



Australian Government

Department of the Environment, Water, Heritage and the Arts

Referral of proposed action

What is a referral?

The (the EPBC Act) protects matters of national environmental significance (NES), and the environment, in relation to Commonwealth actions, and actions on (or impacting upon) Commonwealth land. The purpose of a referral is to determine whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister for the Environment, Heritage and the Arts' decision as to whether approval is necessary and, if so, the type of assessment that will be taken. These decisions are made within 20 business days.

When do I need to make a referral?

A referral must be made for actions that are likely to have a significant impact on matters protected by Part 3 of the EPBC Act:

World Heritage (sections 12 and 15A)

National Heritage places (sections 15B and 15C)

Wetlands of international importance (sections 16 and 17B)

Listed threatened species and communities (sections 18 and 18A)

Listed migratory species (sections 20 and 20A)

Protection of the environment from nuclear actions (sections 21 and 22A)

Marine environment (sections 23 and 24A)

Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)

Protection of the environment from Commonwealth actions (section 28)

OR

actions that may have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land)

actions taken on Commonwealth land that may have a significant impact on the environment generally

actions by Commonwealth Authorities that are likely have a significant impact on the environment require approval.

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure.

To help you decide whether or not your proposed action requires approval (and, therefore, if you should make a referral), read the following documents, available from the Department web site:

the Policy Statement titled . Additional sectoral guidelines are also available.

the Policy Statement titled .

the interactive map on the web site—enter a location to obtain a report on what matters of NES may occur in that location.

A staged or component action

An action that is a component of a larger action may not be accepted separately and may require referral of the larger action for consideration under the EPBC Act. Refer to .

If you want to make a referral for a staged or component referral, contact the EPBC Act Referrals Section (1800 803 772).

Permits

Some activities may also require a permit under other sections of the EPBC Act, whether or not approval is required. Information is available on the Department web site.

Completing the referral form

Completing this form will help ensure that you submit the information required by the EPBC Regulations.

All referrals MUST be published on the Department's web site for public comment (the Department will arrange this) and should generally be:

readily understood by the public

no longer than 25 A4-sized, single-sided pages

typed (main text no smaller than 11 points)
have clearly legible maps and diagrams
supplied unbound or electronically.

Provide supporting documentation, such as environmental reports or surveys, as attachments. However, the referral form must contain the core information, so that it provides an adequate basis for public comment and decision-making.

Provide coloured maps, figures or photographs to help explain the project and its location. Aerial photographs, in particular, can provide a useful perspective and context. Figures should be good quality as they may be scanned and viewed electronically as black and white documents. Maps should be of a scale that clearly shows the location of the proposed action and any environmental aspects of interest.

Using the MS Word file to enter your information

You can complete your referral by entering your information into this Word file.

Instructions are provided in green text. If you do not see the instructions you need to reveal 'hidden' text. A toolbar with buttons to turn the instructions on and off should be visible when you open the file.

Normally the instruction text will not print. (If you wish to print a copy of the form with the instructions you will need to select the Options button in the Print dialog and select Hidden text.)

Submitting the referral form

By mail to

EPBC Act Referrals Section
Environment Assessment Branch
Department of the Environment,
Water, Heritage and the Arts
GPO Box 787
CANBERRA ACT 2601

By fax to 02 6274 1789

Referrals must be of sufficiently clear quality to be scanned into electronic format.

Address the fax to the mailing address, and clearly mark it as a 'Referral under the EPBC Act'.

Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

By email to epbc.referrals@environment.gov.au.

Clearly mark the email as a 'Referral under the EPBC Act'.

Attach the referral as a Microsoft Word file and, if possible, a PDF file.

To ensure file sizes are not too large (below two megabytes), enclose maps and figures as separate files if necessary. If unsure, send a question to the email address.

Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

What happens next?

The Department will write to you at the end of the 20 business day period to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is needed. There are three types of decisions about the referral.

The proposed action is NOT LIKELY to be significant and does NOT NEED approval

No further consideration is required under the environmental assessment provisions of the EPBC Act and the action can proceed (subject to any state or local government requirements).

The proposed action is NOT LIKELY to be significant IF undertaken in specified manner

The specified manner in which you must carry out the action will be identified as part of the final decision. You must report your compliance with the specified manner to the Department.

The proposed action is LIKELY to be significant and does NEED approval

The proposed action is subject to a public assessment process before it can be considered for approval. The level of assessment will be decided at the same time. (Further information about the levels of assessment and basis for deciding the approach are available on the web site.)

If the action is likely to be significant it is called a and the particular matters upon which the action may have a significant impact (such as World Heritage or threatened species) are known as the .

Compliance audits

The Department may audit your project at any time to ensure that it was completed in accordance with the information provided in the referral or the stated particular manner. If the project changes, such that the degree of significance could vary, you should write to the Department to advise of the changes, and likely significance, or discuss with the EPBC Act Referrals Section (1800 803 772).

For more information

call the Department of the Environment, Water, Heritage and the Arts Community Information Unit on 1800 803 772 or

visit the web site www.environment.gov.au/epbc

All the information you need to make a referral, including documents referenced in this form, can be accessed from this web page.

Referral of proposed action

Project title

1 Contacts

1.1	Referring party	Person, agent or agency who is making the referral
	Name	Mark Imber
	Title	Senior Environmental Project Manager
	Organisation	WorleyParsons
	Postal address	Level 3, 80 Albert Street
	Telephone	(07) 3221 7444
	Email	Mark.imber@worleyparsons.com.
1.2	Responsible party	Person responsible for or who will carry out the proposed action. If same as 1.1, write 'as above'
	Name	Peter Binnie
	Title	Vice President – Project Development
	Organisation	Waratah Coal Incorporated
	Postal address	GPO Box 89, Brisbane Qld 4001
	Telephone	(07) 3303 0670
	Email	contact@waratahcoal.com
1.3	Proponent	Person responsible for preparing assessment documentation, if approval is required. If same as 1.2, write 'as above'
	Name	As above
	Title	
	Organisation	
	Postal address	
	Telephone	
	Email	

2 Summary of proposed action

- NOTE: You must attach an A4 size map/plan(s) showing the location and approximate boundaries of the area in which the project is to occur. The summary below should encompass any alternative locations, timeframes or activities that are listed in Section 3.2.

2.1	<p>Short description Use 2 or 3 sentences to uniquely identify the proposed action and its location.</p>	<p>Waratah Coal Inc intends to establish a new coal mine, railway and port to export high volatile, low sulphur, steaming coal to international markets. The coal will be sourced from Waratah Coal's mining tenements near Alpha in the Galilee Basin, Central Queensland. The project also includes the possible establishment of a water supply pipeline between the coal mine and Lake Dalrymple, and the provision of a high voltage electricity transmission line between the closest high voltage distributor and the port.</p>																																																																					
2.2	<p>Latitude and longitude If area less than 5 hectares, provide the location as a single pair of latitude and longitude references. If area greater than 5 hectares, provide bounding location points. Do not use AMG coordinates.</p>	<table border="1"> <thead> <tr> <th rowspan="2">location point</th> <th colspan="3">Latitude</th> <th colspan="3">Longitude</th> </tr> <tr> <th>degrees</th> <th>minutes</th> <th>seconds</th> <th>degrees</th> <th>minutes</th> <th>seconds</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20</td> <td>35</td> <td>13.11</td> <td>146</td> <td>50</td> <td>34.81</td> </tr> <tr> <td>2</td> <td>20</td> <td>34</td> <td>47.52</td> <td>147</td> <td>3</td> <td>1.92</td> </tr> <tr> <td>3</td> <td>23</td> <td>0</td> <td>39.55</td> <td>146</td> <td>43</td> <td>12.07</td> </tr> <tr> <td>4</td> <td>22</td> <td>36</td> <td>20.88</td> <td>150</td> <td>53</td> <td>9.6</td> </tr> <tr> <td>5</td> <td>22</td> <td>57</td> <td>14.82</td> <td>150</td> <td>56</td> <td>50.96</td> </tr> <tr> <td>6</td> <td>23</td> <td>44</td> <td>9.81</td> <td>146</td> <td>6</td> <td>46.09</td> </tr> <tr> <td>7</td> <td>22</td> <td>44</td> <td>52.69</td> <td>146</td> <td>6</td> <td>46.09</td> </tr> <tr> <td>8</td> <td>22</td> <td>44</td> <td>54.45</td> <td>146</td> <td>31</td> <td>4</td> </tr> </tbody> </table>	location point	Latitude			Longitude			degrees	minutes	seconds	degrees	minutes	seconds	1	20	35	13.11	146	50	34.81	2	20	34	47.52	147	3	1.92	3	23	0	39.55	146	43	12.07	4	22	36	20.88	150	53	9.6	5	22	57	14.82	150	56	50.96	6	23	44	9.81	146	6	46.09	7	22	44	52.69	146	6	46.09	8	22	44	54.45	146	31	4
location point	Latitude			Longitude																																																																			
	degrees	minutes	seconds	degrees	minutes	seconds																																																																	
1	20	35	13.11	146	50	34.81																																																																	
2	20	34	47.52	147	3	1.92																																																																	
3	23	0	39.55	146	43	12.07																																																																	
4	22	36	20.88	150	53	9.6																																																																	
5	22	57	14.82	150	56	50.96																																																																	
6	23	44	9.81	146	6	46.09																																																																	
7	22	44	52.69	146	6	46.09																																																																	
8	22	44	54.45	146	31	4																																																																	
2.3	<p>Locality Provide a brief physical description of the project location (proximity to major towns etc).</p>	<p>The proposed open cut coal mine is located near "Hobartville" approximately 13 km west and 35 km north of Alpha. The proposed railway extends 495 km from the mine site on EPC 1040 to the proposed port site. The route corridor passes through Chirnside 8.6 km to the south of Capella, to the immediate north of Gregory, generally to the north of the Mackenzie River, 5.3 km to the south of Marlborough and 8.5 km to the north of Byfield.</p> <p>The port site is situated between Cape Manifold and Five Rocks Beach on the Central Queensland coast, 20 km south of Port Clinton and within the Shoalwater Bay Training Area (SWBTA).</p> <p>The 285 km mine water supply pipeline extends north from the mine site on EPC 1040 to Lake Dalrymple on the Burdekin River. It is located generally to the east of the Belyando River and runs adjacent to the Suttor River.</p>																																																																					
2.4	<p>Size of the development footprint or work area (hectares)</p>	<p>Mine = 8,500 ha Railway = 3,960 ha Port = 100 ha Mine water supply pipeline = 590 ha Port power transmission line = not yet determined Port access road = not yet determined</p>																																																																					

2.5	Street address of the site	Not applicable.	
2.6	Lot description Describe the lot numbers and title description, if known.	Coal mine - EPC1040 (South Alpha)and EPC1053 (Alpha North) Railway corridor – not available Port site – Dismal Sector, SWBTA Mine water supply pipeline corridor – not available Port power transmission – not available Port access road – not available	
2.7	Local Government Area and Council contact (if known)	Barcaldine Regional Council – Ph: (07) 4651 5600 Isaac Regional Council – Ph: 1300 472 227 Central Highlands Regional Council – Ph: 1300 242 686 Rockhampton Regional Council – Ph: (07) 4936 8555	
2.8	Project life Specify the estimated start date of construction/operation and the operational life of the project.	Commence of construction = 2010 Commence of operation = 2012 Estimated project life = 20+ years	
2.9	Alternatives Does the proposed action include alternatives?	<input type="checkbox"/>	No
		<input type="checkbox"/>	Yes, complete section 3.2
2.10	State assessment Is the action subject to a state or territory environmental impact assessment?	<input type="checkbox"/>	No
		<input type="checkbox"/>	Yes, complete Section 3.5
2.11	Component of larger action Is the proposed action a component of a larger action?	<input type="checkbox"/>	No
		<input type="checkbox"/>	Yes, complete Section 3.6

3 Detailed project description

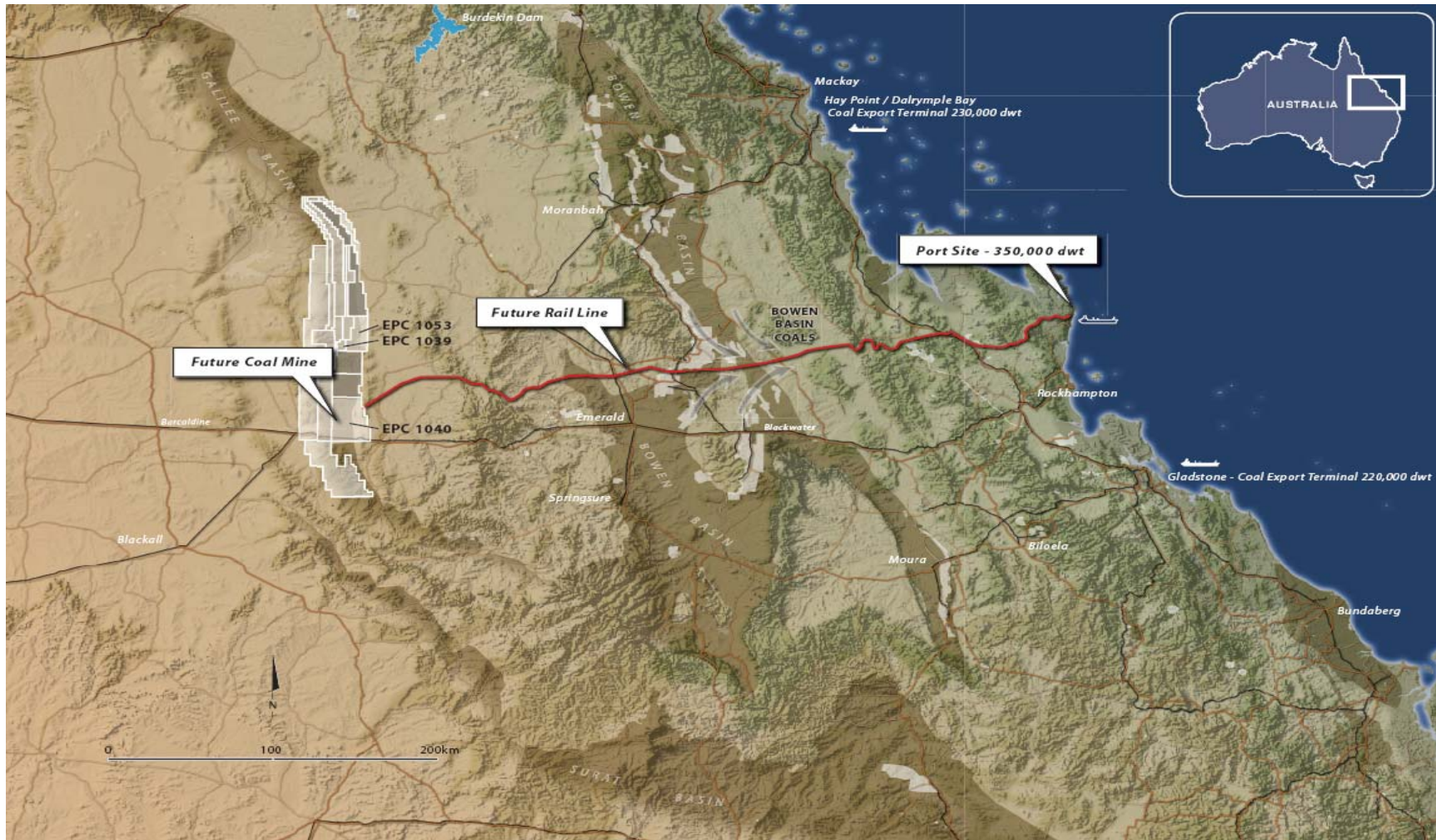
- NOTE: The proposal described here is the action(s) on which ALL subsequent decisions under the EPBC Act will be made, including decisions on significance, level of assessment (if needed) and approval (if needed). It is therefore important that the description is complete and includes all components and activities associated with the action, as well as any specific alternatives to be assessed. If certain related components are not intended to be included within the scope of the referral, this should be clearly explained in Section 3.6.

3.1 Description of proposal

Waratah Coal proposes to construct and operate a new open cut/underground coal mine, railway and port to export coal from its mining tenements near Alpha in the Galilee Basin, Central Queensland. The project also involves the establishment of a water supply pipeline between the coal mine site and Lake Dalrymple on the Burdekin River or alternatively a water supply pipeline from Fairbairn Dam to the mine site, the provision of a high voltage electricity transmission line between the closest high voltage distributor and the port, and the provision of a water supply and water supply pipeline for the new port. The project is expected to provide employment of up to 2,200 people during construction and 760 permanent employees for the operation of the project.

Figure 1 illustrates the project's development concept.

Figure 1: Project Concept Plan



The Mine

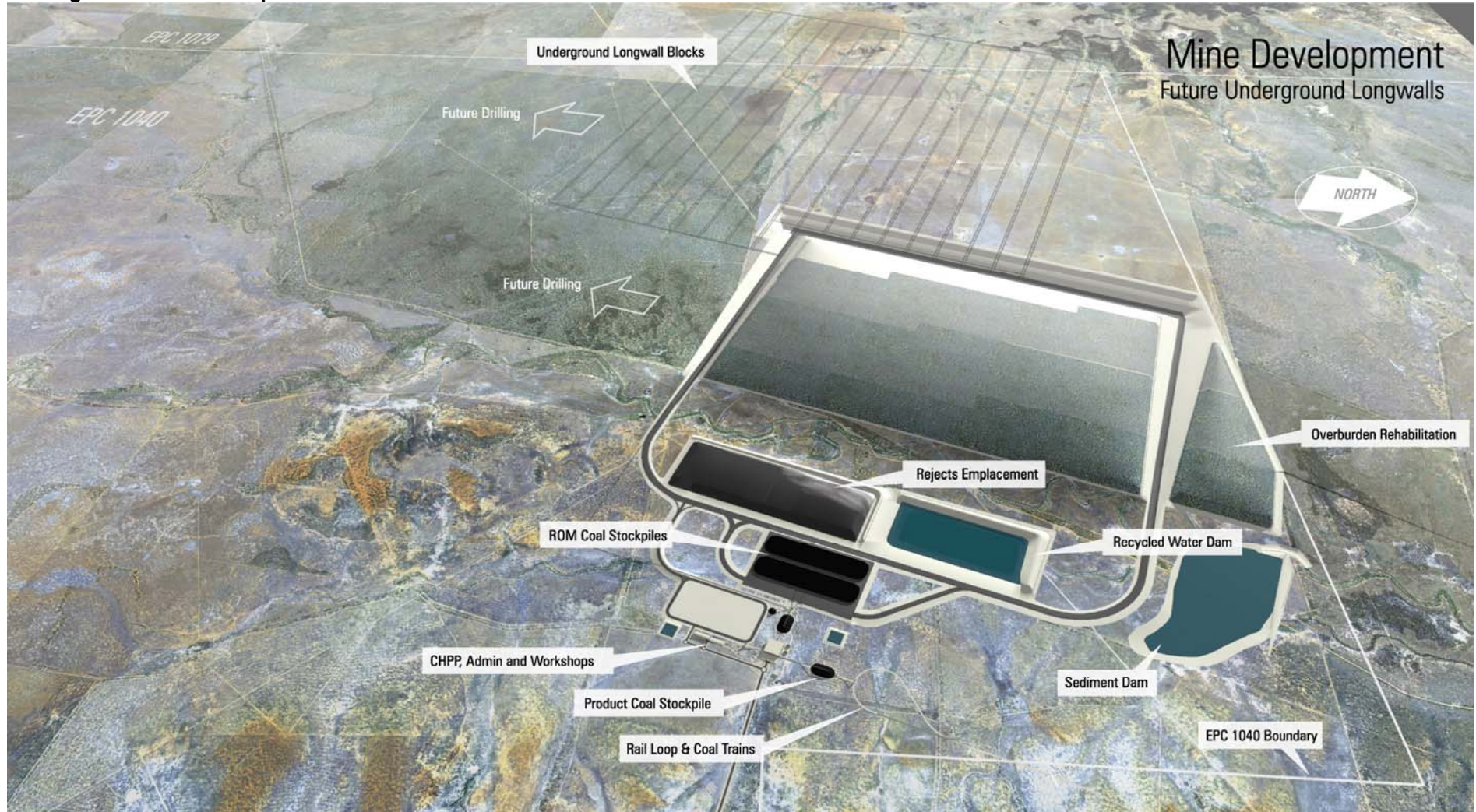
The preliminary mine concept is illustrated in Figure 2. An initial assessment of possible mining options has indicated that the coal deposits are suitable for both open cut mining and underground longwall mining.

The proponent is currently considering a number of potential mining method combinations involving dragline, truck and shovel, and shovel and conveyor options for the open cut phase of the proposed mine. Underground longwall mining will be undertaken at a future time to extract coal from the deeper seams.

It is expected that the mine will incorporate the following:

- Open cut pits;
- Topsoil stockpiles;
- Water management structures (including sediment dams, levee banks, etc);
- ROM and product stockpiles;
- Coal rail loadout facilities;
- Coal preparation plant;
- Tailings dams;
- Overburden dumps;
- Waste water treatment facilities;
- Refuelling and maintenance facilities;
- Access and haul roads;
- Power lines; and
- Mine office, communications, and associated amenities.

Figure 2: Mine Concept Plan



It is estimated that the proposed mine will require some 7,500 ML per annum of raw water. It is proposed to source this water from a variety of sources. Water may be obtained from local bores, mine dewatering, a structure on the Belyando River, from Lake Dalrymple on the Burdekin River or from Fairbairn Dam. The transport of water to the site from Lake Dalrymple would require the construction of a new water supply pipeline (approximately 285 km in length).

The mine's power demand is expected to be up to 100 MVA per annum. The potential mine area is traversed by the existing Lilyvale-Clermont-Barcaldine 132 kV powerline owned by Ergon. Power will either be sourced from this transmission line, or the proposed IsaLink HVDC line (should it proceed) which is also proposed to traverse the potential mine area.

The mine will operate on a fly in / fly out system for its workforce for both the construction and operational phases of the project. It is proposed to construct a temporary accommodation village near the mine site. Several airport options for the fly in / fly out worker movement will be examined as part of the project pre-feasibility studies. These are the construction of a new facility at the mine site, the upgrading of the existing Alpha airstrip and the use of the existing commercial airport at Emerald combined with the bussing of workers to the mine site.

The Railway

A preferred route corridor (20 km wide) has been identified for the proposed railway line. It is intended that the location of the railway line within this corridor will be progressively refined during future design stages of the project. An 80 m wide easement will ultimately be selected for the railway line and associated 5 m wide maintenance track and communications facilities. Figure 1 shows the corridor location.

The location of the proposed railway will provide an opportunity for third party users from the Bowen Basin to access the new railway via a connection with the existing narrow gauge rail network or through the construction of their own individual spur lines

The concept train set will be diesel-electric and will consist of six locomotives and 180 cars. It is proposed to use state-of-the-art, heavy haul, standard gauge, rail infrastructure with 20,000 tonne unit trains. The initial transport of 25 Mtpa of washed coal from Waratah's mining operations would result in the use of four train sets operating on a 24 hour cycle over a six day week and a 50 week year.

The Port

The new port will accommodate ships which range in size from 35,000 DWT to 350,000 DWT and hence will support handymax, panamax, capesize and chinamax vessels.

Initially the port will handle the export of 50 Mtpa of coal. The proposed export berths will accommodate two 350,000 DWT vessels at a time or any combination of ships which equate to this capacity. The port will be designed to enable capacity expansion in 25 Mtpa modules above the nominated start-up capacity.

The operation of the port will require associated services and infrastructure such as all-weather road access, raw and potable water supply, electricity supply and communications. It is also proposed that capital and maintenance dredging will be required as part of the construction and ongoing maintenance of the port. The nature of these needs will be determined during the feasibility study phase of the project.

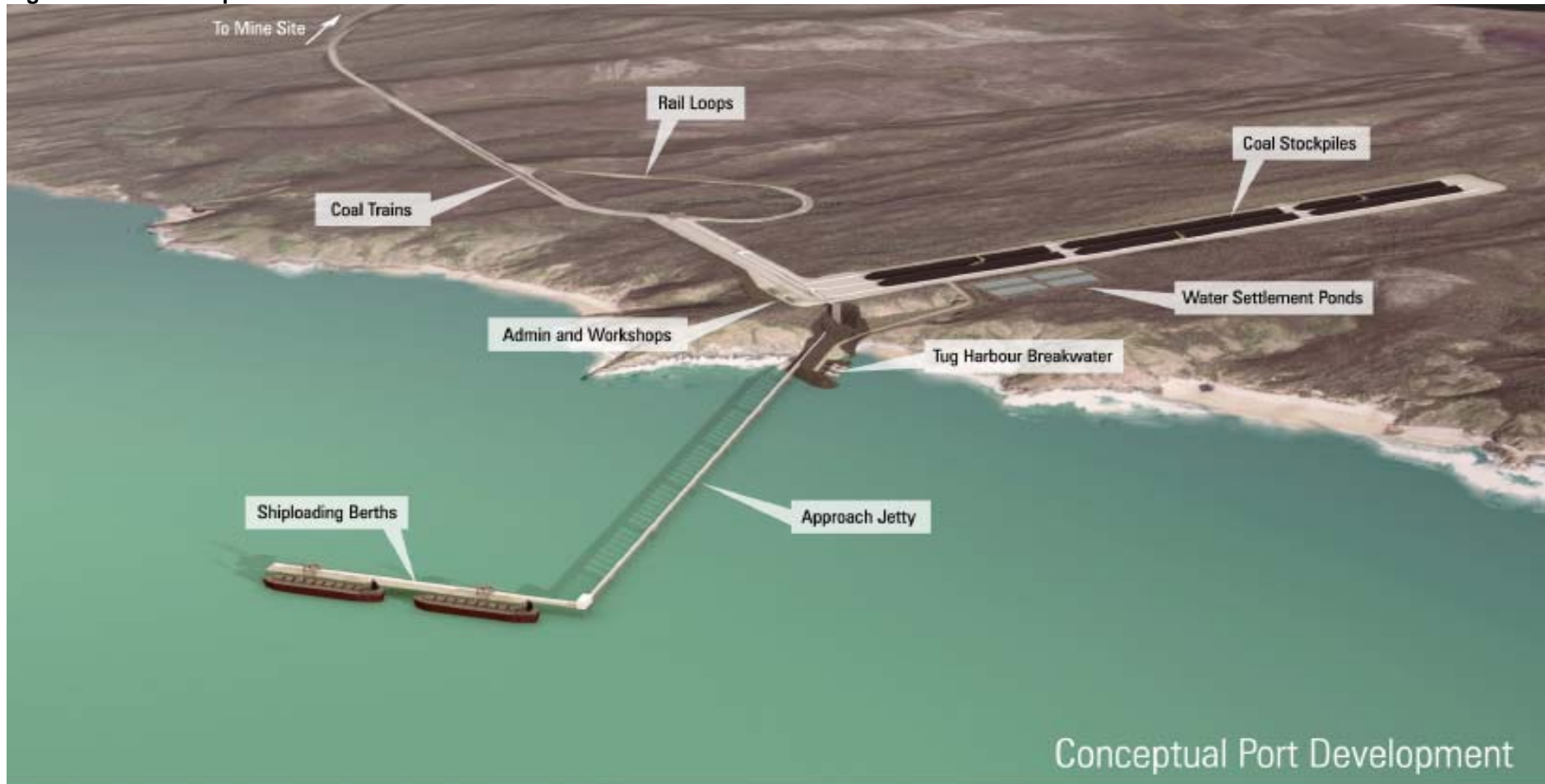
The proposed coal terminal will contain the following components:

- Two coal receival stations (capacity 8,000 tonnes per hour (tph));
- In-loading conveyors;
- Two coal stockpile stackers (8,000 tph inloading rate);
- Coal stockyard (2.5 Mt capacity);
- Two coal stockpile reclaimers (8,000 tph capacity);
- Out-loading conveyors;
- Surge bins;
- Jetty and jetty conveyors;
- Wharf and wharf conveyors;
- Two shiploaders (10,000tph out-loading rate);
- Two shipping berths (Laden draft 24 m);
- Two rail loops (20,000 t trains);
- Tug harbour; and
- Barge dock.

Coal will be transported to the coal terminal in bottom dumping rail wagons, which will discharge the coal into a dump station situated on the rail loop. Coal from the rail dump station will be transported to coal stockpiles by a conveyor system and a stacker / reclaimer. The coal stockyard will initially be 2,500 m in length and 160 m in width and capable of being expanded in response to increased demand. Coal will be reclaimed from the stockpiles, placed on conveyors and transported to the ship loaders for loading onto the export ships. The wharf structure will be located some 1,696 m offshore and will consist of two main berths.

Figure 3 provides an aerial oblique view of the proposed facility looking from the northeast towards the SWBTA.

Figure 3: Port Concept Plan - North East View



Waratah Coal Inc.



You *must* provide a description of all the activities you propose to carry out as part of your action. This should be a detailed description outlining all aspects of the proposal and referencing figures, as appropriate.

3.2 Alternative locations, time frames or activities that form part of the referred action

- Potential locations for the proposed port access road, port power transmission line and port water supply pipeline and associated infrastructure; and
- The potential location of a mine water supply dam on the Belyando River.

Describe any alternatives related to the physical location of the action, time-frames within which the action is to be taken and alternative methods or activities for achieving the action. Please note, if the action that you propose to take is determined to be a controlled action, any alternative locations, timeframes or activities that are identified here will be subject to environmental assessment and a decision on whether to approve the alternative.

3.3 Previously considered alternatives and the ‘do nothing’ case

The pre-concept design phase of the project examined a number of alternative railway routes and potential port locations for the project. This followed a review of the capability of existing rail and port infrastructure to handle the project’s design coal tonnage in a timely manner. This review confirmed the inability of existing infrastructure to meet project requirements, and the need for the project to construct new rail and port infrastructure to enable the export of the project’s coal product within the required timeframe.

The port options considered were Abbot Point, Dalrymple Bay, a new port within the SWBTA and Gladstone. Based on these port options, the rail links outlined in Table 1 below were considered.

Table 1: Alternative Port and Rail Route Options

Port	Rail Route	Rail Distance (km)	Line Status
Abbot Point	EPC to Abbot Point	479	New – 285 km Existing – 194 km
	EPC to Abbot Point via Goonyella	520	New – 155 km Existing – 365 km
Dalrymple Bay	EPC to Dalrymple Bay	422	New – 155 km Existing – 267 km
Port Clinton	EPC to New Port adjacent to SWBTA (north of Mackenzie River)	495	New – 495 km
	EPC to New Port adjacent to SWBTA via Blackwater	596	New – 125 km Existing – 471 km
Gladstone	EPC to Gladstone via Blackwater	575	New – 48 km Existing – 527 km

‘Do Nothing’ Case

There is a growing worldwide demand for coal. The project has a large coal resource base with low overburden ratios which will enable the project to be a very competitive, low cost producer. The ‘Do Nothing’ option would result in the non-realisation of the many public benefits associated with this project. These benefits include the generation of substantial revenues for both the state and national governments gained through taxes and royalties, significant job opportunities during the construction and operational phases of the project, and the provision of new rail and port infrastructure for use by third party coal producers.

Describe any previously considered alternatives and the reasons why referred action is preferred (e.g. projects affecting heritage values of the built environment where several alternatives may have been considered). Briefly describe the consequences of the ‘do nothing’ alternative, if relevant.

3.4 Context, planning framework and state/local government requirements

You *must* explain the context in which the action is proposed, including any relevant planning framework at the state and/or local government level (e.g. within scope of a management plan, planning initiative or policy framework). Describe any Australian Government or state legislation or policies under which approvals are required or will be considered against.

Commonwealth Legislation

- *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*

This referral will provide a determination on the existence of significant controlled actions under the Act and the level of environmental assessment required. It is expected that should controlled actions be identified, the preparation of an EIS would be undertaken as an accredited assessment process agreed between the Queensland and Commonwealth Governments.

- *Great Barrier Reef Marine Park Act 1975 (GBRMP Act)*

Under Regulation 61 of the Great Barrier Reef Marine Park Regulations 1983 (GBRMP Reg), any project that has the potential to impact upon the Marine Park must be assessed by the GBRMPA. An application for a permit under the GBRMP Act will be required as the proposed port facilities will be located in and adjacent to the GBRMP. An approval for the proposed project will be sought from the GBRMPA in accordance with the requirements of Regulation 74 (5) of the GBRMP Act.

- *Environment Protection (Sea Dumping) Act 1981 (the Sea Dumping Act)*

The dredging or disposal of dredge or waste materials to sea associated with the construction and operation of the port facilities or other aspects of the Project will require a permit under this Act.

- *Native Title Act 1993 (NTA)*

This Act recognises the rights and interests over land and water possessed by Indigenous people in Australia under their traditional laws and customs. Several native title claims have been submitted on lands within the project component areas. Should native title be found to exist on such lands, discussions with the claimants will be required to identify issues and safeguards.

- *Department of Defence Shoalwater Bay Training Area Standing Orders Manual and Shoalwater Bay Training Area Environmental Management System*

All activities within the SWBTA are subject to an Environmental Clearance Certificate process based on the above-mentioned documentation. This process provides for the conduct of an activity in a safe and environmentally sustainable manner.

- *Civil Aviation Regulations 1988 and Civil Aviation Safety Regulations 1988*

The Civil Aviation Safety Authority (CASA) controls the height of objects and plumes which might be a hazard to aircraft. Given the port's location within a Defence training area, an aviation safety assessment will be carried out in accordance with CASA requirements to define the size of any potential hazard zone around the port site.

Queensland Legislation

State Development and Public Works Organisation Act 1971 (SDPWOA)

This project has been declared a "significant project" under this Act and as such, Waratah Coal is required to follow the Environmental Impact Assessment (EIA) process outlined in Section 4 of this Act. The outcome of the process is an assessment report prepared by the Queensland Coordinator General which states the development conditions that must be apply to the project.

Environmental Protection Act 1994 (EP Act)

This Act, administered by the Environmental Protection Agency (EPA), provides for the establishment of development based on ecologically sustainable development principles. Under the Act, an approval is required for any Environmentally Relevant Activity (ERAs) that could cause environmental harm or an activity listed as a notifiable activity under Schedule 2 of the Act. It is expected that the project will require approval for the following ERAs under this Act:

- ERA 71 – operating a port (other than an airport) under the *Transport Infrastructure Act 1994*;
- ERA 21 (c) – construction of a pipeline;
- ERA 21 (e) – operation of a pipeline;
- ERA 72 – operating any railway for refuelling and maintaining and repairing rolling stock; and
- ERA 74 – Stockpiling, loading or unloading of goods in bulk - commercially loading, unloading or stockpiling materials or goods, in association with an activity mentioned in item 71, using a crane, conveyor, pump or other similar way at a rate of more than 100 t / day.

The project will also require an Environmental Authority (Mining lease) for a level 1 mining project as specified under section 154 of the EP Act. The EP Act establishes Environmental Protection Policies (EPPs) for the management of air, water, noise and waste issues. These protection policies are applicable this project and the management of potential impacts will be conducted in accordance with these policies.

Other Relevant Queensland Legislation

The project may also be subject to:

- *Coastal Protection and Management Act 1995*;
- *Fisheries Act 1994*;
- *Vegetation Management Act 1999*;
- *Nature Conservation Act 1992*;
- *Aboriginal Cultural Heritage Act 2003*;
- *Land Act 1994*;
- *Marine Parks Act 2004*;
- *Mineral Resources Act 1989*;
- *Queensland Heritage Act 1992*;
- *Transport Infrastructure Act 1994*;
- *Transport Operations (Marine Pollution) Act 1995*;
- *Water Act 2000*;
- *Land Protection (Pest and Stock Route Management) Act 2002*; and
- *State Planning Policy (SPP) 2/02: Planning and Managing Development Involving Acid Sulfate Soils*.

Queensland State Planning Framework

Central Queensland Regional Growth Management Framework (2002)

The project is consistent with the Framework's guiding principle for regional infrastructure in that it can support sustainable economic development with minimal impact on residents' existing lifestyle choices and environmental quality. It is also consistent with the economic development principles of the Framework as it will expand, diversify and value-add to the resources of the region and in the process help generate the sustainable employment and income necessary to improve the quality of life of the region's population.

It is also expected that various Local Authority approvals under Local Laws will be required.

3.5 Environmental impact assessments under Commonwealth, state or territory legislation

Describe any environmental assessment of the relevant impacts of the project that has been, is being, or will be carried out under state or territory legislation prior to this referral. Specify the type and nature of the assessment, the relevant legislation and the current status of any assessments or approvals.

You *must* describe or summarise any public consultation undertaken, or to be undertaken, during the assessment. Attach copies of relevant assessment documentation and outcomes of public consultations (if available).

No environmental assessment of the project proposal or public consultation activities have been or will be undertaken prior to the submission of this referral.

Desktop studies of existing databases have been undertaken to identify the potential for the project to affect items of potential national environmental significance. The findings of these searches are discussed in section 5 of this referral.

3.6 A staged development or component of a larger project

NOTE: The Minister for the Environment, Heritage and the Arts may not accept a referred action that is a component of a larger action and may request the person proposing to take the action to refer the larger action for consideration under the EPBC Act (Section 74A, EPBC Act).

If you wish to make a referral for a staged or component referral, read 'Fact Sheet 6 Staged Developments/Split Referrals' and contact the EPBC Act Referrals Section (1800 803 772).

You provide information about the larger action and details of any interdependency between the stages/components and the larger action. You may also provide justification as to why you believe it is reasonable for the referred action to be considered separately from the larger proposal (e.g. the referred action is 'stand-alone' and viable in its own right, there are separate responsibilities for component actions or approvals have been split in a similar way at the state or local government levels).

This section is not applicable.

4 Affected environment

- NOTE: You must attach a map(s)/plan(s) clearly showing the location of the action in relation to any matters of national environmental significance

Describe the affected area, emphasising the relevant matters protected by the EPBC Act. Your maps and plans should specify the location and boundaries of the project area, and where relevant the affected area in respect to any:

World Heritage properties

National Heritage places

Ramsar wetlands

Listed threatened species or communities and/or known habitat for these species or communities

Listed migratory species and/or known habitat for these species

Commonwealth Heritage Places

Places on the Register of the National Estate or other environmental features (eg conservation reserves/parks and areas of remnant native vegetation).

If the action will affect Commonwealth land or is being undertaken by a Commonwealth agency, also describe the more general environment. The Policy Statement titled *Principle Significance Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* provides further details on the type of information needed.

4.1 Matters of national environmental significance

4.1 (a) World Heritage Properties

The proposed port facilities, which are located within the SWBTA, are located within the Great Barrier Reef World Heritage Area (refer Figure 4 and Figure 4-A). Approximately 39% of the Training Area is located within the World Heritage Area.

The SWBTA represents one of the few remaining large tracts of coastal and sub-coastal land of high wilderness value along the east coast south of Cooktown, which exhibits a low level of disturbance and provides habitat for a number of endangered and threatened species. The natural values of the SWBTA have also been recognised through its inclusion on the Register of the National Estate and the Commonwealth Heritage List.

4.1 (b) National Heritage Places

The marine section of the SWBTA, as it is a part of the Great Barrier Reef, is listed as a National Heritage Place under the EPBC Act. The proposed port infrastructure will be located in the southern part of this area.

4.1 (c) Wetlands of International Significance (Ramsar)

The Ramsar listed, Shoalwater and Corio Bays wetland will be affected by the port and railway components of the project (Figure 4 and Figure 4-B). This wetland largely falls within the SWBTA and includes the intertidal areas, adjacent lands and marine waters up to the high water mark. The wetlands contain coastal, subcoastal, aquatic landscapes and ecosystems which are relatively undisturbed habitat areas for significant floral and faunal assemblages including populations of rare and threatened species.

Figure 4: Protected Areas under EPBC Act

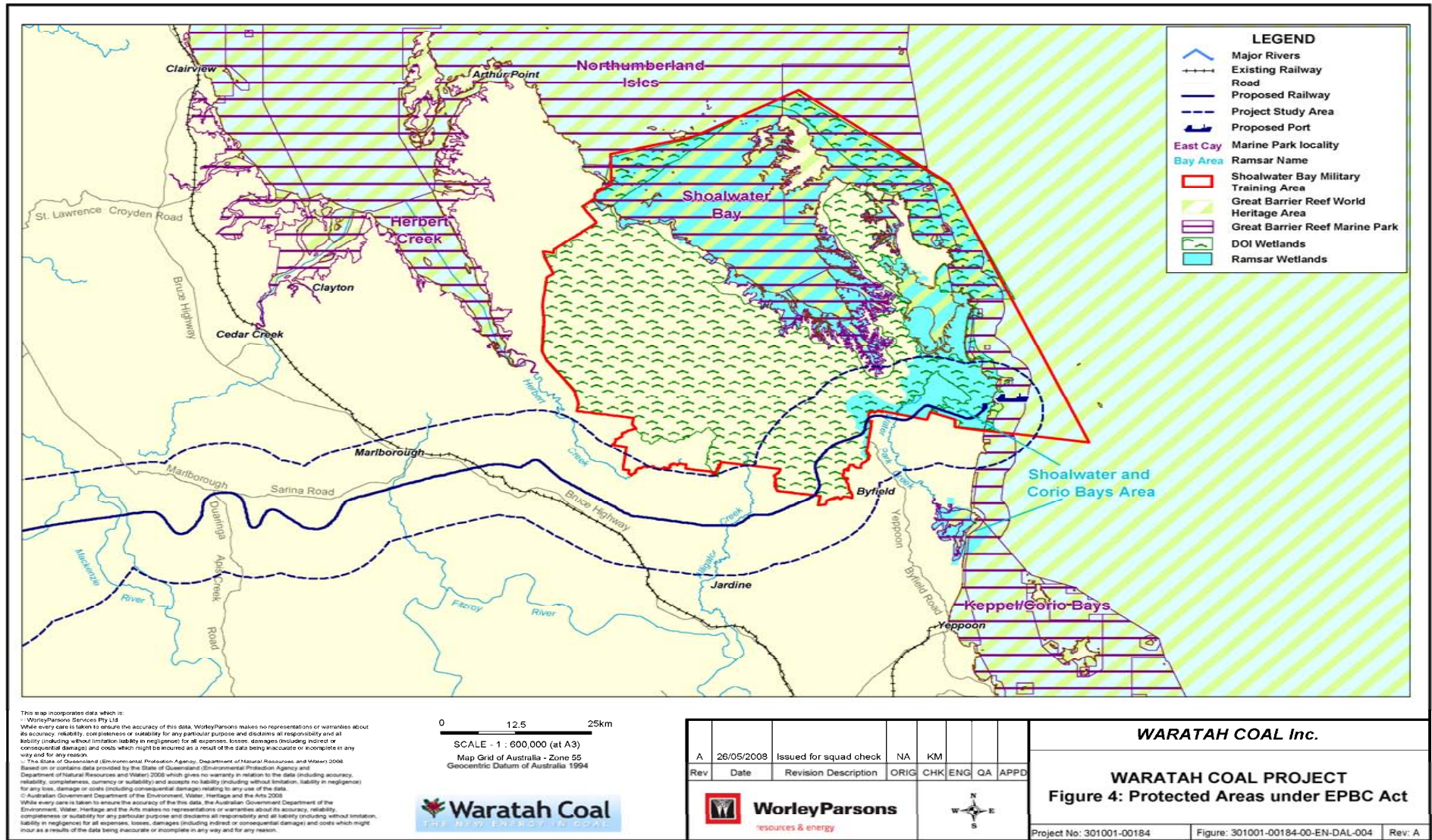
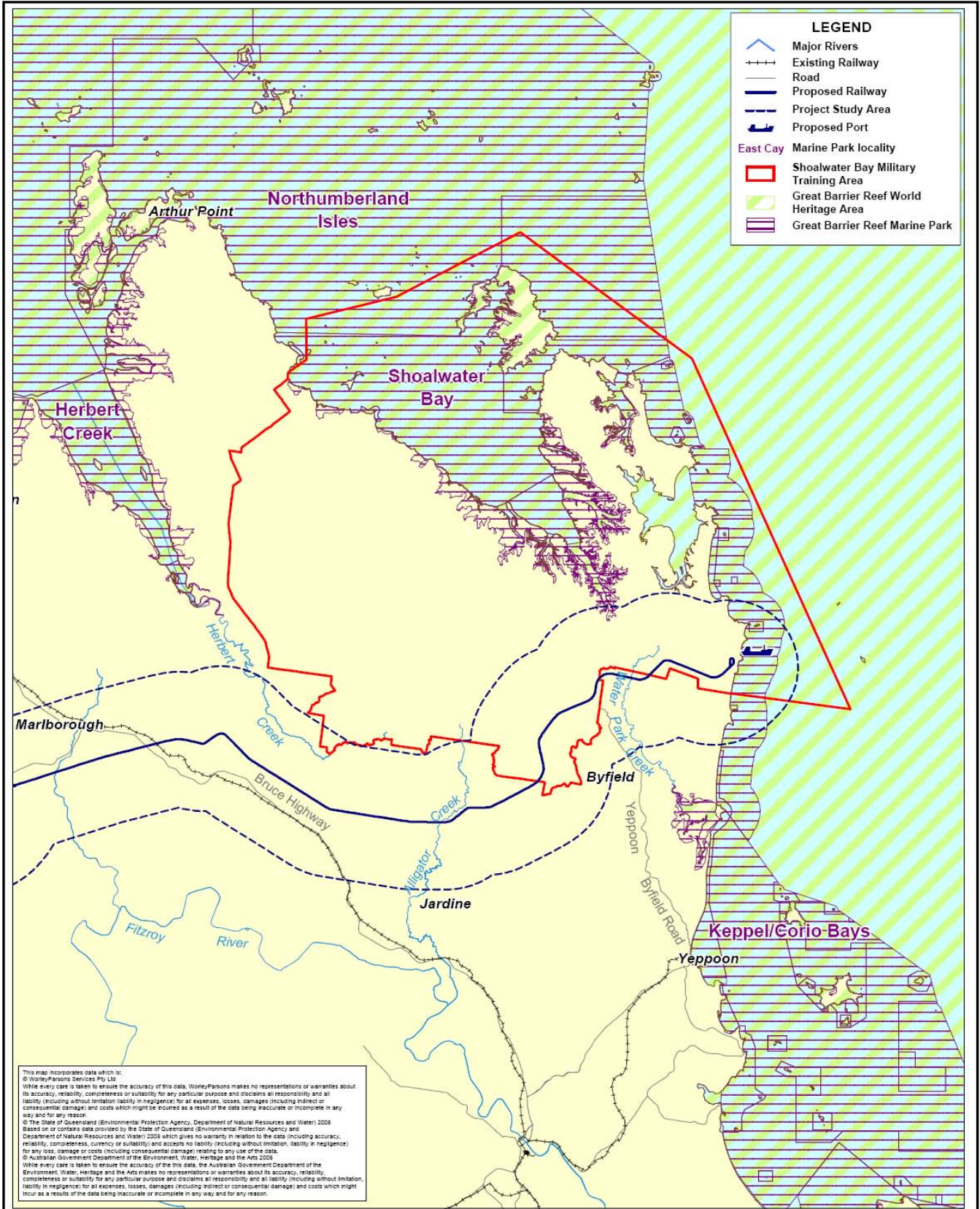


Figure 4-A - Protected Areas within the SWBTA



0 12.5 25km		SCALE - 1 : 500,000 (at A3)		Map Grid of Australia - Zone 56		Geocentric Datum of Australia 1994		WARATAH COAL Inc. WARATAH COAL PROJECT Figure 4-A - Protected Areas within the SWBTA	
Rev	Date	Revision Description	ORIG	CHK	ENG	QA	APPD	Project No: 301001-00184 Figure: 301001-00184-00-EN-DAL-029 Rev: A	
A	28/07/2008	Issued for team review	NA	DH				Project No: 301001-00184 Figure: 301001-00184-00-EN-DAL-029 Rev: A	

Compiled by BRISBANE INFRASTRUCTURE GIS SECTION K:\WARATAH\301001-00184\GIMaps\301001-00184-00-EN-DAL-029A(4A_Protected_Areas).wor

Figure 4-B - Protected Areas within the SWBTA

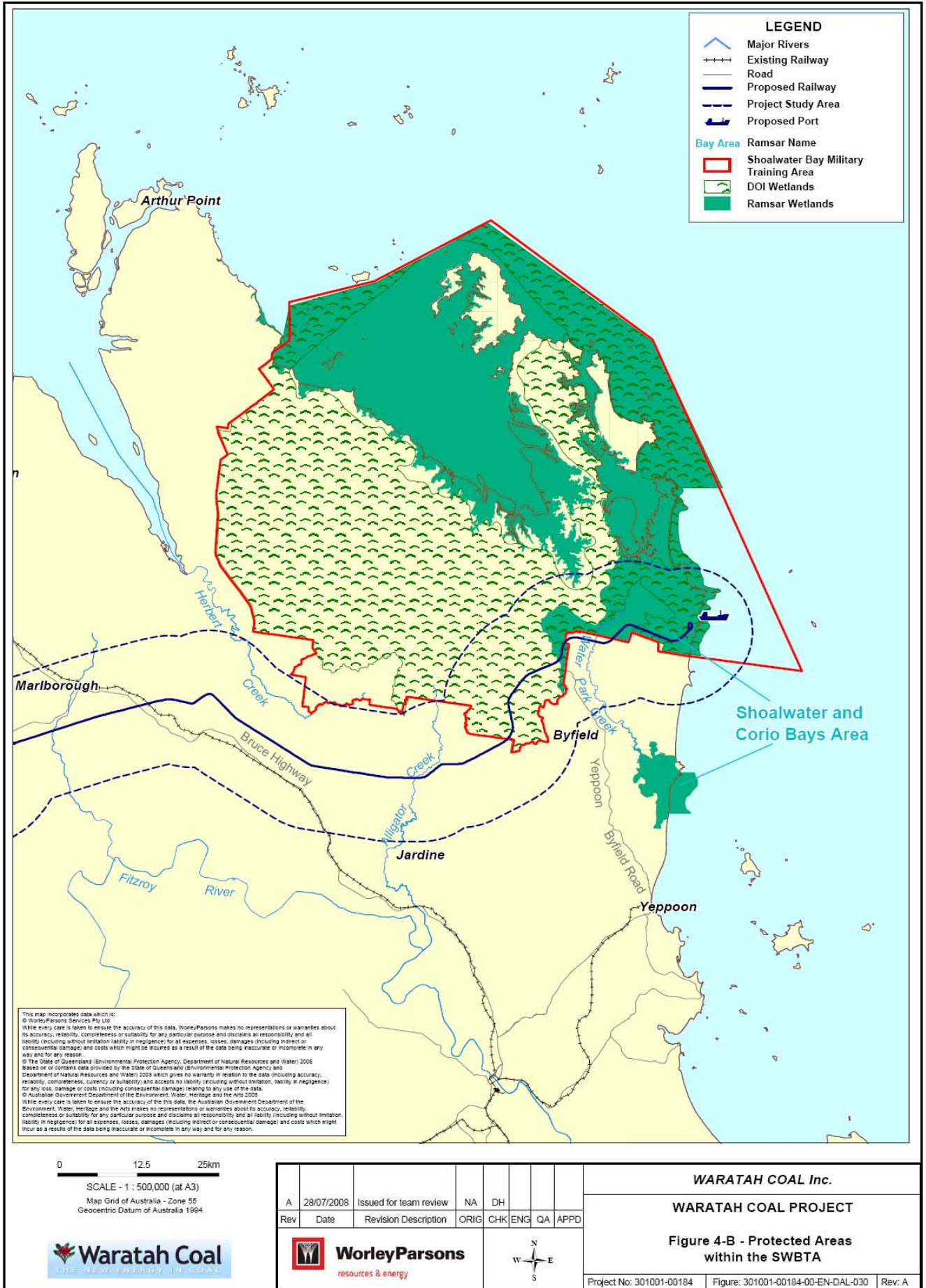
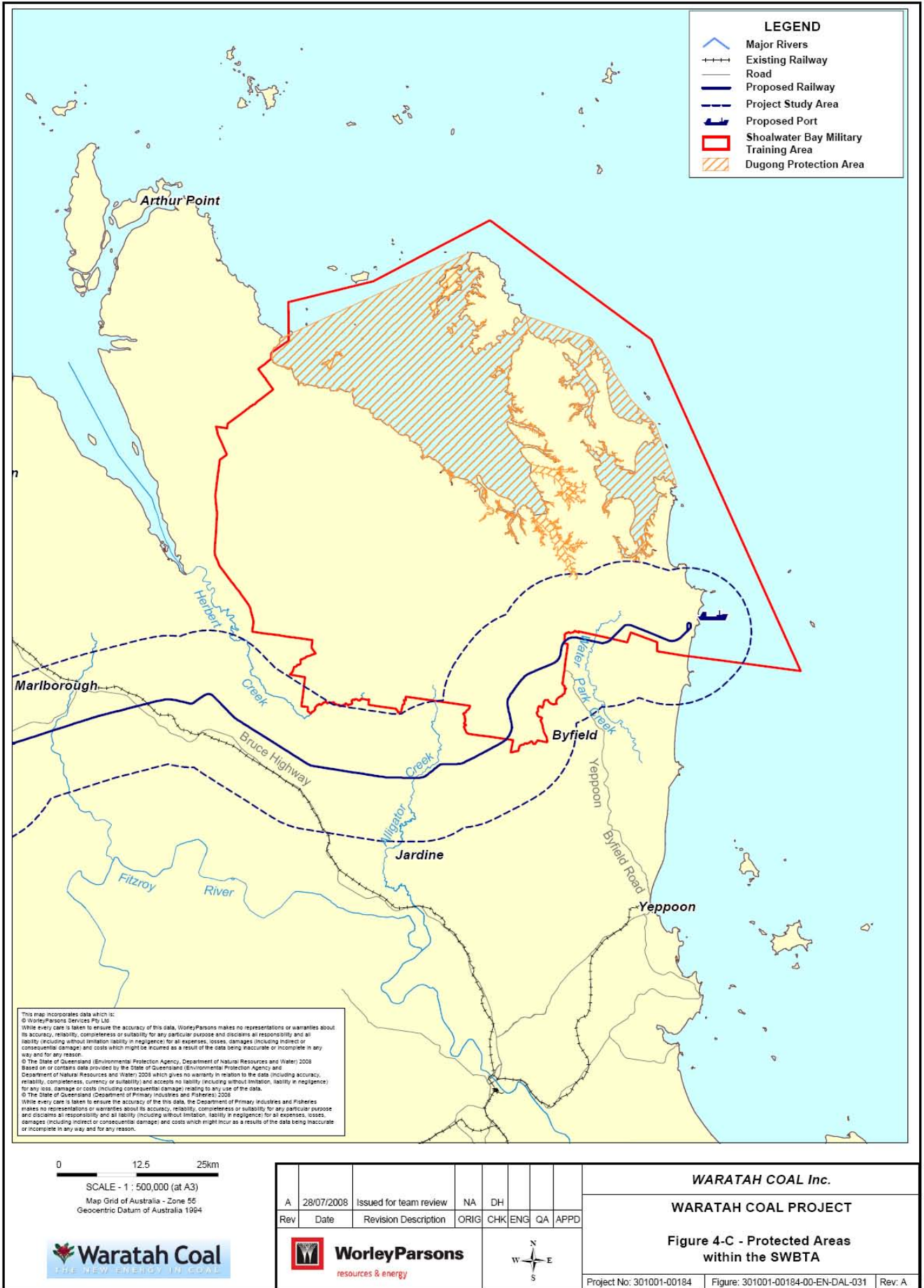


Figure 4-C - Protected Areas within the SWBTA



Compiled by BRISBANE INFRASTRUCTURE GIS SECTION

K:\WARATAH\301001-00184\GIS\Maps\301001-00184-00-EN-DAL-031A(4C_Protected_Areas).wor

4.1 (d) Listed threatened species and ecological communities

A project study area incorporating the proposed mining area, the railway corridor, the mine water supply pipeline corridor and the port site and environs, has been used as a basis for project flora and fauna investigations. The project study area incorporates the probable project footprint plus an approximate 10 km buffer area around this footprint.

Threatened Ecological Communities

Three threatened ecological communities listed under the EPBC Act are known to occur in the region encompassing the project study area. These are:

- Brigalow (*Acacia harpophylla*) dominant and co-dominant community;
- Semi-evergreen Vine Thickets of the Nandewar and Brigalow Belt Bioregions; and
- Bluegrass (*Dichanthium* spp.) dominant grasslands of the Brigalow Belt Bioregion (North and South).

A fourth threatened ecological community, described as the Native species community dependent on natural discharge of groundwater from the Great Artesian Basin (GAB), occurs to the northwest of the study area. The known location is unlikely to be impacted by the project. This community is; however, noted in the referral given the lack of detail regarding other potential locations of this community and the possibility that it may be encountered during field surveys.

The location of these communities in relation to the project study area is depicted in Figures 5a, 5b, 5c and 5d. These figures utilise Queensland Department of Natural Resources and Water Regional Ecosystem mapping. Table 2 identifies the regional ecosystems classified as “Endangered” under the EPBC Act and their associated threatened ecological community.

Table 2: Endangered Regional Ecosystems within the Project Study Area

EPBC Act Threatened Ecological Community	DNRW RE Code	Regional Ecosystem Description	Project Component			
			Mine	Pipeline	Railway	Port
Brigalow Community	11.3.1	Brigalow (<i>Acacia harpophylla</i>) and / or Belah (<i>Casuarina cristata</i>) open forest on alluvial plains	Y	Y	Y	
	11.4.7	Open forest to woodland of Poplar Box (<i>Eucalyptus populnea</i>) with Brigalow and / or Belah on Cainozoic clay plains			Y	
	11.4.8	Dawson Gum (<i>Eucalyptus cambageana</i>) woodland to open forest with Brigalow or Black Gidgee (<i>Acacia argyrodendron</i>) on Cainozoic clay plains	Y	Y	Y	
	11.4.9	Brigalow shrubby open forest to woodland with Yellowwood (<i>Terminalia oblongata</i>) on Cainozoic clay plains			Y	
	11.9.1	Brigalow – Dawson Gum open forest to woodland on fine-grained sedimentary rocks	Y		Y	
	11.9.5	Brigalow and / or Belah forest on fine-grained sedimentary rocks	Y		Y	
	11.11.14	Brigalow open forest on deformed metamorphosed sediments and interbedded volcanics			Y	
Bluegrass Community	11.3.21	Queensland Bluegrass (<i>Dichanthium sericeum</i>) and / or <i>Astrebla</i> spp. grassland on alluvial plains on cracking clay soils			Y	
	11.4.4	<i>Dichanthium</i> spp. and <i>Astrebla</i> spp. dominated grassland on Cainozoic clay plains			Y	
	11.8.11	Queensland Bluegrass grassland on Cainozoic igneous rocks			Y	
Artesian Spring Dependent Community	10.3.31b	Weeping Tea-tree sparse canopy on alluvial plains	Y			
	10.3.16f	Brown-headed Samphire (<i>Halosarcia indica</i>) sparse shrublayer on saline clay plains	Y			
	10.3.16g	Smooth Dropseed (<i>Sporobolus partimpatens</i>) sparse groundlayer on artesian springs	Y			

EPBC Act Threatened Ecological Community	DNRW RE Code	Regional Ecosystem Description	Project Component			
			Mine	Pipeline	Railway	Port
SEVT Community	11.3.11	SEVT on alluvial plains			Y	
	11.8.3	SEVT on Cainozoic igneous rocks and steep hillsides			Y	

Threatened Flora Species

Threatened species listed under the EPBC Act and known to, or which are likely to, occur within the project study area have been identified from database searches. Threatened species and their preferred habitats areas are described in Table 3.

Threatened Fauna Species

Threatened fauna species listed under the EPBC Act and known to, or which are likely to, occur within the project study area have been identified from database searches. Threatened species and preferred habitat areas are described in Table 4.

4.1 (e) Listed migratory species

Migratory species and marine species; instead under the EPBC Act which are known to, or are likely to, occur within the project study area have been identified from database searches. These species and their potential habitat areas are described in Table 5.

Dugongs are listed as Migratory and Marine species under the EPBC Act. The Shoalwater Bay and Port Clinton locality is a designated Dugong Protection Area (refer Figure 4-C). The proposed port and railway corridor are located to the south of this area. While most of the Dugongs in the Shoalwater Bay region are found in Shoalwater Bay itself, the area at, and directly adjacent to, the port site is likely to be traversed by Dugong when they move between coastal seagrass beds.

The area of the proposed port site and its environs is likely to be used by various cetacean species including the Indo-Pacific Humpback Dolphin (*Sousa chinensis*), the Australian Snubfin Dolphin (*Orcaella heinsohni*) and Bottlenose Dolphins (*Truncatus aduncus*).

Table 3: Threatened Flora Species Identified within the Project Study Area

Family Name	Botanical Name Common Name	EPBC Status*	Preferred Habitat	Likelihood^ of Occurrence			
				Mine	Pipeline	Railway	Port
Cycadaceae	<i>Cycas megacarpa</i> Tree Zamia Palm	E	Eucalypt woodland and open forest with a grassy understorey and on rainforest margins on hill tops (40 – 500 m altitude) and steep slopes on shallow clay loams.			U	
Cycadaceae	<i>Cycas ophiolitica</i> Marlborough Blue Zamia Palm	E	Eucalypt open forest and woodlands with grassy understorey on hill top and steep slopes (80 – 620 m altitude) on shallow, stony, red clay loams or sandy soils.			U	
Eriocaulaceae	<i>Eriocaulon carsonii</i> Salt Pipewort	E	Found in running water and around shallow springs in wet soils.	P			
Apiaceae	<i>Eryngium fontanum</i> Blue Devil	E	Permanent spring-fed wetland habitats with a groundwater source from the Great Artesian Basin.	P			
Orchidaceae	<i>Phaius australis</i> Swamp Orchid	E	Ecotones of swamps and forests and wallum, sedgeland rainforests and closed forests on sandy soils.			P	
Mimosaceae	<i>Acacia ramiflora</i> White Mountains Wattle	V	Woodlands on sandstone hills, meta-sandstone and red, stony soils.		L		
Capparaceae	<i>Capparis thozetiana</i> a Capparis	V	Eucalypt woodlands on serpentinite ridges, hills and flats.			L	
Polygalaceae	<i>Comesperma oblongatum</i> Byfield Matchstick	V	Shrublands, heathlands, open forests on steep granitic slopes or rocky areas beside creeks on thin, gravelly or grey sandy soils at 50 – 200 m altitude.			L	P
Myrtaceae	<i>Corymbia clandestina</i> a Bloodwood	V	Woodlands on reddish to grey loamy soils on hillsides at altitudes 350 – 400 m.	U		U	
Myrtaceae	<i>Corymbia xanthope</i> Serpentinite Bloodwood	V	Eucalypt woodland on brown stony soils on serpentinite ridges.			L	

Family Name	Botanical Name Common Name	EPBC Status*	Preferred Habitat	Likelihood^ of Occurrence			
				Mine	Pipeline	Railway	Port
Fabaceae	<i>Daviesia discolor</i> a Bitter-pea	V	Open eucalypt forests and tall woodlands with shrubby understorey and Kangaroo Grass (<i>Themeda australis</i>) groundlayer on grey to white sands and deep red volcanic soils on tablelands, undulating ground and steep slopes.			L	
Poaceae	<i>Dichanthium queenslandicum</i> King Blue-grass	V	Open downs of native grasslands on black clay soils.		P	P	
Myrtaceae	<i>Eucalyptus raveretiana</i> Black Ironbox	V	Riparian woodlands on alluvial flats along river banks on sandy and / or alluvial soils and commonly associated with Paperbarks, River She-oak and Old Blue Gum.			L	
Proteaceae	<i>Grevillea venusta</i> Byfield Spider Flower	V	Mixed sclerophyll forests or woodlands and rainforests in acidic, well drained sandy soils along creek banks and ridges at the base of mountains.			L	
Proteaceae	<i>Hakea trineura</i> Three-veined Hakea	V	Open eucalypt woodland over hummock grasslands on hills.			L	
Arecaceae	<i>Livistona lanuginosa</i> Waxy Cabbage Palm	V	Open forests.		L		
Apocynaceae	<i>Marsdenia brevifolia</i> a Milkvine	V	Open eucalypt forest in brown loam soils and sometimes granitic outcropping at 500 – 1000 m altitude.			L	
Picrodendraceae	<i>Neoroepera buxifolia</i> Serpentinite Bush	V	Gallery or riparian forest in soils high in nickel and magnesium (derived from serpentinite) on low hills and slopes (60 – 100 m altitude).			P	
Apocynaceae	<i>Parsonsia larcomensis</i> a Parsonsia	V	Open heathland and shrubland at or near the summits of mountain peaks 350 – 750 m altitude) in shallow, loamy soils on cliffs or among outcrops of acid volcanic rocks and serpentinite.			U	
Fabaceae	<i>Pultenaea setulosa</i> Eggs and Bacon	V	Eucalypt woodland on hillsides and ridges on brown serpentinite soils.			L	
Simaroubaceae	<i>Quassia bidwillii</i> Quassia	V	Lowland rainforests or rainforest margins in skeletal soils at altitudes 1 – 617 m.			U	U
Laxmanniaceae	<i>Sowerbaea subtilis</i> Vanilla Lily	V	Broad habitat range from eucalypt forests to swamps and sedgelands in sandy, peaty soils 10 – 20 m altitude.			L	P

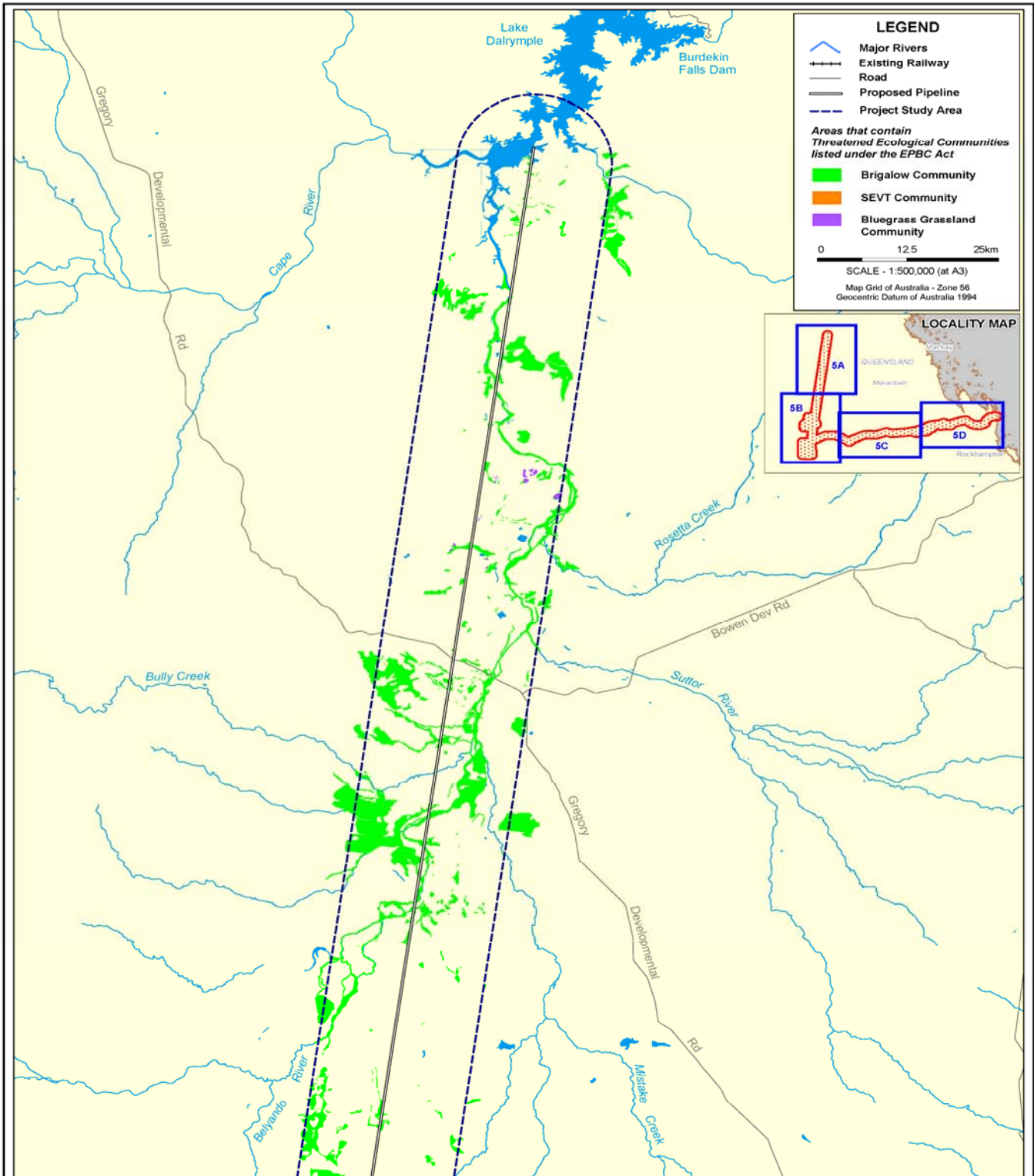
Family Name	Botanical Name Common Name	EPBC Status*	Preferred Habitat	Likelihood^ of Occurrence			
				Mine	Pipeline	Railway	Port
Thymelaeaceae	<i>Pimelea leptospermoides</i> Serpentine Rice Flower	V	Rainforests, vine thickets and forests with grassy and / or shrubby understorey on serpentinite soils.			P	
Sapindaceae	<i>Cossinia australiana</i> Cossinia	E	Araucarian microphyll vine forests and relict SEVTs on a variety of soils at 20 – 380 m altitude.			P	
Poaceae	<i>Digitaria porrecta</i> Finger Panic Grass	E	Tropical and subtropical rainforests and sub-humid woodlands.			U	
Dryopteridaceae	<i>Tectaria devexa</i> a Fern	E	A highly restricted and small population (<50 individuals) found on limestone recorded in the vicinity of The Caves, approximately 23 km north of Rockhampton.			U	
Surianaceae	<i>Cadellia pentastylis</i> Ooline	V	Semi-evergreen vine thickets on sandstone and basalt slopes and acacia and belah communities on undulating clay plains and low hills at altitudes 200 – 500 m.	U			
Ericaceae	<i>Leucopogon cuspidatus</i> Northern Bearded Heath	V	Stunted open woodland or shrubland on mountain tops on poor skeletal soils, amongst granite or serpentinite outcrops.			U	
Poaceae	<i>Paspalum batianoffii</i> A Grass	Ex	Sheoak woodlands on foredunes on sandy soils.			U	

NOTES:

*EPBC Status: E = Endangered, V = Vulnerable. Ex = Presumed extinct

^Likelihood of Occurrence: L = Likely, suitable habitat mapped in study area, P = Possible, sub-optimal habitat or preferred habitat components present in study area, U = Unlikely, no suitable habitat present in study area.

Figure 5a: Threatened Ecological Communities within the Project Study Area



This map incorporates data which is:
 © Commonwealth of Australia (Geoscience Australia) 2008. The Commonwealth gives no warranty regarding the accuracy, completeness, currency or suitability for any particular purpose.
 © WorleyParsons Services Pty Ltd.
 While every care is taken to ensure the accuracy of this data, WorleyParsons makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which might be incurred as a result of the data being inaccurate or incomplete in any way and for any reason.
 © The State of Queensland (Environmental Protection Agency Department of Natural Resources and Water) 2008. Based on contents data provided by the State of Queensland (Environmental Protection Agency and Department of Natural Resources and Water) 2008 which gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) resulting from any use of the data.
 © The State of Queensland, Environmental Protection Agency 2008.
 Survey and mapping of Pre-existing Vegetation Communities and Regional Ecosystems of Queensland, version 5.0 Survey and Mapping of 2003 Remnant Vegetation Communities and Regional Ecosystems of Queensland, Version 5.0

A	26/05/2008	Issued for squad check	NA	DH				
Rev	Date	Revision Description	ORIG	CHK	ENG	QA	APPD	



WorleyParsons
resources & energy



WARATAH COAL Inc.

WARATAH COAL PROJECT

Figure 5A: Threatened Ecological Communities within the Project Study Area

Project No: 301001-00184 | Figure: 301001-00184-00-EN-DAL-007 | Rev: A

Figure 5b: Threatened Ecological Communities within the Project Study Area

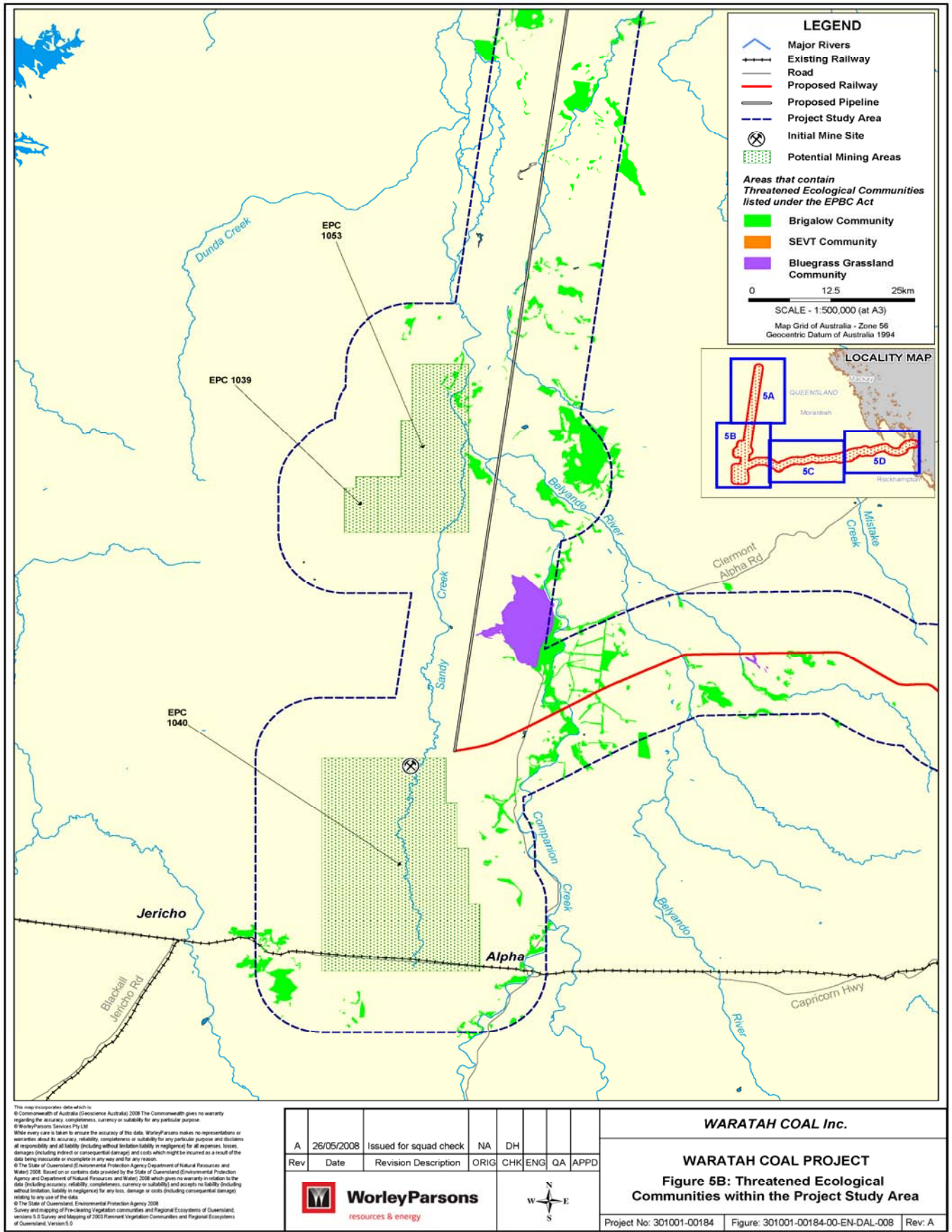


Figure 5c: Threatened Ecological Communities within the Project Study Area

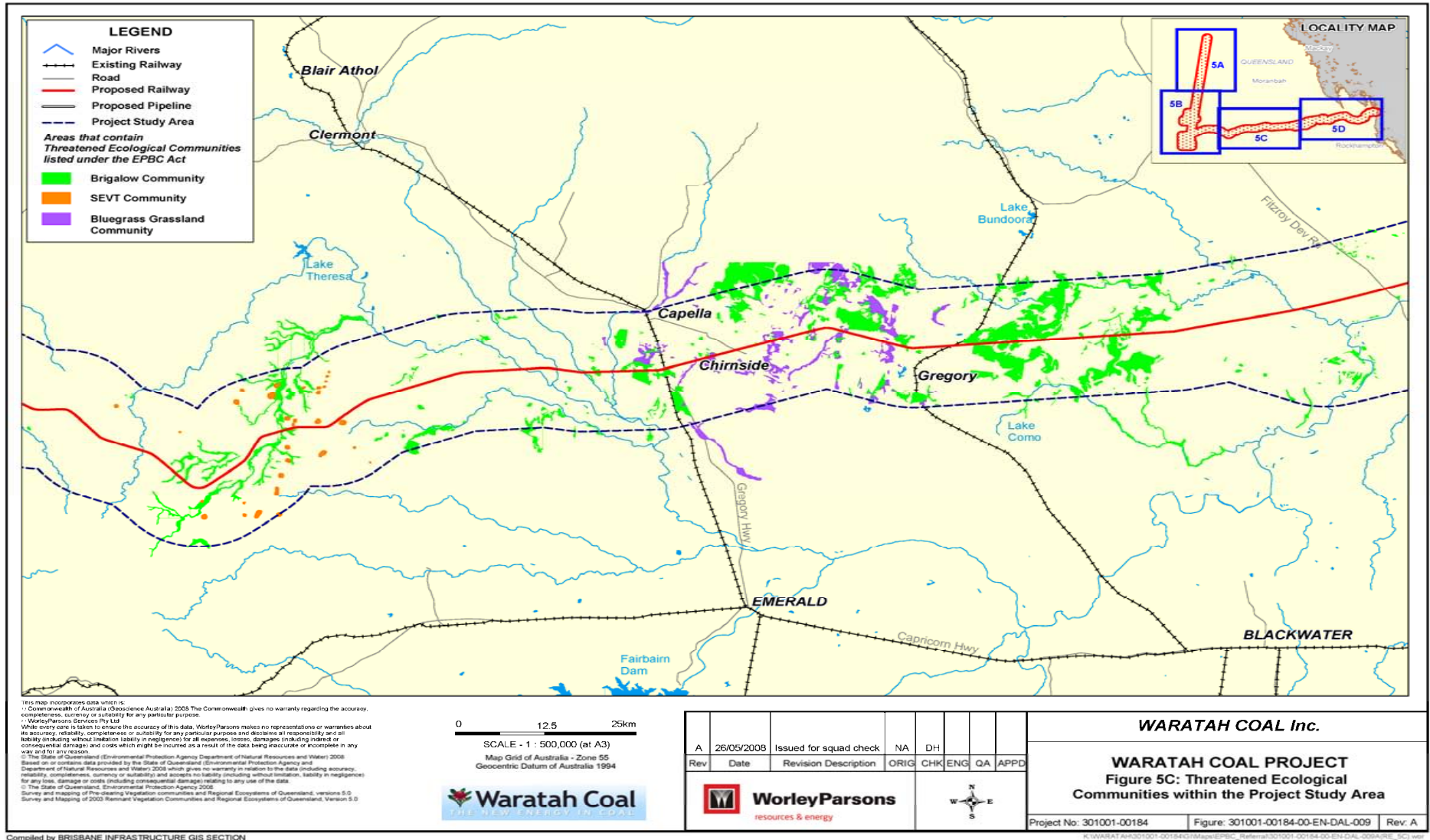


Figure 5d: Threatened Ecological Communities within the Project Study Area

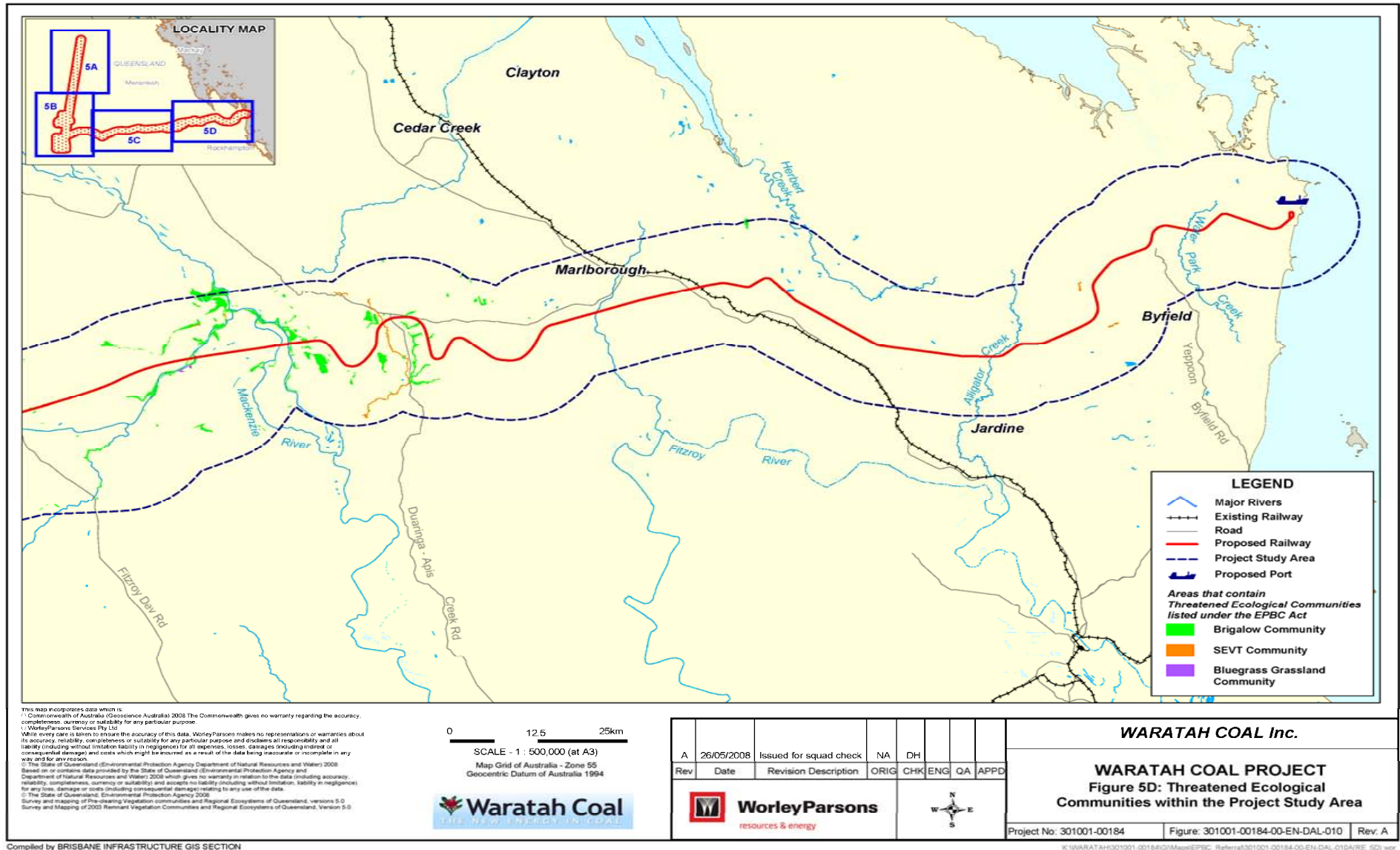


Table 4: Threatened Fauna Species identified within the Project Study Area

Family Name	Scientific Name Common Name	EPBC Status*	Preferred Habitat	Likelihood of Occurrence^			
				Mine	Pipeline	Railway	Port
Fish							
Rhincodontidae	<i>Rhincodon typus</i> Whale Shark	V	Marine. Tropical and warm temperate seas, including both deep and shallow coastal waters. Forms aggregations in areas of high seasonal food resources.				P
Reptiles							
Scincidae	<i>Lerista allanae</i> Allan's Skink	E	Burrows in root systems of grass tussocks on black soil country, known only from a small area around Clermont. Possibly extinct: last seen in 1960.			P	
Cheloniidae	<i>Caretta caretta</i> Loggerhead Turtle	E	Open ocean species. Waters with both hard and soft substrates including rocky and coral reefs, muddy bays sandflats, estuaries and seagrass meadows.				L
Cheloniidae	<i>Lepidochelys olivacea</i> Pacific Ridley	E	Marine waters, generally tropical. Benthic and pelagic foraging habitats ranging from 1-100 m depth. Scattered nesting records on beaches of inshore islands in Arnhem Land and the Gulf of Carpentaria.				U
Cheloniidae	<i>Dermochelys coriacea</i> Leathery Turtle	V	Tropical and temperate marine waters, including estuaries and tidal river mouths. Limited nesting recorded on beaches between Fraser Is and Mackay.				P
Cheloniidae	<i>Chelonia mydas</i> Green Turtle	V	Marine, tropical and warm subtropical seas of northern Australia. Shallow benthic foraging habitats containing seagrass and/ or algae including inshore seagrass beds. Nests on beaches, with breeding records south to SE Qld.				L
Cheloniidae	<i>Eretmochelys imbricata</i> Hawksbill Turtle	V	Coastal marine waters south to NSW, breeding predominantly on beaches in the Gulf of Carpentaria and Great Barrier Reef islands.				L
Chelidae	<i>Natator depressus</i> Flatback Turtle	V	Inshore coastal waters of northern Australia. Breeds exclusively on Australian beaches, south to Bundaberg region in Qld.				L

Family Name	Scientific Name Common Name	EPBC Status*	Preferred Habitat	Likelihood of Occurrence^			
				Mine	Pipeline	Railway	Port
Elapidae	<i>Denisonia maculata</i> Ornamental Snake	V	Low-lying areas with cracking clay soils in open forests, woodlands, brigalow and riparian habitats. Shelters under fallen timber and in soil cracks, and forages for frogs at night.	L	L	L	
Scincidae	<i>Egernia rugosa</i> Yakka Skink	V	Dry open forests or woodland with dense ground vegetation, rocky areas, fallen timber and other debris. Shelters in hollow logs or rock crevices.	L	L	L	
Chelidae	<i>Rheodytes leukops</i> Fitzroy River Turtle	V	Riverine species dependent on shallow fast-flowing water (riffle zones). Confined to Fitzroy and Dawson Rivers and tributaries.			L	
Elapidae	<i>Furina dunmali</i> Dunmall's Snake	V	Open dry sclerophyll forests and woodlands, especially brigalow, with fallen timber and ground litter on floodplains of cracking clay soils.	U	U	P	
Pygopodidae	<i>Paradelma orientalis</i> Brigalow Scaly-foot	V	Brigalow, Callitris and eucalypt woodlands with a sparse grassy understorey. Nocturnal, sheltering under litter and fallen logs during the day.	L	L	L	

Birds

Procellariidae	<i>Macronectes giganteus</i> Southern Giant-petrel	E	Marine species found over seas and inshore waters favouring edges of continental shelf. Shorelines south of Rockhampton.				U
Passeridae	<i>Poephila cincta cincta</i> Black-throated Finch (southern)	E	Open woodlands, scrubby plains and Pandanus flats with dense grasscover close to water.	L	L	P	U
Columbidae	<i>Geophaps scripta scripta</i> Squatter Pigeon (southern subsp.)	V	Open grassy woodlands. Preference for areas on sandy soil with low gravel ridges close to water.	L	L	L	L
Procellariidae	<i>Macronectes halli</i> Northern Giant-petrel	V	Marine species frequenting inshore and pelagic seas out to the continental shelf, shorelines.				U
Rostratulidae	<i>Rostratula australis</i> Australian Painted Snipe	V	Surrounds and shallows of well vegetated wetlands with dense low cover.	P	P	P	
Turnicidae	<i>Turnix melanogaster</i> Black-breasted Button-quail	V	Low canopy, closed rainforest or monsoon forests, vine thickets and drier shrubby scrubs where deep leaf litter is present, or lantana thickets adjacent to SEVT, in eastern Qld and northern NSW.			L	P

Family Name	Scientific Name Common Name	EPBC Status*	Preferred Habitat	Likelihood of Occurrence^			
				Mine	Pipeline	Railway	Port
Meliphagidae	<i>Epthianura crocea macgregori</i> Yellow Chat (Dawson)	CE	Freshwater or saline drainage channels on coastal marine plains, connected to tidally influenced wetlands. Breeding habitat is rank vegetation (rushes, sedges, grasses) flanking wetlands, adjacent to muddy substrates used for foraging.				U
Passeridae	<i>Neochmia ruficauda ruficauda</i> Star Finch (eastern and southern)	E	Dense coastal forests, scrub and tall rank grass along watercourses, rush margins of swamps and moist green crops. Very few records since 1990, scattered across central Qld, centred on Rockhampton area.	P	P	P	
Accipitridae	<i>Erythrotriorchis radiatus</i> Red Goshawk	V	Tropical open woodland, edges of rainforest and dense riparian vegetation. Nests in trees taller than 20 m within 1 km of a permanent watercourse or wetland. Forages in open forests and gallery forests.	P	P	P	
Procellariidae	<i>Pterodroma neglecta neglecta</i> Kermadec Petrel (western)	V	Pelagic seabird: forages at sea in tropical and subtropical waters of the South Pacific; nests on high islands among rocks and vegetation.				U

Mammal

Vombatidae	<i>Lasiorhinus krefftii</i> Northern Hairy-nosed Wombat	E	Semi-arid open woodlands on deep sandy soils. Known population of about 115 individuals confined to Epping Forest NP northwest of Clermont.		L		
Balaenopteridae	<i>Balaenoptera musculus</i> Blue Whale	E	All Australian offshore waters, with concentrations in summer and autumn off W Vic, SE SA and SW WA. Breeds in tropical waters in winter.				U
Dasyuridae	<i>Dasyurus hallucatus</i> Northern Quoll	E	Most abundant in rocky eucalypt woodlands but occurs in a variety of habitats, often near creeklines. Dens in tree hollows and rock crevices.	P	L	L	
Balaenoteridae	<i>Megaptera novaeangliae</i> Humpback Whale	V	Travels from Antarctic feeding grounds to Australian waters during spring to breed. Australian breeding ground lies on the Barrier Reef, so occurs along the eastern coast throughout spring.				P
Vespertilionidae	<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	V	Dry forests and woodlands, moist eucalypt forests. Roosts in caves, crevices in cliffs and old mines.	P	U	L	

Family Name	Scientific Name Common Name	EPBC Status*	Preferred Habitat	Likelihood of Occurrence^			
				Mine	Pipeline	Railway	Port
Vespertilionidae	<i>Nyctophilus timoriensis</i> Eastern Long-eared Bat (south-eastern form)	V	Broad habitat range from River Red Gum forest to semi-arid mallee woodlands. Roosts in tree hollows, crevices and under loose sheets of bark.	U	U	L	P
Pteropodidae	<i>Pteropus conspicillatus</i> Spectacled Flying-fox	V	Rainforest specialist limited to NE Qld. Camps are usually located in the rainforest and if not are rarely located more than 6 km away.		U		
Muridae	<i>Xeromys myoides</i> False Water Rat	V	Saline grassland, coastal saltmarsh, mangroves, margins of freshwater swamps close to fore-dunes. Forages in the mangroves on low tides at night.				U

NOTES:

* EPBC Status: E = Endangered, V = Vulnerable

^ Likelihood of Occurrence: L = Likely, suitable habitat mapped in study area, P = Possible, sub-optimal habitat or preferred habitat components present in study area, U = Unlikely, no suitable habitat present in study area.

Table 5: EPBC-listed Migratory and Marine Fauna Species within the Project Study Area.

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Fish								
Syngnathidae	<i>Acentronura tentaculata</i> Hairy Pygmy Pipehorse		Y	Found on small and sparse seagrass or algae that grow adjacent to reefs at shallow to moderate depths.				P
Syngnathidae	<i>Campichthys tryoni</i> Tryon's Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Choeroichthys brachysoma</i> Pacific Short-bodied Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys amplexus</i> Fijian Banded Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys flavofasciatus</i> Yellow-banded Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys haematopterus</i> Reef-top Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys intestinalis</i> Australian Messmate Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys ocellatus</i> Orange-spotted Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys paxtoni</i> Paxton's Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Corythoichthys schultzi</i> Schultz's Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Doryrhamphus excisus</i> Indian Blue-stripe Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Festucalex cinctus</i> Girdled Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Filicampus tigris</i> Tiger Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Halicampus dunckeri</i> Red-hair Pipefish		Y	Marine fish species.				P

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Syngnathidae	<i>Halicampus grayi</i> Mud Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Halicampus nitidus</i> Glittering Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Halicampus spinostris</i> Spiny-snout Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Hippichthys cyanospilos</i> Blue -speckled Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Hippichthys heptagonus</i> Madura Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Hippichthys penicillus</i> Beady Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Hippocampus bargibanti</i> Pygmy Seahorse		Y	Marine fish species.				P
Syngnathidae	<i>Hippocampus kuda</i> Spotted Seahorse		Y	Marine fish species.				P
Syngnathidae	<i>Hippocampus planifrons</i> Flat-face Seahorse		Y	Marine fish species.				P
Syngnathidae	<i>Hippocampus zebra</i> Zebra Seahorse		Y	Marine fish species.				P
Syngnathidae	<i>Lissocampus runa</i> Javelin Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Micrognathus andersonii</i> Anderson's Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Micrognathus brevirostris</i> Thorn-tailed Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Nannocampus pictus</i> Painted Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Solegnathus hardwickii</i> Pipehorse		Y	Marine fish species.				P
Syngnathidae	<i>Solenostomus cyanopterus</i> Blue-finned Ghost Pipefish		Y	Marine fish species.				P

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Syngnathidae	<i>Solenostomus paradoxus</i> Harlequin Ghost Pipefish		Y	Marine fish species.				P
Syngnathidae	<i>Syngnathoides biaculeatus</i> Double-ended Pipehorse		Y	Marine fish species.				P
Syngnathidae	<i>Trachyrhamphus bicoarctatus</i> Bend Stick Pipefish		Y	Marine fish species.				P

Reptiles

Hydrophiidae	<i>Acalyptophis peronii</i> Horned Seasnake		Y	Sandy areas on coral reefs in northern Australian waters from NW WA to SEQ.				U
Hydrophiidae	<i>Aipysurus duboisii</i> Dubois' Seasnake		Y	Reef flats and coral reefs to depths of 50 m in coastal waters of northern Australia south to NE NSW.				U
Hydrophiidae	<i>Aipysurus eydouxii</i> Eydoux's Seasnake		Y	Coastal waters of northern Australia south to SEQ, particularly turbid waters 30 – 50 m deep and occasionally mangrove inlets.				L
Hydrophiidae	<i>Aipysurus laevis</i> Olive Seasnake		Y	Coral reefs in northern Australian waters, south to NSW central coast.				U
Hydrophiidae	<i>Astrotia stokesii</i> Stokes' Seasnake		Y	Widespread on coral reefs and turbid coastal waters of northern Australia south to NSW central coast.				L
Hydrophiidae	<i>Disteira kingii</i> Spectacled Seasnake		Y	Deep waters off northern Australia south to NSW central coast.				U
Hydrophiidae	<i>Disteira major</i> Olive-headed Seasnake		Y	Deep turbid coastal waters from NSW central coast north to New Guinea.				P
Hydrophiidae	<i>Emydocephalus annulatus</i> Turtle-headed Seasnake		Y	Shallow waters on coral reefs, patchy distribution including central Qld waters and NW WA.				U
Hydrophiidae	<i>Enhydrina schistosa</i> Beaked Seasnake		Y	Shallow bays and estuaries, scattered locations along Qld and NT coast.				P
Hydrophiidae	<i>Hydrophis elegans</i> Elegant Seasnake		Y	Coastal waters across northern Australia from NSW central coast to Perth, particularly deep turbid waters and deep waters between reefs.				P
Hydrophiidae	<i>Hydrophis mcdowellii</i> Small-headed Seasnake		Y	Inshore waters and turbid estuaries of northern Australia south to SEQ.				L
Hydrophiidae	<i>Hydrophis ornatus</i> Spotted Seasnake		Y	Coral reefs, turbid inshore waters and estuaries across northern Australia from south to Sydney and Perth areas.				L
Hydrophiidae	<i>Lapemis hardwickii</i> Spine-bellied Seasnake		Y	Various from turbid estuaries to clear reef waters in northern Australian seas.				L

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Hydrophiidae	<i>Pelamis platurus</i> Yellow-bellied Seasnake		Y	Primarily inhabits open oceans.				U
Laticaudinae	<i>Laticauda colubrina</i> Yellow-lipped Sea Krait		Y	Vagrants rarely recorded from Australian coasts. Forages in shallows of coral reefs, shelters on shore in hollow logs and rock cavities.				U
Laticaudinae	<i>Laticauda laticaudata</i> Brown-lipped Sea Krait		Y	Vagrants rarely recorded from Australian coasts. Forages in shallows of coral reefs, shelters on shorelines in hollow logs and rock cavities.				U
Birds								
Accipitridae	<i>Accipiter fasciatus</i> Brown Goshawk	Y	Y	Forests and woodlands, dry scrublands and farmlands.	L	L	L	L
Scolopacidae	<i>Actitis hypoleucos</i> Common Sandpiper	Y	Y	Narrow muddy edges of billabongs, river pools, mangroves, among rocks and snags, reefs or rocky beaches avoiding wide open mudflats in varied coastal and interior wetlands.				L
Apodidae	<i>Apus pacificus</i> Fork-tailed Swift	Y	Y	Fly-over species with broad habitat range from rainforests to semi-desert.	P	P	L	L
Ardeidae	<i>Ardea alba</i> Great Egret	Y	Y	Wetlands, flooded pastures, dams, estuarine mudflats, mangroves and reefs.	L	L	L	L
Otididae	<i>Arenaria interpres</i> Ruddy Turnstone	Y	Y	Beaches and coasts with exposed rock, stony or shell beaches, mudflats, exposed reefs and wave platforms.				L
Anatidae	<i>Biziura lobata</i> Musk Duck	Y	Y	Deep permanent lakes, swamps and dams having areas of dense reedbeds and open waters.	U	P	P	U
Ardeidae	<i>Bubulcus ibis</i> Cattle Egret	Y	Y	Moist pastures with tall grass, shallow open wetlands and margins and mudflats.	P	P	L	L
Scolopacidae	<i>Calidris acuminata</i> Sharp-tailed Sandpiper	Y	Y	Coastal freshwater and saline wetlands, muddy edges of lagoons, swamps, lakes, dams, soaks, sewage farms and temporary floodwaters.	P	P	L	L
Scolopacidae	<i>Calidris alba</i> Sanderling	Y	Y	Open sandy beaches washed by ocean swells.				P
Scolopacidae	<i>Calidris canutus</i> Red Knot	Y	Y	Sheltered coastal on mudflats and sandbars of estuaries, harbours, lagoons and occasionally beaches and reefs.				P
Scolopacidae	<i>Calidris ferruginea</i> Curlew Sandpiper	Y	Y	Inter-tidal mudflats of estuaries, lagoons, mangrove channels and around lakes, dams, floodwaters and flooded saltbush surrounds of inland lakes.			P	P
Scolopacidae	<i>Calidris ruficollis</i> Red-necked Stint	Y	Y	Diverse habitats including tidal and inland mudflats, salt marshes, beaches, saltfields and temporary floodwaters.			P	L

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Scolopacidae	<i>Calidris tenuirostris</i> Great Knot	Y	Y	Sheltered coastal mudflats of estuaries, inlets, harbours, lagoons, mangrove swamps and sandy bars and beaches near mudflats.				P
Charadriidae	<i>Charadrius bicinctus</i> Double-banded Plover	Y	Y	Tidal mudflats, beaches, exposed reefs, salt marshes, freshwater wetlands, inland salt lakes, short grasses of golf courses and airfields.				P
Charadriidae	<i>Charadrius leschenaultii</i> Greater Sand Plover	Y	Y	Coastal, inter-tidal mudflats and sandbanks of sheltered bays and estuaries and sandy cays of coral reefs and reef platforms and less often on coastal salt marshes, brackish and freshwater wetlands.				L
Charadriidae	<i>Charadrius mongolus</i> Lesser Sand Plover	Y	Y	Inter-tidal sandflats and mudflats, beaches, estuary mudflats and sandbars and reef flats.				L
Charadriidae	<i>Charadrius ruficapillus</i> Red-capped Plover	Y	Y	Inland on salt lakes, salty edges of waterways, brackish pools and claypans and coastal on sheltered estuaries and salt marsh lagoons.	U	P	L	L
Accipitridae	<i>Circus approximans</i> Swamp Harrier	Y	Y	Wetlands, swamps and lakes, vegetated or with open waters, mangroves, saltmarshes, temporary floodwaters and less typically marine waters, heathlands, grasslands and pastures.	P	P	L	L
Cuculidae	<i>Cuculus saturatus</i> Oriental Cuckoo	Y	Y	Rainforest margins, monsoon forests, vine scrubs, riverine thickets, wetter, densely canopied eucalypt forests, paperbark swamps and mangroves.			P	
Anatidae	<i>Dendrocygna arcuata</i> Wandering Whistling-duck	Y	Y	Wetlands with permanent water and aquatic vegetation including billabongs, floodplain pools and tidal creeks.	P	P	L	P
Ardeidae	<i>Egretta sacra</i> Eastern Reef Egret	Y	Y	Shorelines of mainland coasts and islands, estuarine mudflats and inshore reefs.				L
Falconidae	<i>Falco cenchroides</i> Nankeen Kestrel	Y	Y	Open woodlands, grasslands, mulga and other sparse scrublands, heathlands, farmlands, roadsides, coastal dunes and heaths.	L	L	L	L
Fregatidae	<i>Fregata minor</i> Great Frigatebird	Y	Y	Pelagic species of tropical seas occasionally inshore shelf waters.				P
Scolopacidae	<i>Gallinago hardwickii</i> Latham's Snipe	Y	Y	Low vegetation around wetlands in shallows, sedges, reeds, heaths, saltmarshes and irrigated crops.	P	P	L	P
Accipitridae	<i>Haliaeetus leucogaster</i> White-bellied Sea-eagle	Y	Y	Coastal species of reefs, beaches, bays, estuaries, mangroves, inland swamps, lagoons and floodplains. Often far inland on large pools of major rivers, mangroves and inland swamps	P	L	L	L
Accipitridae	<i>Haliastur indus</i> Brahminy Kite	Y	Y	Sheltered waters of tropics and subtropics including coasts with islands, mangroves, estuaries, mudflats, harbours, coastal towns penetrating far inland along rivers.			L	L
Accipitridae	<i>Haliastur sphenurus</i> Whistling Kite	Y	Y	Wetlands and near watercourses in open woodlands, scrublands, farmlands, estuaries and littoral mudflats.	L	L	L	L

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Scolopacidae	<i>Heteroscelus brevipes</i> Grey-tailed Tattler	Y	Y	Coastal areas including inter-tidal pools, shallows, soft surfaces of mudflats and sand beaches as well as rock ledges and reefs.				L
Recurvirostridae	<i>Himantopus himantopus</i> Black-winged Stilt	Y	Y	Shallow freshwater wetlands, interior claypans, flooded paddocks and salt lakes.	L	L	L	P
Apodidae	<i>Hirundapus caudacutus</i> White-throated Needletail	Y	Y	Fly-over species with broad habitat range including oceans.			L	P
Accipitridae	<i>Hirundo rustica</i> Barn Swallow	Y	Y	Open country often near water.	P	P	P	
Scolopacidae	<i>Limosa lapponica</i> Bar-tailed Godwit	Y	Y	Coastal mudflats, sandbars, shores of estuaries, saltmarshes and sewage ponds.				P
Scolopacidae	<i>Limosa limosa</i> Black-tailed Godwit	Y	Y	Coastal areas, estuaries, sheltered bays, lagoons with extensive tidal mudflats or sandbars, shores and islets of large, ephemeral inland lakes.				P
Meropidae	<i>Merops ornatus</i> Rainbow Bee-eater	Y	Y	Open country of woodlands, open forests, semi-arid scrub, grasslands, clearings in heavier forests, farmlands avoiding dense forests.	L	L	L	L
Dicruridae	<i>Monarcha melanopsis</i> Black-faced Monarch	Y	Y	Rainforests, mangroves, eucalypt forests and woodlands.			L	L
Dicruridae	<i>Monarcha trivirgatus</i> Spectacled Monarch	Y	Y	Rainforests, mangroves, and moist gloomy gullies of dense wet eucalypt forests.			L	U
Dicruridae	<i>Myiagra cyanoleuca</i> Satin Flycatcher	Y	Y	Forests and woodlands, mangroves, coastal heath scrubs avoiding rainforests.	U	U	L	L
Anatidae	<i>Nettapus pulchellus</i> Green Pygmy-goose	Y	Y	Deep permanent freshwater lakes, dams and lagoons with abundant aquatic vegetation, especially waterlilies.		P	P	
Scolopacidae	<i>Numenius minutus</i> Little Curlew	Y	Y	Bare dry subcoastal plains, floodplains, billabongs, freshwater swamps, sports fields and lawns.			P	P
Scolopacidae	<i>Numenius phaeopus</i> Whimbrel	Y	Y	Mudflats of estuaries, lagoons, preferably mangroves and less often sandy beaches, reefs and salt lakes.			P	L
Accipitridae	<i>Pandion haliaetus</i> Osprey	Y	Y	Coastal waters and estuaries, beaches, islets and reefs and far inland along major rivers and wetlands / pools.	U	P	L	L
Threskiornithidae	<i>Plegadis falcinellus</i> Glossy Ibis	Y	Y	Shallows of swamps, floodwaters, sewage ponds, flooded or irrigated pastures and occasionally moist pastures and sheltered marine habitats.	L	L	L	L
Charadriidae	<i>Pluvialis fulva</i> Pacific Golden Plover	Y	Y	Estuaries, inter-tidal mudflats, beaches, reefs, saltmarshes, offshore islands and rarely far inland along major rivers.			P	L

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Charadriidae	<i>Pluvialis squatarola</i> Grey Plover	Y	Y	Marine shores of estuaries or lagoons on broad, open mudflats, sandy bars or beaches, rock platforms and reef flats of rocky coasts and inland on margins of salt lakes and swamps.			P	L
Recurvirostridae	<i>Recurvirostra novaehollandiae</i> Red-necked Avocet	Y	Y	Salt and freshwater wetlands, large, shallow salt lakes, swamps and lakes, claypans and dams.	P	L	L	P
Sternidae	<i>Sterna hirundo</i> Common Tern	Y	Y	Marine and well offshore occasionally in coastal waters, sheltered bays, estuaries and on ocean beaches.				P
Sternidae	<i>Sterna sumatrana</i> Black-naped Tern	Y	Y	Offshore coral cays, inner-reef rocky islands and rarely continental coasts, estuaries and harbours.				U
Sulidae	<i>Sula leucogaster</i> Brown Booby	Y	Y	Marine: deep waters and inshore shallows, mostly tropical.				P
Turnicidae	<i>Tringa glareola</i> Wood Sandpiper	Y	Y	Freshwater swamps, lakes, flooded pasture and less frequently on brackish waters and mangroves.			U	U
Turnicidae	<i>Tringa nebularia</i> Common Greenshank	Y	Y	Diverse habitat range including permanent and temporary wetlands, billabongs, swamps, lakes, floodplains and sheltered estuaries and bays with extensive mudflats, mangrove swamps and muddy shallows.			L	P
Turnicidae	<i>Tringa stagnatilis</i> Marsh Sandpiper	Y	Y	Coastal and inland salt and freshwater wetlands, estuarine and mangrove mudflats, beaches, shallows of swamps, lakes, billabongs, temporary floodwaters, sewage farms and saltworks ponds. Summer migrant.	L	L	L	L
Scolopacidae	<i>Xenus cinereus</i> Terek Sandpiper	Y	Y	Coastal mudflats in sheltered estuaries and lagoons, sandbars, reefs, coastal swamps and saltfields.				P
Accipitridae	<i>Accipiter cirrhocephalus</i> Collared Sparrowhawk	Y		Forests and woodlands across most of Australia.	L	L	L	L
Anatidae	<i>Anas castanea</i> Chestnut Teal	Y		Wetlands, coastal estuaries, lakes, saltmarshes, tidal mudflats and coastal islands.			P	P
Anatidae	<i>Anas gracilis</i> Grey Teal	Y		Most wetlands and temporary floodwaters across Australia.	L	L	L	L
Anatidae	<i>Anas rhynchos</i> Australasian Shoveler	Y		Various wetlands, prefers large permanent lakes and swamps with abundant shrubby cover.	L	L	L	P
Anatidae	<i>Anas superciliosa</i> Pacific Black Duck	Y		Freshwater and marine wetlands with shallow, well-vegetated swamps.	L	L	L	L
Accipitridae	<i>Aquila audax</i> Wedge-tailed Eagle	Y		Broad habitat range from forests to scrublands. Requires open country for foraging and forest for roosting.	L	L	L	L

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Accipitridae	<i>Aviceda subcristata</i> Pacific Baza	Y		Margins and spaces of gallery forests, monsoon forests, swamp forests, rainforest-woodland margins, tropical and subtropical open forests and woodlands.	L	L	L	L
Anatidae	<i>Aythya australis</i> Hardhead	Y		Large, deep lakes and swamps with abundant aquatic vegetation, creeks, inundated floodplains.	L	L	L	P
Anatidae	<i>Chenonetta jubata</i> Australian Wood Duck	Y		Open woodlands, farmlands, flooded pastures, close to dams, lakes, estuaries and ponds.	L	L	L	P
Accipitridae	<i>Circus assimilis</i> Spotted Harrier	Y		Open grasslands, spinifex, open shrublands, saltbush, open woodlands, crops and low vegetated areas.	P	L	L	P
Anatidae	<i>Cygnus atratus</i> Black Swan	Y		Large areas of shallow water with aquatic vegetation including lakes, estuaries and flooded pastures.	L	L	L	P
Anatidae	<i>Dendrocygna eytoni</i> Plumed Whistling-duck	Y		Grasslands close to water near swamps, lakes, floodwaters and dams.	L	L	L	L
Accipitridae	<i>Elanus axillaris</i> Black-shouldered Kite	Y		Broad habitat range from open country to forests, woodlands and farmlands with scattered trees across Australia.	L	L	L	L
Charadriidae	<i>Elseyornis melanops</i> Black-fronted Dotterel	Y		Freshwater wetlands, shallow, muddy bottomed swamps, billabongs, lake margins and temporary claypan pools.	L	L	L	P
Charadriidae	<i>Erythronyctes alpinus</i> Red-kneed Dotterel	Y		Well-vegetated freshwater wetlands, swamps, lakes, billabongs and interior claypans.	P	P	L	P
Falconidae	<i>Falco berigora</i> Brown Falcon	Y		Most open habitats across Australia – woodlands, farmlands, mallee, alpine, heathlands.	L	L	L	L
Falconidae	<i>Falco longipennis</i> Australian Hobby	Y		Woodlands and open forests, lakes and swamps, vegetated watercourses, heathlands and farmlands with scattered trees.	L	L	L	L
Falconidae	<i>Falco peregrinus</i> Peregrine Falcon	Y		Broad habitat range from rainforests to arid scrublands. Requires abundant prey and secure nesting sites.	L	L	L	L
Falconidae	<i>Falco subniger</i> Black Falcon	Y		Semi-arid and arid interior along tree-lined watercourses and in isolated stands of trees. Forages in low vegetation of surrounding plains, grasslands, saltbush and bluebush.	L	L	L	P
Gruidae	<i>Grus rubicunda</i> Brolga	Y		Freshwater swamps, flooded grasslands, margins of billabongs, lagoons, dry grasslands, floodplains and irrigated pastures.	L	L	L	L
Accipitridae	<i>Hamirostra melanosternon</i> Black-breasted Buzzard	Y		Semi-arid to arid regions, nesting in large trees along vegetated watercourses and foraging in open scrub and grassland plains.	L	L	P	U
Accipitridae	<i>Hieraetus morphnoides</i> Little Eagle	Y		Forests, woodlands, shrublands, tree-lined rivers across most of mainland Australia.	L	L	L	L

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Anatidae	<i>Malacorhynchus membranaceus</i> Pink-eared Duck	Y		Shallow, open, muddy wetlands and temporary floodwaters.	P	P	P	U
Accipitridae	<i>Milvus migrans</i> Black Kite	Y		Woodlands, scrublands, tree-lined watercourses, mangroves, mudflats and swamps.	L	L	L	L
Charadriidae	<i>Vanellus miles</i> Masked Lapwing	Y		Open short-grassed natural and modified habitats, often beside water, across most of Australia.	L	L	L	L
Charadriidae	<i>Vanellus tricolor</i> Banded Lapwing	Y		Open grassland and woodland with scattered trees, farmland, parks and golf courses, close to water.	L	L	L	P
Sylviidae	<i>Acrocephalus stentoreus</i> Clamorous Reed-Warbler		Y	Wetlands including reedbeds of lakes, cumbungi, tall crops beside water, bamboo thickets and lantana beside water.	P	L	L	P
Anseranatidae	<i>Anseranas semipalmata</i> Magpie Goose		Y	Tropical floodplains, shallows of dams, irrigated crops, swampy well-vegetated margins of deep waterways.	P	L	L	P
Motacillidae	<i>Anthus novaeseelandiae</i> Richard's Pipit		Y	Grasslands, forest clearings, grassy woodlands, semi-open scrublands and beaches and hind-dunes.	L	L	L	L
Ardeidae	<i>Ardea intermedia</i> Intermediate Egret		Y	Freshwater wetlands with abundant vegetation, floodwaters, rivers, intertidal mudflats.	L	L	L	P
Cuculidae	<i>Cacomantis flabelliformis</i> Fan-tailed Cuckoo		Y	Wet eucalypt forests, rainforest edges and open forests including river gum forests, in S and E Australia.		P	L	P
Cuculidae	<i>Chrysococcyx basalis</i> Horsfield's Bronze-cuckoo		Y	Open forests, woodlands, roadside trees and farm shelter belts.	L	L	L	L
Cuculidae	<i>Chrysococcyx lucidus</i> Shining Bronze-cuckoo		Y	Mid to upper strata of wet dense rainforests, eucalypt forests and woodlands.	U	P	P	L
Cuculidae	<i>Chrysococcyx minutillus</i> Little Bronze-cuckoo		Y	Dense, wet vegetation types, rainforest edges, tropical monsoon forests, paperbark swamps, mangroves, woodlands and lush gardens near water.	U	U	L	L
Campephagidae	<i>Coracina novaehollandiae</i> Black-faced Cuckoo-shrike		Y	Rainforests, eucalypt forests and woodlands, tree-lined watercourses of the interior, farmland, gardens..	L	L	L	L
Campephagidae	<i>Coracina papuensis</i> White-bellied Cuckoo-shrike		Y	Rainforests, gallery forests, eucalypt forests, woodlands, mangroves and riverside tree belts.	L	L	L	L
Campephagidae	<i>Coracina tenuirostris</i> Cicadabird		Y	Broad habitat range: rainforests, eucalypt forests, woodlands, paperbark swamps and mangroves.	P	L	L	L
Phasianidae	<i>Coturnix pectoralis</i> Stubble Quail		Y	Short and tall grasses, stubble, pastures, spinifex, saltbushes and bluebushes.	P	L	L	P

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Cuculidae	<i>Cuculus pallidus</i> Pallid Cuckoo		Y	Open country avoiding dense, closed vegetation.	L	L	L	L
Cuculidae	<i>Eudynamis scolopacea</i> Common Koel		Y	Rainforests, wet sclerophyll forests, woodlands, farmlands and gardens.	P	L	L	L
Caprimulgidae	<i>Eurostopodus mystacalis</i> White-throated Nightjar		Y	Forests, woodlands and heathlands, often among rocks, leaves and fallen timber.	P	L	L	P
Caprimulgidae	<i>Eurostopodus argus</i> Spotted Nightjar		Y	Eucalypt, acacia and mulga woodlands favouring stony ridges.	L	P	P	
Coraciidae	<i>Eurystomus orientalis</i> Dollarbird		Y	Woodlands, open country, vegetated watercourses and farmlands.	L	L	L	L
Dicruridae	<i>Grallina cyanoleuca</i> Magpie-lark		Y	Broad habitat range from semi-desert to forests close to water and trees for nesting.	L	L	L	L
Rallidae	<i>Gallirallus philippensis</i> Buff-banded Rail		Y	Dense, damp vegetation around swamps, lakes, creeks, coastal lagoons, tidal mudflats, rainforest margins, moist paddocks and sewage farms.	U	P	L	P
Hirundinidae	<i>Hirundo neoxena</i> Welcome Swallow		Y	Broad habitat range avoiding very heavy forests and the most arid of desert country.	L	L	L	L
Hirundinidae	<i>Hirundo nigricans</i> Tree Martin		Y	Open woodlands and farmlands with trees close to water.	L	L	L	L
Laridae	<i>Larus novaehollandiae</i> Silver Gull		Y	Surf and cliffs of ocean coasts, offshore islands, inland rivers, lakes, temporary floodwaters, cultivated farmlands and ponds.	U	P	L	L
Strigidae	<i>Ninox novaeseelandiae</i> Southern Boobook		Y	Almost anywhere with trees - forests, open forests and woodlands, farmland with scattered trees, parks and gardens.	L	L	L	L
Ardeidae	<i>Nycticorax caledonicus</i> Nankeen Night Heron		Y	Swamps, lakes, billabongs, mangroves and tidal channels. Roosts in dense vegetation during the day.	P	L	L	P
Pelecanidae	<i>Pelecanus conspicillatus</i> Australian Pelican		Y	Large or small areas of water from sheltered coastal bays to temporary pools in desert.	L	L	L	L
Rallidae	<i>Porphyrio porphyrio</i> Purple Swamphen		Y	Wetlands, swamps and well vegetated lakes and river margins.	P	L	L	P
Columbidae	<i>Ptilinopus superbus</i> Superb Fruit-dove		Y	Rainforests and closed forests, monsoon forests, regrowth, lantana thickets, woodlands adjoining rainforests.			L	P
Dicruridae	<i>Rhipidura rufifrons</i> Rufous Fantail		Y	Rainforests, dense wet eucalypt and monsoon forests, paperbark and mangrove swamps and vegetated watercourses.	U	P	L	P

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Cuculidae	<i>Scythrops novaehollandiae</i> Channel-billed Cuckoo		Y	Rainforests, monsoon forests, eucalypt forest and woodlands, river-edge thickets and swamp woodlands.	L	L	L	L
Sternidae	<i>Sterna bengalensis</i> Lesser Crested Tern		Y	Coastal seas, shores of sandy beaches, coral cays, exposed reefs and islands and occasionally mudflats of estuaries and creek channels.				L
Sternidae	<i>Sterna bergii</i> Crested Tern		Y	Ocean beaches and offshore islands extending to deep pelagic waters and inshore on estuaries, bays, harbours, coastal lagoons and along major rivers and saline lakes.			P	L
Sternidae	<i>Sterna caspia</i> Caspian Tern		Y	Sheltered estuaries, inlets, bays, harbours, lagoons with muddy or sandy shores and extending inland on fresh or salt lakes, temporary floodwaters, large rivers, reservoirs and sewage ponds.	P	P	L	L
Sternidae	<i>Sterna nilotica</i> Gull-billed Tern		Y	Temporary waters on mudflats and claypans, salt pans, saltmarshes, open floodplains in arid regions using inland fresh and saline waters. Breeds in lagoons and saltmarshes near the coast.	P	P	L	L
Halcyonidae	<i>Tanyiptera sylvia</i> Buff-breasted Paradise-kingfisher		Y	Rainforests of coastal lowlands and lower slopes of ranges, riverine thickets and tropical gardens.			P	
Threskiornithidae	<i>Threskiornis molucca</i> Australian White Ibis		Y	Shallow fresh and tidal wetlands and pastures, parks and gardens, rubbish tips.	P	L	L	L
Threskiornithidae	<i>Threskiornis spinicollis</i> Straw-necked Ibis		Y	Swamps, irrigated pastures, wet or dry grasslands.	L	L	L	L
Halcyonidae	<i>Todiramphus macleayii</i> Forest Kingfisher		Y	Open forests, woodlands, margins of rivers, swamps and billabongs, mangroves, farmlands.	P	L	L	L
Halcyonidae	<i>Todiramphus sanctus</i> Sacred Kingfisher		Y	Open forests, woodlands, semi-arid scrublands and mangroves.	L	L	L	L
Zosteropidae	<i>Zosterops lateralis</i> Silvereye		Y	Broad habitat range from woodlands and forests to mangroves and coastal heath.	U	P	L	L
Mammals								
Balaenopteridae	<i>Balaenoptera acutorostrata</i> Dwarf Minke Whale		Cet	Spends summers in sub-antarctic waters, travels north in winter as far as north Qld. Often occurs close inshore, enters bays and estuaries.				P
Balaenopteridae	<i>Balaenoptera edeni</i> Bryde's Whale	Y	Cet	Tropical to warm temperate seas; inshore or offshore.				P
Delphinidae	<i>Delphinus delphis</i> Common Dolphin		Cet	Tropical to cool temperate seas worldwide, oceanic and coastal.				P

Family Name	Scientific Name Common Name	Migratory	Marine	Preferred Habitat	Likelihood^ of Occurrence			
					Mine	Pipeline	Railway	Port
Neobalaenidae	<i>Grampus griseus</i> Risso's Dolphin		Cet	Tropical to temperate waters. Mainly a deepwater species, but can occur close inshore.				U
Ziphiidae	<i>Mesoplodon densirostris</i> Blainville's Beaked Whale		Cet	Worldwide in tropical and temperate seas, generally in deep water.				U
Delphinidae	<i>Orcinus orca</i> Killer Whale	Y	Cet	Worldwide in all oceans, most common in cold waters.				U
Delphinidae	<i>Stenella attenuata</i> Spotted Dolphin	Y	Cet	Outer shelf and continental slope of tropical and subtropical waters.				U
Delphinidae	<i>Tursiops aduncus</i> Indian Ocean Bottlenose Dolphin	Y	Cet	Shallow inshore tropical and temperate waters of the Indian and Pacific oceans; estuaries, surf zone of beaches, rocky reefs.				L
Delphinidae	<i>Tursiops truncatus</i> Bottlenose Dolphin		Cet	Worldwide tropical and temperate waters, inshore and offshore, bays, estuaries, harbours, rocky reefs.				P

NOTES:

^ Likelihood of Occurrence: L = Likely, suitable habitat mapped in study area, P = Possible, sub-optimal habitat or preferred habitat components present in study area, U = Unlikely, no suitable habitat present in study area.

Cet = listed Cetacean species.

Threatened species listed in Table 4 have not been repeated in this table.

4.1 (f) Nuclear actions

Not applicable to this project.

4.1 (g) Commonwealth marine areas

The proposed project is located within the Great Barrier Reef World Heritage Area (GBRWHA) and the GBRMP. The marine section of the SWBTA is listed as a National Heritage Place under the EPBC Act. Figure 4 shows the location of these areas in relation to the proposed project.

The GBRMPA is the Commonwealth agency responsible for overall management of the GBRWHA and GBRMP.

The GBRMP extends seaward from the LAT and is a multiple use marine park which designates which activities can occur in specific zones. The port site and surroundings is classified as a General Use zone. The main objective of a general use zone is to provide for the conservation of areas of the Marine Park while providing opportunity for reasonable use.

4.2 Important or unique aspects of the environment, if relevant

4.2 (a) Soil and vegetation characteristics

Refer discussion in sections 4.1(a), 4.1(b), and 4.1(c).

4.2 (b) Water flows, including rivers, creeks and impoundments

The proposed mine and water supply pipeline are located predominantly within the Belyando / Sutton River catchment area. The mine water supply pipeline will transport water from Lake Dalrymple (Burdekin Falls Dam) to the mine area. Lake Dalrymple has been deemed to be of national significance by DEWHA. The proposed mine and water supply pipeline transect the Belyando, Suttor and Carmichael River systems.

The railway corridor transects six catchments, two major rivers and numerous major creeks. The catchments include the Belyando, Nogoa / Mackenzie and Fitzroy Rivers, and the Shoalwater and Water Park Creeks.

The port site is located in the catchment of Water Park Creek which flows southwards to Corio Bay. The proposed site is characterised by several small ephemeral creeks flowing eastwards to the Coral Sea. No major rivers or creeks are present on the site.

4.2 (c) Outstanding natural features, including caves

Refer discussion in sections 4.1(a), 4.1(b), and 4.1(c).

4.2 (d) Gradient

The topography of the project study area is variable. The topography of the proposed mining area is gently undulating and is traversed by some minor creek systems.

The preferred railway route starts at point approximately 38 km NNW of the town of Alpha and extends in an easterly direction to the Queensland Coast. The route generally traverses gently undulating to flat land and crosses a number of major drainage systems including the Belyando and Mackenzie rivers. The route crosses the Drummond Range, the Broadsound Range and the Coast Range.

The port site is located on coastal hills with a thin sand cover at the Pacific coast with dunes, swales and lowlands to the west. The main port supporting infrastructure and stock piles are located on a parallel dune system.

4.2 (e) Buildings or other infrastructure

The project will traverse several railways, major roads, electricity transmission lines, water supply pipelines, gas pipelines and mining leases. These are listed in Sections 2.3.2.3, 2.4.6, and 2.4.7 of the project's Initial Advice Statement which is provided as Attachment A to this referral.

4.2 (f) Marine areas

The proposed port area for the project is located within the SWBTA. This has been discussed in further detail in Section 4.1 (a).

4.2 (g) Kinds of fauna

Refer Section 4.1 (d).

4.2 (h) Current state of the environment

Include information about the extent of erosion, whether the area is infested with weeds or feral animals and whether the area is covered by native vegetation or crops

The current state of the environment varies widely over the project study area and is dependent on the degree of disturbance resulting from land clearing, mining activities, agricultural and grazing practices, weed and feral animal invasion, and in the case of the SWBTA military training activities. Land management practices such as broadscale land clearing, altered fire regimes and unsustainable arid and semi-arid range land grazing have occurred throughout large tracts of the central and western parts of the study area. These activities have affected the natural values and productivity within these areas. Commercial forestry (*Pinus* sp.) is also prevalent within the coastal area near SWBTA.

Declared plant species present in the study area have reduced the productivity of the land. These species include Rubber Vine (*Cryptostegia grandiflora*), Parkinsonia (*Parkinsonia aculeate*), Parthenium Weed (*Parthenium hysterophorus*), Mother of Millions (*Bryophyllum* spp.) and Prickly Pear (*Opuntia inermis*). A number of feral pest fauna occur within the study area. These include pigs (*Sus scrofa*), goats (*Capra hircus*), dogs (*Canis lupus familiaris*), horses / donkeys (*Equus caballus* / *E. asinus*), cattle (*Bos taurus*) and cats (*Felis catus*). Introduced pest species such as European Rabbit (*Oryctolagus cuniculus*), European Brown Hare (*Lepus Capensis*) and European Red Fox (*Vulpes vulpes*) are also prevalent. The occurrence, abundance and density of these species varies within the project study area and impacts range from minor to potentially major in terms of effect to natural values and productivity.

4.2 (i) Commonwealth Heritage Places and places on the Register of the National Estate

Commonwealth Heritage Places

The SWBTA is listed as a Commonwealth Heritage Place on the Commonwealth Heritage List, established under the EPBC Act. Places on the List have been identified by the Minister for the Environment, Water, Heritage and the Arts (the Minister) as having Commonwealth heritage values.

This place comprises a 454,500-hectare military training area and constitutes the largest coastal wilderness between Nadgee in southern New South Wales and the Cape Melville/Starke Holding area on Cape York Peninsula. It is a significant habitat for the threatened dugong, and several species of marine turtle. Five nationally threatened plant species also occur in this area.

The SWBTA's high tidal variation gives rise to extensive mudflats and provides extensive feeding and roosting grounds for both migrant and non-migrant sea and shore birds. Abundant species of migratory birds were recorded on the tidal mudflats during the summer of 1991-1992 including the Lesser Golden Plover (*pluvialis fulva*), Bar-tailed Godwit (*Limosa limosa*), Whimbrel (*Numenius madagascariensis*), Grey-tailed Tattler (*Tringa brevipes*), Red-necked Stint (*Calidris ruficollis*), Terek Sandpiper (*Xenus cinereus*), Great Knot (*Calidris tenuirostris*), and the Fork-tailed Swift (*Apus pacificus*).

Register of the National Estate

A search of the Register of the National Estate indicated that the following places on this Register are located in or near the project study area:

- Capricorn Coast Area, Stanage Bay Road, Shoalwater Bay via Yeppoon;
- Shoalwater Bay Area, Stanage Bay Rd, Shoalwater Bay via Yeppoon;
- Shoalwater Bay Military Training Area, Byfield Rd, Byfield;
- Epping Forest National Park (1978 Boundary), Waltham Epping Rd, Epping Forest via Clermont;
- Princhester Serpentine, Princhester via Marlborough; and
- Capricornia Serpentine Landscape, Marlborough.

4.2 (j) Known Indigenous heritage values

No assessment of Indigenous Cultural Heritage has been undertaken for the mine or rail components of the project.

Culturally-significant sites within the SWBTA have been identified in the past. These include stone arrangements; numerous midden sites; stone cairns; native wells found throughout the Peninsula Range; carved trees near The Plains landing grounds and at Brampton Vale; a rock shelter, and art sites are believed to occur in the Polygon Ranges. Given the undisturbed nature of SWBTA, there is also the potential presence of tree burials which are considered of high significance. These sites are rare due to extensive clearing along the east coast; however, it is likely that areas of pre-European vegetation exist within SWBTA; hence, the potential for tree burials.

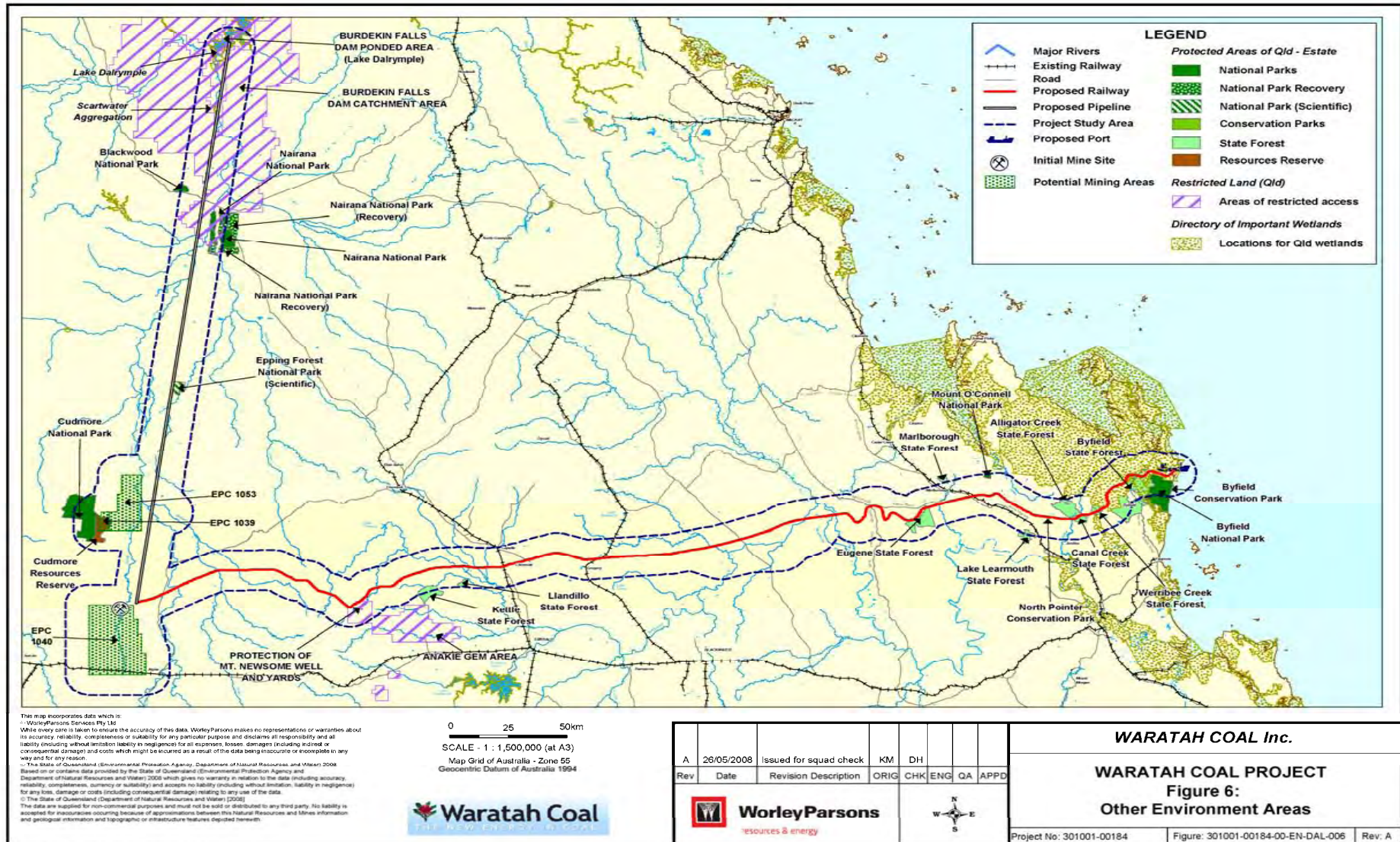
Project site specific data on the existence of aboriginal heritage values within the project study area is not available at this time. It is proposed to undertake cultural heritage surveys in association with the relevant traditional owners as part of the EIS for the project and to assist in the fulfilment of duty of care obligations in accordance with the Queensland *Aboriginal Cultural Heritage Act*.

A detailed Indigenous cultural heritage assessment of the proposed project will be undertaken as part of the EIS.

4.2 (k) Other important or unique values of the environment

A search of Queensland Government databases has identified several restricted, protected and reserves areas in or near the project study area. These areas include national parks, state forests, conservation parks, dam catchment areas and sites of historical significance. These are depicted in Figure 6.

Figure 6: Other Environment Areas.



This map incorporates data which is:
 - WorleyParsons Services Pty Ltd
 While every care is taken to ensure the accuracy of this data, WorleyParsons makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which might be incurred as a result of the data being inaccurate or incomplete in any way and for any reason.
 © The State of Queensland (Environmental Protection Agency, Department of Natural Resources and Water) 2008
 Based on or contains data provided by the State of Queensland (Environmental Protection Agency and Department of Natural Resources and Water) 2008 which gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data.
 © The State of Queensland (Department of Natural Resources and Water) 2008.
 The data are supplied for non-commercial purposes and must not be sold or distributed to any third party. No liability is accepted for inaccuracies occurring because of approximations between this Natural Resources and Mines information and geological information and topographic or infrastructure features depicted therein.

0 25 50km
 SCALE - 1 : 1,500,000 (at A3)
 Map Grid of Australia - Zone 55
 Geocentric Datum of Australia 1994



A	26/05/2008	Issued for squad check	KM	DH				
Rev	Date	Revision Description	ORIG	CHK	ENG	QA	APPD	



4.2 (l) Tenure of the action area (eg freehold, leasehold)

The majority of the proposed mine and water supply pipeline component of the project study area is located on cleared farmlands of leasehold tenure devoted to beef production. Some freehold land will be affected by the project in the southern portion of this area.

The railway corridor study area is predominantly located on freehold land used for beef production and pasture crops. Small pockets of leasehold and forestry reserve lands are present along the alignment. The eastern portion of the corridor transects Commonwealth land.

The proposed port facility study area is located wholly within Commonwealth land.

4.2 (m) Existing land uses

The project study area is predominantly used for a mixture of crop production, cattle grazing, forestry, tourism, coal mining and Defence purposes.

4.2 (n) Proposed land uses

It is proposed to use the land in the project study area for the establishment and operation of the individual project components as described in Section 3 of this document.

5 Nature and extent of likely impacts

5.1 Likely impacts on matters of national environmental significance (NES)

Potential impacts on ecological communities and regional ecosystems, protected areas, and threatened flora and fauna species will arise from the clearing of vegetation for mining, for the railway and pipeline corridors, and for the port. The clearing of vegetation has the potential to impact upon flora and fauna species through direct loss or injury to species during construction activities and indirectly through the loss or degradation of habitat areas, fragmentation of habitat areas and loss of connectivity.

Detailed flora and fauna studies will be undertaken as part of the EIS process to confirm communities and species likely to be impacted by the project, and to identify the most effective mitigation strategies for inclusion in the project's Environmental Management Plan.

Vegetation clearing will be undertaken in accordance with best practice to minimise the potential impact. Rehabilitation programs will be developed and implemented to revegetate and regenerate native vegetation as necessary.

Significant flora and faunal habitats, and protected areas listed under the EPBC, will be avoided where practicable through realignment of proposed pipeline and railway corridors. In view of this ability to relocate this infrastructure to avoid sensitive areas, impacts on protected areas are expected to be minimal.

Construction activities may impact upon fauna species through increased disturbance from construction noise, vehicle movements and dust production.

Construction activities within the vicinity of protected areas may increase dust loads, change the hydrology and water quality of waterways and drainage lines, increase sediment loadings in waterways through runoff, and result in the introduction and dispersal of pest weed species.

5.1 (a) Likely impact on the world heritage values of a declared World Heritage property

The proposed development is unlikely to have a significant impact on the GBRWHA or the GBRMP. As Waratah Coal will follow all extant requirements for undertaking shipping activities in the GBRWHA it is unlikely that adverse impacts will occur.

Dredging activities and spoil disposal to be undertaken at the port site have the potential to elevate water turbidity levels above the existing background conditions. The sediment plumes arising from dredging and spoil disposal activities may temporarily decrease available light conditions at the sea bed, increase suspended sediment concentrations within the water column, and increase deposition of fine sediment over adjacent benthic habitats.

Although the effects vary, dependent on physical aspects of the habitat and composition of the benthic fauna itself, the recovery of the benthic assemblage from such impacts are well documented.

The proposed works and the operation of the port are not likely to have any significant impact on fish assemblages due to their wide distribution through tropical regions and the general mobility of the species. No extensive seagrass communities are likely to occur within the footprint of disturbance and therefore impacts on dugong habitat considered unlikely. This will be confirmed by EIS investigations.

The proposed development is unlikely to have any significant impact on cetacean species. Existing information demonstrates that key cetacean species are able to coexist in areas of extensive port infrastructure.

EIS studies will be undertaken to examine these potential impacts. These studies will include the modelling of turbidity plumes potentially generated at the dredging site and spoil disposal areas and will assess potential impacts to water quality in the vicinity of the dredging and spoil disposal areas.

The Department of Defence has for many years' undertaken military activities within the SWBTA without causing significant impact to the GBRWHA. Extant management processes currently in place for the Department of Defence for conducting activities in the SWBTA that are in or adjacent to the GBRWHA will be assessed as part of the EIS. The EMP for the construction and operation of infrastructure will establish clear management practices for undertaking activities adjacent to and in the GBRWHA that are consistent with current arrangements imbedded within the broader SWBTA EMS.

5.1 (b) Likely impact on the heritage values of a listed National Heritage place

The proposed development is unlikely to have a significant impact on the national heritage values of the SWBTA.

Extant management processes for activities in the SWBTA will be assessed as part of the EIS. The EMP will establish clear management practices for undertaking construction and operational activities in the SWBTA such that impacts to the national Heritage Place values are mitigated.

5.1 (c) Likely impact on the ecological character of a declared Ramsar wetland

The proposed development is unlikely to have a significant impact on the Ramsar wetlands existing in the Shoalwater Bay area. Land clearing and reshaping and consequent alteration of existing drainage lines have the potential to affect the wetland. Similarly the operation of the coal terminal may increase dust loads in the air and may affect the quality of water in drainage lines. However, these issues can be managed by the application of established and proven management measures.

Extant management processes for activities in the SWBTA that are in or adjacent to the Ramsar listed wetland will be assessed as part of the EIS. The EMP for this project will establish clear management practices for undertaking construction and operational activities in these areas, such that they are consistent with current arrangements imbedded within the SWBTA EMS.

5.1 (d) Likely impact on the members of a listed threatened species or ecological community, or their habitat

The clearing of vegetation associated with the mine, water supply pipeline and rail construction has the potential to impact upon flora and fauna species through direct loss or injury to species and indirectly through the loss or degradation of habitat areas; habitat fragmentation and the introduction and dispersal of weed and animal pest species.

In terms of the likely impacts of the Port development on marine species (i.e. marine turtles), some loss of habitat will occur as a result of construction and dredging activities, and the need for an ocean disposal ground. Relative to the area available for marine species in the region, the area potentially impacted by the project is extremely small. Minimising impacts to the marine environment will be an important consideration in identifying the location of the port, together with the construction and ongoing operation of the port.

Detailed studies assessing the potential impacts to terrestrial and marine flora and fauna, and ecological communities, will be undertaken as part of the EIS. Mitigation measures will then be developed for inclusion in the Construction and Operations EMP.

5.1 (e) Likely impact on the members of a listed migratory species or their habitat

As per 5.1 (d).

5.1 (f) Likely impact on the environment in part of the Commonwealth marine area

The port and a small section of the railway will be constructed and operate in an area adjacent to a section of Commonwealth marine area within the SWBTA. Detailed studies assessing the potential impacts to the Commonwealth marine area will be undertaken as part of the EIS. Mitigation measures will then be developed for inclusion in the Construction and Operations EMP.

5.2 Likely impacts for nuclear actions, actions affecting Commonwealth land or actions taken by the Commonwealth

The project will affect Commonwealth land within the boundary of the SWBTA. Impacts will be limited to a small portion of land within the Dismal and Mount Parnassus Sectors and will be associated with the construction of the rail, port, roads and utility infrastructure. Likely impacts will be vegetation loss, habitat alteration, soil disturbance, changed surface flows, alterations to the dunal system, alterations to the wetland systems and the creation of airborne emissions.

As outlined in section 5.1 above, detailed studies assessing the potential impacts to the Commonwealth land area will be undertaken as part of the EIS. Mitigation measures will then be developed for inclusion in the Construction and Operations EMP.

6 Measures to avoid or reduce impacts

An Environmental Management Plan (EMP) will be developed for the project during the EIS process. This EMP will address the relevant environmental risks associated with the construction, operation and decommissioning phases of the project. The EMP will also specify any required ongoing environmental monitoring to be undertaken at the site.

The approach to be implemented by Waratah Coal is espoused in its environmental and occupational health safety and welfare policy statements. The construction contractors will be engaged on the basis that compliance with the project EMP, development approvals and environmental permits will be a contractual requirement. Waratah Coal will maintain compliance with the EMP and relevant approval conditions through a program of risk-based tools, including onsite audits, documentation reviews and key performance metrics.

Vegetation clearing will be undertaken in accordance with best practice to minimise the potential impact on flora and fauna species and will include minimising the practical width of clearing for construction, minimising surface disturbance and implementing soil and water strategies to reduce erosion, sediment loading to watercourses and contamination. The railway alignment will require an average clearing width of 30 m; however, individual significant trees (e.g. habitat trees) will be retained within the clearing width where practicable.

Detailed flora and fauna studies will be undertaken as part of the EIS process to identify key species and habitat areas likely to be affected by the proposed railway and select the final route alignment that minimises these impacts.

Detailed studies on surface water hydrology and water quality will be undertaken as part of the EIS process. Construction and processing activities will be designed to maximise recycling potential of water and water harvesting from the project area. External water demands will be quantified prior to commencement of the project to identify the water resource needs of the local community and environment downstream.

7 Conclusion on the likelihood of significant impacts

- NOTE: Under the EPBC Act, you must identify in the referral whether or not you believe significant impacts on the matters protected under the Act are likely. If you identify that significant impacts are likely, you must identify the relevant protected matters in section 7.2.

Do you THINK your proposed action is likely to have significant impacts?

Yes

No, complete section 7.1

Yes, complete Section 7.2

7.1 Proposed action is NOT LIKELY to have significant impacts

Specify the key reasons why you think the proposed action is NOT LIKELY to have significant impacts.

Key reasons

7.2 Proposed action is LIKELY to have significant impacts

Type 'x' in the box for the matter(s) of the EPBC Act that are impacted

Matters likely to be impacted

X	sections 12 and 15A (World Heritage)
X	sections 15B and 15C (National Heritage places)
X	sections 16 and 17B (Wetlands of international importance)
X	sections 18 and 18A (Listed threatened species and communities)
	sections 20 and 20A (Listed migratory species)
	sections 21 and 22A (Protection of the environment from nuclear actions)
X	sections 23 and 24A (Marine environment)
X	sections 26 and 27A (Protection of the environment from actions involving Commonwealth land)
	section 28 (Protection of the environment from Commonwealth actions)

Specify the key reasons why you think the proposed action is LIKELY to have significant impacts.

Key reasons

Waratah Coal acknowledges that for a project of this scale, the potential exists for adverse impacts to occur to matters of NES. The extent of impact to the receiving environment is uncertain at this stage of project development. However, the matters of NES listed above will be assessed through a competent EIS process. Waratah Coal considers the matters of NES most likely to be adversely impacted will be terrestrial fauna and flora affected by vegetation clearance associated with the construction of the infrastructure and potentially the heritage values at the SWBTA, and the broader GBRWHA.

8 Assessment approach under the EPBC Act

- NOTE: If a decision is made that a proposal needs approval under the Act, the Minister will also decide the assessment approach needed to satisfy the objectives of the Act. While the information you have provided in this referral will be taken into account in making this decision, the final decision rests with the Minister.

- Type 'x' in the box for the level of assessment you think is appropriate

Level of assessment	
<input type="checkbox"/>	Bilateral Agreement applies
<input checked="" type="checkbox"/>	Accredited assessment
<input type="checkbox"/>	Assessment on referral information
<input type="checkbox"/>	Preliminary information
<input type="checkbox"/>	Public Environment Report
<input checked="" type="checkbox"/>	Environmental Impact Statement
<input type="checkbox"/>	Commission of Inquiry
<input type="checkbox"/>	No comment/Not sure

Specify any reasons or views that you have that may be relevant to the decision about the appropriate level of assessment.

Key reasons

The proposed project has been declared as a significant project under the Queensland SDPWOA and will be the subject of an EIS prepared in accordance with the procedures specified under this Act. This process is identified in the Bilateral Agreement as being acceptable to the Commonwealth and is an appropriate vehicle for assessing matters of potential national environmental significance. The Commonwealth has the opportunity to incorporate its specific requirements into the Terms of Reference for the EIS.

9 Environmental history of the responsible party

- NOTE: The EPBC Act Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach for actions that need approval under the Act.

	Yes	No
<p>9.1 Does the party taking the action have a satisfactory record of responsible environmental management.</p> <p>If Yes, provide details</p> <p>Waratah Coal is a Brisbane based coal mining company, currently listed on the Toronto Stock Exchange. Waratah Coal is currently undertaking exploration work in the Galilee Basin in central Queensland, in addition to tenements at Nymboida in northern New South Wales. In due course, Waratah Coal intends to assess other granted exploration tenements in central and north Queensland, and the Northern Territory. Waratah Coal undertakes its exploration following the environmental principals established through the Code of Environmental Compliance for Exploration Development. Waratah Coal is proud of the fact that no breaches of the Code of Environmental Compliance for Exploration Development have occurred during its exploration activities.</p>	Yes	
<p>9.2 Is the party taking the action subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?</p> <p>If Yes, provide details</p>		No
<p>9.3 For an action for which a person has applied for a permit under the EPBC Act, is the person making the application subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?</p> <p>If Yes, provide details</p>		No
<p>9.4 If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?</p> <p>If Yes, provide details of environmental policy and planning framework</p> <p>A copy of the Waratah Coal Environmental Policy is attached to this referral. Refer Attachment B.</p>	Yes	

10 Information sources and attachments

10.1 References

Department of Environment, Water, Heritage and the Arts (2008). Australian Heritage Database. Accessed 30/01/2008.

Department of Environment, Water, Heritage and the Arts (2008). Australian Heritage Places Inventory. Accessed 30/01/2008.

Department of Environment, Water, Heritage and the Arts (2008). Protected Matters Search Request – Waratah Coal Project. Accessed 30/01/2008.

Environmental Protection Agency (2008). Certified environmentally sensitive area map. Online ESA Maps, EPA, Brisbane. [URL:http://www.epa.qld.gov.au/ecoaccess/maps_of_environmentally_sensitive_areas/]. Accessed on 30/01/2008.

Environmental Protection Agency (2008). Copy of the certified regional ecosystem map for the purpose of the Vegetation Management Act 1999. Online RE Maps, Environmental Protection Agency, Brisbane. [URL: <http://www.epa.qld.gov.au/REMAP>]. Accessed on 30/01/2008.

Environmental Protection Agency (2008). HERBRECS Search Request – Waratah Coal Project. Accessed 30/01/2008.

Environmental Protection Agency (2008). Wildlife Online Search Request – Waratah Coal Project. Accessed 30/01/2008.

10.2 Reliability of information

Waratah Coal has obtained information from this report through a review of referenced scientific literature and government databases. Waratah Coal has no reason to doubt the authenticity or accuracy of the literature reviewed. To ascertain the reliability of the data provided, please refer to the disclaimer statements for each tool:

10.3 Attachments

Type 'x' in the box for the documents you have attached.

You must attach	<p>figures, maps or aerial photographs showing the project locality (section 2) The following figures are included <i>within</i> this document:</p> <ul style="list-style-type: none"> • Figure 1: Project Concept Plan • Figure 2: Mine Concept Plan • Figure 3: Port Concept Plan – North East View 	X
	<p>figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 4) The following figures are included <i>within</i> this document:</p> <ul style="list-style-type: none"> • Figures 4 and 4a-c: Protected Areas under EPBC Act • Figures 5 a-d: Endangered Regional Ecosystems within the Project Study Area • Figure 6: Other Environmental Areas 	X
If relevant, attach	<p>copies of any state or local government approvals and consent conditions (section 3.4)</p>	
	<p>copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 3.5)</p> <ul style="list-style-type: none"> • Attachment A - Initial Advice Statement, Galilee Coal Project Central Queensland, 15 April 2008. 	
	<p>copies of any flora and fauna investigations and surveys (section 4)</p>	
	<p>technical reports relevant to the assessment of impacts on protected matters and that support the arguments and conclusions in the referral (section 4 and 5)</p>	
	<p>report(s) on any public consultations undertaken, including with Indigenous Stakeholders (section 4)</p>	
	<p>Proponents Environmental Policy</p> <ul style="list-style-type: none"> • Attachment B – Waratah Coal Inc Environmental Policy 	X

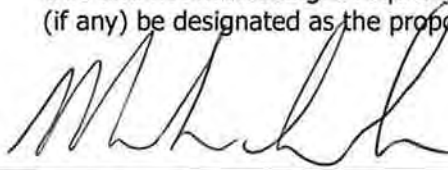
11 Signatures and declarations

- NOTE: Providing false or misleading information is an offence punishable on conviction by imprisonment and fine (Section 489, EPBC Act).

Project title

- 11.1 **Party who prepared the referral** I declare that the information contained in this form is, to my knowledge, true and not misleading. I request that the person named in 11.3 below (if any) be designated as the proponent for the action.

Signature



Date

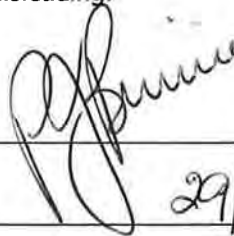
29/7/08

Mark Stephen Imber

Full name

- 11.2 **Party who is responsible for action** I declare that the information contained in this form is, to my knowledge, true and not misleading.

Signature



Date

29/7/2008.

Peter Binnie

Full name

- 11.3 **Proponent (complete only if different from 11.2)** I, being the person nominated in Section 1.3 of this referral form as the nominated proponent (or agent acting on behalf of), agree to be designated as the proponent for the action described above if it is decided that the action requires approval under Part 9 of the EPBC Act.

Signature

Date

Full Name

If the referring party is a small business (fewer than 20 employees), estimate the time, in hours and minutes, to complete this form (include your time reading the instructions, working on the questions and obtaining the information and time spent by all employees in collecting and providing this information).

Hours	Minutes
120	

ATTACHMENT A

Initial Advice Statement, Galilee Coal Project Central Queensland, 15 April 2008.

ATTACHMENT B

Waratah Coal Inc Environmental Policy

Environmental Policy

Waratah Coal recognises its responsibilities for implementing sound environmental stewardship of the environment in which it works. We will care for and manage the environment to deliver environmental better practice outcomes. Our commitment extends to all those who work with and for Waratah Coal.

In executing our environmental policy we will;

- **comply** with all relevant legislation and regulations
- **incorporate** environmental better practice into our core business plans and management processes
- **provide** adequate resources to meet our commitments
- **train** our workforce and contractors to meet our standards
- **communicate** our planned actions, targets and results to all stakeholders
- **identify, minimise and mitigate** environmental disturbance throughout our business
- **measure** our performance
- **enforce** our standards with partners and contractors
- **improve** our performance through continuous planning

This environmental policy confirms the company's intent towards creating and implementing sound environmental management practices. All management, employees and contractors of Waratah Coal will uphold and implement this policy.



Peter Lynch

President and Chief Executive Office

Waratah Coal