Kemerton Power Station

Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust)

Report and recommendations of the Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
Bulletin 1121
December 2003

Environmental Impact Assessment Process Timelines

Date	Progress stages	Time (days)
11 Nov	**Draft referral document received by EPA**	
11 Nov	**Advice requested by EPA**	
14 Nov	**EPA comments to proponent**	**3**
25 Nov	**Final referral document received by EPA**	**11**
26 Nov	**Advice received by EPA**	**1**
4 Dec	**EPA report and recommendations to the Minister**	**13**

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Contents

1. Introduction and background

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment on the environmental factors relevant to the proposal by Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust) to construct a nominal 260MW power generating facility at Kemerton.

Western Power Corporation requires access to additional generating capacity in order to reliably meet the electricity requirements of residential and business customers within the South West Interconnected System (SWIS). Western Power Corporation is required by the *Electricity Corporation Act 1994* to obtain this generation capacity through an open procurement process. Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust) proposes to construct the facility and supply power to the SWIS. A strategic environmental review of the approach has previously been conducted (Environmental Protection Authority, 2002). This concluded that a plant at Kemerton could be managed such that it is unlikely that the EPA's objectives would be compromised.

Based on the information provided in the referral document the EPA considered that, while the proposal has the potential to affect the environment, it could be readily managed to meet the EPA's environmental objectives. Consequently, it was notified in the *West Australian* newspaper on 8 December 2003 that the EPA intended to assess the proposal at the level of Assessment on Referral Information (ARI).

The proponent has submitted a referral document setting out the details of the proposal, potential environmental impacts and appropriate commitments to manage those impacts. The EPA considers that the proposal as described can be managed in an acceptable manner, subject to these commitments and the EPA's recommended conditions being made legally binding.

The EPA has therefore determined under Section 40(1) of the Environmental Protection Act that the level of assessment for the proposal is Assessment on Referral Information, and this report provides the EPA advice and recommendations in accordance with Section 44(1).

2. The proposal

The proposal is to construct a nominal 260MW peaking power plant, consisting of:

- two open cycle air-cooled gas turbine generator sets;
- standby liquid fuel storage (1.5ML of ultra low sulphur diesel); and
- ancillary buildings and plant.

The plant will predominantly use natural gas, and will operate as a peaking plant for meeting short duration, high power demands for electricity. The plant may also operate as spinning reserve, using gas at a very low load in anticipation of high demand. The proponent intends to sell the power generated to Western Power on the SWIS.

Additional base load capacity may be added at a later date; such an upgrade would be subject to separate assessment. Similarly, the gas supply pipeline and transmission corridor will be assessed separately. It is noted that the wastewater pipeline discussed in the strategic assessment for future power generation (Environmental Protection Authority, 2002) is not required as air-cooling will be employed.

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

Table 1: Summary of key proposal characteristics

Element	Description	
Project purpose	Provide peaking power to the SWIS	
Project life	25 years	
Power generating capacity	Nominal 260MW	
Energy generated per year	Approximately 240GWh	
Thermal efficiency At 40°C, 40% relative humidity, and 101.3kPa ISO conditions 15°C, 60% relative humidity	Natural gas 28.6% HHV 31.8% LHV[3] 30.2% HHV 33.5% LHV[3]	Liquid fuel 29.3% HHV 31.4% LHV[3] 30.9 % HHV 33.0% LHV[3]
Plant operating modes	Mode 1 - Peaking plant for 5% of the time at 100% load Mode 2 - Spinning reserve for 10% of the time at 55% load	
Operating hours	Approximately 1000 hours per year	
Estimated capacity factor	Approximately 10%	
Facility footprint Site area including buffer	2 hectares 28 hectares	
Plant facilities		
Proposed technology Number and size of gas turbines Number of stacks Height of stacks Number of liquid fuel storage tanks	2 x Siemens V94.2 gas turbine generators 2 x 130.5MW 2 35m 1 x 1.5ML tank	
Construction period	Approximately 16 months	
Inputs		
Cooling water	None	
General water requirements	20kL/day - For dust suppression during construction 30kL/yr - For domestic use	
Natural gas	Approximately 3PJ per year (approximately 900 hours	

Element	Description	
	per year) taken from the Dampier to Bunbury Natural Gas Pipeline	
Liquid fuel (Backup)	Up to 6 ML per year ultra low sulphur diesel (less than 100 hours per year) Sulphur content of diesel – 50ppm maximum	
Outputs		
Wastewater	None	
Solid waste	<10 tpa	
Air emissions: Oxides of nitrogen (NO_X) Oxides of sulphur (SO_X)[1] Oxides of sulphur (SO_X)[2] Particulate matter Carbon monoxide (CO) Polycyclic aromatic hydrocarbons (PAHs) Non-methane volatile organic compounds (NMVOCs)	Natural gas (based on 900h per year at full load) <39.1 g/s (127 tpa) 0.0 g/s (negligible tpa) 0.0 g/s (negligible tpa) 2.0 g/s (6.48 tpa) 21.7 g/s (70.3 tpa) 0.00087 g/s (0.0028 tpa) 0.83 g/s (2.69 tpa)	Liquid fuel (based on 100h per year at full load) <114.2 g/s (41.1 tpa) 4.06 g/s (1.146 tpa) 0.406 g/s (0.146 tpa 7.62 g/s (2.74 tpa) 20.9 g/s (7.54tpa) 0.016 g/s (0.0057 tpa) 0.16 g/s (0.058 tpa)
Greenhouse gas emissions Average greenhouse intensity	Approximately 160,000 tpa $CO_{2\text{-}e}$ (Assuming approximately 900 hours per year operation on natural gas and 100 hours per year operation on liquid fuel) 667.6.1 kg $CO_{2\text{-}e}$/MWhr (Assuming approximately 900 hours per year operation on natural gas and 100 hours per year operation on liquid fuel)	
Predicted noise level	<28 dB(A) at closest residences	

[1] Emissions modelling based on use of normal distillate (500 ppm sulphur content)
[2] Emissions modelling based on use of ultra low sulphur diesel (50 ppm sulphur content)
[3] Lower Heating Values (LHV) are manufacture guarantee values.

Abbreviations for Table 1

°C	degrees Celsius
$CO_{2\text{-}e}$	carbon dioxide equivalent
dB(A)	decibels (A weighted)
GWhr	gigawatt hours
g/s	grams per second
HHV	higher heating value
ISO	International Standards Organisation
kg	kilograms
kL/day	kilolitres per day
kL/yr	kilolitres per year
kPa	kilopascals
LHV	lower heating value
m	metres
ML	megalitres
MW	megawatts
MWh	megawatt hours
ppm	parts per million
tpa	tonnes per annum
PJ	petajoules
SWIS	South West Interconnected System

The potential impacts of the proposal are discussed by the proponent in the referral (ATA Environmental 2003a, b).

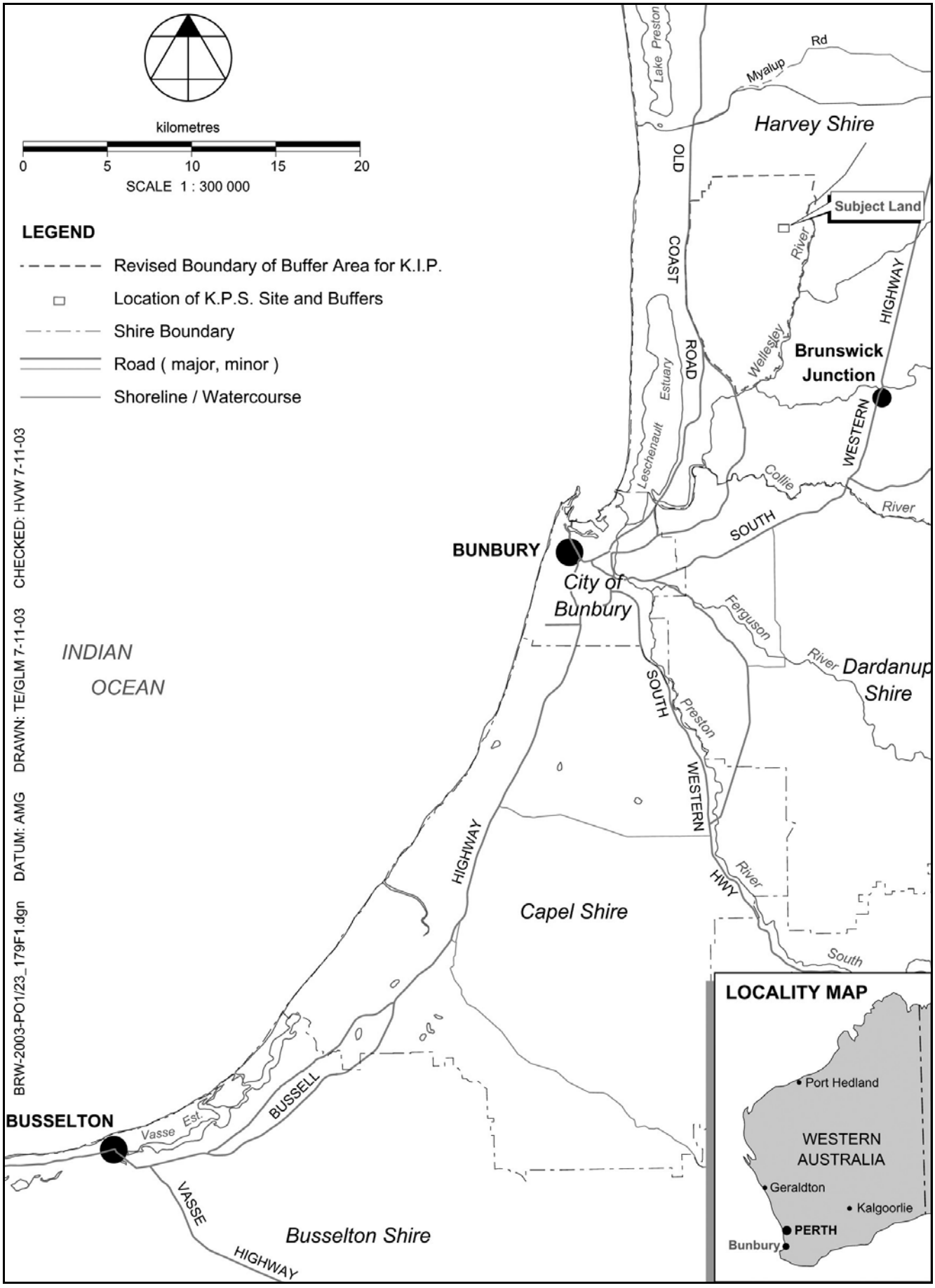

Figure 1: Regional location (Source: ATA Environmental, 2003)

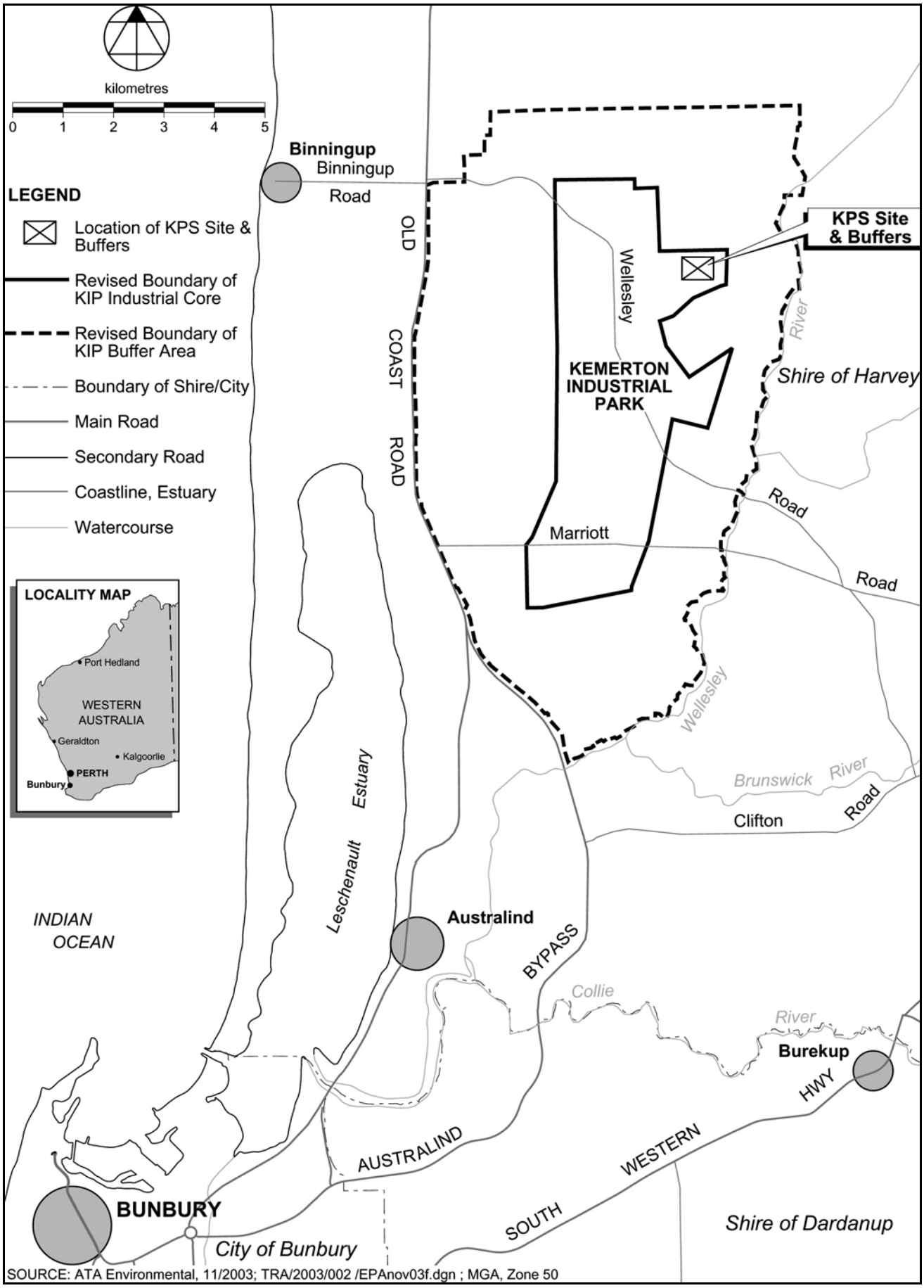

Figure 2: Location in Kemerton Industrial Park
(Source: ATA Environmental, 2003)

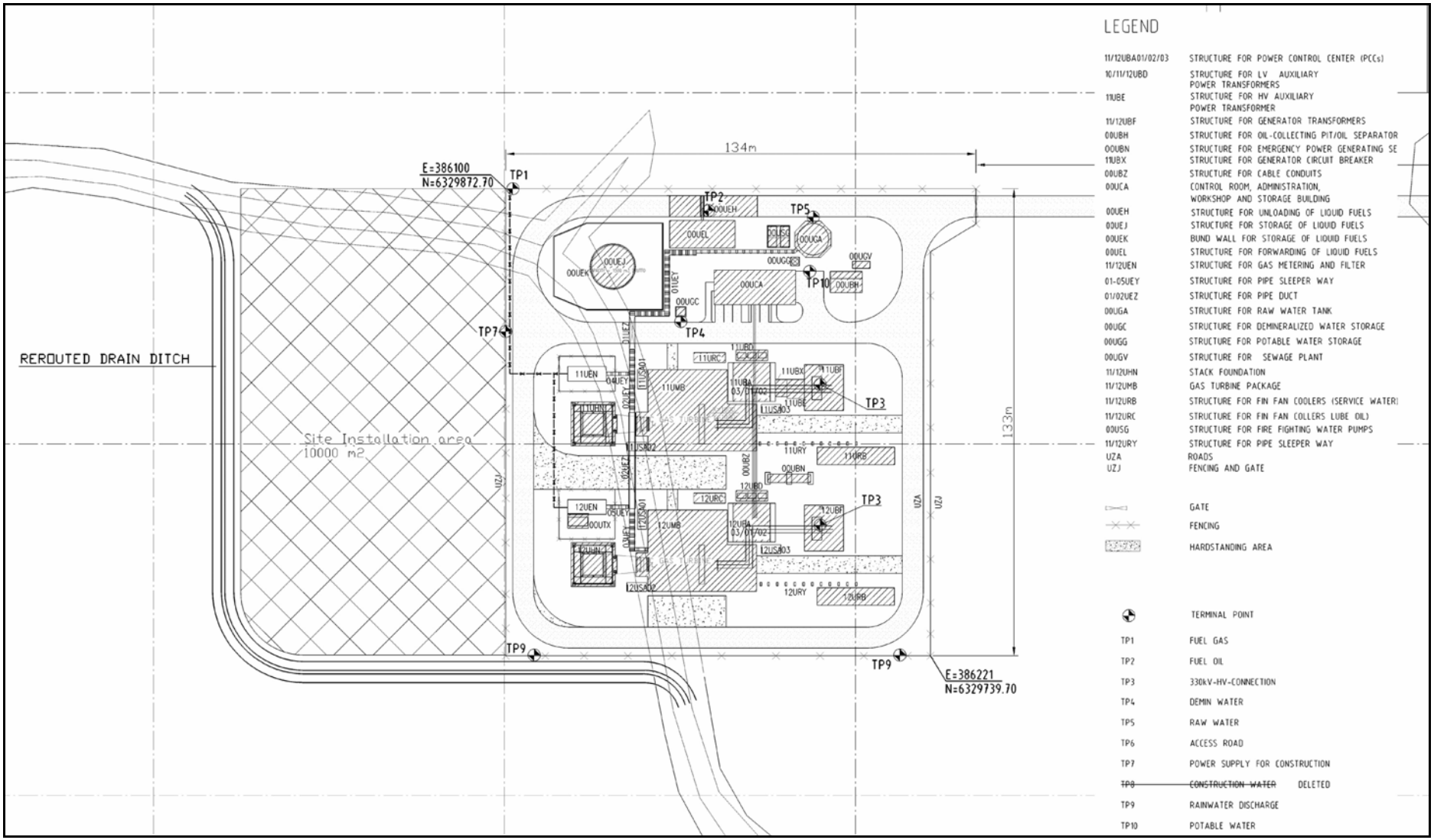

Figure 3: Proposed Kemerton Power Station site map (Source: ATA Environmental, 2003)

3. Consultations

The proponent has advised that consultation has occurred with key stakeholders including the local community. Prior to the preparation of the environmental referral document, the EPA advised Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust) that it intended to set a formal level of assessment of Assessment on Referral Information (ARI) provided all necessary information was provided. This was dependent upon up-front consultation with all relevant stakeholders.

The proponent held meetings with the following groups:

- Shire of Harvey (31 October 2003)
- LandCorp (31 October 2003)
- CALM (24 October 2003, 6 November 2003)
- Department of Industry and Resources (31 October 2003)
- Main Roads WA – Bunbury (24 October 2003)
- Department of Environment – South West Regional Office (24 October 2003)
- Kemerton Industrial Park Coordinating Committee (31 October 2003)
- Kemerton Industrial Park Community Committee (31 October 2003)
- South West Chamber Of Commerce (31 October 2003)
- South West Development Commission (31 October 2003)
- Kemerton Silica Sands Pty Ltd (6 November 2003)
- Leschenault Inlet Management Authority (LIMA) (24 October 2003)

Information has been provided to the following organisations:

- Conservation Council of Western Australia (sent 24 October 2003)
- South West Environment Centre (sent 17 October 2003).

Project information and details of the public information display were advertised in the Bunbury Herald, Harvey Reporter and South Western Times newspapers. These papers have a regional circulation of about 40,000. Advertisements in the community newspapers included full-page descriptions and maps.

A public information display was held on 24 and 25 October 2003 in the Australind Shopping Centre. A leaflet describing this project was distributed to stakeholders, providing a summary of the proposed project and advice in relation to the public information and display events to follow, and contact details for further information or comments. Following this, the display was moved to the Public Library in Australind from 25 October – 7 November 2003. Information briefings were also provided to the two private landowners in the Kemerton Industrial Park.

There was early public concern regarding the proposed wastewater pipeline and implications for vegetation and wetlands, as discussed in the Strategic Environmental Review (Western Power Corporation, 2002). However the proposal was modified to remove the need for water cooling and therefore a wastewater pipeline. The EPA considers that the proponent has undertaken an adequate consultation process and that

all reasonable steps have been taken to inform stakeholders and the community of the proposal.

4. Relevant environmental factors

Section 44 of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and the conditions and procedures, if any, to which the proposal should be subject. In addition, the EPA may make recommendations as it sees fit.

It is the EPA's opinion that the following environmental factors relevant to the proposal require evaluation in this report:

(a) Gaseous emissions

(b) Greenhouse gas emissions

(c) Noise

Details on the relevant environmental factors and their assessment are contained in Sections 4.1 - 4.3. The description of each factor shows why it is relevant to the proposal and how it will be affected by the proposal. The assessment of each factor is where the EPA decides whether or not a proposal meets the environmental objective set for that factor.

4.1 Gaseous emissions

Description

The major gaseous emissions from the proposed plant will be oxides of nitrogen (NO_X), sulphur dioxide (SO_2) when the plant is running on liquid fuel, and to a lesser extent, particulates and unburnt hydrocarbons. NO_X, SO_2 and particulates may impact on local air quality, and NO_X has the potential to lead to photochemical smog.

The Kemerton Industrial Park currently contains a number of minor emitters of NO_X, SO_2 and particulates. These are principally Simcoa Silicon Smelter and Millenium Chemicals. Outside the Industrial Park significant emitters are the Worsley and Wagerup alumina refineries, and the Collie and Muja power stations. These sites are over 50km away.

Assessment

The EPA's environmental objectives for gaseous emissions are to:

- Ensure that gaseous emissions do not adversely affect the environment or health, welfare and amenity of nearby land users by meeting the statutory requirements (including Section 51 of the Environmental Protection Act 1986) and acceptable standards;

- Ensure that gaseous emissions, both individually and cumulatively, meet appropriate criteria and do not cause an environmental or human health problem; and
- Use all reasonable and practicable measures to minimise the discharge of gaseous emissions.

EPA Guidance Statement No. 15 "*Emissions of Oxides of Nitrogen from Gas Turbines*" states that for new open cycle turbines using natural gas, dry low NO_X burner technology constitutes best practice and is capable of achieving NO_X emissions of less than 25ppm. The emissions from the proposed gas turbines will comply with EPA Guidance Statement No. 15. This requires stack emission of less than 34ppmv (dry at 15% oxygen level) when operating on natural gas, and less than 73ppmv (dry at 15% oxygen level) operating on liquid fuel. The proponent will install dry low NO_X burners that limit NO_X emissions to less than 25ppm, therefore minimising NO_X emissions without the requirement for water or steam injection. The combustion temperature will be reduced when operating on liquid fuel to limit NO_X emissions to less than 73ppm.

Air quality modelling for NO_X, SO_2 and particulates arising from the proposed power station has been undertaken, and the results added to emissions from existing Kemerton sources in the cumulative modelling. The principal nearby sources of NO_X, SO_2 and particulates are the Simcoa Silicon Smelter and Millenium Chemicals, both within the Kemerton Industrial estate. Worst-case modelling, assuming continuous operation of the plant on liquid fuel, indicates that emissions will be well within the National Environment Protection Measure (NEPM) criteria for all parameters modelled. The Department of Environmental Protection (DEP) advises that emissions from the Collie and Muja Power Stations, and Worsley and Wagerup Alumina Refineries, are expected to have a minor impact on the Kemerton region and little interaction with emissions from the proposed power station.

Following construction of the power station, the predicted maximum one hour NO_2 level outside the Kemerton buffer zone will be 8µg/m^3 (3.3% of the NEPM standard) for the plant operating on gas, with a predicted maximum one hour NO_2 level of 17µg/m^3 (6.9% of the NEPM standard) when operating on liquid fuel. SO_2 emissions will be negligible when the plant is operating on natural gas. Modelling predicts that SO_2 emissions outside the buffer area will be unchanged by addition of the proposed Kemerton Power Station to the Kemerton Industrial Park. Modelling predicted that the 24 maximum hour average ground level concentrations of particulates (as particular matter less than 10µm in diameter) will be unchanged by addition of the Kemerton Power Station to existing industry (remaining at 1.0% of the NEPM).

The EPA notes that the strategic assessment (Environmental Protection Authority, 2002) stated "*future proposals should provide more justification for the integrity of the* (monitoring station) *data-set, and consider using other data-sets from stations outside the station to provide a sensitivity analysis of predicted impacts*". The proponent has not provided such a justification, however the DEP advises that given the relatively small impacts expected from the proposal, the degree of uncertainty due to the meteorological data set is not believed to be significant. The DEP also advise that it appears unlikely that the proposed power station emissions will contribute to a significant smog problem in Bunbury or elsewhere.

Summary

Having particular regard to the:

- use of dry low NO_X burners and compliance with EPA Guidance Statement 15 for emissions of NO_X from gas turbines;
- use of ultra low-sulphur liquid fuel (less than 100 hours per annum); and
- air modelling predictions which indicate that ground level concentrations of NO_X, SO_2 and particulates will comply with relevant NEPM criteria

it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.2 Greenhouse gas emissions

Description

The principal greenhouse gas emitted by the proposed power station will be carbon dioxide (CO_2). Other contributing gases are methane, nitrous oxide and ozone. It is estimated that the proposed facility will result in net emission of approximately 160,000 tpa of carbon dioxide equivalent ($C0_{2\text{-}e}$).

Assessment

The EPA's environmental objectives for this factor are to:

- Ensure that greenhouse gas emissions meet acceptable standards and requirements of Section 51 of the Environmental Protection Act 1986 (all reasonable and practicable measures are taken to minimise greenhouse gas discharge);
- Ensure that greenhouse gas emissions, both individually and cumulatively, meet appropriate criteria and do not cause an environmental or human health problem; and
- Use all reasonable and practicable measures to minimise the discharge of greenhouse gases.

When operating on natural gas the Kemerton station will have an emission intensity of 648kg $CO_{2\text{-}e}$/MWh. When operating on liquid fuel (an estimated 100 hours per annum) the Kemerton Power Station emission intensity will be 843kg $CO_{2\text{-}e}$/MWh. The predicted greenhouse gas emissions from the plant, approximately 160,000 tpa of $C0_{2\text{-}e}$, constitute approximately 1.46% of Western Australia's annual greenhouse gas emissions from production of electricity in the SWIS.

The EPA notes that open cycle plants have lower thermal efficiency than combined cycle, but accepts that combined cycle is not suitable for peaking plant operations. In this case the plant is clearly intended for peaking operation as it has a running time of approximately 1000 hours per year, and capacity factor of approximately 10%.

The proponent has made a commitment to prepare and implement a Greenhouse Gas Management Strategy, and to join the Greenhouse Challenge.

Summary

Having particular regard to the:

- use of natural gas as the predominant fuel source;
- minimal use (less than 100 hours per annum) of liquid fuel; and
- proposed efficiency of the peaking plant and the predicted greenhouse gas intensity

it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.3 Noise

Description

The proposed power station will be sited within the Kemerton Industrial Park, surrounded by a buffer area designed to provide noise attenuation. The site is approximately 1.8km east of the nearest residence.

Assessment

The EPA's environmental objective for this factor is to protect the amenity of nearby residents from noise impacts resulting from activities associated with the proposal by ensuring that noise levels meet statutory requirements and acceptable standards.

The *Environmental Protection (Noise) Regulations 1997 (As Amended)* set the allowable noise levels that can be received at any noise sensitive premises from another premises. The regulations also set an adjustment factor of +5 dB(A) for the Kemerton Industrial Park. Given that the power station emission noise will not vary significantly with time of day, compliance with the most stringent condition was considered. This corresponds to noise emission of 35 dB(A) or less for 90% of the time at the nearest noise sensitive premises between 10pm on any day and 9am on Sundays and public holidays or 7am on other days. This level is conditional on the noise being without annoying characteristics such as tonal components. Noise suppression enclosures, sound insulation and absorption silencers are proposed, as detailed in the referral document (ATA Environmental, 2003b).

Modelling was carried out in compliance with the EPA *Guidance for the Assessment of Environmental Factors No. 8 Environmental Noise (Draft version, June 1998).* Predictions indicate that under weather conditions most amenable to noise propagation, on the northern, southern and western boundaries of the Kemerton Industrial Park, noise emissions will be less than 20 dB(A). At the eastern boundary, noise levels of 28 dB(A) or less are predicted. Similarly, noise requirements at nearby industrial premises are also met.

Due to the need to expedite the assessment process, the EPA sought independent external advice on the acoustic modelling from Langford Acoustical Services. This advice stated that the noise modelling undertaken by the proponent was acceptable and considered to be accurate. It was concluded that this proposal can be operated without causing any unacceptable impact on the noise environment at any other industrial, commercial or noise sensitive premises in the area.

Summary

Having particular regard to the:

- modelling of noise emissions following EPA *Guidance for the Assessment of Environmental Factors No. 8 Environmental Noise (Draft version, June 1998),* and predicted noise levels complying with those set by the *Environmental Protection (Noise) Regulations 1997*

it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

5. Other Advice

The EPA notes that a 1.5 ML bulk fuel tank is proposed to hold the back up liquid fuel. This creates the potential for the loss of liquid hydrocarbons to the environment. To minimise the risk of this, the proponent will put in place appropriate bunding to contain the quantity of hydrocarbons plus 10% with a sufficient bund wall height to capture jetted fuel ejected from a tank split. The bund will be lined with impervious concrete designed to appropriate Australian Standards, as required by the Department of Industry and Resources. It is noted that the sites natural level is approximately 1m above the average maximum ground water level.

6. Conditions and Commitments

Section 44 of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and on the conditions and procedures to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

In developing recommended conditions for each project, the EPA's preferred course of action is to have the proponent provide a suite of commitments to ameliorate the impacts of the proposal on the environment. The commitments are considered by the EPA as part of its assessment of the proposal and, following discussion with the proponent, the EPA may seek additional commitments.

The EPA recognises that not all of the proponent's commitments are written in a form which makes them readily legally enforceable, but they do provide a clear statement of the action to be taken as part of the proponent's responsibility for, and commitment to, continuous improvement in environmental performance. The commitments, modified if necessary to ensure enforceability, then form part of the conditions to which the proposal should be subject, if it is to be implemented.

6.1 Proponent's commitments

The proponent's commitments as set out in the Referral document and subsequently modified, as shown in Appendix 2, should be made enforceable.

7. Conclusions

The EPA has considered the proposal by Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust) to construct a nominal 260MW power generating facility at Kemerton. The EPA has considered the key environmental factors of gaseous emissions, greenhouse gas emissions and noise.

The EPA has concluded that the proposal is capable of being managed in an environmentally acceptable manner such that it is most unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation of the recommended conditions and proponent's commitments set out in Section 5.

8. Recommendations

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that the proposal being assessed is for the construction of a nominal 260MW power generating facility at Kemerton;
2. That the Minister considers the report on the relevant environmental factors as set out in Section 4;
3. That the Minister notes that the EPA has concluded that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of the recommended conditions set out in Appendix 2, including the proponent's commitments.
4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Appendix 1

References

ATA Environmental (2003a) *Kemerton Power Station Referral, Supporting Documentation, Volume 1,* Perth W.A.

ATA Environmental (2003b) *Kemerton Power Station Referral, Technical Appendices, Volume 2,* Perth W.A.

Environmental Protection Authority (2002) *Strategic Planning for Future Power Generation, Pinjar Power Station Expansion, Kwinana/East Rockingham Power Station, Kemerton Power Station, New Bunbury Power Station, Collie Power Station, Western Power Corporation, Report and Recommendations of the Environmental Protection Authority, Bulletin 1067,* Perth W.A.

Western Power Corporation (2002) *Kemerton Power Station, Strategic Environmental Review,* Perth W.A.

Appendix 2

Recommended Environmental Conditions and Proponent's Consolidated Commitments

Statement No.

RECOMMENDED CONDITIONS AND PROCEDURES

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

KEMERTON POWER STATION, KEMERTON

Proposal: The construction, operation and maintenance of a nominal 260MW open cycle peaking power plant at Kemerton, as documented in schedule 1 of this statement.

Proponent: Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust)

Proponent Address: Level 12, Maritime Towers
201 Kent Street
Sydney NSW 2000

Assessment Number: 1499

Report of the Environmental Protection Authority: Bulletin 1121

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

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 determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

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

determines, on advice of the Environmental Protection Authority, is not substantial, the proponent may implement those changes upon receipt of the approval of the Minister for the Environment.

2 Proponent Commitments

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

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 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 substantially commence the proposal within five years of the date of this statement or the approval granted in this 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 five years from the date of this statement 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 Environmental Protection 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 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.

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 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.

5-3 The proponent may submit a report prepared by an auditor approved by the Department of Environmental Protection under the “Compliance Auditor Accreditation Scheme” to

the Chief Executive Office of the Department of Environmental Protection on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating that the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.

6 Decommissioning Plans

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 12 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.

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 Environmental Protection for the preparation of written advice 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 Environmental Protection.

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 Environmental Protection.

Notes

1 The Minister for the Environment 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.*

3 Within this statement, to "have in place" means to "prepare, implement and maintain for the duration of the proposal".

Schedule 1

The Proposal (Assessment No. 1499)

Transfield Services Kemerton Pty Limited (as trustee for Transfield Services Kemerton Trust) propose to construct, operate and maintain a nominal 260MW open cycle peaking power plant at Kemerton (location shown in Figures 1 and 2).

Table 1 – Key Proposal Characteristics

Element	Description	
Project purpose	Provide peaking power to the SWIS	
Project life	25 years	
Power generating capacity	Nominal 260MW	
Energy generated per year	Approximately 240GWh	
Thermal efficiency At 40°C, 40% relative humidity, and 101.3kPa ISO conditions 15°C, 60% relative humidity	Natural gas 28.6% HHV 31.8% LHV[3] 30.2% HHV 33.5% LHV[3]	Liquid fuel 29.3% HHV 31.4% LHV[3] 30.9 % HHV 33.0% LHV[3]
Plant operating modes	Mode 1 - Peaking plant for 5% of the time at 100% load Mode 2 - Spinning reserve for 10% of the time at 55% load	
Operating hours	Approximately 1000 hours per year	
Estimated capacity factor	Approximately 10%	
Facility footprint Site area including buffer	2 hectares 28 hectares	
Plant facilities		
Proposed technology Number and size of gas turbines Number of stacks Height of stacks Number of liquid fuel storage tanks	2 x Siemens V94.2 gas turbine generators 2 x 130.5MW 2 35m 1 x 1.5ML tank	
Construction period	Approximately 16 months	
Inputs		
Cooling water	None	
General water requirements	20kL/day - For dust suppression during construction 30kL/yr - For domestic use	
Natural gas	Approximately 3PJ per year (approximately 900 hours per year) taken from the Dampier to Bunbury Natural Gas Pipeline	
Liquid fuel (Backup)	Up to 6 ML per year ultra low sulphur diesel (less than 100 hours per year) Sulphur content of diesel – 50ppm maximum	
Outputs		
Wastewater	None	
Solid waste	<10 tpa	

Air emissions:	Natural gas (based on 900h per year at full load)	Liquid fuel (based on 100h per year at full load)
Oxides of nitrogen (NO_X)	<39.1 g/s (127 tpa)	<114.2 g/s (41.1 tpa)
Oxides of sulphur (SO_X)[1]	1.0 g/s (negligible tpa)	4.06 g/s (1.146 tpa)
Oxides of sulphur (SO_X)[2]	0.0 g/s (negligible tpa)	0.406 g/s (0.146 tpa
Particulate matter	2.0 g/s (6.48 tpa)	7.62 g/s (2.74 tpa)
Carbon monoxide (CO)	21.7 g/s (70.3 tpa)	20.9 g/s (7.54tpa)
Polycyclic aromatic hydrocarbons (PAHs)	0.00087 g/s (0.0028 tpa)	0.016 g/s (0.0057 tpa)
Non-methane volatile organic compounds (NMVOCs)	0.83 g/s (2.69 tpa)	0.16 g/s (0.058 tpa)
Greenhouse gas emissions	Approximately 160,000 tpa $CO_{2\text{-}e}$ (Assuming approximately 900 hours per year operation on natural gas and 100 hours per year operation on liquid fuel)	
Average greenhouse intensity	667.6.1 kg $CO_{2\text{-}e}$/MWhr (Assuming approximately 900 hours per year operation on natural gas and 100 hours per year operation on liquid fuel)	
Predicted noise level	<28 dB(A) at closest residences	

[1] Emissions modelling based on use of normal distillate (500 ppm sulphur content)
[2] Emissions modelling based on use of ultra low sulphur diesel (50 ppm sulphur content)
[3] Lower Heating Values (LHV) are manufacture guarantee values.

Abbreviations for Table 1

°C	degrees Celsius
$CO_{2\text{-}e}$	carbon dioxide equivalent
dB(A)	decibels (A weighted)
GWhr	gigawatt hours
g/s	grams per second
HHV	higher heating value
ISO	International Standards Organisation
kg	kilograms
kL/day	kilolitres per day
kL/yr	kilolitres per year
kPa	kilopascals
LHV	lower heating value
M	metres
ML	megalitres
MW	megawatts
MWh	megawatt hours
ppm	parts per million
tpa	tonnes per annum
PJ	petajoules
SWIS	South West Interconnected System

Figures (attached)

Figure 1 – Regional location
Figure 2 – Location in Kemerton Industrial Park
Figure 3 – Proposed Kemerton Power Station site map

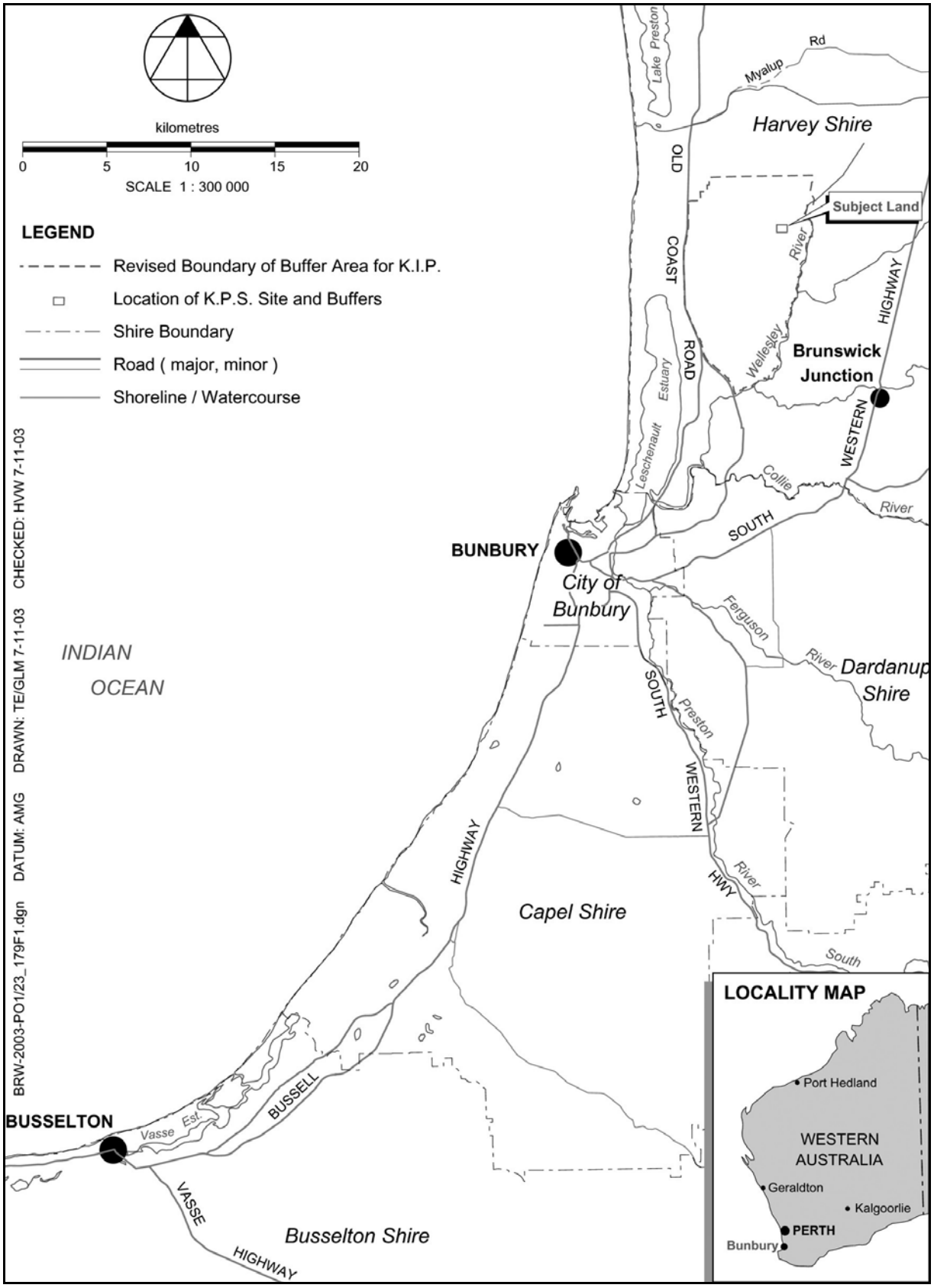

Figure 1: Regional location (Source: ATA Environmental, 2003)

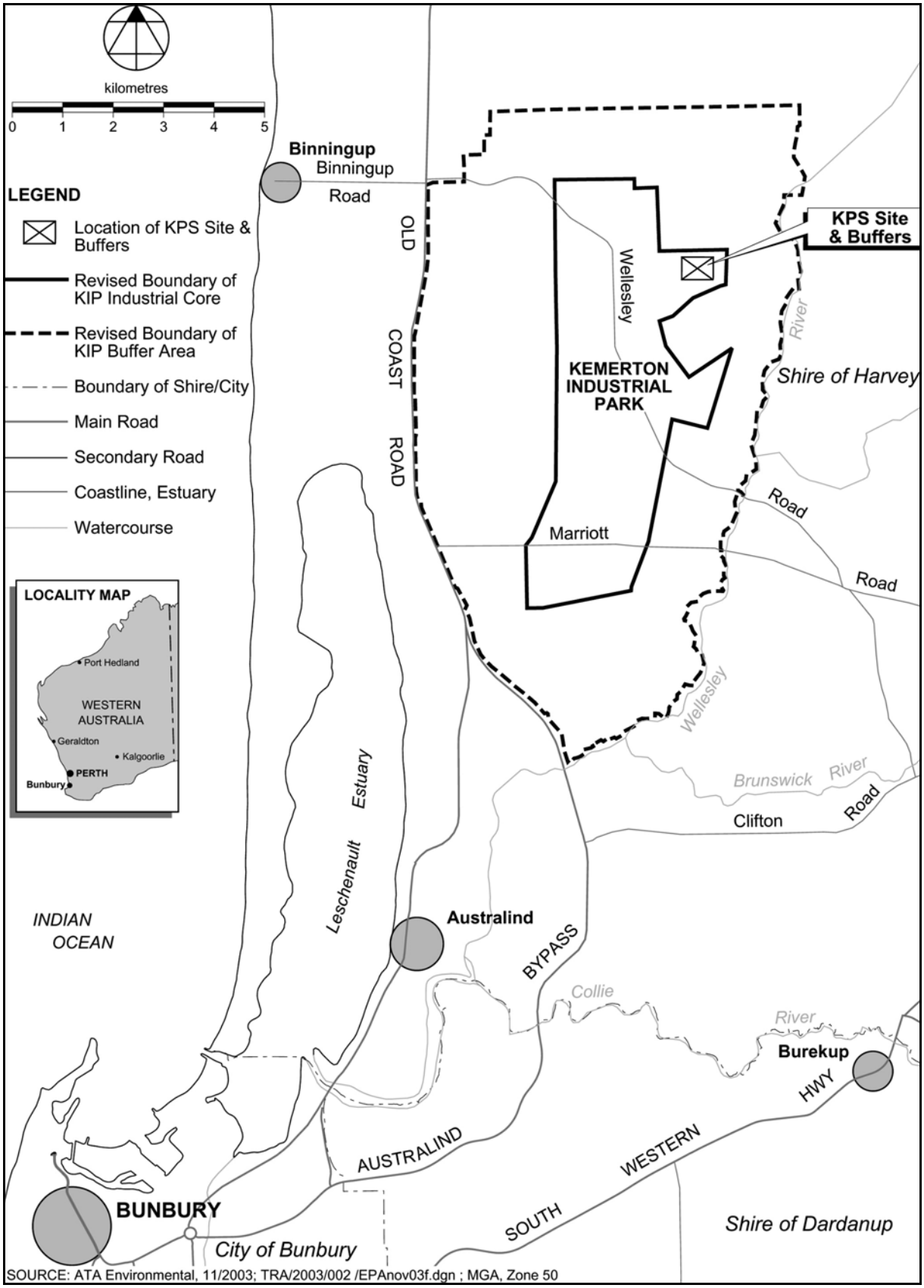

Figure 2: Location in Kemerton Industrial Park (Source: ATA Environmental, 2003)

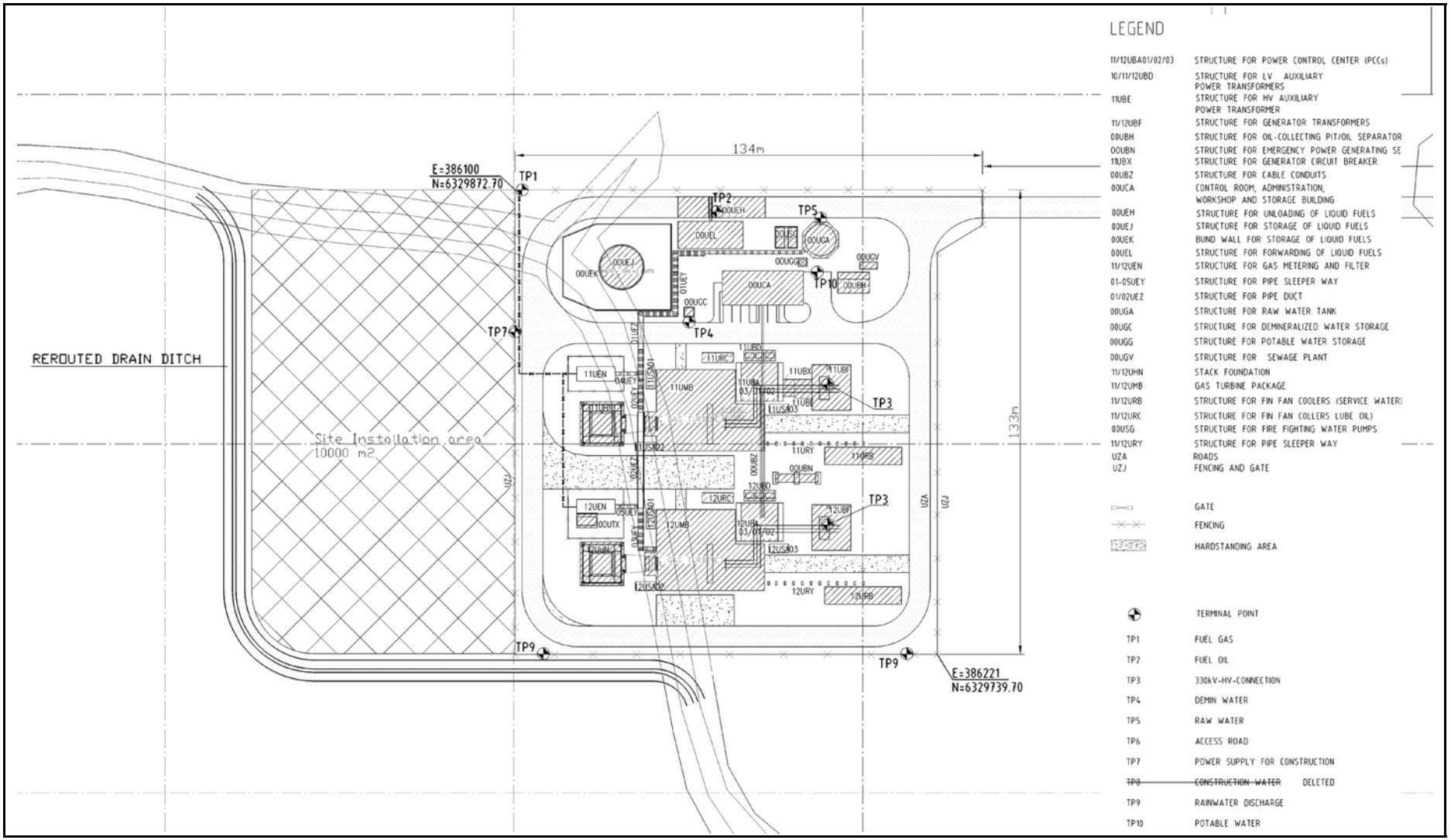

Figure 3: Proposed Kemerton Power Station site map (Source: ATA Environmental, 2003)

Schedule 2

Proponent's Environmental Management Commitments

December 2003

KEMERTON POWER STATION, KEMERTON

(Assessment No. 1499)

TRANSFIELD SERVICES KEMERTON PTY LIMITED (AS TRUSTEE FOR TRANSFIELD SERVICES KEMERTON TRUST)

Proponent's Environmental Management Commitments – October 2003

KEMERTON POWER STATION (Assessment No. 1499)

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.

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
1	Construction Environmental Management	To ensure all aspects of project construction are conducted such that environmental impacts are minimised as far as practicable, and that regulatory requirements are complied with.	1. Prepare a Construction Environmental Management Program (CEMP) which will include the following plans: • Flora and Vegetation Management Plan (see commitment 3); • Fauna Management Plan (see commitment 5); • Groundwater Management Plan (see commitment 6); • Surface and Stormwater Water Management Plan (see commitment 8); • Air Emissions and Dust Management Plan (see commitment 10); • Noise Management Plan (see commitment 13); • Solid and Liquid Waste Management Plan (see commitment 15); • Hydrocarbon and Hazardous Material Handling Plan (see commitment 17); • Aboriginal Heritage Management Plan (see commitment 19);	Prior to Construction	DEP

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
			• Community Consultation Plan (see commitment 20); and • Dewatering Management Plan (see commitment 22); 2. Implement the approved Construction Environmental Management Program (CEMP) described in 1.1 above.		
2	Operational Environmental Management	To ensure all aspects of project operation are conducted such that environmental impacts are minimised as far as practicable, and that regulatory requirements are complied with.	1. Prepare an Operational Environmental Management Program (OEMP) which will include but not be limited to the following plans: • Flora and Vegetation Management Plan (see commitment 4); • Groundwater Management Plan (see commitment 7); • Surface and Stormwater Water Management Plan (see commitment 9); • Air Emissions Management Plan (see commitment 11); • Noise Management Plan (see commitment 14); • Solid and Liquid Waste Management Plan (see commitment 16); • Hydrocarbon and Hazardous Material Handling Plan (see commitment 18); • Community Consultation Management Plan (see commitment 21). 2. Implement the approved Operational Environmental Management Program (OEMP) described in 2.1 above.	Prior to Commissioning	DEP
3	Terrestrial Flora and Vegetation	To maintain the abundance, species diversity, geographic distribution and productivity of vegetation communities during construction	1. Prepare a Construction Flora and Vegetation Management Plan which will address but not be limited to: • Construction Lay-down Site Rehabilitation; • Dieback Hygiene; • Weed management and control; • Clearing of blue gums;	Prior to Construction	DEP/CALM

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
		during construction	• Monitoring requirements; and • Reporting requirements. 2. Implement the approved Flora and Vegetation Management Plan described in 3.1 above.		
4	Terrestrial Flora and Vegetation	To maintain the abundance, species diversity, geographic distribution and productivity of vegetation communities during operation	1. Prepare an Operational Flora and Vegetation Management Plan which will address but not be limited to: • Dieback Hygiene; • Weed management and control; • Clearing of blue gums in buffer; • Monitoring requirements; and • Reporting requirements. 2. Implement the approved Operational Flora and Vegetation Management Plan described in 4.1 above.	Prior to Commissioning	DEP/CALM
5	Terrestrial Fauna Specially protected (Threatened) fauna.	To protect Specially Protected (Threatened) Fauna species and their habitats, consistent with the provisions of the *Wildlife Conservation Act 1950* during construction	1. Prepare a Construction Fauna Management Plan which will address but not be limited to: • Feral and introduced animal management; • Management of species location if required; • Monitoring requirements; and • Reporting requirements. 2. Implement the approved Construction Fauna Management Plan described in 5.1 above.	Prior to Construction	DEP/CALM
6	Groundwater Quality	To monitor groundwater quality and identify and mitigate sources of contamination during construction	1. Prepare a Construction Groundwater Management Plan which will address but not be limited to: • Sample bore locations; • Parameters and sample frequency for monitoring; • Mitigation and contingency measures; • Reporting requirements.	Prior to Construction	DEP/WRC

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
			2. Implement the approved Construction Groundwater Management Plan described in 6.1 above.		
7	Groundwater Quality	To monitor groundwater quality and identify and mitigate sources of contamination during operation	1. Prepare an Operational Groundwater Management Plan which will address but not be limited to: • Zero process water discharge; • Design and bore construction; • Sample bore locations; • Parameters and sample frequency for monitoring; • Mitigation and contingency measures; • Reporting requirements. 2. Will implement the approved Operational Groundwater Management Plan described in 7.1 above.	Prior to Commissioning	DEP/WRC
8	Surface Water Quality	To manage the potential effects of the construction of the project on surface water quality and to maintain existing flow paths where possible	1. Prepare a Construction Surface and Storm Water Management Plan which will address but not be limited to: • Management of contaminated surface water runoff; • Monitoring requirements; • Mitigation and contingency measures; • Reporting requirements. 2. Will implement the approved Construction Surface and Storm Water Management Plan described in 8.1 above.	Prior to Construction	DEP/WRC
9	Surface Water Quality	To manage the potential effects of the operation of the project on surface water quality and to maintain existing flow paths where possible	1. Prepare an Operational Surface and Storm Water Management Plan which will address but not be limited to: • Management of contaminated storm waters such that none leaves the site; • Recovery mechanisms and structures for chemical and hydrocarbon spillages, • Monitoring requirements; • Response and contingency measures; and	Prior to Commissioning	DEP/WRC

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
			• Reporting requirements. 2. Implement the approved Operational Surface and Storm Water Management Plan described in 9.1 above.		
10	Air Quality - Gaseous Emissions	To protect surrounding land users such that gaseous and particulate emissions will Not adversely affect their welfare and amenity or cause health problems. To ensure that conditions which could promote the formation of photochemical smog are managed to minimise the generation of smog and any subsequent impacts.	1. Prepare a Construction Air Emissions/Dust Management Plan which will address but not be limited to: • the use of water sprays to wet the site during windy conditions; • the use of speed limits to minimise dust generated by vehicle movements; • the use of minimum drop heights when loading and unloading soils and other excavated materials; minimisation of areas of disturbed and/or exposed soils; • Incident management; • Responsibilities; • Reporting Requirements; and • Employee training and awareness. 2. Implement the approved Construction Air Emissions / Dust Management Plan described in 10.1 above.	Prior to Construction	DEP
11	Air Quality - Gaseous Emissions	To ensure that best practicable measures are taken to minimise discharge of gaseous and particulate emissions to the atmosphere. To protect surrounding land users such that gaseous and particulate emissions will not	1. Prepare a Operational Air Emissions Management Plan which will address but not be limited to: • Stack emission monitoring program (sampling location, frequency, parameters, standards and limits); • Reporting schedules; • Incident management; • Responsibilities; and • Employee training and awareness.	Prior to Commissioning	DEP

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
		adversely affect their welfare and amenity or cause health problems. To ensure that conditions which could promote the formation of photochemical smog are managed to minimise the generation of smog and any subsequent impacts.	2. Implement the approved Operational Air Emissions Management Plan described in 11.1 above.		
12	Greenhouse Gas Emissions	To ensure that potential greenhouse gas emissions emitted from proposed projects are adequately addressed and best practicable measures and technologies are used in Western Australia to minimise Western Australia's greenhouse gas emissions.	Pursue greenhouse gas reduction through: • Commitment to participate in the Greenhouse Challenge program. • Prepare a Greenhouse Gas Management Strategy under the Greenhouse Challenge program • Implement a Greenhouse Gas Management Strategy under the Greenhouse Challenge program • Operate and maintain the plant to "Good Electricity Practice" as defined in the National Electricity Code.	Prior to Construction and throughout Operation	DEP/Australian Greenhouse Office
13	Noise	To protect the amenity of nearby residents from noise impacts resulting from construction activities associated with the proposal by ensuring that noise levels meet the *Environmental Protection (Noise)*	1. Prepare a Construction Noise Management Plan which will address but not be limited to: • Noise management procedures for construction; • Retention of vegetation (plantation blue gums) where practicable to assist in noise mitigation; • Implement alternative noise attenuation	Prior to Construction	DEP

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
		Protection (Noise) Regulations 1997.	packages to provide enhanced levels of noise control to meet boundary level noise limits if necessary; and • Implement a complaint management procedure to receive, investigate and action noise complaints. 2. Implement the approved Construction Noise Management Plan described in 13.1 above.		
14	Noise	To protect the amenity of nearby residents from noise impacts resulting from operational activities associated with the proposal by ensuring that noise levels meet the *Environmental Protection (Noise) Regulations 1997.*	1. Prepare an Operational Noise Management Plan which will address but not be limited to: • Maintenance of equipment that contribute to overall plant noise; • the use of silencers where necessary; and; • noise monitoring and reporting as necessary. • Implementation of a complaint management procedure to receive, investigate and action noise complaints. 2. Implement the approved Operational Noise Management Plan described in 14.1 above.	Prior to Commissioning	DEP
15	Waste Management	Ensure that the generation of all wastes follows consideration of waste reduction in accordance with the waste hierarchy of reduction, reuse, recycling, treatment, and disposal during construction.	1. Prepare a Construction Solid and Liquid Waste Management Plan to address but not be limited to the following: • Compliance with the requirements of the DoE and Regulations in relation to the management, handling and storage of wastes including application of the waste hierarchy of reduction, reuse, recycling, treatment, and disposal ; • Implementation of waste reduction and recycling initiatives where recyclable wastes will be removed by an approved contractor; • General refuse and putrescible (domestic and industrial) solid waste and inert materials (not suitable for recycling) will be disposed of at	Prior to Construction	DEP/Shire of Harvey

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
			the nearby Kemerton landfill in accordance with the Health Dept of WA and Landfill Board requirements • Solvents and hazardous liquids will be collected and removed from the site for recycling or disposal in an approved liquids disposal area. • Prohibit burning of waste onsite at all times. • Educate employees in non-hazardous solid waste management. • Preparation of annual waste reports 2. Implement the approved Construction Solid and Liquid Waste Management Plan described in 15.1 above.		
16	Waste Management	Ensure that the generation of all wastes follows consideration of waste reduction in accordance with the waste hierarchy of reduction, reuse, recycling, treatment, and disposal during operation.	1. Prepare an Operational Solid and Liquid Waste Management Plan to address but not be limited to the following: • Compliance with the requirements of the DoE and Regulations in relation to the management, handling and storage of wastes including application of the waste hierarchy of reduction, reuse, recycling, treatment, and disposal ; • Implementation of waste reduction and recycling initiatives where recyclable wastes will be removed by an approved contractor; • General refuse and putrescible (domestic and industrial) solid waste and inert materials (not suitable for recycling) will be disposed of at the nearby Kemerton landfill in accordance with the Health Dept of WA and Landfill Board requirements; • Solvents and hazardous liquids will be	Prior to Commissioning	DEP/Shire of Harvey

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
			collected and removed from the site for recycling or disposal in an approved liquids disposal area; and • Prohibit burning of waste onsite at all times. • Educate employees in non-hazardous solid waste management. • Preparation of annual waste reports 2. Implement the approved Operational Solid and Liquid Waste Management Plan described in 16.1 above.		
17	Hydrocarbon and Hazardous Materials	Design and construct (including bunding) in accordance with Australian Standards AS 1940 (Standards Australia 1993) and requirements of the DoIR and the *Explosives and Dangerous Goods Act 1961*.	1. Prepare a Construction Hydrocarbon and Hazardous Materials Handling Plan to address but not be limited to: • Tracking of the volume of hydrocarbon and hazardous waste materials produced; • Identification of disposal options. • Appropriate transport, storage and handling procedures; • Appropriate clean-up and emergency procedures for spillages; • Monitoring requirements; • Contingency and Response Measures; • Reporting requirements. 2. Implement the approved Construction Hydrocarbon and Hazardous Materials Handling Plan described above in 17.1.	Prior to Construction	DEP/DoIR
18	Hydrocarbon and Hazardous Materials	Operate in accordance with Australian Standards AS 1940 (Standards Australia 1993) and requirements of the DoIR and the	1. Prepare an Operational Hydrocarbon and Hazardous Materials Handling Plan to address but not be limited to: • Tracking of the volume of hydrocarbon and hazardous waste materials produced; • Identification of disposal options. • Appropriate transport, storage and handling	Prior to	DEP/DoIR

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
		Explosives and Dangerous Goods Act 1961.	procedures; • Appropriate clean-up and emergency procedures for spillages; • Monitoring requirements; • Contingency and Response Measures; • Reporting requirements. 2. Implement the approved Operational Hydrocarbon and Hazardous Materials Handling Plan described above in 18.1.	Commissioning	
19	Heritage	To protect any sites of significance uncovered during the construction phase of the project.	1. Prepare a Construction Aboriginal Heritage Management Plan to address but not be limited to: • Procedures to ensure compliance with the Aboriginal Heritage Act, 1972; • Consideration of recommendations of the Archaeological and Ethnographic Site Identification Survey Report (AIC, 2003) and adopt appropriate measures to address these recommendations where practicable. • Procedures for protection of a site of significance uncovered during construction; and • Procedure for continued liaison with relevant parties during construction. 2. Implement the approved Construction Aboriginal Heritage Management Plan described above in 19.1.	Prior to Construction	DIA

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
20	Social and Economic Issues	Ensure that any potential impacts from the development on the nearby community are minimised. Ensure that recreational use of the areas surrounding the Kemerton Industrial Park is not compromised.	1. Prepare a Construction Community Consultation Plan to address but not be limited to: • General community consultation associated with the environmental approval process; • Targeted consultation with nearby landowners and communities. • Consultation with the Shires of Harvey, (and/or Dardanup and City of Bunbury) and Kemerton Community Committee; • Local waterbody users representative groups; • Opportunities to engage local workforces. 2. Implement the approved Construction Community Consultation Plan described above in 20.1.	Prior to Commissioning	Kemerton Community Committee
21	Social and Economic Issues	Ensure that any potential impacts from the development on the nearby community are minimised. Ensure that recreational use of the areas surrounding the Kemerton Industrial Park is not compromised.	1. Prepare an Operational Community Consultation Plan to address but not be limited to: • General community consultation associated with the environmental approval process; • Targeted consultation with nearby landowners and communities. • Consultation with the Shires of Harvey,(and/or Dardanup and City of Bunbury) and Kemerton Community Committee; • Local waterbody users representative groups; • Opportunities to engage local workforces. 2. Implement the approved Operational Community Consultation Plan described above in 21.1.	Prior to Commissioning	Kemerton Community Committee
22	Groundwater	To ensure the discharge water from de-watering activities during the construction phase will have no adverse impacts on the groundwater table and /or the water	1. Prepare a Construction Dewatering Management Plan to address but not be limited to: • Definition of the commencement date, duration, anticipated quantity and frequency of discharge; • Monitoring requirements; and	Prior to Construction	DEP/WRC

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
		table, and /or the water quality or flow regime of surface water bodies (including wetlands).	• Reporting requirements. 2. Implement the approved Construction Dewatering Management Plan described above in 22.1.		
23	Decommissioning	To provide the framework to ensure that the site is left in an environmentally acceptable condition at closure	1. Prepare a Preliminary Decommissioning Plan. The Preliminary Decommissioning Plan will address: • conceptual plans for the removal or, if appropriate retention of the plant and infrastructure; • 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; • a conceptual plan for the care and maintenance phase; and • management of noxious materials to avoid the creation of contaminated areas. 2. Prepare a Final Decommissioning Plan. The Final Decommissioning Plan will address: • removal or, if appropriate retention of the plant, access roads, corridors and/or infrastructure in consultation with relevant stakeholders; • rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s);	Within six months of the date of publication of the Ministerial Statement At least six months prior to the anticipated date of decommissioning; or at a time agreed with the EPA.	DEP/Shire of Harvey

NO	TOPIC	OBJECTIVE/S	ACTION	TIMING	ADVICE
			• identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities. Implement the Final Decommissioning Plan		