

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.

The Hon Kristina Keneally MP
Minister for Planning

Sydney

29 October 2008

File No: 9039738

SCHEDULE 1

Application No:	08_0021
Proponent:	Delta Electricity
Approval Authority:	Minister for Planning
Land:	Land to which Major Project Application 08_0021 applies.
Project:	<p>Comprises the Stage 2 project, involving:</p> <ul style="list-style-type: none">• the conversion of the (Stage 1) open cycle gas-fired power station (project approval 06_0029) into a combined-cycle gas-fired power station, including the use of the transmission line and gas pipeline constructed as part of Stage 1; and• the construction and operation of water pipeline infrastructure to cater for Stage 1 and Stage 2, as required.
Concept Approval:	The project is the second stage of the approved concept plan for the Bamarang Gas Turbine Power Facility (06_0029).
Major Project:	The project is part of the Bamarang Gas Power Facility, which was declared a Major Project under section 75B(1)(a) of the <i>Environmental Planning and Assessment Act 1979</i> , because it is development of a kind described in clause 24 of Schedule 1 of <i>State Environmental Planning Policy (Major Projects) 2005</i> .

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

KEY TO CONDITIONS

1. ADMINISTRATIVE CONDITIONS	4
Terms of Approval	4
Limits of Approval	4
Statutory Requirements	5
Compliance	5
2. SPECIFIC ENVIRONMENTAL CONDITIONS	6
Air Quality Impacts	6
Noise Impacts	7
Soil and Water Quality Impacts	8
Surface Water Management	8
Waste Generation and Management	8
Hazards and Risk	9
Traffic and Transport Impacts	10
Flora and Fauna Impacts	10
Visual Amenity Impacts	11
3. ENVIRONMENTAL MONITORING AND AUDITING	11
Air Quality Monitoring	11
Noise Monitoring	12
Hazard Compliance	13
Auditing	13
4. COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT	14
Complaints Procedure	14
5. ENVIRONMENTAL MANAGEMENT	15
Construction Environmental Management Plan	15
Operation Environmental Management Plan	15
6. ENVIRONMENTAL REPORTING	18
Incident Reporting	18
Annual Performance Reporting	18

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

SCHEDULE 2

Act, the	<i>Environmental Planning and Assessment Act, 1979</i>
Conditions of Approval	The Minister's conditions of approval for the project.
Council	Shoalhaven City Council
DECC	Department of Environment and Climate Change
DoD	Commonwealth Department of Defence
Department, the	Department of Planning
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>
Director-General's Report	The report provided to the Minister by the Director-General of the Department under Section 75I of the EP&A Act.
Dust	Any solid material that may become suspended in air or deposited
EA	<i>Proposed Gas Power Facility at Bamarang Stage Two, Environmental Assessment</i> , prepared by GHD Pty Ltd and dated April 2008
EPA	Environment Protection Authority as part of the Department of Environment and Climate Change
EPL	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act, 1997</i>
Minister, the	Minister for Planning
Proponent	Delta Electricity
Publicly Available	Available for inspection by a member of the general public (for example available on an internet site or at a display centre).
Site	Land to which Major Projects Application 08_0021 applies.
Stage 1	Open cycle gas turbine facility project, including gas supply and electricity transmission infrastructure.
Stage 2	<p>Combined cycle gas turbine facility project, including water supply infrastructure.</p> <p>The Proponent may proceed directly to the combined-cycle facility rather than first constructing the Stage 1 open-cycle facility and converting to combined-cycle facility at a later date.</p>
Submission report	<i>Delta Electricity, Proposed Gas Power Facility at Bamarang Stage 2, Submissions Report</i> , prepared by GHD Pty Ltd and dated August 2008

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

1. ADMINISTRATIVE CONDITIONS

Terms of Approval

- 1.1 The Proponent shall carry out the project generally in accordance with the:
- Major Projects Application 08_0021;
 - Proposed Gas Power Facility at Bamarang Stage Two, Environmental Assessment*, prepared by GHD Pty Ltd and dated April 2008;
 - Delta Electricity, Proposed Gas Power Facility at Bamarang Stage 2, Submissions Report*, prepared by GHD Pty Ltd and dated August 2008;
 - the concept plan approval granted with respect to the Bamarang Gas Power Facility (06_0029);
 - Application to Modify a Project Approval, MP08_0021 (Stage 2 Project) MOD 1*, accompanied by *Proposed Gas Power Facility at Bamarang: Application to Modify the Project Approval – Section 75W Environmental Assessment*, prepared by GHD Pty Ltd for Delta Electricity and dated September 2009;
 - Response to Submissions*, prepared by Delta Electricity and dated 8 March 2010, accompanied by *Proposed Gas Turbine Power Station, Bamarang: Addendum to Air Quality Impact Assessment and Plume Rise Assessment*, prepared by Heggies Pty Ltd for Delta Electricity, dated 5 March 2010;
 - Proposed Gas Turbine Power Station, Bamarang: Addendum to Air Quality Impact Assessment and Plume Rise Assessment*, prepared by Heggies Pty Ltd for Delta Electricity, dated 31 March 2010; 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 1.1c) inclusive and 1.1e) and 1.1g) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and
 - any document listed from condition 1.1a) and 1.1c) inclusive and 1.1e) and 1.1g) inclusive, and any other document listed from condition 1.1a) and 1.1c) inclusive and 1.1e) and 1.1g) inclusive, the most recent document shall prevail to the extent of the inconsistency.
- 1.3 Notwithstanding condition 1.2, if there is any inconsistency between this project approval and the concept plan approval for the Bamarang Gas Power Facility, the concept plan approval shall prevail to the extent of the inconsistency.
- 1.4 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

- 1.5 This project approval shall lapse on 27 February 2017, unless works the subject of this approval are physically and substantially commenced on or before that time.
- 1.6 The project shall comprise two heat recovery steam generators and one steam turbine with a total nominal output capacity of approximately 450 megawatts.
- 1.7 The project shall utilise air-cooled condenser technology in the combined-cycle process of the power station.

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

- 1.8 The Proponent shall enter into agreement with Shoalhaven Water to supply the water requirements of the Stage 1 and Stage 2 projects from the DN 600 Hobas Rising Main and bear the cost associated with the connection and maintenance of the water supply pipeline as negotiated with Shoalhaven Water.

Statutory Requirements

- 1.9 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

- 1.10 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.
- 1.11 The Proponent shall be responsible for environmental impacts resulting from the actions of all persons on site, including contractors, sub-contractors and visitors.
- 1.12 Prior to each of the events listed below, the Proponent shall certify in writing to the satisfaction of the Director-General that it has complied with all conditions of this approval applicable prior to that event:
- a) commencement of any construction works on the land subject of this approval;
 - b) commencement of operation of the project.
- 1.13 Notwithstanding condition 1.12 of this approval, the Director-General may require an update report on compliance with all, or any part, of the conditions of this approval. Any such update shall meet the requirements of the Director-General and be submitted within such period as the Director-General may agree.
- 1.14 The Proponent shall meet the requirements of the Director-General in respect of the implementation of any measure necessary to ensure compliance with the conditions of this approval, and general consistency with the documents listed under condition 1.1 of this approval. The Director-General may direct that such a measure be implemented in response to the information contained within any report, plan, correspondence or other document submitted in accordance with the conditions of this approval, within such time as the Director-General may agree.
- 1.15 The Proponent may elect to construct the project in discrete work packages or stages in conjunction with or separate from Stage 1. In this case, these conditions of approval may be complied with separately for each discrete work package or stage, as relevant.

Where works are to be carried out in conjunction with Stage 1, the Proponent may with the Director-General's agreement prepare a single plan, report or correspondence to demonstrate compliance with relevant conditions of approval of both the Stage 1 and Stage 2 projects.

Alternatively, if Stage 2 (or discrete work packages/ stages of the project) is developed after Stage 1, the Proponent may with the Director-General's agreement, update any existing plan, report or correspondence previously prepared for Stage 1, to demonstrate compliance with relevant conditions of approval for Stage 2. In this case, the Proponent must clearly demonstrate how the updated plan, report or correspondence has addressed the relevant requirements of these conditions of approval in relation to the Stage 2 project.

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

Environmental Update

- 1.16 Within three months prior to the commencement of construction, the Proponent shall prepare and submit to the Director-General, a report in consultation with the Environment Protection Authority (EPA) and Council which demonstrates how the Operational Air and Noise impacts are consistent with relevant environmental performance standards current at the time of the report's preparation, taking into account nearby sensitive receivers. In the event of any inconsistency between the current standards (at the time of the report's preparation) and conditions 2.4 and 2.8, the most stringent shall apply. Construction shall not commence until the report has been approved by the Director-General.

2. SPECIFIC ENVIRONMENTAL CONDITIONS

Air Quality Impacts

Dust Generation

- 2.1 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.

Odour

- 2.2 The Proponent shall not permit any offensive odour, as defined under section 129 of the *Protection of the Environment Operations Act 1997*, to be emitted beyond the boundary of the site.

Monitoring and Discharge Points

- 2.3 For the purposes of this approval, air monitoring/ air discharge points shall be identified as provided in Table 1 below.

Table 1 - Identification of Air Monitoring and Discharge Points

Monitoring / Discharge Point Identifier	Monitoring/ Discharge Point Location
1	Turbine Stack 1
2	Turbine Stack 2

Discharge Limits

- 2.4 The Proponent shall design, construct, operate and maintain the project to ensure that for each turbine stack discharge point, the concentration of each pollutant listed in Table 2 is not exceeded. This condition only applies to the operation of the project, and to avoid any doubt, does not apply during start-up or shut-down.

Table 2 - Maximum Allowable Discharge Concentration Limits (Air)

Pollutant	Fuel Type	100 Percentile limit (mgm ⁻³)	Reference conditions
Nitrogen dioxide (NO ₂) or nitric oxide (NO), or both (as NO ₂)	Natural Gas	50	dry, 273 K, 101.3 kPa, and 15 % O ₂

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

Noise Impacts

Vibration Impacts

- 2.5 The Proponent shall ensure that the vibration resulting from construction and operation of the project does not exceed the preferred values vibration (for low probability of adverse comment) presented in *Assessing Vibration: A Technical Guideline* (DECC, February 2006), at any affected residential dwelling.

Construction Noise

- 2.6 The Proponent shall only undertake construction activities associated with the project that would generate an audible noise at any residential premises during the following hours:
- 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;
 - 8:00 am to 1:00 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.
- 2.7 The hours of construction activities specified under condition 2.6 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 condition 2.6 shall be:
- considered on a case-by-case basis;
 - accompanied by details of the nature and need for activities to be conducted during the varied construction hours; and
 - accompanied by written evidence of the DECC's agreement with the proposed variation in construction times, after providing any information necessary for the DECC 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.

Operation Noise

- 2.8 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 3, at those locations and during those periods indicated and are consistent with the New South Wales Industrial Noise Policy (EPA 2000) (or any subsequent update at the commencement of construction). In the case of any inconsistency between Table 3 and the New South Wales Industrial Noise Policy (EPA 2000) (or any subsequent update), the most stringent levels shall be met.

The maximum allowable noise contributions apply under wind speeds up to 3 ms^{-1} (measured at 10 metres above ground level), or under temperature inversion conditions of up to $3^\circ\text{C}/100 \text{ metres}$ and wind speeds of up to 2 m/s at 10 metres above the ground.

Table 3 - Maximum Allowable Noise Contribution

Location	Day 7:00am to 6:00pm Mondays to Saturdays 8:00am to 6:00pm Sundays and public holidays	Evening 6:00pm to 10:00pm on any day	Night 10:00pm to 7:00am Mondays to Saturdays 10:00pm to 8:00am Sundays and public holidays	
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)
Part Lot 2 DP 1040676 Yawal Road (previously identified as Lot 22 DP 746233)	65	65	65	N/A
213 Gannet Road	35	35	35	45
190 Bamarang Road	35	35	35	45
145 Bamarang Road	35	35	35	45

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

2.9 For the purpose of assessment of noise contributions specified under condition 2.8 of this approval, noise from the project shall be:

- a) measured at the most affected point within the residential boundary or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary to determine compliance with the $L_{Aeq}(15 \text{ minute})$ noise limits;
- b) measured at 1 metre from the dwelling façade to determine compliance with the $L_{A1} (1 \text{ minute})$ noise limits; and
- c) subject to the modification factors provided in Section 4 of the New South Wales Industrial Noise Policy (EPA, 2000) (or any subsequent update), where applicable.

Notwithstanding, should direct measurement of noise from the project be impractical, the Proponent may employ an alternative noise assessment method deemed acceptable by the EPA (refer to Section 11 of the New South Wales Industrial Noise Policy (EPA, 2000) (or any subsequent update). Details of such an alternative noise assessment method accepted by the EPA shall be submitted to the Director-General prior to the implementation of the assessment method.

Soil and Water Quality Impacts

2.10 Except as may be expressively 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.

2.11 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*.

Surface Water Management

2.12 The facility shall be designed such that surface water from the project will not be received by the Bamarang Reservoir.

2.13 The facility shall be designed and employ surface water management techniques such that existing run-off volumes from the site to surrounding creeks and drainage lines are maintained at similar levels post-construction.

Waste Generation and Management

2.14 All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.

2.15 The Proponent shall maximise the treatment, reuse and/ or recycling on the site of any waste oils, excavated soils, slurries, dusts and sludges associated with the project, to minimise the need for treatment or disposal of those materials outside the power station. To avoid any doubt, this condition does not permit the use of any material, other than natural gas and steam for the purposes of electricity generation as part of the project.

2.16 The Proponent shall manage any asbestos or asbestos-contaminated materials that may be uncovered during the construction, commissioning and operation of the project strictly in accordance with the requirements under *Protection of the Environment Operations (Waste) Regulation 2005* and any guidelines or requirements issued by the DECC in relation to those materials.

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

- 2.17 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.
- 2.18 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 *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* (DECC, 2004), or any future guideline that may supersede that document.

Hazards and Risk

- 2.19 The Proponent shall demolish all relevant structures strictly in accordance with *Australian Standard 2601-1991: The Demolition of Structures*, as in force at 1 July 1993.

Bunding and Spill Management

- 2.20 The Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:
- a) all relevant Australian Standards;
 - b) for liquids, 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 the requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

Aviation Hazards

- 2.21 Prior to the commissioning of the project, the Proponent shall consult with the DoD, the Civil Aviation Safety Authority and Air Services, including seeking any necessary approval(s) from the DoD, with respect to the management of aviation hazards associated with operations at HMAS Albatross. Consultation with the DoD, Civil Aviation Safety Authority and Air Services shall include, but not necessarily be limited to resolution of the following issues to the satisfaction of the DoD, Civil Aviation Safety Authority and Air Services:
- a) updates to and notations on flight plans, maps and other relevant documentation to identify the project as a potential aviation hazard;
 - b) on-going consultation and notification requirements between the Proponent, the DoD, Civil Aviation Safety Authority and Air Services, where relevant, particularly in relation to the hours, modes and durations of commissioning and operational phases of the project; and
 - c) such other matters as the parties may consider relevant.

Pre-Construction Hazards Studies

- 2.22 Prior to the commencement of construction of the project, the Proponent shall prepare and submit for the approval of the Director-General, the following studies:
- a) a **Fire Safety Study** for the project, covering all aspects detailed in the Department's publication *Hazardous Industry Planning Advisory Paper No. 2 - Fire Safety Guidelines* and the New South Wales Government's *Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*. The Study shall include a strict maintenance schedule for essential services and other safety measures. The Study shall be submitted for approval to the Commissioner of the NSW Rural Fire Service prior to submission to the Director-General;
 - b) a **Hazard and Operability Study (HAZOP)** for the project, chaired by an independent, qualified person or team. The independent person or team shall be approved by the

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

Director-General. The Study shall be carried out in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 8 - HAZOP Guidelines* and shall, in particular, address the early shutdown procedures and systems in the event of a gas leak and recommended measures for early shutdown in the event of an incident. The HAZOP report shall be accompanied by a program for the implementation of all recommendations made in the HAZOP report. If the Proponent intends to defer the implementation of a recommendation, justification must be included.

- c) a **Final Hazard Analysis** prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis*; and
- d) a **Construction Safety Study** for the project, prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 7 - Construction Safety Study Guidelines*. The commissioning portion of the Study may be submitted two months prior to commissioning the project.

Pre-Commissioning Hazards Studies

2.23 Prior to the commencement of commissioning of the project the Proponent shall prepare and submit for the approval of the Director-General the following studies:

- a) an **Emergency Plan** for the project. The Plan shall be prepared in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 1 - Industry Emergency Planning Guidelines*. The plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the project; and
- b) a **Safety Management System**, covering all operations at the project and any associated transport activities involving hazardous materials. The System shall clearly specify all safety-related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to safety procedures. The System shall be developed in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 9 - Safety Management*.

Traffic and Transport Impacts

2.24 Upon determining the haulage route(s) for construction materials associated with the project, the Proponent shall commission an independent, qualified person or team to undertake a **Road Dilapidation Report** in consultation with Council and the Roads and Traffic Authority. The report shall assess the current condition of the roads and detail mechanisms to restore any damage that may result due to traffic and transport related to the construction and ongoing operation of the project. The Report shall be submitted to the Council and the Roads and Traffic Authority for review prior to the commencement of haulage.

The cost of any restorative work described in the Report or recommended by the Council or the Roads and Traffic Authority after review of the Report, shall be funded by the Proponent. Such work shall be undertaken at a time as agreed upon between the Proponent, the Council and the Roads and Traffic Authority. 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.

Flora and Fauna Impacts

2.25 The Proponent shall maximise the use of existing cleared areas for on-site facilities.

2.26 Where possible the Proponent shall retain existing native trees, in particular hollow-bearing trees, and maximise the use of native grass understories.

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

- 2.27 The Proponent shall provide a compensatory habitat package consisting of no fewer than two hectares of compensatory habitat for each hectare of vegetation removed as part of the project or as otherwise agreed to by the DECC. Specifications for the compensatory habitat, including location, composition, quality and management of the habitat, shall be determined in consultation with the DECC and subject to the approval of the Director-General. As a general guide, the value of lost habitat due to the project should be satisfactorily offset such that it maintains or improves biodiversity values in the local area. Funding or works associated with the compensatory habitat package shall be completed to the satisfaction of the Director-General prior to the relevant vegetation clearing.

Visual Amenity Impacts

- 2.28 The Proponent shall minimise the use of reflective building elements and maximise the use of building materials and treatments which visually complement the surrounding bushland.
- 2.29 The Proponent shall ensure that all external lighting associated with the project is mounted, screened, and directed in such a manner so as not to create a nuisance to the surrounding environment, properties and roadway. The lighting shall be the minimum level of illumination necessary and shall comply with *AS 4282(INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*.

Note: this clause does not apply to any aviation hazard lighting that may be required by DoD under condition 2.21.

- 2.30 Prior to the commencement of construction of the project, the Proponent shall submit urban design and landscaping details of the project to be implemented to minimise the visual impact of the project and associated infrastructure on relevant local and regional visual receptors. The design and landscaping details shall be developed in consultation with Council and shall include, but not necessarily be limited to:
- identification of all high visibility structures from both Yalwal Road, and existing and proposed residential areas, and details of measures to be employed to reduce the visual impact of each of these structures; and
 - details of landscaping to be undertaken on-site to minimise visual impact from both Yalwal Road, and existing and proposed residential areas. Australian native species consistent with the surrounding bushland shall be used for this purpose.

3. ENVIRONMENTAL MONITORING AND AUDITING

Air Quality Monitoring

- 3.1 The Proponent shall determine the pollutant concentrations and emission parameters specified in Table 4 below, at each of the turbine stack discharge points (established in strict accordance with the requirements of test method TM-1 as specified in *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* (EPA, 2001)). Monitoring shall be undertaken during operation of the project, at the frequency indicated in the Table, unless otherwise agreed by the DECC.

Table 4 – Periodic Pollutant and Parameter Monitoring (Air)

Pollutant/ Parameter	Units of Measure	Method	Frequency
Nitrogen dioxide (NO ₂) or nitric oxide (NO), or both (as NO ₂)	mgm ⁻³	CEM-2	Continuous
Velocity	ms ⁻¹	TM-2	Post commissioning and annually thereafter
Volumetric flow rate	m ³ s ⁻¹	TM-2	
Temperature	°C	TM-2	
Moisture content in stack gases	%	TM-22	
Dry gas density	kgm ⁻³	TM-23	

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

Molecular weight of stack gases	g.gmol ⁻¹	TM-23	
Carbon dioxide	%	TM-24	
Oxygen	%	TM-25	

Air Quality Performance Verification

- 3.2 Within 90 days of the commencement of operation of the project, or as may be agreed by the Director-General, and during a period in which the project is operating under design loads and normal operating conditions, the Proponent shall undertake a program to confirm the air emission performance of the project. The program shall include, but not necessarily be limited to:
- point source emission sampling and analysis subject to the requirements listed under condition 3.1;
 - a comprehensive air quality impact assessment, using actual air emission data collected under a). The assessment shall be undertaken strictly in accordance with the methods outlined in *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2001);
 - a comparison of the results of the air quality impact assessment required under b) above, and the predicted air quality impacts detailed in the documents listed under condition 1.1 of this approval;
 - a comparison of the results of the air quality impact assessment required under b) above, and the impact assessment criteria detailed in *Approved Methods and Guidance for the Sampling and Analysis of Air Pollutants in New South Wales* (EPA, 2001); and
 - details of any entries in the Complaints Register (condition 4.3 of this approval) relating to air quality impacts.

A report providing the results of the program shall be submitted to the Director-General and DECC within 28 days of completion of the testing required under a).

- 3.3 In the event that the program undertaken to satisfy condition 3.2 of this approval indicates that the operation of the project, under design loads and normal operating conditions, will lead to:
- greater point source emissions or ground-level concentrations of air pollutants than predicted in the documents listed under condition 1.1 of this approval; or
 - greater point source emissions or ground-level concentrations of air pollutants than the impact assessment criteria detailed in *Approved Methods and Guidance for the Sampling and Analysis of Air Pollutants in New South Wales* (EPA, 2001);

then the Proponent shall provide details of remedial measures to be implemented to reduce point source emissions or ground-level concentrations of air pollutants to no greater than that predicted in the documents listed under condition 1.1 of this approval and to meet the impact assessment criteria detailed in *Approved Methods and Guidance for the Sampling and Analysis of Air Pollutants in New South Wales* (EPA, 2001). Details of the remedial measures and a timetable for implementation shall be submitted to the Director-General for approval within such period as the Director-General may require, and be accompanied by evidence that the DECC is satisfied that the remedial measures are acceptable.

Noise Monitoring

- 3.4 Within 90 days of the commencement of operation of the project, or as may be agreed by the Director-General, and during a period in which the project is operating under design loads and normal operating conditions, the Proponent shall undertake a program to confirm the noise emission performance of the project. The program shall meet the requirements of the DECC, and shall include, but not necessarily be limited to:

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

- a) noise monitoring, consistent with the guidelines provided in the *New South Wales Industrial Noise Policy* (EPA, 2000) (or any subsequent update), to assess compliance with condition 2.8 of this approval;
- b) methodologies, locations and frequencies for noise monitoring (including at sites assessed in the EA);
- c) identification of monitoring sites at which pre- and post-project noise levels can be ascertained; and
- d) details of any entries in the Complaints Register (condition 4.3 of this approval) relating to noise impacts.

A report providing the results of the program shall be submitted to the Director-General and the DECC with 28 days of completion of the testing required under a).

- 3.5 In the event that the program undertaken to satisfy condition 3.4 of the approval indicates that the operation of the project, under design loads and normal operating conditions, will lead to greater noise impacts than permitted under condition 2.8 of this approval, then the Proponent shall provide details of remedial measures to be implemented to reduce noise impacts to levels required by that condition. Details of the remedial measures and a timetable for implementation shall be submitted to the Director-General for approval within such period as the Director-General may require, and be accompanied by evidence that the DECC is satisfied that the remedial measures are acceptable.

Hazard Compliance

- 3.6 Within 90 days of the commencement of operation of the project, or as may be agreed by the Director-General, the Proponent shall submit a report detailing compliance with conditions 2.22 and 2.23 of this approval. The report shall include, but not necessarily be limited to:
- a) dates of study, plan or system completion, and commencement of construction and commissioning;
 - b) actions taken or proposed to implement recommendations made in the studies, plans or systems; and
 - c) responses to each requirement that may be requested by the Director-General in respect to the implementation of any measures arising from recommendations of the studies or reports described by conditions 2.22 and 2.23.

Auditing

- 3.7 Twelve months after the commencement of operation of the project, or within such period otherwise agreed by the Director-General, the Proponent shall commission an independent, qualified person or team to undertake a Hazard Audit of the project. The independent person or team shall be approved by the Director-General prior to the commencement of the Audit. A **Hazard Audit Report** shall be submitted for the approval of the Director-General no later than one month after the completion of the Audit. Further Hazard Audits shall be undertaken every three years, or as otherwise agreed or required by the Director-General. Hazard Audits shall be carried out in accordance with the Department's publication *Hazardous Industry Planning Advisory Paper No. 5 - Hazard Audit Guidelines*. The hazard audit report shall be accompanied by a program for the implementation of all recommendations made in the hazard audit report. If the Proponent intends to defer the implementation of a recommendation, justification must be included.
- 3.8 Twelve months after the commencement of operation of the project, and every three years thereafter, or as otherwise agreed or required by the Director-General, the Proponent shall commission an independent, qualified 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. An **Environmental Audit Report** shall be

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

submitted for the approval of the Director-General within one month of the completion 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; and
- d) review the effectiveness of the environmental management of the project, including any environmental impact mitigation works.

The Director-General may require the Proponent to undertake works to address the findings or recommendations presented in the Report. Any such works shall be completed within such time as the Director-General may require. The Environmental Audit Report shall be made available for public inspection on request.

If the preparation and submission of a Hazard Audit Report and an Environmental Audit Report are required at the same time, the requirements of condition 3.7 and 3.8 of this approval may be satisfied with a single report prepared by a single independent person or team approved by the Director-General.

4. COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT

- 4.1 Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.

Complaints Procedure

- 4.2 Prior to the commencement of construction of the project, the Proponent shall ensure that the following are available for community complaints for the life of the project (including construction and operation):
- a) a telephone number on which complaints about construction and operational activities at the site may be registered;
 - b) a postal address to which written complaints may be sent; and
 - c) an email address to which electronic complaints may be transmitted.

The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public, and which clearly indicates the purposes of the sign.

- 4.3 The Proponent shall record details of all complaints received through the means listed under condition 4.2 of this approval in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:
- a) the date and time, where relevant, of the complaint;
 - b) the means by which the complaint was made (telephone, mail or email);
 - c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.

The Complaints Register shall be made available for inspection by the Director-General upon request.

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

5. ENVIRONMENTAL MANAGEMENT

Construction Environmental Management Plan

- 5.1 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 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 monitor and manage dust emissions;
 - ii) measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/ or waters during construction activities, particularly during any construction works at or near drainage lines;
 - iii) measures to monitor and control noise emissions during construction works;
 - iv) measures to minimise and manage impacts on native ecology, including minimisation of vegetation clearing, methods for vegetation clearing and soil disturbance, topsoil, seed and vegetative material re-use initiatives to be employed, and measures and monitoring to be undertaken to control weed spread and feral pests;
 - 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 the Environment Protection Licence for the site;
 - d) a description of the roles and responsibilities for all relevant employees involved in the construction of the project;
 - e) the additional studies listed under condition 5.2 of this approval; and
 - f) 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.

- 5.2 As part of the Construction Environmental Management Plan for the project, required under condition 5.1 of this approval, the Proponent shall prepare and implement a **Traffic Management Protocol** to outline management of traffic conflicts that may be generated during construction of the project. The Plan shall address the requirements of Council and the Roads and Traffic Authority and shall include, but not necessarily be limited to:
- a) details of traffic routes for heavy vehicles, including any necessary route or timing restriction for oversized loads;
 - b) detailed consideration of measures to be employed to ensure traffic volume, acoustic and amenity impacts along the heavy vehicle routes are minimised;
 - c) detailed consideration of alternative routes (where necessary); and
 - d) demonstration that all statutory responsibilities with regard to road traffic impacts have been complied with.

Operation Environmental Management Plan

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

- 5.3 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 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) 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 studies listed under condition 5.4 of this approval; and
 - g) the environmental monitoring requirements outlined under conditions 3.1 to 3.8 of this approval, inclusive.

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.

- 5.4 As part of the Operation Environmental Management Plan for the project, required under condition 5.3 of this approval, the Proponent shall prepare and implement the following Management Plans:
- a) an **Air Quality Management Plan** to outline measures to minimise impacts from the project on local and regional air quality. The Plan shall include, but not necessarily be limited to:
 - i) identification of all major sources of particulate and gaseous air pollutants that may be emitted from the project, being both point-source and diffuse emissions, including identification of the major components and quantities of these emissions;
 - ii) monitoring for gaseous and particulate emissions from the project, in accordance with any requirements of the DECC;
 - iii) procedures for the minimisation of gaseous and particulate emissions from the project;
 - iv) pro-active and reactive management and response mechanisms for particulates and gaseous emissions, with specific reference to measures to be implemented and actions to be taken to minimise and prevent potential elevated air quality impacts on surrounding land uses as a consequence of meteorological conditions, upsets within the project, or the mode of operation of the project at any time;
 - v) specific procedures for the management of generating efficiency and the minimisation of greenhouse gas emissions per unit of electricity generated;
 - vi) procedures aimed at maximising the efficiency of the start-up and shut-down cycles for the project;
 - vii) provision for regular review of air quality monitoring data, with comparison of monitoring data with that assumed and predicted in the documents listed under condition 1.1 of this approval, including verification of air quality modelling and predictions, as may be relevant;

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

- viii) Plans for regular maintenance of process equipment to minimise the potential for leaks and fugitive emissions; and
 - ix) a contingency plan should an incident, process upset or other initiating factor lead to elevated air quality impacts, whether above normal operating conditions or environmental performance goals/ limits.
- b) a **Water Management Plan** to outline measures that will be employed to manage water on the site, to minimise soil erosion and the discharge of sediments and other pollutants to lands and/ or waters throughout the life of the project. The Plan shall be based on best environmental practice and shall address the requirements of the Department, DECC and Council. The Plan shall include, but not necessarily be limited to:
- i) consideration of all reasonable and feasible options to avoid discharge to ground and/or ambient waters including methods to minimise the volume of contaminated water and effluent generated, recycling and reusing water and effluent;
 - ii) identification of clean and dirty water areas on site maps for different stages of the project and identification of criteria for nomination of areas as clean or dirty;
 - iii) details of water management measures to be implemented for clean and dirty waters;
 - iv) calculations for a water balance for all waters generated on the site including potential volumes of groundwater, stormwater and process water for treatment on-site or off-site, proposed discharges, recycling or reuse;
 - v) details of the remedial actions to be taken by the Proponent and site operators in response to an exceedance of concentration limits or other performance criteria for the on-site or ambient water management controls;
 - vi) characterisation of wastewater qualities and quantities for reuse on-site shall be characterised and irrigation management practices specified;
 - vii) specification of wastewater reuse areas shall be specified on site maps for different stages of the project; and
 - viii) specific details shall be provided in relation to the times, locations, volumes and qualities of water to be irrigated, including how the quality of water to be used for irrigation will be assessed.
- c) a **Noise Management Plan** in consultation with DECC, to detail measures to mitigate and manage noise during the operation of the project under design loads and normal operating conditions. The Plan shall include, but not necessarily be limited to:
- i) procedures to ensure that all reasonable and feasible noise mitigation measures are applied;
 - ii) procedures to generate suitable documentation for annual 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 activities that will be carried out in relation to the project and the associated noise sources;
 - 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, including a description of the determined sound power levels of operational equipment to ascertain compliance with the noise goals specified under this approval;
 - vii) reactive and pro-active strategies for dealing promptly with any noise complaints, including documentation of a fast response (eg within one hour), the completed

- action on a complaint, and feedback from the complainant (eg within 24 hours); and
 - viii) noise monitoring and reporting procedures.
 - d) a **Landscaping and Ecology Management Protocol** to detail measures to mitigate and manage impacts on native ecology during operation of the project, and management of landscaping and vegetation on the site. The Plan shall be based on best environmental practice and shall be developed in consultation with the DECC and Council. The plan shall include, but not necessarily be limited to:
 - i) a detailed description of measures, including a monitoring program, to be undertaken to control the occurrence of weeds and pests on-site and in adjacent areas, including run-off areas and any creeks that receive run-off; and
 - ii) a program, including a description of techniques and feedback mechanisms, for managing and monitoring existing habitat for Nowra Heath Myrtle which is affected by the transmission line.

6. ENVIRONMENTAL REPORTING

Incident Reporting

- 6.1 The Proponent shall notify the Director-General of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12 hours of becoming aware of the incident. The Proponent shall provide full written details of the incident to the Director-General within seven days of the date on which the incident occurred.
- 6.2 The Proponent shall meet the requirements of the Director-General to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition 6.1 of this approval, within such period as the Director-General may require.

Annual Performance Reporting

- 6.3 The Proponent shall, throughout the life of the project, prepare and submit for the approval of the Director-General, an **Annual Environmental Management Report (AEMR)**. The AEMR shall review the performance of the project against the Operation Environmental Management Plan (refer to condition 5.3 of this approval), the conditions of this approval and other licences and approvals relating to the project. The AEMR shall include, but not necessarily be limited to:
 - a) details of compliance with the conditions of this approval;
 - b) a copy of the Complaints Register (refer to condition 4.3 of this approval) for the preceding twelve-month period (exclusive of personal details), and details of how these complaints were address and resolved;
 - c) identification of any circumstances in which the environmental impacts and performance of the project during the year have not been generally consistent with the environmental impacts and performance predicted in the documents listed under condition 1.1 of this approval, with details of additional mitigation measures applied to the project to address recurrence of these circumstances ;
 - d) results of all environmental monitoring required under this approval and other approvals, including interpretations and discussion by a suitably qualified person; and
 - e) a list of all occasions in the preceding twelve-month period when environmental performance goals for the project have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident.

The Proponent shall submit a copy of the AEMR to the Director-General every year, with the first AEMR to be submitted no later than twelve months after the commencement of operation of the project. The Director-General may require the Proponent to address certain matters in relation to the environmental performance of the project in response to review of

08_0021 MOD 2 – Approved 1 June 2010

08_0021 MOD 3 – Approved 23 September 2011

08_0021 MOD 5 – Approved 19 May 2013

the Annual Environmental Report. Any action required to be undertaken shall be completed within such period as the Director-General may require. The Proponent shall make copies of each AEMR available for public inspection on request.
