9. Statement of commitments

This chapter addresses the requirement to outline environmental mitigation, management and monitoring provisions for the project. It provides a Statement of Commitments by the proponent in relation to environmental impact mitigation, management and monitoring during construction and operations.

9.1 Introduction

The proponent's assessment of the environmental impact of the project is contained in this Environmental Assessment (EA). The proponent proposes to mitigate this impact by undertaking the measures outlined in this Chapter. We propose that these mitigation measures, along with any conditions of approval issued by the Minister for Planning, will be incorporated into the detailed design of the project and, where appropriate, the construction and operational Environmental Management Plans (EMPs) for the project site. The EMPs will 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 will also include, where appropriate, safeguards developed during the detailed design phase of the project. The EMPs will become the reference documents that assist us to implement the commitments for environmental protection and management in the EA and subsequent approvals. The EMPs will also enable us to confirm the accuracy of the proponent's assessment of the impact made in this EA and measure the effectiveness of the proponent's mitigation measures.

9.2 Construction environmental management and mitigation

The proponent's environmental management and mitigation commitments proposed for implementation during the construction phase of the project are shown in **Table 9-1**. These commitments will be included in the Construction EMP which will be required prior to commencement of any construction activities. The Construction EMP will detail temporary environmental protection measures required to mitigate the impact of the proponent's construction activities.

Table 9-1 Environmental Management Commitments – Design and Construction

Objective	Action
Environmental Management	
Manage hours of construction work	■ Proposed hours of construction for the project site are: - Monday to Friday – 7am to 6pm; - Saturday – 7am to 1pm if inaudible at residential premises, otherwise 8am to 1pm; and - No work on Sundays or public holidays. ■ The Construction EMP will outline the procedures that need to be complied with before any work can be carried out on the project site outside these hours (e.g. approval of relevant authorities and notification of local residents).
Minimise impact of construction on surrounding area	A construction environmental management plan (CEMP) will be prepared and implemented to guide construction activities. The CEMP will cover the following areas: ■ traffic and transport; ■ air quality; ■ water; ■ noise and vibration; ■ heritage; ■ ecology; ■ hazards and risk; ■ visual; ■ waste management; and ■ communication. Any plans and strategies contained in the CEMP will be developed in consultation with the relevant agencies.
Maintain public foreshore access	The Tallawarra Stage B project will not result in any permanent reduction or alteration of the existing foreshore access arrangements in the vicinity of the site
Traffic and Transport	
Minimise impact of construction traffic on surrounding road network	■ Subject to availability, the construction works will use the new temporary area to the north east of the power station site, adjacent to the squash courts/ basketball courts. Access will be via the southern access and service road, minimising the interaction between construction vehicles and other vehicles. ■ Consultation with the relevant roads authority will be undertaken before the commencement of works that may affect public roads or traffic. ■ Traffic and transport mitigation measures and safeguards implemented for the construction of the Tallawarra Stage A plant will be reinstated for the construction of the Tallawarra Stage B power station. In particular, warning signs for the general public and employees will be re-installed and regular inspections of Tallawarra Road's surface condition will continue to be carried out. ■ A traffic management plan will be developed as part of the CEMP.
Air	
Minimise dust generation during construction	The following dust control procedures will be implemented during the construction phase of the project if there is a possibility of wind-blown dust affecting residential areas: ■ In dry, windy conditions, water carts will be used to dampen soils prior to excavation and handling. Exposed surfaces and stockpiles will be watered, sprayed and covered if required.

Objective	Action
	■ Vehicles will only be loaded to their carrying capacity and loads of fill will be covered or dampened during transport. Any soil adhering to the undercarriage and wheels of the trucks will be removed prior to departure from the site. ■ Any long-term stockpiles of soil will be stabilised using fast-seeding grass or synthetic cover spray. In addition, construction plant and equipment used on the site for the project will be well maintained and regularly serviced so that emissions from construction plant and vehicles remain within applicable air quality guidelines and standards.
Water	
Prevent increased sedimentation of nearby waterways	■ All applicable activities will be carried out in a manner that minimises erosion and sedimentation. These measures will be carried out in accordance with the applicable principles and practices contained in 'Soils and Construction' (Landcom, 2004).
Noise	
Minimise construction noise impact on surrounding residences	■ Construction will be carried out during the hours specified above under 'Environmental Management - Manage hours of construction work'. ■ Practical measures will be used to manage noise from construction equipment, particularly in instances where extended hours of operation are required. ■ Noise compliance monitoring will be carried out for all major equipment and activities on site and investigative monitoring of noise will be carried out in response to specific complaints. ■ Contractors will be required to comply with applicable noise criteria in the construction of the proposed plant. Noise limits will be given to suppliers of plant equipment so that the equipment can be designed to comply with project specific noise goals. ■ Suppliers of construction equipment will be required to comply with Australian Standard AS 2436-1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*. All equipment used on-site will need to demonstrate compliance with the noise levels recommended within AS 2436-1981.
Aboriginal Heritage	
Protection of recorded Indigenous Heritage items	■ The location of existing Aboriginal heritage sites close to the proposed works will be noted. A suitable buffer will be physically marked and construction staff will be made aware of their responsibilities and obligations under the *National Parks and Wildlife Act 1974*.
Protection of Indigenous Heritage relics if uncovered	■ All construction personnel will be inducted on the potential to find previously unrecorded Aboriginal items. ■ If an item (or suspected item) of Aboriginal heritage is discovered during works, all work likely to affect the discovery will cease. DECC will be informed and further investigation will be undertaken by an archaeologist before recommencement of work.
Ecology	
Management of terrestrial vegetation and habitats	■ The proposed disturbance footprint will be clearly defined on-ground, using temporary fencing, to avoid unnecessary vegetation and habitat removal. ■ Appropriate weed management strategies will be implemented during construction to ensure they are not spread throughout the study area.
Minimise likelihood of impacts on aquatic and	■ Sediment and erosion controls will be adopted to minimise the impact on water quality. Appropriate measures to store and manage fuels

Objective	Action
riparian habitats	and oils on the project site will be adopted and spill containment equipment will be available on site at all times to prevent and contain accidental spills near local waterways.
Hazards and Risks	
Ongoing assessment of hazards and risks	The following studies will be completed as part of the ongoing assessment of hazards and risks prior to commencement of operations: ■ fire safety study, in accordance with Hazardous Industry Planning Advisory Paper (HIPAP) No. 2; ■ hazard and operability study, in accordance with HIPAP No. 8; ■ emergency response planning, in accordance with HIPAP No. 1; ■ construction safety study, in accordance with HIPAP No. 7; and ■ safety management system assessment, in accordance with HIPAP No. 9.
Visual	
Minimise visual impacts during design	■ Plant will be designed to be consistent with adjacent structures, including Tallawarra Stage A. ■ The design and colour scheme chosen for the built components will be selected to ensure they do not stand out within the natural settings.
Minimise visual impacts during construction	■ Revegetation of earthwork areas will be conducted as soon as practicable during the construction phases.
Waste Management	

Minimise waste generated and maximise re-use and recycling. Waste disposal to be undertaken when re-use and recycling is not possible	■ A waste management plan (WMP) will be developed for incorporation into the CEMP.
	■ The WMP will include:
	  ■ procedures for the management of construction wastes from the site;
	  ■ an inventory of all waste types anticipated; and
	  ■ the preferred options for re-use, recycling or disposal.
	■ The WMP will seek to ensure that all waste generated at the site is recorded to help achieve waste minimisation.
	■ Waste for disposal will be removed by a licensed waste contractor and disposed of at a licensed landfill facility.
	■ Where required, any asbestos, contaminated soil and spoil generated from the power station site and the previous power station foundations (subsurface) will be retained and contained on site in the existing DECC approved site asbestos repository established as part of the Tallawarra A approval.

Communication	
Establish effective communication with community and relevant agencies	A construction communications plan will be prepared and implemented. This plan will include: ■ continuation of the existing community liaison group that was established in 2003 for Tallawarra Stage A and the Tallawarra Lands planning process; ■ establishment of a basis for liaison with the community to deal with construction issues; ■ maintenance of phone/fax/website to provide opportunity for community input; and ■ implementation of an effective complaints handling procedure to address and respond to issues raised by the community.

9.3 Operational environmental management and mitigation

The proponent's proposed environmental management and mitigation commitments relevant to the operational phase of the project are summarised in **Table 9-2**. These include the preparation of a site Operational EMP which will be required prior to operations commencing. The Operational EMP will detail on-going operating conditions and protection measures to mitigate the impact of site operations on the environment. The Operational EMP for the Tallawarra Stage B plant could be prepared as an extension to the Operational EMP developed for the Tallawarra Stage A plant.

The Operational EMP will be updated as required to reflect any changes in the operation of the site or regulatory requirements.

Table 9-2 Environmental Management Commitments – Operational

Objective	Action
Environmental Management	
Minimise impact of operations on surrounding area	An operational environmental management plan (OEMP) will be prepared and implemented to guide operational activities. The OEMP will cover the following areas: ■ environmental management; ■ air and greenhouse; ■ noise; ■ hazard and risk; ■ water; ■ heritage; ■ ecology; ■ landscape and visual; ■ traffic and transport; ■ waste management; and ■ emergency response. Any plans and strategies contained in the OEMP will be developed in consultation with the relevant agencies.
General	■ The OEMP will require that regular monitoring and periodic performance reviews be undertaken of key performance criteria for noise during the operation of the site. Performance reviews will be undertaken against noise performance parameters established in the OEMP. The examination and interpretation of the results of such reviews will be undertaken by a suitably qualified professional and any agreed actions implemented within a reasonable timeframe. ■ The plant's hours of operation will be 24 hours 7 days per week. ■ The site will preferentially use natural gas fuel for firing the power station turbines. Diesel fuel (OCGT only) shall only be used to manage fuel capacity or network system constraints, in the event of failure of existing major electricity generating facilities, failure of natural gas supplies, a State or regional system shutdown situation; if cessation of operation would otherwise lead to a loss or reduction in electricity necessary to maintain the required network supply security/reliability or at the direction of the National Electricity Market Operator.
Maintain public foreshore access	The Tallawarra Stage B project will not result in any permanent reduction or alteration of the existing foreshore access arrangements in the vicinity of the site

Air and Greenhouse		
Minimise emissions from plant and equipment	▪ The air and greenhouse proposal for the Stage B OCGT plant will be designed and implemented to ensure that the NSW DECC criteria for each pollutant identified in Tables 7-1 and 7-2 are not exceeded. As is the case with Tallawarra A (Tallawarra A Air Quality Management Plan), in the event of exceedences, DECC will be notified and remedial action undertaken.	▪ The air and greenhouse proposal for the Stage B CCGT plant will be designed and implemented to ensure that the NSW DECC criteria for each pollutant identified in Tables 8-1 and 8-2 are not exceeded. As is the case with Tallawarra A (Tallawarra A Air Quality Management Plan), in the event of exceedences, DECC will be notified and remedial action undertaken.
	▪ In order to determine the annual NOx load, TRUenergy propose to install and operate a continuous NOx monitoring system at the site. ▪ The need or otherwise for offsets will be determined based on the annual monitoring results. Additionally the need or otherwise will also be determined by; the actual operating data from Tallawarra A, the predicted operating data from Tallawarra B and finally by the actual operating data from Tallawarra B. ▪ TRUenergy has committed to avoid simultaneous cold starts of both Tallawarra A and Tallawarra B CCGTs as a potential exceedance of air emission parameters is indicated from the modelling of this operational scenario with currently available data. TRUenergy reserves the right to remodel and seek the ability to carry out this scenario in the event that improved emissions data becomes available. ▪ Ongoing monitoring of greenhouse gas emissions will be undertaken and reported in the proponent's Annual Environmental Report. ▪ The proponent will continue to meet its requirements under the 'Greenhouse Challenge Plus Program' by maintaining its emissions inventory reporting and continuing development and implementation of action plans to achieve cost effective abatement.	
Noise		
Minimise operational noise impact on surrounding residences	▪ The project noise goals listed in Table 7-17, developed in accordance with the Industrial Noise Policy (INP), will be adhered to during the operation of the Stage B OCGT plant.	▪ The project noise goals listed in Table 8-16, developed in accordance with the Industrial Noise Policy (INP), will be adhered to during the operation of the Stage B CCGT plant.
	▪ Any future development within the Tallawarra Lands area will need to consider the operational noise emissions of the plant and implement design measures to minimise the impact of such emissions. Operational noise emissions monitoring will be undertaken during the operation phase to confirm current assumptions prior to the development of the proposed residential areas. ▪ The start up and shut down activities will be managed through the Operational Environmental Noise Management Plan developed for Tallawarra A, Ref 7142-037-02-01 Rev 2.	
Hazards and Risks		
Reduce the potential risks associated with the operation of the plant	▪ The fitting line will be situated on an above ground pipe rack, with markers that are in accordance with the national standard, as was required for the Tallawarra Stage A plant. ▪ The distance between the marker signs located along the fitting line route will be no more than 50m apart, irrespective of clear visibility along a straight flat section of the fitting line route. ▪ A safety management system element will be developed specifically for the fitting line. This element should include regular fitting line route and equipment inspections and inspection and checking of the impresses current corrosion protection system. ▪ A site first flush retention pond, designed to contain a minimum of 216m^3 of water, will be installed to ensure fire water is retained on site.	

	■ A hazard audit, in accordance with HIPAP No. 5, will be conducted within 12 months of the commencement of operations.	
Water		
Manage water quality in Lake Illawarra		If a CCGT configuration is chosen for the plant, the CCGT will: ■ be designed to utilise wet mechanical draft cooling towers, in preference to once-through cooling, to minimise the amount of water required and the thermal effects of the outlet discharge; ■ use attemperation water (additional intake water to lower the discharge water temperature) to maintain the temperature of cooling water below 35°C.
	■ The existing comprehensive routine monitoring program (as required for Tallawarra Stage A) will be used to monitor the water quality in Lake Illawarra. ■ The use of treated sewage effluent by the proponent for spray irrigation at the site will be managed in accordance with the existing environment protection licence conditions. ■ Runoff water quality will be improved through the use of specially designed traps which will remove oil and grit from runoff water. This will enable recycling of the captured oil, and offsite disposal of the solids. The continued use of the existing constructed wetlands will further improve runoff water quality through removal of excess nutrients and toxicants. ■ Settling basins will be used to remove course material from runoff water and minimise further sedimentation in Lake Illawarra. The settling basins provided for Tallawarra Stage A may need to be enlarged or duplicated to cater for the increased runoff. ■ The oil skimmer booms that are in place for the Tallawarra Stage A plant will be used on the outlet canal to provide extra protection in the event of an oil spill. ■ Subject to any future development of Tallawarra Lands and the availability of sewer TRUenergy intent to connect to this system	
Ecology		
Maintenance of revegetated areas	■ Monitoring of the revegetated areas will be undertaken to ensure they are functioning as designed.	
Aboriginal Heritage		
Maintenance of items on site	■ Any identified or potential Aboriginal heritage sites remaining on the proponent's site will be protected in consultation with the relevant Local Aboriginal Land Council (LALC).	
Visual Amenity		
Minimise impacts on residential amenity	■ The existing landscape planting for Tallawarra Stage A will be enhanced at key locations around the site. ■ The existing earth mound to the east of the site will be elevated to screen the proposed power stations. ■ Native vegetation will be planted on the mound. Vegetation will be retained on the north side of the site and planting will be maximised to reduce views of the site from the Tallawarra Lands area.	
Waste		
Minimise waste generated and	■ Waste management will be a component of the Operational EMP for the operational phase of the facility. It will ensure that initiatives for the sustainable management of waste are given consideration, including:	

maximise re-use and recycling. Waste disposal to be undertaken when re-use and recycling is not possible.	▪ recycling facilities being provided to encourage the separation and recycling of all paper, aluminium, glass, and plastic products used during the operation of the site; and ▪ domestic waste l being collected regularly and disposed of at licensed facilities as appropriate. ■ Where required, any asbestos, contaminated soil and spoil generated from the power station site and the previous power station foundations (subsurface) will be retained and contained on site in the existing DECC approved site asbestos repository established as part of the Tallawarra A approval.

9.4 Environmental reporting

Periodic environmental reports will be prepared to measure performance and progress against the Construction EMP and Operational EMP. These reports will provide relevant authorities with access to important environmental information about the facility. Any shortcomings in environmental performance identified by the reporting process will be addressed by updating the relevant EMP.

9.5 Emergency response

An emergency response and incident management plan (ERIMP) will be prepared to ensure incidents are handled promptly and safely. The ERIMP will outline the appropriate emergency response equipment that will be provided, the mandatory training requirements, the emergency response procedures and the responsibilities of site operators for these matters.

9.6 Conclusions

The environmental assessment undertaken for the project identified a number of benefits arising from the project and the potential environmental impact of the project. The impact has been considered in the context of possible mitigation measures. These mitigation measures have been incorporated, where appropriate, into this Chapter as recommendations for work procedures or the design of the project and commitments for environmental management. These measures will be further developed in the form of EMPs. The EMPs will provide the procedures by which the impact of the project on the environment will managed and mitigated by the proponent.