Draft Statement of Commitments - Summary of Key Outcomes

The Draft Statement of Commitments has been prepared in accordance with section 75F (6) of the EP&A Act. The inclusion of appropriate environmental management measures into the detailed design and construction of the Project would minimise adverse impacts on the environment. The proposed adoption of the relevant measures identified in the Draft Statement of Commitments into a Construction Environmental Management Plan (CEMP) and Operation Environmental Management Plan (OEMP) would be an important component of the Project and reiterate the commitment of AGL and its contractors to mitigation of environmental impacts identified in this assessment.

The Draft Statement of Commitments describes the environmental management and monitoring to be undertaken during the construction and operation of the Dalton Power Project.

Chapter 19 Draft Statement of Commitments

19.1 Introduction

This chapter details the Draft Statement of Commitments in accordance with section 75F (6) of the EP&A Act. The inclusion of appropriate environmental management measures into the detailed design and construction of the project would minimise adverse impacts on the environment. The proposed adoption of the relevant measures identified in the Draft Statement of Commitments into a Construction Environmental Management Plan (CEMP) and Operation Environmental Management Plan (OEMP) would be an important component of the Project and reiterate the commitment of AGL and its contractors to mitigation of environmental impacts identified in this assessment.

The Draft Statement of Commitments describes the environmental management and monitoring to be undertaken during the construction and operation of the Dalton Power Project.

19.2 Environmental Management

19.2.1 Construction Environmental Management Plan

Environmental management during the construction phase of the proposed project would be undertaken in compliance with the requirements of a CEMP. The CEMP is an administrative tool outlining environmental management practises, safeguard measures to be implemented, timing of their implementation, and management and monitoring of the process and procedures. The CEMP must be adhered to during the construction of Dalton Power Project.

The key objectives of the CEMP would include:

- ensuring that works are carried out in accordance with appropriate environmental statutory requirements, the conditions of approval for the project, relevant guidelines and existing environmental management systems and procedures at the site;
- ensuring that works are carried out in accordance with the goals and requirements presented in the Environmental Assessment;
- ensuring that works are carried out in such a way as to minimise the likelihood of environmental degradation occurring;
- ensuring that works are carried out in such a way as to manage the impact of the works on neighbouring land uses;
- ensuring that all workers engaged in the works comply with the terms and conditions of the CEMP;
- providing clear procedures for management of environmental impact including corrective actions; and
- identifying management responsibilities and reporting requirements to demonstrate compliance with the CEMP.

The CEMP would serve as a working document to be used during the implementation of the proposal.

Generally the Construction EMP would include:

- establishment of environmental goals and objectives;
- conditions of project approval;
- lists of actions, timing and responsibilities;
- identification of areas of responsibility for environmental management of the Project;
- statutory requirements – licences and approvals required;
- a structured reporting system detailing all relevant matters on a regular basis;
- procedures and forms for documentation and reporting of issues;
- training obligations of personnel in relation to environmental awareness;
- guidelines for emergencies, contact names and corrective actions for non-conformance and notifications to appropriate authorities and affected parties;
- auditing requirements during implementation of the CEMP;
- review procedures and protocols for modification of the CEMP;
- definition of the complaint handling procedure;
- site management and control procedures; and
- monitoring procedures.

Specifically, the CEMP would provide management actions in relation to:

- erosion and sediment control;
- surface water management;
- waste generation and disposal;
- flora and fauna management;
- Aboriginal cultural heritage management;
- the control of atmospheric emissions;
- the control of construction traffic movements; and
- the control of noise emissions.

19.2.2 Operational Environmental Management Plan

An OEMP would be prepared for the proposed Project, and would address key ongoing monitoring requirements. The OEMP for the operational phase of the Project would include information on:

- the proposed maintenance and monitoring programs for the Project;
- responsibility for maintenance and monitoring;
- reporting requirements;
- permits, approvals and consents issued under the approval process;
- community liaison requirements such as complaints registers and a 24-hour hotline;
- the appropriate standards and protocols for the necessary controls, monitoring and remediation measures;
- auditing procedures;
- response plans for contingency events;
- properly established operating procedures;
- requirements for environmental training and education for Project staff at all levels;
- definition of the proposed monitoring system for review of plans and establishing progress toward achieving objectives and goals;
- non-compliance handling procedures;
- environmental quality controls; and
- plant closure and rehabilitation plan.

19.3 Environmental Safeguards

A number of environmental safeguards and mitigations measures to prevent or minimise environmental impacts that may be generated by the construction and operation of the Dalton Power Project are discussed throughout this Environmental Assessment. These measures would be incorporated in both the OEMP and CEMP and implemented throughout the life of the Project.

Table 19-1 summarises these measures and sets out the timeframe for their implementation (i.e during the design, construction and/or operation phase).

Table 19-1 Summary of Mitigation Measures and Commitments

Item	Mitigation Measures / Commitments	Design	Construction	Operation
	General			
A1	The Proponent would carry out construction and operation in accordance with the: • Project Application; and Agreed Statement of Commitments.		✓	✓
A2	Monitoring would be undertaken in accordance with the Environmental Protection Licence.		✓	✓
	Environmental Management			
B1	The construction and operation would be undertaken in accordance with an Environmental Management System(s) (EMS) to the standard of ISO 14001 or equivalent.		✓	✓
B2	The EMS would provide an overarching system to achieve the environmental management objectives for the Project and address commitments in the statement. This would also include the Minister's Conditions of Approval and any environmental due diligence requirements identified by the Proponents and/or contractor.		✓	✓
B3	Prepare and implement: • a CEMP; and an OEMP. These would include the specific measures outlined in the following sections of this table.		✓	✓
B4	An Environmental Management Representative would be appointed for the construction stage of the proposed Project.		✓	
	Consultation			
C1	Consultation would continue with stakeholders during the planning, detailed design, construction and operation of the Project.	✓	✓	✓
C2	Adjoining landowners and the Dalton community would be notified when construction is likely to be initiated.		✓	
	Soils			
D1	Further geotechnical and groundwater assessments would undertaken to inform the detailed design.	✓		
D2	A Construction Soil and Water Management Plan would be developed and implemented for the construction works to ensure effective management of potential soil erosion issues.		✓	

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Item	Mitigation Measures / Commitments	Design	Construction	Operation
D3	At a minimum the measures outlined in the *Managing Urban Stormwater – Vol 1 Soils and Construction* would be implemented. Measures may include: • limiting slope length, installation of sediment filters and the construction of a sedimentation basin downstream of the plant area.		✓	
D4	Construction would be planned to minimise the time that disturbed land is exposed.		✓	
D5	Disturbed areas would be quickly revegetated or covered with a non-erodable surface following construction.		✓	
D6	During the construction period water may be required for dust suppression.		✓	
D7	Discharge from the sedimentation pond would be through an appropriately designed dissipating structure to minimise soil erosion potential.			✓
D8	Appropriately bunded areas would be included for storage of fuels, oils and chemicals.		✓	✓
D9	Areas within the operational plant area would be appropriately drained so that surface runoff would be prevented from infiltrating directly onto the ground and from reaching the groundwater.			✓
	Air Quality			
E1	As part of the detailed design of the development, the assumptions and emission estimates used in this assessment would be reviewed and should the expected emission rates or stack details increase over the values used here, the modelling would be revised to ensure that OEH air quality standards and goals would be met through appropriate design.	✓		
E2	Liaise with CASA to address the issue of potential aviation hazard of the plant.	✓		
E3	Any emissions of dust particulates during construction would be specifically controlled through the implementation of mitigation measures, which would be incorporated into a Construction Environment Management Plan (CEMP).	✓	✓	

Item	Mitigation Measures / Commitments	Design	Construction	Operation
E4	The CEMP would consider the most appropriate dust mitigation method suited to the activity and circumstances. This may include: • watering, spraying or covering earthworks during excavation and handling and on exposed surfaces and stockpiles; • scheduling activities for more favourable meteorological conditions; • ceasing earthmoving activities when wind speeds exceed 30 km/hr; • covering or limiting truck soil loads; • reducing speed limits on unsealed surfaces; • cleaning soil off the undercarriage and wheels of trucks • any long-term soil stockpiles would be stabilised using measures such as fast seeding grass or synthetic cover spray.		✓	
E5	Monitoring of air emissions during operation would be undertaken in accordance with the Environment Protection Licence.			✓
	Greenhouse Gas			
	Install plant that achieves a thermal efficiency that is consistent with Best Available Technology (BAT) as defined in the Generator Efficiency Standards (AGO,2006).	✓	✓	
	Conduct efficiency audits in accordance with both AGL's internal directives, and regulatory requirements under the *Energy Efficiency Opportunities Act 2006* (EEO - as amended), conducting environmental audits to ensure that plant is being operated efficiently, and to identify opportunities to improve efficiency and reduce emissions intensity e.g.: • restoring the plant to design condition – e.g. replacing filters and removing fouling; • changing operational settings – e.g. ensuring control systems are operating correctly; • investigating and implementing retrofit improvements, and other mitigation options – e.g. turbine blades capable of withstanding higher combustion temperatures, CCS and waste heat brine concentration, where it is cost effective to do so.		✓	✓
	Landscape and Visual			
F1	Materials utilised in the construction of the power station and valve station would be generally dark in tone and where possible non reflective.	✓	✓	✓
F2	Lighting would avoid direct line of sight towards homesteads beyond the site.	✓	✓	✓

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Item	Mitigation Measures / Commitments	Design	Construction	Operation
F3	Top of the stacks would not have lighting unless required for aviation safety.	✓	✓	✓
F4	Large floodlights not to be used other than for emergency lighting.			✓
F5	Security lighting would not spill onto neighbouring residences. This would be achieved through the use of down lights and motion sensor lighting.			✓
	Traffic and Transportation			
G1	AGL would continue liaison with the relevant regulatory authorities about over-mass, over-dimension transport requirements throughout the detailed design phase.	✓		
G2	Once details are confirmed about widening and re-grading works required to facilitate the movement of over-mass, over-dimension vehicles, AGL commits to implementing or paying for temporary improvements, pending project approval.	✓	✓	
G3	Development of detailed Transport Plan (including obtaining approvals) for the transportation of turbine and tower components and equipment.	✓	✓	
G4	Development of detailed Traffic Management Plan for the construction phase.	✓		
G5	Undertake a detailed pavement and structure analysis on all affected sections of road prior to, and following construction. Provide Upper Lachlan Shire Council with a copy of the assessment.		✓	
G6	Undertake an analysis of the horizontal and vertical alignment to determine the adequacy of the affected public road network for all expect traffic types prior to construction. Provide Upper Lachlan Shire Council with a copy of the assessment.		✓	
G7	Development of a Traffic Management Plan for the operational phase if required.			✓
G8	Transport of over-mass and over- dimensional loads to be undertaken under RTA and NSW Police permit conditions and approved routes.		✓	
	Noise			
H1	A Construction Noise Management Plan is to be developed as part of the CEMP to confirm assumptions made in the assessment and to investigate reasonable and feasible noise mitigation measures if necessary.		✓	
H2	Carrying out all noisy construction works during the standard daytime construction hours.		✓	

Item	Mitigation Measures / Commitments	Design	Construction	Operation
H3	Scheduling construction to minimise multiple use of the noisiest equipment or plant items near noise sensitive receptors.		✓	
H4	Strategic positioning of plant items to reduce the noise emission to noise sensitive receptors, where possible.	✓	✓	
H5	Carrying out maintenance work away from noise sensitive receptors, where practicable.		✓	
H6	Ensuring engine covers are closed, maintenance of silencers and mechanical condition. Regular maintenance and noise testing for major items of construction equipment that are significant contributors to construction noise levels.		✓	
H7	Awareness training for staff and contractors in environmental noise issues including.		✓	
H8	Minimising the use of horn signals and maintaining to a low volume. Alternative methods of communication will be considered.		✓	
H9	Avoiding any unnecessary noise when carrying out manual operations and when operating plant.		✓	
H10	Switching off any equipment not in use for extended periods during construction work.		✓	
H11	Minimising heavy vehicles' entry to site and departure from site outside the nominated construction hours.	✓	✓	
H12	Where noise level exceedances cannot be avoided during construction, consideration will be given to applying time restrictions and/or providing quiet periods for nearby residents.		✓	
H13	Community consultation with local residents and building owners to assist in the alleviation of community concerns.		✓	
H14	Maintaining a suitable complaint register. Should noise complaints be received, undertake noise monitoring at the locations concerned. Reasonable and feasible measures would need to be implemented to reduce noise impacts.		✓	
H15	Noise emissions from the plant operation to be verified during commissioning stage to confirm assumptions made regarding noise attenuation and compliance with the project noise criteria.			✓
H16	The exhaust stack is required to be designed to comply with the INP requirements.	✓		✓
H17	AGL will commence discussions with receptors B, C and D regarding the low frequency noise assessment as consistent with other developments.	✓		

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Item	Mitigation Measures / Commitments	Design	Construction	Operation
	Flora and Fauna			
I1	A Flora and Fauna Management Plan (FFMP) would be developed and implemented as part of the CEMP and include measures for the minimisation or avoidance of impacts on threatened as well as common native flora and fauna.		✓	
I2	A Vegetation Clearing Strategy for the development footprint would be developed and implemented to ensure clearing only occurs where necessary.		✓	
I3	A Pre Clearing Survey Strategy would be developed and implemented to detail pre-clearance ecology surveys to be undertaken within all areas planned for vegetation clearance. Surveys would be carried out by qualified ecologists prior to all clearing activities. Surveys would target potentially present threatened flora and fauna and threatened fauna species habitat. OEH/SEWPaC would be consulted regarding requirements for further action.		✓	
I4	A Two-Stage Clearing Strategy would be developed and implemented for areas identified as containing habitat trees (trees with hollows and other habitat features such as nests, drays etc).		✓	
I5	A Habitat Replacement Strategy would be developed and implemented to provide effective delivery of replacement habitat in the adjoining proposed offset area in order to compensate for all EPBC Act vegetation habitat removed. AGL estimates that these works would require site establishment costs of around $15,000 for exclusion fencing, as well as an average cost of rehabilitation of around $24,000 per annum over a 20 year period. These costs are likely to be higher in the first 5 to 10 years than in the second 10 years of rehabilitation works.		✓	
I6	A Habitat Corridor and Connectivity Plan would be developed and implemented with the objective that any planned remediation works would aim to increase the value of the Site in regards to connectivity with other remnants in the landscape, through the revegetation of habitat corridors within the offset area.		✓	✓

Item	Mitigation Measures / Commitments	Design	Construction	Operation
I7	The Site Management Plan would include commitment to: • Maintain low vehicle speed limits on Site and in the surrounding locality to reduce fauna road fatalities; • Restrict all vehicular and personnel entry into retained vegetation through exclusion fencing, signage, locating access roads and paths to avoid habitat damage; • Educate workers as to the appearance and location of all threatened species and ecological communities as well as noxious weeds present or likely to be present within the Site, and mark their locations onto site plans; • Employ down-lights and motion sensor lighting in order to reduce light spill and the associated secondary impact on nocturnal fauna species potentially using the adjoining vegetation. All lighting will be directed inwards so as to minimise any spill outside the areas of activity; and • Areas identified for clearing will be clearly marked prior to construction using highly visible flagging tape or spray paint to prevent unnecessary clearing		✓	✓
I8	A Grazing Management Plan would be developed and implemented to exclude grazing by cattle and sheep to improve the habitat value and floristic diversity of retained vegetation.		✓	✓
I9	An Edge Effect Strategy would be developed to manage and reduce possible edge effects and fragmentation from the Project.		✓	✓
I10	All waterway crossings would be designed and constructed in accordance with the I&I NSW Policy and Guidelines for Fish Friendly Waterway Crossings and Why Do Fish Need to Cross the Road? (Fairfull, S. and Witheridge, 2003 and NSW DPI, 2004) and DWE's Guidelines for Controlled Activitied – Watercourse Crossings (DWE, February, 2008).	✓	✓	
I11	A Weed and Pest Management plan would be developed and implemented.		✓	✓
I12	A Complementary Planting and Rehabilitation Plan would be developed and implemented. This would include strategies to utilise plant species to replicate Box Gum Woodland and Natural Temperate Grassland floristic composition. Planting of local provenance seed, propagules, or saplings would be undertaken where possible and utilise best practice bush regeneration techniques.			✓

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Item	Mitigation Measures / Commitments	Design	Construction	Operation
I13	AGL would implement a Biodiversity Offset Strategy (in consultation with OEH and SEWPaC) to compensate for clearing associated with the Project and in line with the requirements of the offsetting policies of those bodies to provide management the offset area for environmental purposes in perpetuity.			✓
I14	Golden Sun Moth surveys will be undertaken in Spring by a qualified biologist prior to determination.	✓		
	Heritage			
	Aboriginal Heritage			
J1	Where practicable, disturbance to Aboriginal archaeological sites D2, D3, D4, D5, D7 and DGP3 should be avoided. If impact is unavoidable, the artefacts should be collected or relocated away from the area of impact.	✓	✓	
J2	If impact to Aboriginal site D5 and potential archaeological deposits DPAD1 and DPAD2 cannot be avoided, then a program of archaeological subsurface testing should be conducted to ascertain the presence, extent and integrity of cultural material that may be present in these areas.	✓	✓	
J3	Where practicable, disturbance to Aboriginal archaeological sites DGP4, DGP5 and DGP6 will be avoided.	✓	✓	
J4	If sites DGP4, DGP5 and DGP6 are unavoidable, then the following management strategies are recommended: • the artefacts exposed at DGP5 would be collected and/or relocated away from the area of impact; and • a limited program of salvage excavation will be conducted at sites DGP4 and DGP6 with the aim of recording and analysing a larger and more representative sample of artefacts.		✓	
J5	The CEMP would be developed and implemented addressing heritage issues. The CEMP would detail management strategies for identified Aboriginal sites together with strategies to be followed in the event that an Aboriginal object is uncovered during construction.		✓	
	European Heritage			
K1	The CEMP would be developed and implemented addressing heritage issues including strategies to be followed in the event that a non Aboriginal archaeological relic is uncovered during construction.		✓	

Item	Mitigation Measures / Commitments	Design	Construction	Operation
	Socio-Economic			
L1	Where practicable, local contractors and supply companies would be utilised for the provision of labour and services during the construction phase and subsequent operation and maintenance of the plant.		✓	✓
L2	AGL commits to examining how to continue its active community engagement philosophy whereby AGL supports particular community initiatives.		✓	
	Water Management			
	Soil Erosion			
M1	All construction works would be undertaken in a manner to minimise the potential for soil erosion and sedimentation. Sediment and erosion control measures would be detailed in the CEMP.		✓	
M2	At a minimum the measures outlined in the *Managing Urban Stormwater – Vol 1 Soils and Construction* would be implemented. Measures may include: • limiting slope length, • installation of sediment filters, and • the construction of a sedimentation basin downstream of the plant area.		✓	
M3	Soil erosion and sedimentation devices would remain in place until the surface is restored. These devices would also capture any gross pollutants.		✓	
M4	Disturbed areas would be quickly revegetated or covered with a non-erodable surface following construction.		✓	
	Spills and site management			
M5	All possible pollutant materials would be stored well clear of site boundaries and stormwater drainage lines and stored in a designated covered area.		✓	✓
M6	Appropriately bunded areas would be included for storage of fuels, oils and chemicals.			✓
M7	Waste collection areas would be designated.	✓	✓	✓
M8	Waste disposal and collection would be undertaken in an appropriate manner.			✓
M9	All major vehicle and equipment maintenance would be undertaken offsite.		✓	✓
M10	Any vehicle washing on-site (if not restricted by Sydney Water from time to time) would be restricted to specific bunded areas.		✓	✓

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Item	Mitigation Measures / Commitments	Design	Construction	Operation
M11	Staff facilities would be provided, installed and maintained so that pollutants, including wash water are not conveyed from the site in stormwater.		✓	✓
M12	Water for dust suppression would be sourced from the existing dams on the site or imported if required.		✓	✓
	Surface water			
M13	Roof runoff would be reused at site and no contaminated effluent would be discharged into waterways.	✓		✓
M14	Water management strategies developed and implemented to maintain zero water discharge from the power plant site except for natural surface flows. Some wastewater may be tankered offsite for disposal at a licensed facility.	✓	✓	✓
M15	Water from the power plant site would be directed through a sedimentation pond designed to remove any oil and minimise suspended solids to an acceptable level prior to discharge from the Site. Process areas would also pass through an oil/sediment trap prior to entering the stormwater system.	✓		✓
M16	The outlet of the power plant site's stormwater system would be designed to maximize the dispersion of these high flows and spread the flow out over a wider area and thereby minimize their potential to cause soil erosion downstream.	✓		✓
	Wastewater Treatment			
M17	Blow down water and other process wastewater would be collected in evaporation ponds lined with a synthetic liner (such as high density polyethylene) and clay to minimise the risk of the saline waste water escaping into the natural groundwater system.	✓		✓
M18	Adequate pond freeboard would be provided to prevent overtopping eg by wave action.	✓		✓
M19	Waste solids, sludge/brine would be removed from site and disposed of by a licensed contractor		✓	✓
M20	Undertake hydrologic and hydraulic studies and implement mitigation measures if required to address local flooding.	✓		
M21	Domestic wastewater would be treated by a zero discharge proprietary treatment system or stored and disposed of offsite by a licensed contractor.	✓	✓	✓

Item	Mitigation Measures / Commitments	Design	Construction	Operation
M22	Following confirmation of water supply source(s) and arrangements during the detailed design of the water treatment system, the following would be investigated and implemented following a cost benefit analysis of the following: • Assessment and potential implementation of inlet filter (if any) backwash recycling system; • Maximising recovery of product water in any desalination systems; • Ensuring appropriate pretreatment prior to a deionisation plant to ensure minimal loss of efficiency due to poor feed water quality (physical fouling, ion-exchange resins 'poisoning' due to organics contamination, etc); • Assessment and potential recycling of the evaporative cooling system blowdown (side stream purification and return to the cooling water system or blending with the desalination/deionisation plant feed water possibly after filtration and/or other pretreatment); and • Assessment of a zero liquid discharge option whereby all wastewater streams are thermally desalinated to produce only a solid salt residue, with recovered distillate recycled. This would be an extension of a brine concentrator option, whereby a crystalliser or dryer would further treat a brine to recover solid salt.	✓		✓
M23	Further environmental assessment would be required should AGL seek to supply water to for the Project by water pipeline.	✓		✓
	Waste Management			
N1	All solid and liquid wastes would be contained on-site and where possible separated into recyclable and non-recyclable materials. All waste would be classified and disposed of by a licensed contractor in accordance with the *EPA's Environmental Guidelines: Assessment, Classification & Management of Liquid and Non-Liquid Wastes* (1999).		✓	✓
N2	Prepare Waste Management Plans as part of the CEMP and OEMP addressing the management of wastes during these stages.		✓	✓
	Preliminary Hazard Analysis			
O1	Implement a safety management system for use at the site, specifically as it applies to the proposed hazardous materials handling, pipelining and storages.			✓

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Item	Mitigation Measures / Commitments	Design	Construction	Operation
O2	High and low pressures of the natural gas pipe are to be monitored during (and, if applicable, outside) operation of the Power Plant. These conditions would need to be associated with an automatic trip / shut down of the pipeline at the metering station in case of a major failure of the natural gas pipeline within the site boundary (as assumed in the PHA).			✓
O3	Use of fusible tubing around high risk natural gas piping to be investigated – such tubing would be linked to automatic shut down of the fuel source.			✓
O4	The detailed design of the turbine housing and associated equipments will clearly outline the safety measures used to ensure that explosive situations do not arise (the risk is rendered negligible). Reference will be made to European ATEX Directive and the UK HSE PM84 or other guidance / regulation of equivalent safety.	✓		
O5	Fire protection inside the turbine housing to be determined, including use of explosion panels and use of fire retardant material where appropriate.	✓		
O6	A system implemented to ensure that any removal of critical safety functions (e.g. for repair or exchange) is subject to careful scrutiny by plant management (decisions on whether to shut down plant or a turbine if a critical safety function is removed need to be canvassed).	✓		✓
O7	Rotating machines to be designed such that risk associated with projectile is minimised (gas pipelines protected or not in probable line of projectile, people protected etc.)	✓		
O8	Loud alarm and visual indication (e.g. strobe light) to be installed within the turbine housing, alerting any persons within these housings of the pending discharge of asphyxiants and allowing escape.	✓		✓
O9	Further assessment of the impact of bushfires on the power station and bushfire ignition threats from the power station.	✓		
O10	A safety assessment process would continue throughout the design, construction and commissioning of a potentially hazardous facility to refine and update the outcome of the development approval / environmental risk process.	✓	✓	✓