

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

I, the Minister for Planning, approve the project 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.



Hon Kristina Keneally MP
Minister for Planning

Sydney

20 Sept.

2009

File No: S07/01887

SCHEDULE 1

Application No: 08_0075

Proponent: EnergyAustralia

Approval Authority: Minister for Planning

Land: The integrated development site (Belmore Park Zone Substation and a Commercial Building) on land owned by EnergyAustralia, with frontages to Pitt, Hay and Campbell Streets, Sydney. Stub tunnel connection from the existing City South Cable Tunnel which runs beneath the north side of Campbell Street, to the proposed Belmore Park Substation, with a tunnel length of approximately 12 metres and nominally 20 metres below street level.

Project: Stage 1 of the Sydney CityGrid Project, being the works in and around the Belmore Park Zone substation site, comprising:

- a) Stage 1A being the construction and operation of the Belmore Park Zone substation building and stub tunnel connection from the existing City South Cable Tunnel to Belmore Park Zone substation; and
- b) Stage 1B being commercial/retail development on the corner of Pitt, Campbell and Hay Streets, to be integrated with works comprising Stage 1A.

Concept Plan: The Concept Plan for the Sydney CityGrid Project (08_0075).

Major Project: The project is part of the Sydney CityGrid Project, which is a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* (the Act) applies by virtue of an Order made by the Minister for Planning under section 75B of the Act on 11 February 2008.

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SCHEDULE 2

Act, the	<i>Environmental Planning and Assessment Act, 1979</i>
Conditions of Approval	The Minister's conditions of approval for the project.
Construction	All pre-operation activities associated with the project other than survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys or other activities determined by the Environmental Representative to have minimal environmental impact such as minor access roads, minor adjustments to services / utilities and establishing temporary construction sites.
Council	City of Sydney Council
DECC	Department of Environment and Climate Change
Department, the	Department of Planning
Design Review Panel	Representatives of Council and the Design Advisory Panel of the City of Sydney Council, or an equivalent agreed by the Director-General.
Director-General, the	Director-General of the Department of Planning (or delegate).
Director-General's Approval	<p>A written approval from the Director-General (or delegate).</p> <p>Where the Director-General's Approval is required under a condition the Director-General will endeavour to provide a response within one month of receiving an approval request. The Director-General may ask for additional information if the approval request is considered incomplete. When further information is requested the time taken for the Proponent to respond in writing will be added to the one month period.</p>
Dust	Any solid material that may become suspended in air or deposited.
EA	Environmental Assessment for the Proposed: <i>Sydney CityGrid Project</i> , prepared by PlanCom Consulting Pty Ltd and endorsed by EnergyAustralia, dated December 2008; and <i>Belmore Park Zone Substation and Commercial Development, Project Environmental Assessment Report</i> , prepared by PlanCom Consulting Pty Ltd and endorsed by EnergyAustralia, dated December 2008.
EPA	Environment Protection Authority as part of the Department of Environment and Climate Change
Minister, the	Minister for Planning
Proponent	EnergyAustralia
Publicly Available	Available for inspection by a member of the general public (for example available on an internet site or at a display centre).
Reasonable and feasible	<p>Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.</p>
Sensitive Receiver	Residence, education institution (e.g. school, TAFE college), health care facility (e.g. nursing home, hospital), religious facility (e.g. church) and occupied commercial building (e.g. office and business).
Site	Land to which the Stage 1 project applies.
Submission report	<i>Belmore Park Zone Substation & Commercial Development Project, Submissions Response & Preferred Project Report</i> , prepared by PlanCom Consulting Pty Ltd for EnergyAustralia, dated May 2009.

1. ADMINISTRATIVE CONDITIONS

Terms of Approval

- 1.1 The Proponent shall carry out the project generally in accordance with the:
- Major Projects Application 08_0075;
 - Sydney CityGrid Project, Concept Environmental Assessment Report*, prepared by PlanCom Consulting Pty Ltd and endorsed by EnergyAustralia, dated December 2008;
 - Belmore Park Zone Substation and Commercial Development, Project Environmental Assessment Report*, prepared by PlanCom Consulting Pty Ltd and endorsed by EnergyAustralia, dated December 2008;
 - Sydney CityGrid Project Submissions Response & Preferred Project Report*, prepared by PlanCom Consulting Pty Ltd and dated May 2009;
 - Belmore Park Zone Substation & Commercial Development Project, Submissions Response & Preferred Project Report*, prepared by PlanCom Consulting Pty Ltd for EnergyAustralia, dated May 2009; and
 - the conditions of this approval.
- 1.2 In the event of an inconsistency between:
- the conditions of this approval and any document listed from condition 1.1a) and 1.1e) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and
 - any document listed from condition 1.1a) and 1.1e) inclusive, and any other document listed from condition 1.1a) and 1.1e) inclusive, the most recent document shall prevail to the extent of the inconsistency.
- 1.3 The Proponent shall comply with any reasonable requirement(s) of the Director-General arising from the Department's assessment of:
- any reports, plans or correspondence that are submitted in accordance with this approval; and
 - the implementation of any actions or measures contained in these reports, plans or correspondence.

Limits of Approval

- 1.4 The requirements contained in this project approval apply to Stage 1 in its entirety, including Stage 1A and Stage 1B.
- 1.5 The Proponent may construct and operate Stage 1A and Stage 1B together, or separately, subject to compliance with the conditions of this approval. Should the Proponent decide to implement Stage 1A and Stage 1B separately, the Proponent shall submit to the Director-General details of how the works the subject of the two stages will be scheduled and coordinated within the context of the requirements of this approval.
- 1.6 Should the Proponent determine that the construction of Stage 1B will unlikely commence within 12 months of the completion of the Stage 1A civil works, the temporary façade treatment shall be constructed as part of the Stage 1A works.
- 1.7 This project approval shall lapse five years after the date on which it is granted, unless the works subject of this approval are physically commenced on or before that time.

Statutory Requirements

- 1.8 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 for 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

- 1.9 The 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.

- 1.10 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.
- 1.11 In the event of a dispute between the Proponent and another public authority, in relation to an applicable requirement in this approval or relevant matter relating to the project, either party may refer the matter to the Director-General for resolution. The Director-General's determination of any such dispute shall be final and binding on the parties.

2. PROJECT DESIGN REQUIREMENTS

- 2.1 Prior to the commencement of construction of the project (other than works for the purposes of bulk excavation), the Proponent shall submit for the approval of the Director-General, detailed plans including landscape design treatments and temporary façades treatments for the project (both Stage 1A and Stage 1B).
- 2.2 In preparing the plans required under condition 2.1 of this approval, the Proponent shall consult with the Design Review Panel during the detailed design phase of the project. The articulation of the substation building, if required by the Design Review Panel, shall be further refined as part of this consultation process, including the potential uses of the public frontages of the building. The aim of this consultation process is to ensure the final design, purpose and use of the Stage 1 development is consistent with this approval and meets the reasonable requirements of the Design Review Panel.
- 2.3 Should the Proponent elect to implement Stage 1 separately as Stage 1A and Stage 1B, as outlined in condition 1.5 of this approval, then the Proponent shall comply with the requirements of conditions 2.1 and 2.2 of this approval, for each sub-stage and submit the relevant detailed plans to the Director-General for approval, prior to the construction of that sub-stage.

3. SPECIFIC ENVIRONMENTAL CONDITIONS

Noise Impacts

Vibration Impacts

- 3.1 The Proponent shall ensure that the vibration resulting from construction and operation of the project does not exceed the preferred values for vibration (for low probability of adverse comment) presented in *Assessing Vibration: A Technical Guideline* (DECC, February 2006), at any affected residential dwelling.
- 3.2 Prior to commencement of construction activities likely to result in elevated vibration levels, the Proponent shall identify potentially-affected sensitive facilities, including scientific equipment, measuring equipment and the like, where additional receiver-specific vibration mitigation and management measures may be required. Should such cases arise, the Proponent shall consult with the potentially affected owners and develop appropriate mitigation measures to ensure impacts are acceptable.
- 3.3 The Proponent shall consult with RailCorp during the detailed design phase of the project, to ensure the vibration criteria are acceptable to RailCorp for the purposes of ensuring no damage to its assets occur as a result of the project.

Construction Hours

- 3.4 The Proponent shall only undertake construction activities (other than those noise-intensive activities subject to condition associated with the project, including transportation of spoil, that would generate an audible noise at any sensitive receiver premises during the following hours:
- 7:00 am to 7:00 pm, Mondays to Fridays, inclusive;
 - 7:00 am to 5:00 pm on Saturdays; and
 - 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, or emergency work to avoid the loss of lives, property and/or to prevent environmental harm.

- 3.5 The Proponent shall only undertake rock breaking, rock hammering, sheet piling, pile driving or any similar noise-intensive construction activities during the following hours:
- a) 7:00 am to 12:00 pm, Mondays to Saturdays, inclusive;
 - b) 2:00 pm to 5:00 pm, Mondays to Fridays, inclusive; 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, or emergency work to avoid the loss of lives, property and/or to prevent environmental harm.

- 3.6 The hours of construction activities specified under conditions 3.4 and 3.5 of this approval may be varied with the prior written approval of the Director-General. Any request to alter the hours of construction specified under conditions 3.4 and 3.5 shall be:
- a) considered on a case-by-case basis; and
 - b) 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) affected sensitive receivers being informed of the timing and duration of work approved under this condition at least 48 hours before that work commences.

Construction Noise Standards

- 3.7 The airborne construction noise objective for the project is to manage noise from construction activities (as measured by a $L_{A10(15\text{-minute})}$ descriptor) so the noise level contributed by the construction activities does not exceed the background L_{A90} noise level by:
- a) more than 20 dB(A) for a construction period of four weeks and under;
 - b) more than 10 dB(A) for a construction period of greater than four weeks and not exceeding 26 weeks; and
 - c) more than 5 dB(A) for a construction period greater than 26 weeks.

For the purpose of this condition, background noise levels shall be those established in the document referred to under condition 1.1b), unless otherwise established in an approved Construction Noise and Vibration Management Plan (refer to condition 5.3a)).

- 3.8 The Proponent shall undertake construction activities such that the following regenerated noise limits are not exceeded at the nearest residential receiver:
- a) $L_{Aeq(15\text{-minute})}$ of 40 dB(A) between the hours of 6:00pm and 10:00pm; and
 - b) $L_{Aeq(15\text{-minute})}$ of 35 dB(A) between the hours of 10:00pm and 7:00am

Construction Noise Management

- 3.9 The Proponent shall use only dampened rock hammers and/or "city" rock hammers to minimise the impacts associated with rock-breaking works.
- 3.10 During construction, the Proponent shall minimise noise emissions from plant and equipment operated on the site, including bulldozers, cranes, graders, excavators and trucks, by installing and maintaining where reasonable and feasible, efficient silencers, low-noise mufflers (residential standard), screening of worksites and replacement of reversing alarms on vehicles with alternative silent measures. Such alternative silent measures for reversing alarms shall be investigated in consultation with DECC.

Operational Noise Criteria

- 3.11 The Proponent shall design, construct, operate and maintain the project to ensure that the noise contributions from the project to the background acoustic environment do not exceed the maximum allowable noise contributions specified in Table 1, at any residential receiver during the periods indicated. The maximum allowable noise contributions apply under wind speeds up to 3 ms^{-1} (measured at 10 metres above ground level), and under temperature inversion conditions of up to $3^\circ\text{C}/100 \text{ metres}$.

Table 1 - Maximum Allowable Noise Contribution

Location	Day	Evening	Night
	7:00am to 6:00pm Mondays to Saturdays 8:00am to 6:00pm Sundays and public holidays	6:00pm to 10:00pm on any day	10:00pm to 7:00am Mondays to Saturdays 10:00pm to 8:00am Sundays and public holidays
	$L_{Aeq}(15 \text{ minute})$	$L_{Aeq}(15 \text{ minute})$	$L_{Aeq}(15 \text{ minute})$
Any residential receiver	54	53	50

Non-Indigenous Heritage

- 3.12 Stage 1A of the project shall be monitored by an archaeologist during initial bulk excavation of the site to identify any non-indigenous items present within the area, including any remains dating to the period of the Brickfield Village (19th Century remains). Any items of non-indigenous heritage significance or interest shall be recorded by the archaeologist and managed in consultation with the Heritage Office of the Department.

Indigenous Heritage

- 3.13 If during the course of construction the Proponent becomes aware of any Aboriginal object(s) and/or material, including human remains, all work likely to affect the object(s) and/or materials shall cease immediately and the relevant authorities, including DECC and the Metropolitan Aboriginal Land Council, shall be informed in accordance with the *National Parks and Wildlife Act 1974*. A qualified archaeologist shall assess the object(s) and/or material to determine significance. Relevant works shall not recommence until written authorisation from the DECC advising otherwise is received by the Proponent.
- 3.14 All new (previously unidentified) indigenous sites identified during the course of construction or during any stage related to the project shall be reported to DECC in accordance with section 91 of the *National Parks and Wildlife Act 1974*.

Air Quality Impacts

- 3.15 The Proponent shall construct the project in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust. All activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, 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.
- 3.16 Construction vehicles shall be maintained and covered to prevent any loss of load, whether in the form of dust, liquid or solids. The Proponent shall ensure construction vehicles would not track mud, dirt or other material onto any street, which is opened and accessible to the public. In the event of any spillage, the Proponent is required to remove the spilt material within 24 hours of such as incident.

Water Quality Impacts

- 3.17 The Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997* which prohibits the pollution of waters.
- 3.18 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 Landcom's *Managing Urban Stormwater: Soils and Conservation*.
- 3.19 The Proponent shall prepare a contingency plan for events that have the potential to pollute or contaminate surface or groundwater sources of water. The plan shall include threshold levels, remediation actions and communication strategies for the effective management of such an event. This plan shall be included in the Construction Water Quality Management Plan, required under condition 5.3d).

- 3.20 The Proponent shall provide details of the management of groundwater during construction and operation of the project and include this information in the Construction Environmental Management Plan and Operational Environmental Management Plan (where relevant). The information shall detail groundwater control measures to be implemented during construction and operation, and include but not necessarily be limited to:
- a) impacts on nearby structures from potential settlement;
 - b) groundwater inflow control;
 - c) handling, treatment and disposal of groundwater and contaminated groundwater;
 - d) methods for monitoring groundwater during construction and operation;
 - e) measures to manage exceedances and details of response actions;
 - f) measures to allow for the reuse of water wherever practical, in preference to discharge into the stormwater system; and
 - g) details of the use of existing water treatment plants including performance and/or proposed new water treatment plants and discharge points, for the purposes of treating seepage water prior to discharging into waterways. This must include water treatment techniques for the infiltrated groundwater, prior to its discharge and details of post discharge monitoring and reporting.

Bunding and Spill Management

- 3.21 The Proponent shall store and handle all dangerous goods (as defined by the Australian Dangerous Goods Code) and combustible liquids, 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; and
 - c) the EPA's Environment Protection Manual Technical Bulletin *Bunding and Spill Management*.

In the event of an inconsistency between requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

Traffic, Transport and Road Management

Road Impacts and Site Access

- 3.22 Prior to commencement of construction and after construction is complete, the Proponent shall commission road dilapidation reports for all roads nominated in the Construction Traffic Management Protocol (refer to condition 5.3e) 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.
- 3.23 The Proponent shall ensure that any measures to restore roads are undertaken in a timely manner, in accordance with the requirements and to the satisfaction of the relevant road authority and at the full expense of the Proponent. All works associated with the project shall be at no cost to the RTA or Council.
- 3.24 All vehicles shall enter and exit the site in a forward direction and be wholly contained on site before parking, unless otherwise permitted under traffic control plans agreed in advance by Council and RTA.
- 3.25 The swept path of the longest vehicle entering and exiting the project site, as well as manoeuvrability through the site, shall be in accordance with *AUSTROADS (Guide to Traffic and Engineering Practice)* or the revised *Austrroads Guide to Traffic Management*, as determined appropriate by the RTA. A detailed plan demonstrating that the project complies with this condition shall be submitted to the RTA with regard to circumstances where the project would not conform to the guidelines included in the Austrroads or revised version, for example the delivery of bulky electricity infrastructure. Where this is envisaged, the detailed plan shall identify such circumstances and alternative procedures for vehicle entry to, and exiting from, the site, which shall be developed to the satisfaction of the RTA and be included in the plan.

Car Parking and Cyclists –Stage 1B

- 3.26 The layout of car parking areas associated with the project (including driveways, grades, turn paths, sight distance requirements, aisle widths and lengths, and parking bay dimensions) shall be in accordance with Australian Standard AS 2890.1 – 2004. Certification, by a qualified engineer, that the design of the car parking areas (for use during construction and operation) complies with the provision of AS 2890.1 – 2004, shall be included in the Construction Environmental Management Plan (refer to condition 5.2).
- 3.27 The car parking area and substation entry and exit points shall be clearly delineated through line marking and signage to ensure safe traffic flow.
- 3.28 The Proponent shall include bicycle parking facilities either within the proposal site or in close proximity to the site and provide end trip facilities such as showers and changing rooms, to encourage bicycle use for travelling to and from the development.

Interactions with Metro Infrastructure and Works

- 3.29 The Proponent shall liaise with the Sydney Metro Authority to determine whether construction works associated with the CBD Metro concurrently with works associated with the project. If such works are to coincide, the Proponent shall develop, in consultation with the Sydney Metro Authority, mitigation measures to ensure the avoidance or minimisation of adverse impact to public roads, traffic, pedestrians, residents and businesses.

Interactions Rail Infrastructure – Stage 1B

- 3.30 During the detailed design phase of Stage 1B, the Proponent shall confirm with RailCorp how close the proposed excavation face and depth will be to the Eastern Suburbs Railway tunnels and associated rail infrastructure that lie within the vicinity of (and beneath) the proposed site.
- 3.31 The Proponent shall submit to RailCorp for review and comment, detail drawings of the Stage 1B development, particularly the basement excavation and associated shoring, during the detailed design phase of the project.
- 3.32 Details of any cranes proposed to be set up over rail infrastructure shall be submitted to RailCorp for review and comment, prior to any such activity occurring.
- 3.33 Where works are to be located within 20 metres of existing rail infrastructure, geotechnical and structural reports shall be submitted to RailCorp for review and comment, prior the commencement of any such works.
- 3.34 The Proponent shall continue to consult with RailCorp with respect to the outcomes and findings of the electrolysis report submitted by the Proponent to RailCorp in April 2009, as referred to in the document referred to under condition 1.1d) of the approval, during the detailed design of Stage 1B of the project.
- 3.35 The Proponent shall commission a qualified person to undertake a Rail Dilapidation Report of all the Eastern Suburbs Railway tunnels and associated rail infrastructure within the vicinity of the Stage 1B works in consultation with RailCorp and other relevant authorities. The Report shall assess the current condition of the relevant tunnels. Following completion of construction, a subsequent Rail Dilapidation Report shall be prepared to assess any damage that may have resulted due to excavation works related to the construction of Stage 1B of the project.

The Proponent shall commit to restore the relevant rail tunnel to a state, described in the original Rail Tunnel Dilapidation report where the dilapidation is attributable to construction excavation. The cost of any restorative work described in the subsequent Report or recommended by the relevant rail authorities after review of the subsequent Report, shall be funded by the Proponent. Such work shall be undertaken at a time as agreed upon between the Proponent and the relevant rail authorities. In the event of a dispute between the parties with respect to the extent of restorative work that may be required under this condition, any party may refer the matter to the Director-

General for resolution. The Director-General's determination of any such dispute shall be final and binding on the parties.

- 3.36 The Proponent shall provide Safe Work Method Statements, Risk Assessments, construction methodologies and any monitoring regimes applicable to rail infrastructure to RailCorp for review and comment, prior to the commencement of Stage 1B works.
- 3.37 No intrusion of rockbolts/anchors shall occur within the existing rail tunnel easement from the tunnel face.

Waste Generation and Management

- 3.38 All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.
- 3.39 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.
- 3.40 The Proponent shall ensure that all liquid and / or non-liquid waste generated and / or stored on the site is assessed and classified in accordance with the *Waste Classification Guidelines* (DECC, 2008), or any future guideline that may supersede that document.

Magnetic Fields

- 3.41 The Proponent shall undertake pre-operation magnetic field monitoring to establish existing magnetic field levels surrounding the project site. Results from this monitoring shall be included in the Magnetic Field Management Protocol, required under condition 5.3f) of this approval.

4. ENVIRONMENTAL MONITORING AND AUDITING

Independent Environmental Auditing

- 4.1 Within two years of the commencement of operation of Stage 1A and then as may be directed by the Director-General, the Proponent shall commission an independent person or team to undertake an **Environmental Audit** of the project. The independent person or team shall be approved by the Director-General prior to the commencement of the Audit. The Audit shall:
- a) be carried out in accordance with ISO 19011:2002 - Guidelines for Quality and or Environmental Management Systems Auditing;
 - b) assess compliance with the requirements of this approval, and other licences and approvals that apply to the project;
 - c) assess the environmental performance of the project against the predictions made and conclusions drawn in the documents referred to under condition 1.1 of this approval;
 - d) review the effectiveness of the environmental management of the project, including any environmental impact mitigation works; and
 - e) review the adequacy of the Proponent's response to any complaints made about the project through the Complaints Register required, referred to in the concept approval.

An **Environmental Audit Report** shall be submitted for comment to the Director-General within two months of the completion of the Audit, detailing the findings and recommendations of the Audit and including a detailed response from the Proponent to any of the recommendations contained in the Report.

5. ENVIRONMENTAL MANAGEMENT

Environmental Representative

- 5.1 Prior to the commencement of any construction or operational activities, or as otherwise agreed by the Director-General, 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) during any construction activities, and throughout the life of the project, 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, contained in the document referred to under 1.1 d) of this approval, permits and licences; 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

5.2 The Proponent shall prepare and implement a **Construction Environmental Management Plan** to outline environmental management practices and procedures to be followed during construction of the project. The Plan shall be consistent with *Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004) and shall include, but not necessarily be limited to:

- a) a description of all activities to be undertaken on the site during construction including an indication of stages and sub-stages of construction, where relevant;
- b) statutory and other obligations that the Proponent is required to fulfil during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
- c) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:
 - i) measures to manage vibration;
 - ii) measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/ or waters during construction activities;
 - iii) measures to monitor and control noise emissions during construction works;
 - iv) measures to minimise and manage impacts on existing trees and vegetation;
 - v) measures to monitor and control air emissions during construction to ensure that air emissions are both minimised and in compliance with the requirements of this approval; and
 - vi) measures to minimise and manage impacts to indigenous and non-indigenous items and locales.
- d) a description of the roles and responsibilities for all relevant employees involved in the construction of the project;
- e) quantification of traffic volume generated by construction activities and description of traffic management measures;
- f) landscaping details, including the number of trees to be removed on site and trees to be planted;
- g) the additional Plans listed under condition 5.3 of this approval; and
- h) complaints handling procedures during construction.

The Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of any 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.

5.3 As part of the Construction Environmental Management Plan for the project, required under condition 5.2 of this approval, the Proponent shall prepare and implement the following:

- a) a **Noise and Vibration Management Plan**, that shall include, but not necessarily be limited to:
 - i) identification of all potentially affected sensitive receivers, activities to be carried out, including ancillary facilities, and associated sources of noise at each premises;
 - ii) quantification of the rating background noise for sensitive receivers;
 - iii) the construction noise, ground-borne noise and vibration objectives outlined in this approval;

- iv) assessment of potential noise, ground-borne noise and vibration levels from the proposed construction methods (including construction vehicles) anticipated at sensitive receiver premises against the objectives identified in this approval, in accordance with relevant guidelines;
- v) where the objectives are predicted to be exceeded, an analysis of feasible and reasonable mitigation measures that can be implemented to reduce construction noise impacts;
- vi) description of management methods and procedures, and specific noise mitigation treatments that will be implemented to control noise and vibration during construction;
- vii) where the noise and vibration objectives cannot be met, additional measures including but not necessarily limited to the following shall be considered and implemented where practicable:
 - reduced hours of construction;
 - the provision of respite from noisy and/or vibration intensive activities;
 - an acoustic enclosure over the excavation site; and
 - alternative excavation methods or other negotiated outcomes with the affected community.
- viii) 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) is consistent with current 'best practice' shall be included in the Plan;
- ix) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity; and
- x) measures to monitor noise performance and respond to complaints.
- b) a **Non-Indigenous Historical Management Plan**, that shall be prepared in consultation with the Heritage Office of the Department and Council and include, but not necessarily be limited to:
 - i) details of any investigations to be undertaken for the stub-tunnel connection component of the project and any approvals required;
 - ii) procedures to be implemented if previously unidentified historical relics are discovered during construction. If such relics are discovered, all work likely to affect the relic(s) must immediately cease and the NSW Heritage Council notified in accordance with the *Heritage Act 1977*; and
 - iii) an education program, for construction personnel on their obligations for historic relics.
- c) a **Air Quality Management Plan**, that shall be prepared in consultation with DECC and provide details of all dust and gas 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) include measures to reduce dust from stockpiles and other exposed surfaces;
 - iii) establishment of a protocol to handle dust complaints that includes recording, reporting and appropriate actions for excepted types of 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;
 - v) address the monitoring, management and control of air pollutants including gaseous substances generated during construction.
- d) a **Water Quality Management Plan**, that shall include, but not necessarily be limited to:
 - i) details of measures to be employed to manage any accumulation of water in the stub-tunnel section (both groundwater and surface water);
 - ii) management of the cumulative impacts of the project on the quality and quantity of surface and groundwater, including stormwater;
 - iii) details of short and long term measures to be employed to minimise soil erosion and the discharge of sediment to land and/or waters;
 - iv) identification of all potential sources of water pollution (including those resulting from maintenance activities) 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;
 - v) opportunities for recycling/re-use of stormwater;

- vi) contingency plans to be implemented in the event of major fuel spills or other chemicals; and
- vii) a programme for reporting on the effectiveness of the sediment and erosion control system against performance goals.
- e) a **Traffic Management Protocol**, that shall be prepared in consultation with the RTA, Council and State Transit Authority and include information on, but not necessarily be limited to:
 - i) all roads nominated for use during construction;
 - ii) minimising and monitoring use of local roads by heavy vehicles;
 - iii) identification and designation of heavy vehicle routes, including spoil trucks;
 - iv) adequate access to properties (residential and commercial) during construction;
 - v) scheduling of works to minimise traffic disruption;
 - vi) safe pedestrian and cyclist movement;
 - vii) safe traffic movement and access;
 - viii) loss of parking spaces and provision of alternative spaces;
 - ix) minimising worker car use and disruption to business activities; and
 - x) any other approvals required for the management of traffic.
- f) a **Magnetic Field Management Protocol**, that shall include details of measures to be applied to the project to ensure that the levels of magnetic fields surrounding the cables, transformers, switchboard and air-core reactors are minimised during operation, including details on the application of Prudent Avoidance Principles. The Protocol shall include, but not necessarily be limited to:
 - i) identification of the predicted distance between the sources within the substation that will emit magnetic fields and sensitive receptors situated in the commercial development of the project and other sensitive receptors surrounding the project site;
 - ii) identification of the magnetic field reduction strategies, technologies and design measures, already used and proposed to be used, to minimise the exposure of occupants in the commercial building that is part of the project, surrounding buildings and other sensitive receivers surrounding the proposed substation; and
 - iii) details of the methodology to be employed to monitor the magnetic field levels generated from the project during the operation phase.

Operation Environmental Management Plan

- 5.4 The Proponent shall prepare and implement an **Operation Environmental Management Plan** to detail an environmental management framework, practices and procedures to be followed during operation of Stage 1A. The Plan shall be consistent with *Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004) and shall include, but not necessarily be limited to:
- a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to operation of the project, including all approvals, licences, approvals and consultations;
 - b) a description of the roles and responsibilities for all relevant employees involved in the operation of the project;
 - c) overall environmental policies and principles to be applied to the operation of the project;
 - d) standards and performance measures to be applied to the project, and a means by which environmental performance can be periodically reviewed and improved, where appropriate;
 - e) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval;
 - f) the additional Plan listed under condition 5.5 of this approval; and
 - g) the environmental monitoring requirements outlined under this approval.

The Plan 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 otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General.

- 5.5 As part of the Operation Environmental Management Plan required under condition 5.4, the Proponent shall prepare and implement, but is not limited to the following:
- a) a **Noise Management Plan** to detail measures to mitigate and manage noise during operation of the Stage 1A. The Plan shall include, but not necessarily be limited to:

- i) procedures to ensure that all reasonable and feasible noise mitigation measures are applied during operation of Stage 1A;
 - ii) procedures to generate suitable documentation for environmental auditing, that demonstrates that the noise limits and noise goals specified under this approval, or best practice noise control operations, are being met;
 - iii) identification of all relevant receivers and the applicable criteria at those receivers commensurate with the noise limits and noise goals specified under this approval;
 - iv) identification of noise-generating activities and/or sources in relation to stage 1;
 - v) procedures for periodic consideration of noise impacts at the relevant receivers against the noise limits and noise goals specified under this approval;
 - vi) details of all management methods and procedures that will be implemented to control individual and overall noise emissions from the site during operation;
 - vii) a description of reactive and pro-active strategies for dealing promptly with any noise complaints, including documentation of a fast response (eg within one hour or as soon as reasonably practical), the completed action on a complaint and feedback from the complainant (eg within 24 hours); and
 - viii) noise monitoring and reporting procedures.
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