

# Planning Secretary's Environmental Assessment Requirements

## Section 5.16 of the *Environmental Planning and Assessment Act 1979*

<b>Application Number</b>	SSI 10053
<b>Proposal</b>	Moorebank Avenue Realignment – the realignment and upgrade of the existing Moorebank Avenue from south of Anzac Road to the East Hills Railway, running predominantly to the east of the Moorebank Precinct East site.
<b>Location</b>	East of the Moorebank Intermodal Terminal, Moorebank.
<b>Proponent</b>	Qube Property Management Services Pty Ltd
<b>Date of Issue</b>	17 July 2020

## 1. General SEARs

Desired Performance Outcome	Requirement	Current Guidelines <sup>1</sup>
<b>1. Environmental Impact Assessment Process</b> The process for assessment of the project is transparent, balanced, well focussed and legal.	<ol style="list-style-type: none"> <li>1. The Environmental Impact Statement must be prepared in accordance with Part 3 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation).</li> <li>2. It is the Proponent's responsibility to determine whether the project needs to be referred to the Commonwealth Department of Agriculture, Water and the Environment (DAWE) for an approval under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). If the DAWE has determined that an approval is required under the EPBC Act, supplementary environmental assessment requirements may need to be issued to ensure a streamlined assessment under the Bilateral Agreement can be achieved.</li> <li>3. Where the project requires approval under the EPBC Act and is being assessed under the Bilateral Agreement the EIS must address:               <ol style="list-style-type: none"> <li>(a) consideration of any Protected Matters that may be impacted by the development where the Commonwealth Minister has determined that the project is a Controlled Action.</li> <li>(b) identification and assessment of those Protected Matters that are likely to be significantly impacted.</li> <li>(c) details of how significant impacts to Protected Matters have been avoided, mitigated and, if necessary, offset.</li> <li>(d) consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans.</li> </ol> </li> <li>4. The onus is on the Proponent to ensure legislative requirements relevant to the project are met.</li> </ol>	<a href="#">EPBC Act Environment Assessment Process</a> (SEWPAC, 2010)
<b>2. Environmental Impact Statement</b> The project is described in sufficient detail to enable clear understanding that the project 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	<ol style="list-style-type: none"> <li>1. The EIS must include, but not necessarily be limited to, the following:               <ol style="list-style-type: none"> <li>(a) executive summary;</li> <li>(b) a description of the project, including key components and activities (including ancillary components and activities) required to construct and operate it including-                   <ul style="list-style-type: none"> <li>– the proposed infrastructure;</li> <li>– site location (including use of plans)</li> <li>– “place making” design initiatives;</li> <li>– all road work and car parking;</li> <li>– scope of works to construct the project, including key activities and timing, working</li> </ul> </li> </ol> </li> </ol>	

<sup>1</sup> Guidelines listed are the current list of guidelines that may be applicable to a SSI project. It is the Proponents responsibility to identify, and justify, which guidelines have been applied to a specific project. Including those guidelines identified in the Scoping Report.

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environmental, social and economic impact, including its cumulative impacts.	<p>hours and indicative plant and equipment to be used;</p> <ul style="list-style-type: none"> <li>– operational activities; and</li> <li>– acquisition of privately owned, council and crown land;</li> </ul> <p>(c) a statement of the objective(s) of the project;</p> <p>(d) a summary of the strategic need for the project with regard to its State significance and relevant State Government policy;</p> <p>(e) an analysis of feasible alternatives to the project<sup>2</sup>;</p> <p>(f) a description of feasible options within the project<sup>3</sup>;</p> <p>(g) a description of how alternatives to and options within the project 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 and options(s) within the project 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, social and 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 project 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 the outcomes the Proponent 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 impact(s), between impacts themselves and between measures and impacts;<sup>4</sup></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 been completed (including but</p>	

<sup>2</sup> Alternatives to a project are different projects which would achieve the same project objective(s) including the consequences of not carrying out the project.

<sup>3</sup> Options within the project are variations of the same project. For example, options within a road project could be design of an intersection; the location or design of a bridge; locations for a vent stack.

<sup>4</sup> Measures proposed to avoid or minimise one impact may cause an unintended impact on another issue. Therefore these impacts and their interactions need to be analysed and resolved where possible.

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	<p>not limited to the Moorebank Precinct East (MPE) and Moorebank Precinct West projects;</p> <p>(p) a clear description of how the project relates to the approved stages within the Moorebank Intermodal Terminal Precinct in relation to construction programming and the final design. The EIS must consider the need for any consequential modifications to MPE 2 and MPE Concept approvals;</p> <p>(q) statutory context of the project as a whole, 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>(r) 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 project 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;</li> <li>– a compilation of the impacts of the project 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) the Proponent commits to achieve; and</li> <li>– the reasons justifying carrying out the project as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts; and</li> </ul> <p>(s) relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.</p> <p>2. The EIS must only include data and analysis that is reasonably needed to make a decision on the project. Relevant information must be succinctly summarised in the EIS and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.</p>	
<p><b>3. 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.</p> <p>* Key issues are nominated by the Proponent in the SSI project application and by the Department in the SEARs.</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 project 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) describe the biophysical, social and economic environment, as far as it is relevant to that issue, including baseline data that is reflective of current guidelines where relevant;</li> <li>(b) describe the legislative and policy context, as far as it is relevant to the issue;</li> <li>(c) identify, describe and quantify (if possible) the impacts associated with the issue, including</li> </ul>	

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<p>Key issues need to be reviewed throughout the preparation of the EIS 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>the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities within the project and cumulative impacts;</p> <p>(d) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies);</p> <p>(e) 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); and</p> <p>detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures.</p> <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>	
<p><b>4. Consultation</b></p> <p>The project is developed with meaningful and effective engagement during project design and delivery.</p>	<p>1. The project must be informed by consultation, including with relevant local, State and Commonwealth government agencies, infrastructure and service providers, special interest groups, Aboriginal groups, affected landowners, businesses and the community.</p> <p>2. The Proponent must document the consultation process and demonstrate how the project has responded to the inputs received.</p> <p>3. The Proponent must describe the timing and type of community consultation proposed during the design and delivery of the project, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.</p> <p>4. The Proponent must liaise with Sydney Trains regarding the bridge and any affectation/utilisation of the land owned by TAHE (formerly RailCorp) that adjoin the rail corridor (also known as the Moorebank Station site).</p>	

## 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. Biodiversity</b></p> <p>The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity.</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. Biodiversity impacts in accordance with s7.9 of the <i>Biodiversity Conservation Act 2016</i> (BC Act), the Biodiversity Assessment Method (BAM), and be documented in a Biodiversity Development Assessment Report (BDAR).</li> <li>2. The BDAR must include information in the form detailed in s6.12 of the BC Act, cl6.8 of the Biodiversity Conservation Regulation 2017 and the BAM.</li> <li>3. The BDAR must be submitted with all digital spatial data associated with the survey and assessment as per Appendix 10 of the BAM.</li> <li>4. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the BC Act.</li> <li>5. The BDAR must include details of the measures proposed to address offset obligations.</li> <li>6. Impacts on biodiversity values not covered by the BAM. This includes a threatened aquatic species assessment (Part 7A <i>Fisheries Management Act 1994</i> (FM Act)) to address whether there are likely to be any significant impact on listed threatened species, populations or ecological communities listed under the FM Act.</li> <li>7. Identify whether the project, or any component of the project, would be classified as a Key Threatening Process (KTP) in accordance with the listings in the BC Act, FM Act and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act).</li> </ol>	<p>Biodiversity Assessment Method (OEH, 2017)</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>Guidelines for Fish Habitat Conservation and Management (P&amp;G) (Fairfull, 2013 update)</p> <p><a href="#">Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</a> (NSW Fisheries, 2003)</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>
<p><b>2. Transport and Traffic</b></p> <p>The safety and efficiency of the transport system (including parking) in the vicinity of the project are managed to minimise impacts.</p> <p>The safety of transport system customers is maintained.</p>	<ol style="list-style-type: none"> <li>1. Construction transport and traffic (vehicle, pedestrian, cyclists, bus services and train operations) impacts, including, but not necessarily limited to: <ol style="list-style-type: none"> <li>(a) a considered approach to route identification and scheduling of transport movements, particularly outside construction hours;</li> <li>(b) the indicative number, frequency and size of construction related vehicles (light and heavy vehicles) including those related to the establishment of ancillary facilities;</li> <li>(c) construction worker parking;</li> </ol> </li> </ol>	<p>State Infrastructure Strategy 2018-2038: Building Momentum</p> <p>Future Transport Strategy 2056</p> <p>Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2007)</p>

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Impacts on network capacity and the level of service are effectively managed.	<ul style="list-style-type: none"> <li>(d) the nature of existing parking, and traffic on construction access routes;</li> <li>(e) access constraints and impacts on public transport, pedestrians and cyclists;</li> <li>(f) the need to close, divert or otherwise reconfigure elements of roads, car parking and pedestrian and cycle network associated with the construction of the project and the duration of these changes;</li> <li>(g) safe access and egress to/from the classified road network; and</li> <li>(h) cumulative impacts with other construction activities occurring in the vicinity of the project.</li> </ul> <p>2. Assess and model the operational transport impacts of the project including, but not necessarily limited to:</p> <ul style="list-style-type: none"> <li>(a) estimation of daily and peak traffic movements at key intersections along the proposed alignment;</li> <li>(b) intersection performance analysis of key intersections using SIDRA (or an equivalent traffic modelling software) considering scenarios of 2020, 2026, 2036 and the year of completion of the Moorebank Avenue Realignment. A sensitivity test should be undertaken for the feasible redistribution of the Moorebank Intermodal Terminal traffic as a result of the Cambridge Avenue Upgrade project;</li> <li>(c) forecast travel demand and traffic volumes generated by the operation of the project and other surrounding developments (light and heavy vehicles);</li> <li>(d) travel time impacts;</li> <li>(e) traffic signal warrant assessment and justifications for all proposed signalised intersections in accordance with the requirements set out in the TfNSW Traffic Signal Design Guidelines;</li> <li>(f) performance of key interchanges and intersections undertaking a level of service analysis at key locations;</li> <li>(g) impacts on cyclists and pedestrian access and safety;</li> <li>(h) property and business access and on street parking (where relevant); and</li> <li>(i) an explanation for the scope of the modelled area, including justification of the nominated boundaries.</li> </ul>	<p>Guide to Traffic Generating Developments Version 2.2 (RTA, 2002)</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 3.0 (TfNSW, 2013)</a></p> <p>Sydney's Cycling Future 2013</p> <p>Sydney's Walking Future 2013</p> <p>Sydney's Bus Future 2013</p>

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<p><b>3. Noise and Vibration</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.</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>	<ol style="list-style-type: none"> <li>1. Assess construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines, including activities with the proposed alignment and activities at ancillary facilities, and vehicle movements associated with the proposal, including haulage vehicles. The assessment must identify sensitive receivers and assess construction noise/vibration generated by representative construction scenarios focusing on high noise generating works. Where work hours outside of standard construction hours are proposed, clear justification and detailed assessment of these work hours must be provided, including alternatives considered and mitigation measures proposed.</li> <li>2. Demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.</li> <li>3. Impacts to the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage).</li> <li>4. An assessment of cumulative impacts associated with any existing development and any developments having been granted development consent, but which have not commenced.</li> </ol>	<p>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC, 1990)</p> <p>Assessing Vibration: a technical guideline (DEC, 2006)</p> <p>German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures</p> <p>Interim Construction Noise Guideline (DECC, 2009)</p> <p><a href="#">Noise Policy for Industry (EPA, 2017)</a></p> <p><a href="#">Rail Infrastructure Noise Guideline (EPA, 2013)</a></p> <p><a href="#">NSW Road Noise Policy (DECCW, 2011)</a></p> <p>Development Near Rail Corridors and Busy Roads – Interim guideline (DoP, 2008)</p> <p>Noise Mitigation Guideline (RMS, 2015)</p> <p>Noise Criteria Guideline (RMS, 2015)</p>
<p><b>4. Soils and Contamination</b></p> <p>The environmental values of land, including 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>	<ol style="list-style-type: none"> <li>1. Verify the risk of acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) within, and in the area likely to be impacted by, the project.</li> <li>2. Assess the impact of the project on acid sulfate soils (including impacts of acidic runoff offsite) in accordance with the current guidelines.</li> <li>3. Assess whether the land is likely to be contaminated 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, document how the assessment and/or remediation would be undertaken in accordance with current guidelines.</li> <li>4. Assess the impacts on soil and land resources (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>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>



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		<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> <p>Other guidelines made or approved under section 105 of the <i>Contaminated Land Management Act 1997</i></p> <p>Acid Sulfate Soils Assessment Guidelines (DoP, 2008)</p> <p>Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee, 1998)</p>
<p><b>5. Water - Quality</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 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>	<ol style="list-style-type: none"> <li>1. Identify 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;</li> <li>2. Demonstrate how construction and operation of the project will, to the extent that the project can influence: <ol style="list-style-type: none"> <li>(a) where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and</li> <li>(b) where the NSW WQOs are not currently being met, activities will work toward their achievement over time.</li> </ol> </li> <li>3. Justify, if required, why the WQOs cannot be maintained or achieved over time.</li> <li>4. Identify and estimate the quality and quantity of pollutants that may be discharged and an analysis of the likely nature and degree of impact that any discharge(s) may have on the receiving environment.</li> <li>5. Identify the rainfall event that water quality protection measures will be designed to cope with.</li> </ol>	<p>NSW Water Quality and River Flow Objectives at <a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a></p> <p>Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006)</p> <p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018) at <a href="http://www.waterquality.gov.au/anz-guidelines">www.waterquality.gov.au/anz-guidelines</a></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</p>

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	<ol style="list-style-type: none"> <li>Demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented.</li> <li>Identify sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments.</li> <li>Identify proposed monitoring and indicators of surface and groundwater quality.</li> </ol>	<p>Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)</p> <p>Guidelines for controlled activities on waterfront land (DPI 2018)</p>
<p><b>6. Water - Hydrology</b></p> <p>Long term impacts on surface water and groundwater hydrology are minimised. The environmental values of nearby, connected and affected water sources, groundwater and dependent ecological systems are maintained (where values are achieved) or improved and maintained (where values are not achieved).</p> <p>Sustainable use of water resources.</p>	<ol style="list-style-type: none"> <li>Describe any surface and groundwater resource (including reliance by users and for ecological purposes) likely to be impacted by the project, including stream orders, as per the BAM.</li> <li>Identify an adequate and secure water supply for the life of the project.</li> <li>Prepare a water balance for ground and surface water for construction.</li> <li>Assess (and model if appropriate) the impact of the construction and operation of the project (both built elements and discharges) on surface and groundwater hydrology in accordance with the current guidelines.</li> <li>Identify any requirements for baseline monitoring of hydrological attributes.</li> </ol>	<p>Biodiversity Assessment Method (OEH, 2017)</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>Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012)</p> <p>NSW Aquifer Interference Policy (2012)</p>
<p><b>7. 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>Assess the impacts of the proposed development on flood behaviour, including: <ol style="list-style-type: none"> <li>any detrimental increases in the potential flood affectation of other properties, assets and infrastructure;</li> <li>consistency (or inconsistency) with applicable Council floodplain risk management plans;</li> <li>compatibility with the flood hazard of the land;</li> <li>compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land;</li> <li>downstream velocity and scour potential;</li> <li>impacts the development may have upon existing community emergency management arrangements for flooding. These matters must be discussed with the State Emergency Services and Council;</li> <li>any adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the proposal;</li> <li>any direct or indirect increase in erosion, siltation, destruction of riparian</li> </ol> </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>

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	<p>vegetation or a reduction in the stability of river banks or watercourse;</p> <p>(b) whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with SES and the local Council;</p> <p>(c) emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event; and</p> <p>(d) any impacts the development may have on social and economic costs to the community as a consequence of flooding.</p> <p>2. Describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of 5% Annual Exceedance Probability (AEP) flood level, 1% AEP flood level and the probable maximum flood, or an equivalent extreme event.</p> <p>3. Model the effect of the proposed development (including fill) on the flood behaviour under current flood behaviour for a range of design events as identified above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.</p> <p>4. Modelling in the EIS must consider and document:</p> <p>(a) existing local council flood studies in the area and examine consistency to the flood behaviour document in these studies;</p> <p>(b) the impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood;</p> <p>(c) impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories; and</p> <p>(d) relevant provision of the <i>NSW Floodplain Development Manual 2005</i>.</p>	
<p><b>8. 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 items of environmental heritage and</p>	<p>1. Direct and/or indirect impacts (including cumulative impacts) to the significance of:</p> <p>(a) Aboriginal places, objects and cultural heritage values, as defined under the <i>National Parks and Wildlife Act 1974</i> and in accordance with the principles and methods of assessment identified in the current guidelines;</p> <p>(b) Aboriginal places of heritage significance, as defined in the Standard</p>	<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>

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<p>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>	<p>Instrument – Principal Local Environmental Plan;</p> <p>(c) environmental heritage, as defined under the <i>Heritage Act 1977</i>;</p> <p>(d) items listed on the State, National and World Heritage lists;</p> <p>(e) heritage items and conservation areas identified in environmental planning instruments applicable to the project area.</p> <p>2. Where impacts to State or locally significant heritage items are identified, the assessment must:</p> <p>(a) include a significance assessment, a state of heritage impact for all heritage items and historical archaeological assessment;</p> <p>(b) consider the conservation policies of any relevant conservation management plan;</p> <p>(c) consider impacts to the item caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment, drainage infrastructure, contamination remediation and ancillary facilities;</p> <p>(d) outline measures to avoid and minimise those impacts during construction and operation in accordance with the current guidelines; and</p> <p>(e) be undertaken by a suitably qualified heritage consultant(s) and/or historical archaeologist (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria)</p> <p>3. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW 2010).</p> <p>4. Impacts to Aboriginal objects and/or places must be assessed and documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation must be undertaken with Aboriginal people in accordance with the <i>Aboriginal Cultural Heritage Consultation requirements for proponents</i> (DECCW, 2010). The ACHAR must:</p> <p>(a) document the outcomes of consultation with Aboriginal people and outlines measures proposed to mitigate impacts, and document the significance of cultural heritage values for Aboriginal people who have a cultural association with the land;</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>Criteria for the assessment of excavation directors (NSW Heritage Council, 2011)</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</p>

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	<ul style="list-style-type: none"> <li>(b) identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the project;</li> <li>(c) document the outcomes of the archaeological surface survey and test excavation;</li> <li>(d) assess and document impacts on Aboriginal cultural heritage values and demonstrate attempts to avoid impacts upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the AHIMS Registrar; and</li> <li>(e) outline procedures to be followed if Aboriginal objects are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts.</li> </ul>	
<p><b>9. Design, Place and Movement</b> The project is well-designed and enhances the environment where it is located, including improved accessibility and connectivity for communities and public spaces.</p>	<ul style="list-style-type: none"> <li>1. A design led process that is informed, collaborative and iterative, which:               <ul style="list-style-type: none"> <li>(a) Utilises good design processes (such as Design Excellence and Design Review);</li> <li>(b) utilises design experts and multidisciplinary teams;</li> <li>(c) considers designing with Country; and</li> <li>(d) involves the community, user groups and other stakeholders.</li> </ul> </li> <li>2. Identify place design principles that are reflective of the design objectives in Better Placed, including a focus on:               <ul style="list-style-type: none"> <li>(a) fit – contextually, local and of its place;</li> <li>(b) performance – sustainable, adaptable and durable;</li> <li>(c) community – inclusive, connected, accessible and diverse;</li> <li>(d) people – safe, comfortable and liveable (such as crime prevention through environmental design);</li> <li>(e) working- functional, efficient and fit for purpose;</li> <li>(f) value – creating and adding value; and</li> <li>(g) look and feel – engaging, inviting and attractive.</li> </ul> </li> <li>3. Include and illustrate place designs, actions and outcomes for the project that protect and facilitate improvements to the built environment, including in relation to:               <ul style="list-style-type: none"> <li>(a) public space (including open space);</li> </ul> </li> </ul>	<p>Better Placed – An integrated design policy for built environment of New South Wales (Government Architect NSW, 2017)</p> <p>Better Placed – Aligning Movement and Place – Outline for understanding places in relation to movement infrastructure (Government Architect of NSW, 2019)</p> <p>NSW State Design Review Panel Pilot Program (Government Architect, 2018)</p> <p>Sydney Green Grid – Spatial Framework and Project Opportunities (Tyrrell Studio and Office of the Government Architect 2017)</p> <p>NSW State Design Review Panel Pilot Program (Government Architect, 2018).</p> <p>Greener Places – Establishing an urban Green Infrastructure policy for New South Wales</p>

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	<p>(b) active and public transport; and (c) views and vistas.</p> <p>This should address maintenance of infrastructure, place and residual land; and processes to refine design (as per point 1).</p> <p>1. The provision of visual representations of the project from key locations to illustrate the project.</p> <p>4. Identify green infrastructure design principles that are reflective of the principles in Greener Placed and The Sydney Green Grid.</p> <p>5. Include and illustrate green infrastructure designs, actions and outcomes for the project including in relation to:</p> <p>(a) green infrastructure, including how the designs do not preclude future provision of open space that supports recreation, biodiversity and waterway health;</p> <p>(b) how the project will achieve a net increase in tree numbers and canopy within proximity of the impacted area (this relates to the number of trees to be cleared by the project (a tree is defined by Australian Standard 4970) that will not be covered by a biodiversity offset strategy;</p> <p>(c) the use of local provenance species (trees, shrubs and groundcovers) propagated from locally source seeds from the impacted native vegetation communities (or from those that once existed).</p>	<p>(Government Architect NSW – Draft for discussion, 2017)</p> <p>Destination Management Plan (Liverpool City Council)</p>
<p><b>10. Air Quality</b></p> <p>The project is designed, constructed and operated in a manner that minimises air quality impacts (including nuisance dust and odour) to minimise risks to human health and the environment to the greatest extent practicable.</p>	<p>1. An air quality impact assessment (AQIA) for construction and operation of the project in accordance with the current guidelines.</p> <p>2. Ensure the AQIA also includes the following:</p> <p>(a) demonstrated ability to comply with the relevant regulatory framework, specifically the <i>Protection of the Environment Operations Act 1997</i> and the <i>Protection of the Environment Operations (Clean Air) Regulation (2010)</i>; and</p> <p>(b) a cumulative local and regional air quality impact assessment.</p>	<p>Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2017)</p> <p>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2007)</p> <p>Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)</p>
<p><b>11. Social</b></p> <p>The project minimises adverse social impacts and capitalises on opportunities</p>	<p>1. Potential social impacts of the project from the points of view of the affected community/ies and other relevant stakeholders, i.e. how they expect to experience the project.</p>	<p>Social Impact Assessment Guideline (DPE, 2017)</p>

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
potentially available to affected communities.	<ol style="list-style-type: none"> <li>2. How potential environmental changes in the locality may affect people's (including, but not limited to):               <ol style="list-style-type: none"> <li>(a) community;</li> <li>(b) access to and use of infrastructure, services, and facilities;</li> <li>(c) culture;</li> <li>(d) decision-making systems; and</li> <li>(e) fears and aspirations, as relevant and considering how different groups may be disproportionately affected.</li> </ol> </li> <li>3. Identify actions and outcomes that address both negative and positive social impacts.</li> </ol>	
<p><b>12. Environmentally Sensitive Lands and Processes</b></p> <p>The project is designed, constructed and operated to avoid or minimise impacts on protected and sensitive lands.</p> <p>The project is designed, constructed and operated to avoid or minimise future exposure to coastal hazards and processes.</p>	<ol style="list-style-type: none"> <li>1. Environmentally sensitive land and processes (and the impact of processes on the project) including, but not limited to:               <ol style="list-style-type: none"> <li>(a) protected areas (including land and water) managed by Environment, Energy and Science Group (EESG) and/or Regions, Industry, Agriculture &amp; Resources, (RIAR) of DPIE under the <i>National Parks and Wildlife Act 1974</i> and the <i>Marine Estate Management Act 2014</i>;</li> <li>(b) Key Fish Habitat as mapped and defined in accordance with the FM Act;</li> <li>(c) waterfront land as defined in the <i>Water Management Act 2000</i>;</li> <li>(d) land or waters identified as Critical Habitat under the FM Act or EPBC Act or areas of outstanding biodiversity value under the BC Act; and</li> <li>(e) biodiversity stewardship sites, private conservation lands and other lands identified as offsets.</li> </ol> </li> </ol>	<p>Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)</p> <p>Revocation, Re-categorisation and Road Adjustment Policy (OEH, 2012)</p> <p>Guidelines for controlled activities on waterfront land (DPI 2012)</p>