

Secretary's Environmental Assessment Requirements

Section 115Y of the *Environmental Planning and Assessment Act 1979*

Application Number	SSI 8863
Proposal	The Western Harbour Tunnel and Warringah Freeway Upgrade would comprise: <ul style="list-style-type: none">• a new crossing of Sydney Harbour involving twin tolled motorway tunnels connecting WestConnex at Rozelle and the existing Warringah Freeway at North Sydney (the Western Harbour Tunnel); and• Upgrade and integration works along the existing Warringah Freeway, including connections to the Beaches Link and Gore Hill Freeway Connection project (the Warringah Freeway Upgrade).
Location	Western Harbour Tunnel – Land generally located between Rozelle and Cammeray, including the suburbs of Rozelle, Balmain, Birchgrove, Waverton, McMahons Point, North Sydney Neutral Bay, Crows Nest and Cammeray Warringah Freeway Upgrade – Land generally located between Milsons Point and Naremburn, including the suburbs of Milsons Point, Kirribilli, North Sydney, Neutral Bay, Cammeray, Crows Nest and Naremburn
Proponent	Roads and Maritime Services
Date of Issue	15 December 2017

General SEARs

Desired Performance Outcome	Requirement	Current Guidelines ¹
<p>1. Environmental Impact Assessment Process</p> <p>The process for assessment of the proposal is transparent, balanced, well focussed and legal.</p>	<ol style="list-style-type: none"> 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). 2. It is the Proponent’s responsibility to determine whether the project needs to be referred to the Commonwealth Department of the Environment and Energy for an approval under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). 3. The onus is on the Proponent to ensure legislative requirements relevant to the project are met. 	<p><u>EPBC Act Environment Assessment Process</u> (SEWPAC, 2010)</p>
<p>2. Environmental Impact Statement</p> <p>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 environmental, social and economic impact, including its cumulative impacts.</p>	<ol style="list-style-type: none"> 1. The EIS must include, but not necessarily be limited to, the following: <ol style="list-style-type: none"> (a) an executive summary; (b) a description of the project and all components and activities (including ancillary components and activities) required to construct and operate it, including: <ul style="list-style-type: none"> – the proposed route; – design of the tunnels, interchanges (inclusive of tunnel portals and entry and exit ramps), road user, pedestrian and cyclist facilities, and lighting; – surface road upgrade works, including road widening, intersection treatment and grade separation works, property access, parking, pedestrian and cyclist facilities (including appropriate locations for overbridges) and public transport facilities; – ancillary infrastructure and operational facilities, such as operational and maintenance facilities, ventilation structures and systems, and fire and emergency services and infrastructure for the proposal, including (if required) additional infrastructure (such as tolling infrastructure); – location and operational requirements of construction ancillary facilities and access; – land use changes as a result of the proposal and the acquisition of privately owned, Council and Crown lands, and impacts to Council and Crown lands; and – the relationship and/or integration of the project with existing and proposed² public and freight transport services; (c) a statement of the objective(s) of the project, (d) a summary of the strategic need for the project with regard to its State significance and relevant State Government policy; (e) an analysis of any feasible alternatives to the project³; 	

¹ Guidelines listed are the current list of guidelines that may be applicable to a CSSI project. It is the Proponents responsibility to identify, and justify, which guidelines have been applied to a specific project.

² Proposed – as identified in relevant State strategies and the like.

³ Alternatives to a project are different projects which would achieve the same project objective(s) including the consequences of not carrying out the project. For example, alternatives to a road project may be a rail project in the same area and alternate routes for the road, or a combination of these alternatives.

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	<p>(f) a description of feasible options within the project⁴, including:</p> <ul style="list-style-type: none"> – alternative methods considered for the construction of the project, including the tunnels; and – staging of the proposal; <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 to, and options(s) within, the project were selected, including:</p> <ul style="list-style-type: none"> – details of the short-listed route and tunnel options considered, and the criteria that was considered in the selection of the preferred route and tunnel design; – details of the alternative construction methods that were considered for tunnel construction, particularly those areas spanning Sydney Harbour; – the alternative tunnel design and ventilation options considered to meet the air quality criteria for the proposal; and – a justification for the preferred proposal taking into consideration the objects of the <i>Environmental Planning and Assessment Act 1979</i>; <p>(h) 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>(i) a demonstration of how the project design has been developed to avoid or minimise likely adverse impacts during construction and operation of the project;</p> <p>(j) the identification and assessment of key issues as provided in the ‘Assessment of Key Issues’ performance outcome;</p> <p>(k) a statement of the outcome(s) the proponent will achieve for each key issue;</p> <p>(l) 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>(m) consideration of the interactions between mitigation measures, between impacts and between measures and impacts;⁵</p> <p>(n) identification of other environmental impacts (such as protected and sensitive lands, sedimentation and erosion and impacts to water front land) and proposed measures for managing and/or mitigating the level of impact;</p> <p>(o) an assessment of the cumulative impacts of the project taking into account other projects that have been approved but where construction has not commenced, projects that have commenced</p>	

⁴ 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 ventilation outlet.

⁵ 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>construction, and projects that have recently been completed;</p> <p>(p) statutory context of the project as a whole, including:</p> <ul style="list-style-type: none"> - how the project meets the provisions of the EP&A Act and EP&A Regulation; and - a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out; <p>(q) a chapter that synthesises the environmental impact assessment and provides:</p> <ul style="list-style-type: none"> - a succinct but full description of the project for which approval is sought; - 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 project; - a compilation of the impacts of the project that have not been avoided; - 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; - a compilation of the outcome(s) the proponent will achieve; and - 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 <p>(r) 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 proposal. Relevant information must be succinctly summarised in the EIS and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.</p>	

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<p>3. Assessment of Key Issues*</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 CSSI project application and by the Department in the SEARs. 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 CSSI projects.</p>	<ol style="list-style-type: none"> 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. 2. For each key issue the Proponent must: <ol style="list-style-type: none"> (a) describe the biophysical and socio-economic environment, as far as it is relevant to that issue, including adequate baseline data, in terms of temporal, spatial and parameters monitored; (b) describe the legislative and policy context, as far as it is relevant to the issue; (c) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence of the impact (comprehensive risk assessment), and the cumulative impacts of: a) concurrent project construction activities; and b) proposed and approved projects (where information is available at the time of writing); (d) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); (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 (f) detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures. 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>4. Consultation</p> <p>The project is developed with meaningful and effective engagement during project design and delivery.</p>	<ol style="list-style-type: none"> 1. The project must be informed by consultation, including with relevant local, State and Commonwealth government agencies (including the Harbour Master where disturbance of seabeds, shipping channel closures or marine movement of materials/spoil are proposed), infrastructure and service providers, special interest groups (including Local Aboriginal Land Councils, Aboriginal stakeholders, and pedestrian and bicycle user groups), affected landowners, businesses and the community. 2. The Proponent must document the consultation process, and demonstrate how the project has responded to the inputs received. 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. 4. The Proponent must assess the potential for complaint fatigue to occur during construction of the project and describe how mitigation measures, complaint handling procedures and community consultation 	

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	mechanisms will mitigate complaint fatigue. The assessment must consider the cumulative impacts from the project and other major projects in the local area.	

Key Issue SEARs

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
<p>1. Transport and Traffic</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>1. The Proponent must assess construction transport and traffic (vehicle, marine, pedestrian and cyclists) impacts, including, but not necessarily limited to:</p> <ul style="list-style-type: none"> (a) a considered approach to route identification and scheduling of marine and land transport movements, particularly outside standard construction hours; (b) the number, frequency and size of construction related vehicles (passenger, marine, commercial and heavy vehicles, including spoil management movements); (c) construction worker parking; (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 and parking arrangements including internal Port roads and land if utilised during construction); (e) access constraints and impacts on public transport, pedestrians and cyclists; (f) how construction of the project affects the capacity of, and the need to close, divert or otherwise reconfigure elements of, the road, cycle and pedestrian network; (g) details of how construction and scheduling of works are to be coordinated in regard to public events and cumulative traffic impacts resulting from concurrent work on the project and other major projects, under or preparing for or commencing construction in the vicinity of the proposal; (h) alternatives to road transport of construction spoil including marine and rail options as well as potential re-use in existing land reclamation 	<p>Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2007)</p> <p>Guide to Traffic Generating Developments Version 2.2 (RTA, 2002)</p> <p>Cycling Aspects of Austroads Guides (Austroads, 2014)</p> <p>NSW Bicycle Guidelines v 1.2 (RTA, 2005)</p> <p>Planning Guidelines for Walking and Cycling (DIPNR, 2004)</p> <p>NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)</p>

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	<p>areas or in association with Resource Recovery Exceptions (if obtained from the EPA) to minimise traffic impacts on the road network;</p> <ul style="list-style-type: none"> (i) the likely risks of the project to public safety, paying particular attention to pedestrian safety and users of Sydney Harbour; and (j) impacts to water based traffic and shipping channels on Sydney Harbour. <p>2. The Proponent must assess and model the operational transport impacts of the project including, but not necessarily limited to:</p> <ul style="list-style-type: none"> (a) forecast travel demand and traffic volumes (expressed in terms of total numbers and heavy and light vehicle numbers) for the project and the surrounding road, cycle and public transport network, including potential shifts of traffic movements on alternate routes outside the proposal area (such as toll avoidance) and impact of permanent street closures directly attributable to the SSI; (b) accessibility impacts in commercial centres within the vicinity of the project; (c) travel time analysis; (d) performance of key interchanges and intersections by undertaking a level of service analysis at key locations; (e) wider transport interactions (local and regional roads, cycling, public and freight transport), taking into account the Sydney City Centre Access Strategy and planned future urban release areas such as the Bays Precinct; (f) induced traffic and operational implications for existing and proposed public transport (particularly with respect to strategic bus corridors and bus routes and permanent closure/relocation of bus stops) and consideration of opportunities to improve public transport; (g) impacts on cyclists and pedestrian access and safety; (h) property and business access and on street parking; and (i) an explanation for the scope of the modelled area, including justification of the nominated boundaries. 	

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<p>2. Air Quality</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>	<ol style="list-style-type: none"> 1. The Proponent must undertake an air quality impact assessment (AQIA) for construction and operation of the project in accordance with the current guidelines. 2. The Proponent must ensure the AQIA also includes the following: <ol style="list-style-type: none"> (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>; (b) the identification of all potential sources of air pollution including details of the location, configuration and design of all potential emission sources including ventilation systems and tunnel portals; (c) a review of vehicle emission trends and an assessment that uses or sources best available information on vehicle emission factors; (d) an assessment of impacts (including human health impacts) from potential emissions of PM₁₀, PM_{2.5}, CO, NO₂ and other nitrogen oxides and volatile organic compounds (eg BTEX) including consideration of short and long term exposure periods; (e) consider the impacts from the dispersal of these air pollutants on the ambient air quality along the proposal route, proposed ventilation outlets and portals, surface roads, ramps and interchanges and the alternative surface road network; (f) a qualitative assessment of the redistribution of ambient air quality impacts compared with existing conditions, due to the predicted changes in traffic volumes; (g) assessment of worst case scenarios for in-tunnel and ambient air quality, including a range of potential ventilation scenarios and range of traffic scenarios, including worst case design maximum traffic flow scenario (variable speed) and worst case breakdown scenario, and discussion of the likely occurrence of each; (h) details of the proposed tunnel design and mitigation measures to address in-tunnel air quality and the air quality in the vicinity of portals and any mechanical ventilation systems (ie ventilation outlets and air inlets) including details of proposed air quality monitoring (including frequency and criteria); (i) a demonstration of how the project and ventilation design ensures 	<p>Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2016)</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>In-Tunnel Air Quality (Nitrogen Dioxide) Policy (Advisory Committee on Tunnel Air Quality, 2016)</p> <p>Optimisation of the Application of GRAL in the Australian Context (Advisory Committee on Tunnel Air Quality, 2017)</p>

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	<p>that concentrations of air emissions meet NSW, national and international best practice for in-tunnel and ambient air quality, and taking into consideration the approved criteria for the M4 East project, New M5 project and the In-Tunnel Air Quality (Nitrogen Dioxide) Policy;</p> <p>(j) details of any emergency ventilation systems, such as air intake/exhaust outlets, including protocols for the operation of these systems in emergency situations, potential emission of air pollutants and their dispersal, and safety procedures;</p> <p>(k) details of in-tunnel air quality control measures considered, including air filtration, and justification of the proposed measures or for the exclusion of other measures;</p> <p>(l) a description and assessment of the impacts of potential emissions sources relating to construction, including details of the proposed mitigation measures to prevent the generation and emission of dust (particulate matter and TSP) and air pollutants (including odours) during the construction of the proposal, particularly in relation to ancillary facilities (such as concrete batching plants), dredge and tunnel spoil handling and storage at Glebe Island and White Bay, the use of mobile plant, stockpiles and the processing and movement of spoil; and</p> <p>(m) a cumulative assessment of the in-tunnel, local and regional air quality impacts from the operation of the project and due to the operation of and potential continuous travel through motorway tunnels and surface roads.</p>	
<p>3. Health and Safety</p> <p>The project avoids or minimises any adverse health impacts arising from the project.</p> <p>The project avoids, to the greatest extent possible, risk to public safety.</p>	<ol style="list-style-type: none"> 1. The Proponent must assess the potential health risks from the construction and operation of the project. 2. The assessment must: <ol style="list-style-type: none"> (a) describe the current known health status of the potentially affected population; (b) describe how the design of the proposal minimises adverse health impacts and maximises health benefits; (c) assess human health risks from the operation and use of the tunnel under a range of conditions, including worst case operating conditions 	<p>Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards, Commonwealth of Australia (enHealth, 2012)</p> <p>Air Quality in and Around Traffic Tunnels (NHMRC, 2008)</p> <p><u>Methodology for Valuing the Health Impacts of Changes in Particle Emissions (EPA, 2013)</u></p>

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	<p>and the potential length of motorway tunnels in Sydney;</p> <p>(d) human health risks and costs associated with the construction and operation of the proposal, including those associated with air quality, odours, noise and vibration (including residual noise following application of mitigation measures), construction fatigue and social impacts (including from acquisitions) on the adjacent and surrounding areas, as well as opportunity costs (such as those from social infrastructure and active transport impacts)during the construction and operation of the proposal;</p> <p>(e) include both incremental changes in exposure from existing background pollutant levels and the cumulative impacts of project specific and existing pollutant levels at the location of the most exposed receivers and other sensitive receptors (including public open space areas, child care centres, schools, hospitals and aged care facilities);</p> <p>(f) assess the likely risks of the project to public safety, paying particular attention to pedestrian safety, subsidence risks, bushfire risks and the handling and use of dangerous goods;</p> <p>(g) assess the opportunities for health improvement;</p> <p>(h) assess the distribution of the health risks and benefits;</p> <p>(i) include a cumulative human health risk assessment inclusive of in-tunnel, local and regional impacts due to the operation of and potential continuous travel through motorway tunnels and surface roads.</p>	<p><u>Health Impact Assessment: A practical guide</u> (NSW Health, 2007)</p> <p>Health Impact Assessment Guidelines, Commonwealth Department of Health and Aged Care (enHealth, 2002)</p> <p>SEPP No. 33 - Hazardous and Offensive Development</p>
<p>4. Noise and Vibration - Amenity</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</p>	<ol style="list-style-type: none"> The Proponent must assess construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. The assessment must take into consideration and address the redistribution of traffic (including on local feeder roads) and operational plant and equipment, and must include consideration of impacts to sensitive receivers and include consideration of sleep disturbance and, as relevant, the characteristics of noise and vibration (for example, low frequency noise). An assessment of construction noise and vibration impacts must address: <ol style="list-style-type: none"> the nature of construction activities (including transport, tonal or 	<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>Interim Construction Noise Guideline (DECCW, 2009)</p> <p>Noise Policy for Industry (EPA, 2017)</p> <p>Construction Noise and Vibration Guideline (RMS, 2016)</p> <p><u>NSW Road Noise Policy (DECCW, 2011)</u></p>

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and well-being of the community.	<p>impulsive noise-generating works and the removal of operational noise barriers, as relevant);</p> <p>(b) the intensity and duration of noise and vibration impacts (both air and ground borne. This must include consideration of extended construction impacts associated with ancillary facilities (and the like) and construction fatigue;</p> <p>(c) the identification of receivers, existing and likely, during the construction period;</p> <p>(d) the nature, sensitivity and impact to receivers;</p> <p>(e) the need to balance timely conclusion of noise and vibration-generating works with periods of receiver respite, and other factors that may influence the timing and duration of construction activities (such as traffic management);</p> <p>(f) the potential for works outside standard construction hours, including predicted levels, exceedances, number of potentially affected receivers, and justification for the activity in terms of the <i>Interim Construction Noise Guideline</i> (DECCW, 2009);</p> <p>(g) a cumulative noise and vibration assessment inclusive of impacts from the project (including concurrent project construction activities);</p> <p>(h) a cumulative noise and vibration assessment of the impacts from the project and the construction of other relevant development in the vicinity of the proposal;</p> <p>(i) details and analysis of the effectiveness of mitigation measures to adequately manage identified impacts, including cumulative impacts as identified in (g) and (h) and a clear identification of residual noise and vibration following application of mitigation measures; and</p> <p>(j) a description of how community preferences have been taken into account in the design of mitigation measures and consider tailored mitigation, management and communication strategies for vulnerable community members.</p> <p>3. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.</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><u>NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)</u></p>

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<p>5. Noise and Vibration - Structural</p> <p>Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise 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 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"> 1. The Proponent must assess construction and operation noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. The assessment must include consideration of impacts to the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage) as well as property in general. 2. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required. 	<p>German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures</p> <p>Assessing vibration: a technical guideline (DEC, 2006)</p>
<p>6. Biodiversity</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 remaining impacts of project construction and operation.</p>	<ol style="list-style-type: none"> 1. Biodiversity impacts related to the proposal are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). 2. The BDAR must include information in the form detailed in the <i>Biodiversity Conservation Act 2016</i> (s. 6.12), <i>Biodiversity Conservation Regulation 2017</i> (s 6.8) and <i>Biodiversity Assessment Method</i> (BAM) including details of the measures proposed to address the offset obligation as follows: <ol style="list-style-type: none"> (a) the total number and classes of biodiversity credits required to be retired for the developments/project; (b) the number of classes of like-for-like biodiversity credits proposed to be retired; (c) the number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; (d) any proposal to fund a biodiversity conservation action; and (e) any proposal to make a payment to the Biodiversity Conservation Fund. 	<p><u>Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013</u> (DPI, 2013)</p> <p><u>Threatened Species Survey and Assessment Guidelines</u></p> <p><u>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</u> (NSW Fisheries, 2003)</p> <p><u>NSW Sustainable Design Guidelines Version 3.0</u> (TfNSW, 2013)</p> <p>Aquatic Ecology in Environmental Impact Assessment – EIA Guideline (Marcus Lincoln Smith 2003)</p>

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	<ol style="list-style-type: none"> 3. If requesting the application of the variation rules, the BDAR must contain details of what reasonable steps have been taken to attempt to obtain the required like-for-like biodiversity credits. 4. 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 s. 6.10 of the <i>Biodiversity Conservation Act 2016</i>. 5. In accordance with section 9.1 and 9.2 of the BAM the BDAR must assess all direct and indirect impacts of the proposal on native vegetation, threatened ecological communities and threatened species habitat. 6. Impacts on biodiversity values that cannot be assessed using the BAM must also be otherwise assessed. The values include: <ol style="list-style-type: none"> (a) marine mammals; (b) wandering seabirds; and (c) matters of national significance listed under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>. 7. Species declared as threatened under the <i>Biodiversity Conservation Act 2016</i> and recorded recently (since 1990) within approximately 1.5 kilometres of the project's development corridor should be considered as likely to be affected by the proposal. 	
<p>7. Place Making and Urban Design</p> <p>The project design complements the visual amenity, character and quality of the surrounding environment.</p> <p>The project contributes to the accessibility and connectivity of communities.</p>	<ol style="list-style-type: none"> 1. The Proponent must identify how functional 'place' outcomes of public benefit will be achieved, including design principles and strategies that: <ol style="list-style-type: none"> (a) consider areas identified for future urban renewal; (b) capitalise on reduced traffic volumes and the reduction of traffic permeation, particularly in and around commercial and community centres; (c) avoid locating infrastructure, including ancillary facilities, adjoining residential areas and other sensitive receivers, and justify where this cannot be achieved; (d) achieve high quality landscaping, streetscapes, architecture and design; 	<p>Better Placed – an integrated design policy for the built environment in NSW (NSW Government Architect, 2017)</p> <p>AS4282-1997 Control of the obtrusive effects of outdoor lighting</p> <p>Beyond the Pavement: RTA urban design policy, procedures and design principles (RMS, 2014)</p> <p>Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2012)</p>

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	<ul style="list-style-type: none"> (e) identify urban design strategies and opportunities that will enhance healthy, cohesive and inclusive communities, including in relation to accessibility and connectivity; (f) consider resulting residual land treatments, and demonstrate how the proposed hard and soft urban design elements of the proposal would be consistent with the existing and desired future character of the area traversed or affected by the proposal; (g) identify opportunities to utilise surplus or residual land, particularly for the provision of community space (passive and recreational) and utilise key structures (such as ventilation outlets) for multiple uses i.e. integration with other structures; and (h) explore the use of Crime Prevention Through Environmental Design (CPTED) principles during the design development process, including natural surveillance, lighting, walkways, signage and landscape. <p>2. The Proponent must describe the accessibility elements of the proposal including relevant accessibility legislation and guidelines, including:</p> <ul style="list-style-type: none"> (a) Impacts on public transport infrastructure and services; (b) impacts on pedestrian and cyclist access and safety across and adjoining the proposal; and (c) opportunities to integrate and enhance accessibility including the provisions public and active transport infrastructure as a result of the proposal. <p>3. The Proponent must assess the visual and landscape impacts of the proposal, including ancillary infrastructure on:</p> <ul style="list-style-type: none"> (a) views and vistas; (b) streetscapes, key sites and buildings; (c) landscaping, green spaces and existing trees and tree canopy, including an assessment of likely magnitude of impacts to trees and need for removal to be undertaken by an arborist, including the provision of measures to minimise and offset impacts; (d) heritage items including Aboriginal places, environmental heritage; and areas of heritage sensitivity; and (e) the local community. 	<p>NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)</p> <p>Crime prevention and the assessment of development applications (DUAC, 2001)</p> <p>Crime Prevention through Environmental Design (CPTED) (Queensland Government, 2007)</p> <p>Disability (Access to Premises – Buildings) Standards 2010</p> <p>Technical guideline for Urban Green Cover in NSW Healthy Urban Development Checklist (NSW Health, 2009)</p> <p>Cycling Aspects of Austroads Guides (Austroads, 2014)</p> <p>NSW Bicycle Guidelines v 1.2 (RTA, 2005)</p> <p>Planning Guidelines for Walking and Cycling (DIPNR, 2004)</p> <p>Environmental Health Risk Assessment, Guidelines for assessing human health risks from environmental hazards, Commonwealth of Australia (enHealth, 2012)</p> <p>Health Impact Assessment: A practical guide (NSW Health, 2007)</p>

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	<p>4. The Proponent must provide artist impressions and perspective drawings of the proposal from key receiver locations to illustrate the proposal and its visual impacts.</p>	
<p>8. Socio-economic, Land Use and Property</p> <p>The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities.</p> <p>The project minimises impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure.</p>	<p>1. The Proponent must assess social and economic impacts (of all phases of the project) in accordance with the current guidelines (including cumulative construction and operational impacts of the proposal and other major projects in the vicinity of the project) and in consultation with relevant land owners (such as the Ports Authority of NSW and those land owners whose property is being acquired).</p> <p>2. The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users (including potential cumulative impacts associated with use of Glebe Island and White Bay in consideration of other major developments in the precinct), including amenity impacts (including from cumulative and extended construction time frames and construction fatigue), property acquisitions/adjustments, future land uses, access, relevant statutory rights, and community severance and barrier impacts resulting from the project.</p> <p>3. Where an immersed tube (IMT) method of construction is proposed for use in Sydney Harbour, the Proponent must:</p> <ul style="list-style-type: none"> (a) provide details of how reductions to current Harbour depths will be avoided; (b) provide details confirming the level of protection for the IMTs will be similar to or better than that of the existing Sydney Harbour Tunnel; (c) identify impacts to ship scheduling in consultation and agreement with the Harbour Master; (d) assess the impact to the Viva supply chain for fuel oils at Gore Cove; and (e) provide details of full mission simulation which takes in account, but is not necessarily limited to: <ul style="list-style-type: none"> i. movement and placement of the IMTs; and ii. identification of weather restrictions and towage requirements for the safe movement of seagoing ships to and from berths in Glebe Island, White Bay, Gore Cove and past proposed Project 	<p>Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013)</p> <p>Guidelines for developments adjoining land and water managed by DECCW (DECCW 2010);</p>

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	<p>work areas in Glebe Island and White Bay, and Birchgrove to Waverton.</p> <ol style="list-style-type: none"> 4. The Proponent must assess potential impacts on utilities (including communications, electricity, gas, fuel and water and sewerage) and the relocation of these utilities. 5. Where the project is predicted to impact on utilities the Proponent must undertake a utilities management strategy, identifying management options, including relocation or adjustment of the utilities. 6. A draft Community Consultation Framework must be prepared identifying relevant stakeholders, procedures for distributing information and receiving/responding to feedback and procedures for resolving stakeholder and community complaints during construction and operation. Key issues that must be addressed in the draft Framework include, but are not limited to: <ol style="list-style-type: none"> (a) traffic management (including property access, pedestrian access); (b) landscaping/urban design matters; (c) construction activities including out of hours work; and (d) noise and vibration mitigation and management. 	
<p>9. Water - Hydrology</p> <p>Long term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised.</p> <p>The environmental values of nearby, connected and affected water sources, groundwater and dependent ecological systems including estuarine and marine water (if applicable) 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"> 1. The Proponent must describe (and map) the existing hydrological regime for any surface and groundwater resource (including reliance by users and for ecological purposes and groundwater dependent ecosystems) likely to be impacted by the project, including rivers, streams, wetlands and estuaries as described in Appendix 2 of the <i>Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects</i> (OEH, 2014). 2. The Proponent must prepare a detailed water balance for ground and surface water including the proposed intake and discharge locations (including mapping of these locations), volume, frequency and duration for both the construction and operational phases of the project. 3. The Proponent must assess (and model if appropriate) the impact of the construction and operation of the project and any ancillary facilities (both 	<p>Framework for Biodiversity Assessment – Appendix 2 (OEH, 2014)</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 (DPI, 2012)</p> <p><u>NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)</u></p> <p>Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012)</p>

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	<p>built elements and discharges) on surface and groundwater hydrology in accordance with the current guidelines, including:</p> <ul style="list-style-type: none"> (a) natural processes within rivers, wetlands, estuaries, marine waters and floodplains that affect the health of the fluvial, riparian, estuarine or marine system and landscape health (such as modified discharge volumes, durations and velocities), aquatic connectivity, water-dependent fauna and flora and access to habitat for spawning and refuge; (b) impacts from any permanent and temporary interruption of groundwater flow, including the extent of drawdown, barriers to flows, implications for groundwater dependent surface flows, ecosystems and species, groundwater users and the potential for settlement; (c) changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources including the stormwater harvesting scheme implemented by North Sydney Council at the storage dam at Cammeray Golf Course; (d) direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses; (e) minimising the effects of proposed stormwater and wastewater management during construction and operation on natural hydrological attributes (such as volumes, flow rates, management methods and re-use options) and on the conveyance capacity of existing stormwater systems where discharges are proposed through such systems; and (f) measures to mitigate the impacts of the proposal and manage the disposal of produced and incidental water. <p>4. The assessment must provide details of the final landform of the sites to be excavated or modified (e.g. portals), including final void management and rehabilitation measures.</p> <p>5. The Proponent must identify any requirements for baseline monitoring of hydrological attributes.</p>	Controlled Activities on Waterfront Land (2012)

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	<p>6. The assessment must include details of proposed surface and groundwater monitoring.</p> <p>7. The Proponent must identify design approaches to minimise or prevent drainage of alluvium in the paleochannels.</p>	
<p>10. Water - Quality</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>	<p>1. The Proponent must:</p> <ul style="list-style-type: none"> (a) describe the background conditions for any surface or groundwater resource likely to be affected by the development (b) state the ambient NSW Water Quality Objectives (NSW WQO) (as endorsed by the NSW Government [see www.environment.nsw.gov.au/ieo/index.htm]) and environmental values for the receiving waters (including groundwater where appropriate) relevant to the project and that represent the community's uses and values for those receiving waters, including the indicators and associated trigger values or criteria for the identified environmental values in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government; (c) identify and estimate the quality and quantity of all 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; (d) identify the rainfall event that the water quality protection measures will be designed to cope with; (e) assess the significance of any identified impacts including consideration of the relevant ambient water quality outcomes; (f) demonstrate how construction and operation of the project (including mitigating effects of proposed stormwater and wastewater management) will, to the extent that the project can influence, ensure that: <ul style="list-style-type: none"> – where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and 	<p>NSW Water Quality and River Flow Objectives at http://www.environment.nsw.gov.au/ieo/</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 (ANZECC/ ARMCANZ, 2000)</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>

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	<ul style="list-style-type: none"> – where the NSW WQOs are not currently being met, activities will work toward their achievement over time; (g) justify, if required, why the WQOs cannot be maintained or achieved over time; (h) demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented; (i) identify sensitive receiving environments (which may include estuarine and marine waters downstream including Quarry Creek and its catchment) and develop a strategy to avoid or minimise impacts on these environments; and (j) identify proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality. <p>2. The assessment should consider the results of any current water quality studies, as available, in the project catchment.</p>	
<p>11. Flooding</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>	<p>1. The EIS must map the following features relevant to flooding as described in the <i>NSW Floodplain Development Manual 2005</i> (NSW Government, 2005) including:</p> <ul style="list-style-type: none"> (a) Flood prone land; (b) Flood planning areas, the area below the flood planning level; and (c) Hydraulic categorisation (floodways and flood storage areas). <p>2. The Proponent must assess and (model where required), the impacts on flood behaviour during construction and operation for a full range of flood events up to the probable maximum flood (taking into account sea level rise and storm intensity due to climate change) including:</p> <ul style="list-style-type: none"> (a) how the tunnel entries and cut-and-cover sections of the tunnels would be protected from flooding during construction works; (b) any detrimental increases in the potential flood affectation of the project infrastructure and other properties, assets and infrastructure; (c) consistency (or inconsistency) with applicable Council floodplain risk management plans; (d) compatibility with the flood hazard of the land; 	<p>NSW Government's Floodplain Development Manual (Department of Natural Resources, 2005)</p> <p><u>PS 07-003 New guideline and changes to section 117 direction and EP&A Regulation on flood prone land</u></p> <p><u>Practical Consideration of Climate Change - Flood risk management guideline (DECC, 2007)</u></p>

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	<ul style="list-style-type: none"> (e) compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land; (f) whether there will be adverse effect to beneficial inundation of the floodplain environment, on, or adjacent to or downstream of the site; (g) downstream velocity and scour potential; (h) 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; (i) any impacts the development may have on the social and economic costs to the community as consequence of flooding; (j) whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses; and (k) any mitigation measures required to offset potential flood risks attributable to the project (these mitigation measures must be discussed with the State Emergency Services and Council where appropriate). <p>3. The assessment should take into consideration any flood studies undertaken by local government councils, as available.</p> <p>4. The EIS must assess and model the effect of the proposed development (including fill) on current flood behaviour for the 1 in 200 and 1 in 500 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>12. Soils</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>	<ul style="list-style-type: none"> 1. The Proponent must 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. 2. The Proponent must assess the impact of the project on acid sulfate soils (including impacts of acidic runoff offsite) in accordance with the current guidelines and detail the mitigation measures proposed to minimise potential impacts. 	<p>Acid Sulfate Soils Assessment Guidelines (DoP, 2008)</p> <p>Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee, 1998)</p> <p>Managing Land Contamination: Planning Guidelines SEPP 55 –Remediation of Land, (DUAP & EPA, 1998)</p> <p>Guidelines for Consultants Reporting on Contaminated Sites (OEH, reprinted 2011)</p>

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	<ol style="list-style-type: none"> 3. The Proponent must assess whether the land and harbour sediment is likely to be contaminated and identify if remediation 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 Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines. 4. Where contaminated spoil and/or sediments are to be handled at Glebe Island and/or White Bay, the Proponent must provide details of contamination characteristics and measures to manage this spoil to avoid adverse impacts to land and water quality; 5. The Proponent must assess whether salinity is likely to be an issue and if so, determine the presence, extent and severity of soil salinity within the project area. 6. The Proponent must assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology. 7. The Proponent must 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. 8. The Proponent must assess the impact of any disturbance of contaminated groundwater and the tunnels should be designed so as to not exacerbate mobilisation of contaminated groundwater and/or prevent contaminated groundwater flow. 	<p>Guidelines for the NSW Site Auditor Scheme (DEC, 2006)</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 (http://www.environment.nsw.gov.au/salinity/solutions/urban.htm) 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> <p>Other guidelines made or approved under section 105 of the <i>Contaminated Land Management Act 1997</i></p>
<p>13. Heritage</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 Aboriginal objects and places.</p>	<ol style="list-style-type: none"> 1. The Proponent must identify and assess any direct and/or indirect impacts (including cumulative, vibration and visual impacts) to the heritage significance of listed (and nominated) heritage items inclusive of: <ol style="list-style-type: none"> (a) Aboriginal places and objects, 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; (b) Aboriginal places of heritage significance, as defined in the Standard Instrument – Principal Local Environmental Plan; 	<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>

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<p>The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of environmental heritage and Aboriginal objects and places.</p>	<ul style="list-style-type: none"> (c) environmental heritage, as defined under the <i>Heritage Act 1977</i> (including potential items of heritage value, conservation areas, open space heritage landscapes, built heritage landscapes and archaeology); (d) items listed on the State, National and World Heritage lists (including Cockatoo Island); (e) heritage items and conservation areas identified in local and regional planning environmental instruments covering the project area; and (f) marine items of potential heritage significance within Sydney Harbour, such as any shipwrecks within proximity to the Balls Head Coal Loader wharf). <p>2. Where impacts to State or locally significant heritage items or archaeology are identified, the assessment must:</p> <ul style="list-style-type: none"> (a) include a significance assessment and statement of heritage impact for all heritage items (including any unlisted places that are assessed of heritage value; (b) provide a discussion of alternative locations and design options that have been considered to reduce heritage impacts; (c) in areas identified as having potential archaeological significance, undertake a comprehensive archaeological assessment and management plan in line with Heritage Council guidelines which includes a methodology and research design to assess the impact of the works on the potential archaeological resource and to guide physical archaeological test excavations and include the results of these excavations. This is to be carried out by a suitably qualified archaeologist and is to discuss the likelihood of significant historical, maritime and Aboriginal archaeology on the site, how this may be impacted by the project, and includes measures to mitigate any impacts; (d) consider potential impacts to the Balls Head Coal Loader particularly associated with vibration and disturbance as part of the ongoing works. Due to the potential significance of this site, options to ensure that it is not impacted must be considered; 	<p>NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998)</p> <p><u>Aboriginal site recording form</u></p> <p><u>Aboriginal site impact recording form</u></p> <p><u>Aboriginal Heritage Information Management System site registration form</u></p> <p><u>Care agreement application form</u></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>

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	<ul style="list-style-type: none"> (e) consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, increased traffic, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment (as relevant); (f) provide a comparative analysis to inform the rarity and representative value of any heritage places proposed for demolition; (g) outline mitigation measures to avoid and minimise identified impacts in accordance with the current guidelines; and (h) be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria). <p>3. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, meeting the minimum qualification requirements specified in section 1.6 of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW 2010).</p>	
<p>14. Sustainability</p> <p>The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources.</p> <p>Conservation of natural resources is maximised.</p>	<ol style="list-style-type: none"> 1. The Proponent must assess the sustainability of the project in accordance with the Infrastructure Sustainability Council of Australia (ISCA) <i>Infrastructure Sustainability Rating Tool</i> and recommend an appropriate target rating for the project. 2. The Proponent must assess the project against the current guidelines including targets and strategies to improve Government efficiency in use of water, energy and transport. 	<p>NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)</p> <p>Infrastructure Sustainability Rating Tool Scorecard relating to energy and carbon for large infrastructure projects, ISCA</p>
<p>15. Waste</p> <p>All wastes generated during the construction and operation of the project are effectively stored, handled, treated, reused, recycled and/or disposed of lawfully and in a manner that protects environmental values.</p>	<ol style="list-style-type: none"> 1. The Proponent must assess predicted waste generated from the project during construction and operation, including: <ul style="list-style-type: none"> a) classification of the waste in accordance with the current guidelines; b) estimates / details of the quantity of each classification of waste to be generated during the construction of the project, including bulk earthworks and spoil balance; c) handling of waste including measures to facilitate segregation and 	<p>EPA's Waste Classification Guidelines (as in force from time to time)</p> <p>NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)</p>

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	<p>prevent cross contamination;</p> <p>d) management of waste including estimated location and volume of stockpiles;</p> <p>e) waste minimisation and reuse;</p> <p>f) lawful disposal or recycling locations for each type of waste; and</p> <p>g) contingencies for the above, including managing unexpected waste volumes.</p> <p>2. The Proponent must assess potential environmental impacts from the excavation, handling, storage on site and transport of the waste particularly with relation to sediment/leachate control, noise and dust.</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>16. Climate Change Risk</p> <p>The project is designed, constructed and operated to be resilient to the future impacts of climate change.</p>	<p>1. The Proponent must assess the risk and vulnerability of the project to climate change in accordance with the current guidelines.</p> <p>2. The Proponent must quantify specific climate change risks with reference to either the NSW Government’s climate projections at 10 km resolution (or lesser resolution if 10 km projections are not available) or equivalent projection tool (such as the Climate Futures Tool from CSIRO and BoM (attenuated for project region)) and incorporate specific adaptation actions in the design.</p>	<p>Australian Government’s Climate Change Impacts and Risk Management – A Guide for Business and Government (2006)</p> <p>AS/NZS 3100:2009 Risk Management – Principles and Guidelines</p> <p>Technical Guide for Climate Change Adaptation for the State Road Network (RMS, in draft)</p>
<p>17. Hazards</p>	<p>1. The Proponent must describe the process for assessing the risk of emissions from ventilation facilities on aircraft operations taking into consideration the requirements of the <i>Airports Act 1996</i> (Commonwealth) and the <i>Airport Regulations 1997</i>.</p>	