Delta Electricity

Proposed Gas Turbine Power Station, Bamarang

Planning Focus Meeting

Background Report

June 2005

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1. Overview of proposal

1.1 Introduction

This report has been prepared by GHD Pty Ltd (GHD) on behalf of Delta Electricity (Delta) to provide background information to relevant authorities and stakeholders on its proposal to facilitate the development of a gas turbine power station at Bamarang (referred to as 'the proposal' for the purposes of this report). Delta proposes to facilitate the development of the proposal to meet future local and regional electricity needs.

The site for the proposal (at 681 Yalwal Road, Bamarang) is approximately 8km south-west of Nowra on the NSW south coast and falls within the Shoalhaven Local Government Area (LGA). It has been identified as a suitable site for the proposal as it is located in close proximity to the Eastern Gas Pipeline (gas supply), the TransGrid 330kV transmission network and the Integral Energy 132kV network enabling connection to the National Electricity Grid.

GHD is assisting Delta with the following four components of the project:

» Finalisation of the functional design (that is, the 'concept' design for the project);

» Investigation and negotiation of easement acquisitions;

» Preparation of an EIS based on the concept design; and

» Approvals management and post EIS activities.

This background report provides the following information on the proposal to assist relevant stakeholders and authorities to identify potential issues:

» A description of the proposal;

» A description of the proposal site;

» A discussion of the approvals process, planning controls and potential approvals;

» An outline of the potential key environmental impacts; and

» An overview of the project development process.

1.2 The proponent

Delta is an electricity generation company (State owned corporation) that produces around 12% of the electricity consumed in the national electricity market, which covers consumers in South Australia, Queensland, New South Wales, Victoria and the ACT. This electricity is produced using a diverse range of fuels such as coal, water and biomass materials.

Since it was formed in 1996, Delta has mainly operated in the wholesale electricity market, selling to energy retailers and a small number of large industrial customers. Delta's business practices focus on providing cost-effective, safe and reliable electricity.

Delta currently operates four major power stations in NSW; Vales Point, Munmorah, Mt Piper and Wallerawang, which have a combined generating capacity of 4,240 megawatts.

1.3 Description of the proposal

The proposal involves the construction of a gas turbine power station and associated infrastructure, including transmission connections.

1.3.1 Key features

A summary of the potential features of the proposal is provided below. The project description would be developed as an outcome of the functional design process.

- Fee value – $150-340 million
- Employment – Up to 20 employees once operational.
- Infrastructure
  - Two gas turbines in an open cycle configuration (OCGT) including a turbine hall, control building and cooling system in stage 1 (see Section 1.3.2 for more information on staging).
  - In stage 2 the addition of a heat recovery steam generator (HRSG) to each gas turbine and the addition of a steam generator to form a combined cycle gas turbine configuration (CCGT).
  - A switchyard.
  - Gas supply (underground) connected to the eastern gas pipeline (located approximately 2km to the east of the site).
  - Electrical transmission lines to connect to the Integral Energy 132kV lines (located approximately 6km to the east).
  - Condenser cooling plant (could be wet or dry cooling).
- Technology
  - The proposal would require the use of either water or air in the cooling process. Both options will be considered in the EIS, however, it is more likely that water cooling will be selected.
  - Technology issues will be considered during the functional design process.

1.3.2 Stages of development

The proposal would be developed in two stages:

- Stage 1: Installation of open cycle gas turbines for a peaking facility;
- Stage 2: Conversion to a combined cycle power station to meet intermediate/ base load demands;

The staged approach has been developed to ensure that Delta is able to respond to increased electricity demands in a timely manner. Stage 1 would ensure that the power generation plant is able to meet demands during peak periods on the national

electricity grid. This would result in the plant only operating during periods when electricity demands peak. As the overall demand for electricity increases, it is anticipated that the project would operate over longer periods of time, resulting in Stage 2 operating conditions, which would see it producing electricity to meet base load demands.

Following the completion of Stage 2, the plant would have a capacity of 400MW, although this capacity is subject to transmission constraints that would need to be confirmed during the course of the project.

1.3.3 Benefits of the proposal

The proposal has a number of local and regional benefits, namely it:

» Improves security of electricity supply to south coast residents;

» Provides employment opportunities (mainly during construction, but up to 20 jobs will be provided once the facility is operational);

» Has the potential to reuse industrial wastewater, with associated potential reductions in current odour problems associated with irrigation from the Manildra plant in Nowra;

» Meets the State's need for peak electricity supply; and

» Minimises land clearing through reuse of existing easements and a redundant development site.

The use of gas has the added benefit of producing lower greenhouse emissions than coal (approximately 40% of the carbon dioxide produced by a coal fired power station[1]). Combined cycle plants are more efficient than conventional power stations and therefore have a lower level of carbon dioxide emissions[1]. They also have lower nitrogen oxide and particulate emissions[1].

1.4 Description of the locality

The site is located at Bamarang, approximately 8km south-west of Nowra on the NSW south coast (Figure 1). The site has frontage to Yalwal Road, which links Nowra with Yalwal.

The site (refer to Figure 2) is approximately 20 hectares, of which 5 hectares would be required for the gas turbine plant and 2 hectares would be required for a switchyard. The site is bounded by Bamarang Nature Reserve to the north and Crown Land elsewhere. Bamarang Dam, which supplies Nowra's water, is located 300m to the west

The central portion of the site was previously cleared and developed as an abattoir, although the facility was never operated. Some regrowth has occurred since the site was cleared for the abattoir development, which may need to be removed. The remainder of the site contains bushland that extends into the adjoining properties owned by the Crown and Council. This bushland is part of a larger parcel that is of

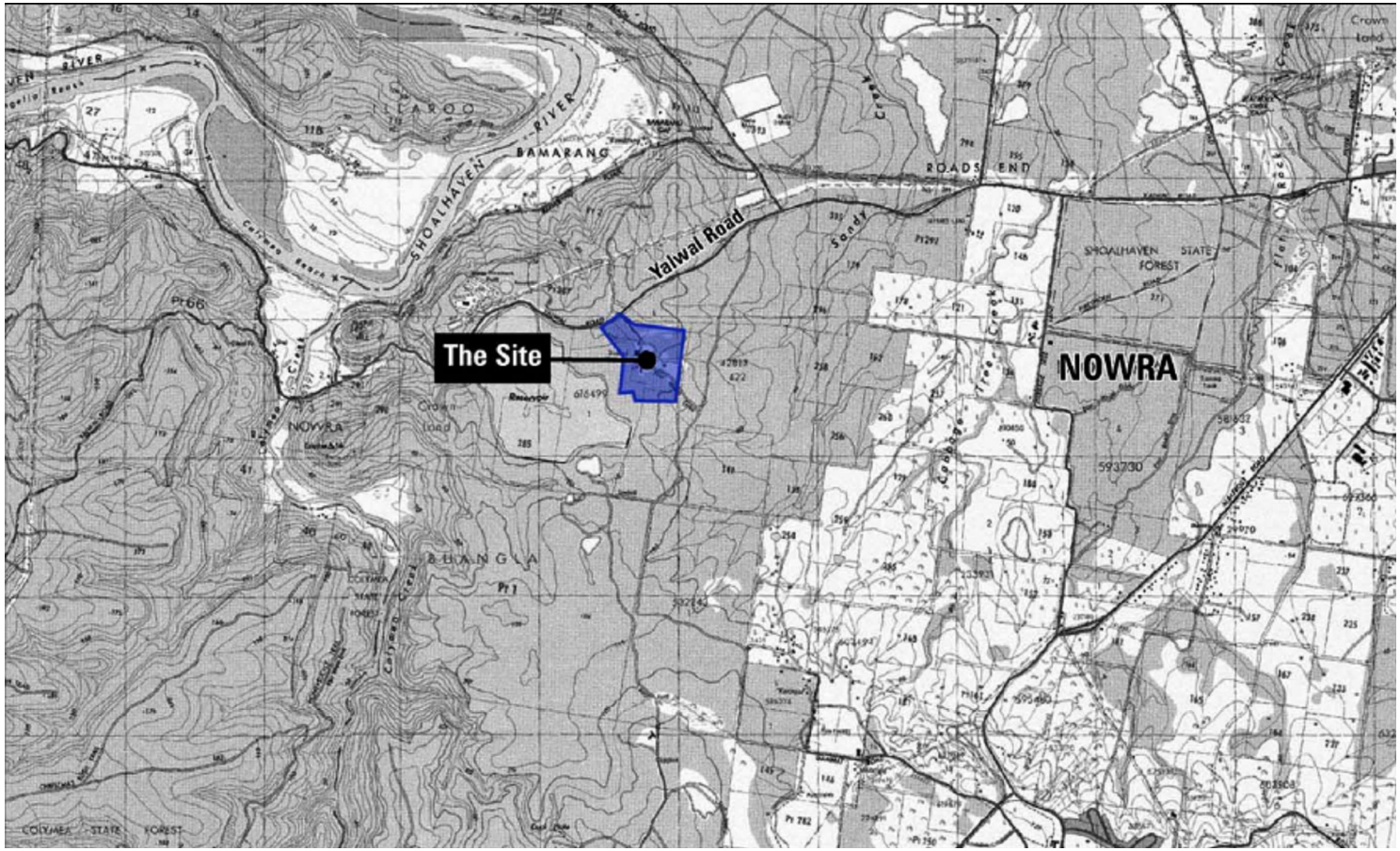
[1] Burns and Roe Worley Pty Ltd, 2002 *Feasibility Study for Combined Cycle Gas Turbine Plant.*

high conservation value and includes the Bamarang Nature Reserve, Triplarina Nature Reserve, Wogamia Nature Reserve and the Colymea State Conservation Area.

It is expected that the proposal and associated infrastructure (excluding pipelines) will contained within the existing cleared area of the site.

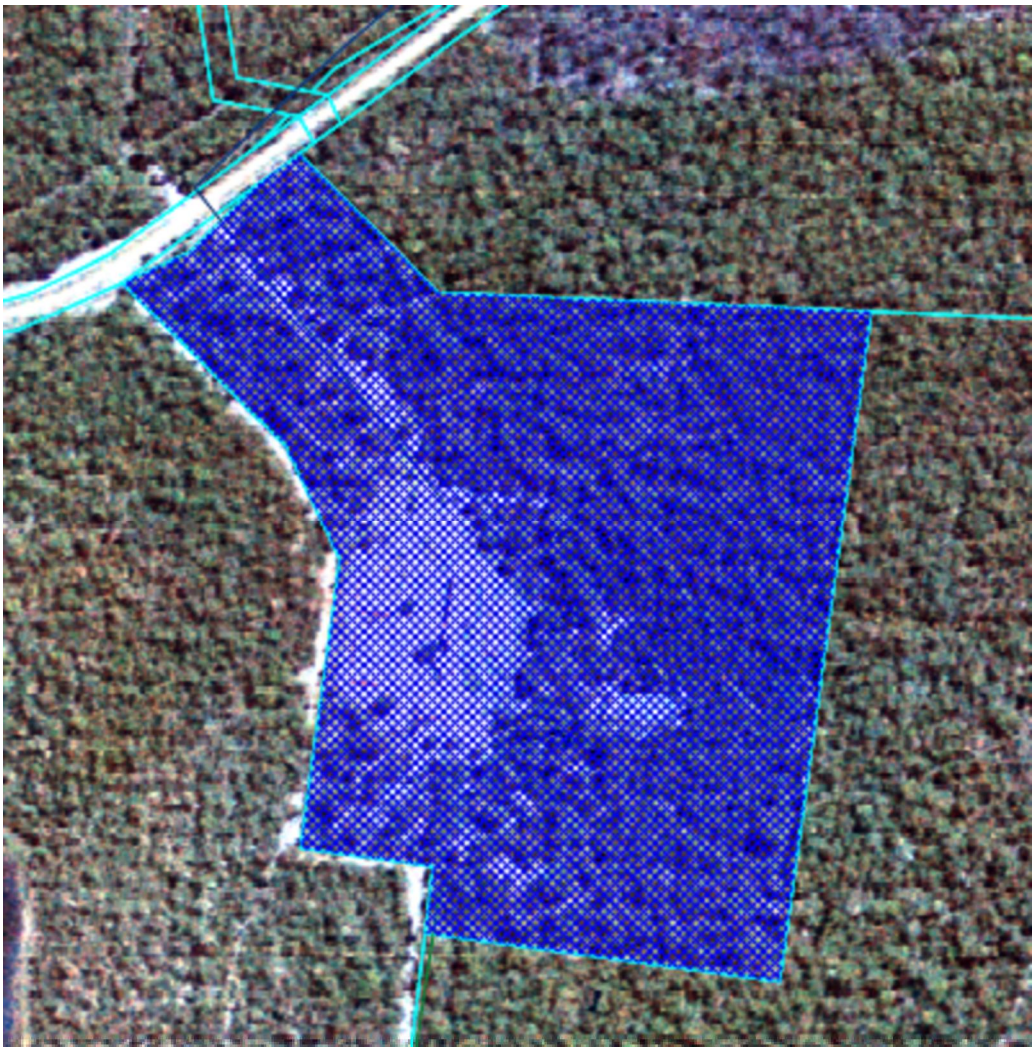
There are a number of existing buildings on the site, constructed during the abattoir development, which include stockyards, an administration building, and a processing building. There is also a storage shed and residence which were known to contain asbestos. Following purchase of the site, Delta stripped and removed the asbestos from the site. This waste was disposed of in a suitably licensed waste management facility. Remaining buildings would be demolished as part of the construction of the proposal.

Figure 1 Site location



Source: Parsons Brinkerhoff Pty Ltd (PB) on behalf of Delta Electricity (February 2005) *Proposed gas turbine power station at Bamarang, Nowra – Scoping investigations for environmental impact assessment*.

Figure 2 Aerial photograph of the site



2. Approvals process

2.1 Statutory planning framework

2.1.1 Overview

The existing framework for assessment of the project is established by *Environmental Planning & Assessment Act 1979* (EP&A Act 1979).

The recently announced planning reforms would be considered to determine the planning approval requirements for the proposal. The new planning approval process will be set out in a new Part of the *Environmental Planning and Assessment Act 1979 (Part 3A)*, the amendment of which was only recently passed by Parliament. Potential implications of the reforms for the assessment and approval process have been discussed with Department of Infrastructure, Planning and Natural Resources (DIPNR).

Based on the current system, the proposal would require approval under Part 4 of *Environmental Planning and Assessment Act 1979 (EP&A Act)* and is considered to be 'designated development', but not 'integrated development' and it is deemed to be 'State significant'. Therefore, the Minister for Planning (the Minister) is the consent authority and in terms of environmental assessment, an Environmental Impact Statement (EIS) is required to assess the environmental impact of the proposal. This is outlined in more detail below.

It is noted that the *Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005* was assented to by Parliament on 16 June 2005 (but is yet to commence). The development application for the proposal is likely to be considered under Part 3A (in accordance with the Amendment Act). The potential implications for the environmental impact assessment process will need to be considered as the project progresses.

2.1.2 Permissibility

Development approval is required for the development of a gas turbine facility under Part 4 of the *EP&A Act*. The site for the proposal falls within Shoalhaven LGA and therefore the *Shoalhaven Local Environmental Plan 1985* applies.

Power station and gas supply line

The site for the power station and the path of the gas supply line are zoned 1(d) Rural "D" (General Rural) Zone under the Shoalhaven LEP. The objectives of this zone are outlined in Appendix A. Power generation works (excluding wind-power generators) and public utility works are permissible with consent in this zone. The proposal would be generally consistent with the zone objectives.

Electrical transmission lines

Options for the transmission lines are currently being investigated. The path of the electrical transmission easements will be determined through the finalisation of the

functional design. The electrical transmission lines would potentially pass through a number of different zones including zones 1(d), 1(f), 6(d), 7(d2), 5(a), 2 (c), 4(a), 4 (b), 6(a), 2(a1) and unzoned land (land shown uncoloured on the zoning map). Development of a transmission line connection would be permissible with consent within zones 1(d), 1(f), 2(c), 4(a) and 4(b), but prohibited within zones 2(a1), 5(a), 6(a), 6(d) and 7(d2).

Clause 36 of the Shoalhaven LEP indicates that development consent is also required for works within land shown uncoloured on the zoning map:

36 Development of land shown uncoloured on the map

(1) Development, including the clearing of vegetation and trees, shall not be carried out on any land shown uncoloured on the map without the consent of the Council.

(2) Notwithstanding subclause (1), a public authority does not require Council's consent to clear vegetation or trees within road reserves shown uncoloured on the map.

Clause 54D of the Shoalhaven LEP contains the following special provisions for certain development by public authorities, which includes electricity transmission lines:

54D Certain development by public authorities

If, in the absence of this clause, development by or on behalf of a public authority, being:

(a) the construction of water storage dams, or

(b) sewage treatment works, or

(c) electricity transmission lines,

may be carried out with development consent, the development may be carried out without that consent.

This clause effectively negates the need for development consent in zones 1(d), 1(f), 2(c), 4(a) and 4(b).

Further, Clause 5 of the Shoalhaven LEP adopts selected model provisions from the *Environmental Planning and Assessment Model Provisions 1980,* including Clause 35.

35 Savings

Nothing in the local environmental plan shall be construed as restricting or prohibiting or enabling the consent authority to restrict or prohibit:

(a) the carrying out of development of any description specified in Schedule 1,

(b) the use of existing buildings of the Crown by the Crown, or

(c) home occupations carried on in dwelling-houses.

The following description under Schedule 1, is considered to applicable to the development:

The carrying out by persons carrying on public utility undertakings, being water, sewerage, drainage, electricity or gas undertakings, of any of the following development, being development required for the purpose of their undertakings, that is to say:

(d) the provision of overhead service lines in pursuance of any statutory power to provide a supply of electricity.

As the works fall within the definition of 'public utility undertakings', this clause negates the need for development consent in zones where consent is required, and overrides the prohibition in zones where transmission line easements would be prohibited (2(a1), 5(a), 6(a), 6(d) and 7(d2)).

These two savings provisions mean that the development of the transmission lines could potentially be considered under Part 5 of the *EP&A Act*, as these works are permissible without development consent. Section 76A(8)b of the *EP&A Act,* provides for the Part 5 elements of a State significant development (that is, those parts that did not require consent) to be considered under Part 4 of the *EP&A Act*. As the development of the power station is State significant (refer to 2.1.4), the ancillary development of the transmission line easements also needs to be considered under Part 4 of the *EP&A Act*.

2.1.3 Designated development

Under Part 4 of the *EP&A Act*, an environmental impact statement (EIS) is required if the development is 'designated development'. 'Designated development' is defined under Schedule 3 of the *Environmental Planning and Assessment Regulation 2000 (EP&A Regulation).* The following definition, under clause 18 of Schedule 3, is considered relevant to the proposal:

Electricity generating stations

(1) Electricity generating stations, including associated water storage, ash or waste management facilities, that supply or are capable of supplying:

(a) electrical power where:

(i) the associated water storage facilities inundate land identified as wilderness under the Wilderness Act 1987, or

(ii) the temperature of the water released from the generating station into a natural waterbody is more than 2 degrees centigrade from the ambient temperature of the receiving water, or

(b) more than 1 megawatt of hydroelectric power requiring a new dam, weir or inter-valley transfer of water, or

(c) more than 30 megawatts of electrical power from other energy sources (including coal, gas, wind, bio-material or solar powered generators, hydroelectric stations on existing dams or co-generation).

(2) This clause does not apply to power generation facilities used exclusively for stand-by power purposes for less than 4 hours per week averaged over any continuous 3-month period.

The proposal would generate more than 30 megawatts of electrical power from gas and would not operate exclusively for stand-by power for less than 4 hours per week on average. Therefore, the development would constitute designated development and an EIS would need to be prepared to accompany the application for development consent.

2.1.4 State significant development

Under section 76(A)(7) of the *EP&A Act*, 'State significant' development is development that is declared by a state environmental planning policy or regional environmental plan to be State significant development and that may be carried out with development consent.

State significant developments are defined in *State Environmental Planning Policy (State Significant Development) 2005.* The following definition, under clause 24 of Schedule 1, applies to the proposal*:*

Electricity generation

Development for the purpose of an electricity generation facility that:

(a) has a capital investment value of more than $30 million for gas or coal-fired generation, or co-generation, or bioenergy, bio-fuels, waste gas, bio-digestion or waste to energy generation, or hydro or wave power generation, or solar power generation, or

(b) involves wind energy that:

> *(a) includes more than 30 towers, or*
>
> *(b) has generating capacity of more than 60MW, or*
>
> *(c) has generating capacity of more than 30MW where the towers are in more than one council area, or*

(c) is located in an environmentally sensitive area of State significance.

The proposal is for a gas fired electricity generation facility and would have a capital investment value of more than $30 million. Therefore the proposal is State significant and the Minister for Planning is the consent authority.

2.1.5 Integrated development

In accordance with Section 90(2) of the *EP&A Act*, the proposal would not be considered 'integrated development' as Delta is a representative of the Crown.

2.2 Other approvals that may be required

2.2.1 NSW

Preliminary investigations commissioned by Delta indicated that licences/approvals etc under the following legislation might be required.

- Dangerous Goods Act 1974
- Electricity Supply Act 1995
- Heritage Act 1977
- National Parks and Wildlife Act 1974
- Pipelines Act 1967
- Roads Act 1993
- Threatened Species Conservation Act 1995
- Protection of the Environment Operations Act 1997

It is noted that under Section 75U of the *Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005* a number of concurrences/approvals that were previously required are no longer required

2.2.2 Commonwealth

The need for a referral to the Minister for Environment under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 will be considered

A section 149 planning and zoning certificate received for the power station site indicates that consent of the Commonwealth Department of Defence is required under the Defence (Areas Control) Regulations for any structure higher than 45 metres within 15 kilometres of the Naval Air Station at Nowra. The site is also located within the HMAS Albatross Military Aircraft Operating Areas. As the proposed stack will be approximately 40 metres in height, approval may be required from the Commonwealth Department of Defence.

3. Key environmental issues

Based on an environmental impact assessment scoping investigation carried out for the proposed gas turbine power station by PB[2] (consultants, Parsons Brinkerhoff Pty Ltd) in February 2005 and initial discussions with Shoalhaven City Council, the following issues are considered to be the key issues associated with the proposal. These issues, together with any other issues identified by statutory agencies, will be investigated in more detail in the EIS.

3.1 Community

The following issues are likely to be of interest to the community:

- Proximity to Bamarang reservoir (part of the Nowra district water supply), and the likely impacts of stormwater runoff and cooling tower emissions on water quality;
- Public health and safety;
- Noise and air quality;
- Impacts on recreation and conservation value of the area;
- Visual impacts, including the proposed transmission connections options;
- Land values; and
- Impacts on biodiversity.

A community and stakeholder consultation plan will be developed from the outset of the project. The plan will detail the consultation program and guide the consultation process. The aim of the plan is to inform the community about the need for the project and potential impacts associated with the development and to ascertain community concerns and issues. The plan will outline ways in which the community can participate in the project and provide mechanisms for gathering community feedback. It will include a timetable for consultation activities. Activities proposed include advertisements, community newsletters, project information line, focus group meetings with local interest groups and key stakeholders, an information session and a public display.

The outcomes of the community consultation and summary of community feedback will be included in the EIS.

3.2 Ecology - Flora and Fauna

The site of the proposal is within the grounds of the abandoned abattoir, which has largely been cleared of vegetation. Preliminary investigations have indicated that few

[2] This report was prepared by PB on behalf of Delta as a preliminary assessment of the potential planning, regulatory, environmental and stakeholder issues associated with the proposed facility, with the objective of assisting Delta with its decision on whether to proceed to the next stage of the development process involving a detailed feasibility study, environmental assessment and planning approvals.

ecological impacts would be associated with the construction and operation of the proposal at this site.

The proposed transmission easement route will largely traverse existing transmission easements and roads and consequently vegetation clearing will range from no clearing required, to vegetation clearing required along existing cleared areas. Nonetheless preliminary studies indicated that a number of potential ecologically sensitive issues exist along the proposed transmission easement route in the form of threatened species and communities. These are:

» River-Flat Eucalypt Forest, an endangered ecological community listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act);

» *Triplarina nowraensis*, a plant species listed as endangered under the TSC Act and Commonwealth *Environment Protection and Biodiversity Act 1999* (EPBC Act);

» Northern Foothills Spotted Gum – Blackbutt Moist Shrub Forest, a community of regional significance; and

» Three RoTAP species, *Leptospermum epacridoideum*, *Leptospermum sejunctum* and *Acacia subtilinervis*.

The proposed route passes through a section of the Bamarang Nature Reserve and adjacent to the Triplarina Nature Reserve. There are also a number of drainage lines along the path of the proposed transmission line.

The level of impact of this proposal on flora and fauna will be assessed by the ecological impact assessment for the EIS.

3.3 Air quality

The operation of the proposed gas turbine plant is expected to be the primary source of potential air emissions. Gas fired power stations have lower greenhouse emissions than conventional coal fired power stations. In addition, the proposal will incorporate best practice measures to minimise the impacts on local and regional air quality (these will be considered during the functional design process, and may include measures such as dry low NOx combustors and/or water injection to limit the emissions of nitrogen oxides and carbon monoxide)

As a result, the proposal is not expected to have any significant air quality impacts. Detailed assessment of existing air quality and modelling based on manufacturers specifications will be undertaken as part of the air quality impact assessment for the EIS.

3.4 Surface water quality

It is anticipated that treated wastewater from the nearby Nowra Sewage Treatment Plant and/or the Manildra plant could be used for evaporative cooling (if this is considered the preferred cooling method). The only other water supply would be for potable water.

A small part of the site drains to the northwest to the Shoalhaven River. Bamarang Reservoir lies immediately to the west of the proposed site. This reservoir is part of the Nowra district water supply.

As with similar construction projects, there is potential for the proposal to impact on surface water quality during both the construction and operational phases. Protection of this water resource and management of runoff from the site will be an important issue for consideration during the functional design process, and in the EIS. The functional design process/EIS will also consider the impacts of stormwater runoff from the site into adjacent nature reserves and waterways, and recommend appropriate measures (including site design features and environmental management controls) to mitigate the potential for impacts.

3.5 Noise and vibration

The proposed site is within a remote, rural bushland setting. Apart from intermittent aircraft noise associated with HMAS Albatross activities, it is expected that existing ambient noise levels are low. In terms of sensitive noise receivers, there are rural residential properties located along Bamarang Road and Cabbage Tree Lane, which are approximately 1.25 – 3 km from the site, and a mudbrick business to the north (located approximately 0.75km the north of the site).

Aside from the noise associated with construction activities, the operation of the gas turbine plant would be the primary noise generating activity. The site selected is situated away from main residential areas, which limits the number of sensitive receptors. The proposal will incorporate best practice measures to minimise the noise impacts, such as:

» Containment of turbines with an enclosed building

» Specification of the noise limit requirements for equipment suppliers.

» Selection of the best available equipment, which meets noise limit requirements.

Assessment of the existing noise environment and modelling based on manufacturers specifications or similar facilities operated by Delta will be undertaken as part of the noise impact assessment for the EIS.

3.6 Visual amenity

The site is well screened by dense, tall vegetation. The existing buildings on the site are not visible from Yalwal Road or surrounding areas, including the lookout near HMAS Albatross.

The visibility of the proposal to the following sensitive receptors will need to be considered:

» Bundanon – the former residence of the artist Arthur Boyd, which is now a culturally significant site (located approximately 2.5km to the north west of the site).

» The Bamarang and Triplarina Nature Reserves.

» The existing and future rural residential areas and Wollongong University

» The Nowra hill lookout.

The site affords sufficient dense screening to conceal the gas turbine plant and switchyard. The stacks of the gas turbine plant and the transmission lines are likely to be the only visible elements of the development. The stacks are expected to be approximately 40m in height and therefore potentially visible from Nowra hill lookout and Yalwal Road. The transmission lines are likely to be approximately 20m in height may be visible from the nature reserves, the University and Nowra hill lookout.

Vegetation clearance is likely to be required for the installation of the gas supply pipeline and transmission line easements. One of the objectives of the refinement of the functional design is to try to minimise the visual impact of providing these connections by using existing easements where possible.

Further assessment will be undertaken as part of the EIS, including identification of local viewsheds and production of photomontages to provide an indication of the appearance of the facility and the impact on the visual amenity of the area.

3.7 Indigenous heritage

Although there are no recorded heritage sites at the proposed site, there is potential for unrecorded Aboriginal sites to be found in the vicinity of the proposed site for the power station and the transmission easements, as the site is within easy access to water resources.

A heritage impact assessment would be undertaken as part of the EIS in accordance with relevant DEC guidelines.

3.8 Hazards and risks

The site and its surrounds are considered 'bushfire prone land'. Council considerations in regard to bushfire prone land are specified in Clause 28 of the Shoalhaven LEP.

A bushfire hazard assessment will be undertaken as part of the EIS, in accordance with the requirements of Council and the *Planning for Bushfire Protection* guidelines. This assessment will be undertaken in the early stages of the project to inform other areas of the EIS.

The EIS also will consider the hazards and risks associated with the CCGT plant and associated supply infrastructure, the transmission lines and any hazardous materials to be stored on site.

The proposal will incorporate all the necessary safety measures to minimise the risk of harm or fatality arising from an incident at the site. A suitable buffer zone will also be provided around the facility to reduce the risk.

A preliminary hazard analysis (PHA) will be undertaken as part of the EIS, in accordance with the requirements of SEPP 33.

3.9 Other issues

The EIS will address the following:

- Topography, soils and geology;
- Surface water quality;
- Groundwater quality;
- Flora and fauna;
- Land use;
- Visual impacts;
- Indigenous heritage;
- Non-indigenous heritage;
- Noise and vibration;
- Climate and air quality;
- Hazards and risks;
- Traffic;
- Utilities;
- Energy;
- Contamination;
- Waste and resources;
- Socio-economic impacts;
- Cumulative impacts; and
- Ecologically sustainable development.

4. Project development process

GHD is assisting Delta with the following four components of the project:

1. Finalisation of the functional design;
2. Investigation and negotiation of easement acquisitions;
3. Preparation of an EIS for the final concept design; and
4. Approvals management and post EIS activities.

4.1 Refining the functional design

The engineering study will form the first input into the EIS. The study will:

» Define the transmission network constraints and technical methods to maximise power generation export to the Integral Energy 132kV network;

» Within the constraints identified by the transmission study, refine the plant configuration for stage 1 as open cycle peaking plant and stage 2 as based load combined cycle; and

» Define with appropriate details the necessary inputs to the EIS such as:

  – Transmission details
  – Gas pipeline
  – Liquid fuels
  – Waste water
  – Noise
  – Air emissions

4.1.1 Options for easements

There are currently two options for the gas supply line, one running along Yalwal Road and the other running across the reserve (to the east of the proposal) to join the eastern gas supply line. There are also two options under consideration for the electrical transmission connection, one running along Yalwal Road to the Shoalhaven substation and the other along the existing 33kV easement (to the north, parallel to Yalwal Road) then across Yalwal Road to Shoalhaven substation.

The assessment of route options will involve:

» Confirming the technical specifications of the required easement;

» Consideration of acquisition issues/ease of acquisition;

» Identification of whether they are any major environmental issues/ constraints associated with the options;

» Assignment of a weighting to the above factors and evaluation of the options; and

» Identification of the preferred option.

4.2 Negotiating property acquisitions

GHD is also assisting Delta with the negotiation of property acquisitions, which involves the following:

» Preparation of a strategy for negotiations and acquiring easements for approval of Delta;

» Confirmation of ownership of all affected land and identification of encumbrances and interests, including native title interests on Crown land;

» Property issues input into environmental assessment for selection of transmission line and pipeline routes; and

» Conduct negotiations with landowners, stakeholders and encumbrancers to acquire easement rights.

4.3 EIS on concept design

A comprehensive description of the proposal (concept design) will be prepared based on the functional design developed as part of the engineering investigations. The proposal will be described in terms of the physical setting and will also take into account the economic and logistical reasons behind the project. This will ensure that the relationship between the works and the context and the location's regional significance is clear and the linkage between the works and the need for improved power generation in NSW is well defined.

The EIS will consider the concept design and evaluate the environmental impacts associated with the proposal and identify any mitigation measures necessary to minimise the impacts. The EIS will consider all of the issues outlined in Section 3..

Appendix A

Extracts from Shoalhaven LEP 1985

Zone No 1 (d) (Rural "D" (General Rural) Zone)

1 Objectives of zone. The objectives are:

(a) to provide opportunities for a range of rural land uses and other development, including those which by virtue of their character require siting away from urban areas,

(b) to recognise the potential for high intensity bush fire over wide areas of the zone and to ensure that development does not lead to significant risks to life or property from bush fire or to the implementation of bush fire mitigation measures which will have a significant environmental impact, and

(c) to ensure that wherever possible the location, design and management of development is consistent with:

(i) the protection of important natural and cultural environments,

(ii) the conservation of renewable natural resources such as forests and prime crop and pasture land,

(iii) the maintenance of opportunities for economic development of important extractive resources,

(iv) minimising conflict between land uses, and

(v) any plans for public infrastructure provision or management.

2 Without development consent Agriculture; forestry (other than on land to which clause 21, 23, 25 or 27 applies).

3 Only with development consent Any purpose other than a purpose for which development may be carried out without development consent or a purpose for which development is prohibited.

4 Prohibited Boarding houses; bulk stores; bulky goods retailing; car repair stations; cluster housing; dual occupancies (other than attached dwellings); generating works involving wind-powered generators; industries (other than rural industries, extractive industries, offensive or hazardous industries); junk yards; motor showrooms; residential flat buildings; service stations; sexual services premises; shops; warehouses.

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Document Status

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