



MINISTER FOR THE ENVIRONMENT

Statement No.

000671

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL  
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE  
ENVIRONMENTAL PROTECTION ACT 1986)**

**COCKBURN 2 COMBINED CYCLE POWER PLANT, KWINANA**

**Proposal:** The construction, operation and maintenance of a nominal 240 megawatt combined cycle gas turbine power plant on a site located in Kwinana.

The proposal is documented in schedule 1 of this statement.

**Proponent:** Western Power Corporation

**Proponent Address:** GPO Box L921 PERTH WA 6001

**Assessment Number:** 1530

**Previous Assessment Number:** 1465

**Previous Statement Numbers:** 628 (published on 23 June 2003), and  
656 (interim conditions published on 12 July 2004).

**Report of the Environmental Protection Authority:** Bulletin 1154

**Previous Report of the Environmental Protection Authority:** Bulletin 1086

The implementation of the proposal to which the above reports of the Environmental Protection Authority relate is subject to the following conditions and procedures, which replace all previous conditions and procedures (See Note 3 at the foot of this statement):

**1 Implementation**

- 1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this statement.

**2 Proponent Commitments**

- 2-1 The proponent shall implement the revised environmental management commitments documented in schedule 2 of this statement, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Published on

30 DEC 2004

### **3 Proponent Nomination and Contact Details**

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.
- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.

### **4 Commencement and Time Limit of Approval**

- 4-1 The proponent shall substantially commence the proposal within five years of the date of the statement published on 23 June 2003 or the approval granted in that statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond 23 June 2008 to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

- 1. the environmental factors of the proposal have not changed significantly;
- 2. new, significant, environmental issues have not arisen; and
- 3. all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

### **5 Compliance Audit and Performance Review**

- 5-1 The proponent shall prepare an audit program and submit compliance reports to the Department of Environment which address:

1. the status of implementation of the proposal as defined in schedule 1 of this statement;
2. evidence of compliance with the conditions and commitments; and
3. the performance of the environmental management plans and programs.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

5-2 The proponent shall submit a performance review report every five years after the start of operations, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, which addresses:

1. the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets;
2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
3. significant improvements gained in environmental management, including the use of external peer reviews;
4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and
5. the proposed environmental targets over the next five years, including improvements in technology and management processes.

## **6 Decommissioning**

6-1 Prior to construction, the proponent shall prepare a Preliminary Decommissioning Plan, which provides the framework to ensure that the site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Preliminary Decommissioning Plan shall address:

1. rationale for the siting and design of plant and infrastructure as relevant to environmental protection, and conceptual plans for the removal or, if appropriate, retention of plant and infrastructure;

2. a conceptual rehabilitation plan for all disturbed areas and a description of a process to agree on the end land use(s) with all stakeholders;
  3. a conceptual plan for a care and maintenance phase; and
  4. management of noxious materials to avoid the creation of contaminated areas.
- 6-2 At least six months prior to the anticipated date of decommissioning, or at a time agreed with the Environmental Protection Authority, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Final Decommissioning Plan shall address:

1. removal or, if appropriate, retention of plant and infrastructure in consultation with relevant stakeholders;
  2. rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and
  3. identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.
- 6-3 The proponent shall implement the Final Decommissioning Plan required by condition 6-2 until such time as the Minister for the Environment determines, on advice of the Environmental Protection Authority, that the proponent's decommissioning responsibilities have been fulfilled.
- 6-4 The proponent shall make the Final Decommissioning Plan required by condition 6-2 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

## **7 Greenhouse Gas Emissions**

- 7-1 Prior to construction, the proponent shall prepare a Greenhouse Gas Emissions Management Plan to:
- ensure that through the use of best practice, the total net "greenhouse gas" emissions and/or "greenhouse gas" emissions per unit of product from the project are minimised; and
  - manage "greenhouse gas" emissions in accordance with the *Framework Convention on Climate Change 1992*, and consistent with the National Greenhouse Strategy;

to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall include:

1. calculation of the “greenhouse gas” emissions associated with the proposal, as advised by the Environmental Protection Authority;

Note: The current requirements of the Environmental Protection Authority are set out in: *Minimising Greenhouse Gas Emissions, Guidance for the Assessment of Environmental Factors, No. 12* published by the Environmental Protection Authority (October 2002). This document may be updated or replaced from time to time.

2. specific measures to minimise the total net “greenhouse gas” emissions and/or the “greenhouse gas” emissions per unit of product associated with the proposal using a combination of “no regrets” and “beyond no regrets” measures;
3. estimation of the “greenhouse gas” efficiency of the project (per unit of product and/or other agreed performance indicators) and comparison with the efficiencies of other comparable projects producing a similar product, both within Australia and overseas;
4. actions for the monitoring and annual reporting of “greenhouse gas” emissions and emission reduction strategies;
5. a target set by the proponent for the reduction of total net “greenhouse gas” emissions and/or “greenhouse gas” emissions per unit of product and as a percentage of total emissions over time, and annual reporting of progress made in achieving this target. Consideration should be given to the use of renewable energy sources such as solar, wind or hydro power; and
6. consideration by the proponent of entry (whether on a project-specific basis, company-wide arrangement or within an industrial grouping, as appropriate) into the Commonwealth Government’s “Greenhouse Challenge” voluntary cooperative agreement program. Components of the agreement program include:
  - 1 an inventory of emissions;
  - 2 opportunities for abating “greenhouse gas” emissions in the organisation;
  - 3 a “greenhouse gas” mitigation action plan;
  - 4 regular monitoring and reporting of performance; and
  - 5 independent performance verification.

Note: In (2) above, the following definitions apply:

1. “no regrets” measures are those which can be implemented by a proponent and which are effectively cost-neutral; and

2. "beyond no regrets" measures are those which can be implemented by a proponent and which involve additional costs that are not expected to be recovered.
- 7-2 The proponent shall implement the Greenhouse Gas Emissions Management Plan required by condition 7-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 7-3 Prior to construction, the proponent shall make the Greenhouse Gas Emissions Management Plan required by condition 7-1 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

### Procedures

- 1 Where a condition states "to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environment for the preparation of written notice to the proponent.
- 2 The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment.
- 3 Where a condition lists advisory bodies, it is expected that the proponent will obtain the advice of those listed as part of its compliance reporting to the Department of Environment.

### Notes

- 1 The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment over the fulfilment of the requirements of the conditions.
- 2 The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the *Environmental Protection Act 1986*.
- 3 Interim conditions pursuant to section 46A of the *Environmental Protection Act 1986* were published in Statement No. 656 on 12 July 2004.

Dr Judy Edwards MLA  
MINISTER FOR THE ENVIRONMENT

30 DEC 2004

## Schedule 1

### The Proposal (Assessment Nos. 1465 and 1530)

The proposal is to construct, operate and maintain a second 240 megawatt combined cycle gas turbine unit adjacent to and to the south of Cockburn 1 which is currently under construction to form 'Cockburn Power Station'. This combined cycle gas turbine unit (Cockburn 2) will allow for the decreased usage of Kwinana Power Station Stage A.

The main components of the plant are:

- one natural gas fired 160 megawatt generator unit;
- heat recovery steam generator;
- one 80 megawatt steam turbine and generator unit;
- water treatment plant to produce demineralised water;
- cooling water outfall with sub-sea diffuser; and
- administration, control room and workshop buildings.

The main characteristics of the proposal are summarised in the Table 1 below.

**Table 1 - Key Proposal Characteristics**

Element	Description
Project purpose	To construct, operate and maintain a natural gas fired combined cycle gas turbine plant of nominal 240 Megawatt capacity to supply electricity to customers on the South West Interconnected System grid.
Life of the Project	25 years
Power Generating Capacity	240 megawatt (nominal)
Facility "footprint"	2 hectares
Site area	9.4 hectares
Fuel	Natural gas
Natural gas supply: Source	Dampier to Bunbury Natural Gas Pipeline, via the Epic Energy gate station at the corner of Leath and Barter Roads, Naval Base. Cockburn 2 will utilise gas supply facilities constructed as part of the Cockburn 1 development.
Plant facilities: No. and size of gas turbines	1 x Alstrom GT13E2 gas turbine unit of 160MW nominal generating capacity fitted with dry low NO <sub>x</sub> burners. A gas bypass system and bypass stack may be fitted.
No. and size of steam turbines	1 x Alstom single shaft, axial exhaust steam turbine of 80 MW nominal generating capacity.
Heat Recovery Steam Generator (HRSG)	Alstom dual pressure HRSG with horizontal gas path.
No. of stacks	One heat recovery steam generator stack and one bypass stack (optional).
Height of HRSG stack	60m
Height of bypass stack (optional)	45m
No. of cooling towers	nil
No. of liquid fuel tanks	nil
Sub-sea diffuser and associated pipeline	1 of 180m length

Element	Description
Plant operation	Baseload/Mid Merit
Evaporation ponds	Excess wastewater which is not suitable for recycling will be discharged to the evaporation pond constructed as part of the Cockburn 1 development.
Construction period	27 months
Operating Hours	24 hours a day, 365 days a year.
<b>INPUTS</b>	
Natural gas	39 Terajoules per day
Cooling water	Seawater (5 m <sup>3</sup> /s)
Process water	Groundwater from the Perron Quarry Ash Disposal Facility
<b>OUTPUTS</b>	
Wastewater	Cooling water – 5 m <sup>3</sup> /s Process waters – minimal to evaporation pond
Air emissions: Oxides of nitrogen (NO <sub>x</sub> ) Sulphur dioxide (SO <sub>2</sub> ) Carbon dioxide (CO <sub>2</sub> )(equiv)  Carbon monoxide (CO) Non-methane volatile organic compounds (NMVOCs)	830 tpa, (26.5 g/s) (less than 34 ppmv, dry, 15% O <sub>2</sub> ) 2.1 tpa, (0.07 g/s) 838 000 tpa (maximum at 100% load) 629 000 tpa (based on projected usage, at 75% load) 154.5 tpa 51 tpa

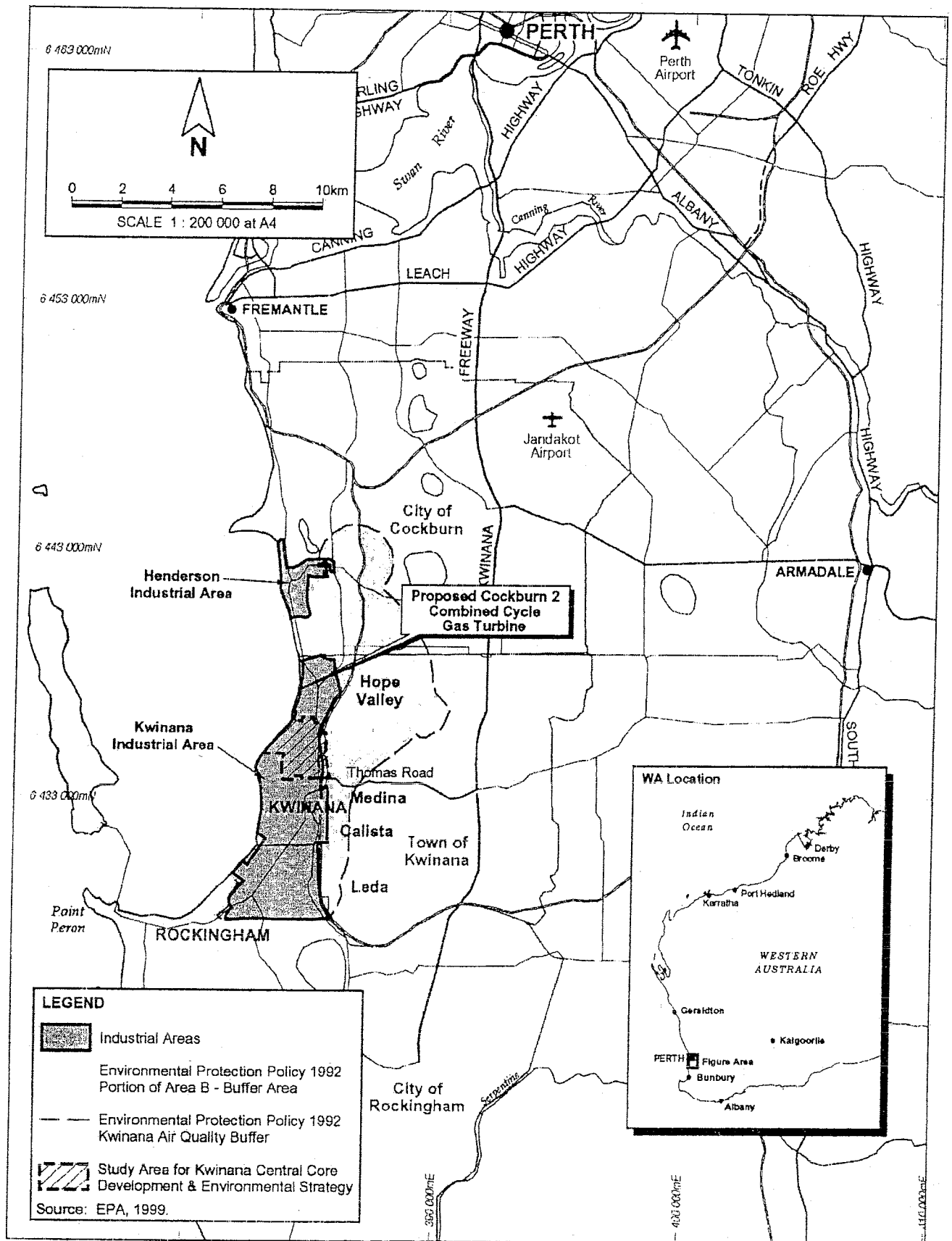
#### Abbreviations for Table 1:

DBNGP	Dampier to Bunbury Natural Gas Pipeline
g/s	grams per second
L	litres
m	metres
m <sup>3</sup> /yr	cubic metres per year
mm	millimetres
MW	megawatts
ppmv	parts per million by volume
SWIS	South West Interconnected System
tpa	tonnes per annum

#### Figures (attached)

Figure 1 - Regional location;  
Figure 2 - Location Plan; and  
Figure 3 - Power plant layout.





**Figure 1: Regional location plan**

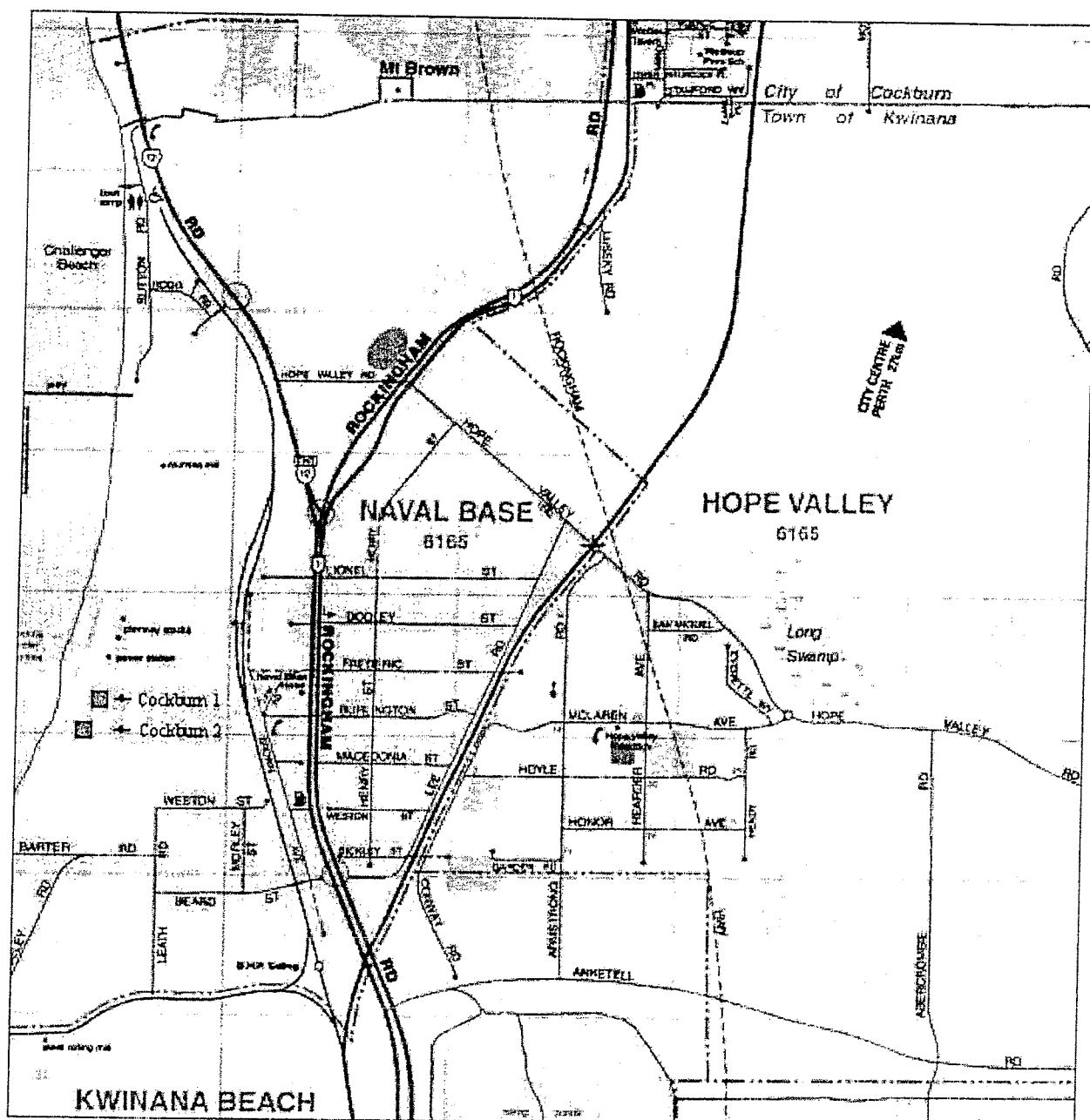


Figure 2: Location plan

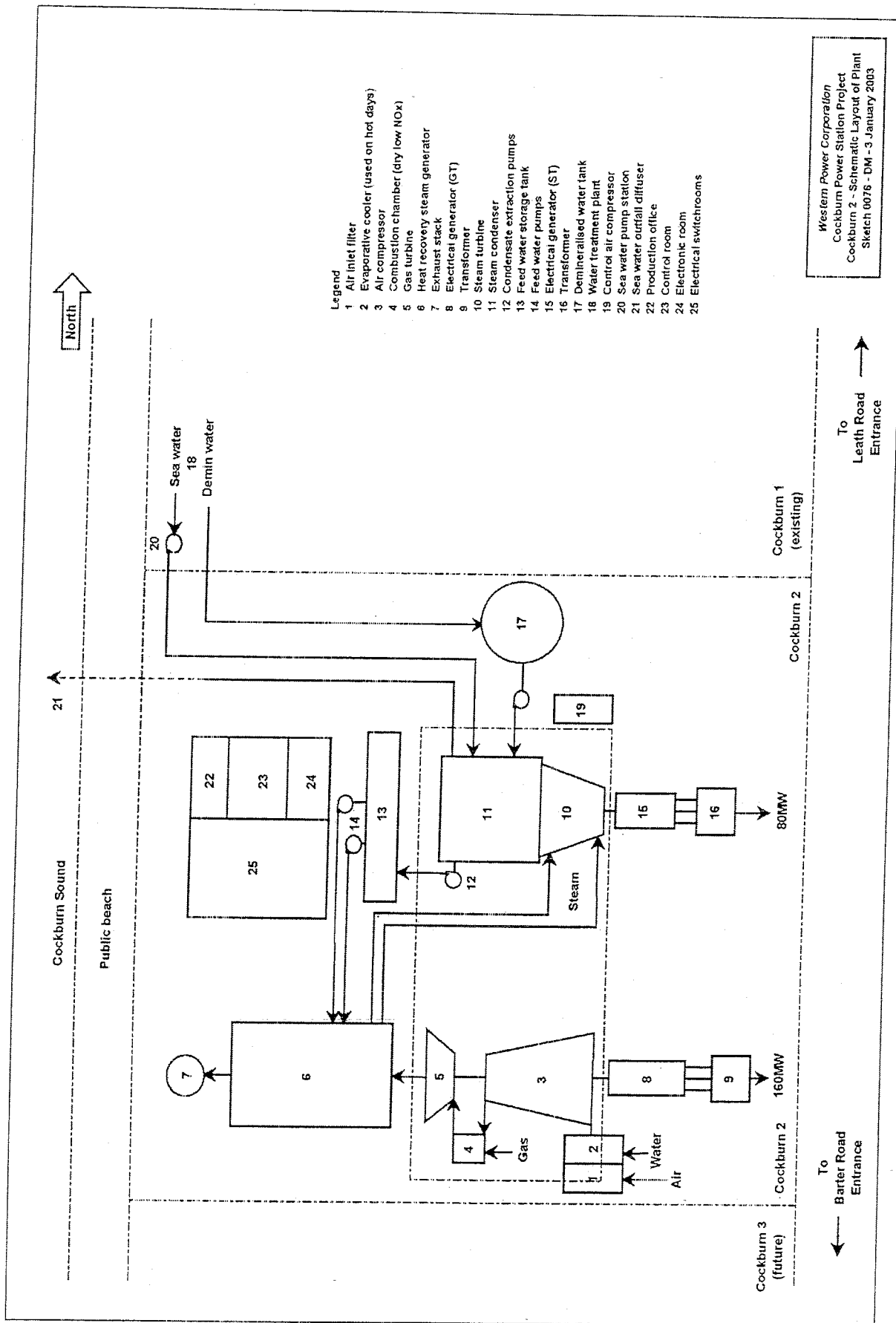


Figure 3: Proposed power plant layout

**Proponent's Environmental Management Commitments**

(Revised November 2004)

**COCKBURN 2 COMBINED CYCLE  
POWER PLANT, KWINANA**

(Assessment Nos. 1465/1530)

Western Power Corporation

## Schedule 2

### Proponent's Consolidated Environmental Management Commitments

#### Cockburn 2 Combined Cycle Power Plant (Assessment Nos. 1465/1530) – November 2004

**Note:** The term “commitment” as used in this schedule includes the entire row of the table and its five separate parts as follows:

- a commitment topic;
- the “action” to be undertaken by the proponent;
- the objective of the commitment;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environment.

Topic	Action	Objective	Timing	Advice
Environmental management approach	1 Operate plant under the existing Western Power Environmental Management System which meets the requirements of AS/NZS ISO 14001:1996.	To ensure construction, operation and decommissioning phases of the Project are managed to minimise environmental impacts.	1 Design, operation and closure.	
Community consultation	2 Continue with the Consultation Program.	Keep the local community and other interested stakeholders well informed of the development and operation of the Project.	2 Throughout the life of the Project.	Relevant local authorities & community groups.
Air emissions	3 Incorporate dry low NO <sub>x</sub> burners into the plant design which are capable of consistently achieving NO <sub>x</sub> emission concentrations of 34 ppmv or below.  4 Sample, analyse and report on relevant stack emissions (including NO <sub>x</sub> ) on a six-monthly basis until performance is established and thereafter annually.	Ensure that air emissions (including NO <sub>x</sub> ) meet statutory requirements, and meet acceptable standards.	3 Design.  4 During operations, 6 monthly and then annually thereafter.	

Topic	Action	Objective	Timing	Advice
Water quality	5 Prepare a Water Management Plan to address: <ul style="list-style-type: none"> <li>stormwater management;</li> <li>contaminated runoff from site;</li> <li>groundwater monitoring program; and</li> <li>emergency response for spillages.</li> </ul>	To maintain the quality of surface and groundwater and the waters of Cockburn Sound so that existing and potential environmental values, including ecosystem maintenance, are protected.	5 Design	WRC Water Corporation
	6 Implement the Water Management Plan.		6 Operation	WRC
	7 Prepare a Marine Protection Management Plan to address: <ul style="list-style-type: none"> <li>a program to monitor available chlorine levels;</li> <li>a program to monitor thermal discharge from the diffuser and the temperature elevation field in Cockburn Sound; and</li> <li>contingency plans to address exceedences in Environmental Quality Objectives.</li> </ul>	To maintain the quality of the Cockburn Sound so that environmental values are protected.	7 Prior to operation	
	8 Implement the Marine Protection Management Plan.	To ensure that the Environmental Quality Objectives of the Cockburn Sound Environmental Protection Policy are met.	8 Operation	
Noise	9 Prepare a Construction Noise Management Plan to address the requirements of the <i>Environmental (Noise) Regulations 1997</i> (Regulation 13).	To protect the amenity of nearby residents from noise impacts resulting from activities associated with the proposal by ensuring the noise levels meet the statutory requirements and acceptable standards.	9 Design.	
	10 Implement the Construction Noise Management Plan.		10 Construction.	
	11 Prepare an Operational Noise Management Plan to address: <ul style="list-style-type: none"> <li>noise attenuation packages incorporated into the plant to ensure compliance with the SVT Engineering Consultants Environmental Noise Review (2002) and the Alstom Overall Noise Protection Concept (2002);</li> <li>a noise monitoring program to verify compliance with noise control requirements for the plant equipment and buildings and to verify predictive modelling;</li> <li>provision of noise modelling information to Kwinana Industries Council to update their cumulative noise model.</li> </ul>		11 Design.	
	12 Implement the Operational Noise Management Plan.		12 Operation	

Topic	Action	Objective	Timing	Advice
Construction of the Cooling Water Discharge Pipeline	13 Prepare a Pre-construction Management Plan to address: <ul style="list-style-type: none"> <li>• sediment sampling to include testing for organochlorine, pesticides and nutrient release potential; and</li> <li>• geotechnical characterisation to determine the need for specialised dredging/blasting.</li> </ul>	To determine the quality of material to be excavated and to characterise the proposed pipeline route.	13 Design	
	14 Implement the Pre-construction Management Plan.		14 Design	
	15 Prepare a Construction Management Plan to address: <ul style="list-style-type: none"> <li>• dredging plume monitoring; and</li> <li>• dredging plume reporting; and</li> <li>• contingency plans for plume management and for specialised dredging or blasting if required.</li> </ul>		15 Design	
	16 Implement the Construction Management Plan.		16 Construction	
Risk and hazards	17 Prepare a Site Safety Management Plan to address: <ul style="list-style-type: none"> <li>• emergency response procedures as part of the overall Emergency Response Plan.</li> </ul>	To ensure that at all stages of the plant's life it is managed and operated to minimise risk.	17 Design	Fire and Emergency Services Authority and the Kwinana Industries Mutual Aid Group.
	18 Implement the Site Safety Management Plan		18 Operation.	

#### Abbreviations

AS/NZS = Australian Standard/New Zealand Standard  
WRC = Water and Rivers Commission