9th floor

MINISTER FOR THE ENVIRONMENT AND HERITAGE

Statement No.

000625

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)

KWINANA COMBINED CYCLE POWER PLANT

Proposal: The construction, operation and maintenance of a nominal 120 megawatt combined cycle gas turbine power plant on a site located in Kwinana.

The proposal is documented in schedule 1 of this statement.

Proponent: Perth Energy Pty Ltd

Proponent Address: Level 29, 221 St George's Terrace, PERTH WA 6000

Assessment Number: 1460

Report of the Environmental Protection Authority: Bulletin 1080

The proposal referred to above may be implemented subject to the following conditions and procedures:

Procedural conditions

1 Implementation and Changes

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

1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

Published on

23 MAY 2003

29th FLOOR, ALLENDALE SQUARE, 77 ST. GEORGE'S TERRACE, PERTH 6000 TELEPHONE: (08) 9220 5050 FACSIMILE: (08) 9221 4665/8
E-MAIL: judy-edwards@dpc.wa.gov.au

1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is not substantial, the proponent may implement those changes upon receipt of written advice.

2 Proponent Commitments

2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement.

2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of the conditions in this statement.

3 Proponent Nomination and Contact Details

3-1 The proponent for the time being nominated by the Minister for the Environment and Heritage 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 and Heritage 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 Environmental Protection 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 provide evidence to the Minister for the Environment and Heritage within five years of the date of this statement that the proposal has been substantially commenced or the approval granted in this statement shall lapse and be void.

Note: The Minister for the Environment and Heritage 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 five years from the date of this statement to the Minister for the Environment and Heritage, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

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

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

Environmental conditions

5 Compliance Audit and Performance Review

5-1 The proponent shall prepare an audit program in consultation with and submit compliance reports to the Department of Environmental Protection which address:

- the implementation of the proposal as defined in schedule 1 of this statement;
- evidence of compliance with the conditions and commitments; and
- 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 Environmental Protection is empowered to audit 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.

Usually, the Department of Environmental Protection prepares an audit table which can be utilised by the proponent, if required, to prepare an audit program to ensure that the proposal is implemented as required. The Chief Executive Officer is responsible for the preparation of written advice to the proponent, which is signed off by either the Minister or, under an endorsed condition clearance process, a delegate within the Environmental Protection Authority or the Department of Environmental Protection that the requirements have been met.

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

- 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;

- the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;

- significant improvements gained in environmental management, including the use of external peer reviews;

- stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and

- 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, and subsequently implement, 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 and Heritage 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, following consultation with the Department of Industry and Resources, 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 and Heritage 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 and Heritage 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 and Heritage on advice of the Environmental Protection Authority.

7 Greenhouse Gas Emissions

7-1 Prior to commencement of construction of the power plant, the proponent shall prepare a Greenhouse Gas Emissions Management Plan to:

- ensure that "greenhouse gas" emissions from the project are adequately addressed and best available efficient technologies are used to minimise total net "greenhouse gas" emissions and/or "greenhouse gas" emissions per unit of product; and

- mitigate "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 and Heritage on advice of the Environmental Protection Authority.

This Plan shall include:

(1) calculation of the "greenhouse gas" emissions associated with the proposal, as indicated in *Minimising Greenhouse Gas Emissions, Guidance for the Assessment of Environmental Factors, No. 12* published by the Environmental Protection Authority;

(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;

(3) monitoring of "greenhouse gas" emissions;

(4) 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;

(5) analysis of the extent to which the proposal meets the requirements of the National Greenhouse Strategy using a combination of:

- "no regrets" measures;
- "beyond no regrets" measures;
- land use change or forestry offsets; and
- international flexibility mechanisms.

(6) a target set by the proponent for the reduction of total net "greenhouse gas" emissions and/or "greenhouse gas" emissions per unit of product over time, and annual reporting of progress made in achieving this target.

Note: In part 5 above, the following definitions apply:

(1) "no regrets" measures are those that can be implemented by a proponent which are effectively cost-neutral and provide the proponent with returns in savings which offset the initial capital expenditure that may be incurred; and

(2) "beyond no regrets" measures are those that can be implemented by a proponent which involve some additional cost that is 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 and Heritage on advice of the Environmental Protection Authority.

7-3 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 and Heritage on advice of the Environmental Protection Authority.

8 Wastewater Disposal

8-1 The proponent shall design the Kwinana Combined Cycle Power Plant such that it can readily dispose of all wastewater via the Water Corporation's Kwinana Wastewater Recycling Plant Cape Peron outlet pipe tie-in, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.

8-2 In the event that the Water Corporation's Kwinana Wastewater Recycling Plant is not available for wastewater disposal, the proponent shall refer alternative wastewater disposal options for the Kwinana Combined Cycle Power Plant to the Environmental Protection Authority.

8-3 The proponent shall utilise the Water Corporation's Kwinana Wastewater Recycling Plant Cape Peron outlet pipe tie-in for the disposal of all wastewater from the Kwinana Combined Cycle Power Plant as soon as the former is operational, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.

9 Water Supply

9-1 The proponent shall design the Kwinana Combined Cycle Power Plant such that it can readily source water from the Water Corporation's Kwinana Wastewater Recycling Plant, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.

9-2 The proponent shall source water for the Kwinana Combined Cycle Power Plant from the Water Corporation's Kwinana Wastewater Recycling Plant as soon as the supply is available, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.

Procedures

1 Where a condition states "to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority", the Chief Executive Officer of the Department of Environmental Protection will obtain that advice for the preparation of written advice to the proponent.

2 The Environmental Protection Authority may seek advice from other agencies, as required, in order to provide its advice to the Chief Executive Officer of the Department of Environmental Protection.

Notes

1 The Minister for the Environment and Heritage will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environmental Protection 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*.

Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT AND HERITAGE

23 MAY 2003

Schedule 1

The Proposal (Assessment No. 1460)

The proposal is to construct, operate and maintain a natural gas fired combined cycle gas turbine power plant with a nominal generation capacity of 120 megawatts on a site located at Part Lot 131 Mason Road, LandCorp Proposed Lot 3, on the south-western corner of Donaldson Road and Burton Place, off Mason Road, Kwinana, (Figures 1, 2, and 3). The plant will provide approximately 1,045 gigawatt hours of electricity annually into the South West Interconnected System.

The main components of the plant are:

- two natural gas fired 40 megawatt turbine generator units;
- two heat recovery steam generators;
- one 40 megawatt steam turbine and generator unit;
- condenser;
- four mechanical draft water cooling towers;
- water treatment plant to produce demineralised water;
- transformers and switch yard; and
- administration, control room, warehouse and workshop buildings.

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

Table 1 - Key Proposal Characteristics

Element	Description
Project purpose	To produce electricity to supply to contestable customers on the South West Interconnected System grid in an efficient manner
Life of the Project	25 years
Power Generating Capacity	120MW nominal
Facility "footprint" Site area	1.8 hectares 3.6 hectares
Natural gas pipeline: Source Length Diameter Pressure	 Dampier to Bunbury Natural Gas Pipeline (adjacent block to east of site) or the Parmelia Pipeline (35m south-east of site) Approximately 250m from supply point (responsibility of supplier) 152.4mm nominal Approximately 3MPa from the metering skid
Plant facilities: No. and size of gas turbines No. and size of steam turbines No. of stacks Height of stacks No. of cooling towers No. of liquid fuel tanks Transmission line length	 2 x 40MW nominal 1 x 40MW nominal 2 heat recovery steam generator stacks and 2 (optional) Bypass stacks 25m 4 1 x 10,000L tank (optional - for emergency start up) Approximately 500m (responsibility of Western Power Networks)

Table 1 - Key Proposal Characteristics (continued)

Element	Description
Plant operation	Baseload
Water Source	Water Corporation Kwinana Wastewater Recycling Plant
Emergency discharge evaporation ponds	Designed to hold up to three days of wastewater discharge. Lined with HDPE.
Vegetation disturbance	Negligible - already cleared
Estimated off-site individual risk level	Negligible increase to existing off-site risk due to low inherent risk and short length of gas pipeline
Construction period	18 months
Operating Hours	24 hours per day 351 days per year.
INPUTS	
Natural gas	204 million m^3/yr (Higher heating value 8.4PJ/yr)
Cooling water	1,053ML/yr
Water to demineralisation plant	28ML/yr
General water	1ML/yr, inclusive of domestic, cleaning/wash down, landscape, reticulation etc.
OUTPUTS	
Wastewater	35ML/yr (100kL/day) returned to the Cape Peron Outlet Pipeline (currently being negotiated) with emergency backup discharge to on-site evaporation ponds.
Solid waste	Minimal - approximately 5tpa disposed of to an approved landfill site.
Air emissions: Oxides of nitrogen (NO_X) Sulphur dioxide (SO_2) Particulate matter Carbon dioxide (CO_2) Carbon monoxide (CO) Polycyclic aromatic hydrocarbons (PAHs) Non-methane volatile organic compounds (NMVOCs)	 327tpa (10.9g/s) (less than 25ppmv, dry, 15% O_2) 0.54tpa (0.018g/s) 9.6tpa 410,780tpa 49.5tpa 0.003tpa 0.3tpa
Predicted noise at closest residences: Hope Valley Medina	 Less than 40dB(A) - "not significantly contributing" Less than 35dB(A) - "not significantly contributing"

Abbreviations for Table 1:

dB(A)	decibels (A weighted)
DBNGP	Dampier to Bunbury Natural Gas Pipeline
g/s	grams per second
HDPE	high density polyethylene
KL/day	kilolitres per day
KL/yr	kilolitres per year
L	litres
m	metres
m^3/yr	cubic metres per year
mm	millimetres
MW	megawatts
ML/yr	megalitres per year
MPa	megapascals
O_2	oxygen
PJ/yr	petajoules per year
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 - Plant layout.

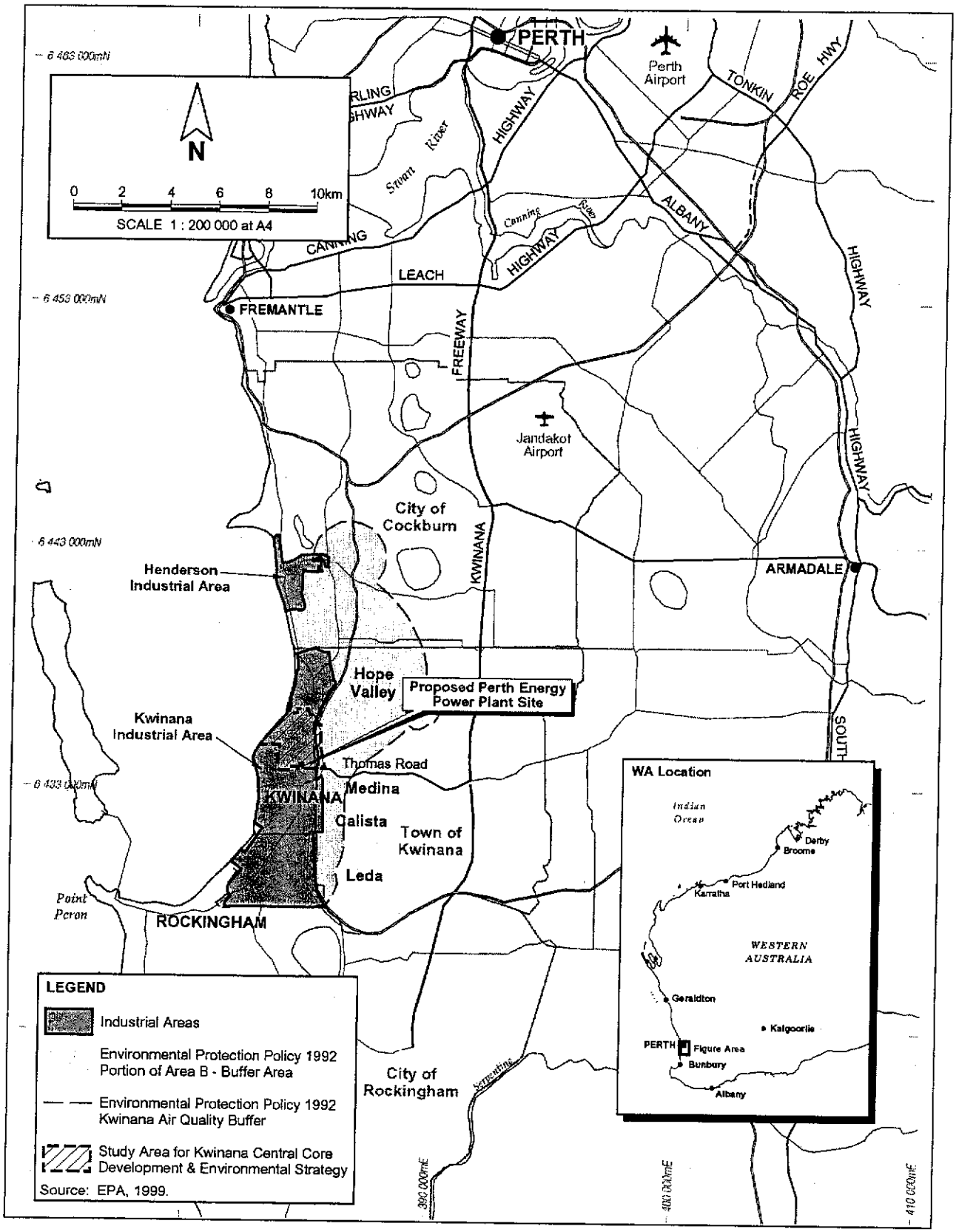

Figure 1: Regional location

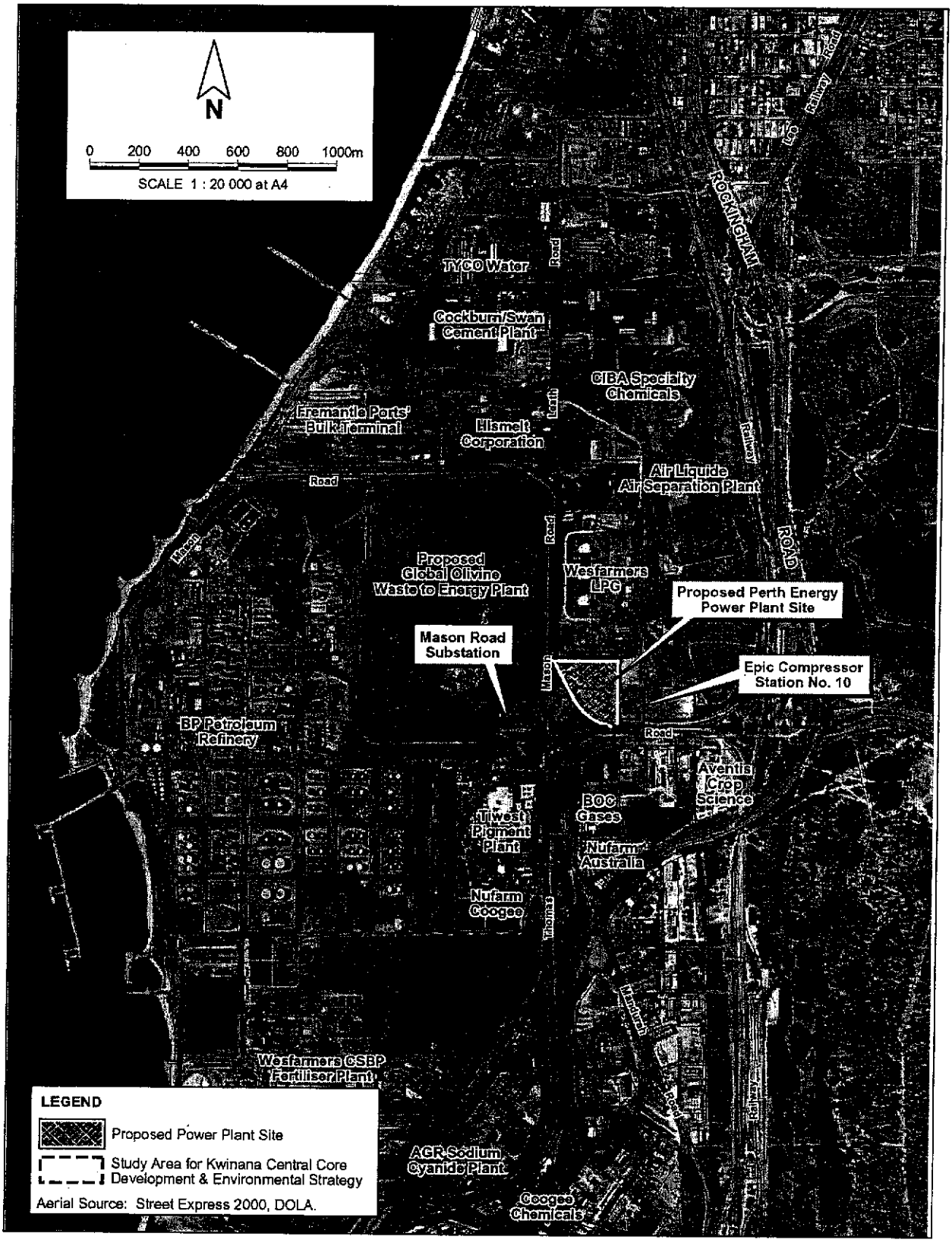

Figure 2: Location plan

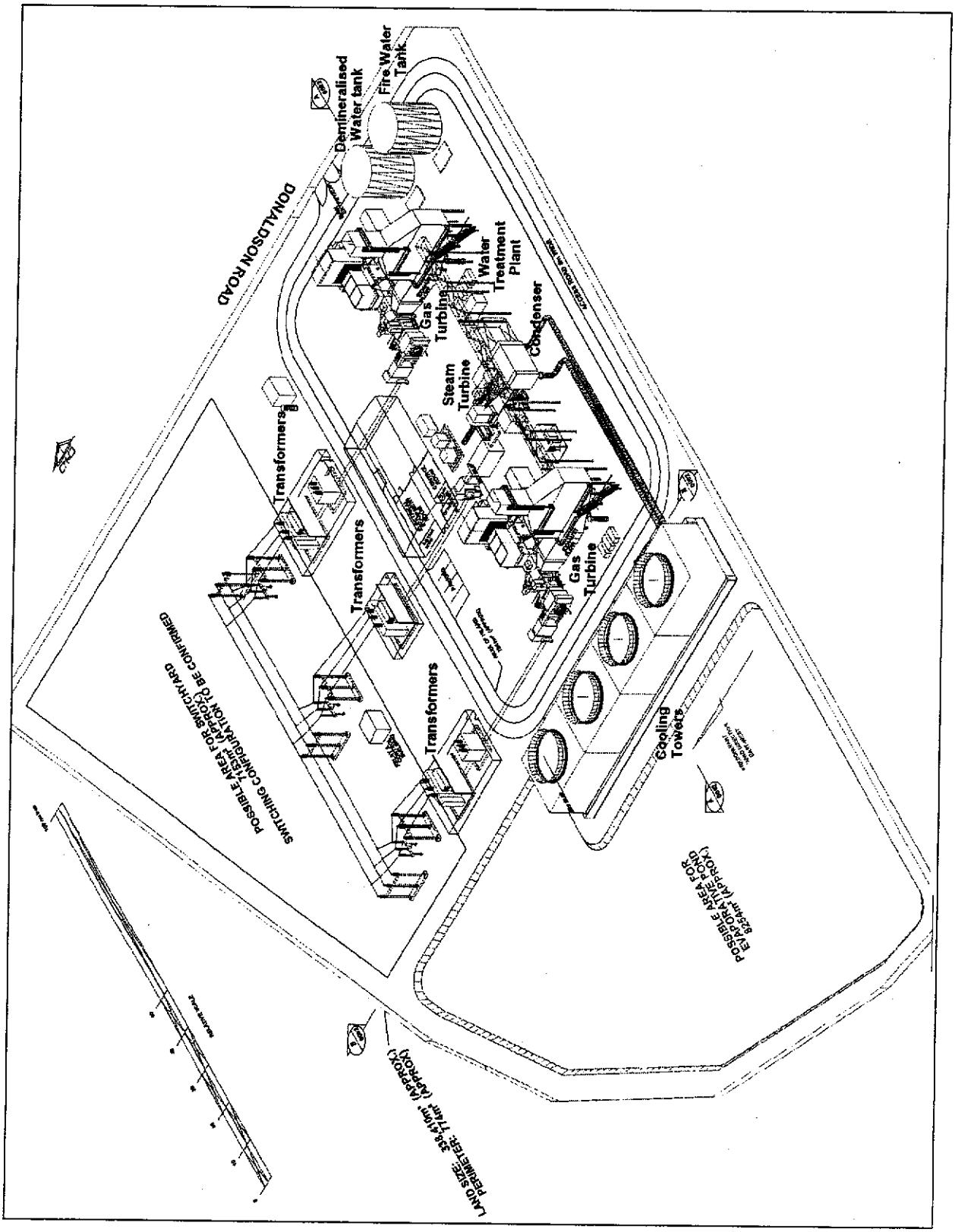

Figure 3: Plant layout

Schedule 2

Proponent's Environmental Management Commitments

December 2002

KWINANA COMBINED CYCLE POWER PLANT

(Assessment No. 1460)

Perth Energy Pty Ltd

Schedule 2

Kwinana Combined Cycle Power Plant (Assessment No. 1460)
Proponent's Consolidated Environmental Management Commitments

Note: The term "commitment" as used in this schedule includes the entire row of the table and its six separate parts as follows:

- a commitment number;
- a commitment topic;
- the objective of the commitment;
- the "action" to be undertaken by the proponent;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environmental Protection.

	Topic	Objective	Action	Timing	Advice
1	Environmental management approach	To ensure construction, operation and decommissioning phases of the Project are managed to minimise environmental impacts.	1.1 Prepare and implement an environmental management system (EMS) in line with recognised national standards.	1.1 Pre-commissioning, construction, operation and decommissioning.	
2	Community consultation	Keep the local community and other interested stakeholders well informed of the development and operation of the Project.	2.1 Continue with the Consultation Programme.	2.1 Throughout the life of the Project.	Relevant local authorities & community groups.
3	Air quality	To ensure that emissions meet statutory requirements and acceptable standards.	3.1 Design the plant such that the maximum building height will be less than 10m if a stack height of 25m is used. 3.2 Periodically monitor and report on relevant emissions to ensure that the plant is operating at or better than its design.	3.1 Project design. 3.2 Operation.	

	Topic	Objective	Action	Timing	Advice
4	NO_X emissions	Ensure that NO_X emissions are as low as is reasonably practicable, and meet acceptable standards including the NEPM for Ambient Air Quality and the requirements of Section 51 of the *Environmental Protection Act 1986*.	4.1 Incorporate dry low NO_X burners into the plant design which are capable of consistently achieving NO_X emission concentrations of 25ppmv or below. 4.2 Sample, analyse and report on the stack emissions for NO_X on a six-monthly basis until performance is established and thereafter annually.	4.1 Project design. 4.2 During operations, 6 monthly and then annually thereafter.	
5	Water quality	To maintain the quantity of surface and groundwater so that existing and potential environmental values, including ecosystem maintenance, are protected.	5.1 Prepare and implement a Water Management Plan as part of the EMS to address stormwater management and any potentially contaminated run-off. 5.2 Design any hazardous storage facilities in accordance with all relevant legislation and guidelines. 5.3 Develop a Site Emergency Plan as part of the EMS to ensure any potential spills do not compromise surface or groundwater quality.	5.1 Pre-commissioning, construction and operation. 5.2 Pre-commissioning. 5.3 Construction, operation and decommissioning.	
6	Noise	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.	6.1 Incorporate noise attenuation packages into design criteria to reduce noise levels from the proposed plant to as low as is reasonably practicable. 6.2 Submit to the Department of Environmental Protection (DEP) for approval, additional noise modelling following the detailed design of the proposed plant. 6.3 Submit to the DEP for approval, relevant sections of the contract specification for the proposed plant. 6.4 Prepare and Implement Construction and Operation Noise Management Plans as part of the EMS. These will include The Australian Standard 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites". 6.5 Confirm compliance with regulations and predictive modelling with a noise monitoring program during construction and operation. Submit a noise monitoring and assessment report to the DEP for approval that demonstrates compliance with the Noise Regulations.	6.1 Project design. 6.2 Project design. 6.3 Project design. 6.4 Pre-commissioning, construction and operation. 6.5 Post-commissioning.	

	Topic	Objective	Action	Timing	Advice
			6.6 All noise modelling information will be made available to the Kwinana Industries Council so that they can update their cumulative noise model.	6.6 Post-commissioning.	
7	Liquid waste management	Where possible, liquid waste will be minimised, reused or recycled. Wastewaters will be treated on-site or disposed of off-site. Where this is not feasible, wastewater will be managed on-site to prevent groundwater and surface water contamination.	7.1 Saline wastewater will be routinely monitored to meet Water Corporation environmental acceptance criteria. This will include analysis of a range of relevant parameters in the wastewater. Results will also be made available to the Department of Environmental Protection. 7.2 Evaporation ponds will be included into the Project design to enable the emergency disposal of the wastewater in the event that the water cannot be discharged to the Cape Peron Outlet Pipeline.	7.1 Operation 7.2 Project design stage and throughout operational life of facility.	Water Corporation. Water and Rivers Commission.
8	Particulates and dust	Protect the surrounding land users such that dust emissions do not create a nuisance.	8.1 Implement the guidelines "Land development sites and impacts on air quality - a guideline for the prevention of dust and smoke pollution from land development sites in Western Australia" (DEP, 1996) as part of the Project's Dust Management Plan. 8.2 Use all reasonable and practicable measures to minimise the generation of dust, especially during the construction phase.	8.1 Pre-commissioning and construction. 8.2 Construction and operation.	
9	Soil contamination	To ensure that any previous on-site contamination is managed and no further contamination takes place.	9.1 A Phase II site assessment will be undertaken prior to purchase of site to delineate the extent and nature of any contamination. 9.2 An appropriate remediation plan will be implemented if required. 9.3 The EMS will be developed and complemented to reduce the likelihood of any further contamination occurring. 9.4 All potentially contaminating materials will be appropriately handled, stored and transported to prevent any further contamination.	9.1 Prior to construction. 9.2 Prior to construction. 9.3 Pre-commissioning, construction, operation and decommissioning. 9.4 Construction, operation and decommissioning.	LandCorp. LandCorp.

	Topic	Objective	Action	Timing	Advice
10	Solid waste management	To ensure that solid waste is minimised using the principles of reduce, reuse, recycle and that it does not impact on the surrounding environment.	10.1 Prepare and implement a Hydrocarbon and Hazardous Materials Management Plan as part of the EMS, incorporating the reduce, reuse, recycle principles.	10.1 Pre-commissioning, construction and operation.	Local government authorities.
11	Sewage	To minimise the potential for nutrients from sewage to enter the environment.	11.1 Dispose of sewage via an advanced package nutrient retentive wastewater treatment unit. 11.2 Install an appropriate sewage system on site.	11.1 Design stage, pre-commissioning. 11.2 Construction.	Department of Health, Town of Kwinana.
12	Visual amenity	To ensure the visual amenity of the region is not impacted by the Project.	12.1 Provide buffer plantings to screen the facility.	12.1 Pre-commissioning, construction and operation.	Town of Kwinana.
13	Aboriginal heritage	To ensure the requirements of the *Aboriginal Heritage Act 1972*, are met.	13.1 Notify the Department of Indigenous Affairs if any indigenous artefacts or remains are uncovered during construction, as required by the *Aboriginal Heritage Act 1972*.	13.1 Construction.	Department of Indigenous Affairs.
14	Risk and hazards	To ensure that at all stages of the plant's life it is managed and operated to minimise risk.	14.1 Hazard and Operability (HAZOP) studies will be completed as part of the plant design, construction and operation. 14.2 A Site Safety Plan will be prepared and implemented. This will include emergency response procedures as part of the overall Emergency Response Plan. Details will be provided to the Fire and Emergency Services Authority and the Kwinana Industries Mutual Aid Group.	14.1 Design, construction and operation. 14.2 Pre-construction and commissioning. During operation.	Fire and Emergency Services Authority and the Kwinana Industries Mutual Aid Group.