

Mt Piper Power Station Extension

ENVIRONMENTAL ASSESSMENT

CHAPTER 16 – ENVIRONMENTAL MANAGEMENT AND
STATEMENT OF COMMITMENTS

- September 2009



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16. Environmental Management and Statement of Commitments

The Director-General's requirements:

The Environmental Assessment must include a draft Statement of Commitments detailing measures for environmental mitigation, management and monitoring for the project.

16.1 Overview

This chapter provides a Statement of Commitments by the proponent in relation to environmental impact mitigation, management and monitoring during construction and operation.

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 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;
- 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.

16.2 Construction Environmental Management and Mitigation

Environmental management commitments proposed during the construction phase are shown in **Table 16-1**. 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 16-1 Environmental Management Commitments - Construction

Objective	Action
Environmental Management	
Manage hours of construction work	<p>Proposed hours of construction are 7.00am – 6.00pm Monday to Friday, 8:00am – 1:00pm Saturday, with no work on Sundays or public holidays.</p> <p>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 will be required under certain circumstances e.g. to minimise impacts on active operational services (e.g. connection to live sewer, water and electrical services), to minimise impacts on existing traffic, to respond to emergencies, and unavoidable construction constraints (e.g. long concrete pours).</p>
Minimise impact of construction on surrounding area	<p>A Construction Environmental Management Plan (CEMP) would be prepared and implemented to guide construction activities as outlined below in the following commitments:</p> <ul style="list-style-type: none"> ■ Air Quality ■ Water Quality ■ Noise & Vibration ■ Heritage ■ Flora & Fauna ■ Visual and landscape ■ Waste Management ■ Traffic and transport ■ Communication. <p>All plans and strategies would be developed as part of the CEMP, in consultation with the relevant agencies.</p>
Traffic and Transport	
Minimise impact of construction activities on surrounding road network	<p>A Construction Traffic Management Plan (CTMP) would be prepared and implemented to:</p> <ul style="list-style-type: none"> ■ Restrict heavy construction traffic to designated arterial routes using the mechanism of construction contracts; ■ Establish consultation procedures with the RTA and Lithgow Council for any proposed off site works. <p>Where possible, shifts would be staggered to minimise the traffic impacts associated with employee movements to and from the site.</p>
Air Quality	
Minimise dust generation during construction	<p>Develop and implement a Dust Management Plan (DMP) as part of the Construction EMP.</p> <p>The DMP would include the following mitigation measures and controls:</p> <ul style="list-style-type: none"> ■ Undertake regular watering of active work areas, including

Objective	Action
	<p>stockpiles and loads of soil being transported, to reduce wind blown dust emissions;</p> <ul style="list-style-type: none"> ■ Minimise the area of disturbed / exposed land at any one time; ■ Revegetate stockpiles or progressively landscape exposed areas and where material is to remain in situ for a long period of time.
Water Quality	
<p>No increased sedimentation of nearby waterways</p> <p>Identification and management of any contaminated fill and the potential for groundwater impacts</p>	<p>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.</p> <p>A contaminated land assessment would be undertaken as part of the geotechnical assessment which would be required during detailed design. The assessment would follow the NSW EPA (1997) <i>Guidelines for Consultants Reporting on Contaminated Sites</i> and would recommend procedures for remediation of any contaminated material.</p>
Noise and Vibration	
<p>Minimise construction noise impact on residences</p>	<p>An Environmental Noise Management Plan (ENMP) would be prepared and implemented prior to the commencement of works to achieve compliance with DECCW criteria. This Plan would include:</p> <ul style="list-style-type: none"> ■ Application of physical noise controls to construction equipment, equipment maintenance and utilising “best practice” technology to achieve low levels of construction noise emissions; ■ Noise compliance monitoring for all major equipment and activities on site; ■ The planning of noisy activities for parts of the day when they would have the least impact; ■ 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.
Heritage	
<p>Protection of Indigenous Heritage relics if uncovered</p>	<p>In the unlikely 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.</p>
Flora and Fauna	
<p>Minimise likelihood of direct impacts to threatened species</p>	<p><i>Eucalyptus cannonii</i> and other species to be protected on-site will be tagged and all efforts made to avoid damage during during construction.</p>
Landscape and Visual	
<p>Improve and manage landscaping</p>	<p>A Landscape Management Plan (LMP) will be prepared during detailed design of the project and implemented during and after the construction period. The plan would include:</p> <ul style="list-style-type: none"> ■ processes for the management of on-site weeds; ■ detail on the rehabilitation of the site with a program of weed removal and revegetation with native species. Noxious weeds at

Objective	Action
	<p>the site would be identified and be removed in accordance to the criteria under the <i>Noxious Weeds Act 1993</i>, and the relevant NSW Department of Primary Industries weed control guidelines;</p> <ul style="list-style-type: none"> ■ Monitoring of vegetation to ensure it becomes established and to identify any further management requirements.
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>	<p>A Waste Management Plan (WMP) would be prepared and implemented. This would include:</p> <ul style="list-style-type: none"> ■ Measures to minimise waste including the use of clean excavated material as fill for site levelling and road works, the re-use of excavated material not suitable for construction purposes for landscaping where practicable, and any contaminated soils to be remediated and used on site where appropriate. ■ Investigate the use of recycled materials in concrete, road base, asphalt and other construction materials; ■ Waste for disposal would be removed by a licensed waste contractor and disposed of at a licensed landfill facility; and ■ Quantities of waste produced/reuse/recycled and location of final disposal to be monitored.
Communication	
<p>Establish effective communication with community and relevant agencies</p>	<p>A Construction Communications Plan would be prepared and implemented. This would include:</p> <ul style="list-style-type: none"> ■ Maintenance of phone line/email/website to provide opportunity for community input; ■ An effective complaints handling procedure to address and respond to issues raised by the community, including investigative monitoring of construction traffic in response to specific complaints.

16.3 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 16-2**. These include the preparation of a site Operational Environmental Management Plan (OEMP) which would be required prior to power station 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 16-2 Environmental Management Commitments – Operational**

Objective	Action
Environmental Management	
Minimise impact of operations on surrounding area	<p>An Operational Environmental Management Plan (OEMP) would be prepared and implemented to guide operational activities. It would include:</p> <ul style="list-style-type: none"> ■ Air quality ■ Chemicals storage and handling ■ Water Quality ■ Noise & Vibration ■ Waste Management ■ Energy and Greenhouse ■ Emergency Response ■ Community Liaison ■ Environmental Reporting <p>All plans and strategies would be developed in consultation with the relevant agencies. The proponent would undertake a sustainability assessment of the operational aspects of the site to determine and develop appropriate strategies to minimise environmental impacts. These would be outlined in the OEMP.</p>
General	<p>The OEMP would provide for regular monitoring and periodic performance reviews of the key performance criteria for air, noise, water management and traffic established for the operation of the power station. Air, noise and water management performance parameters would be established in the EPL for the site and be described in OEMP. The examination and interpretation of results will be undertaken by a suitably qualified professional and any agreed actions implemented within a reasonable timeframe as defined in the OEMP.</p>
Air Quality	
<p>Minimise emissions from plant and equipment</p> <p>Confirm predictions from air modelling</p>	<p>Equipment to be maintained to ensure environmental performance in terms of air emissions meets licence requirements.</p> <p>Monitoring at sites at Wallerawang and Blackmans Flat will continue to allow the demonstration of the conservative assumptions used in the modelling studies.</p>
Chemicals Storage & Handling	
Minimise risk of future contamination	<p>Operations to be managed to ensure potentially contaminating materials are stored and handled in an appropriate manner to minimise future contamination risk to soils and groundwater.</p>
Minimise risk of on site incidents	<p>The site operator will be required to prepare and implement operating procedures for the management of dangerous goods.</p>
Hydrology and Water Quality	
Manage water quality runoff to waterways	<p>The key operational water quality measure and environmental safeguard would be the capture, treatment and reuse of the process water and contaminated water. This will be contained and treated in the wastewater treatment system. Treated water will be reused except for brine concentrate (coal option) which will be used in the ash storage area.</p> <p>Clean runoff water will be diverted via the drainage system to water quality management devices on site to be monitored prior to discharge. Any devices installed will be maintained at regular intervals to ensure they are functioning as expected.</p>

Objective	Action
Noise and Vibration	
Minimise operational noise impact on surrounding residences	<p>An Environmental Noise Management Plan (ENMP) would be prepared and implemented and would detail methods available to mitigate noise during the operation of the proposal.</p> <p>More detailed noise monitoring and modelling will be undertaken during design to assist in developing appropriate mitigation measures to ensure noise criteria can be met.</p> <p>Monitoring will be undertaken following commencement of operation to ensure modelling predictions are achieved.</p> <p>Investigative monitoring of noise will be undertaken in response to specific complaints. Appropriate complaints procedures and means of responding to complaints will be established.</p>
Waste Management	
Minimise the generation of waste and maximise reuse of waste generated	<p>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.</p> <p>Wastewater will be recycled through the power plant and brine concentrate (for the coal option) would be used for ash conditioning. Ash (from the coal option) will be placed in the proposed new ash deposition areas (subject to separate approval).</p>
Energy & Greenhouse	
Reduce energy consumption and greenhouse gas generation	<p>Identify opportunities to minimise energy consumption on site. Energy management measures would be assessed during detail design and would be consistent with relevant industry guidelines.</p> <p>Evaluation of availability and feasibility of measures to reduce and/or offset greenhouse emissions (including the use of carbon capture and storage) will be undertaken. Options for staged implementation of emerging mitigation technologies will be identified at key stages in the development of that technology.</p>
Emergency Response	
Ensure emergency response procedures are adequate	<p>An Emergency Response and Incident Management Plan (ERIMP) would be prepared to ensure incidents are handled promptly and safely. The ERIMP would outline the appropriate emergency response equipment that would be provided, the mandatory training requirements, the emergency response procedure and the responsibilities of site operators.</p>
Community Liaison	
Establish effective communication with community	<p>Liaise with the community about the operation of the proposed extension via the existing community relations program eg. articles in the local newspapers, forums and meetings with stakeholder groups.</p> <p>Provide avenues for community feedback.</p>
Environmental Reporting	
Provide clear and appropriate communication about site operations	<p>During operation, environmental performance and progress will be incorporated as necessary into the respective corporate environmental reporting of Delta Electricity 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.</p>

16.4 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 the proponent 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.

16.5 Emergency Response

An Emergency Response and Incident Management Plan (ERIMP) would be prepared to ensure incidents are handled promptly and safely. The ERIMP would outline the appropriate emergency response equipment that would be provided, the mandatory training requirements, the emergency response procedure and the responsibilities of site operators.