Published on: 17 September 2010 Statement No. 837

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

BLUEWATERS POWER STATION EXPANSION - PHASE III AND PHASE IV
SHIRE OF COLLIE, SHIRE OF DARDANUP, SHIRE OF HARVEY

Proposal: The proposal is for the construction and operation of two nominal 229 Megawatt (208 Megawatt net sent-out) subcritical coal-fired base-load generation plants (i.e. Bluewaters Power Station Phases III and IV) on a site adjacent to the existing Bluewaters Phase I and Phase II generating plants located approximately 4.5 kilometres north-east of Collie. The proposal also involves the construction and operation of an approximately 63 kilometre long wastewater discharge pipeline following the same alignment as the existing Collie A Power Station wastewater pipeline with a route deviation through the coastal foredune system, and an ocean outfall consisting of an approximately 650 metre long pipe including a 110 metre long diffuser located north of the Leschenault Inlet at Buffalo Road.

The proposal is further documented in Schedule 1 of this statement.

Proponent: Griffin Power 3 Pty Ltd (ACN: 126 582 876)

Proponent Address: Level 15, 28 The Esplanade, PERTH WA 6000

Assessment Number: 1733

Report of the Environmental Protection Authority: 1349

Published on:

Appeal Numbers: 21 to 23 of 2010

Related Statements: Bluewaters Phase I (Ministerial Statements 685 and 803) and Bluewaters Phase II (Ministerial Statements 724 and 804)

The proposal referred to in the above report of the Environmental Protection Authority may be implemented. The implementation of that proposal is subject to the following conditions and procedures:

1 Proposal Implementation

1-1 The proponent shall implement the proposal as documented and described in schedule 1 of this Statement subject to the conditions and procedures of this Statement.

2 Proponent Nomination and Contact Details

2-1 The proponent for the time being nominated by the Minister for Environment under sections 38(6) or 38(7) of the Act is responsible for the implementation of the proposal.

2-2 The proponent shall notify the CEO of any change of the name and address of the proponent for the serving of notices or other correspondence within 30 days of such change.

3 Time Limit of Authorisation

3-1 The authorisation to implement the proposal provided for in this Statement shall lapse and be void five years after the date of this Statement if the proposal to which this Statement relates is not substantially commenced.

3-2 The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this Statement.

4 Compliance Reporting

4-1 The proponent shall prepare and maintain a compliance assessment plan to the satisfaction of the CEO.

4-2 The proponent shall submit to the CEO the compliance assessment plan required by condition 4-1 at least 6 months prior to the first compliance report required by condition 4-6, or prior to implementation, whichever is sooner. The compliance assessment plan shall indicate:

1. the frequency of compliance reporting;

2. the approach and timing of compliance assessments;

3. the retention of compliance assessments;

4. the method of reporting of potential non-compliances and corrective actions taken;

5. the table of contents of compliance assessment reports; and

6. public availability of compliance assessment reports.

4-3 The proponent shall assess compliance with conditions in accordance with the compliance assessment plan required by condition 4-1.

4-4 The proponent shall retain reports of all compliance assessments described in the compliance assessment plan required by condition 4-1 and shall make those reports available when requested by the CEO.

4-5 The proponent shall advise the CEO of any potential non-compliance within seven days of that non-compliance being known.

4-6 The proponent shall submit to the CEO the first compliance assessment report fifteen months from the date of issue of this Statement addressing the twelve month period from the date of issue of this Statement and then annually from the date of submission of the first compliance report. The compliance assessment report shall:

1. be endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf;

2. include a statement as to whether the proponent has complied with the conditions;

3. identify all potential non-compliances and describe corrective and preventative actions taken;

4. be made publicly available in accordance with the approved compliance assessment plan; and

5. indicate any proposed changes to the compliance assessment plan required by condition 4-1.

5 Performance Review and Reporting

5-1 The proponent shall submit to the CEO a Performance Review Report at the conclusion of the first, second, fourth, sixth, eighth and tenth years after the start of implementation and then at five yearly intervals which addresses:

1. the major environmental risks and impacts; the performance objectives, standards and criteria related to these; the success of risk reduction/impact mitigation measures and results of monitoring related to management of the major risks and impacts;

2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology; and

3. improvements gained in environmental management which could be applied to this and other similar projects.

5-2 The Performance Review Reports shall be to the satisfaction of the CEO.

5-3 The proponent shall make the Performance Review Report required by condition 5-1 publicly available in a manner approved by the CEO.

6 Air Quality

6-1 The proponent shall control and manage emissions of sulphur dioxide (SO_2), oxides of nitrogen (NO_X) [as nitrogen dioxide (NO_2)] and particulates to achieve the EPA's objective in relation to air quality, namely that emissions from the proposal shall not, taking into account other emission sources within the Collie area, cause pollution, environmental harm or otherwise unreasonably interfere with the health, welfare or amenity of persons outside the proposal site.

[note: the details of any emission limits or other conditions required to achieve this objective will be considered by the DEC through Part V of the Act]

7 Greenhouse Gas Abatement

7-1 The proponent shall prepare and submit to the CEO a Greenhouse Gas Abatement Program, prior to the commencement of the proposal, which has the objectives of:

- minimising greenhouse gas emissions in absolute terms and reducing emissions per MWh to as low as reasonably practicable; and

- mitigating greenhouse gas emissions.

7-2 The Greenhouse Gas Abatement Program shall:

1. demonstrate that maximising energy efficiency and opportunities for future energy recovery have been given due consideration in the design and operation of the proposal;

2. ensure that the "greenhouse gas" intensity [i.e. quantity of carbon dioxide equivalents ($CO_{2\text{-}e}$) generated per MWh of electricity produced] is equivalent to, or better than benchmarked best practice for equivalent plants; and

3. achieve continuous improvement in net greenhouse gas emissions through the periodic review, and adoption of advances in technology and process management, including consideration of carbon capture and storage technology.

7-3 The proponent shall review the Abatement Program each calendar year and report to the CEO on the performance of the proposal against the requirements of condition 7-2 by 31 March of each year.

7-4 The proponent shall commission an Independent Specialist to review and report on the proponent's performance against the requirements of condition 7-2 at intervals of no greater than two years, with the report being provided to the CEO within 21 days of it being received by the proponent.

7-5 The proponent shall make the Greenhouse Gas Abatement Program required by condition 7-1 and the reviews under conditions 7-3 and 7-4 publicly available in a manner approved by the CEO.

7-6 Conditions 7-1 to 7-5 continue to have effect and condition the implementation of the proposal until such time as it is determined by the CEO that they are non complementary to any Commonwealth greenhouse gas emissions trading scheme applicable to the proposal and the Minister provides notice in writing of concurrence with this determination.

8 Flora and Vegetation

8-1 The proponent shall limit the width of the pipeline construction corridor to 15 m in all conservation areas and other well vegetated areas along the corridor route, including conservation category and EPP wetlands, and 20 m for all other areas along the route.

8-2 The proponent shall liaise with the DEC regarding conditions of entry to Wellington National Park, Leschenault Peninsula Conservation Park and Harris River State Forest.

8-3 The proponent shall liaise with the DEC regarding the Construction Environmental Management Plan prior to commencement of activities associated with the pipeline construction within the Leschenault Peninsula Conservation Park.

8-4 The proponent shall undertake rehabilitation to achieve the following outcomes:

1. The proposal shall be non-polluting and shall be constructed so that its final shape, stability, surface drainage, resistance to erosion and ability to support local native vegetation are comparable to natural landforms within the local area.

2. Native vegetation areas disturbed through implementation of the proposal shall be progressively rehabilitated with vegetation composed of native plant species of local provenance (defined as seed or plant material collected within 10 kilometres of the proposal).

3. Proposal areas not supporting native vegetation prior to the commencement of the proposal, shall be revegetated to the original land use or a use approved by the CEO.

4. The percentage cover of living vegetation in all rehabilitation areas shall be comparable with that of nearby undisturbed land.

5. No new species of weeds (including both declared weeds and environmental weeds) shall be introduced into the area as a result of the implementation of the proposal.

6. The coverage of weeds (including both declared weeds and environmental weeds) within the rehabilitation areas shall not exceed that identified in baseline monitoring undertaken prior to the commencement of the proposal, or exceed that existent on comparable, nearby land which has not been disturbed during implementation of the proposal, whichever is less.

8-5 Rehabilitation activities shall continue until such time as the requirements of condition 8-4 are demonstrated to have been met for a minimum of five years, to the satisfaction of the CEO on advice of the DEC.

9 Fauna

9-1 The proponent shall ensure the following requirements are met:

1. Replace all potential and confirmed Black Cockatoo nesting trees that are removed during construction of the generating plants and the pipeline with artificial nesting boxes and shall install and maintain, during the operating lifetime of the generating plants and pipeline, a minimum of six nesting boxes

per tree removed, in locations and to a standard determined in consultation with the DEC and DEWHA.

2. Engage a fauna clearing person prior to undertaking authorised clearing, to identify, remove and relocate Black Cockatoos, in consultation with the DEC.

3. Develop a monitoring program for the duration of the project, in consultation with the DEC, to monitor the use of the nesting boxes by Black Cockatoos and report the findings in the Performance Review Report referred to in condition 5-1.

9-2 During construction of the pipeline the proponent shall ensure that the following requirements are met:

1. The proponent shall limit the length of open trenches associated with the construction of the pipeline corridor to a length capable of being inspected and cleared by the fauna clearing person within the required times as set out in condition 9-2(4).

2. Fauna refuges are to be placed in the trenches at intervals not exceeding 50 metres.

3. The proponent shall employ at least two fauna clearing persons to remove fauna from the trenches.

4. The proponent shall ensure that inspection and clearing of fauna from trenches by fauna clearing persons occurs at least twice daily and not more than half an hour prior to backfilling of trenches, with the first daily inspection and clearing to be undertaken no later than 3.5 hours after sunrise, and the second inspection and clearing to be undertaken daily between the hours of 3:00 pm and 6:00 pm.

5. In the event of rainfall, the proponent shall, following the clearing of fauna from the trenches, pump out any pooled water in the open trenches (with the exception of groundwater) and discharge it to adjacent areas in such a manner as to avoid any disturbance to soil or any native vegetation.

6. Within 14 days following completion of the construction of the pipeline, the proponent shall provide a report on fauna found, both dead and alive, within the pipeline corridor to the CEO.

10 Saline wastewater disposal from the ocean outfall

10-1 If blasting or pile driving is required during ocean outfall construction, the proponent shall notify the CEO and the DEC no less than 21 calendar days prior to commencement of such activities.

10-2 The proponent shall ensure that a Low Ecological Protection Area is maintained within 50 metres from all points of the ocean outfall diffuser structure. At the boundary of the Low Ecological Protection Area a high level of ecological protection shall be maintained.

10-3 The proponent shall ensure that anywhere within the Low Ecological Protection Area the 95th percentile of bioaccumulating toxicant concentrations meets ANZECC and ARMCANZ 2000 80% species protection guideline levels.

10-4 The proponent shall ensure that the following conditions are met at the boundary between the Low Ecological Protection Area and the High Ecological Protection Area:

1. The median salinity resulting from discharge at the wastewater diffuser either, (1) does not exceed the 80th percentile of the natural salinity range over the same period; or, (2) does not exceed the median salinity at a suitable reference site by more than 0.8 parts per thousand.

2. The 95th percentile of toxicant concentrations meets the 99% species protection levels specified in the ANZECC and ARMCANZ 2000 (with the exception of cobalt where the 95% species protection guideline shall apply).

3. The results of Whole Effluent Toxicity testing undertaken using a minimum of five species as per ANZECC and ARMCANZ 2000 protocols demonstrate that sufficient dilution is occurring such that a high level of ecological protection (99% species protection) is met for at least 95% of wastewater flow and oceanographic conditions.

4. The ambient dissolved oxygen in bottom water samples is not below 90% saturation for more than six weeks and never below 60% saturation.

5. The median temperature in any season does not exceed the 80th percentile of the natural temperature range over the same period.

10-5 The proponent shall verify diffuser performance in terms of achieving the required number of dilutions to meet the requirements of 10-2 to 10-4, under a range of flow rates, meteorological and sea state conditions for a period of at least 12 months immediately following completion of the commissioning phase or six months from the commencement of the commissioning phase, whichever is sooner, by use of continuous loggers or at least weekly sampling.

10-6 The proponent shall use procedures contained in EPA 2005 *Manual of Operating Procedures for Environmental Monitoring Against the Cockburn Sound Environmental Quality Criteria* EPA Report 21 for monitoring carried out to meet the requirements of 10-2 to 10-5.

10-7 Within 18 months of the first wastewater discharge the proponent shall submit a report containing the results of the monitoring required by 10-2 to 10-5 and including an assessment of the operating limitations necessary to ensure ongoing compliance with 10-2 to 10-4 to the CEO.

10-8 In the event that the monitoring required by 10-5 indicates that the requirements of 10-2 to 10-4 are not being met, the proponent shall immediately report such findings to the CEO, with a description of the management actions to be taken to meet the requirements of 10-2 to 10-4.

11 Decommissioning

11-1 Prior to commencement of the proposal, the proponent shall:

1. describe the rationale for the siting and design of plant and infrastructure as relevant to environmental protection;

2. prepare a conceptual plan of the final landform at closure;

3. prepare a plan for a care and maintenance phase; and

4. prepare an initial plan for the management of noxious materials following closure.

11-2 At least six months prior to the anticipated date of closure, the proponent shall ensure the following decommissioning criteria are met:

1. removal or, if agreed in writing by the appropriate regulatory authority, retention of, plant and infrastructure;

2. rehabilitation of all disturbed areas to a standard suitable for the new land use(s) subject to any agreement under condition 11-2(1); and

3. identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.

12 Definitions

In these conditions, unless contrary intention appears:

"Act" means the *Environmental Protection Act 1986*;

"ANZECC and ARMCANZ 2000" means the *National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh and Marine Water*

Quality 2000, Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand, 2000;

"best practice" is as defined in *Environmental Protection Authority Guidance Statement No. 55 – Implementing Best Practice in Proposals Submitted to the Environmental Impact Assessment Process*;

"Black Cockatoos" means Carnaby's, Baudin's and Red-tailed Black Cockatoos;

"CEO" means the Chief Executive Officer of the Office of the Environmental Protection Authority;

"commencement of the proposal" means the date on which the first ground disturbing activities, clearing activities, or construction of infrastructure commence for the implementation of the proposal; but does not include minor preliminary works such as erection of fencing and undertaking sampling;

"conservation category wetland" has the meaning given in 3(c) of the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*;

"Construction Environmental Management Plan" means the *Bluewaters Power Station Phase III and IV Expansion: Construction Environmental Management Plan*, prepared for Griffin Power 3 Pty Ltd by Strategen Environmental Consultants Pty Ltd, July 2009;

"DEC" means the Department of Environment and Conservation;

"DEWHA" means the Australian Government Department of the Environment, Water, Heritage and the Arts;

"EPA" means the Environmental Protection Authority;

"EPP wetland" has the meaning given in clause 4 (1) of the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992;*

"fauna clearing person" means a person who meets the requirements of the Department of Environment and Conservation to undertake fauna handling;

"Independent Specialist" means a person with a minimum of five years experience in environmental auditing of coal fired power stations in Australia, approved by the CEO;

"Low Ecological Protection Area" has the meaning given in Saline Wastewater Disposal Management Plan in the *Bluewaters Power Station Phase III and IV Expansion:*

Operation Environmental Management Plan, prepared for Griffin Power 3 Pty Ltd by Strategen Environmental Consultants Pty Ltd, July 2009;

"High Ecological Protection Area" has the meaning given in Saline Wastewater Disposal Management Plan in the *Bluewaters Power Station Phase III and IV Expansion: Operation Environmental Management Plan*, prepared for Griffin Power 3 Pty Ltd by Strategen Environmental Consultants Pty Ltd, July 2009;

"pipeline" means the wastewater discharge pipeline.

Procedures

1. Where a condition states "on advice of the Office of the Environmental Protection Authority, the Office of the Environmental Protection Authority will provide that advice to the proponent.

Hon Donna Faragher JP MLC
MINISTER FOR ENVIRONMENT; YOUTH

Schedule 1

The Proposal (Assessment No. 1733)

The proposal involves the construction and operation of:

- two nominal 229 megawatt (MW) [208 MW net sent-out] subcritical coal-fired base-load generation plants (i.e. Bluewaters Power Station Phases III and IV) on a site adjacent to the existing Bluewaters Phase I and Phase II generating plants, located approximately 4.5 km north-east of Collie;

- an approximately 63 km long wastewater discharge pipeline following the same alignment as the existing Collie A Power Station wastewater pipeline easement with a route deviation through the coastal foredune system;

- an ocean outfall consisting of an approximately 650 m long pipe including a 110 m long diffuser located north of the Leschenault Inlet at Buffalo Road;

- two approximately 150 m high stacks which will be shared with the Bluewaters Phase I and Phase II generating plants, and will replace the existing stacks for those two generating plants;

- two cooling towers;

- an ash silo; and

- various support facilities and infrastructure such as additional roads, conveyors, fuel and water pipelines, and connections to the electricity substation.

The following infrastructure will be shared with Bluewaters Power Station Phases I and II:

- coal conveyors and coal storage and handling facilities;

- wastewater treatment plant (with augmentation);

- water storage ponds and tanks;

- package sewage treatment plant;

- site substation;

- liquid fuel storage facilities (with augmentation); and

- workshops, offices; and roads.

The location of the various project components is shown on Figures 1, 2, 3, 4, and 5.

The main characteristics of the proposal are summarised in Table 1 below. A detailed description of the proposal is provided in Chapter 1 - Section 6 of the PER document (Strategen Environmental Consultants Pty Ltd, 2009).

Table 1: Summary of key proposal characteristics

Element	Description
General	
Generating units	Two nominal 229 MW (208 MW net sent-out) subcritical coal-fired base-load generating plants.
Plant operating hours	24 hours, 7 days a week [Approximately 8000 hours (92% availability over the life of the project)].
Power generation	1,676,314 MWh/yr without flue gas desulphurisation (1,661,227 to 1,667,932 MWh/yr sent-out with flue gas desulphurisation).
Plant thermal efficiency	36.4% HHV sent-out without flue gas desulphurisation (36% to 36.2% HHV sent-out with flue gas desulphurisation).
Stacks	Two 150 m high stacks which will be shared with the Bluewaters Phase I and Phase II generating plants.
Cooling towers	Two.
Ash silo	One.
Wastewater discharge pipeline	An approximately 63 km long pipeline following the same alignment as the existing Collie A Power Station wastewater pipeline easement. The pipeline route will deviate through the coastal foredune system.
Ocean outfall	An approximately 650 m long pipe including a 110 m long diffuser located north of the Leschenault Inlet at Buffalo Road.
Facility footprint	27.1 ha for the Phase III and Phase IV generating plants plus 118 ha for the wastewater discharge pipeline and ocean outfall.
Native vegetation clearing	Up to 26.3 ha (4.27 ha for the Phase III and Phase IV generating plants and 22 ha for the wastewater discharge pipeline).
Marine habitat loss	Up to 0.72 ha (temporary during construction).
Inputs	
Coal supply	Approximately 1,666,224 t/yr.
Water supply	Approximately 6.5 GL/yr (3.25 GL/yr annual average for each generating unit based on 92% operating availability).
Outputs	
Saline cooling wastewater	Approximately 0.7 ML/day (0.25 GL/yr) at 9,200 mg/L TDS from Bluewaters Phases III & IV disposed of via wastewater discharge pipeline and ocean outfall. Note - the pipeline will be designed to accommodate wastewater from other sources in the region and discharge up to 10 ML/day at < 3,000 mg/L TDS (worst case with all sources combined).
Other wastewater	Up to 15 kL/day during construction and up to 0.3 kL/day during operation).
Solid waste	Estimated 300 000 t/yr of ash assuming an average ash content of 18% in feed coal. (Disposal: co-disposal with Ewington Mining Operations mine waste).
Greenhouse gas emissions (direct)	Approximately 3.1 million tonnes of CO_{2-e} per year.
Greenhouse gas intensity	Approximately 921 kg of CO_{2-e} / MWh without flue gas desulphurisation (926 to 929 kg of CO_{2-e} / MWh with flue gas desulphurisation).

Abbreviations

CO_{2-e}	carbon dioxide equivalents
GL	gigalitres (10^9 litres)
GL/yr	gigalitres per year
ha	hectares
HHV	higher heating value
kg	kilograms
kL	kilolitres
kL/day	kilolitres per day
km	kilometres
m	metres
mg	milligrams
mg/L	milligrams per litre
mg/Nm^3	milligrams per 'normal' cubic metre
ML	megalitres (10^6 litres)
ML/day	megalitres per day
MW	megawatts (10^6 watts)
MWh	megawatt hours
MWh/yr	megawatt hours per year
TDS	total dissolved solids
t/yr	tonnes per year

Figures (attached)

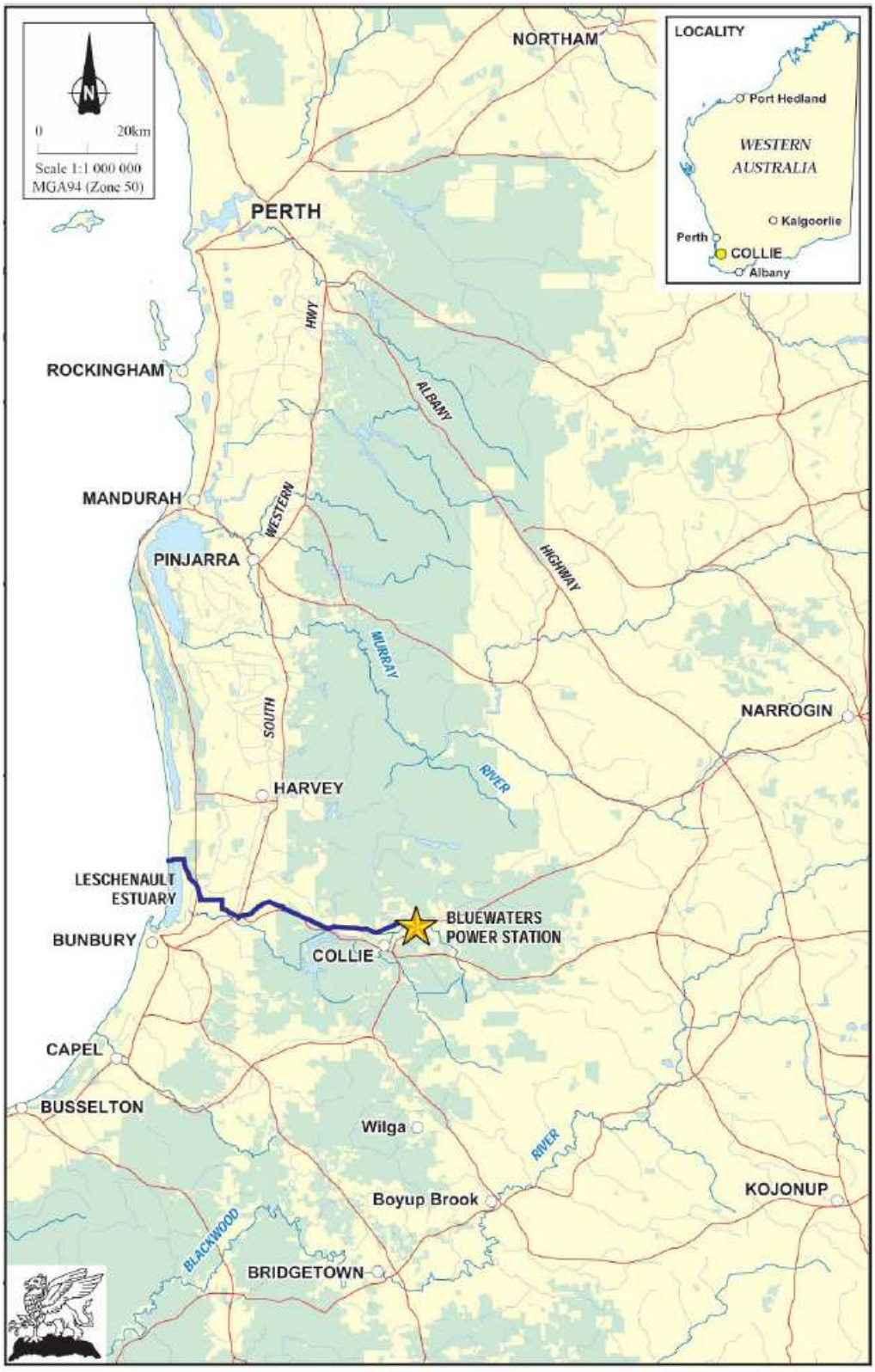

Figure 1: Regional location (Source: Figure 1.1 from Strategen Consulting Pty Ltd, 2009)

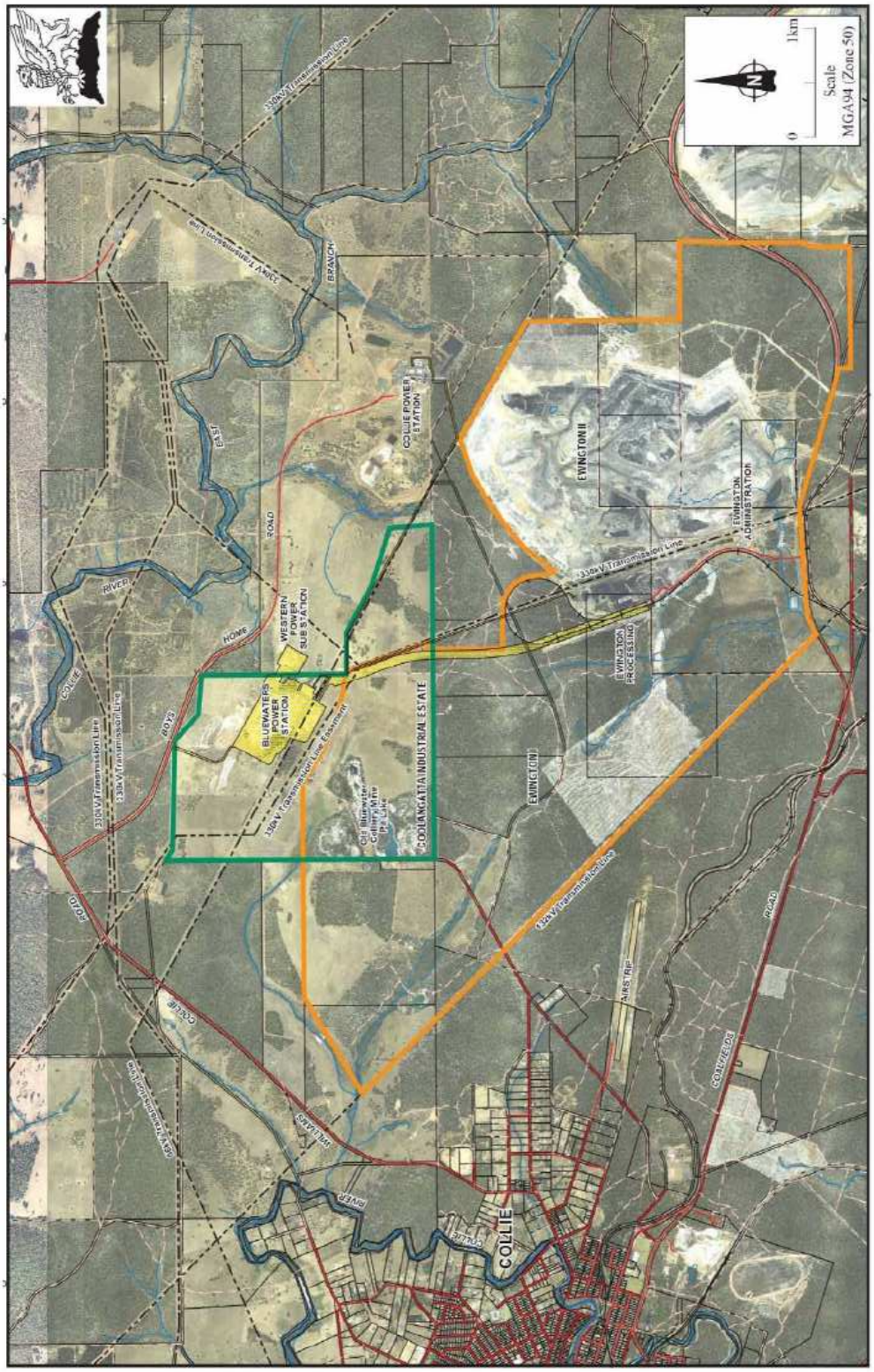

Figure 2: Location plan (Source: Figure 1.2 from Strategen Consulting Pty Ltd, 2009)

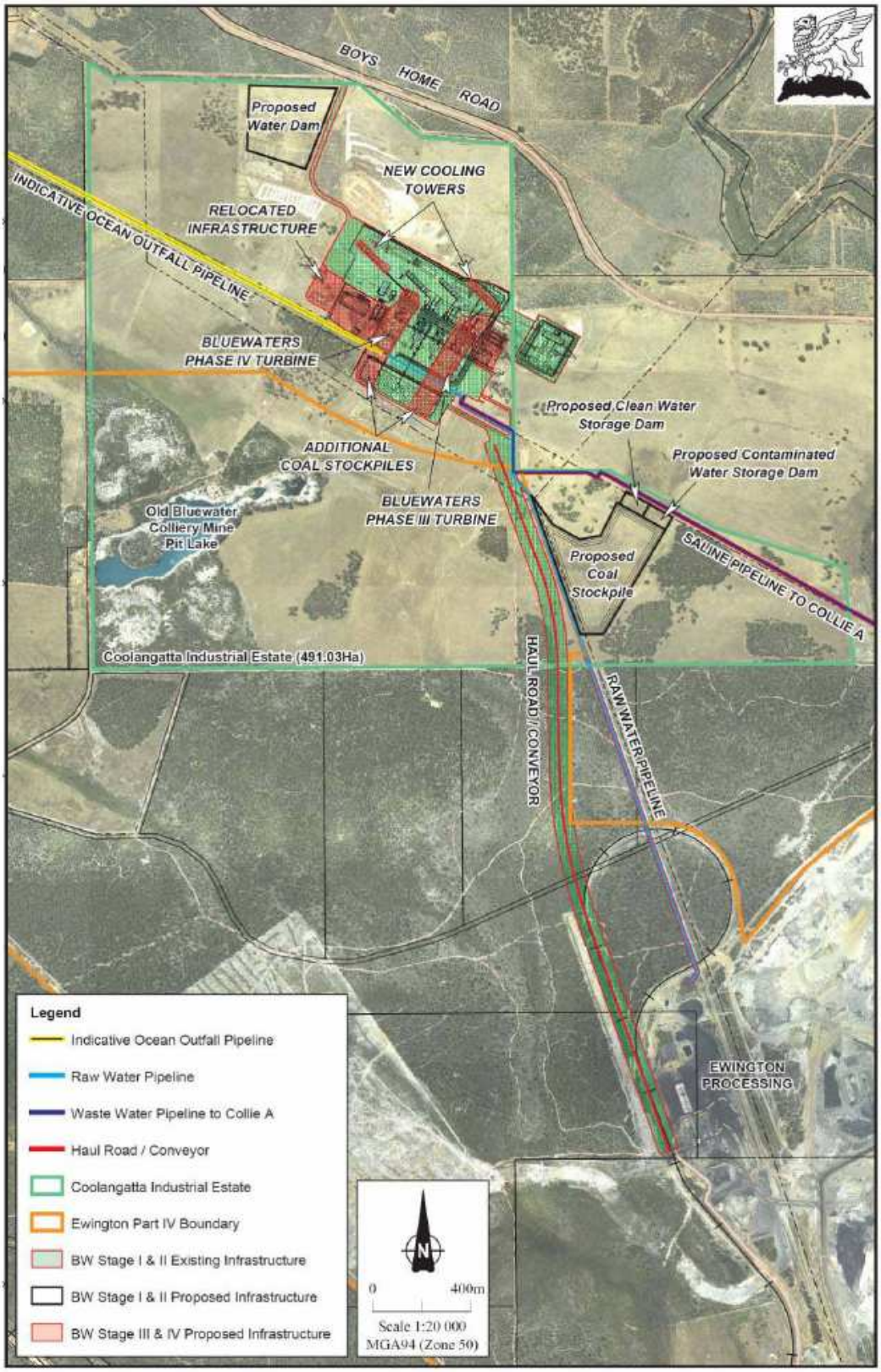

Figure 3: Plant layout (Source: Figure 1.6 from Strategen Consulting Pty Ltd, 2009)

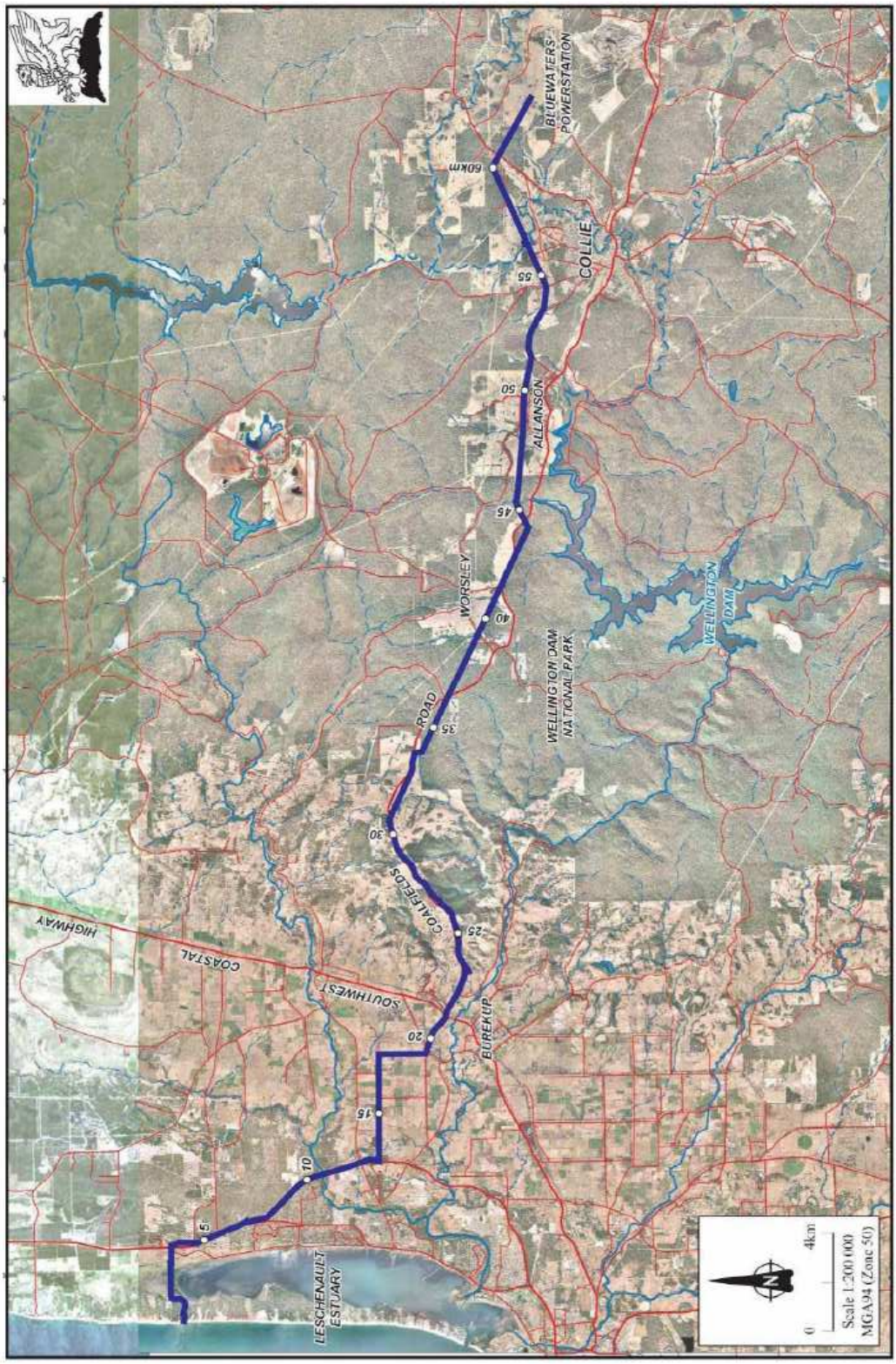

Figure 4: **Saline wastewater discharge pipeline route (Source: Figure 1.8 from Strategen Consulting Pty Ltd, 2009)**

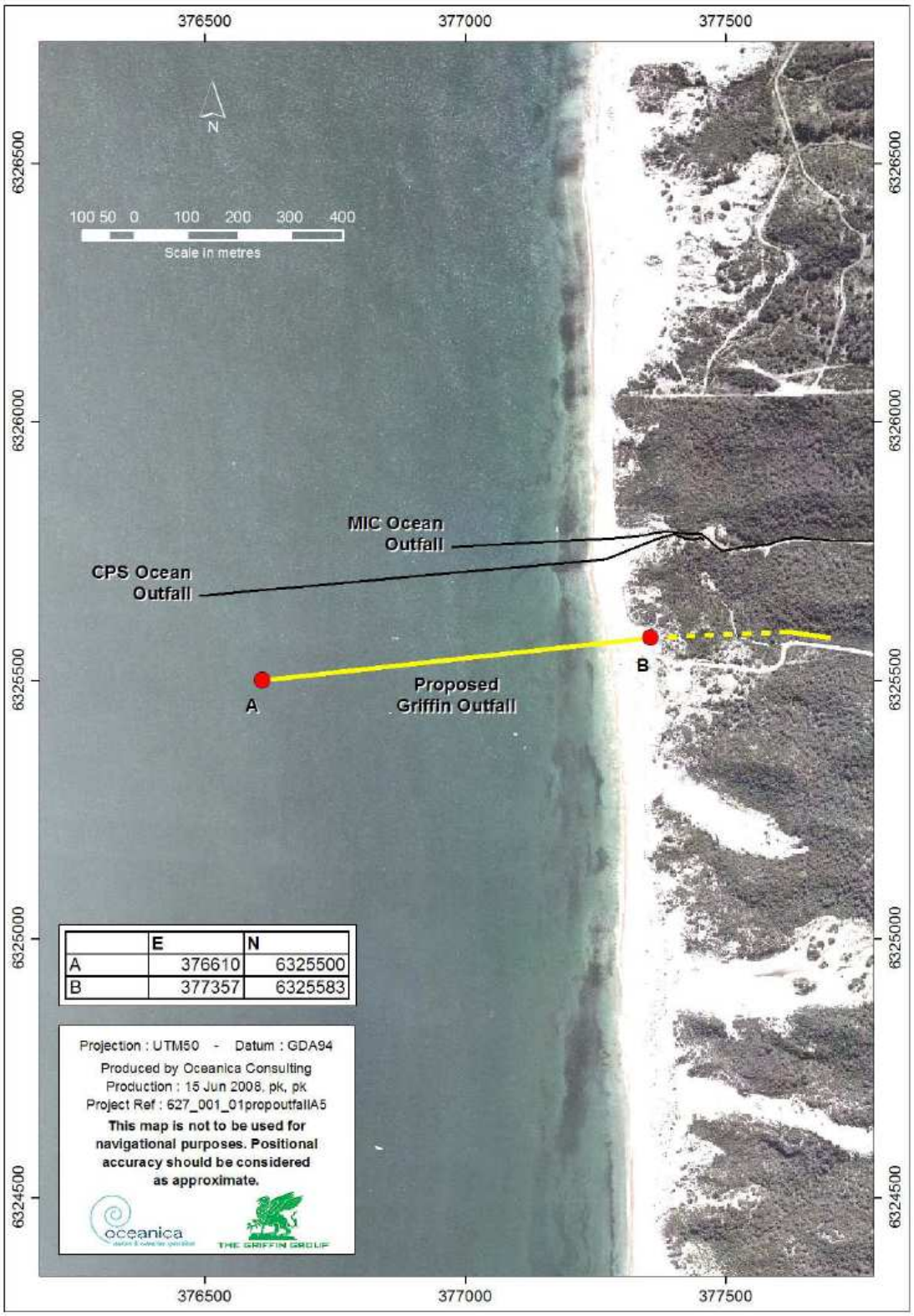

Figure 5: **Ocean outfall location (Source: Figure 1.9 from Strategen Consulting Pty Ltd, 2009)**

ATTACHMENT 1 TO MINISTERIAL STATEMENT 837

Section 45C
Environmental Protection Act 1986

NOTICE OF SECTION 45C CHANGE TO PROPOSAL

BLUEWATERS POWER STATION EXPANSION – PHASE III AND PHASE IV SHIRE OF COLLIE, SHIRE OF DARDANUP, SHIRE OF HARVEY

Pursuant to section 45C of the *Environmental Protection Act 1986*, the above proposal is amended, as depicted by the following Figure 6, attached to Statement 837. Figure 6 replaces existing Figure 5 in this Statement.

Dr Paul Vogel
CHAIRMAN

18 April 2012

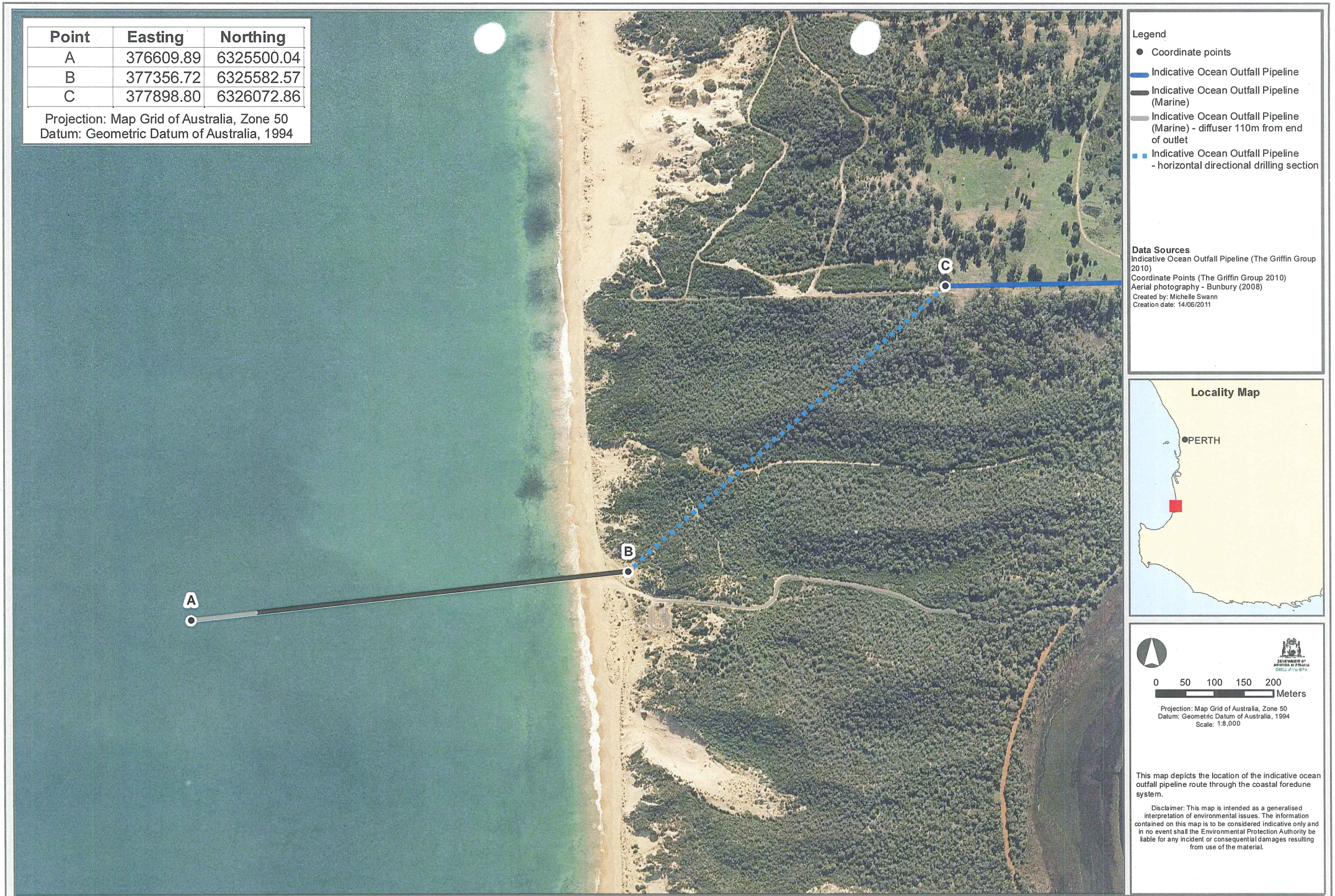

Figure 6: Indicative ocean outfall pipeline route through coastal foredune system (Source: Email from The Griffin Group to the Office of the EPA dated 8 April 2010)