

Section 1

Introduction

This section introduces the proposal to develop a medium-scale, open cut coal mine approximately 15km northeast of Boggabri and 10km north of the Whitehaven Coal Mine and serves to:

- *outline the scope and format of the document;*
 - *introduce the Proponent;*
 - *review the history of mining, relevant information on ongoing and approved mining developments in the local area and the background to the proposal;*
 - *present all planning instruments relevant to the proposal;*
 - *record the outcomes from the consultation program with government agencies and the local community and the process involved in the prioritisation of environmental issues raised;*
 - *describe the principles of sustainable development relevant to the proposal;*
 - *discuss the proposed approach towards environmental management and documentation; and*
 - *record the personnel involved at all stages of the development including project design, document preparation and specialist consultant investigations.*
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1.1 SCOPE

This Environmental Impact Statement (EIS) has been prepared by R.W. Corkery & Co. Pty. Limited to accompany a development application by a joint venture between Whitehaven Coal Mining Limited (WCM) and Idemitsu Boggabri Coal Pty Ltd (IBC) to develop and operate a medium scale open cut coal mine to be known as the East Boggabri Coal Mine (the “proposal”). A copy of the development application for the proposal is included as **Appendix 1**.

For the purposes of this document, the area which incorporates the proposed mine area for the proposed East Boggabri Coal Mine is referred to as the “Project Site”. **Figure 1.1** places the Project Site in its regional setting in northern New South Wales, approximately 300km northwest of Newcastle. **Figure 1.2** provides the local setting of the Project Site approximately 15km northeast of Boggabri, 42km north-northwest of Gunnedah and 10km north of the existing Whitehaven Coal Mine which is owned and operated by WCM.

The proposal would involve a number of component activities both within and external to the Project Site, all of which are described in this EIS. Development consent is sought for all component activities associated with the mining, processing and transportation of coal, namely:

- mining and associated activities;
- processing (crushing and screening) of coal;
- construction of roads which would form part of the transport route between the Project Site and the Whitehaven Coal Handling and Preparation Plant (CHPP) and rail loading facility;
- upgrading sections of existing public roads;
- transportation of coal from the Project Site to the Whitehaven CHPP and rail loading facility;
- the backloading of coarse reject produced from the washing of East Boggabri coal to the mine for disposal in the mine void; and
- progressive rehabilitation of the areas of disturbance within the Project Site and establishment of additional areas of native vegetation as part of an offset strategy for mine-related disturbance.

The mine, if approved, would produce up to 2.0 million tonnes (Mt) run-of-mine coal annually, averaging 1.6Mtpa over its 8 to 10 year mine life.

Beneficiation of the coal produced at the proposed East Boggabri Coal Mine would be undertaken at the Whitehaven CHPP and all coal products would be despatched from the Whitehaven rail loading facility. Both of these facilities are approved for these activities and as such are not considered part of this proposal (see Section 1.4.7).

The proposal is “State significant” in accordance with Section 76(A)7(b)(ii) of the *Environmental Planning and Assessment Act 1979* and, consequently, the Minister for Infrastructure and Planning is the consent authority. The proposal is also “designated development” in accordance with the provisions of Schedule 3 (Part 1) of the *Environmental Planning and Assessment Regulation 2000*, thus requiring an Environmental Impact Statement (EIS) to accompany the development application. The proposal is also recognised under Section 91 of the same Act to be “integrated development” as more than one approval is required to develop and operate the proposed mine. Therefore, this document will also serve to support the applications for the various approvals and licences required (see Section 2.1.5).



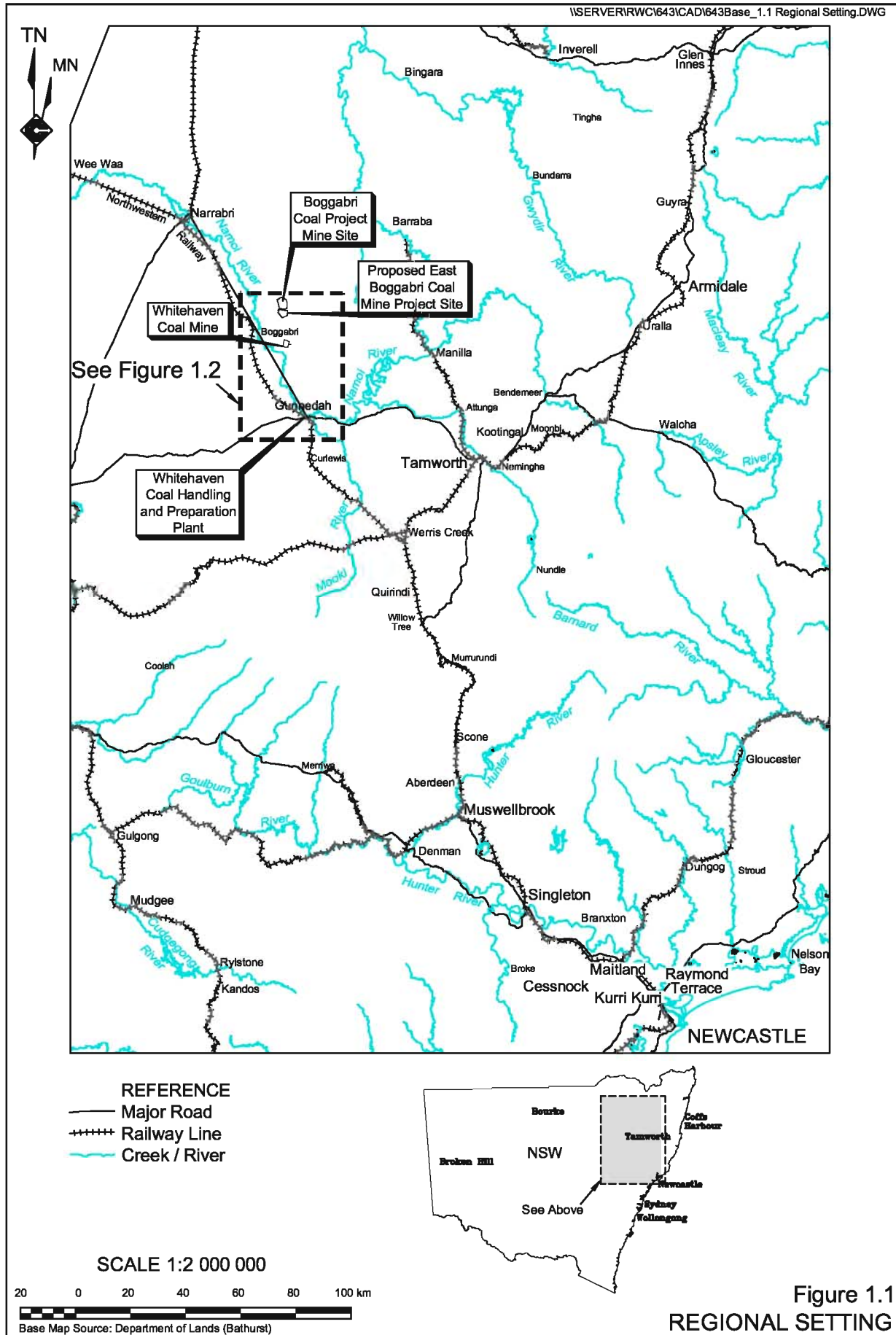
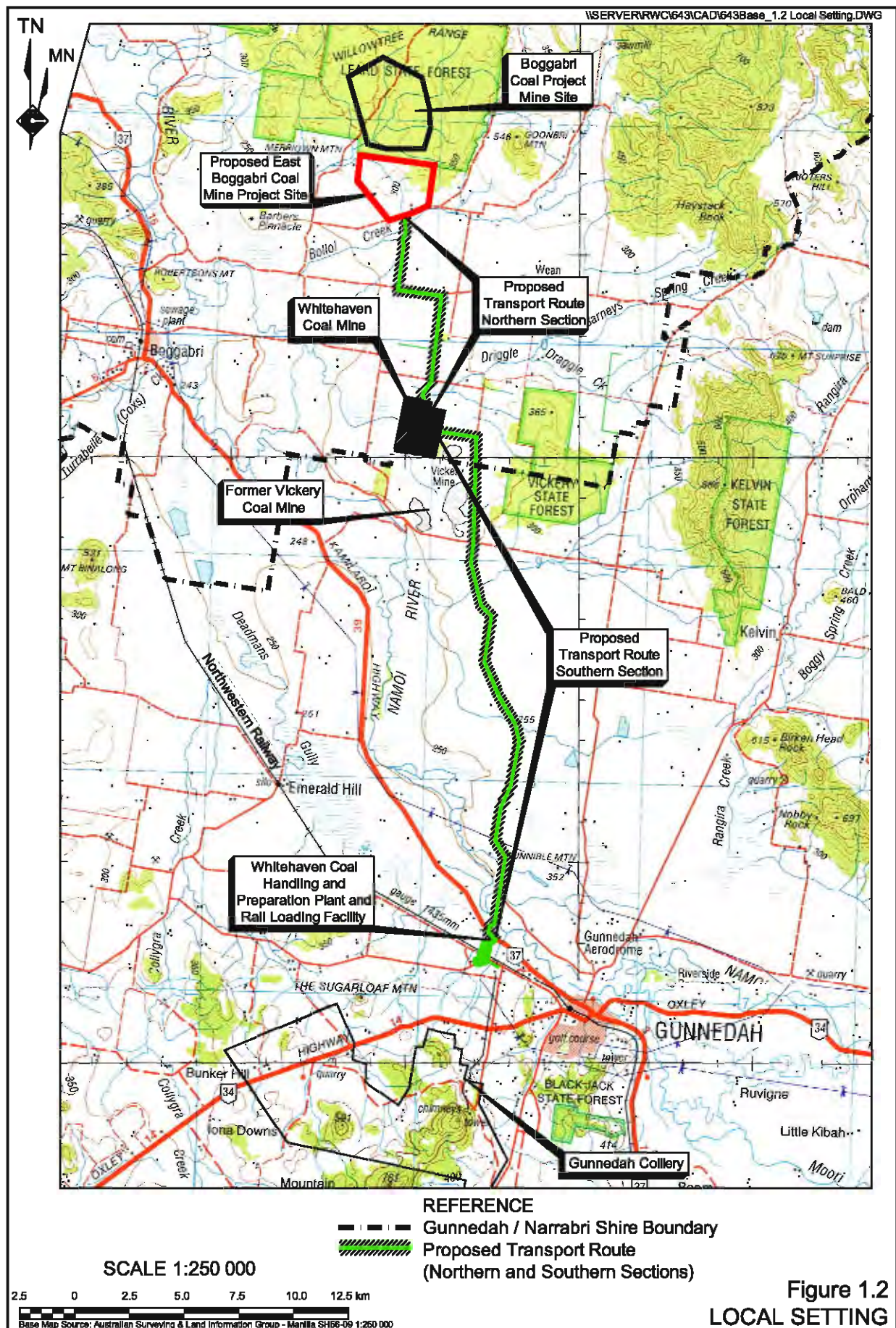


Figure 1.1
REGIONAL SETTING





Apart from describing the proposal, this document also provides relevant background information and provides a description of the existing environment within and surrounding the Project Site and adjacent to the entire transport route. The environmental safeguards and/or procedures that would be adopted to minimise or ameliorate the impacts associated with all proposed activities are outlined, together with the predicted impacts once those safeguards are adopted.

The information presented in this document covers all aspects of the planning, development, operation, rehabilitation and environmental monitoring at the proposed mine at a level of detail consistent with industry standards, the scale of the proposed operation and the potential for environmental impact. These aspects are presented in a manner that addresses the specific requirements of the Department of Infrastructure, Planning and Natural Resources (DIPNR) and other State and local government agencies, together with those issues raised during the community consultation process.

1.2 FORMAT OF THE STATEMENT

The EIS has been compiled in a single volume which includes six sections of text and a set of Appendices. The EIS is supported by a *Specialist Consultant Studies Compendium* (2 volumes) incorporating the reports prepared by specialist environmental consultancies engaged to assess specific aspects of the proposal.

The format of the EIS is as follows.

- Section 1:** introduces the proposal and the Proponent and briefly describes the history of coal mining in the Gunnedah area. Background information is provided to the proposal including information on existing, approved and proposed mine and related developments within the Gunnedah-Boggabri area. Information is provided on the consultation undertaken by the Proponent and prioritisation of issues for this document. An outline of sustainable development principles as they relate to the proposal is provided, together with the ongoing documentation for the proposal and information on the management of investigations for the EIS.
- Section 2:** describes the Proponent's objectives and proposed mining, coal processing, transportation, waste management and rehabilitation activities. The feasible alternatives to the proposed activities considered during the planning phase are also outlined.
- Section 3:** describes the general environmental setting of the Project Site and provides relevant background information for the environmental components that are discussed within Section 4.
- Section 4:** presents a description of a range of environmental features of the local environment that may or would be influenced by the proposal. The design and operational safeguards, and where appropriate, the management procedures that have been incorporated into the proposal to protect the local environment, are also presented. This section also analyses the potential impact the proposal would have on the physical, biological and social environment once the safeguards and procedures are adopted. The effectiveness of the measures to protect the environment and ongoing monitoring programs are presented.



Section 5: justifies the proposal in terms of biophysical, economic and social considerations, evaluates the proposal in terms of the goals and guidelines of Ecologically Sustainable Development, and examines the consequences of not proceeding with the development.

Section 6: provides a summary of the commitments made by the Proponent throughout the EIS in relation to environmental management and monitoring.

References: list the various source documents referred to for information and data used during the preparation of the EIS.

Glossary of Technical Terms, Acronyms, Symbols and Units: explains the technical terms, acronyms, symbols and units used throughout the EIS.

Appendices: present the following additional information.

1. A copy of the Proponent's development application.
2. A summary of the specific requirements of DIPNR and the other State and local government agencies consulted and identifies in which section(s) of the EIS the nominated requirements are addressed.
3. An overview of the Boggabri Coal Project.

The EIS has been prepared with the input of nine specialist consultancies, each of which is listed in Section 1.9. Their reports have been compiled into the supporting two-volume *Specialist Consultant Studies Compendium* which has been placed on exhibition with the EIS. The contents of these reports are summarised into the appropriate sections of the EIS. Individual copies of each report or the entire *Specialist Consultant Studies Compendium* can be provided to any person who purchases a hard copy of the EIS, while a full copy of the compendium is also included on the CD compiled for the proposal.

1.3 THE PROPONENT, PROJECT SITE AND PROPOSED TRANSPORT ROUTE

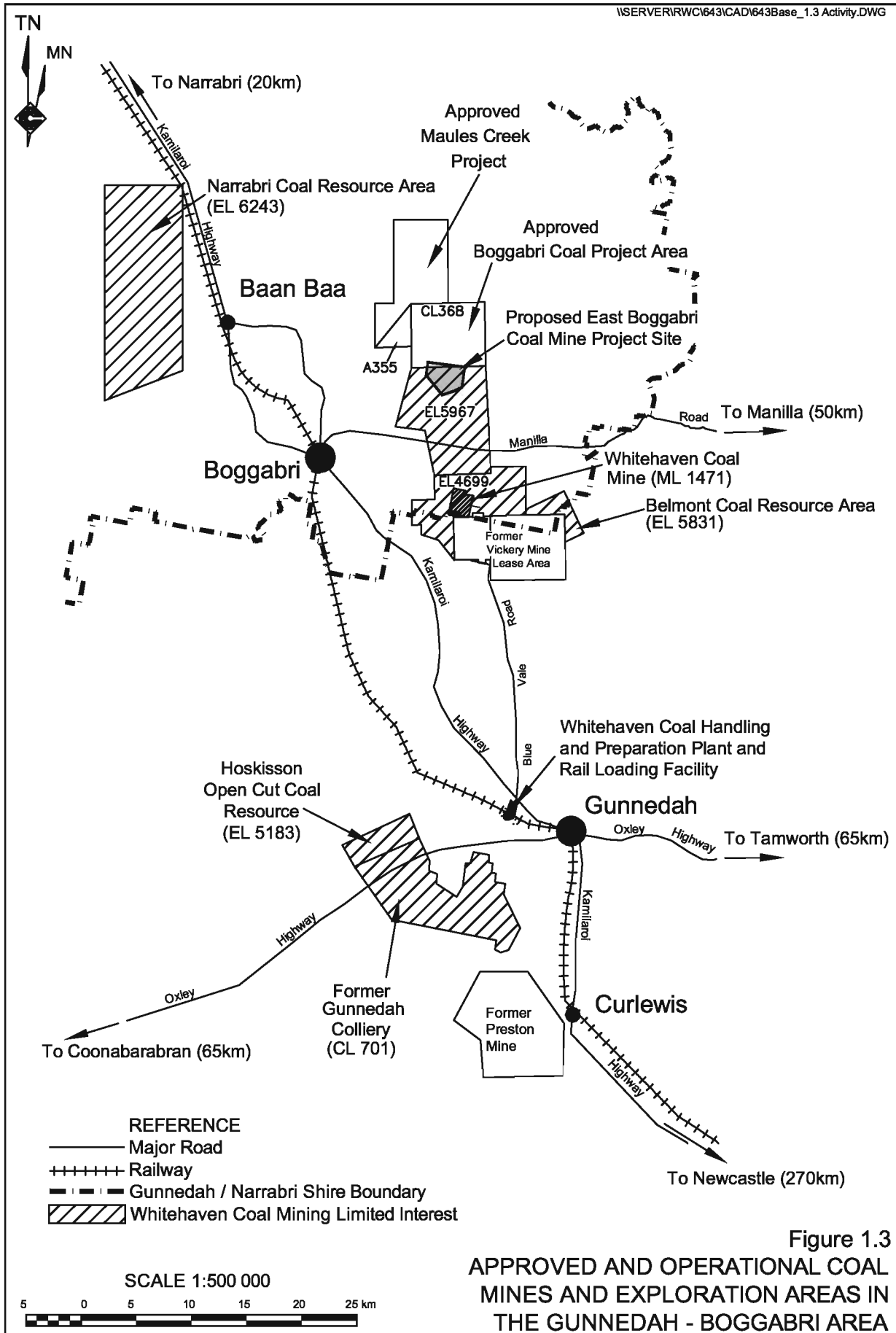
1.3.1 The Proponent

The Proponent for the proposed East Boggabri Coal Mine is a joint venture between WCM and IBC.

WCM is an unlisted public company which was initially formed to explore and potentially develop the coal resources in the Gunnedah Basin and, specifically, in the Boggabri area. WCM owns the Whitehaven Coal Mine, located approximately 10km south of the Project Site, the Whitehaven CHPP and rail loading facility approximately 6km west of Gunnedah and the former Gunnedah Colliery (**Figure 1.2**). WCM and associated companies also hold a number of other coal exploration tenements within the Gunnedah-Boggabri area which are subject to various forms of assessment activity including the Belmont Coal Resource Area located approximately 10km east of the Whitehaven Coal Mine. WCM holds an exploration licence (EL) 5697 which incorporates a substantial proportion of the Project Site. **Figure 1.3** presents the various mines, coal resource areas, exploration tenements and associated activities within the Gunnedah-Boggabri area.



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IBC is a 100% owned subsidiary of Idemitsu Kosan Coy Limited (IKC) of Japan. IBC is the holder of Coal Lease (CL) 368 and Authorisation A355 over the Boggabri coal deposit (the “Boggabri Coal Project”), immediately north of the Project Site (see **Figure 1.3**). The Boggabri Coal Project was approved for development on 22 August 1989 with recommencement of mining activity scheduled in early 2006 (see Section 1.4.4). IKC’s other coal interests in Australia include the 100% owned Muswellbrook Coal Mine and an 85% interest in the Ensham Coal Mine in Central Queensland. IKC, through its wholly owned subsidiaries, is the holder of a number of other mining tenements in the Hunter Valley.

1.3.2 The Project Site

The area of land on which mining and mining-related activities are proposed is referred to throughout this document as the “Project Site”. The Project Site covers an area of approximately 726ha within Exploration Licence (EL) 5967 and Coal Lease (CL) 368 and incorporates parts of the “Thuin”, “Nagero” and “Forest View” properties.

The proposed transport route from the Project Site to the Whitehaven CHPP does not form part of the Project Site. Rather, the proposed transport route is described separately (see Section 1.3.3). Both the Project Site and the proposed transport route are fully assessed in this EIS.

The Project Site comprises the following parcels of freehold land, all of which occur within the Parish of Leard, County of Nandewar and Shire of Narrabri (see **Figure 1.4**).

- Lots 10, 15, 16, 24, 25, 29 and 31, DP 754940.
- Part Lots 11 and 25, DP 759940.
- Part Lot 83, DP 754953.
- Part Lot 1, DP 970060.

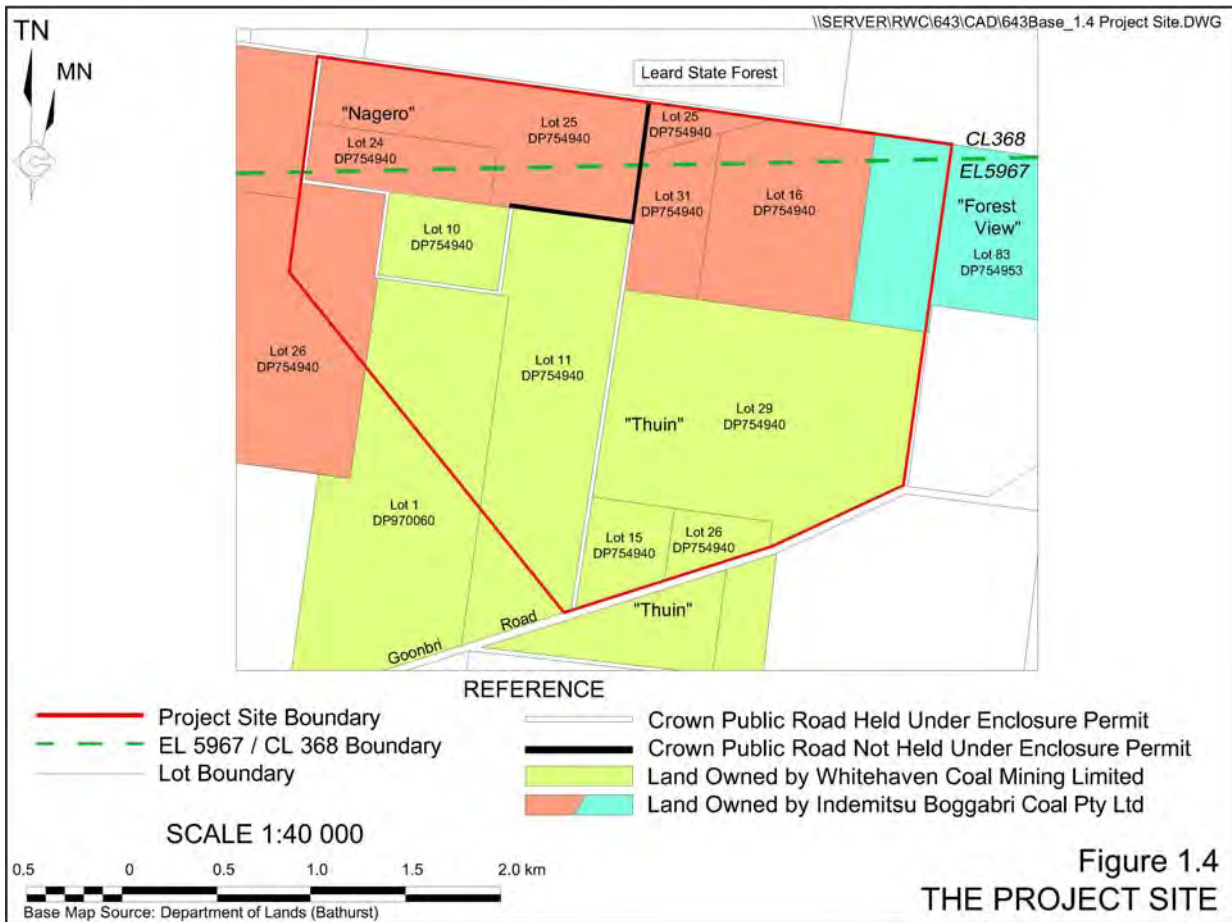
All freehold land within the Project Site within the “Thuin” property is owned by WCM and within the “Nagero” and “Forest View” properties is owned by IBC.

The Project Site also contains approximately 3.4km of vacant Crown road reserve or Crown road reserve held under enclosure permit. These reserves, which are all approximately 20m wide, are also presented on **Figure 1.4** and include the following.

- (i) Crown public roads west of Lots 10, 24 and 25, DP 754940 and the Crown road reserve south of Lot 24, DP 754940. These roads are currently held under Enclosure Permit 34904 in the name of Idemitsu Boggabri Coal Pty Ltd.
- (ii) Crown public roads south and east of Lot 10, DP 754940 held under Enclosure Permit 35915 in the name of Russell Douglas Cross (the former owner of “Thuin”).
- (iii) Crown public roads west of Lots 15 and 29, DP 754940 held under Enclosure Permit 35915 by Russell Douglas Cross (the former owner of “Thuin”).
- (iv) Crown public roads south and within Lot 25, DP 754940 and Crown road reserve west of Lot 31, DP 754940 not held under enclosure permit.

An application has been made to the Department of Lands (DoL) for the enclosure permits (ii) and (iii) to be transferred to WCM and an enclosure permit issued for (iv).





The Proponent proposes that the boundaries of the mining lease required for the proposed East Boggabri Coal Mine under Section 51 of the *Mining Act 1992* would be coincident with, or lie within, the boundary of the Project Site. The Proponent intends to lodge a mining lease application (MLA) with the Department of Primary Industries (Mineral Resources) (DPI (MR)) which would include an adequate buffer between activities associated with the proposal and those associated with the Boggabri Coal Project. It is envisaged the MLA would include part of Coal Lease (CL) 368 (see **Figure 1.4**) although it is understood, that if approved, DPI (MR) would excise the section of CL 368 within the Project Site and incorporate that part in the mining lease for the proposed East Boggabri Coal Mine. On completion of the East Boggabri Coal Mine, that component of CL 368 excised initially would be transferred back to IBC.

1.3.3 Proposed Transport Route

1.3.3.1 Introduction

The proposed transport route to be used for the movement of coal between the Project Site and the Whitehaven CHPP and the return of coarse rejects comprises:

1. a section of road (the “northern section”) between the proposed mine entrance and the existing product coal bin at the Whitehaven Coal Mine; and
2. an existing section of road (the “southern section”) between the existing product coal bin at the Whitehaven Coal Mine and the existing entrance to the Whitehaven CHPP and rail loading facility.



1.3.3.2 Northern Section

The northern section of the proposed transport route comprises both existing public roads as well as private roads to be constructed on freehold land owned by WCM and local landowners. **Figure 1.5** identifies the following private land, public roads and Crown road reserves, on which the northern section of the proposed transport route is located.

- **Private Land comprising:**

- (i) Lot 26, DP 754940 on the “Thuin” property owned by WCM;
- (ii) Lots 1 and 2, DP 1037347 on the “Tarrawonga” property owned by R & R McGregor;
- (iii) Lot 1, DP 434333 on the “Kyalla” property owned by R & P Crosby; and
- (iv) Lot 140, DP 754926 on the “Bungalow” property and Lot 138, DP 754926, and Lot 1, DP 1015797 on the “Whitehaven” property owned by WCM, terminating at the product coal bin covers part of Lot 1, DP 1015797.

- **Public Roads comprising:**

- (i) a crossing of Goonbri Road approximately 4.4km east of its intersection with Maules Creek Road;
- (ii) a 2.0km section of Manilla Road commencing approximately 4.4km east of its intersection with Maules Creek Road; and
- (iii) a crossing of Hoads Lane approximately 2.4km east of its intersection with Braymont Road.

- **Crown Road Reserves comprising:**

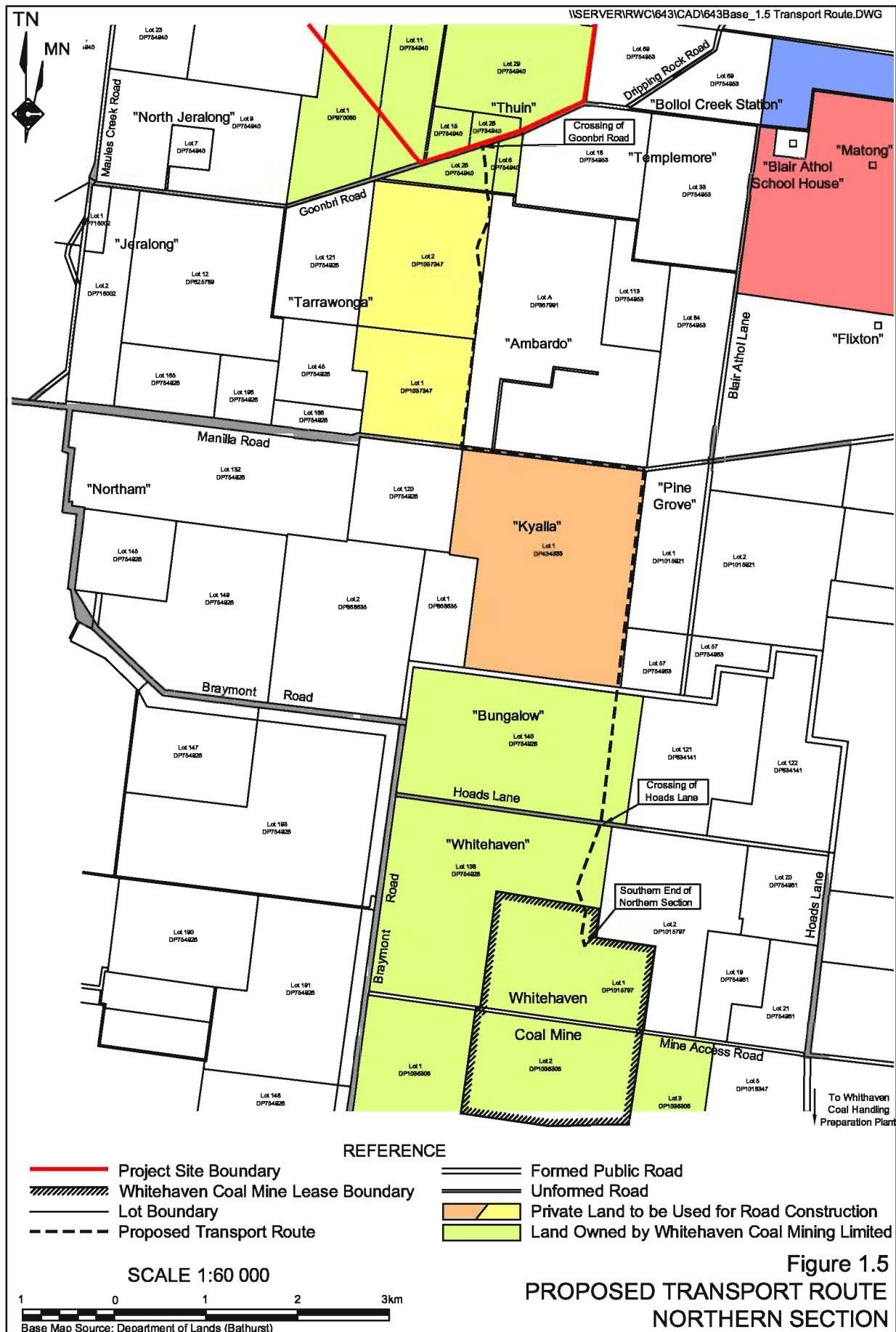
- (i) a crown road between Lot 26, DP 754940 and Lot 2, DP 1037347 (Enclosure Permit 367078 held by R & P Crosby); and
- (i) a crown road between Lot 1, DP 434333 and Lot 140, DP 754926.

1.3.3.3 Southern Section

The southern section of the proposed transport route includes the private mine access road and road to the product coal bin within the Whitehaven Coal Mine and the public roads which form the existing transport route for coal transportation between the Whitehaven Coal Mine and the Whitehaven CHPP and rail loading facility. The public roads include:

- a 5.2km section of Hoads Lane between the mine access road to the Whitehaven Coal Mine and Blue Vale Road;
- a 18.4km section of Blue Vale Road linking Hoads Lane with the Kamilaroi Highway; and
- a 0.5km section of the Kamilaroi Highway between Blue Vale Road and the private access road to the Whitehaven CHPP (also known as “the Siding Access Road”).





1.4 BACKGROUND

1.4.1 Introduction

Coal mining has been undertaken in the Gunnedah area for over 100 years. This sub-section provides an overview of this history as well as relevant information on other operational, approved and proposed coal mines within the local area. This information is provided as background information given the strategic inter-relationship between these various ventures and this proposal.

- Boggabri Coal Project approved for development by IBC, the joint venture partner of WCM for the proposed East Boggabri Coal Mine.
- Whitehaven Coal Mine owned by WCM.
- Whitehaven CHPP owned by WCM.
- The former Gunnedah Colliery owned by WCM.
- Belmont Coal Project proposed by WCM.

WCM has secured long-term markets for the coal produced from the Gunnedah Basin and wishes to increase production to expand these markets principally in Japan and other Asian countries. The low ash and low sulfur content of the coal provides further potential for the coal to be used in blends with other coals eg. for use in steel mills, power utility, and general industrial markets. In particular, the low sulfur content of the coal is attractive for blending to enable higher sulfur coals to meet strict environmental standards.

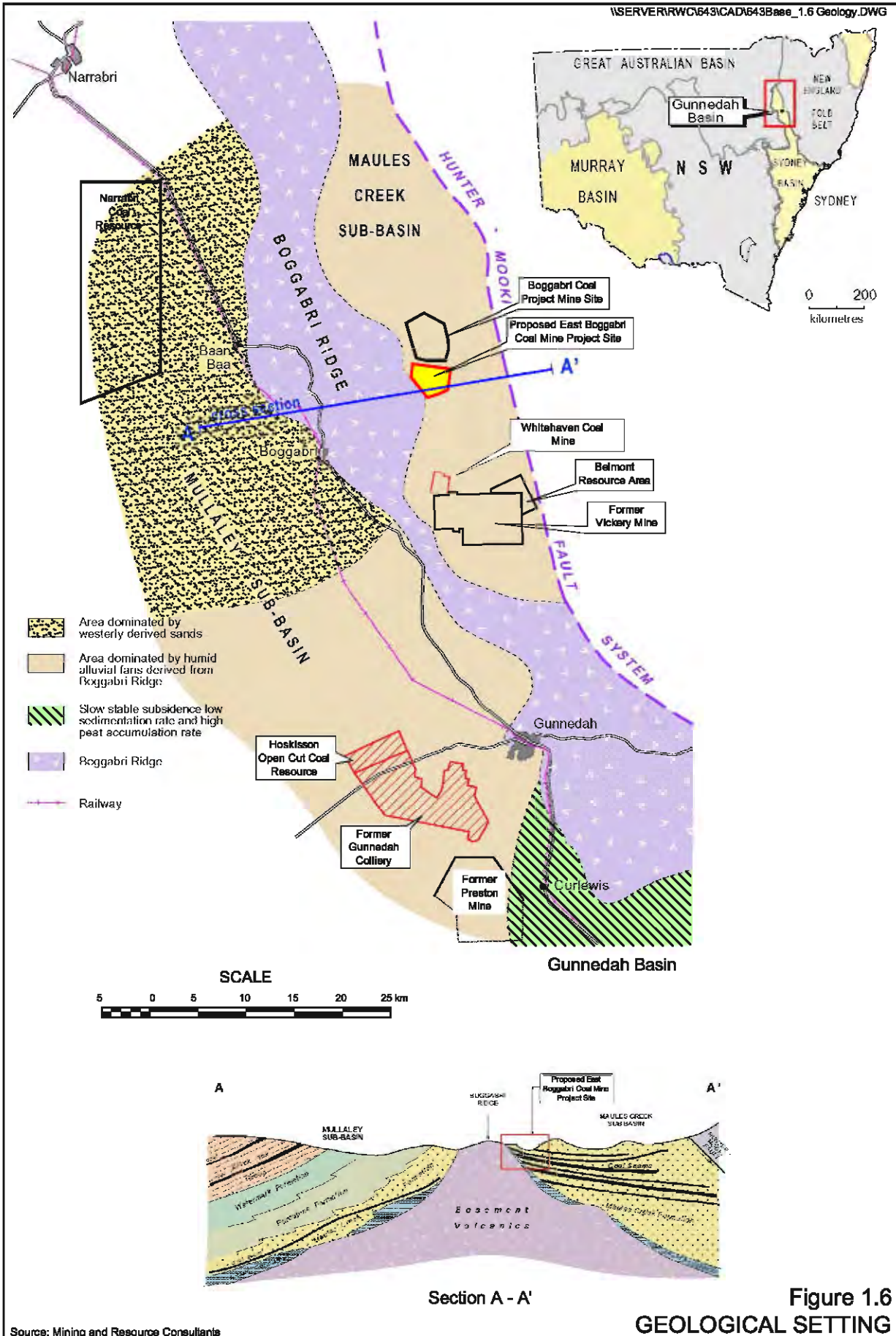
The development of the proposed East Boggabri Coal Mine in conjunction with the Whitehaven Coal Mine would represent an approximate doubling of production. Recognising the limited remaining life of the mine at the Whitehaven Coal Mine, the Belmont Coal Project has been targeted to replace production from the Whitehaven Coal Mine and, together with the proposed East Boggabri Coal Mine, would maintain WCM's ability to supply coal to export markets at between 2.5Mtpa and 3.0Mtpa for the next 8 to 10 years.

The Boggabri Coal Project remains separate to the strategic plans of WCM. However, an inter-relationship has been developed as a result of the joint venture between IBC and WCM with in-principle agreements reached to share environmental data and facilities (eg. meteorological station).

1.4.2 History of Coal Mining in the Gunnedah Area

The Gunnedah Basin covers an area of approximately 15 000km² extending from the Liverpool Ranges in the south to Moree in the north (see Section 3.2.1). The Boggabri Ridge, a north-northwest trending basement ridge, divides the basin into two sub-basins, the Mullaley Sub-basin to the west and Maules Creek Sub-basin to the east (see **Figure 1.6**).





Source: Mining and Resource Consultants



Coal was first discovered within the Gunnedah Basin in the late 1870s in the vicinity of Black Jack Mountain by farmers boring for water for agricultural purposes. In 1877, a well referred to as “Melville’s Well”, was sunk near Wandobah Road, about 11km south of Gunnedah in which 2m of “good steaming coal” was discovered in what is now known as the Melville Seam. After further prospecting, notification to commence mining on the southeastern slopes of Black Jack Mountain was given in 1895 and became what is now referred to as the Gunnedah Colliery No. 1 Entry.

Gunnedah Colliery Co. Ltd was registered on 13 February 1899 and supplied coal to power stations, railways, hospitals and abattoirs into the 1960s. Mining also commenced near Curlewis approximately 15km south of Gunnedah around 1890 with the opening of the Centenary Colliery, now known as the Preston Colliery, which also supplied coal to railways, local industry and power generation facilities.

The Gunnedah and Preston Collieries mined reserves in the Hoskisson and the Melville Seams for most of the 20th Century, producing high quality thermal and semi-soft coking coal for domestic and export markets. In the early 1990s, these collieries employed approximately 500 men and women, contributing significantly to the local economies. The Preston Colliery closed in 1998 and the Gunnedah Colliery in mid 2000 as economic coal reserves in both collieries were exhausted.

Large reserves of coal remain in the Mullaley Sub-basin, including the Narrabri coal resource area (EL 6243), owned by Narrabri Coal Pty Ltd (NCPL)), located approximately half-way between Boggabri and Narrabri (see **Figure 1.3**). NCPL is currently drilling within EL 6243 to determine the feasibility of developing an underground coal mine.

In the Maules Creek Sub-basin, significant coal deposits have been identified. The Vickery and Whitehaven Coal Mines have operated in an area to the southeast of Boggabri. To the northeast of Boggabri, two large scale multi-seam open cut mining developments have been approved, namely the Boggabri Coal Project (owned by IBC) and the Maules Creek Project (owned by Coal and Allied Operations Pty Ltd) (see **Figure 1.3**). IBC are currently proceeding to recommence the development of the Boggabri Coal Project (located directly north of the proposed East Boggabri Coal Mine) which, along with the Maules Creek Project, had previously been deferred awaiting improved market conditions. More detail on the Boggabri Coal Project is provided in Section 1.4.4 and **Appendix 3**. It is understood that the Maules Creek Project remains deferred.

The Vickery Coal Mine, operated by Novacoal Australia Pty Ltd on behalf of Rio Tinto (now Coal and Allied Operations Pty Ltd), was developed in the early 1990s. Though initially an underground mine, the majority of the >3Mt of coal extracted was recovered by open cut methods, with all coal being transported by truck to a rail loading facility 6km west of Gunnedah. The site of the Vickery rail loading facility is now owned by WCM and is the site of its coal handling and preparation plant and rail loading facility (see Section 1.4.7). The mine closed in May 1998 and those areas impacted by the mining activities were subject to an extensive and largely successful post-mining rehabilitation program.

The Whitehaven Coal Mine, which has operated since 2000, has maintained coal production from the Gunnedah section of the Mullaley Sub-basin, however, has a limited remaining reserve (see Section 1.4.5).



1.4.3 Background to the East Boggabri Coal Project

Following a review of drilling results from an extensive exploration program undertaken by BHP-Amax in the late 1970s / early 1980s (34 drill holes totalling approximately 6 000m, a geological model and database), WCM applied for an exploration licence over the area between the Whitehaven Coal Mine and the Boggabri Coal Project Area (see **Figure 1.3**). EL 5967 was granted on 24 July 2002 for a period of three years and WCM commenced geological investigations soon after. The investigations focussed on assessing suitable coal reserves upon which a new open cut and/or underground mine could be developed to initially supplement and potentially replace coal production from the Whitehaven Coal Mine. A resource report for EL 5967 was prepared in September 2002 (Hannah, 2002) and a conceptual open cut mine plan for the area developed in early 2003.

During 2003, WCM also engaged in negotiations with IBC regarding the development of the open cut resource within CL 368 to the north of EL 5967 and south of Leard State Forest. The negotiations culminated in early 2004 with the drafting of a memorandum of understanding for development and the assessment of an additional 16 drill holes within CL 368. Based on a combination of all geological investigations, it was determined that a coal resource that could support the development of an open cut coal mine existed within the Project Site component of EL 5967 / CL 368.

By early 2004, a number of preliminary specialist environmental assessments were commissioned to ascertain whether there were any environmental constraints that might prevent or significantly constrain the development of a coal mine in the area of investigation. Assessments of local flora, fauna and Aboriginal heritage identified several environmental issues for consideration, however, none were deemed prohibitive to the development of an open cut coal mine.

A second assessment of the coal resource within EL 5967 and selected sections of CL 368 was undertaken in September 2004 by SRK Australasia (SRK, 2004).

The Proponent then initiated the planning necessary to develop and operate a mine on the "Thuin", Nagero" and "Forest View" properties. Planning initially involved discussions with specialist mining engineers and contractors, various consultants, State and local government representatives and the local community. Following the initial phase, further planning was undertaken in conjunction with a feasibility study and the preparation of the EIS. An important component of the preparation of the EIS was the consultation with State and local government agencies and the local community. The results of this consultation are recorded in Section 1.6.2.

Once the planning identified the areas required for all mine components, a Project Site layout was developed (see Section 2.1.2).

1.4.4 Boggabri Coal Project

The approval to develop and operate an open cut coal mine, coal preparation facility and rail transportation facility (the "Boggabri Coal Project") was based on an EIS prepared in November 1987 (BHP-AGIP-Idemitsu Joint Venture, 1987). The project was approved on 22 August 1989 but development of the mine was deferred awaiting improved market conditions. In 1991, Idemitsu Boggabri Coal Pty Ltd (IBC) acquired the 100% ownership of the Boggabri Coal Project.



IBC has recently confirmed that the Boggabri Coal Project, now scheduled to re-commence in early 2006, would initially produce approximately 1.5 million tonnes per annum (Mtpa) saleable coal potentially increasing to a production level of approximately 5.0Mtpa. IBC is presently refining development plans including strategic and detailed mine planning and infrastructure options. The preparation of an Environmental Management Plan for the Boggabri Coal Project is underway and discussions with government agencies are continuing to finalise the various licences needed prior to commencement of operations.

Relevant information about the Boggabri Coal Project (described in the 1987 EIS), as it relates to the proposed East Boggabri Coal Mine, is presented in **Appendix 3**.

1.4.5 The Whitehaven Coal Mine

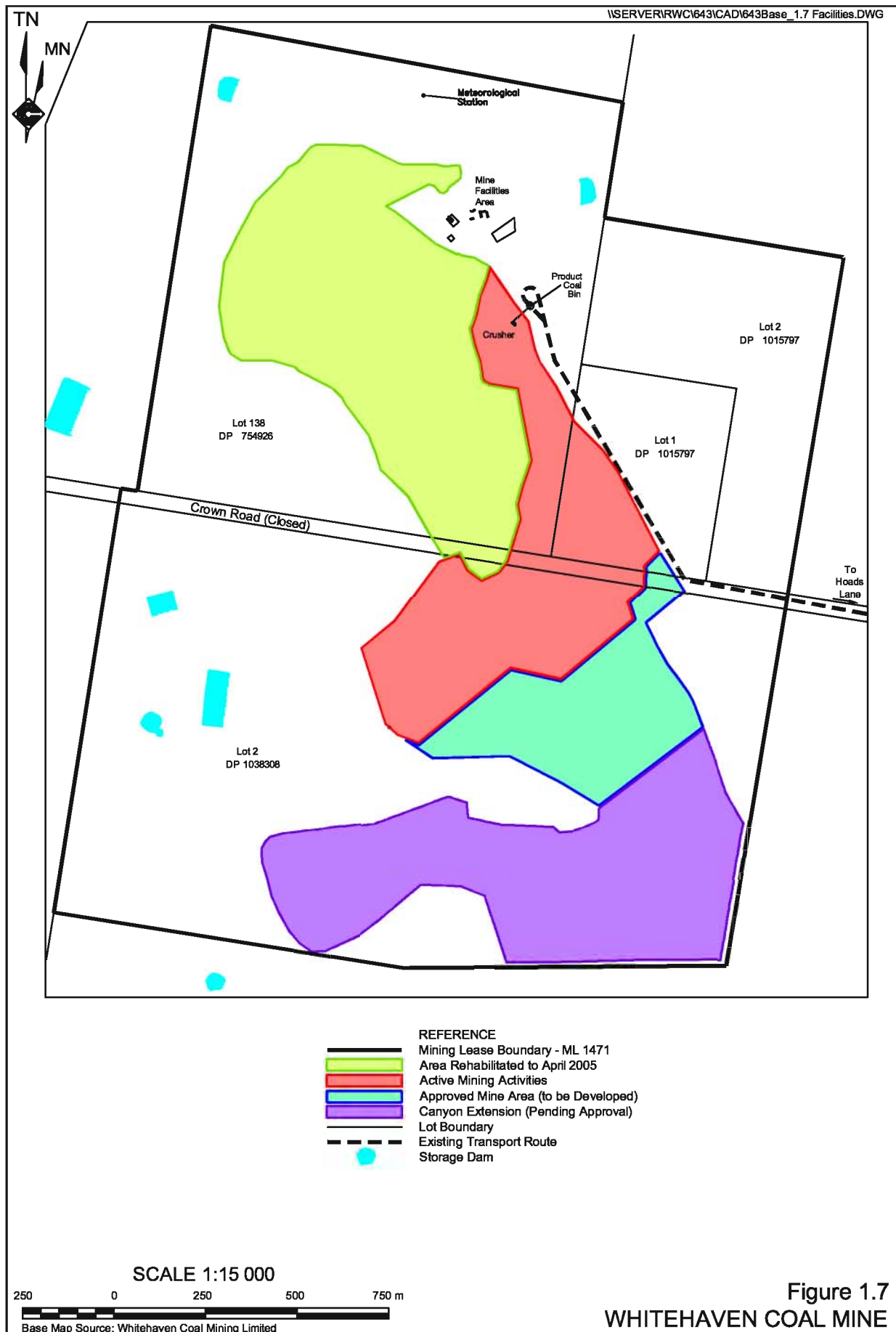
The Whitehaven Coal Mine, located approximately 30km northwest of Gunnedah and 16km east-southeast of Boggabri (see **Figure 1.3**), commenced operations in early 2000 and is currently the only operating mine in the Gunnedah area.

The Whitehaven Coal Mine was developed in two stages. The first stage, a trial mine which commenced production in February 2000, was developed to supplement and maintain continuity of supply to the Gunnedah Colliery's domestic customers, and enable an evaluation of quality and allow an assessment of market acceptability of the coal. The Development Consent (DA 182/99) for the trial mine was issued by Narrabri Shire Council on 19 November 1999 for a period of two years to allow achievement of the trial's objectives. Stage 2 mining was approved on 10 August 2000 by the then Minister for Urban Affairs and Planning (now Minister for Infrastructure and Planning) (DA 72-03-2000), increasing production to 750 000tpa. Stage 2 coal production commenced in September 2000 and has proceeded continuously since that time. As a consequence of greater than projected demand for coal from the mine, in February 2003 an application was lodged to modify DA 72-03-2000 to enable an increase in ROM coal production from 0.75Mtpa to 1.25Mtpa. The modification to the development consent was granted by the Minister for Infrastructure and Planning on 3 September 2003 (MOD-8-2-2003-1) permitting the production increase as well as the disposal of coarse reject from the Whitehaven CHPP to the Whitehaven Coal Mine.

A continuation of greater than expected demand for Whitehaven coal by both domestic and overseas markets, increased demand for coal in general and the upward movement in coal prices precipitated a re-evaluation of the remaining coal resources on WCM's "Whitehaven" and "Womboola" properties within ML 1471. As a result of this re-evaluation, an application to extend the area available for mining within ML 1471 was made in December, 2004 to DIPNR. Approval of the mine extension (the "Canyon Extension") would extend the life of the mine from the end of 2005 to mid 2008. Draft conditions of development consent have been prepared for this extension and recently provided to WCM for review.

Figure 1.7 presents the extent of development at the Whitehaven Coal Mine (as of 1 April 2005) and the proposed Canyon Extension.





1.4.6 The Belmont Coal Proposal

WCM has identified an open cut coal resource of approximately 14Mt centred on its “Belmont” property, approximately 10km east of the Whitehaven Coal Mine (see **Figure 1.3**) and is currently preparing an EIS with a view to lodgement of a development application within the next 12 months. The proposed Belmont Coal Mine would, based on current planning, have a projected production rate of up to 1.5Mtpa ROM coal.

The mine would replace the production from the Whitehaven Coal Mine and have a mine life of approximately 10 years.

1.4.7 Whitehaven Coal Handling and Preparation Plant and Rail Loading Facility

The Whitehaven CHPP is approved for size reduction, washing and stockpiling of coal (DA No. 0079/2002). The washed coal is stockpiled before being transferred to a rail loading facility incorporating a loading hopper, conveyor and train loading bin. At present, approximately 85% of coal from the Whitehaven Coal Mine is washed with the remainder stockpiled (unwashed) adjacent to the rail loading facility. The maximum approved throughput for the Whitehaven CHPP is 2.0Mtpa. The development consent for the plant was issued by Gunnedah Shire Council on 2 October 2002 and is valid until October 2023. The rail loading facility currently operates with a development consent which allows the loading and despatch of coal at approximately 2Mtpa. This consent was granted by the then Minister for Planning and Environment on 18 October 1986 and is due to expire on 14 June 2009.

Table 1.1 presents the proposed production of coal from the Whitehaven Coal Mine, proposed East Boggabri Coal Mine and proposed Belmont Coal Mine along with the relative quantities requiring washing. Notably, modification to the existing development consent for the Whitehaven CHPP would only be required after production from the proposed Belmont Coal Mine is brought on-line in 2008. WCM intends to maintain the quantity of coal despatched from the coal loading facility at <2Mtpa until the approved limit for that facility is increased, ie. before the end of 2006. WCM has commenced consultation with DIPNR regarding a proposed increase in throughput of both the Whitehaven CHPP and rail loading facility.

Table 1.1

Projected Coal Production – Whitehaven Coal Mining Limited

Mine / Proposed Mine	2005		2006		2007		2008		2009	
	WC*	UWC**	WC*	UWC**	WC*	UWC**	WC*	UWC**	WC*	UWC**
Whitehaven [®]	935 000	165 000	935 000	165 000	935 000	165 000	470 000	90 000	-	-
East Boggabri [#]	-	-	350 000	650 000	560 000	1 040 000	560 000	1 040 000	560 000	1 040 000
Belmont [#]	-	-	-	-	-	-	560 000	-	1 500 000	-
Sub-total	935 000	165 000	1 285 000	815 000	1 495 000	1 205 000	1 590 000	1 130 000	2 060 000	1 040 000
TOTAL	1 100 000		2 100 000		2 700 000		2 720 000		3 100 000	

* WC – Washed Coal at Whitehaven CHPP
** UWC – Unwashed Coal – delivered directly to Whitehaven Coal Loading Facility
[®] Subject to receipt of approval for the Canyon Extension (see Figure 1.7)
[#] Subject to receipt of various approvals



1.4.8 Gunnedah Colliery

The Gunnedah Colliery closed in mid 2000, however, the coal preparation plant on site continued operating until May 2003 washing coal from the Whitehaven Coal Mine until the Whitehaven CHPP commenced operations. WCM currently disposes the fine reject material produced at the Whitehaven CHPP at the Gunnedah Colliery in accordance with DA 72-03-2000 and DA 72-03-2000 Mod 1. The North Cut / Melville Underground void at the Gunnedah Colliery is approved under Section 126 of the *Coal Mines Regulations Act 1982* for this activity. The other activity currently undertaken at the Gunnedah Colliery is the progressive rehabilitation of previously disturbed areas across the colliery. All rehabilitation activities are being carried out in accordance with an approved mine closure plan.

Fine reject material transportation from the Whitehaven CHPP to the Gunnedah Colliery is approved under DA 0079/2002 and uses the following public roads.

- Approximately 0.6km on Torrens Road to Quia Road.
- 1.6km on Quia Road to the intersection with Black Jack Road.
- approximately 8km on Black Jack Road.

DA 0079/2002 was issued by Gunnedah Shire Council and is valid to 16 May 2023.

1.5 PLANNING ISSUES

1.5.1 State Planning Issues

A total of four State Environmental Planning Policies are relevant to the assessment of the proposed East Boggabri Coal Mine.

State Environmental Planning Policy No. 11 (SEPP 11) – Traffic Generating Developments

Clause 7 of SEPP 11 requires that certain development applications be referred to the NSW Roads and Traffic Authority (RTA). Mining is listed under paragraph (m), Schedule 1 of this policy, and hence this proposal must be referred to the RTA.

State Environmental Planning Policy No. 33 (SEPP 33) – Hazardous and Offensive Development

The aims and objectives of this planning instrument are:

- “(a) to amend the definitions of hazardous and offensive industries where used in environmental planning instruments;
- (b) to render ineffective a provision of any environmental planning instrument that prohibits development for the purpose of a storage facility on the grounds that the facility is hazardous or offensive if it is not a hazardous or offensive storage establishment as defined in this Policy;



- (c) to require development consent for hazardous or offensive development proposed to be carried out in the Western Division;
- (d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account;
- (e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact; and
- (f) to require the advertising of applications to carry out any such development.”

Hazardous and offensive industries and potentially hazardous and offensive industries are defined as follows.

“Hazardous Industry - means a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would pose a significant risk in relation to the locality:

- to human health, life or property, or
- to the biophysical environment.”

“Potentially Hazardous Industry - means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

- to human health, life or property, or
- to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment.”

“Offensive Industry - means a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would emit a polluting discharge (including, for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land in the locality.”



“Potentially Offensive - Industry - means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.”

In accordance with the risk screening method contained within the document entitled *Applying SEPP 33 2nd edition*, (DUAP, 1997), all hazardous substances and dangerous goods to be held or used on the Project Site are to be identified and classified, with an assessment undertaken as to whether the proposed development represents a hazardous or offensive, or potentially hazardous or offensive, development. The hazardous substances and dangerous goods to be used / stored on the Project Site would be restricted to diesel fuel and the components of the ANFO explosives to be used for blasting as part of the mining activities.

State Environmental Planning Policy No. 34 (SEPP 34) – Major Employment Generating Industrial Development

Coal mining is classified as development designated as a major employment generating industrial development under Clause 7 of the policy. The Minister for Infrastructure and Planning is therefore the consent authority and would ensure the aims of SEPP 34 are met. These include:

- “to promote and co-ordinate the orderly and economic use and development of land and the economic welfare of the State;
- to facilitate certain types of major employment-generating industrial development of State significance;
- to facilitate the carrying out of labour intensive rural industrial development of State significance;
- to achieve appropriate planning controls in respect of such development; and
- to provide for public participation and involvement in the assessment of applications for consent to carry out such development.”

The local Councils (Narrabri Shire Council and Gunnedah Shire Council) are well aware of the proposal through the regular consultation program initiated by the Proponent. DIPNR would forward the development application and accompanying EIS to both Councils for comment.

State Environmental Planning Policy No. 44 (SEPP 44) – Koala Habitat Protection

The Narrabri Local Government Area (LGA) is identified in Schedule 1 of this policy as an area that could provide habitat for Koalas. The policy requires an investigation be carried out to determine if core or potential Koala habitat is present on the areas of the Project Site likely to



be disturbed. Core Koala habitat comprises land with a resident population of Koalas whereas potential Koala habitat comprises land with native vegetation with known Koala feed trees constituting at least 15% of the total number of trees present on a site.

1.5.2 Regional Planning Issues

Draft Orana Regional Environmental Plan (REP) No 1 – Siding Spring

The Project Site lies within a new region, called the Siding Spring Observatory Dark Skies Region, declared by the Minister for Infrastructure and Planning to better protect the observing conditions at the Siding Spring Observatory. The new region includes all local government areas falling within 200km of the observatory. While the Project Site is approximately 150km from Siding Spring and lies within 200km of the Observatory, no consultation or concurrence is required with the Observatory Director. Under Section 8 of the draft REP, consultation or concurrence is only required for locations within 100km of the observatory.

1.5.3 Local Planning Issues

The areas to be developed within the Project Site and the northern section of the proposed transport route lie within the Narrabri Shire with planning control covered by the Narrabri Local Environmental Plan 1992. It is noted that the development of the proposed East Boggabri Coal Mine would not involve any new activities within the Gunnedah Shire. Only transportation of coal is planned on roads within Gunnedah Shire, albeit at a rate greater than the level currently approved for the Whitehaven Coal Mine.

Narrabri Local Environmental Plan (LEP) 1992

The proposed East Boggabri Coal Mine would meet the relevant general aims of this plan which are “to encourage the proper management, development and conservation of natural and man-made resources within the Shire of Narrabri by protecting, enhancing or conserving:

- (i) timber, mineral, soil, water and other natural resources;
- (ii) areas of ecological significance;
- (iii) areas of high scenic or recreational value; and
- (iv) the environmental heritage of the Shire of Narrabri.”

The Project Site and 14km of the proposed transport route are located entirely on land zoned 1(a) (General Rural) under the Narrabri LEP 1992. The objectives of this zone are to promote the proper management and utilisation of resources by:

- “(a) protecting, enhancing and conserving;
 - (i) agricultural land in a manner which sustains its efficient and effective agricultural production potential;
 - (ii) soil stability by controlling and locating development in accordance with soil capability;



- (iii) forests of existing and potential commercial value for timber production;
 - (iv) valuable deposits of minerals, coal, petroleum and extractive materials by controlling the location of development for other purposes in order to ensure the efficient extraction of those deposits;
 - (v) trees and other vegetation in environmentally sensitive areas where the conservation of the vegetation is significant to scenic amenity or natural wildlife habitat or is likely to control land degradation;
 - (vi) water resources for use in the public interest;
 - (vii) areas of significance for nature conservation, including areas with rare plants, wetlands and significant habitats;
 - (viii) places and buildings of archaeological or heritage significance, including the protection of Aboriginal relics and places;
- (b) preventing the unjustified development of agricultural land for purposes other than agriculture;
 - (c) preventing residential development of prime crop and pasture land, except where it is ancillary to agriculture or another use permissible in the zone;
 - (d) facilitating farm adjustments;
 - (e) ensuring that any allotment created for an intensive agricultural pursuit is potentially capable of sustaining a range of such purposes or other agricultural purposes;
 - (f) minimising the cost to the community of fragmented and isolated development of rural land; and
 - (g) providing, extending and maintaining public amenities and services.”

The proposal would meet the relevant objectives for this zone and is permissible within the zone with development consent.

1.6 IDENTIFICATION AND PRIORITISATION OF ISSUES

1.6.1 Introduction

Identification of issues relevant to the development and operation of the proposed East Boggabri Coal Mine involved a combination of consultation and background investigations and research. This included:

- consultation with State and local government agencies;
- consultation with the local community;
- preliminary environmental studies; and
- reference to relevant NSW government policies and guidelines.



Issues identified through this process were then classified according to their impact on the regional, local, or Project Site biophysical and/or social environments. Priority was given to those aspects with a higher potential for impact or a high frequency of identification.

1.6.2 Consultation

1.6.2.1 Consultation with the Local Community

The land uses surrounding the Project Site and proposed transport route are generally rural in nature with the residents comprising the owners, or managers of agricultural properties, and their families. The Proponent has met with a number of these property owners or residents on at least one occasion to inform them about the proposal, explain the development application process and identify the issues of concern to these landowners or land users. In total, 12 landowners or land users of 14 properties were approached covering land both around the Project Site and adjacent to the northern section of the proposed transport route.

The following issues were noted as being of concern to these landowners / land users.

1. R. & R. McGregor, owners of the "Tarrawonga" property, were concerned over the possible impacts to visual amenity.
2. D. Wellwood, owner of the "Ambardo" property, raised concerns regarding truck noise and the potential for the proposed transport route to impede natural flood flows.
3. P. Laird, owner of the "Templemore" property, raised concerns regarding noise and dust generation as well as the potential for the proposed transport route to impede natural flood flows. The possible detrimental impacts on land values and lifestyle were also raised.
4. S. & C. Bull, owners of the "Pine Grove" property, were also concerned over the truck noise generated along the proposed transport route.
5. G. & S. Johnson, owners of the "Matong" property, expressed concern of the impact of the proposal on water bores on their property located on Bollol Creek.

All other landowners / land users in the vicinity of the Project Site and northern section of the proposed transport route, including owners / residents of "Tarrawonga", "Northam", "Kyalla", "Merriown", "Flixton", "Bollol Creek Station", "Jeralong", "Jeralong North" and "Blair Athol School House" either expressed no concern or were supportive of the proposal and simply wished to be kept informed.

WCM has consulted with the landowners and residents adjacent to Hoads Lane and Blue Vale Road, ie. on those properties that are located adjacent to the section of road between the Whitehaven Coal Mine and Whitehaven CHPP. Consultation was in the form of a letterbox drop informing the landowners and residents of WCM's intention to increase coal transportation along the section of road as part of the proposed East Boggabri Coal Mine and seeking feedback about the proposal. No response had been received by 17 May 2005.



An information evening was held in Boggabri on 5 April 2005 which was attended by representatives of the Proponent including Mr Keith Ross, Managing Director, and Mr Chris Burgess, Area Manager, both of WCM and Mr Zen Yamamoto, Development Officer, and Mr Trevor Smith, Development Manager, both of IBC. During the evening, a description of the proposal and an outline of the development application process was provided to approximately 160 local residents, community group representatives and other interested parties. Those attending were invited to comment on the proposal with all issues of concern addressed either during the evening or within the EIS.

The responses of those attending were predominantly positive with support for the potential employment creation re-iterated throughout the evening. Over 200 job application forms have been distributed since 5 April 2005. One attendee expressed concern over the use of the Manilla Road for coal transport, with another concern raised over the ability of Boggabri, and to a lesser extent Gunnedah, to house the possible influx of new residents to these towns.

1.6.2.2 Consultation with Government Agencies

The following State and local government agencies were consulted by the Proponent, R.W. Corkery & Co. Pty. Limited and/or the specialist consultants prior to and/or during the preparation of the EIS.

- Department of Infrastructure, Planning and Natural Resources (Sydney)*.
- Department of Infrastructure, Planning and Natural Resources (Tamworth)*.
- Narrabri Shire Council (Narrabri)*.
- Gunnedah Shire Council (Gunnedah)*.
- Department of Primary Industries (Mineral Resources) (Singleton)*.
- Department of Environment and Conservation (Environment Protection Authority), (Armidale)*.
- Roads and Traffic Authority (Grafton).
- Department of Environment and Conservation (formerly NSW National Parks and Wildlife Service), (Dubbo)*.
- Department of Primary Industries (Agriculture) (Gunnedah)*.
- Department of Lands (Gunnedah).

One or more representatives of those agencies identified with an asterisk (*) attended a Planning Focus Meeting held on 10 November 2005 in Gunnedah convened and co-ordinated by DIPNR. The Planning Focus Meeting provided each agency with an opportunity to gain an understanding of the proposal and to inspect the Project Site prior to formally providing their written requirements for the EIS. The issues raised by the various agencies during the Planning Focus Meeting are presented in **Table 1.2**. All agencies subsequently forwarded their written requirements to DIPNR which in turn forwarded these to R.W. Corkery & Co. Pty Limited as the Director-General's Requirements. A tabulated summary of the Director-General's Requirements is included in **Appendix 2**, together with a reference to where each requirement is addressed in this document.



Table 1.2

Requirements of Government Agencies Attending the Planning Focus Meeting

Page 1 of 3

Issue	Requirements	Section in EIS
Department of Infrastructure, Planning and Natural Resources (Sydney)		
Community Consultation	<ul style="list-style-type: none"> Detail consultation undertaken. Consider community forums/workshops. 	1.6.2 1.6.2.1
Socio-economic Impacts	<ul style="list-style-type: none"> Comprehensive assessment of impact on economy/housing/ employment from development. Comprehensive assessment of economic benefits required, including flow-on affects. 	4.12, 5.1.3, 5.1.4 5.1.3
Cumulative Impacts	<ul style="list-style-type: none"> Identify and discuss cumulative impacts. 	Section 4
Department of Infrastructure, Planning and Natural Resources (Barwon Region)		
Groundwater	<ul style="list-style-type: none"> Describe existing environment. 	4.2.2
	<ul style="list-style-type: none"> Identify potential changes. 	4.2.3, 4.2.5
	<ul style="list-style-type: none"> Assess potential contamination impacts. 	4.2.5.7
	<ul style="list-style-type: none"> Address cumulative impact associated with up to three mines operating in close proximity. 	4.2.5.9
	<ul style="list-style-type: none"> Address water availability and access to local landholders. 	4.2.2.6, 4.2.5.5
	<ul style="list-style-type: none"> Address requirement for water licences (including aquifer interference – Water Management Act). 	2.1.5
	<ul style="list-style-type: none"> Identify number of bores and associated licences required. 	2.1.5
Surface Water	<ul style="list-style-type: none"> Address impacts and proposed harvesting and requirements. 	4.1.4.2, 4.1.4.3, 4.1.7.3
Flora/Fauna	<ul style="list-style-type: none"> 8-Part tests and assessment against EPBC Act required. 	4.4.5.3, 4.4.5.2 4.5.7.1
Soil	<ul style="list-style-type: none"> Describe existing soil units. 	4.3.2.2, 4.3.2.3
	<ul style="list-style-type: none"> Address impacts. 	4.3.6
	<ul style="list-style-type: none"> Address possible contamination and mitigation measures. 	4.3.4, 4.3.5
	<ul style="list-style-type: none"> Include an Erosion and Sediment Control Plan. 	4.3.4, 4.1.4.3.3
	<ul style="list-style-type: none"> Address EMP. 	1.8.2
Soil	<ul style="list-style-type: none"> Include Rehabilitation Management Plan. 	2.13
	<ul style="list-style-type: none"> Perform salinity risk assessment. 	4.3.6.1
Planning	<ul style="list-style-type: none"> Identify impacts on local landowners: <ul style="list-style-type: none"> include lighting. 	4.14.5, 4.11.4.1
	<ul style="list-style-type: none"> Undertake community consultation: <ul style="list-style-type: none"> include regional centre workshops (Gunnedah/ Boggabri/Narrabri). 	1.6.2.1
	<ul style="list-style-type: none"> Assess Cultural heritage. 	4.6, 4.7
Socio-economic	<ul style="list-style-type: none"> Include possible flow-on benefits. 	4.12
Infrastructure	<ul style="list-style-type: none"> Address maintenance of local roads. 	4.13.3.3, 4.13.4
	<ul style="list-style-type: none"> Include assessment of bushfire hazard (given proximity to Leard State Forest). 	3.5



Table 1.2 (Cont'd)

Requirements of Government Agencies Attending the Planning Focus Meeting

Page 2 of 3

Issue	Requirements	Section in EIS
GUNNEDAH SHIRE COUNCIL		
Transport Corridor	• Assessment of remaining pavement life (Blue Vale Road) and anticipated upgrade requirements.	4.13.4
	• Include assessment of cumulative impact on road network (also allowing for proposed Belmont Coal Mine).	4.13.4.2
	• Assess existing intersection of Blue Vale Road / Kamilaroi Highway.	4.13.4
Socio-economic	• Address impacts associated with employment: – housing (where will people live?) – services; – infrastructure.	5.1.4, 4.12
	• Clarify separation of application/consent for mine and CHPP.	1.1, 1.4.7
Surface Water	• Identify discharge points.	Figure 4.4
	• Assess potential salinity issues.	4.1.3.5, 4.1.7.4, 4.1.7.7, 4.1.4.3.7
Groundwater	• Address existing and potential impacts.	4.2.5
Waste Management	• Identify waste streams.	2.11.1
	• Address disposal/management of sewage: – eg. upgrade to existing septic system.	2.7.5, 2.11.2.4
	• Address chemical stability of water and waste material.	2.11.2, 2.11.3, 4.2.2.5, 4.1.2.5,
	• Address storage of chemicals and hazardous materials.	2.7.6, 2.7.7, 2.11.2.2
Cumulative Impacts	• Address all potential cumulative impacts with Whitehaven and Boggabri Coal Project.	Section 4
Alternative Assessment	• Address alternative void design and overburden emplacements.	2.14.2.1
NARRABRI SHIRE COUNCIL		
	• Address community consultation.	1.6.2.1
	• Assess transport route options.	2.14.3
DEPARTMENT OF PRIMARY INDUSTRIES (MINERAL RESOURCES)		
	• Address community consultation.	1.6.2.1
	• Assess sediment and erosion control.	4.3.4, 4.1.4.3.3
	• Describe/assess final landform and impacts on drainage.	2.13.3, 2.13.6.3, 4.1.7
	• Address the rehabilitation of the final void (include water quality).	2.13
	• Justify slopes of the northern and southern emplacements.	2.13
	• Address impacts of lighting/include monitoring.	4.11.4.1
DEPARTMENT OF PRIMARY INDUSTRIES (AGRICULTURE)		
Land Use	• Identify agricultural land suitability.	4.3.3
	• Assess impacts associated with noise, dust, groundwater, blasting, etc. on agricultural activities.	4.14.3.2, Section 4
	• Address continuing agriculture on the Project Site.	4.14.3.1
Rehabilitation	• Describe and justify proposed rehabilitation.	2.13
	• Include a salinity balance for the final void and assessment of impact.	4.2.5.8
	• Standard requirements for Resource Statement.	2.2



Table 1.2 (Cont'd)

Requirements of Government Agencies Attending the Planning Focus Meeting

Page 3 of 3

Issue	Requirements	Section in EIS
DEPARTMENT OF ENVIRONMENT AND CONSERVATION (EPA)		
Licensing	• Address implications to existing licence of CHPP.	1.4.7
	• Address implications to current Whitehaven licence conditions.	1.4.5
Noise	• Assess against INP.	4.8.3, 4.8.5
	• Address blasting noise/vibration.	4.8.5, 4.9.5
	• Consider sleep disturbance (especially with relation to haul route):	4.8.3.4, 4.8.5.3.3
	• Consider cumulative impacts with Whitehaven.	4.8.5.4.3
Air Quality	• Justify background / ambient data.	4.10.2
	• Address cumulative impacts.	4.10.6.2
	• Include HVAS monitoring.	4.10
DEPARTMENT OF ENVIRONMENT AND CONSERVATION (NPWS)		
Flora/Fauna (General)	• Recognise development in the Bioregion has heavily impacted upon the levels of native vegetation with few remnants remaining.	Noted
	• Leard State Forest is a highly significant remnant within the Bioregion [consider reviewing Brigalow Belt Study].	Noted
	• Address the cumulative impact of East Boggabri and Boggabri projects on Leard State Forest.	4.4.5.4
Flora/Fauna (Threatened Species)	• 8-part test for all threatened species, populations and endangered ecological communities.	4.4.5.2, 4.4.5.3
	• Clearly define each community against scientific committee definitions.	4.4.2.3
Offset Management	• Address offsets in light of time lag between disturbance and revegetation.	2.13.6.7
	• Use of local endemic species and propagation material.	2.13.6.2
Aboriginal Heritage	• Requirement for Section 90 Permit.	2.1.5

1.6.3 Preliminary Environmental Studies

Following conceptual planning for the proposed East Boggabri Coal Mine, environmental investigations were commissioned to broadly investigate the flora, fauna and cultural heritage of the area being considered as the Project Site for the proposed mine and identify any issues which might ultimately prohibit the development of a coal mine.

Flora

Mr Geoff Cunningham, Principal of Geoff Cunningham Natural Resource Consultants Pty Ltd, surveyed selected areas of EL 5967 and CL 368 during spring and summer 2003 and autumn 2004 and identified eight separate vegetation communities. Of the eight communities, only the White Box Blakely's Red Gum Cypress Pine Community, which has been identified as a variant of the White Box Yellow Box Blakely's Red Gum Woodland Community, was identified as threatened.



The preliminary layout of the proposed East Boggabri Coal Mine was subsequently revised to minimise disturbance to this community with the remaining disturbance not considered a constraint prohibitive to the future development of a mine.

Fauna

Investigations by Dr Leong Lim, Principal of Countrywide Ecological Service, within and surrounding the Project Site in 2003 and 2004, identified two threatened microbat species and five threatened bird species, namely:

- Yellow-bellied Sheathtail Bat;
- Greater Long-eared Bat;
- Grey-crowned Babbler;
- Glossy Black Cockatoo.
- Turquoise Parrot;
- Grey Falcon;
- Black Hooded Robin; and

Three areas of fauna habitat where disturbance should be minimised were also identified, of which, two were associated with the threatened White Box Blakely's Red Gum Cypress Pine community and the third with the Belah Community. As each area was unlikely to be disturbed by the proposed mine or associated activities, impacts on fauna were not considered prohibitive to mine development.

Cultural Heritage

A number of Aboriginal heritage sites were identified as part of preliminary investigations undertaken by Mr John Appleton of Archaeological Surveys & Reports Pty Ltd. Although the mine design avoids disturbance to scarred trees identified, avoidance of two isolated artefact scatters would be impractical. Representatives of the Red Chief Local Aboriginal Land Council have indicated they would support an application for a Heritage Impact Permit to collect the isolated artefacts and therefore, with appropriate management, cultural heritage was not considered prohibitive to mine development.

These preliminary investigations subsequently formed the basis for more detailed assessments and reports on the flora, fauna and cultural heritage of the Project Site.

1.6.4 NSW Government and Industry Policies and Guidelines

The following policies and guidelines have been obtained and referenced in the design of the proposed development.

- Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes (DEC, 1999).
- Managing Urban Stormwater: Soils and Construction (DoH, 1998).
- The NSW State Groundwater Policy Framework Document (DLWC, 1997).
- The NSW State Groundwater Dependent Ecosystems Policy (DLWC, 2002).
- ANZECC Fresh and Marine Water Quality Guidelines (ANZECC, 2000).
- Applying SEPP 33 (DUAP, 1997).



1.6.5 Prioritisation of Issues

The issues identified in the consultation phase and as a consequence of the investigations undertaken during the preparation of the EIS have been categorised as:

- regional issues, ie. those with environmental or social effects beyond the landholdings surrounding the Project Site and proposed transport route;
- local issues, ie. those issues with effects restricted to the biophysical or social environment immediately surrounding the Project Site and proposed transport route; or
- site specific issues, ie. those issues with effects restricted to the biophysical environment on the Project Site or within the proposed transport route.

The main issues raised have been ranked in the order of priority determined following the entire consultation program. It is recognised that for some members of the surrounding community, a different priority may exist for some of these issues. The main issues and all other issues raised by the local community (see Section 1.6.2.1) and the State and local government agencies (see Section 1.6.2.2 and **Appendix 2**), as well as those identified through preliminary environmental assessments and a review of relevant NSW government policies and guidelines, have been addressed in the EIS. The relevant section in the EIS where each main issue is addressed is listed following each issue.

Regional Issues

Priority regional issues identified included:

- (i) the impact(s) of increasing coal mine developments within the Gunnedah Basin on existing land uses and infrastructure (Sections 4.12 & 4.14);
- (ii) the impact on regionally significant remnants of native vegetation (Section 4.4);
- (iii) the effect of the proposal on the quantity and quality of water entering the Namoi River Catchment (Section 4.1); and
- (iv) the effect the proposal would have on the availability and use of groundwater resources within the Narrabri Shire (Section 4.2).

Local Issues

A number of common local issues were raised during consultation with the local community and the State and local government agencies. Priority local issues identified included:

- (i) availability and use of water (Section 4.2.2.6);
- (ii) changes to the flow of surface water, particularly flood flows to the Namoi River (Section 4.1.7);
- (iii) the generation of noise, particularly truck noise, and dust (Sections 4.8.5, and 4.10.6);
- (iv) impacts on the land use of surrounding properties the future use of those properties associated with the Project Site (Section 4.14.5);



- (v) impacts on locally threatened vegetation communities, habitat and species (Sections 4.4.5 and 4.5.7);
- (vi) the social and economic impacts (including benefits) of the proposed development on surrounding landholders/residents, the affected LGAs and NSW in general (Section 4.12); and
- (vii) the impact on the existing visual amenity (Section 4.11.4).

Project Site and Proposed Transport Route Issues

Based on the results of the preliminary assessments of flora, fauna and cultural heritage within and surrounding the Project Site, as well as the outcomes of the consultation process, the following on-site issues were identified as of highest priority.

- (i) The Project Site contains a variant of the endangered White Box Yellow Box Blakely's Red Gum Woodland Community (*Threatened Species Conservation Act 1995* (TSC Act)) as well as several areas of habitat important for identified threatened fauna species (Section 4.4.5).
- (ii) The future value of the land on the Project Site for agricultural activities or nature conservation (Section 4.14.5).
- (iii) Management of Aboriginal heritage sites present on the Project Site and within proposed transport route (Sections 4.6.5 and 4.6.6).

All other Project Site-related issues are addressed to the level considered appropriate throughout the EIS.

1.7 SUSTAINABLE DEVELOPMENT PRINCIPLES

1.7.1 Introduction

The Proponent is committed to the development and operation of the proposal in a manner that reflects the integration of the principles of sustainable development. This sub-section provides a background to the principles of sustainable development and briefly introduces how the Proponent has addressed these principles in the design of the proposed East Boggabri Coal Mine.

1.7.2 Background

In 1987, sustainable development was first defined as “development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report). Since that time, the concept of sustainable development has evolved and developed to reflect the outcomes from various global conferences and contributions from various governments, corporations and institutions. In 1992, the Agenda 21 Agreement arising from the Rio Earth Summit classified sustainable development in the following broad themes.

- Quality of life.
- Efficient use of natural resources.



- Protection of global commons.
- Management of human settlements.
- Waste management.

“Sustainable economic growth” was subsequently added as a sixth theme in 1997 by the World Bank.

In 1992, the Council of Australian Governments adopted the term “ecologically sustainable development” (ESD) to reflect the growing emphasis upon natural ecologies and ecosystems. The National Strategy for Ecologically Sustainable Development (NSES) defined ESD as development that aims to “*meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations*”.

The ESD principles evolved further in 1999 when the Australian government passed the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This Act reflects the various ecologically sustainable development principles of ESD through its objectives, namely:

- “to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- to promote the conservation of biodiversity;
- to promote a co-operative approach to the protection and management of the environment involving governments, the community, landholders and indigenous peoples;
- to assist in the co-operative implementation of Australia’s international environmental responsibilities;
- to recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia’s biodiversity; and
- to promote the use of indigenous peoples’ knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge.”

1.7.3 Approach to Sustainable Development Principles

1.7.3.1 Introduction

ESD as defined by the Australian Government involves the application of four principles when determining an appropriate balance between economic, environmental and social impacts of a proposal.



1.7.3.2 The Precautionary Principle

This principle states that “where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation”.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
- (ii) an assessment of the risk-weighted consequences of various options.

To satisfy this principle, emphasis needs to be placed upon anticipation and prevention of environmental damage, rather than reacting to it, when designing a new development or extensions to an existing development.

1.7.3.3 Social Equity: Intra- and Inter-Generational Equity

This principle is based on social equity in the decisions taken today for the current generation (intra-generational) and future generations (inter-generational).

Intra-generational equity requires that the economic and social benefits of a proposal be shared equitably among all members of the community. This involves respect for groups and individuals throughout the community.

Inter-generational equity requires that “the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations”. In other words, the present generation should pass onto the next generation an environment that does not limit the ability of future generations to attain a quality of life at least equal to that experienced by the current generation.

1.7.3.4 Conservation of Biological Diversity and Ecological Integrity

Biological diversity or biodiversity describes life forms and is usually considered at three levels, namely: genetic diversity, species diversity and ecosystem diversity. Ecological integrity describes the condition of an ecosystem that is relatively unaltered from its natural state. The maintenance of these ecological processes and systems are essential for elements of life such as food and shelter, however, they should not be exploited to the detriment of other elements of the biophysical environment.

1.7.3.5 Promotion of Improved Valuation, Pricing and Incentive Mechanisms

This principle involves consideration of the proposal and the surrounding environmental resources (ie. air, water, land and living things) which may be affected. The EPBC Act added a fifth principle which, whilst embodied within the above four principles, reflected the evolution in sustainable development over the past 10 years. This fifth principle nominated that “Decision making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations”.



1.7.4 Sustainable Development in Legislation

In 1986, the NSW government incorporated the above four principles within the *Environmental Planning and Assessment Act 1979* as matters for proponents to address in Environmental Impact Statements for new and amended projects.

The Department of Infrastructure, Planning and Natural Resources (formally PlanningNSW) in their draft guideline on “Sustainability in EIA”, identified that there is now a “broader concept of sustainability with a stronger focus on the integration of environmental, social and economic goals throughout society and economic development activity”.

1.7.5 Ecologically Sustainable Use of Natural Resources

Article 10 of the World Charter for Nature adopted by the United Nations in 1982 stated, “non-renewable resources which are consumed as they are used shall be exploited with restraint taking into account their abundance and rational possibilities of converting them for consumption, and the compatibility of their exploitation with the functioning of natural systems”.

The concept of not wasting natural resources recognised in 1982 has continued throughout many sustainability themes, particularly those relating to social equity.

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* defines ecological sustainable use of natural resources as:

“Use of natural resources within their capacity to sustain natural processes while maintaining the life support systems of nature and ensuring that the benefit of the use to the present generation does not diminish the potential to meet the needs of future generations.”

1.7.6 The Proponent’s Approach to Sustainable Development Principles

The decisions made during the preparation of the EIS and the design process for the proposed East Boggabri Coal Mine included regular reviews of the proposal for consistency with the principles of sustainable development, with particular emphasis during the following phases.

- The identification of project objectives.
- The design of the components of the proposal.
- The integration of design and operational safeguards.
- Planning for the progressive rehabilitation of the Project Site and its subsequent land use.
- The integrated use of the final landform for agriculture and nature conservation.

In order to ensure a proposal which embodies the principles of sustainable development, strong emphasis was placed upon identifying all relevant issues and understanding the features of the existing environment prior to finalising the design of the proposal and the necessary mitigation measures. The assessment also considered both short- and long-term impacts of the proposal.

Section 5.2 presents an assessment of the proposal against the principles of an ecologically sustainable development.



1.8 ENVIRONMENTAL MANAGEMENT AND DOCUMENTATION

1.8.1 Environmental Management

On-going environmental management at the proposed East Boggabri Coal Mine, including the Proponent's performance with respect to this document and the implementation of any lease, licence or development consent conditions, would be the responsibility of the Proponent's Area Manager. The Mine Manager would be responsible for day-to-day on-site supervision including the integrated implementation of all environmental safeguards identified in this document and additional documentation developed throughout the life of the mine. Assistance would be provided by specialist consultants as and when required.

The Proponent is committed to undertaking all component activities in a responsible and proactive manner which:

- (i) enables the co-existence of the various land uses in the area;
- (ii) is environmentally and socially responsible; and
- (iii) minimises any real or perceived impacts on other members of the community. Central to this approach would be regular contact with neighbours, an open-door policy, and a willingness to openly discuss actual or perceived problems and to implement appropriate changes to operational procedures.

The Proponent has already identified Roche Mining as the mining contractor for the proposed East Boggabri Coal Mine if it is approved. Both WCM and Roche Mining are working together at the Whitehaven and Werris Creek Coal Mines and would extend the prior operational, communication, training and reporting procedures adopted at these mines and shown to achieve a high standard of environmental performance.

1.8.2 Environmental Documentation

Successful environmental management invariably involves regular, organised documentation to ensure that, irrespective of personnel changes, all aspects of planning, environmental control, monitoring and responses to problems are properly recorded.

Should a mining lease be granted for the proposed East Boggabri Coal Mine, the Proponent would be committed to the Mining, Rehabilitation and Environmental Management Process (MREMP) managed by the DPI(MR) with input from other relevant government agencies. This process involves the preparation of:

- a Mining Operations Plan (MOP); and
- Annual Environmental Management Reports (AEMRs).



Mining Operations Plan (MOP)

The MOP component of the process provides a mechanism for the Proponent to provide a greater level of detail regarding the mining, rehabilitation, and general environmental management activities necessary for compliance with the collective conditions imposed upon the mining development. The MOP structure also permits and facilitates a flexible response to changing circumstances, increasing knowledge of the local environment and improving technology and procedures.

The proposed section headings with descriptions for the initial MOP are as follows.

- **Introduction** - summarises the history of operations within the context of those proposed; outlines the objectives and scope of operations proposed in the MOP; lists all consents, leases and licences held or required and the relevant mine contacts; describes mine geology and land ownership, and summarises the consultation undertaken.
- **Pre-MOP Environment** - describes the significant features of the Pre-MOP environment including topography, water resources, flora, fauna and cultural heritage.
- **Proposed Mining Activities** - describes in detail the proposed activities for the term of the MOP. Activities described include exploration, land preparation, construction, mining, processing waste management, stockpiling, water management and hazardous materials management.
- **Proposed Rehabilitation Activities** - describes in detail rehabilitation activities proposed for the term of the MOP including stakeholder consultation, rehabilitation procedures, building demolition, water management of rehabilitated lands, and any planned rehabilitation trials and/or research.
- **Final Rehabilitation** - describes the anticipated outcomes for the mining lease and the proposed achievement of these outcomes. Included are the features of mining and associated activities to remain and the planning criteria to be used.
- **Environmental and Rehabilitation Risk Assessment** - provides a matrix for assessing environmental risk associated with the proposed activities and identifies those activities with the greatest associated risk.



- **Environmental Management Controls** - documents how environmental management and performance will be managed. This section would be prepared in tabular form with reference to the document from which a management control or monitoring commitment has been drawn. This section would also outline the monitoring program for aspects such as air, noise, water, blasting and meteorology, if required, and the contingency plans to respond to emergencies, incidents or any breakdown in environmental performance.

The initial MOP would be the central document for the management of the operations and the environment for the first 3 years of the project and would incorporate relevant aspects of all other plans or protocols referred to in the development consent. Management of other aspects such as flora, fauna, visibility, traffic, archaeology and social impacts would also be described within the document.

The Proponent recognises there would be a need to update the MOP throughout the life of the operation. Subsequent MOPs would incorporate the above information as refined on the basis of operational experience and monitoring results. Particular emphasis would be placed upon mine rehabilitation.

Annual Environmental Management Report (AEMR)

The Proponent would prepare an AEMR for submission to the DPI(MR), DIPNR and other government agencies. The AEMR would document the progress of site activities during the reporting period and activities planned during the following 12 months. Similar information would be provided on the construction, operation and maintenance of the transport route. The report would provide an opportunity to review the effectiveness of the environmental management strategies adopted on the mining lease and external road network. Where relevant, the AEMR would identify where it would be desirable for some procedures to be varied.

The principal chapter headings for the Annual Environmental Management Report would be as follows.

- **Introduction:** - introduces the document; summarises the status of existing leases, licences and approvals; introduces the Company and personnel responsible for rehabilitation and environmental management.
- **Summary of Operations During the AEMR Period:** - provides an overview of the activities undertaken at the proposal during the AEMR period and summarises coal production levels, processing operations, transport operations; overburden / interburden emplacement, overburden / interburden emplacement rehabilitation, final landform preparation, and associated works.



- **Environmental Management During the AEMR Period** - presents the monitoring undertaken during the AEMR period; summarises the controls adopted by the Proponent for protection of the environment with respect to water, air, noise, blasting, wastes and hazardous materials; includes a summary of consultation undertaken and response to complaints or comments by the local community and/or local and State government agencies.
- **Rehabilitation** - describes rehabilitation activities undertaken by the Proponent during the reporting period and provides a review of the progress of previous rehabilitation activities.
- **Activities Proposed for the following AEMR Period** - presents plans for the following 12 months of operations relating to coal production levels, processing operations, transport operations, overburden / interburden emplacement, overburden / interburden emplacement rehabilitation and final landform preparation.
- **Appendices:** - present a range of supplementary documentation including, but not necessarily limited to, the relevant approvals, the Development Consent compliance tables and monitoring data.

The initial AEMR would be submitted approximately 12 months after the commencement of mining.

1.9 MANAGEMENT OF INVESTIGATIONS

The preparation of this document has involved a study team managed by Mr Rob Corkery, M.Appl.Sc., B.Sc (Hons), Principal of R.W. Corkery & Co Pty. Limited, assisted by Mr Alex Irwin, B.Sc (Hons), Environmental Scientist with the same company.

Geological investigations were co-ordinated by Mr Jeffrey Beckett of Belford Dome Resource Consultants and mine planning and operational information was provided Mr John Tynan of Roche Mining. On behalf of the Proponent, Mr Keith Ross (Managing Director of WCM), Mr Chris Burgess (Area Manager of WCM) and Mr Bob Corbett (Group Environmental Manager of AMCI Australia) provided further technical information on the proposed development and assisted with finalising the document.

Strong emphasis has been placed upon a multi-disciplinary team approach to the design of the proposal, the description of the existing environment and impact assessment. A wide range of specific studies were commissioned by the Proponent through the following specialist consultancies.



- Archaeological Surveys & Reports Pty Ltd (Aboriginal Heritage Assessment)
 - *Mr John Appleton, BA (Hons)*

- CastleCrest Consultants and Key Insights Pty Ltd (Socio-Economic Assessment)
 - *Mr Bob Hawes, B.Ec.*
 - *Ms Ellen Davis-Meehan, B.Ed., M.Ed. Studies*

- Countrywide Ecological Service (Fauna Assessment)
 - *Dr Leong Lim, PhD, M.Sc (Hons), B.Sc, BLaws*

- Geoff Cunningham Natural Resource Consultants Pty Ltd (Flora, Soils and Land Capability)
 - *Mr Geoff Cunningham, B.Sc (Hons)*

- New England Soil Services Team, Department of Lands (Surface Water Assessment)
 - *Mr David Howley, M.Sc (Env Man), B.Sc, B.Eng*

- Richard Heggie Associates Pty Ltd (Air Quality Assessment)
 - *Mr Damon Roddis, B.Sc (Hons)*

- Robert Carr & Associates (Groundwater Assessment)
 - *Mr Phillip Hitchcock, M.App.Sc, B.Sc (Hons)*

- Spectrum Acoustics Pty Ltd (Noise and Vibration Assessment)
 - *Dr Neil Pennington, PhD, B.Sc (Physics), B.Math (Hons)*

- URS Australia Pty Ltd (Acid Mine Drainage and Salinity Assessment)
 - *Dr Ian Swane, PhD (Hydrogeochemistry), B.Env.Sc. – Geology (Hons)*

