Byerwen Coal Pty Ltd

Initial Advice Statement

February 2011




Contents

Table Index

Figure Index

1. Executive Summary

This initial advice statement (IAS) has been prepared for the purpose of identifying environmental, cultural or community issues and regulatory approvals required for the Byerwen Coal Project (the Project). The IAS aims to satisfy the information requirements of the Coordinator General in assessing the potential for the Project to be declared as a Significant Project under Section 26 of the *State Development and Public Works Act 1971*.

The Project will be an integrated open cut and underground coal mine located approximately 20 km west of the township of Glenden in Queensland's Bowen Basin. The Project includes the construction of a new water pipeline from the Burdekin Water Supply scheme and upgrades to existing power supply infrastructure close to and within the Project area. It is proposed that the mine will produce up to 10 million tonnes of product coal for the export market. Production from the Project will primarily be high quality coking coal with some thermal coal. It is anticipated that the coking coal will be sold under long term off take agreements to Asian customers. There is also some potential for coal to be sold into India, Europe and Brazil. Coal produced by the Project will be railed to Abbot Point for export to customers overseas.

The proponent of the Project is Byerwen Coal Pty Ltd (Byerwen Coal). Byerwen Coal is a joint venture between QCoal Pty Ltd (80%) and JFE Steel (20%). Byerwen Coal has applied for six mining leases (MLA 10355, 10356, 10357, 70434, 70435 and 70436) which cover the project area.

A high level concept study has been completed that identifies a staged development process with a progressive ramp up in production activity over the first three years of mine life to achieve a design target of 10 Mtpa of product coal. Mining will initially be via open cut means utilising large scale excavators and trucks. Part of the coal resource will be mined by underground means utilising longwall extraction techniques. It is likely that a Run of Mine (ROM) mining rate of 15 Mtpa will be required to meet the design production rate of product coal.

Infrastructure requirements for the mine will include crushing, screening and washing facilities to process the coal. Additional infrastructure will be required to establish rail loading facilities and a balloon rail loop, connect the mine to the regional power grid and provide administration and maintenance facilities. A new water pipeline from the Burdekin scheme will need to be built to meet the water requirements of the Project.

A range of detailed environmental studies will be required to assess the impact of the Project on land, hydrological, ecological, noise, air quality, socio-economic and cultural heritage environments. The proponent recognises that a Project of this magnitude and complexity will require an Environmental Impact Statement (EIS) and has already commenced detailed studies to collect the requisite data to inform the EIS.

2. Introduction

2.1 Project Overview

The Proponent proposes development of the Byerwen Coal Project (the Project); an integrated open cut and underground coal mine located approximately 20 km west of the township of Glenden in Queensland's Bowen Basin. The Project consists of six mining leases located primarily in a cleared cattle grazing area. The Project area is immediately to the west of the Xstrata owned Newlands Mine and to the north of the Xstrata Wollombi and Suttor Creek mines. It is split across two local government areas, Whitsunday Regional Council in the north and Issac Regional council in the south. A plan showing local government boundaries and the underlying pastoral titles is attached at Appendix A. The area within the proposed lease boundaries covers approximately 22,697 hectares and incorporates buffer capacity to enable protection of significant environmental values.

The proposed mine will produce up to 10 million tonnes per annum (Mtpa) product coal for the export market. The mine will have a mine life of up to 50 years, inclusive of construction, operation and closure.

The identified coal resource for the Project is contained within the mine area as shown in Figure 2-1, and is the subject of six Mining Lease Applications (MLA) lodged by the Proponent on 29 and 30 June 2010. Specifically, MLA 10355, MLA 10356, MLA 10357, MLA 70434, MLA 70435 and MLA 70436.

The Project will involve the mining of up to 15Mtpa of ROM coal to produce the scheduled 10Mtpa of product coal from a number of open pits. Additional resources have been defined and will be extracted by underground mining. Open cut mining will be by a combination of large excavator, truck and dozer equipment. Underground mining will be by longwall means.

ROM coal will be hauled on internal haul roads to a central processing (CHPP) facility where it will be crushed, washed and processed to produce a range of hard coking and thermal coal products. Over time an additional CHPP plant may be established to minimise haul distances and optimise the productivity of mining equipment. Product coal will be transferred to a train loading facility located adjacent to the existing Newlands – Abbot Point railway line to the north of the Newlands Mine operation. Coal will be railed to Abbot Point for export to international customers.

Infrastructure requirements for the Project include a new rail loop, power transmission lines, water pipelines and bridges to cross existing, and proposed, roads and railway lines. The Project has a proposed construction workforce of approximately 350 – 500 and an operational workforce close to 1000 over the life of the Project. Accommodation for construction and operations personnel is envisaged to be in surrounding local townships such as Glenden and Collinsville. Studies into the accommodation requirements of the Project are ongoing and will be included in the EIS process.

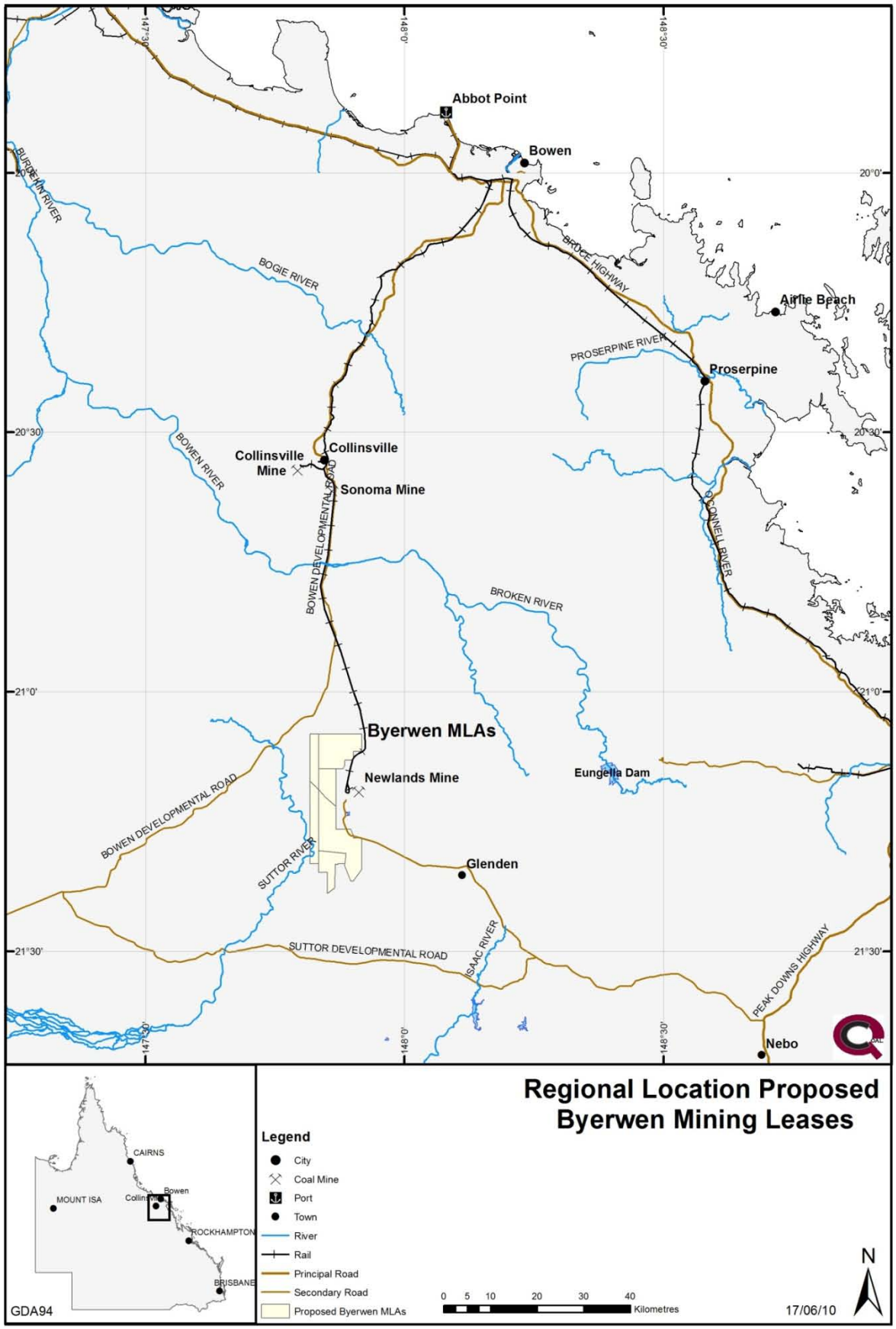


Figure 2-1 Location of Project

2.2 The Proponent

The Proponent for the Byerwen Coal Project is Byerwen Coal Pty Ltd (Byerwen Coal). Byerwen Coal is a joint venture between QCoal Pty Ltd (80%) and JFE Steel (20%).

QCoal is a privately owned Queensland company based in Brisbane. QCoal has been active in the Queensland coal exploration and mining industry for over 16 years. QCoal discovered and developed the Sonoma Mine and remains a major Joint Venture partner in the mine. QCoal has also been instrumental in the discovery of the Coppabella deposit.

JFE Steel is a subsidiary of the JFE Group of Japan. The JFE Group is Queensland's largest export customer and JFE Steel is one of the largest customers of Queensland sourced coking coal. JFE Steel and associated companies already have direct equity investments in a number of Queensland coal mines including Sonoma.

Byerwen Coal holds the two underlying exploration tenements in the project area, EPC 614 and EPC 739. The proposed Project area covers a portion of the two underlying EPCs. Byerwen Coal has applied for Mining Leases 10355, 10356, 10357, 70434, 70435 and 70436 which cover the project area.

Contact details for the Proponent:

PO Box 10630

Adelaide Street

Brisbane Qld 4000

Phone: 61 7 3002 2900

Fax: 61-7- 3002 2999

2.3 Project Need

Exploration within the Project area has been conducted since the early 1970's by a number of companies including the Proponent. Exploration activities have included regional drilling, geotechnical surveys, extensive regional geological mapping, environmental surveys and cultural heritage work. The Project area includes both the Moranbah and Rangal Coal Measures which are both currently being commercially extracted from nearby mines within the Bowen Basin.

Exploration activities have defined a resource of approximately 650 million tonnes (Mt) of economically recoverable coal. Mining operations will produce up to 10 Mtpa product coal for export markets. The resource is mainly coking coal; however, economic quantities of thermal coal are also contained within the deposit which will be mined for sale.

The Australian coal sector has generally recovered from the lows impacted from the Global Financial Crisis and has seen a resurgence in coal sales driven by China's strong demand. Future indicators suggest that the strong coal demand from China will continue. There is also strong potential for Indian customers to enter the market to satisfy supply shortfalls in that country. It is expected that demand for prime quality, hard coking coal will outstrip supply creating a need for new mines to supply the marketplace. Increasingly large end-users are taking up equity positions in Australian coal projects to ensure supply.

Production from the Byerwen Coal Project will comprise two products:

- High quality hard coking coal; and
- Thermal coal.

It is anticipated that the coking coal product will be sold under long-term off take agreements with major end-users prior to production commencing. The most likely markets are anticipated to be Asian steel mills; however interest has been expressed from other consumers in India, Europe and Brazil.

Development concepts and parameters of the Project have assumed an approximate 50 year life. The mine area covers only a portion of the overall Project area so there is some potential that ongoing exploration may extend the mine area and life. Accordingly, the proposed Mining Leases will seek a fifty (50) year duration to allow for exploitation of the known resources, plus additional resources likely to be identified during the operation, and an allowance of suitable timeframes to permit successful rehabilitation.

The likely economic impacts of the Byerwen Coal Project can be divided into two distinct categories. First is the primary, direct economic impact resulting from the Project's expenditure in the community, employment of personnel, direct payment of taxes, State royalty and infrastructure charges and use of resources within the community, surrounding region, and the State of Queensland. The second category is the indirect impacts that flow on from the increased spending and employment in service industries.

The Byerwen Coal Project will employ approximately 350 – 500 personnel during construction and an average of 990 people over the life of mine once operational. It is proposed that the Byerwen Coal Project will operate 24 hrs per day, 7 days per week.

The proposed economic and social benefits from the Byerwen Coal Project will complement the contribution from existing QCoal mines such as Sonoma.

Construction will commence immediately upon grant of the Mining Leases. Accordingly, construction is intended to commence in 2012, with the Project expected to be commissioned and producing coal by 2013. The Byerwen Coal Project is well located to take advantage of established infrastructure in the region. Glenden is located 20 km east of the area while the mining town of Collinsville is located 46km to the north of the area. The port of Abbot Point lies 142 km by rail to the northeast, and the major regional town of Mackay is approximately 150 km away by sealed road.

2.3.1 Other regional projects and proposals

The Byerwen project is located immediately to the west of Xstrata Coal's Newlands and Wollombi/Suttor Creek mines which produce in excess of 10 million tonnes of mainly thermal coal per year for the export market. An existing haul road corridor from Wollombi/Suttor Creek to the Newlands processing area cuts across the Project area.

BHP Mitsui has two advanced stage projects (Lancewood & Wards Well) to the south of the Byerwen project area with potential for infrastructure conflicts with future expansion plans for Byerwen.

QR National's Northern Missing Link project traverses the Byerwen mining leases and will create operational issues once mining activities commence at Byerwen. Given that the Northern Missing Link is likely to expand capacity in future years to meet the stated expansion aims of the Abbot Point coal terminal it is likely that further expansion of this rail link will occur, with consequent disruption to operations at Byerwen.

A number of the major mine proponents in the Galilee basin are proposing rail and infrastructure corridors that pass through or close to the Project area. The most advanced project, Hancock Coal's Alpha Project EIS shows a preferred rail corridor that bisects the Byerwen project area. Adani Mining Pty Ltd have recently released an IAS for the Carmichael Coal Project that also shows a potential joint use of the Alpha rail corridor through the Project area. This may require the construction of additional passing loops along the proposed Alpha rail alignment. Figure 2-2 shows the potential spatial conflicts and interactions between the various infrastructure developments in the Byerwen Project area using publically available infornation.

The interaction of the various project and activities proposed for the Byerwen area will require high level coordination to ensure the best quality outcomes for the State of Queensland and the various project proponents.

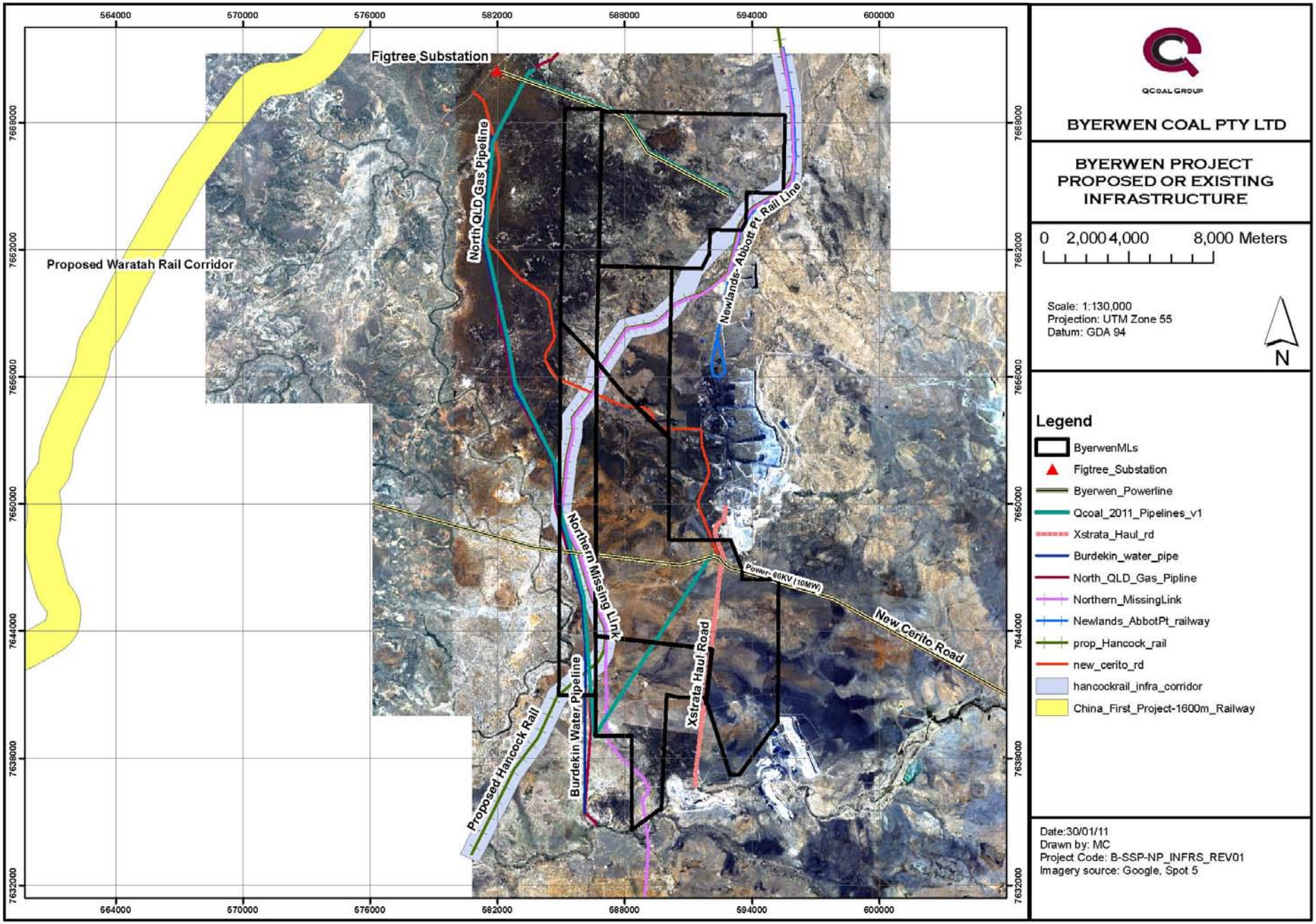


Figure 2-2 Project Infrastructure conflicts

2.4 Project Tenure

Byerwen Coal lodged six Mining Lease Applications (MLAs) with the Department of Employment, Economic Development and Industry on 29 & 30 June 2010. Due to the size of the Mine area the MLAs were split between two mining regions with MLA 10355, 10356 and 10357 lodged with the Charters Towers Mining Registrar and MLA 70434, 70435 and 70436 lodged with the Emerald Mining Registrar. The surface area of the individual MLAs is shown in Table 2-1.

Table 2-1 - MLA surface areas

MLA	Area (Ha)
10355	5411
10356	2203
10357	1898
70434	7731
70453	2560
70436	2894
Total	**22697**

Byerwen Coal also holds the underlying exploration tenures EPC 614 and 739. A portion of the Mine area is subject to an Authority to Prospect (ATP688P) for petroleum held by another party.

The location of the Mining Leases is shown in Figure 2-3.

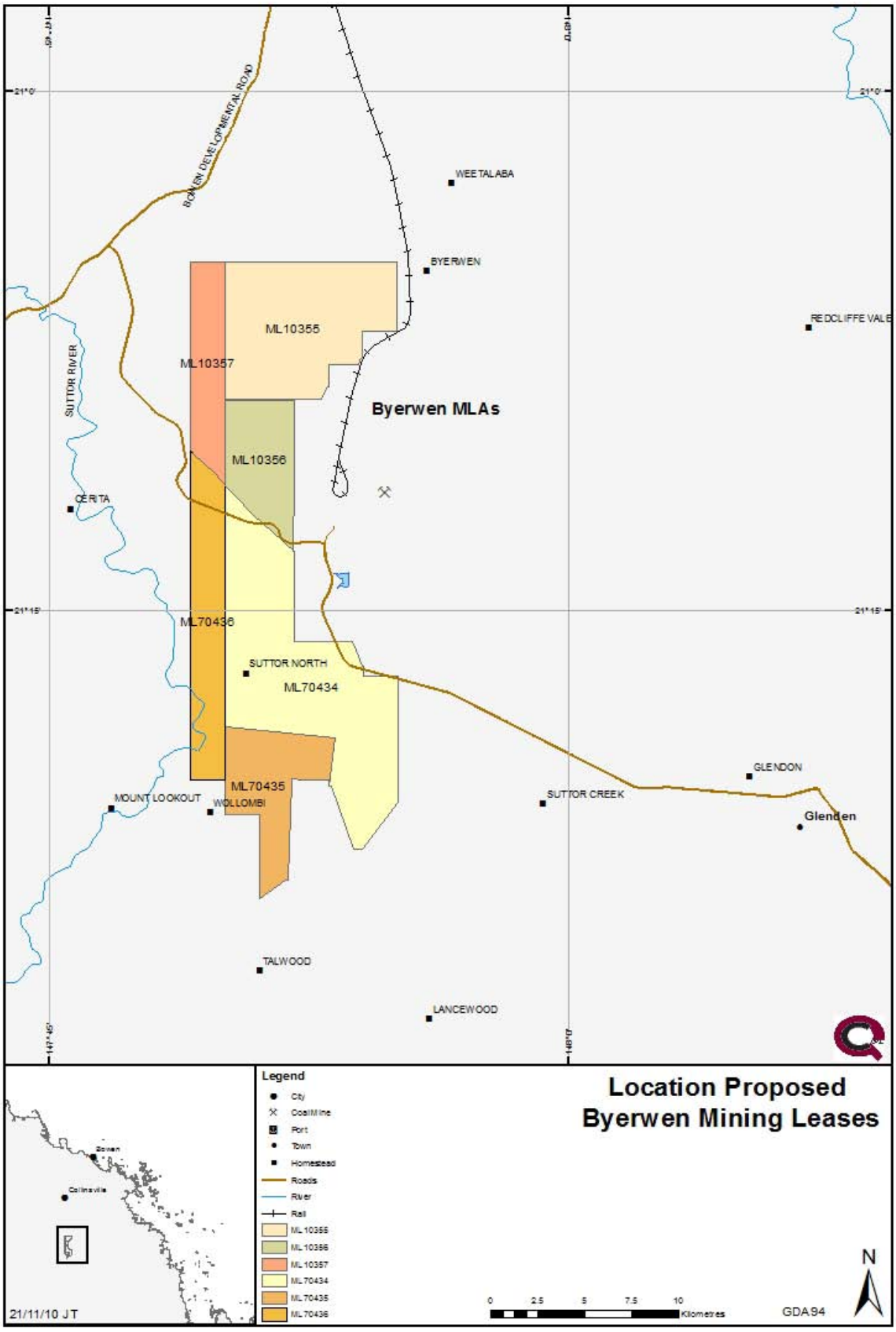


Figure 2-3 Mining lease locations

2.5 Legislative and Approvals Requirements

There are a range Commonwealth and State approvals/licences/permits and legislation that will be required for the development and operation of the Project. Table 2-2 summarises the legislation that may be relevant during the approval process.

Table 2-2 Summary of relevant Commonwealth and State legislation

Commonwealth Legislation	Administering authority	Approval trigger	Approval type	Relevance to project
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Department of Sustainability, Environment, Water, Population and Communities (DSEWPC)	Action which has, or is likely to have, a significant impact on a Matter of National Environmental Significance (MNES).	Referral to DSEWPC for determination of 'controlled action' status	Potential impacts on MNES must be dealt with in EIS
Native Title Act 1993	The Attorney-General's Department and Minister for Families, Housing, Community Services and Indigenous Affairs	Project area falls on land where Native Title has not been extinguished	Agreements and/or cultural heritage management plans in place with respective claimant groups	Covered by two native title claims. QUD6244/98 by the Birri People and QUD6230/98 by the Jangaa People.
Energy Efficiency Opportunities Act 2006	Department of Resources, Energy and Tourism (DRET)	Assess energy reduction opportunities & minimise energy use	Annual report required once project approved	Requirements of the Act need to be considered during the project planning stage

State Legislation	Administering authority	Approval trigger	Approval type	Relevance to project
Mineral Resources Act 1989	Department of Employment, Economic Development and Innovation (DEEDI)	Lodgement of Lease application for mining and mining related activities	Grant of Mining Lease(s)	Mining cannot occur until legal tenure is granted under the Act.
Sustainable Planning Act 2009	Department of Infrastructure & Planning & Local Government agencies	Project related activities occurring off Mining Lease	Planning Approval	Only required for off lease developments such as accommodation villages
Environmental Protection Act 1994	Department of Environment and Resource Management (DERM)	Referral for assessment by DEEDI upon receipt of Mining Lease application. Project encompasses a range of Environmentally Relevant Activities (ERAs).	Environmental Authority for mining activities.	Environmental Impact Statement required for large scale mining activities if not prepared under the *State Development and Public Works Organisation Act 1971.* Mining Lease cannot be issued until EA granted.
Nature Conservation Act 1992	DERM	Clearing or interference with declared and protected areas or wildlife habitats	Permit required for disturbance or interference with listed species.	No declared protected areas identified in Project area at this

State Legislation	Administering authority	Approval trigger	Approval type	Relevance to project
				stage.
Vegetation Management Act 1999	DERM	Vegetation clearing	Development permit	All mining related clearing on a mining tenement are exempt. Triggers for provision of offsets might occur.
Aboriginal Cultural Heritage Act 2003	DERM	Activity that has potential to harm Aboriginal cultural heritage	Cultural Heritage Management Plan (CHMP).	Proponent has to demonstrate the exercise of 'Duty of Care' that all reasonable and practicable measures have been taken to protect cultural heritage. EIS will require a CHMP.
Water Act 2000	DERM	Taking or interfering with water in a watercourse, lake or bore.	Permit and/or licence	There may be a need to divert water courses during the life of the Project.
Water Supply Safety and Reliability Act 2008	DERM	Referable dam within Project area	Licence	Size of Project may require large water storage to ensure supply continuity.
Coal Mining Safety and Health Act 1999	DEEDI (Mines and Energy)	Mining Activity	Regulatory and operational framework for the conduct of mining activities	Mining activity on the site must be conducted in accordance with health and safety systems established and required by the Act.

The Queensland Government has announced plans to enact new legislation in 2011 to protect the States Strategic Cropping land. It is expected that mining developments, such as the Byerwen, will be impacted by the new legislation. The final impact of the legislation will be assessed once the Regulatory Assessment Statement is released.

2.6 Purpose of this Document

This Initial Advice Statement (IAS) has been prepared for the purposes of identifying environmental, cultural or community issues and regulatory approvals required as far as they can be foreseen at the conceptual stage of the Project.

The IAS aims to provide sufficient information to;

- Enable stakeholders to determine their level of interest in the Project;
- Assist the Coordinator General to make a decision on a declaration of the Byerwen Project as a Significant Project under Section 26 of the Queensland State Development and Public Works Organisation Act 1971 (SDPWO Act); and
- Assist the Department of Infrastructure and Planning (DIP) prepare the draft Terms of Reference for the Project Environmental Impact Statement (EIS).

3. Proposed Development

3.1 Proposed Operations

A high level concept study has identified a staged development process that sees a progressive ramp up in production over the first three years of mine operation to a design target of 10 Mtpa of product coal. The Project will produce primarily high quality hard coking coal for the export market. A potential mine life of 50 years has been identified with coal being sourced from a combination of open cut and underground developments.

It is likely that open cut mining will be by conventional large excavator and trucks with the potential for large scale equipment such as electric rope shovels and draglines. Underground mining is likely to be by longwall extraction with potential for longwall top coal caving in some areas. The final pit designs, mining methods and schedules will be determined once detailed mine planning is complete.

Overburden removal and mining activities will take place on a 24 hour, 7 days per week operation. In the initial stages of operation ROM coal will be hauled by off-highway haul trucks to stockpiles adjacent to the coal processing facility. Coal will be loaded into the crushing circuit either by direct dumping or front end loader reclaim. Product coal will be transferred to the train loading facility by road train style haulage using internal private haul roads. Investigations into the use of conveyors for material movement are ongoing. There is likely to be significant interaction between the proposed mining and hauling operations and external infrastructure such as the Northern Missing link.

3.1.1 Mine Infrastructure

The following mine infrastructure is proposed at the site:

- Site water management controls, including sediment control ponds;
- Coal handling civil works, including ROM pad;
- Construction and commissioning of Coal Handling and Preparation Plant (CHPP);
- Construction of the Byerwen Mine rail loop, load-out and connection to the existing Newlands Rail Line;
- Construction of Mine Infrastructure Area (MIA) including administration, ablution buildings, accommodation village (if required) and vehicle maintenance workshops;
- Internal haul roads for product haulage, site access roads and a number of overpasses or bridges over existing and proposed railway lines;
- Construction of process water storage and distribution system;
- Construction of overland conveyors for the haulage of coal product;
- Depot for onsite blasting contractor.

3.1.2 Coal Handling and Preparation Plant (CHPP)

The concept study has identified that the CHPP facility will require a throughput rate in excess of 2000 tonnes per hour (tph). The CHPP design will comprise a dense medium cyclone and bath/spiral/reflux classifier and froth flotation operation with a co-disposal system for rejects management. There is some potential for production capacity to be split across two plants located at either end of the Mine area.

The co-disposal dam will be located in close proximity to the CHPP to reduce pumping distances. The proposed CHPP design is similar to plants already in place throughout the Bowen basin and as such is considered tried and proven technology.

3.2 Supporting Infrastructure

In addition to the coal mining requirements, the Project will also include:

- Power Supply: an existing overhead 66Kv transmission line will be used to provide power to the southern portion of the mine area. Additional power infrastructure will be required for the northern portion of the mine area including the train loading facility;
- Water Supply: A new pipeline will be constructed to source sufficient water for the Project and other potential users, from the Burdekin Water supply scheme. The proponent is in the process of finalising an agreement with a third party water supply provider for the design, construct and supply of water from the pipeline.
- Rail infrastructure: it is proposed that the initial balloon loop will be constructed in the northern portion of the mine area adjacent to the existing Newlands – Abbot Point railway line. The final location will be on the basis of a detailed economic and engineering assessment incorporating operational factors associated with the interaction with existing and proposed rail infrastructure through the Project area.
- Road infrastructure: access roads will be constructed connecting site facilities with existing local roads. Main access to the site will be via the Glenden – Newlands road from the south and Cerito road / Bowen Development road in the north. An internal haul road for product coal will also be required to transport product coal to the train loading facility;
- Accommodation: it is intended that a reasonable proportion of the mine workforce will reside in existing nearby townships. Further detail on the accommodation infrastructure will be detailed in the Project EIS once detail studies are completed.

3.3 Mine Waste Management

Overburden generated in the initial phases of the Project will be placed in out of pit overburden dumps. Once sufficient volume becomes available in mining voids overburden will be switched to in pit dumping.

Waste streams from the CHPP plant will include coarse and fine rejects, and process water. A Co-disposal storage facility will be established in close proximity to the CHPP plant(s) to reduce pumping distances and maximise process water reclaim.

3.4 Water Management

Waste water generated through mining activities will include mine water, process water, sediment-laden runoff and sewerage effluent.

Mine water will be contained in constructed storage facilities for reuse in mining and processing operations. Discharging to surrounding watercourses will only occur in extreme weather events with dilution occurring and under conditions specified by the EPA as part of the mine's environmental authority. .

A primary sewerage treatment plan (STP) will be situated on site. Sludge and effluent from the plant will be removed by a licensed contractor to a licensed disposal facility.

Development of the proposed Byerwen Coal Project may require diversion of some ephemeral creeks; creek diversions requirements will be further defined as design progresses.

Stormwater management will aim to divert clean stormwater from surface runoff around pits and other disturbed areas and into existing creeks and drainage lines. Scour protection works will be provided at discharge points, if required.

Stormwater from all disturbed areas including stockpiles will be collected in sediment control ponds to be established across the site. Final locations and capacity of these ponds will be determined in the detailed design stage. Water pumped from active pits will also be directed to sediment control ponds. Where possible, water

collected in sediment control ponds will be reused for dust suppression or process water. Water quality criteria will be developed for releases from sediment control ponds to existing surface drainage systems.

Rehabilitation of disturbed areas will be progressive, with a goal of minimising disturbed areas across the site to minimise erosion.

3.5 Staffing and Accommodation

It is anticipated that a construction workforce of up to 500 personnel will be required to construct the Project over a three year time frame. The operational workforce will progressively ramp up to a peak workforce in excess of 1000 permanent employees. An average of 990 permanent employees will be required at the Byerwen Mine over the life of the operation. Depending upon the operational model chosen some employees may be employed by contractors rather than directly by Byerwen Coal. Workers may reside permanently in Glenden and/or Collinsville or reside elsewhere when not on shift and arrive at site on a drive in/drive out basis.

The Proponents preferred option is to house workers in local townships. Accommodation provisions will be finalised as a part of the EIS process.

3.6 Community & Stakeholder Consultation

The overall purpose of the consultation process will be to ensure that all relevant stakeholders are aware of the Project and have an opportunity to comment and provide input into the EIS process.

As part of the EIS process it is proposed that community consultation will be conducted with the local community and other relevant stakeholders.

It is proposed to develop a Community Engagement Plan for the Project that will encompass the following key objectives;

- Provide a mechanism for community contact with the Project team
- Provide the community with information regarding the Project
- Identify any issues and concerns that the community have regarding the Project
- Establish a mechanism for capturing community feedback for use in the EIS
- Inform and provide content for the social impact management plan.

4. Existing Environment

4.1 Regional Climate

The climate of the proposed Project site is sub-tropical and experiences distinct seasonality. Information from the Bureau of Meteorology (www.bom.gov.au) indicates that the average annual rainfall for the region (based on the Wollombi station) is approximately 541 mm. Rainfall is typically seasonal, with the highest average rainfall occurring in January and the lowest level in September. Temperature ranges (based on Moranbah station data) from a mean maximum temperature of 34.1 ^{0}C and a mean minimum temperature of 23.7 ^{0}C.

4.2 Land and Infrastructure

4.2.1 Existing Land Use

The existing land use in the Byerwen area is predominantly cattle grazing and natural environment, as shown in Figure 4-1. A number of existing and proposed water and gas pipeline easements traverse the Project area. Proposed rail corridors for the Goonyella – Abbot Point railway line and private coal haulage railway lines also potentially traverse the Project area.

Figure 4-1 Typical grazing land use - Byerwen Project area

The Queensland Government has announced a new policy framework to protect strategic cropping land within the state. Review of the draft trigger map released by the Department of Environment and Resource Management

(DERM) does not appear to show any strategic cropping land within the Project area. A further review will be conducted once the Regulatory Assessment tool has been finalised and released by DERM and will be included in the EIS

4.2.2 Topography and Landscape

The topography of the Project area varies from gently undulating plains in the south to the low hills and outcrops of the Leichardt Ranges in the north. The Leichardt Range is comprised of tertiary volcanics which are basaltic and underlain by sediments of the Suttor formation. South of the Range the topography is flat lowland Brigalow country that has been extensively cleared for grazing. Much of the area is composed of Quaternary alluviums. Elevations in the Project area range from 360m to 240m above sea level (AHD).

4.2.3 Soils

A detailed soil assessment will be undertaken as part of the EIS. Previous studies in the area conducted for other projects have identified the following soil types;

- Finely structured, self mulching clays;
- Yellow, brown and red duplex soils;
- Massive earths; and
- Deep sandy soils.

Low average rainfall and a high evaporation rate has led to soils with low levels of organic matter and little if any leaching.

4.2.4 Geology

The Byerwen area is situated in the North Bowen Basin and contains Early Permian rocks of the marginal marine Back Creek Group, Late Permian coal-bearing (non-marine) strata of the Blackwater Group, fluviatile sedimentary rocks of Triassic Rewan Group, and overlying Tertiary basalt and sediments of the Suttor Formation. A summary of the stratigraphy is presented in Table 4-1

Table 4-1 Stratigraphy of the Byerwen area

Age	Group	Formation	Thickness
Tertiary		Suttor Formation	
Triassic	Rewan Group	Arcadia Formation Sagittarius Sandstone	230m 280m
Late Permian	Blackwater Group	Rangal Coal Measures Fort Cooper Coal Measures Moranbah Coal Measures	60m 400m 290m
Early Permian	Back Creek Group	Exmoor Formation Blenheim Formation Gebbie Formation Tiverton Formation	85m

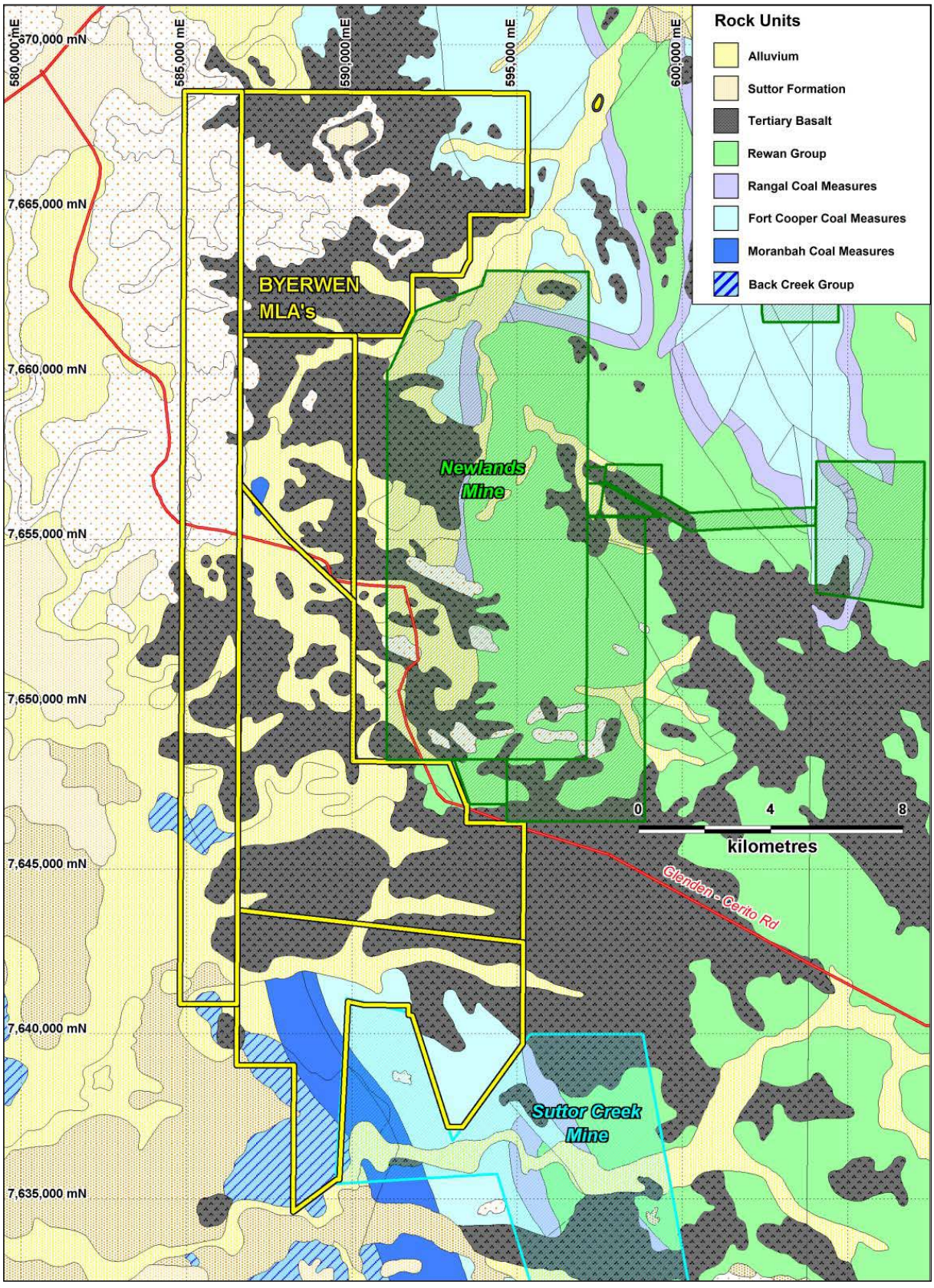


Figure 4-2 Surface geology of the Byerwen area (after Hutton & others)

4.2.5 Contaminated Land

A search of the Environmental Management Register/Contaminated Land Register (EMR/CLR) held by the Department of Environment and Resource Management (DERM) has confirmed that there are no lots containing contaminated ground in the Project area.

4.2.6 Restricted Land

A portion of the Project area has been quarantined as a restricted area under the provisions of *The Mineral Resources Act (1989)* as the potential Suttor River damsite.

4.3 Water Resources

4.3.1 Surface Water

The Byerwen Coal Project area falls within the Belyando/Suttor sub catchment area of the Burdekin River catchment. The Suttor River flows through a portion of the south-western corner of the MLA area and the southern boundary of the MLA area is marked by Suttor Creek. Surface water flows in the Project area are generally towards the west into the Suttor River catchment. Stream flows are ephemeral with low rates of flow confined to the wetter summer months. Little data exists on water quality and flow rates in the Project area. Further investigation will be conducted as a part of the proposed EIS studies.

4.3.2 Groundwater

The Project area lies on the eastern edge of the Great Artesian Basin .Groundwater in the Project area is typically associated with coal seams, alluvial sediments and basalt layers. Some proprietary information has been collected by other companies in the vicinity of the Project area but little information is publically available. Data that has been collected from exploration holes suggest the highest inflows will be from the coal seams with the inflow rate only being of a minor nature. Additional studies will be required to increase the understanding of local groundwater systems.

4.4 Ecology

4.4.1 Existing Vegetation

The Project area sits within the northern Brigalow belt and consists mainly of cleared grazing land and vegetated areas on ridges and slopes associated with the Leichardt Range.

Vegetation surveys have been conducted over parts of the southern Project area for EIS studies associated with the Northern Missing link (Queensland Rail) and Wollombi No 2 expansion (Xstrata Coal). Both studies have identified regional ecosystems listed under the *Vegetation Management Act 1999* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

A desktop survey has been completed for the preparation of the EPBC referral that was lodged with the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (SEWPaC). The list of species reported in the referral is shown in Appendix B. A copy of the EPBC referral regional ecosystem (RE) map is attached in Appendix C.

The Proponent has also commenced detailed vegetation studies across the MLA to obtain up to date information for the proposed EIS.

4.4.2 Fauna

Fauna in the area is expected to be typical of the northern Brigalow belt. A number of surveys have been conducted as a part of the previous studies for the Northern Missing Link and Wollombi No. 2 expansion. A review of previously published information on fauna distribution in the area lists 317 species as known to exist within the wider Project area. The Proponent has commenced detailed fauna surveys across the whole Project area to confirm information available from desktop sources.

There is a potential to impact aquatic fauna found in waterways and dams in the Project area through activities associated with operational mining and clearing for the various infrastructure components. Liminology surveys will be conducted as a part of the Project EIS to fully assess any impacts.

Table 4-2 provides a listing of species that fall into the endangered and potentially impacted categories.

Table 4-2 Species listing

Birds	Erythrotriorchis radiates – Red Goshawk
	Geophaps scripta scripta – Squatter Pigeon
	Neochmia rufficauda ruficauda – Star Finch
	Peophilla cinta cinta – Black-throated Finch
	Rostratula australis - Australian Painted Snipe
Mammals	Dasyrurus hallucatus – Northern Quoll
	Nyctophilus corbeni – South-eastern Long-eared Bat
Reptiles	Egernia rugosa – Yakka Skink
	Denisonia maculata – Ornamental snake
Plants	Acacia ramiflora
	Dicanthium queenslandicum – King Bluegrass
	Eucalyptus raveretiana – Black Ironbox
	Cycas ophiolitica
	Digitaria porrecta – Finger Panic Grass
	Leucopogon cuspidatus

4.4.3 EPBC Referral

The Project has been referred to SEWPaC for determination as to whether the Project is a Controlled Action as per requirements of the EPBC Act - *Environment Protection and Biodiversity Conservation Act* (1999). Initial advice has been received from SEWPaC that the Project will be a Controlled Action on the basis of the likely presence of threatened species, communities and migratory species.

A copy of the EPBC referral document is attached at Appendix D.

4.5 Noise and Vibration

Noise levels within the Project area are mainly influenced by pastoral activities, rail, road and mining activities. Noise from mining activities is sourced from the two existing mining operations along the eastern boundary of the

MLA area, Newlands and Suttor Creek/Wollombi (Xstrata Coal). The proposed Goonyella – Abbot Point railway line alignment traces much of the western boundary of the MLA area and will also be an additional noise and vibration source in the area.

The township of Glenden is over 20 km to the east so is unlikely to be affected by noise from the Project. The existing Newlands and Suttor Creek/Wollombi mines lie between the Project area and the township. The Wollombi homestead will be within 2 km of mine operations so it is likely to have some potential noise impacts.

Additional studies will be required to determine the existing noise environment, the impact of Project activities and to develop noise mitigation strategies on sensitive receptors close to the Project area.

4.6 Air Quality

Air quality values within the vicinity of the Project area are expected to be primarily consistent with pastoral activities. It is noted that there is already mining activity close to the eastern boundary of the Project area and that this activity might be contributing factor to the air quality values currently observed. The major sources of dust in the Project area are likely to be stock movement, working cattle yards and vehicular traffic on unsealed roads, including adjacent mining haul roads and mining activities such as blasting and overburden removal. Climate is a strong influence on dust generation potential with the dryer winter months being more susceptible to dust generation.

A more detailed monitoring program will be required to establish background dust levels. This information will be used to in the EIS process.

4.7 Indigenous Cultural Heritage

The Byerwen Coal Project is split between two native title claim areas, Birri claim QC98/12 in the north and Jangga claim QC98/10 in the south. A Cultural Heritage Study will be conducted for the Project area.

4.8 Non-indigenous Cultural Heritage

A search was undertaken of the Queensland Heritage Register and National Heritage Register. Sites of cultural significance were not recorded in the registers for the proposed Byerwen Project area.

4.9 Social Impacts

The Byerwen Coal Project is split between two local government areas, the Issac and Whitsunday Regional Councils. The closest town to the Project is Glenden which is located approximately 20 km to the east. Glenden is a purpose built town that was established in 1982 to support the mining operations at the Xstrata Newlands coal mine. The town is an ‘open’ town that is administered by the Issac Regional Council.

The local community also includes the directly affected landowners and their employees. Other communities that will be impacted by the Project to a lesser extent are Collinsville, approximately 50km to the north and the major regional centre of Mackay, 140 km to the east.

5. Potential Impacts and Mitigation Measures

5.1 Land

The existing land use in the Project area is low intensity cattle grazing. Grazing area will vary throughout the duration of the mine life in accordance with the mine plan. In the longer term, rehabilitation is intended to largely restore the land to grazing land use.

Final rehabilitation will address long-term land use, establishing an ongoing stable and viable land use consistent with pre-mining land use and surrounding land uses. It is unlikely that alternative land uses will be sought in futures that are precluded by the proposed mining activity.

The Project site landscape varies from gently undulating plains through to low hills and outcrops. The likely impacts on landscape and topography will include:

- Landform changes, with addition of permanent and temporary overburden stockpiles and final voids; and
- Drainage changes in relation to diversion of creeks and permanent landform changes.

The EIS will assess visual amenity including overburden stockpiles and infrastructure, rehabilitation and land suitability.

While these impacts are an unavoidable consequence of the mining activity, the EIS will investigate the extent to which these impacts may cause adverse impacts on adjacent land uses and downstream systems. Mitigation measures will be identified to manage both short and long-term impacts. Wherever possible progressive rehabilitation of dumps and voids will occur to minimise the total disturbed land area at any one time.

5.2 Water Supply and Hydrological Impacts

When fully developed to the planned production rate of 10 Mtpa it is expected that the Project will require approximately 5,400 Ml of water a year. Water is required for the CHPP, dust suppression on haul roads, potable water and supply for underground services. Dust suppression water will be supplemented by sediment pond water.

Byerwen Coal has commenced discussions with a third party water supplier for the sourcing and delivery of water for the Project with a pipeline that connects the Project to the Burdekin water supply scheme at Gorge Weir. Byerwen Coal will be the foundation customer for the pipeline. Engineering studies have commenced to finalise the pipeline alignment and inform the EIS process.

5.2.1 Surface Hydrology

The Byerwen Coal Project area falls within the Belyando/Suttor sub catchment area of the Burdekin River catchment. The major surface drainage features of the site are the Suttor River along the western boundary and the smaller Suttor Creek to the south.

Potential impacts on the existing natural hydrological processes of the study area may include:

- Creek diversions;
- Clearing of vegetation and exposure of soils and sub soils to erosive forces;
- Construction of access roads, stockpiles, mine infrastructure, ponds, plant and accommodation (construction phase);
- Coal extraction and processing; and
- Placement of overburden dumps outside pits.

During the life of the Project, several creek diversions, both permanent and temporary, may be required. These will be designed and managed to minimise the impact on the environment and will be further described in the Project EIS.

There is little available water quality and stream flow data for the Project area. Further investigations will be conducted to ensure adequate data is available for the Project EIS.

Other hydrology and water quality impacts may arise from the release of sediment and contaminants to surface waters and drainage lines. Design features will include erosion and sediment control devices, such as scour protection works at overflow outlets and other high water velocity or steep gradient situations. Sedimentation dams to capture run-off water from the mining areas will be constructed with retention times that enable coarse suspended sediment to settle. While there are no planned releases to surface waters, in adverse conditions the ponds may overflow and rainfall may also mobilise sediments.

Accidental releases of hydrocarbons may also occur directly to drainage lines in the event of a major spill. The EIS will identify appropriate design, storage and handling measures to minimise this risk to acceptable levels.

The EIS studies will provide an input into the finalisation of the Project Water Management Plan.

5.2.2 Ground Water

The potential impacts on groundwater from the Project include:

- Groundwater drawdown and changes in the coal seam and alluvial aquifers; and
- Groundwater contamination.

Groundwater analysis will be used to assess the current groundwater environment and to assist in prediction of regional impacts on groundwater users and the environment resulting from mine related groundwater extraction and any final voids left after mining ceases.

5.3 Ecology

Clearing of regrowth and natural vegetation for mining activities will be one of the most significant impacts on flora and fauna in the Project area. As mining progresses previously cleared land currently used for cattle grazing will become unavailable until a stable rehabilitated landform is created that enables grazing to recommence.

Detailed flora and fauna surveys have commenced across the Project area and will be used to develop flora and fauna management plans as a part of the EIS process.

Vegetation within the proposed mining and infrastructure footprint will be progressively cleared to allow mining to progress. Vegetation outside the mining footprint will be retained and enhanced through weed control and other measures. The potential impacts of this clearing includes the loss of habitat for fauna, weed invasion and secondary impacts associated with dust and changes to surface hydrology and groundwater. Mitigation measures will be developed to assist in ameliorating the impacts of the proposed mine, particularly to sensitive areas.

5.4 Noise

Noise and vibration sources from the Project will include mining (equipment, machinery, ventilation fans and vehicles) and processing activities. The proposed operation will be required to meet noise standards from both the *Coal Mining Safety & Health Act (1999)* and the *Environmental Protection Act (1999)*.

A baseline noise study will be conducted as a part of the EIS process.

5.5 Air Quality

The principal source of dust will be from exposed surfaces and mining. During mining activities, dust generation will be mitigated though dust suppression techniques. The proposed operation will be required to meet air quality standards from both the *Coal Mining Safety & Health Act (1999)* and the *Environmental Protection Act (1999)*.

A detailed air quality survey will be conducted as a part of the EIS process.

5.6 Socio-Economic Impacts

Social and socio-economic impacts associated with the construction and operations of the proposed Byerwen Project are likely to include:

- Increased employment opportunities for skilled and unskilled workers, particularly in engineering and technical trade areas. This will include workers already resident in the Glenden/Collinsville/Mackay area;
- An increase in local population where workers and families may relocate to Glenden or Collinsville;
- An increase in the temporary population of Glenden or Collinsville where workers choose to work on a drive in/drive out basis;
- Relocation of workers and families from outside the region to centres such as Mackay;
- Increased demand for local community services and facilities. This impact can be positive where the increased demand stimulates provision of new services and facilities, or negative where it leads to increased demand for existing services and facilities that do not have sufficient available capacity to meet such an increase;
- Flow on effects in relation to accommodation in Glenden and Collinsville;
- Increased business opportunities for local and regional suppliers; and
- Increased revenue to the government sector from infrastructure charges, taxes and royalties.

Assessment will be based on a range of published and draft Department of Infrastructure and Planning (DIP) guidelines and policies, including but not limited to;

- *Guideline to preparing a social impact management plan*
- *Sustainable Resource Communities Policy: Social impact assessment in the mining and petroleum industries*
- *Draft Resource Town Housing Affordability Strategy*

The results from the socio-economic assessment will be combined with the information gathered through community engagement activities to produce a detailed social impact management plan for the Project. Key components of the social impact management plan will include identified impacts, an impact analysis, mitigation and impact strategies, monitoring mechanisms, reporting mechanisms, review mechanisms, engagement strategies and dispute resolution mechanisms.

5.7 Cultural Heritage

A Cultural Heritage Management Plan will be negotiated with the two native title claimant groups in accordance with the requirements of the *Aboriginal Cultural Heritage Act 2003*.

All activities undertaken on site will be in accordance with the approved CHMP.

Based on the current and former uses of the Project area it does not appear that there are any special requirements to preserve or protect non-indigenous cultural heritage on site.

5.8 Mine Infrastructure Impacts

5.8.1 Mine Waste

The Project will produce both general waste and mine specific waste, management procedures will be established to minimise the impact of both waste streams. The handling of mine specific waste has already been discussed in section 3.3.

General waste will be generated during the construction and operational stages of the Project. General waste likely to be generated during construction includes green waste, concrete & rubble, metals, waste hydrocarbons, timber, tyres, sealant/resin and paint materials, sewage, wash down water and exhaust emissions. Waste generated during the operational phase will include green waste, batteries, paper and cardboard products, scrap metal, tyres, oily waste such as rags and filters, water treatment plant waste, sewage and domestic rubbish. The method of disposal of waste streams will be determined during the EIS process with the emphasis being on the use of recycling wherever practicable.

5.8.2 Hazardous Materials

It is unlikely that hydrocarbons, chemicals and detergents will be stored on site in significant quantities during the construction and operational phases of the Project. Only quantities required for day to day operation will be stored on site and will be stored in accordance with the requirements of the relevant Australian Standard.

Small quantities of explosives and blasting agents will be stored on site in a purpose built compound once operations commence. It is anticipated that the explosives storage facility will be supplied and managed by a specialist explosive supplier in accordance with all statutory and Australian Standards requirements.

5.8.3 Traffic and Transport

The major roads likely to be used to access the Project include the Bruce Highway, Peak Downs Highway, Suttor Development Road, Bowen Development Road, Glenden – Newlands Road and Cerito Road. All roads are sealed and currently carry traffic for a number of existing mines in the vicinity of the Project area.

As a part of the EIS process a traffic/transport impact assessment will be undertaken in accordance with the Department of Main Roads' *Guidelines for the Assessment of Road Impacts of Development Proposals.* The assessment will look at both the construction and operational phases of the Project and assess likely impacts on the existing road network and identify mitigation measures, if required.

5.8.4 Subsidence

Longwall mining is proposed in sections of the Project area to extract coal at depth. A typical consequence of longwall mining is the occurance of surface cracking and minor depressions. Further studies are required to finalise the design and location of the underground mine(s). Studies will include an assessment of the nature and extent of subsidence and the potential impacts on current and future land use.

6. Environmental Management

The EIS will identify measures that will prevent or mitigate potential adverse environmental impacts resulting from the Byerwen Coal Project on each environmental value. This includes land resources, water resources (surface and groundwater), air quality and greenhouse gasses, noise, flora and fauna, cultural and non-indigenous heritage and social and community impacts.

An Environmental Management Plan (EM Plan) for the Byerwen Coal Project will be developed to convert the undertakings and recommendations from the EIS into actions and procedures that will protect environmental values and mitigate any adverse impacts of the Project. The EM plan will also provide a framework for the development of conditions for the Project Environmental Authority.

The EM Plan for the Byerwen Coal Project will address the following issues:

- Environmental policies and procedures
- Annual plans – project objectives and targets
- Environmental risks
- Management plans to mitigate risks
- Relevant procedures
- Consultation and communication processes
- Site education, induction, training and competency
- Responsibilities of all site personnel
- Monitoring
- Environmental incident management
- Complaints procedures
- Audits and review

The EM plan will be prepared as a standalone document that can be read separately from the main EIS document.

6.1 Rehabilitation

6.1.1 Final land use

It is intended to return the Project area to pastoral cattle grazing (pre-mining land-use). This objective will be achieved through:

- Effective mine closure planning;
- Establishing key performance indicators;
- Stabilising landforms; and
- Revegetation with suitable pasture species.

As a component of the EIS and EM Plan for the Project, rehabilitation requirements and methodologies will be further developed.

6.1.2 Overburden Dumps

Overburden dumps will be shaped, capped with topsoil and revegetated in accordance with the EM Plan.

6.1.3 Final Voids

The mining void will be partially backfilled progressively throughout the mine life. There will be some voids remaining at the end of mining and these will be used for stock water storage.

The voids will become water bodies as rainfall, runoff and seepage accumulates. Final void sizes and mitigation measures for aspects such as impacts to surface and groundwater will be further detailed in the EIS. Likely water quality in the void will also be discussed.

6.1.4 CHPP and Infrastructure

The CHPP and mining infrastructure will be dismantled and removed upon completion of the mining operations. The plant footprint will be removed and the area ripped, reshaped and topsoiled before revegetation. Any improvements that are considered to be of beneficial use to the subsequent landholder will be retained, if requested.

7. References

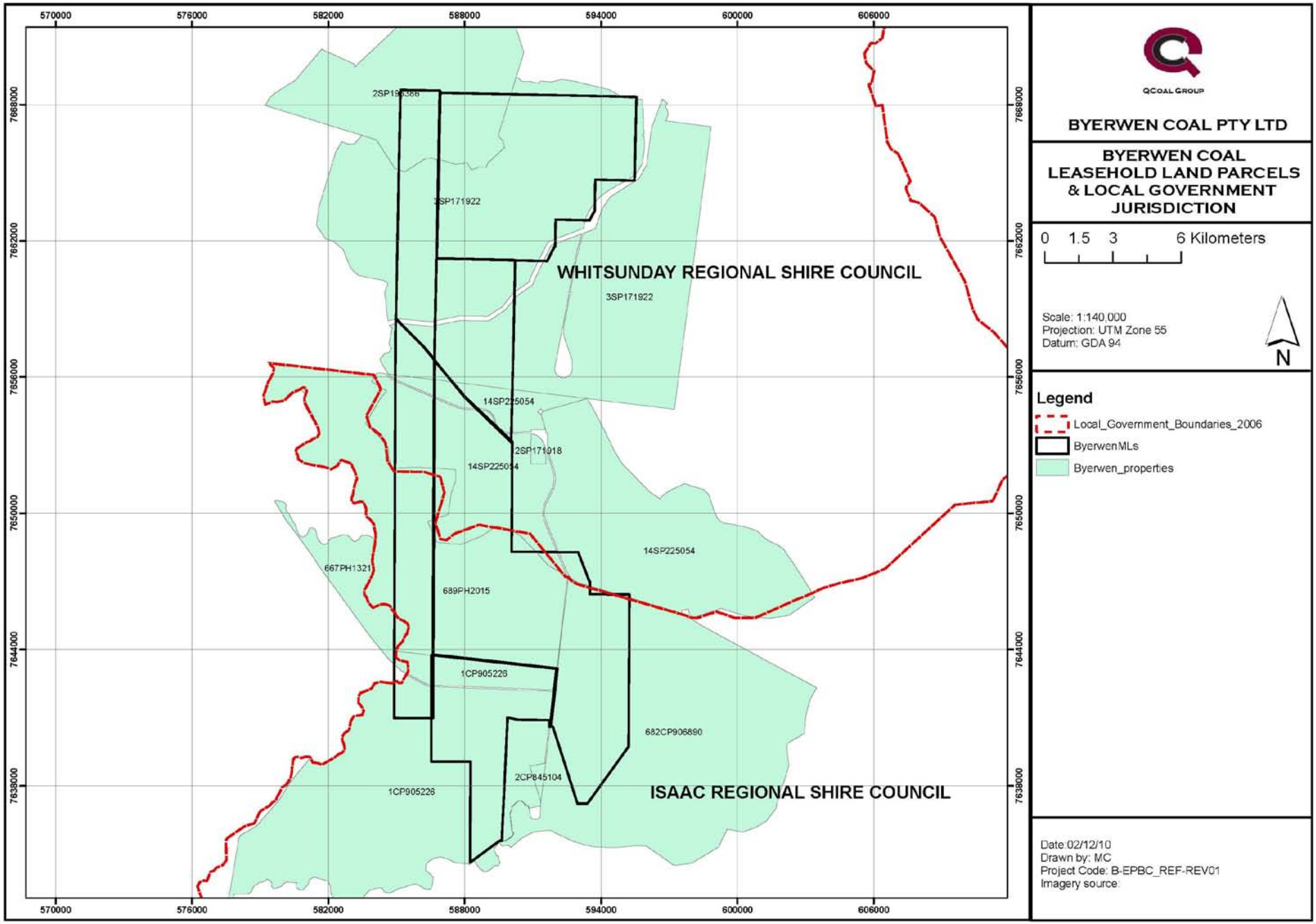
Bureau of Meteorology (2010). Climate data online. Available from http://www.bom.gov.au/climate/data. Accessed on 10 August 2010 11:24:11 AM EST

Department of Sustainability, Environment, Water, Population and Communities (2010). EPBC Act Protected Matters Report. Available from http://www.environment.gov.au/erin/oct/epbc/index.html. Accessed on 17 November 2010 16:37 PM EST.

Hutton, L.J., Grimes, K.G., Law, S.R., & McLennan, T.P.T. 1998: Mount Coolon sheet SF/55-7. Queensland 1:250000 Geological Series. Second Edition. Geological Survey of Queensland.

8. Appendices

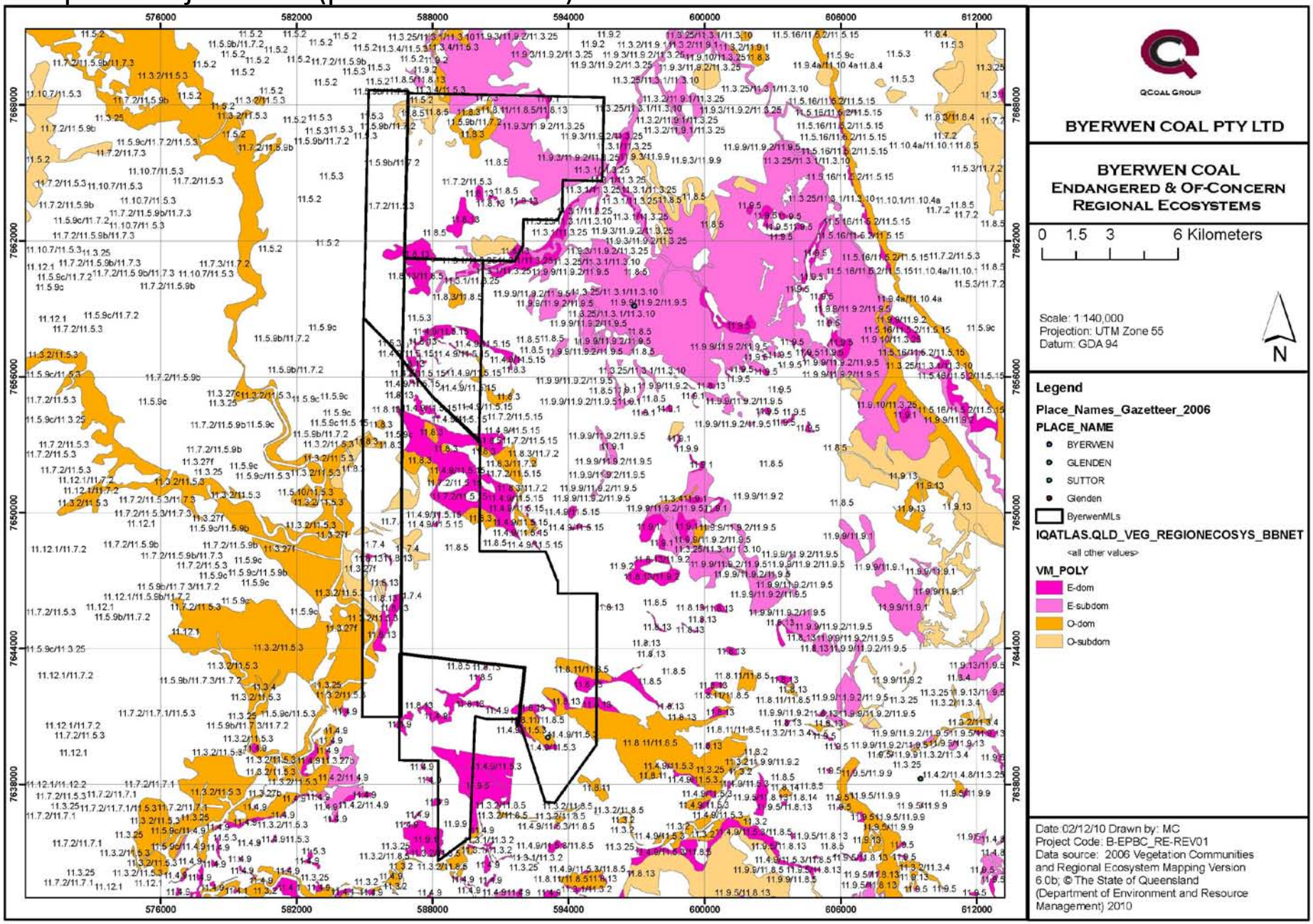
A – Underlying Pastoral leases



B – List of Flora species in Project Area (per EPBC referral)

Regional Ecosystem	Description	VM Stat.
11.3.1	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	E
11.3.2	Eucalyptus populnea woodland on alluvial plains	OC
11.3.4	Eucalyptus tereticornis and/or Eucalyptus spp. Tall woodland on alluvial plains	OC
11.3.25	Eucalyptus tereticornis or Eucalyptus camaldulensis woodland fringing drainage lines	LC
11.3.27 (11.3.27f)	Freshwater wetlands / Lacustrine wetland (e.g. lake) / Palustrine wetland (e.g. vegetated swamp) / Eucalyptus coolabah and/or E. tereticornis open to woodland to woodland fringing swamps	LC
11.4.9	Acacia harpophylla shrubby open forest to woodland with Terminalia oblongata on Cainozoic clay plains	E
11.5.2	Eucalyptus crebra, Corymbia spp., with E. moluccana on lower slopes of Cainozoic sand plains/remnant surfaces	LC
11.5.3	Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana on Cainozoic sand plains/remnant surfaces	LC
11.5.9	Eucalyptus crebra and other Eucalyptus spp. and Corymbia spp. woodland on Cainozoic sand plains/remnant surfaces	LC
11.5.15	Semi-evergreen vine thicket on Cainozoic sand plains/remnant surfaces	LC
11.5.16	Acacia harpophylla and/or Casuarina cristata open forest in depressions on Cainozoic sand plains/remnant surfaces	E
11.7.1 (11.7.1x1)	Acacia harpophylla and/or Casuarina cristata and Eucalyptus thozetiana or E. microcarpa woodland on lower scarp slopes on Cainozoic lateritic duricrust	E
11.7.2	Acacia spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	LC
11.7.3	Eucalyptus persistens, Triodia mitchellii open woodland on stripped margins of Cainozoic lateritic duricrust	LC
11.7.4	Eucalyptus decorticans and/or Eucalyptus spp., Corymbia spp., Acacia spp., Lysicarpus angustifolius on Cainozoic lateritic duricrust	LC
11.7.6	Corymbia citriodora or Eucalyptus crebra woodland on Cainozoic lateritic duricrust	LC
11.8.3	Semi-evergreen vine thicket on Cainozoic igneous rocks	OC
11.8.5	Eucalyptus orgadophila open woodland on Cainozoic igneous rocks	LC
11.8.11	Dichanthium sericeum grassland on Cainozoic igneous rocks	OC
11.8.13	Semi-evergreen vine thicket and mircophyll vine forest on Cainozoic igneous rocks	E
11.9.1	Acacia harpophylla – Eucalyptus cambageana open forest to woodland on fine-grained sedimentary rocks	E
11.9.2	Eucalyptus melanophloia +/- E. orgadophila woodland on fine-grained sedimentary rocks	LC
11.9.3	Dichanthium spp., Astrebla spp. grassland on fine-grained sedimentary rocks	LC
11.9.10	Eucalyptus populnea, Acacia harpophylla open forest on fine-grained sedimentary rocks	OC
11.10.7	Eucalyptus crebra woodland on coarse-grained sedimentary rocks	LC

C – RE Map for Project Area (per EPBC referral)



D –EPBC referral document

Australian Government

Department of the Environment, Water, Heritage and the Arts

Referral of proposed action

What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides for the protection of the environment, especially matters of national environmental significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Australian Government Environment Minister or the Minister's delegate. (Further references to 'the Minister' in this form include references to the Minister's delegate.) To obtain approval from the Environment Minister, a proposed action should be referred. The purpose of a referral is to obtain a decision on whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be undertaken. These decisions are made within 20 business days, provided that sufficient information is provided in the referral.

Who can make a referral?

Referrals may be made by or on behalf of a person proposing to take an action, the Commonwealth or a Commonwealth agency, a state or territory government, or agency, provided that the relevant government or agency has administrative responsibilities relating to the action.

When do I need to make a referral?

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

- World Heritage properties (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)
- Commonwealth marine environment (sections 23 and 24A)
- Great Barrier Reef Marine Park (sections 24B and 24C)
- The environment, if the action involves Commonwealth land (sections 26 and 27A), including:
    - actions that are likely to 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;
- The environment, if the action is taken by the Commonwealth (section 28)
- Commonwealth Heritage places outside the Australian jurisdiction (sections 27B and 27C)

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure. This will provide a greater level of certainty that Commonwealth assessment requirements have been met.

To help you decide whether or not your proposed action requires approval (and therefore, if you should make a referral), the following guidance is available from:

- the Policy Statement titled Significant Impact Guidelines 1.1 – Matters of National Environmental Significance. Additional sectoral guidelines are also available.
- the Policy Statement titled Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies.

- the interactive map tool (enter a location to obtain a report on what matters of NES may occur in that location).

Can I refer part of a larger action?

In certain circumstances, the Minister may not accept a referral for an 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 Referral Business Entry Point (1800 803 772).

Do I need a permit?

Some activities may also require a permit under other sections of the EPBC Act or another law of the Commonwealth. Information is available on the Department's web site.

Is your action in the Great Barrier Reef Marine Park?

If your action is in the Great Barrier Reef Marine Park it may require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If a permission is required, referral of the action under the EPBC Act is deemed to be an application under the GBRMP Act (see section 37AB, GBRMP Act). This referral will be forwarded to the Great Barrier Reef Marine Park Authority (the Authority) for the Authority to commence its permit processes as required under the Great Barrier Reef Marine Park Regulations 1983. If a permission is not required under the GBRMP Act, no approval under the EPBC Act is required (see section 43, EPBC Act). The Authority can provide advice on relevant permission requirements applying to activities in the Marine Park.

The Authority is responsible for assessing applications for permissions under the GBRMP Act, GBRMP Regulations and Zoning Plan. Where assessment and approval is also required under the EPBC Act, a single integrated assessment for the purposes of both Acts will apply in most cases. Further information on environmental approval requirements applying to actions in the Great Barrier Reef Marine Park is available from http://www.gbrmpa.gov.au/ or by contacting GBRMPA's Environmental Assessment and Management Section on (07) 4750 0700.

The Authority may require a permit application assessment fee to be paid in relation to the assessment of applications for permissions required under the GBRMP Act, even if the permission is made as a referral under the EPBC Act. Further information on this is available from the Authority:

Great Barrier Reef Marine Park Authority

2-68 Flinders Street PO Box 1379
Townsville QLD 4810
AUSTRALIA

Phone: + 61 7 4750 0700
Fax: + 61 7 4772 6093

www.gbrmpa.gov.au

What information do I need to provide?

Completing all parts of this form will ensure that you submit the required information and will also assist the Department to process your referral efficiently.

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

Instructions

Instructions are provided in green text throughout the form.

Attachments/supporting information

The referral form should contain sufficient information to provide an adequate basis for a decision on the likely impacts of the proposed action. You should also provide supporting documentation, such as environmental reports or surveys, as attachments.

Coloured maps, figures or photographs to help explain the project and its location should also be submitted with your referral. 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.

Please ensure any attachments are below two megabytes (2mb) as they will be published on the Department's website for public comment. To minimise file size, enclose maps and figures as separate files if necessary. If unsure, contact the Referral Business Entry Point for advice. Attachments larger than two megabytes (2mb) may delay processing of your referral.

Note: the Minister may decide not to publish information that the Minister is satisfied is commercial-in-confidence.

How do I submit a referral?

Referrals may be submitted by mail, fax or email.

Mail to:

Referral Business Entry Point
Environment Assessment Branch
Department of the Environment, Water, Heritage and the Arts
GPO Box 787
CANBERRA ACT 2601

- If submitting via mail, electronic copies of documentation (on CD/DVD or by email) are appreciated.

Fax to: 02 6274 1789

- Faxed documents 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.

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

What happens next?

Following receipt of a valid referral (containing all required information) you will be advised of the next steps in the process, and the referral and attachments will be published on the Department's web site for public comment.

The Department will write to you within 20 business days to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. There are a number of possible decisions regarding your referral:

The proposed action is NOT LIKELY to have a significant impact 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 other Commonwealth, state or local government requirements).

The proposed action is NOT LIKELY to have a significant impact IF undertaken in a particular manner

The action can proceed if undertaken in a particular manner (subject to any other Commonwealth, state or local government requirements). The particular 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 particular manner to the Department.

The proposed action is LIKELY to have a significant impact and does NEED approval

If the action is likely to have a significant impact a decision will be made that it is a *controlled action*. The particular matters upon which the action may have a significant impact (such as World Heritage values or threatened species) are known as the *controlling provisions*.

The controlled action is subject to a public assessment process before a final decision can be made about whether to approve it. The assessment approach will usually be decided at the same time as the controlled action decision. (Further information about the levels of assessment and basis for deciding the approach are available on the Department's web site.)

The proposed action would have UNACCEPTABLE impacts and CANNOT proceed

The Minister may decide, on the basis of the information in the referral, that a referred action would have clearly unacceptable impacts on a protected matter and cannot proceed.

Compliance audits

If a decision is made to approve a project, the Department may audit it at any time to ensure that it is completed in accordance with the approval decision or the information provided in the referral. If the project changes, such that the likelihood of significant impacts could vary, you should write to the Department to advise of the changes. If your project is in the Great Barrier Reef Marine Park and a decision is made to approve it, the Authority may also audit it. (See "*Is your action in the Great Barrier Reef Marine Park,"* p.2, for more details).

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 the above web site.

Referral of proposed action

Project title: Byerwen Coal Project

1 Summary of proposed action

NOTE: You must also attach a map/plan(s) showing the location and approximate boundaries of the area in which the project is to occur. Maps in A4 size are preferred. You must also attach a map(s)/plan(s) showing the location and boundaries of the project area in respect to any features identified in 3.1 & 3.2, as well as the extent of any freehold, leasehold or other tenure identified in 3.3(j).

1.1 **Short description**

Byerwen Coal Pty Ltd is proposing to develop the Byerwen Coal Mine which involves the development of an open cut and underground coal mine, two coal handling facilities and one rail loading facility. The proposed mine will produce up to 10 million tonnes per annum (Mtpa) product coal for the export market. The mine will have a mine life of up to 50 years, inclusive of construction, operation and closure.

1.2 **Latitude and longitude**

Serial	Latitude (South)	Longitude (East)	Comments
1	21° 04'54.4620"	147° 55'03.8964"	North East Corner
2	21° 06'54.4608"	147° 55'03.8964"	
3	21° 06'54.4608"	147° 54'03.8952"	
4	21° 07'39.2361"	147° 54'03.8979"	
5	21° 07'42.2256"	147°54'01.9188"	
6	21° 07'47.0640"	147° 53'59.1468"	
7	21° 07'50.2932"	147° 53'57.7788"	
8	21° 07'53.2956"	147° 53'56.0796"	
9	21° 07'54.4619"	147° 53'55.7235"	
10	21° 07'54.4584"	147° 53'03.8976"	
11	21° 08'33.5435"	147° 53'03.8999"	
12	21° 08'33.9527"	147° 53'02.7652"	
13	21° 08'54.4601"	147° 52'52.3550"	
14	21° 08'54.4596"	147° 52'03.9000"	
15	21° 15'54.4572"	147° 52'03.9036"	
16	21° 15'54.4578"	147° 53'45.1775"	
17	21° 16'36.5746"	147° 54'02.9715"	
18	21° 16'36.5846"	147° 54'03.8988"	
19	21° 16'54.4584"	147° 54'03.8988"	
20	21° 16'54.4584"	147° 54'41.0547"	
21	21° 16'54.4584"	147° 55'03.9000"	East Corner
22	21° 20'32.2857"	147° 55'03.9000"	East Corner
23	21° 21'54.4572"	147° 54'01.3278"	
24	21° 21'54.4578"	147° 53'46.2644"	
25	21° 20'04.6934"	147° 53'08.0640"	
26	21° 20'03.8572"	147° 53'03.9048"	
27	21° 19'54.4584"	147° 53'03.9048"	
28	21° 19'54.4589"	147° 52'17.1702"	
29	21° 19'51.0669"	147° 52'00.3075"	
30	21° 22'47.4178"	147° 51'52.4036"	
31	21° 22'47.4130"	147° 51'48.9312"	
32	21° 23'18.9627"	147° 51'03.9096"	
33	21° 20'54.4560"	147° 51'03.9060"	
34	21° 20'54.4560"	147° 50'03.9084"	
35	21° 19'54.4548"	147° 49'03.9064"	
36	21° 19'54.4548"	147° 49'03.9046"	South West Corner
37	21° 04'54.4443"	147° 49'03.9062"	North West Corner

1.3 **Locality and property description**

The Byerwen Coal Project is located approximately 20 km west of the township of Glenden in Queensland's Bowen Basin (refer to figure 1). The Project consists of six mining leases located primarily in a cleared cattle grazing area on Byerwen, Wollombi, Suttor Creek, Suttor Creek North, Newlands and Figtree Stations. The Project area is immediately to the west of the Xstrata Coal owned Newlands Mine and to the north of the Xstrata Coal Wollombi and Suttor Creek mines. The area within the proposed lease incorporates buffer capacity to enable protection of any significant environmental values.

1.4	**Size of the development footprint or work area (hectares)**	The mine site has an area of 22,697 hectares.
1.5	**Street address of the site**	Cerito Road, Byerwen Station

1.6 **Lot description (refer to figure 2)**

EPC 614 and 739 are over the following parcels: Lot 2 SP195386, Lot 14 SP225054, Lot 689 PH2015, Lot 682 CP906890, Lot1 CP905226, Lot 3 SP171922, Lot 667 PH1321

1.7 **Local Government Area and Council contact (if known)**

The project lies within the Isaac and Whitsunday Regional Council areas.

1.8 **Time frame**

Baseline environmental surveys and engineering design work commenced in 2009. Construction will commence immediately upon grant of the mining leases. Accordingly, construction is intended to commence in 2012, with the Project expected to be commissioned and producing coal in 2013.

1.9	**Alternatives to proposed action** Were any feasible alternatives to taking the proposed action (including not taking the action) considered but are not proposed?	X	No
			Yes, you must also complete section 2.2
1.10	**Alternative time frames etc** Does the proposed action include alternative time frames, locations or activities?	X	No
			Yes, you must also complete Section 2.3. For each alternative, location, time frame, or activity identified, you must also complete details in Sections 1.2-1.9, 2.4-2.7 and 3.3 (where relevant).
1.12	**State assessment** Is the action subject to a state or territory environmental impact assessment?		No
		X	Yes, you must also complete Section 2.4
1.12	**Component of larger action** Is the proposed action a component of a larger action?	X	No
			Yes, you must also complete Section 2.6
1.13	**Related actions/proposals** Is the proposed action related to other actions or proposals in the region (if known)?	X	No
			Yes, provide details:
1.14	**Australian Government funding** Has the person proposing to take the action received any Australian Government grant funding to undertake this project?	X	No
			Yes, provide details:
1.15	**Great Barrier Reef Marine Park**	X	No

Is the proposed action inside the Great Barrier Reef Marine Park?	☐	Yes, you must also complete Section 3.1 (h), 3.2 (e)

2 Detailed description of proposed action

2.1 Description of proposed action

A high level concept study has identified a staged development process that sees a progressive ramp up in production over the first three years of mine operation to a design target of 10 Mtpa of product coal. The Project will produce primarily high quality hard coking coal for the export market. A potential mine life of 50 years has been identified with coal being sourced from a combination of open cut and underground developments.

It is likely that open cut mining will be by conventional large excavator and trucks with the potential for large scale equipment such as electric rope shovels and draglines. Underground mining is likely to be by longwall extraction with potential for longwall top coal caving in some areas. The final pit designs, mining methods and schedules will be determined once detailed mine planning is complete.

Overburden removal and mining activities will take place on a 24 hour, 7 days per week operation. In the initial stages of operation, ROM coal will be hauled by off-highway haul trucks to stockpiles adjacent to the coal processing facility. Coal will be loaded into the crushing circuit either by direct dumping or front end loader reclaim. Product coal will be transferred to the train loading facility by road train style haulage using internal private haul roads. Investigations into the use of conveyors for material movement are ongoing.

Mine Infrastructure

The following mine infrastructure is proposed at the site:

- Site water management controls, including sediment control ponds;
- Coal handling civil works, including ROM pad;
- Construction and commissioning of Coal Handling and Preparation Plants (CHPP);
- Construction of the Byerwen Mine rail loop, load-out and connection to the existing Newlands Rail Line;
- Construction of Mine Infrastructure Area (MIA) including administration, ablution buildings, accommodation village (if required) and vehicle maintenance workshops;
- Internal haul roads for product haulage, site access roads and a number of overpasses or bridges over existing and proposed railway lines;
- Construction of process water storage and distribution system;
- A waste water sewage treatment system;
- Depot for onsite blasting contractor.

Coal Handling and Preparation Plant (CHPP)

The concept study has identified that the CHPP facilities will require a throughput rate in excess of 2,000 tonnes per hour (tph). The CHPP design will comprise a dense medium cyclone and bath/spiral/reflux classifier and froth flotation operation with a co-disposal system for rejects management. There is some potential for production capacity to be split across two plants located at either end of the Mine area.

The co-disposal dam will be located in close proximity to the CHPP to reduce pumping distances. The proposed CHPP design is similar to plants already in place throughout the Bowen basin and as such is considered tried and proven technology.

Supporting Infrastructure

In addition to the coal mining requirements, the Project will also include:

- Power Supply: an existing overhead 66Kv transmission line will be used to provide power to the southern portion of the mine area. Additional power infrastructure will be required for the northern portion of the mine area including the train loading facility;
- Water Supply: a number of water supply options are actively being explored with water infrastructure providers. It is likely that a new pipeline will be required to source sufficient water for the Project from the Burdekin River.
- Rail infrastructure: it is proposed that the initial balloon loop will be constructed in the northern portion of the mine area adjacent to the existing Newlands – Abbot Point railway line. The final location will be on the basis of a detailed economic and engineering assessment incorporating operational factors associated with the interaction with existing and proposed rail infrastructure through the Project area.
- Rail Transportation: the Project will access rail capacity on the Goonyella Abott Point (GAP 50) Project. Capacity agreements have already been put in place by Byerwen Coal.
- Road infrastructure: access roads will be constructed connecting site facilities with existing local roads. Main access to the site will be via the Glenden – Newlands road from the south and Cerito road / Bowen Development road in the north. An internal haul road for product coal will also be required to transport product coal to the train loading facility;
- Accommodation: it is intended that a reasonable proportion of the mine workforce will reside in existing nearby townships. Further information on the accommodation infrastructure will be provided in the Project EIS once detail studies are completed; and
- Port: the Project will access the existing facilities at Abbot Point X50 terminal to export coal from the Project. Capacity agreements have already been put in place by Byerwen Coal.

Mine Waste Management

Overburden generated in the initial phases of the Project will be placed in out of pit overburden dumps. Once sufficient volume becomes available in mining voids overburden will be switched to in pit dumping.

Waste streams from the CHPP plant will include coarse and fine rejects, and process water. A co-disposal storage facility will be established in close proximity to the CHPP plant(s) to reduce pumping distances and maximise process water reclaim.

Water Management

Waste water generated through mining activities will include mine water, process water, stormwater, sediment-laden runoff from disturbed areas and sewerage effluent.

Mine water will be contained in constructed storage facilities for reuse in mining and processing operations. Discharging to surrounding watercourses will only occur in extreme weather events with dilution occurring and under conditions specified by the DERM as part of the mine's environmental authority.

A primary sewerage treatment plant (STP) will be situated on site. Sludge and effluent from the plant will be removed by a licensed contractor to a licensed disposal facility.

Development of the proposed Byerwen Coal Project may require diversion of some ephemeral creeks; creek diversions requirements will be further defined as design progresses.

Stormwater management will aim to divert clean stormwater from surface runoff around pits and other disturbed areas and into existing creeks and drainage lines. Scour protection works will be provided at discharge points, if required.

Stormwater from all disturbed areas including stockpiles will be collected in sediment control ponds to be established across the site. Final locations and capacity of these ponds will be determined in the detailed design stage. Water pumped from active pits will also be directed to sediment control ponds. Where possible, water collected in sediment control ponds will be reused for dust suppression or process water. Water quality criteria will be developed for releases from sediment control ponds to existing surface drainage systems.

Staffing and Accommodation

It is anticipated that a construction workforce of up to 500 personnel will be required to construct the Project over a three year time frame. The operational workforce will progressively ramp up to a peak workforce in excess of 1000 permanent employees. An average of 990 permanent employees will be required at the Byerwen Mine over the life of the operation. Depending upon the operational model chosen some employees may be employed by contractors rather than directly by Byerwen Coal. Workers may reside permanently in Glenden and/or Collinsville or reside elsewhere when not on shift and arrive at site on a drive in/drive out basis.

Byerwen Coal's preferred option is to house workers in local townships. Accommodation provisions will be finalised as a part of the EIS process.

Rehabilitation

All land disturbances will be minimised throughout the Project. Land disturbed by this project will be rehabilitated either progressively, where practical, or on decommissioning to mitigate any potential negative environmental impacts. It is proposed to return the majority of the Project site back to its pre-mining land suitability.

Where available, topsoil will be stripped and stockpiled from disturbed areas for re-use in the rehabilitation program to provide a seed bank and growth media for revegetation activities.

2.2 Alternatives to taking the proposed action

The project has high economic value to the State of Queensland, providing jobs and stimulating the local economy. The project is based on extraction of a defined coal resource. As such, an alternative action is not proposed.

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

The project is based on extraction of a defined coal resource. As such, an alternative location for the mine site is not possible. The Project timeframe aims to maximise the high value of coal in the marketplace. As such, alternative timing is not proposed.

2.4 Context, planning framework and state/local government requirements

Byerwen Coal is currently seeking declaration of the project as a significant project under the Queensland *State Development and Public Works Organisation Act 1974* (SDPWO Act). The project will be assessed by Environmental Impact Statement (EIS). Mining leases have been applied for under the Queensland *Mineral Resources Act 1989* along with an Environmental Authority (EA) application under the Queensland *Environmental Protection Act 1994*. The EA application will be supported by the EIS and will contain Environmental Management Plan (EMP), for mining operations.

2.5 Environmental impact assessments under Commonwealth, state or territory legislation

It is proposed that an EIS be undertaken in accordance with the Bilateral Agreement between the State of Queensland and Commonwealth, to meet the requirements of the EPBC Act and the SDPWOA Act.

2.6 Public consultation (including with Indigenous stakeholders)

The Birri and Jangga people have been identified as the claimants of the area encompassing the Byerwen Project. Ongoing consultation has been undertaken with both claimant groups since the exploration tenements were applied for. Exploration agreements have been entered into with both claimant groups.

The overall purpose of the consultation process will be to ensure that all relevant stakeholders are aware of the Project and have an opportunity to comment and provide input into the EIS process.
As part of the EIS process it is proposed that community consultation will be conducted with the local community and other relevant stakeholders.

It is proposed to develop a Community Engagement Plan for the Project that will encompass the following key objectives;

- Provide a mechanism for community contact with the Project team;
- Provide the community with information regarding the Project;
- Identify any issues and concerns that the community have regarding the Project; and
- Establish a mechanism for capturing community feedback for use in the EIS.

2.7 A staged development or component of a larger project
This is a standalone project and it is not part of a staged development.

3 Description of environment & likely impacts

3.1 Matters of national environmental significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest.

Your assessment of likely impacts should refer to the following resources (available from the Department's web site):

- specific values of individual World Heritage properties and National Heritage places and the ecological character of Ramsar wetlands;
- profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- *Significant Impact Guidelines 1.1 – Matters of National Environmental Significance*; and
- associated sectoral and species policy statements available on the web site, as relevant.

Note that even if your proposal will not be taken in a World Heritage area, Ramsar wetland, Commonwealth marine area, the Great Barrier Reef Marine Park or on Commonwealth land, it could still impact upon these areas (for example, through downstream impacts). Consideration of likely impacts should include both direct and indirect impacts.

3.1 (a) World Heritage Properties

Description
The project area does not contain any World Heritage Properties.

Nature and extent of likely impact

N/A

3.1 (b) National Heritage Places

Description
The Project area does not contain any Natural Heritage Places

Nature and extent of likely impact

N/A

3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)

Description
There are no Wetlands of International Importance within or immediately surrounding the Project area.

Nature and extent of likely impact

N/A

3.1 (d) Listed threatened species and ecological communities

Description

A review of relevant State and Commonwealth databases including the Environmental Protection and Biodiversity Conservation Act Protected Matters database and the DERM Wildlife Online database was undertaken to identify any listed threatened species or ecological communities potentially occurring on the Project site. The results of the search are summarised in the table below.

Ecological Community / Species	Status or presence / no of species
Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin	Known to occur
Brigalow (*Acacia harpophylla* dominant and co-dominant)	Known to occur
Semi-evergreen vine thickets of the Brigalow belt	Known to occur
Birds	5
Mammals	2
Reptiles	2
Plants	7

Table 1: Summary of the Protected Matters desktop search

The search identified five birds, two mammals, two reptiles, seven plants and twelve migratory bird species that were evaluated to have a level of (known, likely, possible or unlikely) likelihood to occur in or adjacent the project area. The likelihood of occurrence was determined based on the known habitat requirements of each species, information on their known distribution, recent historical records and information on habitats thought to be present on the Project site.

Field studies and surveys have been undertaken of the total project area to quantify the type, quality and the extent of the habitats occurring within the site. However at the time of this referral, the report of the studies has not been finalised. The forth coming EIS will detail the results of the field studies and surveys discussing the potential impacts and likelihood of occurrence of "Protected Matters" within the project area.

The habitat for each "Protected Matter" which has the potential to occur is briefly described below.

Brigalow (Acacia harpophylla dominant and co-dominant)

The listed ecological community is characterised by the presence of Brigalow (*Acacia harpophylla*) as one of the three most abundant tree species (Butler 2007). Brigalow is usually either dominant in the tree layer or co-dominant with other species such as *Casuarina cristata* (Belah), other species of Acacia, or species of Eucalyptus. Occasionally Belah, or species or Acacia or Eucalyptus may be more common than Brigalow within the broad matrix of Brigalow vegetation. The structure of the vegetation ranges from open forest to open woodland. The height of the tree layer varies from about 9 m in low rainfall areas (averaging around 500 mm per annum) to around 25 m in higher rainfall areas (averaging around 750 mm per annum) (Butler 2007). A prominent shrub layer is usually present. In Queensland, 16 Regional Ecosystem types correspond with the Brigalow Threatened Ecological Community (TEC).

Natural grasslands of the Queensland Central Highlands and the northern Fitzroy Basin ecological community usually occurs on flat ground or gently undulating rises. It occurs on soils that have formed either in situ on the fresh basalt, or on fine-grained sedimentary rocks, or where this material has been transported to form extensive alluvial plains along ancient and flood-prone watercourses. The soils are fine textured vertosols (cracking clay), often deep and dark in colour (Fensham, 1999), although soils may be shallower on ridges or sloping land. The soils are cracking or self-mulching, that is, they expand when wet and contract when dry. The development of deep cracks may tear tap roots and is a possible reason why trees and woody shrubs are lacking in these grasslands (Beadle, 1981; Fensham, 2003; Whalley, pers. comm., 2007). Other factors, such as fire, frost, and soil chemistry (particularly low sodicity) can also be important for tree exclusion (Fensham, 2003). The high water-holding capacity of the clay soil also inhibits deep penetration during most rainfall events.

Natural grasslands of the Queensland Central Highlands and the northern Fitzroy Basin ecological community includes the following seven Queensland Regional Ecosystems (REs) (Qld EPA, 2007):

RE 11.3.21 *Dichanthium sericeum* and/or *Astrebla* spp. grassland on alluvial plains - Cracking clay soils;

RE 11.4.4 *Dichanthium* spp., *Astrebla* spp. grassland on Cainozoic clay plains;

RE 11.4.11 *Dichanthium sericeum*, *Astrebla* spp. and patchy *Acacia harpophylla*, *Eucalyptus coolabah* on Cainozoic clay plains;

RE 11.8.11 *Dichanthium sericeum* grassland on Cainozoic igneous rocks;

RE 11.9.3 *Dichanthium* spp., *Astrebla* spp. grassland on fine-grained sedimentary rocks;

RE 11.9.12 *Dichanthium sericeum* grassland with clumps of *Acacia harpophylla* on fine-grained sedimentary rocks; and

RE 11.11.17 *Dichanthium sericeum* grassland on old sedimentary rocks with varying degrees of metamorphism and folding.

Four of the seven REs above (11.3.21, 11.4.4, 11.8.11 and 11.9.12) were included under the previously listed 'Bluegrass (*Dichanthium* spp.) dominant grasslands of the Brigalow Belt Bioregions (North and South)' threatened ecological community.

Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nadewar Bioregions's
Semi-evergreen vine thicket (SEVT) is considered an extreme form of dry seasonal subtropical rainforest (McDonald 1996). It is generally characterised by the prominence of trees with microphyll sized leaves (i.e. leaves usually 2.5–7.6 cm long), the presence of Bottle Trees (*Brachychiton* spp.) as emergents from the vegetation, and the thickets occurring in areas with a subtropical, seasonally dry climate on soils of high to medium fertility (e.g. Webb 1959, 1968; Webb & Tracey 1981, 1994). Remnants of the listed SEVT ecological community in Queensland are generally considered to be floristically diverse, with species richness decreasing as rainfall decreases and/or becomes more seasonal (Fensham 1995; McDonald 1996). Annual rainfall and the mean temperature of the coldest quarter significantly affect community types (McDonald 1996). The thickets also become lower and more open in rocky situations and/or with decreasing rainfall (McDonald 1996).

***Erythrotriorchis radiates* - Red Goshawk**
The Red Goshawk occurs in coastal and sub-coastal areas in wooded and forested lands of tropical and warm-temperate Australia (Marchant & Higgins 1993). Riverine forests are also used frequently (Debus 1991, 1993). Such habitats typically support high bird numbers and biodiversity, especially medium to large species which the goshawk requires for prey. The Red Goshawk nests in large trees, frequently the tallest and most massive in a tall stand, and nest trees are invariably within one km of permanent water (Aumann & Baker-Gabb 1991; Debus & Czechura 1988b).

***Geophaps scripta scripta* - Squatter Pigeon**
The Squatter Pigeon (southern) occurs on the inland slopes of the Great Dividing Range. Its distribution extends from the Burdekin-Lynd divide in central Queensland, west to Charleville and Longreach, east to the coastline between Proserpine and Port Curtis (near Gladstone), and south to scattered sites throughout south-eastern Queensland (Frith 1982; Higgins & Davies 1996; Schodde & Mason 1997; Storr 1984).

***Neochmia rufficauda ruficauda* - Star Finch**
The Star Finch (eastern) occurs mainly in grasslands and grassy woodlands that are located close to bodies of fresh water (Garnett 1993; Gould 1865; Holmes 1996). It also occurs in cleared or suburban areas such as along roadsides and in towns (Baldwin 1975; Cayley 1932; Holmes 1996, 1998; Marshall 1932).

***Poephilla cinta cinta* - Black-throated Finch**
The Black-throated Finch (southern) occurs mainly in grassy, open woodlands and forests, typically dominated by *Eucalyptus*, *Corymbia* and *Melaleuca*, and occasionally in tussock grasslands or other habitats (for example freshwater wetlands), often along or near watercourses, or in the vicinity of water (Baldwin 1976; Britton & Britton 2000; BTF Recovery Team 2004; Ley & Cook 2001; NRA 2005; Wieneke 1989). Almost all recent records of the finch from south of the tropics have been in riparian habitat (Baldwin 1976; BTF Recovery Team 2004; Ley & Cook 2001). The subspecies is thought to require a mosaic of different habitats in which it can find seed during the wet season (Mitchell 1996).

***Dasyurus hallucatus* - Northern Quoll**

Dasyurus hallucatus is commonly found in open Eucalypt woodland and dens in specific habitats among rocky outcrops (Woinarski, 2006). Dens are constructed in hollow logs, in crevices and small caves among rocks and in tree hollows (Woinarski, 2006). Most successful breeding occurs near creek lines (Braithwaite and Begg, 1998). Northern quolls forage primarily on the ground but are also capable of climbing trees (Woinarski, 2006).

***Nyctophilus corbeni* — South-eastern Long-eared Bat**
The South-eastern Long-eared Bat occurs in a range of inland woodland vegetation types, including box, ironbark and cypress pine woodlands.

The species also occurs in Buloke woodland, Brigalow woodland, Belah woodland, Smooth-barked Apple, *Angophora leiocarpa,* woodland; River Red Gum, *Eucalyptus camaldulensis,* forests lining watercourses and lakes, Black Box, *Eucalyptus largiflorens,* woodland, dry sclerophyll forest.

***Egernia rugosa* - Yakka Skink**
The Yakka Skink is usually found in open dry sclerophyll forest or woodland (Cogger 2000; Wilson & Knowles 1988). The core habitat of this species is within the Mulga Lands and Brigalow Belt South Bioregions (TSN 2008). Other populations have been recorded throughout the Brigalow Belt North (east to the Rockhamton area) and Einasleigh Uplands bioregions, extending north to the southern section of Cape York Peninsula (TSN 2008). Some populations have been detected along the Queensland/NSW border (TSN 2008). This species, and other similar skinks, often take refuge among dense ground vegetation, large hollow logs, cavities in soil-bound root systems of fallen trees and beneath rocks (Cogger 2000; Wilson & Knowles 1988).

***Denisonia maculata* - Ornamental Snake**

Occurs in Brigalow (*Acacia harpophylla*) woodland growing on clay and sandy soils, riverside woodland, and open forest growing on natural levees (Shine 1983; Cogger *et al*. 1993). Shows a preference for moist areas (Wilson & Knowles 1988). One site in Brigalow woodland near Nebo had ample ground cover in the form of fallen timber, thick *Carissa ovata* bushes and small tussock grasses. Snakes at this site were only found in the vicinity of a complex of flooded gilgai, and were not located in nearby riparian and floodplain woodland. The gilgai had an abundance of frog prey (A.Melzer 2001 pers. comm.).
During surveys in the Brigalow Belt near Coppabella in 2009, an Ornamental Snake was caught in a small dry sandy creek bed, fringed by scattered River Red Gums (*Eucalyptus camaldulensis*) within a Poplar Box (*Eucalyptus populnea*) and Poplar Gum (*Eucalyptus platyphylla*) woodland with very small pockets of Brigalow (*Acacia harpophylla*) and Belah (*Casuarina cristata*) woodland (of <1 ha) some distance from the creek on cracking clays.

Acacia ramiflora
This species grows in woodland on sandstone hills (Pedley 1978, 1987; Orchard & Wilson 2001a). A collection from Hughenden is from pebbly red earth in low open woodland of *Eucalyptus whitei* and *Triodia* sp. (Pedley 1981).

***Dicanthium queenslandicum* – King Bluegrass**
King Bluegrass is found in parts of the Brigalow Belt Bioregion and only occurs in native grasslands on black cracking clay soils.

***Eucalyptus raveretiana*- Black Ironbox**
Black Ironbox occurs between Rockhampton and Ayr in Queensland. The extent of occurrence is about 90 000 km2 (Queensland Herbarium, 2008). Black Ironbox occurs on the banks of rivers, creeks and other watercourses, on clayey or loamy soil (Queensland Herbarium, 2008).

Cycas ophiolitica
Cycas ophiolitica occurs from Marlborough in the north, to the Fitzroy River near Rockhampton in the south, in woodland or open woodland dominated by eucalypts, often on serpentinite substrates.

***Digitaria porrecta*- Finger Panic Grass**
Finger Panic Grass occurs in NSW and Queensland. In NSW it is found on the North West Slopes and Plains, from near Moree south to Tambar Springs and from Tamworth to Coonabarabran. It largely occurs on private land.

Leucopogon cuspidatus
Leucopogon cuspidatus, Family Epacridaceae, is a dwarf to small shrub to 1.2 m with a spreading habit, with bright green young growth. Most populations occur in coastal districts and islands, but collections have been made as far west as Blackdown Tableland. Localities include Mackay, Bowen, Townsville, Gloucester, Magnetic Island, and serpentine outcrops in the Marlborough to Yaamba area.

Nature and extent of likely impact
A detailed assessment of the potential impact on individual listed species will be provided as part of the EIS once habitats and resources have been identified in field surveys. The Ornamental Snake and the Squatter Pigeon has been previously recorded in the project area, mainly occurring in areas of previously cleared vegetation. It is anticipated that the project will cause localised impacts on some of the listed species. Regional Ecosystems consistent with EPBC threatened ecological communities may occur within the Project Area. Impacts on any Threatened Ecological Communities (TEC) will be assessed in the EIS. This information will be provided in the EIS, once key resources and habitats for flora and fauna have been identified in field surveys.

3.1 (e) Listed migratory species

Description

A desktop search of the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) "Protected Matters" tool was conducted. The search indicated there was twelve species of migratory birds that may have the potential to occur within the project area. These species have been listed below.

EPBC listed Migratory Bird Species	Type of Presence
Haliaeetus leaucogaster, White-bellied Sea Eagle	Species or species habitat likely to occur within project area
Hirundapas caudacutus, White-throated Needletail	Species or species habitat may occur within the project area
Hirundo rusitca, Barn Swallow	Species or species habitat may occur within the project area
Merops ornatus, Rainbow Bee-eater	Species or species habitat may occur within the project area
Monarcha melanopsis, Black-faced Monarch	Species or species habitat may occur within the project area
Myiagra cyanoleuca, Satin Flycatcher	Species or species habitat likely to occur within project area
Ardea alba, Great Egret, White Egret	Species or species habitat may occur within the project area
Ardea ibis, Cattle Egret	Species or species habitat may occur within the project area
Gallinago hardwickii, Latham's snipe, Japanese Snipe	Species or species habitat may occur within the project area
Nettapus coromandeliance albipennis, Australian Cotton Pygmy-goose	Species or species habitat may occur within the project area
Rostratula benghalensis s. lat, Painted Snipe	Species or species habitat may occur within the project area
Apus pacificus, Fork-tailed Swift	Species or species habitat may occur within the project area

Nature and extent of likely impact

From the desktop search, the project area does not intersect any wetlands or water bodies that represent significant breeding, nesting, roosting or foraging resource for migratory species. As such, there is not expected to be a significant impact on migratory or migratory marine species. Some foraging individuals may periodically utilise the project area, however given that there are no significant resources are on or adjacent to the project, impact to these species are expected to be minimal.

3.1 (f) Commonwealth marine area

(If the action is in the Commonwealth marine area, complete 3.2(c) instead. This section is for actions taken outside the Commonwealth marine area that may have impacts on that area.)

Description

The project does not contain and is not expected to impact any Commonwealth marine areas.

Nature and extent of likely impact

N/A

3.1 (g) Commonwealth land

(If the action is on Commonwealth land, complete 3.2(d) instead. This section is for actions taken outside Commonwealth land that may have impacts on that land.)

Description
The project area does not include any Commonwealth land.

Nature and extent of likely impact

N/A

3.1 (h) The Great Barrier Reef Marine Park

Description
The project area does not occur within or adjacent to the Great Barrier Marine Park.

Nature and extent of likely impact

N/A

3.2 Nuclear actions, actions taken by the Commonwealth (or Commonwealth agency), actions taken in a Commonwealth marine area, actions taken on Commonwealth land, or actions taken in the Great Barrier Reef Marine Park

3.2 (a)	**Is the proposed action a nuclear action?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment		

3.2 (b)	**Is the proposed action to be taken by the Commonwealth or a Commonwealth agency?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment		

3.2 (c)	**Is the proposed action to be taken in a Commonwealth marine area?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(f))		

3.2 (d)	**Is the proposed action to be taken on Commonwealth land?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(g))		

3.2 (e)	**Is the proposed action to be taken in the Great Barrier Reef Marine Park?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))		

3.3 Other important features of the environment

3.3 (a) Flora and fauna

The project area lies within the Brigalow Belt bioregion. Much of the region has been developed for cropping and improved pasture which is generally found on the more fertile soils. The vegetation of the Brigalow Belt North bioregion consists of woodlands of Ironbarks (*Eucalyptus melanophloia*, *Eucalyptus crebra*), Poplar Box (*Eucalyptus populnea*) and Brown's Box (*Eucalyptus brownii*) with forests of Brigalow (*Acacia harpophylla*), Blackwood (*Acacia argyrodendron*) and Gidgee (*Acacia cambagei*) (Isbell 1962; Isbell and Murtha 1972; Johnson 1964; Thackway & Creswell 1995).
The rangelands part of the bioregion includes open forests of Lancewood and Bendee (*Acacia shirleyi/catenulata*) with Eucalypt woodland and areas of Brigalow and Blackwood. The Eucalypt woodland includes Narrow-leaved Ironbark (*Eucalyptus crebra*), Silver-leaved Ironbark (*Eucalyptus melanophloia*), Mallee Box (*Eucalyptus persistens*), Poplar Box (*Eucalyptus populnea*) and Mountain Coolibah (*Eucalyptus orgadophila*).

The alluvial plains support woodlands of Poplar Box, Gidgee or Coolibah (*Eucalyptus coolabah*) with forest areas of Dawson Gum-brigalow (*Eucalyptus cambageana-acacia harpophylla*). Along the water courses are tall woodlands to open-forests of Red Gum (*Eucalyptus camaldulensis and E. tereticornis*) and Coolibah.

3.3 (b) Hydrology, including water flows

The project area lies within three river catchments which are the Suttor, Burdekin and the Belyando. There are also a number ephemeral creeks and drainage lines within the project which remain dry for the majority of the year.

3.3 (c) Outstanding natural features

Preliminary desktop searches of the project area have identified no outstanding natural features.

3.3 (d) Remnant native vegetation

Six 'Endangered' regional ecosystems are listed as occurring on the project area from Regional Ecosystem mapping (DERM, 2006). There were five 'Of Concern' regional ecosystems listed as also occurring within the project area. A map detailing the 'Endangered' and 'Of Concern' regional ecosystems as mapped by DERM is shown in Figure 3. It is important to note that RE mapping is a desktop procedure undertaken via spectral analysis of satellite imagery. RE mapping can be incorrect, particularly in areas that have not been ground-truthed in recent surveys. The mapping here is indicative only.

The commissioned flora and fauna studies will ground truth and accurately map all regional ecosystems occurring within the project area. The results of these studies (including RE mapping) will be included within the forthcoming EIS.

Regional Ecosystem	Description	VM Stat.
11.3.1	*Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains.	E
11.3.2	*Eucalyptus populnea* woodland on alluvial plains.	OC
11.3.4	*Eucalyptus tereticornis* and/or *Eucalyptus spp.* tall woodland on alluvial plains.	OC
11.3.25	*Eucalyptus tereticornis* or *Eucalyptus camaldulensis* woodland fringing drainage lines.	LC
11.3.27 (11.3.27f)	Freshwater wetlands / Lacustrine wetland (e.g. lake) / Palustrine wetland (e.g. vegetated swamp) / *Eucalyptus coolabah* and/or *E. tereticornis* open woodland to woodland fringing swamps.	LC
11.4.9	*Acacia harpophylla* shrubby open forest to woodland with *Terminalia oblongata* on Cainozoic clay plains.	E
11.5.2	*Eucalyptus crebra*, *Corymbia spp.*, with *E. moluccana* on lower slopes of Cainozoic sand plains/remnant surfaces.	LC
11.5.3	*Eucalyptus populnea* +/- *E. melanophloia* +/- *Corymbia clarksoniana* on Cainozoic sand plains/remnant surfaces.	LC
11.5.9	*Eucalyptus crebra* and other *Eucalyptus spp.* and *Corymbia spp.* woodland on Cainozoic sand plains/remnant surfaces.	LC
11.5.15	Semi-evergreen vine thicket on Cainozoic sand plains/remnant surfaces.	LC
11.5.16	*Acacia harpophylla* and / or *Casuarina cristata* open forest in depressions on Cainozoic sand plains/remnant surfaces.	E

Regional Ecosystem	Description	VM Stat.
11.7.1 (11.7.1x1)	*Acacia harpophylla* and/or *Casuarina cristata* and *Eucalyptus thozetiana* or *E. microcarpa* woodland on lower scarp slopes on Cainozoic lateritic duricrust.	E
11.7.2	*Acacia spp.* woodland on Cainozoic lateritic duricrust. Scarp retreat zone.	LC
11.7.3	*Eucalyptus persistens*, *Triodia mitchellii* open woodland on stripped margins of Cainozoic lateritic duricrust.	LC
11.7.4	*Eucalyptus decorticans* and/or *Eucalyptus spp.*, Corymbia spp., Acacia spp., Lysicarpus angustifolius on Cainozoic lateritic duricrust.	LC
11.7.6	*Corymbia citriodora* or *Eucalyptus crebra* woodland on Cainozoic lateritic duricrust.	LC
11.8.3	Semi-evergreen vine thicket on Cainozoic igneous rocks.	OC
11.8.5	*Eucalyptus orgadophila* open woodland on Cainozoic igneous rocks.	LC
11.8.11	*Dichanthium sericeum* grassland on Cainozoic igneous rocks.	OC
11.8.13	Semi-evergreen vine thicket and microphyll vine forest on Cainozoic igneous rocks.	E
11.9.1	*Acacia harpophylla* - *Eucalyptus cambageana* open forest to woodland on fine-grained sedimentary rocks	E
11.9.2	*Eucalyptus melanophloia* +/- *E. orgadophila* woodland on fine-grained sedimentary rocks.	LC
11.9.3	*Dichanthium spp.*, *Astrebla spp.* grassland on fine-grained sedimentary rocks.	LC
11.9.10	*Eucalyptus populnea*, Acacia harpophylla open forest on fine-grained sedimentary rocks.	OC
11.10.7	*Eucalyptus crebra* woodland on coarse-grained sedimentary rocks.	LC

E-Endangered, LC-Least Concern, OC-Of Concern

An analysis of HERBRECS database was also undertaken. The analysis indicated six regionally significant species occurring in the project area including *Kelita uncinella* which has recently been recognised as a new genus.
Kelita uncinella is known only from the vicinity of the Newlands Coal Mine where it grows on the slopes of tertiary plateaus, preferring south facing slopes and occurring within *Acacia shirleyi* woodland (RE11.7.2). The species is currently not listed under current legislation although a status of 'Endangered' is recommended pending species review (Bean 2010).

Byerwen Coal has initiated further research of *Kelita uncinella* to ensure the biodiversity values of the species are enhanced and protected within the management area of project. Details of the research will be included in the forthcoming EIS.

3.3 (e) Current state of the environment

The majority project area is currently managed for commercial grazing proposes. A large component of the vegetation on the eastern side of the mine area has been cleared for grazing. The grazing intensity, land condition and any associated land degradation as a result of the grazing exercise will be detailed in the EIS. The project area has also been significantly fragmented by development of the 'Northern Missing Link' Goonyella Abbott Point rail line infrastructure, the construction of the new Cerito and Wollombi- Newlands mine haul roads.

There are currently three other coal mines directly adjacent to the project on the eastern and southern sides.

3.3 (f) Commonwealth Heritage Places or other places recognised as having heritage values

There are no Commonwealth Heritage Places within the project area.

3.3 (g) Indigenous heritage values

No indigenous heritage values have been identified within the project area. More detailed assessment of indigenous cultural heritage values will be undertaken as part of the EIS. This will involve engagement with the Birri and Jangga people.

3.3 (h) Other important or unique values of the environment

No national parks, conservation reserves or wetlands of national significance are located near the Project site and will not be affected by the Project.

3.3 (i) Tenure of the action area (eg freehold, leasehold)

Real property descriptions are detailed in Section 1.6 of this referral. The land that the EPC covers consists of 7 Leasehold parcels (see Figure 2 attached).

3.3 (j) Existing land/marine uses of area

The Project site is currently used for cattle grazing and coal exploration.

3.3 (k) Any proposed land/marine uses of area

There are no other proposed land uses for the mine site.

4 Measures to avoid or reduce impacts

An Environmental Management Plan (EMP) will be developed and will detail the environmental values and the impacts of the project.

The aims of an EMP are to provide:

(1) auditable commitments to practical and achievable strategies and design standards (performance specifications) for the management of a proposal to ensure that environmental requirements are specified and complied with;

(2) an integrated plan for comprehensive monitoring and control of impacts;

(3) local, State and Commonwealth authorities, stakeholders and Byerwen Coal with a common focus for approvals conditions and compliance with policies and conditions;

(4) the community with evidence that the environmental management of a project is acceptable.

Specifically the EMP will propose environmental control and proposed conditions that will address:

- Air quality and dust management;
- Community values and social impacts
- Flora, fauna communities, protecting threatened species and limiting impacts on species diversity;
- Groundwater quality and protection from contamination;
- Land management and rehabilitation objectives;
- Noise and Vibration,
- Surface water quality and protection
- Waste management, reuse and minimisation.

5 Conclusion on the likelihood of significant impacts

Identify whether or not you believe the action is a controlled action (ie. whether you think that significant impacts on the matters protected under Part 3 of the EPBC Act are likely) and the reasons why.

5.1 Do you THINK your proposed action is a controlled action?

	No, complete section 5.2
X	Yes, complete section 5.3

5.2 Proposed action IS NOT a controlled action.

Specify the key reasons why you think the proposed action is NOT LIKELY to have significant impacts on a matter protected under the EPBC Act.

5.3 Proposed action IS a controlled action

Type 'x' in the box for the matter(s) protected under the EPBC Act that you think are likely to be significantly impacted. (The 'sections' identified below are the relevant sections of the EPBC Act.)

	Matters likely to be impacted
	World Heritage values (sections 12 and 15A)
	National Heritage places (sections 15B and 15C)
	Wetlands of international importance (sections 16 and 17B)
X	Listed threatened species and communities (sections 18 and 18A)
X	Listed migratory species (sections 20 and 20A)
	Protection of the environment from nuclear actions (sections 21 and 22A)
	Commonwealth marine environment (sections 23 and 24A)
	Great Barrier Reef Marine Park (sections 24B and 24C)
	Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
	Protection of the environment from Commonwealth actions (section 28)
	Commonwealth Heritage places overseas (sections 27B and 27C)

It remains unclear whether the proposed project will be a significant impact on matters protected by the EPBC act. However due to nature and scale of the proposed activities, there remains the potential that some impact may occur. Given this, the proposed project is considered a 'Controlled Action' and will seek approval through the pending EIS process.

6 Environmental record of the responsible party

NOTE: If a decision is made that a proposal needs approval under the EPBC Act, the Environment Minister will also decide the assessment approach. The EPBC Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach.

		Yes	No
6.1	**Does the party taking the action have a satisfactory record of responsible environmental management?** **Provide details**	X	
6.2	**Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been 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?** **If yes, provide details**		X
6.3	**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?** **If yes, provide details of environmental policy and planning framework** Byerwen Coal will develop a project specific environmental policy in accordance with the company's framework for environmental and community stewardship.	X	
6.4	**Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?** **Provide name of proposal and EPBC reference number (if known)** Sonoma Coal Project (2005/2080): EPBC decision 10 May 2005 – not a controlled action. Jax Coal Project (2009/2515): EPBC decision 8 February 2020– not a controlled action Cows Coal Project (2009/2516): EPBC decision 23 March 2010 – not a controlled action Drake Coal Project (2010/5457): EPBC decision 4 June 2010- controlled action	X	

7 Information sources and attachments

(For the information provided above)

7.1 References

Aumann, T. & D. Baker-Gabb (1991). RAOU Report 75. *A Management Plan for the Red Goshawk.* RAOU. Royal Australasian Ornithologists Union, Melbourne

Baldwin, M. (1975). Birds of the Inverell district, New South Wales. *Emu* 75, 113-120.

Baldwin, M. (1976). Distribution of the Black-throated Finch. *Australian Birds.* 11: 13-14.

Beadle, NCW (1981). *The vegetation of Australia*. Fischer, Stuttgart.

Bean, A.R. (2010). *Kelita* (Amaranthaceae), a new genus from Queensland, Australia
Queensland Herbarium, Brisbane Botanic Gardens, Mt Coot-tha road, Toowong, Queensland 4066, Australia;

Black-throated Finch Recovery Team (BTF Recovery Team) (2004). *Recovery Plan for the Black-throated Finch Southern Subspecies* Peophila cincta cincta. Hurstville, NSW: Department of Environment and Conservation; and Brisbane, Queensland: Queensland Parks and Wildlife Service.

Braithwaite, R.W. and Begg, R.J. (1998). Northern Quoll, *Dasyurus hallucatus.* **In:** The Mammals of Australia (ed.) Strachan, R. New Holland Publishers Ltd. Sydney.

Britton, P.L. & H.A. Britton (2000). The birds of Charters Towers, north Queensland. *Sunbird.* 30: 61-88.

Butler, DW (2007) Recovery plan for the "Brigalow (*Acacia harpophylla* dominant and co-dominant" endangered ecological community (draft of 1 May 2007). Report to the Department of the Environment and Water Resources, Canberra. Queensland National Parks and Wildlife Service, Brisbane.

Cayley, N.W. (1932). *Australian Finches in Bush and Aviary.* Angus and Robertson, Sydney.

Cogger, H.G. (2000). *Reptiles and Amphibians of Australia – 6th edition.* Sydney, NSW: Reed New Holland.

Cogger, H.G., E.E. Cameron, R.A. Sadlier & P. Eggler (1993). *The Action Plan for Australian Reptiles.* [Online]. Canberra, ACT: Australian Nature Conservation Agency. Available from: http://www.environment.gov.au/biodiversity/threatened/action/reptiles/index.html

Commonwealth Conservation Advice on Leucopogon cuspidatus (Threatened Species Scientific Committee, 2008rm)

Debus, S. & G. Czechura (1988b). Field identification of the Red Goshawk Erythrotriorchis radiatus. *Australian Bird Watcher*. 12: 154-159

Debus, S.J.S (1991). An annotated list of NSW records of the Red Goshawk. *Australian Birds.* 24: 72-89.

Debus, S.J.S (1993). The status of the Red Goshawk (*Erythrotriorchis radiatus)* in New south Wales. Olsen, P., ed. *Australasian Raptor Studies.* Page(s) 182-191. ARA-RAOU, Melbourne.

Department of Sustainability, Environment, Water, Population and Communities. Biodiversity. Species Profile and Threats Database (Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions. Found at: http://www.environment.gov.au/cgi-bin/sprat/public/publicshowcommunity.pl?id=24

Department of Sustainability, Environment, Water, Population and Communities. Biodiversity. Species Profile and Threats Database (*Erythrotriorchis radiatus* – Red Goshawk). Found at: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?showprofile=Y

Environmental Resources Information Network (2006) *Map of Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions,* Department of the Environment, Water, Heritage and the Arts, viewed 16 April 2008, http://www.environment.gov.au/biodiversity/threatened/communities/maps/pubs/birgalow-nandewar-vine-thickets-map.pdf

Fensham, R.J. (1995) Floristics and environmental relations of inland dry rainforest in north Queensland, Australia. *Journal of Biogeography* 22: 1047-1063.

Fensham, R.J. (1999) Native grasslands of the Central Highlands, Queensland, Australia. Floristics,

regional context and conservation. *Rangeland Journal* 21: 82-103.

Finger Panic Grass - profile (NSW Department of Environment, Climate Change and Water (NSW DECCW), 2005ci) [Internet].

Frith, H.J. (1982b). *Pigeons and Doves of Australia.* Melbourne: Rigby.

Garnett, S., ed. (1993). Threatened and Extinct birds of Australia. *RAOU Report 82.* Melbourne: Royal Australasian Ornithologists Union, and Canberra: Australian National Parks and Wildlife Service.

Gould, J. (1865). *Handbook to the Birds of Australia.* Author, London (Facsimile edition [1972], Lansdowne Press, Melbourne).

Higgins, P.J. & S.J.J.F. Davies, eds. (1996). Handbook of Australian, New Zealand and Antarctic Birds. **In:** *Volume Three – Snipe to Pigeons 3.* Cambridge University Press, Melbourne.

Holmes, G. (1996). Distribution and status of the Southern Star Finch. *Sunbird* 26, 49-59.

Holmes, G. (1998). A review of the distribution, status and ecology of the Star Finch *Neochmia ruficauda* in Queensland. *Australian Bird Watcher* 17, 278-289.

Isbell, R.F. 1962 *Soils and Vegetation of the Brigalow Lands, Eastern Australia.* Soils and Land Use Series No. 43, Division of Soils, CSIRO.

Isbell, R.F. and Murtha, G.G. 1972 'Vegetation'. In: *Burdekin-Townsville Region*. Queensland. Resource Series (Geographic Section, Department of National Development, Canberra)

Johnson, R.W. 1964 *Ecology and Control of Brigalow in Queensland*, Queensland dept Primary Industries, Brisbane.

Ley, A.J. & S.M. Cook (2001). The Black-throated Finch *Poephila cincta* in New South Wales. *Australian Bird Watcher.* 19: 115-20.

Marchant, S. & P.J. Higgins, eds. (1993). *Handbook of Australian, New Zealand and Antarctic Birds. Volume 2 – Raptors to Lapwings.* Melbourne, Victoria: Oxford University Press.

Marshall, A.J. (1932). In search of a "lost" bird. *Emu* 32, 99-103.

Melzer, A. (2001). *Personal Communication.*

Mitchell, D.F. (1996). *Foraging Ecology of the Black-throated Finch* Poephila cincta cincta. M.Sc. Thesis. Townsville: James Cook University of North Queensland.

McDonald, WJF (1996). *Spatial and temporal patterns in the dry season subtropical rainforests of eastern Australia with particular reference to the vine thickets of central and southern Queensland.* PhD thesis, Botany Department, University of New England, Armidale.

Natural Resource Assessment Environmental Consultants (NRA) (2005). *Enertrade North Queensland Gas Pipeline Black-throated Finch Studies (Post-Construction).* Unpublished report prepared for Enertrade, Brisbane.

Orchard, A.E. & A.J.G. Wilson, eds. (2001a). Flora of Australia, Volume 11B, Mimosaceae, Acacia Part 2. **In:** *Flora of Australia*. Canberra, ACT: ABRS & CSIRO.

Pedley, L (1981). Further notes on Acacia in Queensland. *Austrobaileya*. 1(4):339-345.

Pedley, L. (1978). A Revision of *Acacia* Mill. in Queensland. *Austrobaileya*. 1(2):75-234.

Pedley, L. (1987). *Acacias in Queensland*. Brisbane, Dept. of Primary Industries.

Queensland Herbarium 2008, specimen label information, viewed 26 June 2008.

Shine, R. (1983). Food habits and reproductive biology of the Australian elapid snakes of the genus *Denisonia. Journal of Herpetology.* 17 (2): 171-175.

Schodde, R. & Mason, I.J. (1997). Aves (Columbidae to Coracidae). **In:** Houston, W.W.K. & Wells, A., eds. *Zoological Catalogue of Australia.* 37.2. Melbourne: CSIRO Publishing.

Storr, G.M. (1984c). Revised list of Queensland birds. *Records of the Western Australian Museum Supplement.* 19: 1-189.

Thackway, R. & Cresswell I.D. 1995, *An Interim Biogeographical Regionalisation for Australia: a Framework for Setting Priorities in the National Reserves System Cooperative Program*, Australian Nature Conservation Agency, Canberra, ACT.

Threatened Species Network (TSN) (2008). *Yakka Skink;* Egernia rugosa*; National Threatened Species Day Information Sheet*. [Online]. World Wildlife Foundation; Threatened Species Network; Department of the Environment, Water, Heritage and the Arts. Available from: http://www.environment.gov.au/biodiversity/threatened/publications/tsday08-skink.html.

Webb, LJ (1959). A physiognomic classification of Australian rainforests. *Journal of Ecology* 47: 551-70.

Webb, LJ (1968). Environmental relationships of the structural types of Australian rainforest vegetation. *Ecology* 49: 296-311.

Webb, LJ and Tracey, JG (1981). Australian rainforests: patterns and change. In A Keast (ed.), *Ecological Biogeography of Australia,* W. Junk, The Hague, pp 605-74.

Webb, LJ and Tracey, JG (1994). The rainforest of northern Australia. Chapter 4 in GH Groves (ed.), *Australian Vegetation,* second edition, Cambridge University Press.

Whalley (2007). *Personal Communication.*

Wilson, S.K. & D.G. Knowles (1988*). Australia's Reptiles: A Photographic Reference to the Terrestrial Reptiles of Australia.* Australia: Collins Publishers.

Woinarski, J. (2006). *Threatened Species Information Sheet: Arnhem Rock-rat*, Zyzomys maini. [Online]. Northern Territory Department of Natural Resources, Environment and the Arts (NRETA). Available from: http://www.nt.gov.au/nreta/wildlife/animals/threatened/pdf/mammals/arnhem_rockrat_vu.pdf. [Accessed: 09-Jul-2007].

7.2 Reliability and date of information

All reference material is listed above. These sources are considered to be reliable and accurate.

7.3 Attachments

Indicate the documents you have attached. All attachments must be less than two megabytes (2mb) so they can be published on the Department's website. Attachments larger than two megabytes (2mb) may delay the processing of your referral.

		✓ attached	Title of attachment(s)
You must attach	figures, maps or aerial photographs showing the project locality (section 1)	✓	Figures 1, 2
	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 3)	✓	Figure 3
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.3)		
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.4)		
	copies of any flora and fauna investigations and surveys (section 3)		
	technical reports relevant to the assessment of impacts on protected matters and that support the arguments and conclusions in the referral (section 3 and 4)	✓	Commonwealth MNES report
	report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)		

8 Contacts, signatures and declarations

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

Under the EPBC Act a referral can only be made by:

- the person proposing to take the action (which can include a person acting on their behalf); or
- a Commonwealth, state or territory government, or agency that is aware of a proposal by a person to take an action, and that has administrative responsibilities relating to the action[1].

Project title: Byerwen Coal Project

8.1 Person proposing to take action

This is the individual, government agency or company that will be principally responsible for, or who will carry out, the proposed action.

If the proposed action will be taken under a contract or other arrangement, this is:

- the person for whose benefit the action will be taken; or
- the person who procured the contract or other arrangement and who will have principal control and responsibility for the taking of the proposed action.

If the proposed action requires a permit under the Great Barrier Reef Marine Park Act[2], this is the person requiring the grant of a GBRMP permission.

The Minister may also request relevant additional information from this person.

If further assessment and approval for the action is required, any approval which may be granted will be issued to the person proposing to take the action. This person will be responsible for complying with any conditions attached to the approval.

If the Minister decides that further assessment and approval is required, the Minister must designate a person as a proponent of the action. The proponent is responsible for meeting the requirements of the EPBC Act during the assessment process. The proponent will generally be the person proposing to take the action[3].

Name	Christopher Wallin
Title	Director
Organisation	Byerwen Coal Pty Ltd
ACN / ABN (if applicable)	ACN 133 357 632
Postal address	Byerwen Coal Pty Ltd, PO Box 10630, Adelaide Street, Brisbane Qld 4000.
Telephone	(07) 30022900
Email	cwallin@qcoal.com.au
Declaration	I declare that the information contained in this form is, to my knowledge, true and not misleading. I agree to be the proponent for this action.
Signature	 Date 9-12-2010

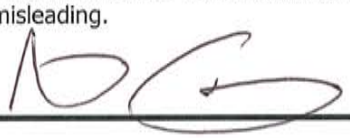
[1] *If the proposed action is to be taken by a Commonwealth, state or territory government or agency, section 8.1 of this form should be completed. However, if the government or agency is aware of, and has administrative responsibilities relating to, a proposed action that is to be taken by another person which has not otherwise been referred, please contact the Referrals Business Entry Point (1800 803 772) to obtain an alternative contacts, signatures and declarations page.*

[2] *If your referred action, or a component of it, is to be taken in the Great Barrier Reef Marine Park the Minister is required to provide a copy of your referral to the Great Barrier Reef Marine Park Authority (GBRMPA) (see section 73A,* EPBC Act*). For information about how the GBRMPA may use your information, see http://www.gbrmpa.gov.au/privacy/privacy_notice_for_permits.*

[3] *If a person other than the person proposing to take action is to be nominated as the proponent, please contact the Referrals Business Entry Point (1800 803 772) to obtain an alternative contacts, signatures and declarations page.*

8.2 Person preparing the referral information (if different from 8.1)

Individual or organisation who has prepared the information contained in this referral form.

Name	Martin Costello
Title	Environmental Manager - Consultant
ACN / ABN (if applicable)	ACN 133 357 632
Postal address	Byerwen Coal Pty Ltd, PO Box 10630, Adelaide Street, Brisbane Qld 4000
Telephone	(07) 3002 29 23
Email	mcostello@qcoal.com.au
Declaration	I declare that the information contained in this form is, to my knowledge, true and not misleading.
Signature	 Date 09/12/2010

REFERRAL CHECKLIST

NOTE: This checklist is to help ensure that all the relevant referral information has been provided. It is not a part of the referral form and does not need to be sent to the Department.

HAVE YOU:

- ☒ Completed all required sections of the referral form?
- ☒ Included accurate coordinates (to allow the location of the proposed action to be mapped)?
- ☒ Provided a map showing the location and approximate boundaries of the project area?
- ☒ Provided a map/plan showing the location of the action in relation to any matters of NES?
- ☒ Provided complete contact details and signed the form?
- ☒ Provided copies of any documents referenced in the referral form?
- ☒ Ensured that all attachments are less than two megabytes (2mb)?
- ☐ Sent the referral to the Department (electronic and hard copy preferred)?