

# SUBMISSIONS REPORT

## Buronga Peaking Power Plant Environmental Assessment

*Prepared for*

**International Power (Australia) Pty Ltd**

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7 November 2008

43177455





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An Environmental Assessment was prepared for International Power (Australia) Pty Ltd (IPRA) (the Proponent) to assess the environmental impacts of the proposed Buronga Peaking Power Plant Project on a site approximately 10km north-east of Buronga.

The Environmental Assessment was prepared in accordance with the *Environmental Planning and Assessment Act, 1979* (the EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation).

This Submissions Report supports the Environmental Assessment of the proposed Buronga Peaking Power Plant Project by providing a response to matters raised during the public exhibition period.

## 1.1 Outline of the Project

IPRA is seeking Project Approval to construct and operate a gas turbine peaking power plant near Buronga, NSW referred to as the "Buronga Peaking Power Plant".

The Buronga Peaking Power Plant Project would be constructed in a single stage and occupy an area of 4 hectares. It would be located on Crown land immediately adjacent to the TransGrid 220kV switching station, approximately 10km northeast of Buronga, on Arumpo Road. This location best facilitates connection into the national electricity grid.

Operating in open cycle mode, the facility would comprise three distillate-fired gas turbine generating units each of up to 50MW capacity subject to final plant selection. These units would be capable of operating individually or in conjunction, together providing a high level of reliable generation capacity embedded within the region. This multi-unit concept would result in a reliability factor in excess of 99% on an annual basis.

The generating units would be of proven technology, comprising small compact generators enclosed in soundproof enclosures. They would be of the "fast start" type and able to provide "black start" capability for re-energising TransGrid's local regional network in the event of a major system collapse. They will be "dual-fuel capable" in the event that sufficient natural gas supplies become commercially available in the future.

IPRA has commenced plant layout and sizing studies and has sought tenders for the procurement of plant ranging in nominal capacity up to 50MW per unit.

Except for emergencies as allowed in its operating licence, the facility would operate on an as-required, intermittent basis for a total maximum period of up to 10% of any year.

The operating regime for the facility in the short to mid term peaking role is anticipated to be:

- |   |                  |        |          |        |
|---|------------------|--------|----------|--------|
| • Operating hours per turbine per annum | Nominal Average: | 600hrs | Maximum: | 875hrs |
| • Total Generation per annum            | Nominal Average: | 75GWh  | Maximum: | 115GWh |
| • Raw water consumption per annum       | Nominal Average: | 20ML   | Maximum: | 40ML   |
| • Distillate consumption per annum      | Nominal Average: | 19000t | Maximum: | 29000t |

Distillate fuel will be of the low sulphur type to Australian Standard AS3570 with up to 1,500 tonnes of distillate stored at site at any one time.

The plant would be located on Crown land (controlled by the Western Lands Commissioner) immediately adjacent to the TransGrid 220kV switching station, approximately 10km northeast of Buronga.

## **Section 1**

## **Introduction**

IPRA has secured lease transfer arrangements with the current leaseholder for the portion of the Crown pastoral lease on which the plant would be sited should the development be approved.

The electricity generated by the Buronga Peaking Power Plant would feed via step up transformers into the TransGrid switching station and thence into the national electricity grid.

The project would take approximately 6 months to build at an estimated cost of up to \$110 million.

### **1.2 Site Location**

The proposed Buronga Peaking Power Plant Project site is located on land immediately adjacent to the TransGrid 220kV switching station, approximately 10km northeast of Buronga, which would facilitate connection into the national electricity grid.

The proposed Development Site is located on Crown land presently forming part of a large pastoral lease - zoned Rural 1(a) - and IPRA has secured lease transfer arrangements with the leaseholder of this pastoral land which is controlled by the Western Lands Commissioner. The Buronga Peaking Power Plant Project would be permissible with consent from the relevant authority within this Land Use Zone.

The location is well served in its proximity to the regional centres of Buronga, Wentworth and Mildura together with associated services, transport and communications infrastructure.

### **1.3 Public Exhibition**

The exhibition period for public comment on the Environmental Assessment was determined by the NSW Department of Planning (DoP) and undertaken for a total of 30 days from 11 August 2008 to 12 September 2008.

An advertisement dealing with the release and availability of the Environmental Assessment was placed by the DoP in the Mildura Sunraysia on 11<sup>th</sup> and 25<sup>th</sup> August 2008 and copies of the Environmental Assessment were made available for public viewing at the following locations:

- Department of Planning, Information Centre, 23-33 Bridge Street, Sydney.
- Nature Conservation Council, 301 Kent Street, Sydney
- Wentworth Council, Wentworth.
- Buronga Library, Chapman Street, Buronga.
- The IPRA website at <http://www.ipplc.com.au>

The Environmental Assessment was also available on the DoP's website and a total of 20 hard copies and 10 electronic copies were provided to the following agencies:

- Wentworth Shire Council – for assessment and exhibition purposes
- Civil Aviation Authority – for assessment
- Department of Environment and Climate Change – for assessment
- Nature Conservation Council – for assessment and exhibition purposes
- NSW Rural Fire Service – for assessment



## Introduction

## Section 1

- Roads and Traffic Authority – for assessment
- Department of Water and Energy – for assessment
- Department of Lands – for assessment

A total of four submissions were received by DoP during the Exhibition period and four submissions after the Exhibition period. They comprised eight responses from agencies and no private submissions.

All issues raised during the Public Exhibition of the Environmental Assessment have been summarised in Section 2 of this Report.

## Section 2

## Summary of Submissions

Table 2-1 below is summary issues raised in the submissions and proposed response.

**Table 2-1 Summary of Issues Raised in Submissions and Proposed Response**

Submission Owner	Issue Raised	Submission	Response
Department of Water & Energy (DWE)	Water supply	DWE acknowledges that the proposed development has nominated a water supply generally sourced from an on-site constructed storage and the supply of tertiary treated effluent from Wentworth Shire Council. Both of these options appear to have limitations and it is recommended that consideration is given to securing a more reliable water supply	International Power have held preliminary discussions with Lower Murray Water. Currently class D water is available and into the future (2008/2009) class C water (effluent for horticultural use) will be available for the project from the Koorlong Waste Water Treatment Plant at market rates. The Koorlong plant currently treats 3.5 to 4ML of waste water each day. In addition, IPRA will maintain contact with Wentworth Shire Council following receipt of their comments on the EAR (see below). Should there be an excess of water from the Buronga Sewage Treatment Plant at particular times of the year, this would potentially be utilised as a secondary source.
		Surface water licences will be required should the total water storage on the site exceed the Maximum Harvestable Right Dam Capacity (MHRDC) in accordance with section 53 of the <i>Water Management Act 2000</i> . Should the storage be constructed to manage environmental impact from the disturbance of the site, DWE may exempt the storage from the MHRDC. The Department requests a condition be included in the development consent that requires the applicant to formally request an exemption from the MHRDC for the proposed water storage from DWE.	Using the calculator provided in the DWE web-site, the Maximum Harvestable Right Dam Capacity for the site is 0.5ML. The site is very small (4ha). The multiplier adopted was 0.13. It is contended that the proposed development meets the criteria specified in the Section 'Special Dams Exempt From Harvestable Right Calculations'. IPRA will formally request an exemption from the MHRDC from DWE.

## Summary of Submissions

## Section 2

Submission Owner	Issue Raised	Submission	Response
Wentworth Shire Council	Water Supply	With regard to <b>Chapter 14 Water Cycle Management</b> , the use of the effluent from the Buronga Sewage Treatment Plant cannot be guaranteed due to the limited supply. Currently the ponds are oversized to cater for the expansion of the Buronga Gol Gol Township. There is not currently an excess of waste water available for the project. Further discussions would need to take place with the representative of International Power to facilitate the use of the water when there was an excess in the ponds. At this point in time Wentworth Shire Council cannot guarantee the required amount of wastewater.	International Power have held preliminary discussions with Lower Murray Water. Currently class D water is available and into the future (2008/2009) class C water (effluent for horticultural use) will be available for the project from the Koorlong Waste Water Treatment Plant at market rates. The Koorlong plant currently treats 3.5 to 4ML of waste water each day. IPRA will maintain contact with Wentworth Shire Council. Should there be an excess of water from the Buronga Sewage Treatment Plant at particular times of the year, this would potentially be utilised as a secondary source.
TransGrid	Relationship with NSW transmission network	Response to DoP letter with regard to contribution of the Peaking Power Plant to the continued reliable operation of the transmission network in the area and extent to which the proposal could be of assistance should there be extensive transmission network problems.	Noted.
Department of Defence	Safety of military flying operations.	Defence has assessed the proposal for any possible impact on the safety of military flying operations. The Department advises the proposed power station will be located outside any areas affected by the Defence (Areas Control) Regulations (DACR). The DACR control the height of objects (both man made structures and vegetation) and the purpose for which they may be used within approximately 15km radius of Defence airfields.  Plume Rise Assessment: as the exhaust plume will be higher than 110m AGL, the proponent will need to have the proposal assessed by CASA for the potential hazard to aircraft operations. The Department of Defence has no objection to the proposal subject to a hazard assessment being undertaken by CASA.	Noted. The EAR was sent to CASA and AirServices Australia in August 2008 as part of the Exhibition phase. See also AirServices Australia submission below.

## Section 2

## Summary of Submissions

Submission Owner	Issue Raised	Submission	Response
AirServices Australia	Plume Rise Assessment	<p>With regard to Section 6.4 of the Air Quality Assessment (Appendix C of the EAR), can you ask the proponent the following questions:</p> <p>Is the “382m” above ground, above sea level or above stack top?</p> <p>Additionally, the assessment is based on a 13m stack. Can you also ask how does a “20m” stack affect the maximum plume rise? Does it reduce or increase the “maximum” rise.</p>	<p>All statistics including stack heights, vertical plume extent, meteorological parameters, and the OLS have been referenced against ground level.</p> <p>The assessment has assessed a 13m stack - the difference between the 13m and 20m results is expected to be in the vicinity of 10m.</p>
Department of Environment and Climate Change, NSW (DECC)	Environment Protection Licence	The project will require an Environment Protection Licence (EPL) for construction and operation of the Project. A separate application to obtain this licence must be made once development consent is granted.	Noted.
	Water quality, air quality, noise, flora and fauna	Recommended conditions in Attachment A relating to pollution of waters, discharges to air, noise emissions and flora, fauna and threatened species.	The recommended conditions will be reviewed by DoP as part of the approvals process.
	Air quality	The Air Impact Assessment is considered generally satisfactory and the methods used are in accordance with the <i>Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (DEC 2005)</i> . The proposed cumulative emissions as shown in Tables 6.1 and 6.2 of Appendix C comply with all relevant DECC assessment criteria at both 13m and 20m stack heights. As the air assessment has been conducted on the basis of all 3 turbines operating every hour of the year, and the plant will most likely operate for only 10% of the year, the modelling results are considered conservative.	Noted.

## Summary of Submissions

## Section 2

Submission Owner	Issue Raised	Submission	Response
	Greenhouse gas emissions	<p>Notes on Greenhouse Gas Emissions and discussion on whether the proposal demonstrates 'best practice emissions for the activity and alternative electricity generation technologies and fuels'</p> <p>As there is ambiguity about what should be considered best practice, and as there is a relatively small difference in emissions compared with the alternative technology, and fuel combination of using natural gas at the nearest available location and a transmission upgrade, the greenhouse gas impact of the proposed Buronga Peaking Plant is considered acceptable.</p> <p>The Environmental Assessment states the Proponent will become a participant in the following programs to manage greenhouse gas emissions:</p> <ul style="list-style-type: none"><li>- The Greenhouse Challenge Plus Program</li><li>- The Generator Efficiency Standards</li></ul> <p>and will develop an Environmental Management System for the site.</p> <p>As these do not appear in the Statement of Commitments, DECC recommends that they should be added to any Part 3A Approval granted.</p> <p>The proposal will need to comply with the Environmental Management System ISO 14001: 2004 standard.</p>	<p>Noted and agreed. IPRA has committed to meeting the State and Federal greenhouse gas programs. This is incorporated into the updated SoC at the end of this Report.</p>

## Section 2

## Summary of Submissions

Submission Owner	Issue Raised	Submission	Response
	Biodiversity	<p>DECC believes the best way to achieve a “maintain or improve outcome” for this proposal is for the allocation of an area of land to be set aside as an offset to ameliorate the impacts of vegetation clearance (hereafter referred to as ‘the offset’). Initial discussions between DECC and the Proponent (via their consultants) indicate that the Proponent is willing to consider a mutually agreeable offset for the proposed development to ameliorate the impacts of native vegetation clearance on threatened species habitat.</p> <p>The offset should consist of the same vegetation communities in a ratio similar to area that is proposed to be cleared. The offset should be as close as practicable to the proposed development and a management plan for the offset should be developed (ideally including such issues as fencing, stock exclusion, pest (weed and feral animal) control and other ongoing management issues).</p> <p>If an area of Western Land Lease is used as the offset, then investigation into amending the conditions of the lease to conservation purposes should also be undertaken. The offset strategy should be developed in consultation with the DECC and the body that will be involved in the ongoing management of the offset.</p>	<p>The proponent notes that this request for a biodiversity offset was not submitted to the DoP during the Adequacy Review. Following Adequacy Review, the EA placed on Exhibition is of a level considered acceptable by DoP to be placed on Exhibition.</p> <p>Notwithstanding, IPRA are currently in discussions with the DECC Buronga Office with regard to developing a suitable offset strategy.</p>
Roads and Traffic Authority, NSW	EAR Assessment	The RTA has assessed the development application and the supporting information supplied and notes the ‘Draft Statement of Commitments’ of the Environmental Assessment Report dated August 2008, prepared by URS and would raise no objection to the development as proposed subject to the following comments being included as conditions in the development consent:	Noted.
	Access road design.	For road safety reasons, a sealed Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment is to be provided at the junction of the proposed access driveway and Arumpo Road. The treatment is to be designed and constructed in accordance with the RTA's Road Design Guide.	Noted and agreed.

## Summary of Submissions

## Section 2

Submission Owner	Issue Raised	Submission	Response
	Access road design.	Any driveway access points are to be located so as to comply with the required Safe Intersection Sight Distance (SISD) in either direction in accordance with the RTA's Road Design Guide for the prevailing speed limit. Compliance with this requirement is to be certified by an appropriately qualified person prior to commencement of construction of the access driveway.	Noted and agreed.
	Access road design.	The driveway is to be constructed as a "Rural Property Access" type treatment in accordance with the RTA 'Road Design Guide'. The driveway is to be constructed with a width to accommodate the largest size of vehicle likely to service the site. The driveway shall be constructed perpendicular (or at an angle of not less than 70 degrees) to the carriageway and be formed as one driveway within the road reserve to the property boundary.	Noted and agreed.
	Access road design.	Any entry gate to the site shall be located at least 40m from the edge of seal of the carriageway or at the property boundary whichever is the greater. This is to allow for standing of large vehicles when gates are to be opened.	Noted and agreed.
	Access road design.	Any proposed access driveway is to be sealed from the edge of seal of the carriageway to the entry gate or the property boundary whichever is the greater. This is required to prevent deterioration of the road shoulder and the tracking of gravel onto the roadway and suppress dust.	Noted and agreed.
	Vehicle parking	The off-street car park layout associated with the development including driveway design and location, internal aisle widths, parking bay dimensions and loading bays is to be in accordance with AS2890.1-2004 "Off-street car parking" & AS2890.2-2002 "Off-street commercial vehicle facilities".	Noted and agreed.
	Access	The swept path of the largest vehicle entering and exiting the site and manoeuvrability through the site is to be in accordance with AS2890.2-2002 "Off-street commercial vehicle facilities" and designed in a manner to allow all vehicles to enter and exit the subject site in a forward direction.	Noted and agreed.
	Signage and line marking	Appropriate directional signage and line marking is to be installed within the site to assist in directing vehicles around and through the facility.	Noted and agreed.

## Section 2

## Summary of Submissions

Submission Owner	Issue Raised	Submission	Response
	Construction management plan	A construction management plan to address access and parking is to be prepared to ensure that suitable provision is available on site for all vehicles associated with the construction of the development to alleviate any need to park within, or load/ unload from, the road reserve. Appropriate signage and fencing is to be installed and maintained to effect this requirement.	Noted and agreed.
	Drainage	Suitable drainage treatment is to be implemented to retard any increased stormwater run off from the site onto the adjoining road reserve as a result of the development. Any access driveway is to be designed and constructed to prevent water from proceeding onto the carriageway of the adjoining road reserve.	Noted and agreed.
	Public utilities	The applicant is responsible for all public utility adjustment/ relocation works, necessitated by the development and as required by the various public utility authorities and/ or their agents. Any works required within the road reserve will require RTA's concurrence under section 138 of the Roads Act 1993, prior to commencement of works.	Noted and agreed.
	Road reserve works	Detailed design plans of all required works within the road reserve to be submitted to the RTA for approval prior to the commencement of any works.	Noted and agreed.
	Road design	Design and construction of the required road works including line marking, signage and lighting shall be in accordance with the RTA's Road Design Guide for the prevailing speed limit and to cater for largest size vehicle likely to access the site. The pavement standards are to be in accordance with RTA requirements.	Noted and agreed.
	Cost	Any works associated with the development shall be at no cost to the RTA.	Noted and agreed.



## Summary of Submissions

## Section 2

Submission Owner	Issue Raised	Submission	Response
NSW Department of Lands	Surface Water Management	There appears to be little or no mention in the Environmental Assessment that the proposed development site is located in or near a box swamp, and how large rainfall events will be handled in the area.	The site is located approximately 2.5km northeast of the edge of Lake Gol Gol. Flooding and a Flood Study currently being developed was discussed with Wentworth Shire Council. It was confirmed that the site is not subject to mainstream flooding and there are no flood related development controls applying to the site – refer Section 14.6 of the EAR. Rain falling onto the site would be collected as far as practicable for use within the site. Once the rainwater storage tanks are full, excess rainwater will be directed into the stormwater pond where detention and sedimentation would occur. Stormwater Management is assessed in Section 14.7 of the EAR.

## Section 3

## Statement of Commitments

The following table updates **Table 19-1** of the Environmental Assessment Volume 1 Main Report. It includes edits agreed to by the Proponent in response to the comments received during the exhibition period.

**Table 19-1 Summary of Mitigation Measures and Commitments**

Item	Mitigation Measures and Commitments	Implementation
<b>General</b>		
A1	IPRA would carry out construction and operation generally in accordance with the Project application, the EA and this Draft Statement of Commitments.	Design, Construction and Operation
A2	IPRA would ensure that all buildings are constructed generally in accordance with the plans provided as part of the EA, the Building Code of Australia and the relevant parts of the EP&A Act building certification.	Design and Construction
A3	IPRA would ensure that all practicable measures are implemented to prevent or minimise any impacts to the environment that may arise from the construction, commissioning and operation.	Design, Construction and Operation
A4	The Buronga Peaking Power Plant would operate as a peaking plant for up to 10% of the year and in accordance with the Environmental Licence associated with Approval of the project.	Design and Operation
A5	IPRA would prepare and implement: Construction Environmental Management Plan (CEMP); and Operational Environmental Management Plan (OEMP).	Construction and Operation
<b>Heritage</b>		
B1	The CEMP and OEMP would be developed and implemented to address heritage issues. The CEMP would detail the management strategies to be followed in the event that an Aboriginal object or non Aboriginal archaeological relic is uncovered during construction.	Design, Construction and Operation
<b>Soils, Geology and Groundwater</b>		
C1	A nominal cross-fall shall be applied to the platform to provide adequate site surface drainage.	Design and Construction
C2	Assess need for groundwater control and collection system.	Design
C3	Where practicable, material excavated from the site (except for say 150 mm of topsoil and root-affected material) would be suitable for use as engineered fill in any cut/fill operations.	Design and Construction
C4	Where fill is proposed to be beneath structures, it is anticipated that it would be compacted to 98% (Standard) dry density ratio at a moisture content in the range (Optimum Moisture Content $\pm 2\%$ ). In areas where fill is not planned to be used as a permanent structural foundation, compaction to 95% standard would be suitable.	Design and Construction
C5	A Construction Soil and Water Management Plan would be developed and implemented for the construction works to ensure effective management of potential soil and erosion issues.	Design and Construction
C6	Construction would be planned to minimise the time that disturbed land is exposed.	Construction
C7	Disturbed areas would be quickly revegetated or covered with a non-erodible surface following construction.	Construction
C8	During the construction period water may be required for dust suppression.	Construction
C9	Provision of an impermeable liner for the stormwater and wastewater storage ponds.	Design and Construction

## Statement of Commitments

## Section 3

Item	Mitigation Measures and Commitments	Implementation
C10	Discharge from the stormwater pond would be through an appropriately designed dissipating structure to minimise soil erosion potential.	Design and Operation
C11	Appropriately bunded areas would be included for storage of fuels, oils and chemicals.	Construction and Operation
C12	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.	Design, Construction and Operation
<b>Visual</b>		
D1	Colour and texture of structures in the Buronga Peaking Power Plant would be selected to blend with the surrounding landscape and utilise non-reflective materials	Design and Construction
D2	Tree and shrub planting would be carried out around the proposed facility to provide additional screening to views from surrounding areas.	Operation
D3	Plant lighting would minimise direct lines of sight from the proposed facility to the Arumpo Road.	Design and Operation
D4	The tops of the exhaust stacks will not have permanent flood lighting attached to them.	Design and Operation
D5	Large floodlights would not be used other than for emergency lighting.	Design and Operation
D6	Security lighting spill from the plant would be minimised.	Design and Operation
D7	Lighting will be designed with reference to CASA lighting requirements.	Design
<b>Traffic</b>		
E1	Construct a new access road to the site with the design requirements for a 19m Semi trailer truck.	Design and Construction
E2	Undertake further assessments to identify and cater for any necessary remedial treatments to facilitate passage of over-dimensional/over-mass transport once the actual weight and dimensions of the proposed plant equipment are known.	Design
E3	Development and effective implementation of a Traffic Management Plan during construction and implementation of a Construction Environmental Management Plan (CEMP).	Construction
E4	The Traffic Management Plan would comply with all relevant Regulations and By-Laws and in particular address "long" and "heavy" load movements.	Construction and Operation
<b>Preliminary Hazard Analysis</b>		
F1	The detailed design of the distillate-fired gas turbine enclosure and associated equipment would clearly outline the basis of safety used to ensure that the explosive situations do not arise (the risk is rendered negligible).	Design
F2	Fire protection inside the gas turbine enclosure to be determined, including use of explosion panels and use of fire retardant material where required by design standards.	Design

## Section 3

## Statement of Commitments

Item	Mitigation Measures and Commitments	Implementation
F3	The site as a whole will be monitored by infra red beam heat detectors to ensure fire protection and management systems for the site are activated in case of fire from adjoining land. The distillate tanks will be equipped with fire detection instrumentation, stationary sprinkler system and transportable foam mixing equipment and fire pump. The transportable distillate fired fire pump and foam mixing equipment will provide a wider fire protection capability across the site.	Design and Operation
F4	The site will be equipped with a reserved 150kL supply of "Fire Protection Water" with up to 150kL of raw water in storage tanks and up to 300kL of demineralised water in storage tanks. In addition, up to 5ML of raw water from the on site stormwater collection pond could also be available for fire fighting and control.	Design and Operation
F5	Carry out an assessment of the safety management system implemented and used at the site, specifically as it applies to the proposed hazardous materials handling, fuel reticulation and storages within the first year of operation.	Operation
F6	Operational safety systems should ensure that any removal of critical safety function (e.g. for repair or exchange) is subject to prior scrutiny by competent plant management.	Design and Operation
<b>Socio Economic</b>		
G1	Where commercially 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 peaking power plant.	Construction and Operation
<b>Bushfire</b>		
H1	Each gas turbine enclosure would be equipped with infra red fire detectors, fixed heat detectors and fuel spill sensors mounted at the base of the turbine units. The enclosure would be protected with carbon dioxide or similar non ozone-depleting fire suppression and sprinklers to provide fire detection and suppression in the unlikely event of a fire within the turbine enclosure.	Design and Operation
H2	The site as a whole would be monitored by infra red beam heat detectors to ensure fire protection and management systems for the site are activated in case of fire from adjoining land. The distillate tanks would be equipped with fire detection instrumentation, stationary sprinkler system and transportable foam mixing equipment and fire pump. The transportable distillate fired fire pump and foam mixing equipment would provide a wider fire protection capability across the site.	Design and Operation
H3	Distillate storage would be managed in accordance with the requirements of the Occupational Health and Safety Act 2000 and the Occupational Health and Safety Regulation 2001. The distillate tanks would be installed in accordance with relevant WorkCover requirements and Australian Standard AS1940:2004 Storage and Handling of Flammable and Combustible Liquids.	Design & Operation
H4	The site would be equipped with a reserved 150kL of reserved "Fire Protection Water" which is to protect the plant in the case of a plant fire, with up to 150kL of raw water in storage tanks and up to 300kL of demineralised water in storage tanks. In addition, up to 5ML of raw water from the on site stormwater collection pond could also be available for fire fighting and control.	Design and Operation

## Statement of Commitments

## Section 3

Item	Mitigation Measures and Commitments	Implementation
H5	Asset Protection Zone Management would be incorporated within long term site management plans. This would include internal monitoring and fuel management programs; removal of leaf litter on an annual basis prior to the fire season; removal of any weed species present; management and trimming of trees and other vegetation in the vicinity of power lines in accordance with the 'ISSC 3 Guideline For Managing Vegetation Near Power Lines' specifications issued by ISSC.	Design, Construction and Operation
<b>Water Management</b>		
<b>Soil Erosion</b>		
I1	All construction works would be undertaken in a manner to minimise the potential for soil erosion and sedimentation.	Construction
I2	At a minimum the measures outlined in the <i>Managing Urban Stormwater – Vol 1 Soils and Construction</i> would be implemented. Measures may include: - installation of sediment filters and - the construction of a sedimentation basin on site	Design and Construction
I3	Soil erosion and sedimentation devices would remain in place until the surface is restored. These devices would also capture any gross pollutants.	Construction and Operation
I4	Disturbed sites would be suitably revegetated or covered with a non-erodible surface as soon as practicable following construction.	Construction
<b>Spill and Site Management</b>		
I5	All potential pollutant materials would be stored in appropriate containers in designated areas and where required these areas will be bunded.	Construction and Operation
I6	Appropriately bunded areas would be included for storage of distillate, oils and minor quantity of chemicals.	Construction and Operation
I7	Waste collection areas would be designated.	Design, Construction and Operation
I8	Waste collection and disposal would be undertaken by a licensed contractor.	Construction and Operation
I9	All major vehicle maintenance would be undertaken offsite or in appropriately managed site areas.	Construction and Operation
I10	Any vehicle washing on-site would be restricted to specific bunded areas or otherwise-managed site areas.	Construction and Operation
I11	Staff facilities would be provided and installed and maintained so that pollutants, including wash water are not conveyed from the site in stormwater.	Construction and Operation
I12	Water may be required for dust suppression and would be of a quality that represents no health risk.	Construction
<b>Surface Water</b>		
I13	Treatable stormwater would be reused at the site. No contaminated effluent will be discharged to local waterways.	Design, Construction and Operation
I14	Water management strategies developed and implemented to ensure nominated peak flows around the site do not exceed existing flows.	Design, Construction and Operation
I15	Cut-off drains would be constructed to divert overland flows around the site. The outlets of the cut-off drains would be designed to maximise the dispersion of flow.	Design, Construction and Operation

## Section 3

## Statement of Commitments

Item		Mitigation Measures and Commitments	Implementation
<b>Wastewater Treatment</b>			
I16	All process wastewater will be collected in the wastewater pond and evaporated into the atmosphere or disposed of offsite to approved receptors if required.		Design and Operation
I17	Waste solids and sludge would be removed from site and disposed of by a licensed contractor.		Construction and Operation
I18	All domestic wastewater during construction would be collected and disposed of offsite by a licensed contractor.		Construction
I19	Domestic and general purpose use 'black' and 'grey' water during operations would be treated by a zero discharge proprietary treatment system or stored and disposed of offsite by a licensed contractor.		Design and Operation
I20	Bund water would pass through an interceptor pit which would discharge into the wastewater pond.		Operation
I21	Stormwater would be directed into the site stormwater pond where detention and sedimentation would occur.		Design and Operation
<b>Flora and Fauna</b>			
J1	Large floodlights would generally not be used, although some lights may be required for emergency lighting.		Design and Operation
J2	Security lighting would be designed not to direct light outside the property boundary.		Design and Operation
J3	Development and implementation of Groundcover Clearance Protocol to reduce impact to habitat values of area.		Construction
J4	Development and implementation of a Pre-clearance Survey to locate fauna to reduce direct impacts to any ground or tree dwelling fauna species.		Construction
J5	Development and implementation of Tree Clearance Protocol to reduce direct impacts to any tree dwelling fauna species.		Construction and Operation
J6	Develop and implement a Weed and Pest Management Plan as part of the CEMP and OEMP for the site. The plan would include active control of Noxious weeds.		Construction and Operation
J7	Implement site management practices such as: <ul style="list-style-type: none"> <li>Setting maximum speed limits during construction and operation traffic on site to reduce fauna road fatalities;</li> <li>Limit vehicular and personnel entry into adjacent remnant vegetation during construction and operation through appropriate fencing; and</li> <li>Using down-lights and motion sensor lighting in order to reduce light spill and the associated secondary impact on nocturnal fauna species potentially utilising the adjacent vegetation.</li> </ul>		Construction and Operation
J8	Revegetation and Landscaping of the plant site. Species selected to be representative of local provenance. Revegetated and Landscaped areas to be monitored for weed infestation and any infestations actively managed.		Design, Construction and Operation
<b>Noise</b>			
K1	A Construction Noise Management Plan is to be developed to confirm assumptions made in the assessment and to investigate reasonable and feasible noise mitigation measures if necessary.		Design and Construction

## Statement of Commitments

## Section 3

Item	Mitigation Measures and Commitments	Implementation
K2	The Construction Noise Management Plan would consider, if appropriate, <ul style="list-style-type: none"> <li>- Selection of quiet plant and processes;</li> <li>- Retrofitting reversing alarms that are quieter and display less annoying characteristics, such alarms include "smart alarms" and "quacker alarms";</li> <li>- Use of temporary barriers;</li> <li>- Positioning of plant / processes; and</li> <li>- Limiting the "clustering" of plant / processes.</li> </ul>	Design and Construction
K3	Plant selection and detailed design processes would evaluate noise mitigation options based on the noise limits identified in this noise assessment.	Design
K4	Plant manufacture to incorporate the features as determined necessary by the detailed design process to meet noise criteria at the relevant receptors.	Design and Construction
K5	Post-commissioning, the plant noise outputs would be measured to demonstrate that actual noise emissions meet noise criteria at the relevant receptors. In the unlikely event that the operational noise levels exceed criteria, remediation action would be undertaken.	Operation
<b>Air Quality</b>		
L1	As part of the detailed design of the development, the assumptions and emission estimates used in this assessment will be reviewed and should the expected emission rates increase or stack details or emission parameters change over the values used here, the assessment will be revised to reflect changes and to ensure that DECC air quality standards and goals will be met.	Design
L2	Throughout the design process, opportunities to minimise emissions to air will be investigated and implemented wherever practicable to ensure that off-site impacts are kept to a minimum.	Design
L3	Liaise with CASA and AirServices Australia to address the issue of potential aviation hazard of the plant.	Design
L4	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).	Design and Construction
L5	The CEMP would consider the most appropriate dust mitigation method suited to the activity and circumstances. This may include: <ul style="list-style-type: none"> <li>• watering, spraying or covering earthworks during excavation and handling and on exposed surfaces and stockpiles;</li> <li>• scheduling activities for more favourable meteorological conditions;</li> <li>• ceasing earthmoving activities when wind speeds exceed 30 km/hr;</li> <li>• covering or limiting truck soil loads;</li> <li>• reducing speed limits on unsealed surfaces; and</li> <li>• cleaning soil off the undercarriage and wheels of trucks.</li> </ul>	Construction

## Section 3

## Statement of Commitments

Item	Mitigation Measures and Commitments	Implementation
L6	Any long-term soil stockpiles would be stabilised using measures such as fast seeding grass or synthetic cover spray.	Construction
L7	IPRA would participate in State and Federal greenhouse gas programs.	Operation



## Limitations

## Section 4

URS Australia Pty Ltd (URS) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of International Power (Australia) Pty and only those third parties who have been authorised in writing by URS to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated 29<sup>th</sup> August 2006.

The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared in October 2008 and is based on information reviewed and available at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

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