



## Secretary's Environmental Assessment Requirements

<b>Application Number</b>	SSI-663 MOD 6
<b>Proposal</b>	M7 Motorway (MOD 6 Widening)
<b>Location</b>	The M7 Westlink Motorway between Richmond Road, Oakhurst/Glendenning and the M5/M7 interchange at Preston
<b>Proponent</b>	Transport for NSW
<b>Date of Issue</b>	10 June 2022
<b>Date of Expiration</b>	10 June 2024

## 1. General SEARs

Desired Performance Outcome	Requirement	Guidelines
<p><b>1. Modification Report</b></p> <p>The modification is described in sufficient detail to enable clear understanding that the modification has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the project, on balance, has the least adverse environmental, social and economic impact, including cumulative impacts.</p>	<p>1. The Modification Report must include, but not necessarily be limited to, the following:</p> <ul style="list-style-type: none"> <li>(a) an executive summary;</li> <li>(b) a description of the existing project and the proposed modification, including key components and activities (including ancillary components and activities) required to construct and operate it including- <ul style="list-style-type: none"> <li>- overview of the proposed modification</li> <li>- site and route locations (including use of plans)</li> <li>- scope of works to construct the modification, including key activities, description of methodologies, working hours, indicative plant and equipment to be used</li> <li>- timing of key construction activities</li> <li>- acquisition of privately owned, council and crown land</li> <li>- identification of bridges and other infrastructure that would need reconfiguration or replacement.</li> </ul> </li> <li>(c) a statement of the objective(s) of the modification;</li> <li>(d) a summary of the strategic need for the modification and relevant State Government</li> </ul>	<p>State Significant Infrastructure Guidelines – Preparing a Modification Report. Appendix F to the State Significant Guidelines (DPIE 2021)</p>

Desired Performance Outcome	Requirement
	<p>policy, having regard to the relevant State Significant Infrastructure Guidelines;</p> <p>(e) an analysis of any feasible alternatives to the modification.;</p> <p>(f) a description of feasible options within the modification.;</p> <p>(g) a description of how alternatives to and options within the modification were analysed to inform the selection of the preferred alternative / option. The description must contain sufficient detail to enable an understanding of why the preferred alternative to and options(s) within the modification were selected;</p> <p>(h) a concise description of different construction methods that were analysed and preferred methods;</p> <p>(i) a concise description of the general biophysical and socio-economic environment that is likely to be impacted by the project (including offsite impacts). Elements of the environment that are not likely to be affected by the project do not need to be described;</p> <p>(j) a demonstration of how the modification design has been developed to avoid or minimise likely adverse impacts;</p> <p>(k) the identification and assessment of key issues as provided in the 'Assessment of Key Issues' performance outcome;</p> <p>(l) a statement of and the quantification of outcomes and performance criteria the modification will achieve for each key issue;</p> <p>(m) measures to avoid, minimise or offset impacts must be linked to the impact(s) they treat, so it is clear which measures will be applied to each impact;</p> <p>(n) consideration of the interactions between measures proposed to avoid or minimise</p>

Desired Performance Outcome	Requirement
	<p>impact(s), between impacts themselves and between measures and impacts;</p> <p>(o) an assessment of the relevant cumulative impacts of the project taking into account other projects that have been approved but where construction has not commenced, projects that have commenced construction, and projects that have recently been completed;</p> <p>(p) statutory context of the modification, including:</p> <ul style="list-style-type: none"> <li>- how the project meets the provisions of the EP&amp;A Act and EP&amp;A Regulation;</li> <li>- a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out;</li> </ul> <p>(q) a chapter that synthesises the environmental impact assessment and provides:</p> <ul style="list-style-type: none"> <li>- a succinct but full description of the modification for which approval is sought;</li> <li>- a description of any uncertainties that still exist around design, construction methodologies and/or operational methodologies and how these will be resolved in the next stages of the modification;</li> <li>- a compilation of the impacts of the modification that have not been avoided;</li> <li>- a compilation of the proposed measures associated with each impact to avoid or minimise (through design refinements or ongoing management during construction and operation) or offset these impacts;</li> <li>- a compilation of the outcome(s) and criteria the modification will achieve and how these will be monitored; and</li> <li>- the reasons justifying carrying out the modification as proposed, having regard to the</li> </ul>

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	<p>biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts.</p> <p>(r) relevant plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.</p> <p>2. The modification report must only include data and analysis that is reasonably needed to make a decision on the modification proposal. Relevant information must be succinctly summarised in the report and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.</p>	
<p><b>2. Assessment of Key Issues*</b></p> <p>Key issue impacts are assessed objectively and thoroughly to provide confidence that the project will be constructed and operated within acceptable levels of impact or with appropriate offsets.</p> <p>* Key issues are nominated by the Proponent in the SSI modification application and by the Department in the SEARs. Key issues need to be reviewed throughout the preparation of the Modification Report to ensure any new key issues that emerge are captured. The key issues identified in this document are not exhaustive but are key issues common to most SSI projects.</p>	<p>1. The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the proposal location and the surrounding environment. The level of assessment must be commensurate to the degree of impact and sufficient to ensure that the Department and other government agencies are able to understand and assess impacts.</p> <p>2. For each key issue the Proponent must:</p> <ul style="list-style-type: none"> <li>(a) assess the issue (including modelling as relevant), and address and undertake the requirements specified in section 2 – Key Issue SEARs,</li> <li>(b) describe the biophysical, social and economic environment, as far as it is relevant to that issue, including substantiated baseline data that is reflective of current guidelines where relevant;</li> <li>(c) describe the legislative and policy context, as far as it is relevant to the issue;</li> <li>(d) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities within the proposal and cumulative impacts (parallel and sequential) with other projects;</li> <li>(e) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies);</li> </ul>	

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	<ul style="list-style-type: none"> <li>(f) detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant);</li> <li>(g) detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures; and</li> <li>(h) measures to monitor the avoidance, minimisation and offsetting of impacts to ensure quantified outcomes and criteria are met.</li> </ul> <p>3. Where multiple reasonable and feasible options to avoid or minimise impacts are available, they must be identified and considered, and the proposed measure justified taking into account the public interest.</p>	
<b>3. Key Appendices</b>	<p>1. The Modification Report must include the following appendices:</p> <ul style="list-style-type: none"> <li>(a) a SEARs table, identifying the sections and subsections where the SEARs have been addressed in the Modification Report and in the specialist assessment reports; assess the issue (including modelling as relevant), and address and undertake the requirements specified in section 5 – Key Issue SEARs,</li> <li>(b) a statutory compliance table, identifying where the relevant statutory requirements have been addressed in the Modification Report;</li> <li>(c) a community engagement table, identifying where the issues raised by the community during engagement have been addressed in the Modification Report;</li> <li>(d) a table of the proposed mitigation measures for the project (excluding any mitigation measures that are built into the physical layout and design of the project and captured in the project description); and</li> <li>(e) any supporting information, including any detailed technical reports prepared by specialists.</li> </ul>	
<p>4.</p> <p><b>Consultation</b></p> <p>The modification is developed with meaningful and effective engagement during project design and delivery.</p>	<ul style="list-style-type: none"> <li>1. The project must be informed by consultation, including with relevant local, State and Commonwealth government agencies, infrastructure and service providers, special interest groups, affected landowners, businesses, and the community.</li> <li>2. The consultation process must be documented and include information on how the modification has responded to the inputs received.</li> <li>3. The timing and type of community consultation proposed during the design and delivery of the</li> </ul>	

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	modification must be described, including the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.	

## 2. Key Issue SEARs

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
<p><b>1. Transport, Traffic and Movement</b></p> <p>Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts.</p> <p>The safety of transport system customers is maintained.</p> <p>Impacts on network capacity and the level of service are effectively managed.</p> <p>Works are compatible with existing infrastructure and future transport corridors.</p> <p>The project is well-designed and enhances the environment where it is located, including improved accessibility and connectivity for communities and public spaces.</p> <p>The project contributes to greener places through the enhancement and provision of green infrastructure.</p>	<p><b>1. Construction transport and traffic (vehicle, pedestrian and cyclists) impacts</b>, including, but not necessarily limited to:</p> <ul style="list-style-type: none"> <li>(a) a considered approach to route identification and scheduling of construction vehicle movements;</li> <li>(b) the indicative number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements), including the indicative number and route of heavy vehicle movements outside of standard construction hours;</li> <li>(c) construction worker parking, including the location and capacity of proposed parking facilities;</li> <li>(d) the nature of existing traffic (types and number of movements) on construction access routes (including consideration of peak traffic times and sensitive road users, pedestrian and cyclist activities and on-street parking arrangements);</li> <li>(e) access constraints and impacts on public transport (infrastructure and services), pedestrians and cyclists;</li> <li>(f) the need to close, divert or otherwise reconfigure elements of the road, pedestrian and cycle network associated with construction of the project and the duration of these changes; and</li> <li>(g) impacts to on-street parking, including to residents and businesses.</li> </ul> <p><b>2. Operational traffic related impacts</b> of the project, including:</p> <ul style="list-style-type: none"> <li>(a) forecast travel demand and traffic volumes for the project and the surrounding road, cycle and public transport network;</li> <li>(b) travel time analysis;</li> </ul>	<p>Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2020)</p> <p>Cycling Aspects of Austroads Guides (Austroads, 2014)</p> <p><a href="#">NSW Bicycle Guidelines v 1.2 (RTA, 2005)</a></p> <p>Planning Guidelines for Walking and Cycling (DIPNR, 2004)</p> <p><a href="#">NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017)</a></p> <p>Movement and Place Framework relevant guidance including the '<a href="#">Walking Space Guide: Towards Pedestrian Comfort and Safety</a>' and the 'Cycleway Design Toolbox: Designing for Cycling and Micromobility'.</p> <p><a href="#">Aligning Movement and Place – Outline for understanding places in relation to movement infrastructure (Government Architect of NSW, 2019)</a></p> <p><a href="#">Practitioner's Guide to Movement and Place (NSW Government 2020)</a></p> <p><a href="#">Healthy Urban Development Checklist (NSW Health,</a></p>



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	<ul style="list-style-type: none"> <li>(c) performance of key interchanges and intersections by undertaking a level of service analysis at key locations;</li> <li>(d) wider transport interactions (local and regional roads, cycling, public and freight transport);</li> <li>(e) induced traffic and operational implications for public transport (particularly with respect to strategic bus corridors and bus routes) and consideration of opportunities to improve public transport;</li> <li>(f) impacts on cyclists and pedestrian access and safety; and</li> <li>(g) an explanation of the scope of the modelled area, including justification of the nominated boundaries.</li> </ul> <p><i>Note: The Traffic assessment must include consideration of changes to traffic volumes that would occur as a result of current and future strategic land use changes and road projects/upgrades within the road catchment which feeds into the project alignment.</i></p> <p>3. Identify <b>Movement (accessibility and connectivity) principles, outcomes and actions</b> for the project that facilitate improvements to movement, including in relation to:</p> <ul style="list-style-type: none"> <li>(a) how the project considers the relationship between movement and place [including any issues and opportunities identified];</li> <li>(b) how the project contributes to more walking, cycling and public transport use including journey time comparisons for public and active transport for general traffic journey time improvements made, and the matters set out in the Healthy Urban Development Checklist TC1 and TC2 (NSW Health, 2009);</li> <li>(c) how any walking, cycling or public transport improvements provided by the project integrates with wider active and public transport networks; and</li> </ul>	<p><a href="#">2009</a>, section 10</p>

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	(d) opportunities for refinements and improvements to the existing pedestrian and cycle routes adjacent to and across the M7 Motorway corridor, including in response to land use changes/development since the opening of the M7 Motorway (including access between key community focal points such as public transport nodes, public open space and community facilities);	
<p><b>2. Noise and Vibration - Amenity</b></p> <p>Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on acoustic amenity, and adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage.</p> <p>Increases in noise emissions and vibration affecting nearby properties and other sensitive receivers during operation of the project are effectively managed to protect the amenity and well-being of the community.</p> <p>Increases in noise emissions and vibration affecting environmental heritage as defined in the <i>Heritage Act 1977</i> during operation of the project are effectively managed.</p>	<ol style="list-style-type: none"> <li>1. The Proponent must assess <b>construction and operational noise and vibration impacts</b> in accordance with relevant NSW noise and vibration guidelines and policies, including how the measures in the guidelines will be implemented and their effect on reducing the level and impact of noise and vibration.  The assessment must take into consideration and address the redistribution of traffic (including on local feeder roads), operational plant and equipment, and the characteristics of noise and vibration. It must consider the impacts to sensitive receivers, including sleep disturbance.</li> <li>2. The assessment of <b>construction noise and vibration</b> must be undertaken in accordance with the Interim Construction Noise Guideline (DECC 2009) (ICNG) relevant guidelines, and must: <ol style="list-style-type: none"> <li>(a) describe the nature of construction activities and related noise characteristics (including annoying activities described in the ICNG) using typical and worst-case scenarios and identify high noise generating activities;</li> <li>(b) detail the intensity and duration of noise (both air and ground borne) and vibration impacts. This must include consideration of high noise generating activities and extended construction impacts associated with ancillary facilities (and the like) and construction fatigue;</li> </ol> </li> </ol>	<p>Assessing Vibration: a technical guideline (DEC, 2006)</p> <p>Interim Construction Noise Guideline (DECC, 2009)</p> <p><a href="#">NSW Road Noise Policy (DECCW, 2011)</a></p> <p>German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures</p>

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	<ul style="list-style-type: none"> <li>(c) identify the nature and location of sensitive receivers;</li> <li>(d) describe the nature and level of the impact and the sensitivity of receivers, including for out of hours works (NOTE: subjective and qualitative language must not be used to describe or group noise impacts. E.g. terms such as “negligible” and “low” should be avoided);</li> <li>(e) identify factors that may influence the timing and duration of noisy and vibration generating construction activities;</li> <li>(f) identify and document the potential for works outside standard construction hours (including utility works and works associated with the proposed development including those undertaken under another assessment and approval pathway, including but not limited to: <ul style="list-style-type: none"> <li>- justification for the activity(ies) in terms of the ICNG.</li> <li>- location of the activity(ies)</li> <li>- predicted noise and vibration levels, and exceedances</li> <li>- number of potentially affected receivers, and</li> <li>- timing and duration of the activity(ies).</li> </ul> </li> <li>(g) include a cumulative noise and vibration assessment inclusive of impacts from the project (including concurrent project construction activities) and the construction of other relevant development in the vicinity of the project;</li> <li>(h) assess the potential for sleep disturbance (including the number of noise-awakening events);</li> <li>(i) provide details and analysis of the predicted effectiveness of temporary or permanent mitigation measures to adequately manage identified impacts,</li> <li>(j) describe any potential residual noise and vibration impacts following application of mitigation measures; and</li> <li>(k) include a description of how receiver feedback received during the</li> </ul>	

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	<p>preparation of the EIS has been taken into account (and would be taken into account post exhibition of the EIS) in the design of mitigation measures, including any tailored mitigation, management and communication strategies for sensitive receivers.</p> <p>3. The assessment of <b>construction traffic and operational traffic noise</b> must undertaken in accordance with the NSW Road Noise Policy (DECCW include:</p> <ul style="list-style-type: none"> <li>(a) justification for the model used in accordance with the Road Noise Policy Appendix B4 and B5;</li> <li>(b) consideration of how the potential for maximum noise levels to cause sleep disturbance has informed the mitigation measures;</li> <li>(c) consideration of the effects of road gradient on road emissions and speed of vehicles; and</li> <li>(d) consider meteorological conditions by noting any wind or temperature inversion conditions that are characteristic of the area and discuss the effects on traffic noise from the project according to the NSW Road Noise Policy</li> </ul> <p><i>Note: Consideration of changes to traffic volumes as a result of recent strategic and project land use changes in the project's road catchment must be considered in the noise assessment.</i></p> <p>4. The process for community engagement should be included or referenced</p>	

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	in the noise and vibration assessment as part of the mitigation strategy and assessment.	
<p><b>3. Flooding</b></p> <p>The project minimises adverse impacts on existing flooding characteristics.</p> <p>Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure.</p>	<ol style="list-style-type: none"> <li>1. A flood impact and risk assessment (FIRA) must be undertaken by a qualified flooding engineer. As a minimum the FIRA should consider: <ol style="list-style-type: none"> <li>a) existing base case scenario, including developing a hydrologic and hydraulic model that is compatible with existing flood information developed by Liverpool, Fairfield and Blacktown Councils' flood studies and floodplain risk management studies and plans;</li> <li>b) existing flood behaviour and flood constraints and risks on the site and its surrounding areas for the full range of events including 5% AEP, 1% AEP, PMF and 0.5% AEP or 0.2% AEP;</li> <li>c) changes in post development flood behaviour, impacts of flooding on existing community and on the development for the full range of events including 5% AEP, 1% AEP, PMF and 0.5% AEP or 0.2% AEP. This should address impacts on flood behaviour and on emergency response management of the site and surrounding areas;</li> <li>d) impacts of climate change on both existing and post development flood behaviour due to increase in rainfall intensities; and</li> <li>e) proposed temporary management actions to mitigate impacts of flooding during construction on the community, personnel, machinery, and construction sites.</li> </ol> <p><i>Note: flood behaviour includes flood volume, extent, depth, level, velocity, duration, rate of rise, flood function and hazard.</i></p> </li> <li>2. The assessment must include maps of all features relevant to flooding as described in the Floodplain Development Manual, including flood prone and the flood planning area.</li> </ol>	<p>NSW Government's Floodplain Development Manual (Department of Natural Resources, 2005)</p> <p><a href="#">PS 07-003 New guideline and changes to section 117 direction and EP&amp;A Regulation on flood prone land</a></p> <p><a href="#">Practical Consideration of Climate Change - Flood risk management guideline (DECC, 2007)</a></p> <p>Australian Rainfall and Runoff – A Guide to Flood Estimation (Commonwealth of Australia (Geoscience Australia), 2019)</p>

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<p><b>4. Heritage – Aboriginal Cultural Heritage</b></p> <p>The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of Aboriginal objects and places.</p> <p>The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of Aboriginal objects and places.</p>	<ol style="list-style-type: none"> <li>1. The Proponent must provide an assessment of Aboriginal cultural heritage, prepared in accordance with relevant sections of the current guidelines, identifying, describing and assessing potential impacts to Aboriginal cultural heritage sites or values associated with the modification.</li> <li>2. The Proponent must provide evidence of consultation with Aboriginal communities in determining and assessing impacts, developing and selecting options and mitigation measures (including the final proposed measures), in accordance with relevant sections of current guidelines.</li> </ol>	<p>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011)</p> <p>Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010)</p> <p>Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW, 2010)</p> <p>NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998)</p> <p><a href="#">Aboriginal site recording form</a></p> <p><a href="#">Aboriginal site impact recording form</a></p> <p><a href="#">Aboriginal Heritage Information Management System site registration form</a></p> <p><a href="#">Care agreement application form</a></p> <p><a href="#">Criteria for assessing Excavation Directors (NSW Heritage Council, 2019)</a></p> <p>NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning, 1994)</p> <p>Assessing Heritage Significance (NSW Heritage Office, 2001)</p> <p>The Australia ICOMOS Burra Charter 2013</p>
<p><b>5. Soils and Contamination</b></p> <p>The environmental values of land, including</p>	<ol style="list-style-type: none"> <li>1. Verify the risk of <b>acid sulfate soils</b> (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) within, and in the area likely to be impacted by, the</li> </ol>	<p>Acid Sulfate Soils Assessment Guidelines (DoP, 2008)</p> <p>Acid Sulfate Soils Manual (Acid Sulfate Soils</p>

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<p>soils, subsoils and landforms, are protected.</p> <p>Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.</p>	<p>project.</p> <ol style="list-style-type: none"> <li>The impact of the project on <b>acid sulfate soils</b> (including impacts of acidic runoff offsite) in accordance with the current guidelines.</li> <li>The likelihood of <b>land contamination</b> and identify if remediation of the land is required, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where assessment and/or remediation is required, the EIS must document how the assessment and/or remediation would be undertaken in accordance with current guidelines.</li> <li>Identify whether <b>soil salinity</b> is likely to be an issue and if so, determine the presence, extent and severity of soil salinity within the project area, and assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology.</li> <li>The impacts on <b>soil and land resources</b> (including erosion risk or hazard). Particular attention must be given to soil erosion and sediment transport consistent with the practices and principles in the current guidelines.</li> </ol>	<p>Management Advisory Committee, 1998)</p> <p>Managing Land Contamination: Planning Guidelines SEPP 55 –Remediation of Land, (DUAP &amp; EPA, 1998)</p> <p>Contaminated Land Guidelines: Consultants Reporting on Contaminated Sites (EPA, 2020)</p> <p>Guidelines for the NSW Site Auditor Scheme (3<sup>rd</sup> Edition) (EPA, 2017)</p> <p>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015)</p> <p>Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets (<a href="http://www.environment.nsw.gov.au/salinity/solutions/urban.htm">http://www.environment.nsw.gov.au/salinity/solutions/urban.htm</a>) which includes <i>Site Investigations for Urban Salinity</i> (DLWC, 2002)</p> <p>Landslide risk management guidelines presented in Australian Geomechanics Society (2007)</p> <p>Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)</p> <p>Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)</p>

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		Other guidelines made or approved under section 105 of the <i>Contaminated Land Management Act 1997</i>
<p><b>6. Biodiversity</b></p> <p>The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity.</p> <p>he</p> <p>Offsets and/or supplementary measures are assured which are equivalent to any residual impacts of project construction and operation.</p>	<ol style="list-style-type: none"> <li>1. Prepare a <b>Biodiversity Development Assessment Report (BDAR)</b> that assess biodiversity impacts in accordance with s7.9 of the <i>Biodiversity Conservation Act 2016</i> (BC Act) and the Biodiversity Assessment Method (BAM).</li> <li>2. The BDAR must document the application of the avoid, minimise and offset framework in accordance with the BAM.</li> <li>3. The BDAR must include information in the form detailed in s6.12 of the BC Act, cl6.8 of the <i>Biodiversity Conservation Regulation 2017</i> and the BAM, including details of the measures proposed to address the offset obligation as follows: <ul style="list-style-type: none"> <li>(a) the total number and classes of biodiversity credits required to be retired for the developments/project;</li> <li>(b) the number of classes of like-for-like biodiversity credits proposed to be retired;</li> <li>(c) the number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;</li> <li>(d) any proposal to fund a biodiversity conservation action;</li> <li>(e) any proposal to make a payment into the Biodiversity Conservation Fund; and</li> <li>(f) any stage retirement of credits based on when the development is carried out that would impact on biodiversity values.</li> </ul> </li> </ol> <p><i>Note: If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.</i></p>	<p>Biodiversity Assessment Method (OEH, 2020)</p> <p><a href="#">Policy and Guidelines for Fish Habitat Conservation and Management – Update</a> 2013 (DPI, 2013)</p> <p><a href="#">Threatened Species Survey and Assessment Guidelines</a></p> <p><a href="#">Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003)</a></p> <p>Aquatic Ecology in Environmental Impact Assessment – EIA Guideline (Marcus Lincoln Smith 2003)</p> <p>Freshwater threatened species distribution maps (<a href="http://www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw/freshwater-threatened-species-distribution-maps">www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw/freshwater-threatened-species-distribution-maps</a>)</p>



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	<ol style="list-style-type: none"> <li>4. The BDAR must be submitted with all digital spatial data associated with the survey and assessment required by the BAM and as detailed in various guidelines, practice notes, updates and other advice issued by the Environment and Heritage Group of DPE (EHG) to BAM accredited assessors (see: <a href="https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/accredited-assessors/assessor-resources">https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/accredited-assessors/assessor-resources</a>).</li> <li>5. The BDAR must be prepared by a person accredited in accordance with the <i>Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017</i> under s6.10 of the BC Act.</li> <li>6. The BDAR must include details of the measures proposed to address offset obligations.</li> <li>7. Impacts on <b>biodiversity values not covered by the BAM</b> must be assessed. This includes a threatened aquatic species assessment (Part 7A <i>Fisheries Management Act 1994</i>) to address whether there are likely to be any significant impact on listed threatened species, populations or ecological communities listed under the <i>Fisheries Management Act 1994</i> (FM Act).</li> <li>8. Identify whether the project, or any component of the project, would be classified as a <b>Key Threatening Process (KTP)</b> in accordance with the listings in the BC Act, FM Act and the <i>Environmental Protection and the Biodiversity Conservation Act 2000</i> (EPBC Act).</li> </ol>	
<p><b>7. Water – Quality and Hydrology</b></p> <p>The project is designed, constructed and operated to protect the NSW Water Quality Objectives where they are currently being achieved, and contribute towards achievement of the Water Quality Objectives over time</p>	<ol style="list-style-type: none"> <li>1. An assessment of water quality impacts, including:               <ol style="list-style-type: none"> <li>(a) stating the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the project, including the indicators and associated trigger values or criteria for the identified environmental values in accordance with the</li> </ol> </li> </ol>	<p>NSW Water Quality and River Flow Objectives at <a href="http://www.environment.nsw.gov.au/ieo/">http://www.environment.nsw.gov.au/ieo/</a></p> <p>Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006)</p>

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<p>where they are currently not being achieved, including downstream of the project to the extent of the project impact including estuarine and marine waters (if applicable).</p> <p>Assess the impacts of the development on hydrology and waterway health and develop measures to avoid and mitigate these impacts.</p>	<p>Australian &amp; New Zealand Guidelines for Fresh &amp; Marine Water Quality and or local objectives, criteria or targets endorsed by the NSW government;</p> <p>(b) identifying and estimating the quality and quantity of pollutants that may be introduced into the water cycle by source and discharge point and describe the nature and degree of impact that any discharge(s) may have on the receiving environment, including consideration of all pollutants that pose a risk of non-trivial harm to human health and the environment;</p> <p>(c) identifying the rainfall event that the water quality protection measures will be designed to cope with;</p> <p>(d) the significance of any identified impacts including consideration of the relevant ambient water quality outcomes;</p> <p>(e) demonstrating how construction and operation of the project will, to the extent that the project can influence, ensure that:</p> <ul style="list-style-type: none"> <li>- where the NSW WQOs for receiving waters are currently being met, they will continue to be protected; and</li> <li>- where the NSW WQOs are not currently being met, activities will work toward their achievement over time;</li> </ul> <p>(f) justifying, if required, why the WQOs cannot be maintained or achieved over time;</p> <p>(g) demonstrating that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented;</p> <p>(h) identifying sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments; and</p> <p>(i) identifying proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.</p>	<p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ ARMCANZ, 2000)</p> <p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018)</p> <p>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DECC, 2008)</p> <p>Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)</p> <p>NSW Aquifer Interference Policy (2012)</p> <p>Guidelines for Controlled Activities on Waterfront Land (2018)</p> <p>The relevant Water Sharing Plans (available at <a href="https://water.dpie.nsw.gov.au/home">https://water.dpie.nsw.gov.au/home</a>).</p>

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	<p>2. An assessment of the impact of the development on hydrology, including:</p> <ul style="list-style-type: none"> <li>(a) a detailed and consolidated site water balance, including quantity, quality and source;</li> <li>(b) effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas;</li> <li>(c) effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems;</li> <li>(d) impacts to natural process and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches);</li> <li>(e) changes to environmental water availability;</li> <li>(f) mitigation measures for the management of stormwater and wastewater during both construction and operation (including volumes, flow rates, management methods and re-use options); and</li> <li>(g) proposed surface and groundwater monitoring activities and methodologies.</li> </ul>	
<p><b>8. Other Issues</b></p>	<p>1. An assessment of the following issues must be undertaken in accordance with the commitments in Attachment 2 of the M7 Motorway (SSI 663) – Project Modification letter submitted 9 May 2022 (via Major Projects Portal):</p> <ul style="list-style-type: none"> <li>· Air Quality</li> <li>· Climate Change Risk</li> <li>· Landscape Character, Visual Impact and Urban Design (including green infrastructure designs, actions and outcomes for the project and how the project will achieve a net increase in tree numbers and canopy within proximity of the impacted area).</li> </ul>	

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	<ul style="list-style-type: none"> <li>· Non-Aboriginal Heritage</li> <li>· Social</li> <li>· Sustainability</li> <li>· Waste</li> </ul>	