

Table 8-6 Environmental Performance Requirements (Noise and Vibration only)

EES Evaluation Objective	Applicable Legislation and Policy	Performance Objective	EPR Code	Environmental Performance Requirement	Project Phase						
Noise and Vibration											
<p>Health, amenity and environmental quality – to minimise adverse air quality, noise and vibration effects on the health and amenity of nearby residents, local communities and road users during both construction of the works and operation of the West Gate Tunnel Project</p>		<p>To minimise traffic noise impacts of West Gate Tunnel Project and local roads</p>	<p>NVP1</p>	<p>Traffic noise limits Design and construct the works to meet the following limits on traffic noise levels.</p> <table border="1" data-bbox="904 395 1912 1295"> <thead> <tr> <th data-bbox="904 395 1093 432">Aspect</th> <th data-bbox="1093 395 1912 432">External Traffic Noise Levels</th> </tr> </thead> <tbody> <tr> <td data-bbox="904 432 1093 1023"> <p>External traffic noise levels</p> </td> <td data-bbox="1093 432 1912 1023"> <p>a External traffic noise levels from the freeway* and Local Roads[†] at Category A Buildings and Category B Buildings facing the traffic noise, being those adjacent to or with a direct line of sight to the freeway*, must be no greater than:</p> <ul style="list-style-type: none"> i 63dB(A) L_{10(18h)} measured between 6am and midnight for Category A Buildings; and ii 63dB(A) L_{10(12h)} measured between 6am and 6pm for Category B Buildings; and <p>b External traffic noise levels from the freeway* and Local Roads[†] at Category A Buildings and Category B Buildings which do not fall within paragraph (a) above and which are adjacent to an identified section of Local Road[†], must be no greater than the predicted traffic noise level under a 'no project' scenario. The 'no project' scenario must also assume that the road traffic noise attributable to the West Gate Freeway (without the project) is:</p> <ul style="list-style-type: none"> • 63dB(A) L_{10(18h)} measured between 6am and midnight for the relevant Category A Buildings; and • 63dB(A) L_{10(12h)} measured between 6am and 6pm for the relevant Category B Buildings. </td> </tr> <tr> <td data-bbox="904 1023 1093 1295"> <p>Applies at</p> </td> <td data-bbox="1093 1023 1912 1295"> <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 existing and occupied or capable of being occupied at the time of announcing the design on 2 April 2017.</p> <p>In some cases off-site noise attenuation may be required to meet the noise criteria at any Category A or Category B Building. This may include implementation of noise attenuation measures in consultation with the owner of the relevant building to ensure that an equivalent level of attenuation is provided internal to the building.</p> </td> </tr> </tbody> </table> <p>*Freeway means the primary road connecting the West Gate Freeway (from the M80 interchange) with the Port of Melbourne, CityLink and the city to be constructed as a result of the Project and excludes:</p> <ul style="list-style-type: none"> • The sections of the West Gate Freeway east of the Williamstown rail line; and • The sections of the Project which comprise widening of arterial roads, 	Aspect	External Traffic Noise Levels	<p>External traffic noise levels</p>	<p>a External traffic noise levels from the freeway* and Local Roads[†] at Category A Buildings and Category B Buildings facing the traffic noise, being those adjacent to or with a direct line of sight to the freeway*, must be no greater than:</p> <ul style="list-style-type: none"> i 63dB(A) L_{10(18h)} measured between 6am and midnight for Category A Buildings; and ii 63dB(A) L_{10(12h)} measured between 6am and 6pm for Category B Buildings; and <p>b External traffic noise levels from the freeway* and Local Roads[†] at Category A Buildings and Category B Buildings which do not fall within paragraph (a) above and which are adjacent to an identified section of Local Road[†], must be no greater than the predicted traffic noise level under a 'no project' scenario. The 'no project' scenario must also assume that the road traffic noise attributable to the West Gate Freeway (without the project) is:</p> <ul style="list-style-type: none"> • 63dB(A) L_{10(18h)} measured between 6am and midnight for the relevant Category A Buildings; and • 63dB(A) L_{10(12h)} measured between 6am and 6pm for the relevant Category B Buildings. 	<p>Applies at</p>	<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 existing and occupied or capable of being occupied at the time of announcing the design on 2 April 2017.</p> <p>In some cases off-site noise attenuation may be required to meet the noise criteria at any Category A or Category B Building. This may include implementation of noise attenuation measures in consultation with the owner of the relevant building to ensure that an equivalent level of attenuation is provided internal to the building.</p>	<p>Detailed design, construction</p>
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				<p>but includes:</p> <ul style="list-style-type: none"> The Dynon Road eastbound exit ramp and Dynon Road westbound entry ramp to the western abutment of the existing Dynon Road bridge over the railway lines; and The Wurundjeri Way Extension from Dynon Road to the point at which the elevated section of the road ties into Wurundjeri Way south of Dudley Street. <p>+ Local Road means</p> <ul style="list-style-type: none"> The sections of Grieve Parade, Millers Road, Williamstown Road, Hyde Street, MacKenzie Road, Simcock Avenue and Dynon Road which extend 100 metres from the interchange of the relevant road with the Freeway; and The sections of Footscray Road between the intersection of Footscray Road with the Footscray Road ramps and the Sims Street loop intersection with Footscray Road. 	
			NVP 1A	<p><u>Operational noise limits</u></p> <p><u>The noise barriers must be maintained to continue to meet the traffic noise levels in NVP1 for 20 years after opening of the Freeway for the same receptors used at the time of the design.</u></p>	Operation
			NVP2	<p>Traffic noise monitoring</p> <p>Traffic noise must be measured prior to and upon opening of the Freeway <u>and during operation of the Freeway</u>, in accordance with the VicRoads Traffic Noise Measurement Requirements for Acoustic Consultants – September 2011, to verify conformance with the external traffic noise performance requirements set out in NVP1 above.</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 performance requirements set out in NVP1 are not met.</p>	Pre-operation, Operation
		Manage surface construction noise and vibration to protect amenity	NVP3	<p>Construction noise, vibration management, and monitoring</p> <p>Prepare and implement a Construction Noise and Vibration Management Plan (CNVMP) in accordance with the limits and methodologies outlined in the Noise and Vibration EPRs.</p> <p>The CNVMP must be informed by monitoring and modelling undertaken by a suitably qualified acoustic and vibration consultant prior to the construction works and include (but not be limited to):</p> <ul style="list-style-type: none"> Identification of sensitive receptors potentially impacted by the construction stage of the Project Identification of the scheduling, duration, activities and equipment with the potential to generate airborne noise or surface vibration impacts at the identified sensitive receptors Implementation of construction noise and surface vibration limits Updated noise and vibration modelling of the noise and vibration impacts <u>Condition surveys to be undertaken for properties which are identified during modelling as potentially experiencing exceedances of vibration limits</u> Noise and vibration monitoring commitments <u>(including real time monitoring in high risk</u> 	Pre-construction, construction

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				<p>areas) and response protocols for managing noise complaints and remedial action</p> <ul style="list-style-type: none"> • Detail of practicable measures adopted to manage noise and surface vibration impacts that exceed the targets set out in the CNVMP • Details of the communication plan to be adopted throughout construction. 																	
			NVP4	<p>Construction Noise Targets</p> <p>1 Highly Sensitive Areas</p> <p>For Highly Sensitive Areas (based on AS/NZS 2107:2000) implement management actions if construction noise is predicted to or does exceed the internal and external noise levels below, and a noise sensitive receptor is adversely impacted.</p> <p>If construction exceeds the noise levels below:</p> <ul style="list-style-type: none"> • Consider the duration of construction noise • Consider the existing ambient noise levels • Consult with the owner or operator of the noise sensitive receptor • Consider any specific acoustic requirements of land uses listed below <p>To determine whether a noise sensitive receptor is adversely impacted.</p> <table border="1" data-bbox="907 790 1910 1386"> <thead> <tr> <th data-bbox="907 810 1377 842">Land use</th> <th data-bbox="1377 790 1910 842">Construction noise management level, L_{Aeq} (15 min) (applies when properties are in use)</th> </tr> </thead> <tbody> <tr> <td data-bbox="907 858 1377 914">Classrooms in schools and other educational institutions</td> <td data-bbox="1377 858 1910 914">Internal noise level 45 dB(A)</td> </tr> <tr> <td data-bbox="907 922 1377 954">Places of worship</td> <td data-bbox="1377 922 1910 954">Internal noise level 45 dB(A)</td> </tr> <tr> <td data-bbox="907 962 1377 1074">Active recreation areas characterised by sporting activities and activities which generate their own noise, making them less sensitive to external noise intrusion</td> <td data-bbox="1377 962 1910 1074">External noise level 65 dB(A)</td> </tr> <tr> <td data-bbox="907 1082 1377 1209">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 data-bbox="1377 1082 1910 1209">External noise level 60 dB(A)</td> </tr> <tr> <td data-bbox="907 1217 1377 1305">Community centres</td> <td data-bbox="1377 1217 1910 1305">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 data-bbox="907 1313 1377 1345">Industrial premises</td> <td data-bbox="1377 1313 1910 1345">External noise level 75 dB(A)</td> </tr> <tr> <td data-bbox="907 1353 1377 1385">Offices, retail outlets</td> <td data-bbox="1377 1353 1910 1385">External noise level 70 dB(A)</td> </tr> </tbody> </table>	Land use	Construction noise management level, L_{Aeq} (15 min) (applies when properties are in use)	Classrooms in schools and other educational institutions	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)	Construction
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				<p>2 Residential dwellings</p> <p>For residential dwellings, implement management actions if construction noise is predicted to</p>																	

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				<p>or does exceed the noise targets in EPA Victoria Publication 1254 or the daytime management levels specified for noise at residences during recommended standard hours in Part 4.1.1 of the NSW Interim Construction Noise Guidelines (ICNG) with the hours amended to correspond to the EPA Victoria Publication 1254 hours as shown in the table below.</p> <table border="1" data-bbox="904 376 1912 967"> <thead> <tr> <th data-bbox="904 405 1285 440">Time of day</th> <th data-bbox="1285 376 1912 440">Construction noise management level, L_{Aeq} (15 min) (applies when properties are in use)</th> </tr> </thead> <tbody> <tr> <td data-bbox="904 453 1285 561">7am–6pm Monday to Friday 7am–1pm Saturday</td> <td data-bbox="1285 453 1912 561">Noise affected Background $LA_{90}+10dB$ Source: NSW ICNG Chapter 4.1.1 Table 2, page 12</td> </tr> <tr> <td data-bbox="904 568 1285 676">7am–6pm Monday to Friday 7am–1pm Saturday</td> <td data-bbox="1285 568 1912 676">Highly noise affected $75d(B)(A)$ Source: NSW ICNG Chapter 4.1.1 Table 2, page 12</td> </tr> <tr> <td data-bbox="904 683 1285 855">6pm–10pm Monday to Friday 1pm–10pm Saturday 7am–10pm Sunday and public holidays</td> <td data-bbox="1285 683 1912 855">Noise level at any residential premises not to exceed background noise (LA_{90}) by: <ul style="list-style-type: none"> • 10 dB(A) or more for up to 18 months • 5 dB(A) or more after 18 months Source: EPA Publication 1254 Section 2</td> </tr> <tr> <td data-bbox="904 861 1285 967">10pm–7am Monday to Sunday</td> <td data-bbox="1285 861 1912 967">Noise inaudible within a habitable room of any residential premises Source: EPA Victoria Publication 1254 Section 2</td> </tr> </tbody> </table> <p data-bbox="904 1015 965 1034"><i>Notes</i></p> <p data-bbox="904 1046 1912 1098">1 The noise affected level represents the point above which there may be some community reaction to noise.</p> <p data-bbox="904 1110 1912 1161">2 The highly noise affected level represents the point above which there may be strong community reaction to noise.</p>	Time of day	Construction noise management level, L_{Aeq} (15 min) (applies when properties are in use)	7am–6pm Monday to Friday 7am–1pm Saturday	Noise affected Background $LA_{90}+10dB$ Source: NSW ICNG Chapter 4.1.1 Table 2, page 12	7am–6pm Monday to Friday 7am–1pm Saturday	Highly noise affected $75d(B)(A)$ Source: NSW ICNG Chapter 4.1.1 Table 2, page 12	6pm–10pm Monday to Friday 1pm–10pm Saturday 7am–10pm Sunday and public holidays	Noise level at any residential premises not to exceed background noise (LA_{90}) by: <ul style="list-style-type: none"> • 10 dB(A) or more for up to 18 months • 5 dB(A) or more after 18 months Source: EPA Publication 1254 Section 2	10pm–7am Monday to Sunday	Noise inaudible within a habitable room of any residential premises Source: EPA Victoria Publication 1254 Section 2	
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		Manage construction vibration and regenerated noise impacts to protect amenity	NVP5	<p>Blasting trials and assessment</p> <p>Where blasting is proposed, a series of initial trials at reduced scale must be conducted prior to production blasting to determine site-specific blast response characteristics and to define allowable blast sizes to meet air blast overpressure and ground vibration limits. If blasting is required, an assessment of the potential noise and vibration impacts, and a strategy to minimise and manage those impacts must be prepared, including preparation of an appropriate community information program.</p>	Construction										
			NVP6	<p>Construction vibration targets (amenity)</p> <p>Implement management actions if the following guideline target levels for continuous vibration</p>	Construction										

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				<p>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).</p> <p style="text-align: center;">Vibration Dose Values (m/s^{1.75})</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Type of space occupancy</th> <th colspan="2">Day (7am to 10pm)</th> <th colspan="2">Night (10pm to 7am)</th> </tr> <tr> <th>Preferred Value</th> <th>Maximum Value</th> <th>Preferred Value</th> <th>Maximum Value</th> </tr> </thead> <tbody> <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> </tbody> </table> <p><i>Notes</i></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 VDVs may be converted to PPVs within a noise and vibration construction management plan.</p>	Type of space occupancy	Day (7am to 10pm)		Night (10pm to 7am)		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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			NVP7	<p>Construction vibration targets (structures)</p> <p>Construction vibration targets for structures are summarised in the tables below.</p> <p>Guideline values for the vibration velocity to be used when evaluating the effects of short term vibration on structures.</p> <p style="text-align: center;">Guideline values for velocity (mm/s)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Type of structure</th> <th colspan="3">Vibration at the foundation at a frequency of</th> <th rowspan="2">Vibration at horizontal plane of highest floor All frequencies</th> </tr> <tr> <th>1 to 10 Hz</th> <th>10 to 50 Hz</th> <th>50 to 100 Hz*</th> </tr> </thead> <tbody> <tr> <td>1. 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> </tr> <tr> <td>2. Dwellings 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> </tr> <tr> <td>3. Structures that, because of their particular sensitivity to vibration,</td> <td>3</td> <td>3 to 8</td> <td>8 to 10</td> <td>8</td> </tr> </tbody> </table>	Type of structure	Vibration at the foundation at a frequency of			Vibration at horizontal plane of highest floor All frequencies	1 to 10 Hz	10 to 50 Hz	50 to 100 Hz*	1. Buildings used for commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50	40	2. Dwellings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	3. Structures that, because of their particular sensitivity to vibration,	3	3 to 8	8 to 10	8		
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				<p>cannot be classified under lines 1 and 2 and are of intrinsic value (eg. Heritage buildings)</p> <hr/> <p>*At frequencies > 100 Hz, the values given in this column may be used as a minimum</p> <p><i>Notes</i></p> <ol style="list-style-type: none"> <i>Vibration levels marginally exceeding those vibration levels in the table would not necessarily mean that damage would occur and further investigation would be required to determine if higher vibration levels can be accommodated without risk of damage</i> <i>For civil engineering structures (e.g. with reinforced concrete constructions used as abutments or foundation pads) the values for Type 1 buildings may be increased by a factor of 2</i> <i>Short-term vibration is defined as vibration which does not occur often enough to cause structural fatigue and which does not produce resonance in the structure being evaluated.</i> 									
				<p>Guideline values for the vibration velocity to be used when evaluating the effects of long term vibration on structures.</p> <table border="1" data-bbox="904 746 1848 1145"> <thead> <tr> <th data-bbox="904 799 1384 839">Type of structure</th> <th data-bbox="1384 746 1848 839">Guideline values for velocity (mm/s) Vibration at horizontal plane of highest floor All frequencies</th> </tr> </thead> <tbody> <tr> <td data-bbox="904 839 1384 943">Buildings used for commercial purposes, industrial buildings, and buildings of similar design</td> <td data-bbox="1384 839 1848 943">10</td> </tr> <tr> <td data-bbox="904 943 1384 1015">Dwellings and buildings of similar design and/or occupancy</td> <td data-bbox="1384 943 1848 1015">5</td> </tr> <tr> <td data-bbox="904 1015 1384 1145">Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of intrinsic value (eg. Heritage buildings)</td> <td data-bbox="1384 1015 1848 1145">2.5</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <p><i>Vibration levels marginally exceeding those in the table would not necessarily mean that damage would occur and further investigation would be required to determine if higher vibration levels can be accommodated without risk of damage</i></p> <ol style="list-style-type: none"> <i>Limits in the above table may need to be adjusted following a pre-construction condition survey</i> <i>Long-term vibration relates to events that may result in a resonant structural response.</i> <p>Implement management actions if, due to construction activity, the DIN 4150.3 Guideline</p>	Type of structure	Guideline values for velocity (mm/s) Vibration at horizontal plane of highest floor All frequencies	Buildings used for commercial purposes, industrial buildings, and buildings of similar design	10	Dwellings and buildings of similar design and/or occupancy	5	Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of intrinsic value (eg. Heritage buildings)	2.5	
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				Targets for structural damage to buildings (for short-term vibration or long-term vibration) are not achieved.									
			NVP8	<p>Ground-borne (internal) noise targets</p> <p>Implement management actions as determined in consultation with potentially affected land owners to protect amenity at residences where the following ground borne noise guideline targets are exceeded during construction.</p> <table border="1"> <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 (6pm to 10pm)</td> <td>L_{Aeq} (15 minute) = 40dBA</td> </tr> <tr> <td>Night (10pm to 6am)</td> <td>L_{Aeq} (15 minute) = 35dBA</td> </tr> </tbody> </table> <p><i>Notes</i></p> <ol style="list-style-type: none"> Levels are only applicable when ground borne noise levels are higher than airborne noise levels. Management actions include community consultation to determine acceptable level of disruption and provision of respite accommodation in some circumstances. 	Time of Day	Internal noise level measured at the centre of the most affected habitable room	Evening (6pm to 10pm)	L _{Aeq} (15 minute) = 40dBA	Night (10pm to 6am)	L _{Aeq} (15 minute) = 35dBA	Construction		
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Evening (6pm to 10pm)	L _{Aeq} (15 minute) = 40dBA												
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		To manage construction vibration to protect utility assets	NVP9	<p>Utility asset protection</p> <p>Prior to construction undertake condition assessments of above and below ground utility assets and establish construction vibration limits in consultation with asset owners to maintain asset integrity. Where construction vibration limits are not agreed with the asset owner, the guideline values in the table below apply.</p> <table border="1"> <thead> <tr> <th>Pipe Material</th> <th>Guideline values for velocity measured on the pipe</th> </tr> </thead> <tbody> <tr> <td>Steel (including welded pipes)</td> <td>100mm/s</td> </tr> <tr> <td>Clay, concrete, reinforced concrete, pre stressed concrete, metal (with or without flange)</td> <td>80 mm/s</td> </tr> <tr> <td>Masonry, plastic</td> <td>50 mm/s</td> </tr> </tbody> </table> <p><i>Notes</i></p> <ol style="list-style-type: none"> These values may be reduced by 50% when evaluating the effects of long-term vibration on buried pipework It is assumed pipes have been manufactured and laid using current technology. <p>Monitor vibration limits during construction to demonstrate compliance with agreed vibration limits. Identify contingency measures to be implemented if limits are not met. Where necessary rectify any defects that are attributable to the Project.</p>	Pipe Material	Guideline values for velocity measured on the pipe	Steel (including welded pipes)	100mm/s	Clay, concrete, reinforced concrete, pre stressed concrete, metal (with or without flange)	80 mm/s	Masonry, plastic	50 mm/s	Pre-construction, construction
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EES Evaluation Objective	Applicable Legislation and Policy	Performance Objective	EPR Code	Environmental Performance Requirement	Project Phase												
	SEPP N-1 – Control of Noise from Commerce, Industry and Trade	To minimise noise impacts of the tunnel ventilation system	NVP10	Tunnel ventilation system noise design Design and implement the tunnel ventilation system in accordance with the Works Approval to achieve compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1) and in accordance with the Works Approval . Provide detailed design to the satisfaction of EPA Victoria prior to commencement of the works permitted by the Works Approval.	Detailed design. operation												
			NVP11	Tunnel ventilation system noise monitoring Measure noise from the tunnel ventilation system on commencing road operation and monitor noise from the tunnel ventilation system for up to five years post opening of the Freeway, or as agreed with EPA Victoria, to verify compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1). Identify contingency measures to be implemented if noise level targets are not met.	Operation												
		Manage construction blasting impacts to protect amenity	NVP12	Amenity – Blast Vibration 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 border="1" data-bbox="907 742 1848 1252"> <thead> <tr> <th>Category</th> <th>Type of blasting operations</th> <th>Peak component particle velocity (mm/s)</th> </tr> </thead> <tbody> <tr> <td>Sensitive site</td> <td>Operations lasting longer than 12 months or more than 20 blasts</td> <td>5mm/s for 95% blasts per year 10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply</td> </tr> <tr> <td>Sensitive site</td> <td>Operations lasting less than 12 months or less than 20 blasts</td> <td>10mm/s maximum unless agreement is reached with occupier that a higher limit may apply</td> </tr> <tr> <td>Occupied non-sensitive sites such as factories and commercial premises</td> <td>All blasting</td> <td>25mm/s maximum value unless agreement is reached with occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specification or levels that can be shown to adversely affect the equipment operation</td> </tr> </tbody> </table> <p><i>Note</i> 1 Sensitive site includes houses and low rise residential buildings, theatres, schools and other similar buildings occupied by people.</p>	Category	Type of blasting operations	Peak component particle velocity (mm/s)	Sensitive site	Operations lasting longer than 12 months or more than 20 blasts	5mm/s for 95% blasts per year 10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply	Sensitive site	Operations lasting less than 12 months or less than 20 blasts	10mm/s maximum unless agreement is reached with occupier that a higher limit may apply	Occupied non-sensitive sites such as factories and commercial premises	All blasting	25mm/s maximum value unless agreement is reached with occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specification or levels that can be shown to adversely affect the equipment operation	Construction
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			NVP13	Amenity – Blast Overpressure Implement management actions if the following overpressure values are not achieved.	Construction												

EES Evaluation Objective	Applicable Legislation and Policy	Performance Objective	EPR Code	Environmental Performance Requirement	Project Phase									
				<p>Blasting activities must comply with Australian Standard AS2187.2-2006, Explosives – Storage and use Part 2 – Use of explosives for all blasting.</p> <table border="1" data-bbox="904 284 1848 837"> <thead> <tr> <th data-bbox="904 312 1144 347">Category</th> <th data-bbox="1144 284 1384 347">Type of blasting operations</th> <th data-bbox="1384 312 1848 347">Peak Overpressure Value (dBL)</th> </tr> </thead> <tbody> <tr> <td data-bbox="904 363 1144 598">Sensitive Site</td> <td data-bbox="1144 363 1384 598"> Operations lasting longer than 12 months or more than 20 blasts Operations lasting less than 12 months or less than 20 blasts </td> <td data-bbox="1384 363 1848 598"> 115 dBL for 95% blasts per year. 120dBL maximum unless agreement with occupier that a higher limit may apply 120dBL for 95% blasts per year. 125 dBL maximum unless agreement with occupier that a higher limit may apply </td> </tr> <tr> <td data-bbox="904 606 1144 837">Occupied non-sensitive sites such as factories and commercial premises</td> <td data-bbox="1144 606 1384 837">All blasting</td> <td data-bbox="1384 606 1848 837">125 dBL maximum value unless agreement is reached with occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturers specification or levels that can be shown to adversely affect the equipment operation</td> </tr> </tbody> </table> <p><i>Note</i></p> <p>1 Sensitive site includes houses and low rise residential buildings, theatres, schools and other similar buildings occupied by people.</p>	Category	Type of blasting operations	Peak Overpressure Value (dBL)	Sensitive Site	Operations lasting longer than 12 months or more than 20 blasts Operations lasting less than 12 months or less than 20 blasts	115 dBL for 95% blasts per year. 120dBL maximum unless agreement with occupier that a higher limit may apply 120dBL for 95% blasts per year. 125 dBL maximum unless agreement with occupier that a higher limit may apply	Occupied non-sensitive sites such as factories and commercial premises	All blasting	125 dBL maximum value unless agreement is reached with occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturers specification or levels that can be shown to adversely affect the equipment operation	
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