

# Project Approval

## Section 75J of the *Environmental Planning & Assessment Act 1979*

I approve the project application referred to in schedule 1, subject to the conditions in schedule 2.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

*SHaddad*

Sam Haddad  
Director-General

Sydney

*18<sup>th</sup> July*

2011

### SCHEDULE 1

**Application No.:**

MP 10\_0141

**Proponent:**

Ausgrid

**Approval Authority:**

Minister for Planning & Infrastructure

**Land:**

Sydney CBD

**Project:**

Sydney CityGrid Stage 2D, including:

- Construction of the 3.2 km City East Cable Tunnel (CECT) between a site on the corner of Albion Street and Riley Street, Surry Hills, and the City North Zone Substation at the northern end of the CBD, with connections to the proposed City East Substation;
- Extension of the existing City South Cable Tunnel (CSCT) by approximately 150 m between the existing Surry Hills shaft at Wade Place, Surry Hills, and the site proposed for the Riley Street sub-transmission switching station on the corner of Albion and Riley Streets, Surry Hills.

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## DEFINITIONS

<b>Act, the</b>	<i>Environmental Planning and Assessment Act, 1979.</i>
<b>Conditions of Approval</b>	The Minister's conditions of approval for the project.
<b>Council</b>	City of Sydney Council
<b>OEH</b>	Office of Environment and Heritage, formerly Department of Environment Climate Change and Water / Heritage Office
<b>Department, the</b>	Department of Planning & Infrastructure.
<b>Director-General, the</b>	Director-General of the Department of Planning & Infrastructure (or delegate).
<b>Director-General's Approval</b>	A written approval from the Director-General (or delegate) where the Director-General's Approval is required under a condition. The Director-General may ask for additional information if the approval request is considered incomplete.
<b>Director-General's Report</b>	The report provided to the Minister by the Director-General of the Department under section 75I of the EP&A Act.
<b>Dust</b>	any solid material that may become suspended in air or deposited
<b>EA</b>	<i>Sydney CityGrid Project Environmental Assessment for Stage 2D</i> prepared by EnergyAustralia and GHD and dated November 2010.
<b>EPL</b>	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act, 1997</i>
<b>Minister, the</b>	Minister for Planning & Infrastructure
<b>NOW</b>	NSW Office of Water
<b>Proponent</b>	Ausgrid (the Proponent), formerly EnergyAustralia
<b>Publicly Available</b>	Available for inspection by a member of the general public (for example available on an internet site or at a display centre).
<b>Site</b>	Land to which Major Projects Application 10_0141 applies.
<b>Preferred Project Report</b>	Sydney CityGrid Project Submissions Response and Preferred Project Report for Stage 2D prepared by EnergyAustralia and GHD and dated February 2011.

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**SCHEDULE 2**  
**PART A - ADMINISTRATIVE CONDITIONS**

**Terms of Approval**

A1. The Proponent shall carry out the project generally in accordance with:

- (a) Major Project Application 10\_0141;
- (b) Sydney CityGrid Environmental Assessment for Stage 2D (EnergyAustralia November 2010);
- (c) Stage 2D of the Sydney CityGrid Project Submissions Response and Preferred Project Report (EnergyAustralia February 2011);
- (d) the concept plan approval granted for Sydney CityGrid (08\_0075); and
- (e) the conditions of this approval.

A2. In the event of an inconsistency between:

- (a) the conditions of this approval and any document listed from condition A1(a) to A1(c) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and
- (b) any document listed from condition A1(a) to A1(c) inclusive, and any other document listed from condition A1(a) to A1(c) inclusive, the most recent document shall prevail to the extent of the inconsistency.

A3. The Proponent shall comply with any reasonable requirement(s) of the Director-General arising from the Department's assessment of:

- (a) any reports, plans or correspondence that are submitted in accordance with this approval; and
- (b) the implementation of any actions or measures contained in these reports, plans or correspondence.

**Limits of Approval**

A4. This project approval shall lapse five years after the date on which it is granted, unless the works subject of this approval have been commenced before that time.

**Statutory Requirements**

A5. The Proponent shall ensure that all licences, permits and approvals are obtained and maintained as required throughout the life of the project. No condition of this approval removes the obligation of the Proponent to obtain, renew or comply with such licences, permits or approvals. The Proponent shall ensure that a copy of this approval and all relevant environmental approvals are available on the site at all times during the project.

**Compliance**

A6. Proponent shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.

A7. The Proponent shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.

## PART B – GENERAL CONDITIONS

### Water Quality Impacts

- B1. Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997* which prohibits the pollution of waters.

### Waste Generation and Management

- B2. The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*, if such a licence is required in relation to that waste.
- B3. The Proponent shall maximise the reuse and/or recycling of waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.
- B4. The Proponent shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with *Waste Classification Guidelines (DECC, 2008)*, or any future guideline that may supersede that document and where removed from the site is only directed to a waste management facility lawfully permitted to accept the materials.

### Bunding and Spill Management

- B5. The Proponent shall store and handle all dangerous goods (as defined by the Australian Dangerous Goods Code), combustible liquids, and any other hazardous materials strictly in accordance with:
- (a) all relevant Australian Standards;
  - (b) a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund;
  - (c) *Storing and Handling Liquids: Environmental Protection – Participants Manual (2007)*; and
  - (d) *Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management – Part B Review of Best Practice and Regulation (2005)*.
- In the event of an inconsistency between requirements listed from a) to d) above, the most stringent requirement shall prevail to the extent of the inconsistency.



## PART C – PRIOR TO CONSTRUCTION

### Traffic and Transport Impacts

- C1. Prior to commencement of construction and after construction is complete, the Proponent shall commission road dilapidation reports for all roads in the vicinity of the site nominated in the Construction Traffic Management Plan (refer to condition C11(b)) that are likely to be used by construction traffic. Copies of the reports shall be provided to Council and RTA. Any road/footpath damage, aside from that resulting from normal wear and tear, shall be repaired to a standard at least equivalent to that existing prior to the damage, at the cost of the Proponent.

### Transport Infrastructure & Corridors

- C2. Before construction commences within the relevant interface (as defined in condition C8 (a)-(f)), the Proponent must consult with the Department of Transport, RailCorp, RTA and CrossCity Motorway Pty Limited about impacts on existing rail infrastructure and the Cross City Tunnel (CCT), and the planned CBD Rail Link (CBDRL), and the Interim Metro Corridor.
- C3. The Proponent must design, construct and maintain the cable tunnel so as to:
- a) not to interfere with either existing rail or the Cross City Tunnel infrastructure or the capacity to design, construct and operate the CBDRL and the Interim Metro Corridor;
  - b) allow for impacts from the construction, operation and maintenance of the CCT, CBDRL and the Interim Metro Corridor; and
  - c) allow for impacts, including stray currents and vibration, from rail operations.
- C4. Prior to commencement of any construction within the relevant interface (as defined in condition C8 (a)), the Proponent must obtain from RailCorp, and comply with a Rail Party Access Authority as provided under the Master Deed for Access to Rail Corridor between Ausgrid and RailCorp.
- C5. The Proponent must advise the Director General as soon as practicable after an authority has been issued by RailCorp.
- C6. Unless otherwise agreed in writing by the relevant agency, prior to the commencement of any construction within the relevant interface (as defined in condition C8 (a)-(f)), the Proponent must enter into Agreements with:
- (a) the Department of Transport in relation to the Interim Metro Corridor;
  - (b) RailCorp in relation to rail infrastructure and the CBDRL; and
  - (c) the RTA and CrossCity Motorway Pty Limited in relation to the CCT,

to ensure that the capacity to design, construct and operate the Interim Metro Corridor, rail infrastructure, CBDRL and the CCT is not impeded. The Proponent must comply with the terms of the Agreements.

The Agreements are to at least address as relevant:

- a) the provision of design documentation and other information to the Department of Transport, RailCorp and the RTA and CrossCity Motorway Pty Limited;
- b) the consideration of the Department of Transport, RailCorp and the RTA and CrossCity Motorway Pty Limited responses, including those related to designs, design modifications, technical reports and other documents, where there may be an impact on the capacity to design, construct, and operate the Interim Metro Corridor, rail infrastructure, CBDRL and the CCT; and



- c) notification of the Department of Transport, RailCorp and the RTA and CrossCity Motorway Pty Limited of events that affect existing rail or road infrastructure and the planned CBDRL and the Interim Metro Corridor.
- C7. The Proponent must advise the Director-General of the Department of the Agreement as soon as practicable once it has been reached.
- C8. For the purpose of conditions C2 to C7 the interface is generally an area where the proposed works will pass:
- (a) within 25 metres (horizontally) of any RailCorp land boundary;
  - (b) within land vertically above or below, and not limited in depth or height, of any tunnel which is a railway corridor;
  - (c) within 5 metres of any RailCorp buried cables;
  - (d) within 25 metres of the CBDRL corridor;
  - (e) within 25 metres of the Interim Metro Corridor; and
  - (f) within 25 metres of the Cross City Tunnel infrastructure.

## **ENVIRONMENTAL MANAGEMENT**

### **Environmental Representative**

- C9. Prior to the commencement of any construction or operational activities, the Proponent shall nominate for the approval of the Director-General a suitably qualified and experienced Environmental Representative(s) independent of the design, construction and operation personnel. The Proponent shall engage the Environmental Representative(s) prior to construction until at least six months after commencement of operation, or as otherwise agreed by the Director-General. The Environmental Representative(s) shall:
- (a) oversee the implementation of all environmental management plans and monitoring programs required under this approval, and advise the Proponent upon the achievement of these plans/programs;
  - (b) consider and advise the Proponent on its compliance obligations against all matters specified in the conditions of this approval and the Statement of Commitments; and
  - (c) have the authority and independence to recommend to the Proponent reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and, failing the effectiveness of such steps, to recommend to the Proponent that relevant activities are to be ceased as soon as reasonably practicable if there is a significant risk that an adverse impact on the environment will be likely to occur.

### **Construction Environmental Management Plan**

- C10. The Proponent shall prepare and implement a Construction Environmental Management Plan (CEMP) to outline environmental management practices and procedures to be followed during construction of the project. The Plan shall be prepared in consultation with City of Sydney Council and be consistent with the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004 or its latest revision) and shall include, but not necessarily be limited to:
- (a) a description of all relevant activities to be undertaken on the site during construction including an indication of stages of construction, where relevant;
  - (b) identification of the potential for cumulative impacts with other construction activities occurring in the vicinity and how such impacts would be managed;
  - (c) details of any construction sites and mitigation, monitoring, management and rehabilitation measures specific to the site compound(s) that would be implemented;
  - (d) statutory and other obligations that the Proponent is required to fulfil during construction including all relevant approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;



- (e) evidence of consultation with relevant public authorities required under this condition and how issues raised by the agencies have been addressed in the plan;
- (f) a description of the roles and responsibilities for all relevant employees involved in the construction of the project including relevant training and induction provisions for ensuring that all employees, contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval;
- (g) details of how the environmental performance of construction will be monitored, and what actions will be taken to address identified potential adverse environmental impacts;
- (h) specific consideration of relevant measures to address any requirements identified in the documents referred to under conditions A1(b) and A1(c) of this approval;
- (i) the additional requirements of this approval; and
- (j) a complaints handling procedure during construction.

The Construction Environmental Management Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of any relevant construction works associated with the project, or within such period otherwise agreed by the Director-General. Construction works shall not commence until written approval has been received from the Director-General.

C11. As part of the Construction Environmental Management Plan required under condition C10 of this approval, the Proponent shall prepare and implement the following:

- (a) a **Construction Noise and Vibration Management Plan (CNVMP)** to manage noise and vibration impacts during construction and to identify all feasible and reasonable noise and vibration mitigation measures. The Plan shall include, but not necessarily be limited to:
  - (i) implementing all the construction noise and vibration management measures in Section 9 of the Noise and Vibration Impact Assessment accompanying the EA, and all the commitments in the Statement of Commitments;
  - (ii) identification of the specific activities that will be carried out and associated noise sources at the premises;
  - (iii) identification of all potentially affected sensitive receiver premises;
  - (iv) quantification of the rating background noise level (RBL) for sensitive receivers, as part of the CNVMP, or as undertaken in the EA;
  - (v) the construction noise, ground-borne noise and vibration objectives outlined in these conditions of approval;
  - (vi) where the objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts;
  - (vii) description of management methods and procedures, and specific noise mitigation treatments that will be implemented to control noise and vibration during construction;
  - (viii) where objectives cannot be met, a sliding scale of additional mitigation measures are to be developed and implemented including, but not necessarily limited to the following, which should be considered and implemented where practicable: reduced hours of construction, the provision of respite from noisy/vibration intensive activities, an acoustic enclosure over the shaft excavation at the Riley Street construction compound, alternative excavation methods or other negotiated outcomes with the affected community;
  - (ix) where it is determined that the works cannot be undertaken in a manner that satisfies the construction noise and vibration objectives, a report justifying that the construction noise and vibration measures (including management



- measures) consistent with current best practice shall be submitted to the Director-General for approval prior to commencement of works;
- (x) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints;
  - (xi) an out-of-hours work (OOHW) protocol for the assessment, management and approval of works outside of standard construction hours as defined in condition D3 & D4 of this approval, including a risk assessment process under which the Environmental Representative may approve out-of-hour construction activities deemed to be of low environmental risk and refer high risk works for the Director-General's approval. The OOHW protocol shall detail standard assessment, mitigation and notification requirements for high and low risk out-of-hour works, and detail a standard protocol for referring applications to the Director-General; and
  - (xii) a description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be conducted, the locations where monitoring would take place, how the results of this monitoring would be recorded and reported; and, if any exceedance is detected how any non-compliance would be rectified.
- (b) a **Traffic Management Plan** to manage traffic conflicts that may be generated during construction. The Plan shall be prepared in consultation with the RTA, Council and State Transit and shall include, but not necessarily be limited to:
- (i) details of how construction of the project will be managed in proximity to local and regional roads;
  - (ii) details of all roads in the immediate vicinity of the site nominated for use during construction including traffic routes for heavy vehicles, and any necessary route or timing restriction for oversized loads;
  - (iii) details of measures to minimise and monitor the use of local roads by heavy vehicles;
  - (iv) demonstration that all statutory responsibilities with regard to road traffic impacts have been complied with;
  - (v) details of measures to minimise interactions between the project and other users of the roads such as the use of fencing, lights, barriers, traffic diversions etc;
  - (vi) procedures for informing the public where any road access will be restricted as a result of the project;
  - (vii) speed limits to be observed along routes to and from the site and within the site;
  - (viii) details of the expected behavioural requirements for vehicle drivers travelling to and from the site;
  - (ix) details of measures to schedule works to minimise traffic disruption;
  - (x) details of measures to ensure safe pedestrian, cyclist, and traffic movement and access;
  - (xi) details of loss of parking spaces and provision of alternative spaces;
  - (xii) details of measures to minimise worker car use and disruption to business activities; and
  - (xiii) details of any other approvals required for the management of traffic.
- (c) **Air Quality Management Plan**, that shall be prepared and provide details of all dust control measures to be implemented during the construction of the project. The Plan shall include, but not necessarily be limited to:
- i) identification of sources of dust deposition;
  - ii) mitigation measures to reduce dust;
  - iii) establishment of a protocol to handle dust complaints that includes recording, reporting and appropriate actions for dealing with complaints;
  - iv) a reactive management programme detailing how and when operations are to be modified to minimise the potential for dust emissions, should emissions exceed the relevant criteria.



- (d) a **Water Quality Management Plan**, shall be prepared in consultation with NoW and include, but not necessarily be limited to:
  - i) management of the cumulative impacts of the project on the quality and quantity of surface water;
  - ii) details of short and long term measures to be employed to minimise soil erosion and the discharge of sediment to land and/or waters;
  - iii) identification of all potential sources of water pollution and a detailed description of the remedial action to be taken or management systems to be implemented to prevent discharge of these pollutants from all sources within the project sites;
  - iv) a contingency plan for events that have the potential to pollute or contaminate surface water. The plan shall include threshold levels, remediation actions and communication strategies for the effective management of such an event.
  - v) a programme for reporting on the effectiveness of the sediment and erosion control system against performance goals.
- (e) a **Groundwater Quality Management Plan**, shall be prepared in consultation with NoW and include, but not necessarily be limited to:
  - (i) details of groundwater control measures to be undertaken during the construction stage;
  - (ii) impacts on nearby structures from potential settlement;
  - (iii) groundwater inflow control;
  - (iv) handling, treatment and disposal of groundwater and contaminated groundwater;
  - (v) monitoring; auditing; measures for dealing with exceedances; and response actions;
  - (vi) outline of operational stage groundwater control measures; and
  - (vii) identifying a suitable point to discharge treated groundwater to the stormwater network, in consultation with Sydney Water and Council as relevant.
- (f) a **Spoil Management Sub Plan** must be prepared as part of the CEMP.
  - (i) The Sub Plan must include:
    - (a) the locations of major (defined as a volume greater than 500 cubic metres) spoil stockpiles;
    - (b) methods to re-use or dispose excess or unsuitable spoil material including estimated volumes and disposal sites.
  - (ii) All material excavated from Construction must be re-used or recycled unless otherwise approved in the Spoil Management Sub Plan. The Proponent must ensure that the re-use of material generated from Construction is maximised.

### **Urban Design and Landscaping**

C12. The Proponent shall prepare a detailed Urban Design and Landscape Sub-Plan in consultation with Council and community liaison group established in accordance with the Statement of Commitments in the document listed in condition A1(c). Suitably qualified urban designers and landscape specialists shall be utilised to develop the Sub Plan. The Sub Plan shall address aboveground infrastructure at the Riley Street site and include, but not be limited to the following:

- (a) sections and elevation sketches of the above ground structures, photomontages from key viewing points, and materials and finishes;
- (b) methodology of landscaping works;
- (c) location and identification of existing and proposed vegetation including use of indigenous species;
- (d) location of mounds, bunds, structures or other proposed treatments, finishes of exposed surfaces (including paved areas), colours and specifications, staging of works;
- (e) landscape strategies incorporating other environmental controls such as erosion and sedimentation controls, drainage, noise mitigation and lighting; and



- (f) monitoring and maintenance.

The Sub Plan shall be prepared to the satisfaction of the Director-General, prior to the commencement of the works subject to this condition.

- C13. All landscaping works (including the health of all trees) shall be monitored and maintained by a suitably qualified landscape specialist at the Proponent's expense, for a period of not less than three years, from the date of operation of the cable. The Proponent shall implement any required remediative measures to maintain landscaping works to a high standard. All maintenance and landscaping works are to be undertaken in accordance with Ausgrid's property management guidelines and procedures.

#### **Property Damage and Access**

- C14. Subject to obtaining landowner agreement, property inspections must be conducted on the following:
- (a) structures located up to and including 50 metres from Construction activities that generate vibration impacts;
  - (b) any other locations identified by the Proponent; and
  - (c) any other locations identified by the Environmental Representative.

The property inspections must be undertaken consistent with AS 4349.1 "Inspection of Buildings" and dilapidation surveys must be prepared for each of the properties inspected.

The owners of all properties on which property inspections are to be conducted must be advised at least two weeks before the inspection of its scope and methodology and of the process for making a property damage claim. A copy of the dilapidation survey must be given to the owner of each property inspected at least three weeks before Construction that could affect the property commences.

The extent of the dilapidation survey required under condition C14(a) must be defined in the CEMP and certified by a suitably qualified structural engineer as encompassing the maximum area that could be reasonably expected to be impacted by tunnelling or other major vibration inducing works.

A register of all properties inspected must be maintained by the Proponent indicating whether the owner accepted or refused the property inspection offer. A copy of the register must be provided to the Director-General upon request.

If contact can not be made or agreement reached, then Ausgrid is not obliged to prepare a dilapidation report for that property, unless otherwise required by the Director-General. Ausgrid is to report to the Department on steps taken to agree an access arrangement.

- C15. Property inspections need not be undertaken if a risk assessment indicates Structures will not be affected. The risk assessment must be undertaken before Construction commences in the vicinity of the property by geotechnical and construction engineering experts with appropriate registration on the National Professional Engineers Register.
- C16. The Proponent, where liable, must rectify any property damage caused directly or indirectly (for example from vibration or from groundwater change) by the Project's Construction or Operation at no cost to the property owner(s). Alternatively the Proponent may negotiate compensation for the property damage with the property owner.

- C17. The Proponent must ensure that access to properties is maintained during Construction. The Proponent must ensure that any lawful property access affected by the Project is reinstated to an equivalent standard or that alternative arrangements are negotiated with the relevant property owner.

#### **Utilities and Services**

- C18. The Proponent must identify the utilities and services (hereafter "services" including private infrastructure) potentially affected by Construction to determine requirements for diversion, protection and/or support. Alterations to services must be determined by negotiation between the Proponent and the service providers. The Proponent in consultation with service providers must ensure that disruption to services resulting from the project are minimised and advised to customers.
- C19. The Proponent must ensure that existing cathodic protection systems are not adversely affected and that appropriate measures are put in place to minimise stray currents.
- C20. The Proponent must develop a contingency plan, in consultation with the relevant service provider(s), to deal with accidental damage and repair of services.
- C21. The Proponent must ensure that disruption to services resulting from the proposal are minimised and must be responsible for advising local residents and businesses affected prior to any disruption of service.

#### **Waste Management and Recycling**

- C22. As part of the CEMP and OEMP, the Proponent must prepare Waste Management and Re-use Sub Plans. The Sub Plans must address the management of wastes during Construction and Operation respectively in accordance with the NSW Government's Waste Reduction and Purchasing Policy. The Sub Plans must identify requirements for:
- (a) the application of the waste minimisation hierarchy principles of avoid/reduce/re-use/recycle/dispose;
  - (b) waste handling and storage;
  - (c) disposal of wastes. Specific details must be provided for cleared vegetation, contaminated materials, glass, metals and plastics, hydrocarbons (lubricants and fuels) and sanitary wastes; and
  - (d) any waste material that is unable to be re-used, re-processed or recycled must be disposed at a facility approved to receive that type of waste.



## **PART D - DURING CONSTRUCTION**

### **Noise Impacts**

#### **Construction Noise**

- D1. The Proponent shall take all reasonable measures to minimise noise emissions and vibration from all plant and equipment operated on the site such that they do not exceed noise and vibration criteria derived by application of the Interim Noise Control Guideline – Construction Site Noise (DECC 2009) and the Environment Criteria for Road Traffic Noise (EPA 1999).
- D2. An acoustic enclosure is to be provided over the Riley Street excavation site, during all tunnel excavation works.

#### **Construction Hours**

- D3. The Proponent shall only undertake construction activities (other than below ground tunnelling works and noise intensive activities such as rock breaking) associated with the project that would generate an audible noise at any sensitive receptor during the following hours:
- (a) 7:00 am to 7:00 pm, Mondays to Fridays, inclusive;
  - (b) 7:00 am to 5:00 pm on Saturdays; and
  - (c) at no time on Sundays or public holidays.

This condition does not apply in the event of a direction from police or other relevant authority for safety reasons, to prevent environmental harm or risk to life.

- D4. The Proponent shall only undertake noise intensive activities such as rock breaking during the following hours:
- (a) 9:00 am to 12:00pm, Mondays to Saturdays;
  - (b) 2:00 pm to 5:00pm, Mondays to Fridays; and
  - (c) at no time on Sundays or public holidays.
- D5. Below ground tunnelling works may be conducted 24 hours per day
- D6. Construction outside of those hours specified in conditions D3 & D4 may be varied for works as approved through the out-of-hours work protocol outlined in condition C11 of this approval. Any request to alter the hours of construction shall:
- (a) be considered on a case-by-case basis;
  - (b) be accompanied by details of the nature and need for activities to be conducted during the varied construction hours and any other information necessary to reasonably determine that activities undertaken during the varied construction hours will not adversely impact on the acoustic amenity of receptors in the vicinity of the site; and
  - (c) commit to informing affected residential receivers of the timing and duration of any construction activities approved under this condition at least 48 hours before that work commences.

#### **Construction Noise Standards**

- D7. The airborne construction noise objective for the project is to manage noise from construction activities in accordance with the Interim Construction Noise Guideline (DECCW, 2009). The following noise objectives for the contribution of construction LAeq(15 minute) to external noise levels at nearby receivers are to be applied to the project:
- (a) residential (external)
    - (i) standard construction hours – management level of background plus 10 dB(A) with a maximum of 75 dB(A); and

- (ii) outside standard construction hours – management level of background plus 5 dB(A).
- (b) commercial / retail (external) 70 dBA.
- (c) industrial (external) 70dBA.

For the purpose of this condition, background noise levels shall be those established in the document referred to in condition A1(b), unless otherwise established in an approved Construction Noise and Vibration Management Plan (refer to condition C11(a)).

- D8. Regenerated noise from construction works must not exceed the following criteria as measured at the nearest sensitive receptor:
- (a) 40 dB(A) between the hours of 6:00 pm and 10:00 pm; and
  - (b) 35 dB(A) between the hours of 10:00 pm and 7:00 am.

These limits must be implemented unless otherwise approved by the Director-General. If works are predicted to exceed the regenerated noise criteria the Proponent must provide the following details to the Director-General for consideration:

- (a) identification of potentially affected residences;
- (b) predicted regenerated noise impacts;
- (c) time periods when these impacts will occur;
- (d) duration of the impacts;
- (e) justification as to why the work needs to be undertaken during night time hours;
- (f) an analysis of alternative methods;
- (g) management measures that will be implemented including community consultation and provision of a 24-hour complaints line; and
- (h) contingency measures to be implemented in the event of noise complaints.

### **Construction Noise**

- D9. The Proponent shall implement all reasonable and feasible measures to minimise noise generation from the construction of the project consistent with the requirements of the Interim Construction Noise Guideline (DECC, July 2009) including noise generated by heavy vehicle haulage and other construction traffic associated with the project.

### **Vibration Criteria**

- D10. Vibration caused by Construction and received at any Structure outside the proposal must:
- (a) for structural damage vibration be limited to German Standard DIN 4150 Part 3 *Structural Vibration in Buildings: Effects on Structures*; and
  - (b) for human exposure to vibration be limited to the evaluation criteria presented in British Standard BS 6472 - *Guide to Evaluate Human Exposure to Vibration in Buildings* (1Hz to 80 Hz) for low probability of adverse comment.

Where there is an inconsistency between these standards, the more stringent criteria must apply.

- D11. Prior to commencement of construction activities likely to result in high vibration levels, the Proponent must identify potential highly sensitive facilities, including scientific equipment, measuring equipment, printing press and the like, where the criteria in Condition D10 may not be adequate. Should such cases arise, the Proponent must consult with the potentially affected owners and develop appropriate mitigation measures to ensure impacts are acceptable.
- D12. Unless otherwise agreed by the Director General vibration levels must not exceed 3 mm/s at the building foundation of heritage buildings and sensitive structures



### **Heritage Impacts**

- D13. If during the course of construction the Proponent becomes aware of any previously unidentified Aboriginal object(s), all work likely to affect the object(s) shall cease immediately until they are collected, recorded and deposited at the Australian Museum in accordance with standard archaeological practice. In addition, registered Aboriginal stakeholders shall be informed of the finds.
- D14. If during the course of construction the Proponent becomes aware of any unexpected historical relic(s), all work likely to affect the relic(s) shall cease immediately and the OEH notified in accordance with the *Heritage Act 1977*. Works shall not recommence until the Proponent receives written authorisation from the OEH.

### **Soil and Water Quality Impacts**

- D15. Soil and water management controls shall be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities, in accordance with:
- (a) Managing Urban Stormwater: Soils and Conservation (Landcom, 2004);
  - (b) Managing Stormwater: Urban Soils and Construction 2A Installation of Services (DECC 2008); and
  - (c) Managing Stormwater: Urban Soils and Construction Vol 2C Unsealed Roads (DECC 2008).

### **Acid Sulphate Soils Management**

- D16. Any Acid Sulphate Soils encountered during construction must be treated and disposed of in accordance with the "Acid Sulphate Soils Manual" (Acid Sulphate Soil Management Advisory Committee, 1998) or update.

### **Contaminated Land**

- D17. Any contaminated spoil encountered during excavation must be assessed, managed and disposed of in accordance with the DECC (2008) "Waste Classification Guideline".

### **Lighting**

- D18. All lighting for the Project must be designed, installed and operated in accordance with the requirements of AS 4282 "Control of the Obtrusive Effects of Outdoor Lighting".

### **Blasting**

- D19. The Proponent must not undertake any blasting.

### **Dust Generation**

- D20. The Proponent shall construct and operate the project in a manner that minimises dust generation from the site, including wind-blown and traffic-generated dust as far as practicable. All project related activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should visible dust emissions attributable to the project occur during operation and construction, the Proponent shall identify and implement all practicable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease.

## **PART E – PRIOR TO OPERATIONS**

### **Operational Environmental Management Plan**

- E1. The Proponent shall operate the project in accordance with plans, procedures and policies that apply to its electricity network. These plans, procedures and policies shall be amended in consultation with NOW and City of Sydney Council as relevant, to include but not necessarily limited to:
- (a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to the operation of the development, including all consents, licences, approvals and consultations;
  - (b) a management organisational chart identifying the roles and responsibilities for all relevant employees involved in the operation of the project;
  - (c) overall environmental policies to be applied to the operation of the project;
  - (d) standards and performance measures to be applied to the project, and means by which environmental performance can be periodically monitored, reviewed and improved (where appropriate) and what actions would be taken in the case that non-compliance with the requirements of this approval are identified. In particular the following environmental performance issues shall be addressed:
    - (i) groundwater management, including any updates of the management plan for the Campbell Street Water Treatment Plant.
    - (ii) air quality management, in particular air quality at vent shafts.
    - (iii) noise management, including noise from ventilation systems, other operating plant noise and maintenance.
  - (e) the environmental monitoring requirements outlined under this approval;
  - (f) complaints handling procedures;
  - (g) specific consideration of relevant measures to address any requirements identified in the documents referred to under conditions A1(b) and A1(c) of this approval; and
  - (h) management policies to ensure that environmental performance goals are met and do comply with the conditions of this approval.

The details of these amendments shall be submitted for the approval of the Director-General no later than one month prior to the commencement of Operation of the project or within such period as otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General.

### **Certification**

- E2. The Proponent must ensure that the structural integrity of the Tunnel is certified by a suitably qualified structural engineer prior to operation of the cable tunnel. A copy of the certificate is to be included in the OEMP.



