Published on: 17 September 2010 Statement No. 838

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

COOLIMBA POWER STATION PROJECT
SHIRE OF CARNAMAH AND SHIRE OF COOROW

**Proposal:** The proposal is for the construction and operation of a power station comprising of a nominal 450 MW coal-fired base-load generation plant and a nominal 358 MW natural gas-fired peaking-load generation plant on a site located approximately 15 km south-south-west of Eneabba. The proposal also involves the establishment of an approximately 20 km long and 100 m wide infrastructure corridor that will accommodate the construction and operation of a natural gas pipeline lateral to connect the power station to either the Dampier to Bunbury Natural Gas Pipeline or the Parmelia Gas Pipeline, and a 330 kV electricity transmission line to connect the power station to the external electricity network at the proposed Eneabba Substation.

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

**Proponent:** Coolimba Power Pty Ltd (ACN: 127 468 348)

**Proponent Address:** Suite 4, Level 3, The South Shore Centre, 83-85 South Perth Esplanade, SOUTH PERTH WA 6151

**Assessment Number:** 1697

**Report of the Environmental Protection Authority**: 1350

Published on:

**Appeal Numbers:** 25 to 26 of 2010

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 ground disturbing activity, 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.

## 6 Infrastructure Corridor

6-1 The proponent shall not establish the infrastructure corridor within the South Eneabba Nature Reserve.

6-2 The proponent shall ensure that there is no loss of plants of Declared Rare Flora (DRF) species due to construction activities associated with the proposal.

6-3 Prior to commencement of the proposal, the proponent shall provide details of a revised infrastructure route and associated environmental impacts to the satisfaction of the CEO, on advice of the DEC.

6-4 Commencement of the proposal within the revised corridor shall not be implemented until approved by the CEO.

6-5 The proponent shall ensure that activities associated with the proposal do not introduce *Phytophthora* species (dieback) into areas of native vegetation or into the South Eneabba Nature Reserve.

## 7 Rehabilitation

7-1 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.

7-2 Rehabilitation activities shall continue until such time as the requirements of condition 7-1 are demonstrated by inspections and reports to have been met for a minimum of five years to the satisfaction of the CEO on advice of the DEC.

## 8 Fauna

8-1 The proponent shall limit the length of any single section of open trenches associated with the construction of the gas pipeline lateral to a maximum of 2.5 kilometres at any time.

8-2 Fauna refuges are to be placed in the trenches at intervals not exceeding 50 metres.

8-3 The proponent shall employ at least two fauna clearing persons to remove fauna from the trenches.

8-4 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.

8-5 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 via a mesh (to dissipate energy) to adjacent vegetated areas.

8-6 Within 14 days following completion of the construction of the gas pipeline lateral, the proponent shall provide a report on fauna found, both dead and alive, within the gas pipeline corridor to the CEO.

## 9 Air Quality

9-1 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 airshed, 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]

## 10 Greenhouse Gas Abatement

10-1 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.

10-2 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.

10-3 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 10-2 by 31 March of each year.

10-4 The proponent shall commission an Independent Specialist to review and report on the proponent's performance against the requirements of condition 10-2 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.

10-5 The proponent shall make the Greenhouse Gas Abatement Program required by condition 10-1 and the reviews under conditions 10-3 and 10-4 publicly available in a manner approved by the CEO.

10-6 Conditions 10-1 to 10-5 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.

## 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) as agreed pursuant to 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*;

"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*;

"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;

"DEC" means the Department of Environment and Conservation;

"EPA" means the Environmental Protection Authority;

"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.

**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. 1697)**

The proposal is for the construction and operation of:

- a nominal 450 MW coal-fired base-load generation plant consisting of three 150 MW subcritical steam turbine generating units with circulating fluidised bed (CFB) boilers; and
- a nominal 358 MW natural gas-fired peaking-load generation plant consisting of two 179 MW open cycle gas turbine (OCGT) generating units,

on a site located approximately 15 km south-south-west of Eneabba, and the establishment of an approximately 20 km long and 100 m wide infrastructure corridor, the location of which is yet to be determined, that will accommodate the construction and operation of:

- a 300 - 400 mm diameter natural gas pipeline lateral to connect the power station to either the Dampier to Bunbury Natural Gas Pipeline (DBNGP) or the Parmelia Gas Pipeline; and
- a 330 kV electricity transmission line with about eighty, 40 m high towers located approximately every 250 m to connect the power station to the external electricity network at the proposed Eneabba Substation.

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

The main characteristics of the proposal are summarised in Table 1 below. A detailed description of the proposal is provided in Section 3 of the PER document (URS Australia Pty Ltd, 2009).

**Table 1: Summary of key proposal characteristics**

| Element | Description |
|---|---|
| **General** | |
| Entire project area footprint | Up to 483 hectares. |
| Water supply requirement (construction) | 65 ML/yr over the 4 year construction period sourced from the Central West Coal (CWC) Project (Cattamarra Aquifer). |
| Water supply requirement (operations) | Up to 11 GL/yr mainly sourced from the CWC Project mine dewatering. Backup supply of approximately 3 GL/yr sourced from the Yarragadee aquifer. |
| Evaporation pond area | 150 hectares. |
| Infrastructure corridor | Approximately 20 km long and 100 m wide. |
| Gas pipeline lateral | A 300 - 400 mm diameter gas pipeline approximately 20 km long that will be connected to either the Dampier to Bunbury Natural Gas Pipeline or the Parmelia Gas Pipeline. The gas pipeline will be located within the infrastructure corridor. |
| Electricity transmission line | An approximately 20 km long 330 kV electricity transmission line that will be connected to the external network at the proposed Eneabba Substation. The transmission line will be located within the infrastructure corridor and will include about eighty, 40 m high towers located approximately every 250 m. |
| **Coal-fired component** | |
| Coal-fired steam turbine electrical output | Approximately 450 MW net. |
| Number of generating units | Three. |

| Element | Description |
|---|---|
| Nominal unit output | Approximately 150 MW net. |
| Load profile | Base-load with a capacity factor of approximately 95%. |
| Annual coal consumption | Approximately 2.3 million tonnes of coal from the CWC deposit. |
| Start up fuel | Natural gas or liquid fuel (diesel). |
| **Coal-fired component (Continued)** | |
| Liquid fuel storage capacity (for boiler start-up etc) | Up to approximately 300 kL. |
| Condenser cooling | Water cooled (with possible hybrid optimisations). |
| Stack details | One 130 m high stack with three flues each with an exit diameter of 3.45 m. |
| **Gas-fired component** | |
| Gas turbine electrical output | Approximately 358 MW net. |
| Number of generating units | Two. |
| Nominal unit output | Approximately179 MW net at Maximum Continuous Rating and ISO conditions. |
| Net plant thermal efficiency (HHV) | Approximately 33% (for each unit) |
| Load profile | Peaking-load with a capacity factor of approximately 25%. |
| Stack details | One 35 m high stack for each unit, each with an exit diameter of 6.5 m. |
| Annual natural gas consumption | Approximately 9 PJ at 25% capacity factor. |
| **Outputs** | |
| Solid waste | Approximately 820,000 tonnes of fly ash and bottom ash from coal-fired generation and 20,000 tonnes of evaporation pond residue will be generated each year and backfilled into the CWC pit with waste rock. |
| Wastewater | Approximately 2.36 GL/yr discharged to on-site evaporation ponds. |
| Greenhouse gas emissions | Coal-fired generation: No more than 3,776,074 tonnes of $CO_{2-e}$ per year.<br>Gas-fired generation: Approx 438,290 tonnes of $CO_{2-e}$ per year.<br>Other sources: Approx 13,068 tonnes of $CO_{2-e}$ per year.<br>Total: Approx 4,227,432 tonnes of $CO_{2-e}$ per year. |

**Abbreviations**

| | |
|---|---|
| $CO_{2-e}$ | carbon dioxide equivalent |
| GL | gigalitres ($10^9$ litres) |
| GL/yr | gigalitres per year |
| g/s | grams per second |
| HHV | higher heating value |
| ISO | International Standards Organisation |
| kL | kilolitres |
| km | kilometres |
| kV | kilovolts |
| m | metres |
| $mg/Nm^3$ | milligrams per 'normal' cubic metre |
| ML | megalitres ($10^6$ litres) |
| ML/yr | megalitres per year |
| mm | millimetres |
| MW | megawatts ($10^6$ watts) |
| $O_2$ | oxygen |
| PJ | petajoules ($10^{15}$ joules) |
| $PM_{10}$ | particulate matter with an aerodynamic diameter of < 10 micrometres |
| ppmv | parts per million by volume |
| t/yr | tonnes per year |

**Source: Modified version of Table 3.1 from URS Australia Pty Ltd**

## Figures (attached)

Figure 1: Regional location (Source: Figure 1-1 from URS Australia Pty Ltd, 2009)

Figure 2: General location (Source: Figure 1-2 from URS Australia Pty Ltd, 2009)

Figure 3: Project layout plan (Source: Figure 1-3 from URS Australia Pty Ltd, 2009)

Figure 4: Conceptual power station plant layout plan (Source: Figure 1-4 from URS Australia Pty Ltd, 2009)


**Figure 1: Regional location (Source: Figure 1-1 from URS Australia Pty Ltd, 2009)**

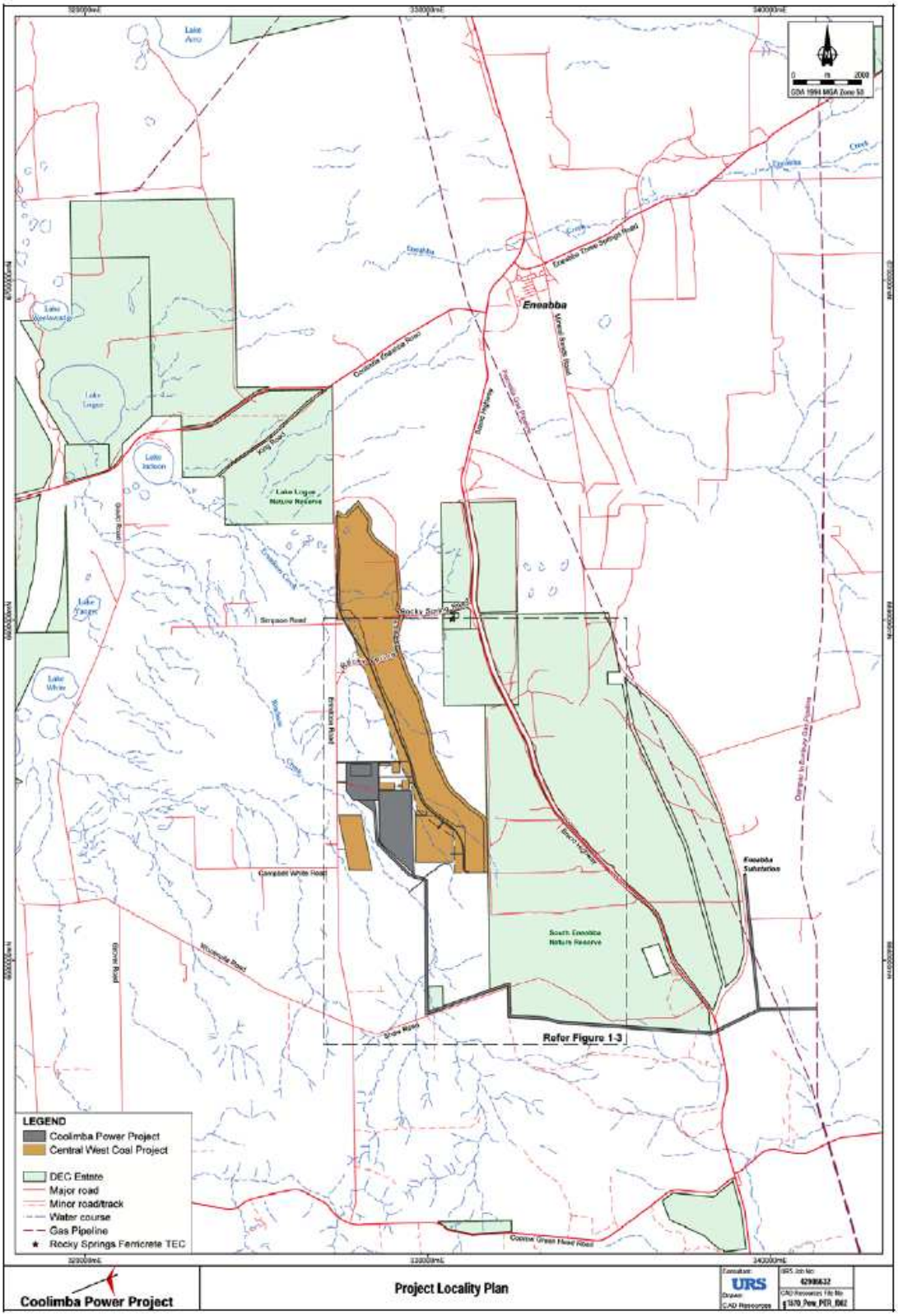


**Figure 2: General location (Source: Figure 1-2 from URS Australia Pty Ltd, 2009)**

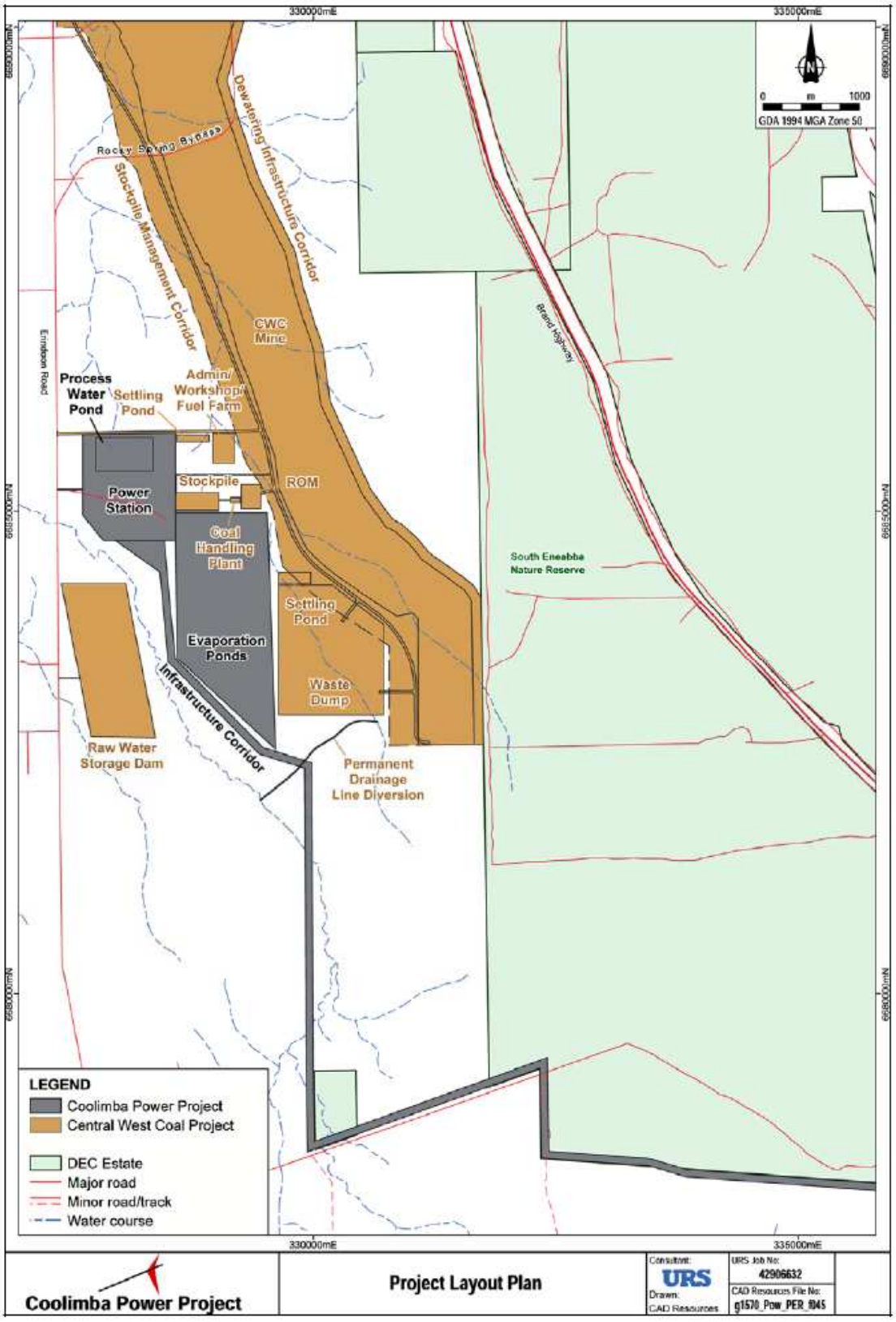


**Figure 3: Project layout plan (Source: Figure 1-3 from URS Australia Pty Ltd, 2009)**

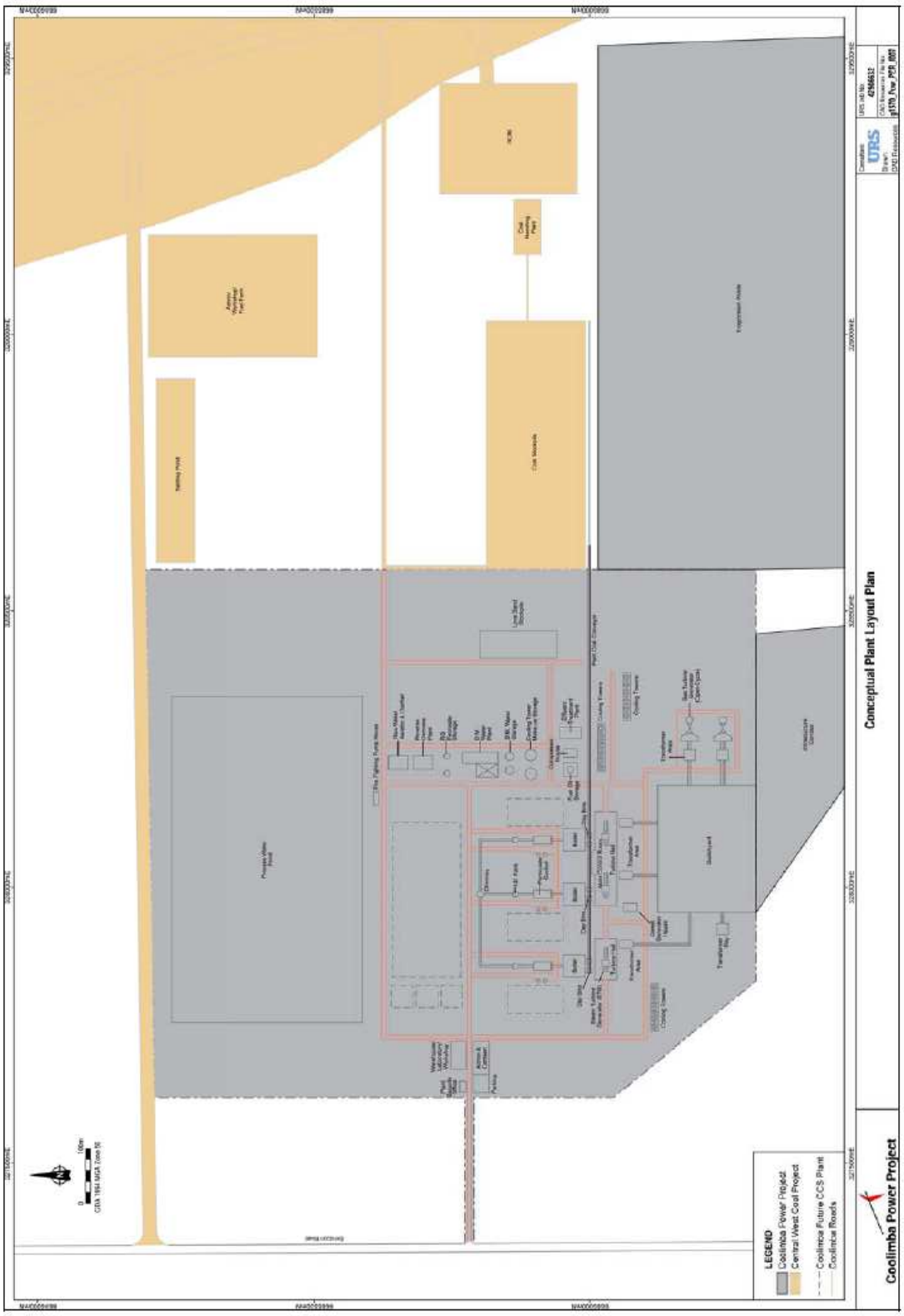


**Figure 4: Conceptual power station plant layout plan (Source: Figure 1-4 from URS Australia Pty Ltd, 2009)**