



Mt Piper Power Station Ash Placement Project

ENVIRONMENTAL ASSESSMENT

CHAPTER 13 – ENVIRONMENTAL MANAGEMENT AND DRAFT
STATEMENT OF COMMITMENTS

- August 2010



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13. Environmental Management and Statement of Commitments

This chapter summarises the proposed environmental mitigation, monitoring and management provisions for the proposed works. It provides a draft Statement of Commitments by the proponent in relation to environmental impact mitigation, management and monitoring during construction and operation.

13.1. Overview

This chapter addresses the requirements to outline environmental monitoring and management provisions for the proposed works. It also provides a Statement of Commitments by the applicant in relation to environmental impact mitigation, management and monitoring during construction and operation.

The construction and operation of the proposed ash storage areas will be a major undertaking by Delta. The environmental impacts of the proposal have been assessed in this EA and measures to manage those impacts have been outlined. These mitigation measures, along with any conditions of approval issued by the Minister for Planning, would be incorporated into the detailed design, as well as where appropriate, the preparation of construction and operational Environmental Management Plans (EMPs) for the project. The EMPs would typically include:

- Approval conditions and statutory requirements;
- Environmental goals, environmental performance requirements and responsibilities;
- Plans for implementing mitigation measures;
- Reporting, training and induction requirements;
- Environmental performance monitoring and auditing procedures; and
- Clear guidelines for emergency response and incident management plans and responsibilities.

The EMPs would include, where appropriate, sustainability assessment recommendations and safeguards developed during the detailed design phase of the project. The EMPs would become the reference documents that ensure the commitments for environmental protection and management in the EA and subsequent approvals are fully implemented. They would also serve as a framework for confirming the accuracy of impact predictions made in this EA and for measuring the effectiveness of mitigation measures.

The EMPs for construction and operation would be prepared in accordance with the requirements of ISO 9001:2000 and ISO 14001:2004.

13.2. Construction Environmental Management and Mitigation

Environmental management commitments proposed during the construction phase are shown in **Table 13-1** below. The commitments for the concept approval sites are often the same as those for the project approval sites. Where they differ the sites to which they apply are shown in the table. These commitments include the preparation of a construction EMP (CEMP) which would be required prior to any construction activities commencing. The CEMP would detail operating conditions and temporary environmental protection measures to mitigate the impact of construction activities. Other commitments may form part of the terms of contract with the companies or consortium responsible for the project construction, or may be further assessed at the detailed design stage.

Table 13-1: Environmental Management Measures - Construction

Objective	Action	Sites
Environmental Management		
Manage hours of construction work	Proposed hours of construction are 7.00am – 6.00pm Monday to Friday, 7:00am – 1:00pm Saturday, with no work on Sundays or public holidays. The construction EMP will outline protocols for notifying relevant authorities and local residents prior to any works occurring out of normal construction hours. Out of hours work may be required under certain circumstances e.g. to minimise impacts on active operational services (e.g. due to the need to respond to emergencies and unavoidable construction constraints).	All
Minimise impact of construction on surrounding area	A Construction Environmental Management Plan (CEMP) would be prepared and implemented to guide construction activities as outlined below in the following commitments: <ul style="list-style-type: none"> ■ Air Quality ■ Water Quality ■ Noise & Vibration ■ Heritage ■ Flora & Fauna ■ European Heritage ■ Waste Management ■ Communication. All plans and strategies would be developed as part of the CEMP, in consultation with the relevant agencies.	All
Air Quality		
Minimise dust generation during construction	Develop and implement a Dust Management Plan (DMP) as part of the Construction EMP. The DMP would include the following mitigation measures and controls: <ul style="list-style-type: none"> ■ Undertake regular watering of active work areas to reduce wind blown dust emissions; ■ Minimise and stabilise the area of disturbed / exposed land at any one time. 	All

Objective	Action	Sites
Water Quality		
No increased sedimentation of nearby waterways	<ul style="list-style-type: none"> ■ A Soil and Water Management Plan (SWMP) will be prepared and implemented to reduce the potential water quality impacts from the site during construction. General measures to control erosion of soil and sedimentation would be implemented prior to construction works. These measures would be prepared in accordance with the principles and practices in <i>Soils and Construction</i> (Landcom, 2004) and would be maintained and monitored during the construction phase. 	All
Noise and Vibration		
Minimise construction noise impact on surrounding residences	<ul style="list-style-type: none"> ■ Detailed investigation of potential impacts from construction noise using DECCW (2009) <i>Interim Construction Noise Guideline (ICNG)</i>. ■ An Environmental Noise Management Plan (ENMP) would be prepared and implemented prior to the commencement of works to achieve compliance with DECCW criteria where reasonable and feasible. This Plan would include: <ul style="list-style-type: none"> ■ Application of physical noise controls to construction equipment, equipment maintenance and utilising appropriate technology to achieve low levels of construction noise emissions ■ Noise compliance monitoring for all major equipment and activities on site ■ Communication between the community and the construction management to be provided at the start of the works and maintained during the works ■ Investigative monitoring of noise in response to specific complaints. 	Neubecks Creek & Ivanhoe No 4 All
Indigenous Heritage		
Protection of Indigenous Heritage relics if uncovered	<ul style="list-style-type: none"> ■ Further survey, assessment and consultation studies to be undertaken on sites following completion of mining operations to assess potential impacts on any indigenous sites on or in the area of the proposed ash placement. Studies to follow relevant guidelines of DECCW. ■ Avoidance of sites in Lamberts South study area subject to Cultural Heritage Management Plan prepared prior to coal mining. ■ In the event that artefacts of indigenous heritage significance are uncovered during the course of construction, works in the immediate area would cease, DECCW would be notified and expert advice would be sought from an appropriately qualified professional. 	Neubecks Creek & Ivanhoe No 4 Lamberts South All

Objective	Action	Sites
Flora and Fauna		
<p>Minimise likelihood of direct impacts on quality habitat areas and to threatened species</p>	<ul style="list-style-type: none"> ■ Detailed surveys and assessment of vegetated areas remaining following mining activities. Studies to follow <i>Draft Guidelines for Threatened Species Assessment (DEC & DPI 2005)</i>. ■ Prior to construction beginning and where appropriate: <ul style="list-style-type: none"> ■ Habitat offset areas to be negotiated with DECCW and DoP ■ Preclearing surveys to identify habitat trees. ■ Removal of habitat features to be supervised by an ecologist ■ Threatened plant species in the area of the proposed works to be identified and tagged to ensure protection ■ Felled timber to be stockpiled to be used for habitat in rehabilitation areas ■ Topsoil stockpiled to be used for revegetation areas ■ Weed management to be implemented. 	<p>Neubecks Creek & Ivanhoe No 4</p> <p style="text-align: center;">All</p>
Waste Management		
<p>Minimise waste generated and maximise re-use and recycling. Waste disposal to be undertaken when re-use and recycle is not possible</p>	<ul style="list-style-type: none"> ■ A Waste Management Plan (WMP) would be prepared and implemented. This would include: <ul style="list-style-type: none"> ■ Measures to minimise waste ■ Investigate the use of recycled materials and other construction materials ■ Waste for disposal would be removed by a licensed waste contractor and disposed of at a licensed landfill facility 	<p style="text-align: center;">All</p>
European Heritage		
<p>Protection of European heritage</p>	<ul style="list-style-type: none"> ■ Undertake surveys for European heritage following mining activities at sites and identify means to minimise potential impacts on any remaining areas of heritage value 	<p>Neubecks Creek & Ivanhoe No 4</p>
Communication		
<p>Establish effective communication with community and relevant agencies</p>	<ul style="list-style-type: none"> ■ A Communications Plan would be prepared and implemented. This would include: <ul style="list-style-type: none"> ■ Continuation of liaison with Community Reference Group to deal with project construction issues ■ Maintenance of phone line/fax/website to provide opportunity for community input ■ An effective complaints handling procedure to address and respond to issues raised by the community. 	<p style="text-align: center;">All</p>

13.3. Operational Environmental Management and Mitigation

Mitigation and other environmental management measures identified in the EA and relevant to the operational phase of the project are summarised in **Table 13-2**. These include the preparation of a site Operational Environmental Management Plan (OEMP) which would be required prior to ash placement operations commencing. The OEMP would detail on-going operating conditions and protection measures to mitigate the impact of site operations. Relevant measures would be detailed, as appropriate, in the relevant OEMP to be prepared by the site operators.

The OEMP would be updated as required to reflect any changes in the operation of the site or regulatory requirements.

■ **Table 13-2: Environmental Management Measures – Operational**

Objective	Action	Sites
Environmental Management		
Minimise impact of operations on surrounding area	An Operational Environmental Management Plan (OEMP) would be prepared and implemented to guide operational activities. It would include: <ul style="list-style-type: none"> ■ Environmental Management ■ Air Quality ■ Hydrology and Water Quality ■ Noise & Vibration ■ Landscape ■ Waste Management ■ Community Liaison All plans and strategies would be developed in consultation with the relevant agencies.	All
General	<ul style="list-style-type: none"> ■ The OEMP would provide for regular monitoring and periodic performance reviews of the key performance criteria for air, noise, water management established for the operation of the ash placement. Air, noise and water management performance parameters would be established in the EPL for the site and be described in OEMP. 	All
Air Quality		
Minimise dust emissions from ash placement areas	<ul style="list-style-type: none"> ■ The site operational plan would include management practices to be implemented to minimise potential for dust emissions. These would include: <ul style="list-style-type: none"> ■ Conditioning of ash with water or brine ■ Application of sprays ■ Use of water trucks ■ Equipment maintenance ■ Response to complaints. 	All

Objective	Action	Sites
Hydrology and Water Quality		
Maintain water quality in receiving waterways	<ul style="list-style-type: none"> ■ Manage water quality runoff by development of water management systems which: <ul style="list-style-type: none"> ■ separate clean water from undisturbed catchments and clean water on the site ■ Manage water generated on site using dirty water area and sedimentation dams ■ Allowing no regular controlled releases ■ Using water generated on site for rehabilitation and dust control ■ Allowing releases from sedimentation dams only in large rainfall events following treatment in dams ■ Manage groundwater quality by: <ul style="list-style-type: none"> ■ Design of ash placement areas to provide buffer to groundwater and to place brine treated ash more than 30m above groundwater ■ Undertaking borehole water quality monitoring program through a Water Monitoring program and provide annual monitoring report ■ Monitor receiving water quality through a Water Monitoring program and provision of an annual monitoring report. 	All
Noise and Vibration		
Minimise operational noise impact on surrounding residences	<ul style="list-style-type: none"> ■ An Environmental Noise Management Sub-Plan (ENMP) would be prepared and implemented and would detail methods available to mitigate noise during the operation of the proposal. The ENMP will include: <ul style="list-style-type: none"> ■ More detailed noise modelling as design is developed to test the mitigation effects of using the benched ash mound as a noise barrier. ■ More detailed modelling during detailed design, when a full inventory of operational plant is available, to ensure noise criteria are met. ■ Investigative monitoring of noise in response to specific complaints. Appropriate complaints procedures and means of responding to complaints will be established. 	All
Waste Management		
Reduce the generation of waste	<ul style="list-style-type: none"> ■ Ensure that initiatives for the sustainable management of waste are given due consideration. Such measures would include reduction of materials being brought onto the site, reuse of wastes where practicable and recycling. 	All

Objective	Action	Sites
Landscape and Visual		
Improve and manage landscaping	<ul style="list-style-type: none"> ■ A Visual Impact Assessment will be undertaken for concept approval sites. Consideration will be given to: <ul style="list-style-type: none"> ■ Maximising the use of surrounding topography as a visual shield ■ The use of screening vegetation to protect views from sensitive viewpoints. ■ A Landscape Management Plan (LMP) will be prepared during detailed design of the project and implemented during and after the ash placement period. The plan would include: <ul style="list-style-type: none"> ■ Processes for the management of on-site weeds ■ Use of native vegetation for rehabilitation of the sites once ash placement is finished ■ Monitoring of vegetation to ensure it becomes established and to identify any further management requirements ■ Use of screening vegetation to protect views from sensitive viewpoints 	<p>Neubecks Creek & Ivanhoe No 4</p> <p>All</p>
Community Liaison		
Establish effective communication with community	<ul style="list-style-type: none"> ■ Liaise with the community about the operation of the proposed ash placement areas via the existing community relations program eg. Consultation with community forum and meetings with stakeholder groups. Provide avenues for community feedback. 	All

13.4. Environmental Reporting

Periodic environmental reports would be prepared to measure performance and progress against the CEMP. During operation, environmental performance and progress will be incorporated as necessary into the respective corporate environmental reporting of Delta and the site operators.

The reports would ensure relevant authorities have access to important environmental information relating to the new facility. Any shortcomings in environmental performance identified by the reporting process would be addressed by updating the EMPs.