

VICKERY COAL PROJECT

PROJECT DESCRIPTION AND PRELIMINARY ENVIRONMENTAL ASSESSMENT

OCTOBER 2011



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1 INTRODUCTION

1.1 PURPOSE AND STRUCTURE OF THIS DOCUMENT

Whitehaven Coal Limited (Whitehaven) is seeking Development Consent under Part 4 of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979* (EP&A Act) to recommence mining operations at the Vickery Coal Mine (herein referred to as the Vickery Coal Project [the Project]).

The Project is located within the Gunnedah Basin, in the NSW Gunnedah Coalfield, with the planned open cut being situated approximately 25 kilometres (km) north of Gunnedah (Figure 1).

This document has been prepared to provide an overview of the Project to key State regulatory agencies, facilitate the discussion of issues that would need to be addressed during the environmental assessment process and initiate the preparation of the Director-General's Requirements (DGRs) under clause 3 of Schedule 2 of the NSW *Environmental Planning and Assessment Regulation, 2000* (EP&A Regulation).

The remainder of this document is structured as follows:

- | | | | |
|-----------|---|-----------|---|
| Section 1 | Introduction – provides a background to the development of the Project and an overview of the proposed mining activities. | Section 5 | Preliminary Environmental Assessment – identifies key environmental issues of particular relevance to the Project, provides a preliminary analysis of the likely nature and extent of potential impacts, and identifies the level and scope of environment impact assessment to be undertaken for the Environmental Impact Statement (EIS). |
| Section 2 | Local and Regional Context – summarises the local and regional context of the Project (including surrounding developments). | Section 6 | Stakeholder Consultation – outlines consultation (with the community, local councils and Government agencies) already undertaken and proposed to be carried out for the Project. |
| Section 3 | Project Description and Justification – provides a description of the Project, indicates the types of activities that would be undertaken, includes a justification for the Project and summarises alternatives considered. | | |
| Section 4 | Planning Considerations – describes the permissibility of the Project and applicable statutory planning instruments and strategic planning documents. | | |

1.2 BACKGROUND

On 24 April 1986, Namoi Valley Coal Pty Ltd (a subsidiary of Conzinc Riotinto of Australia [to later become Rio Tinto Limited]) submitted dual applications to the Gunnedah Shire Council (DA 23/86) and the Narrabri Shire Council (DA 18/86) to construct and operate the Vickery Coal Mine (then known as the Namoi Valley Coal Project). Development Consent for the mine was originally granted in October 1986 by the Minister for Planning and Environment pursuant to section 101 of the EP&A Act.

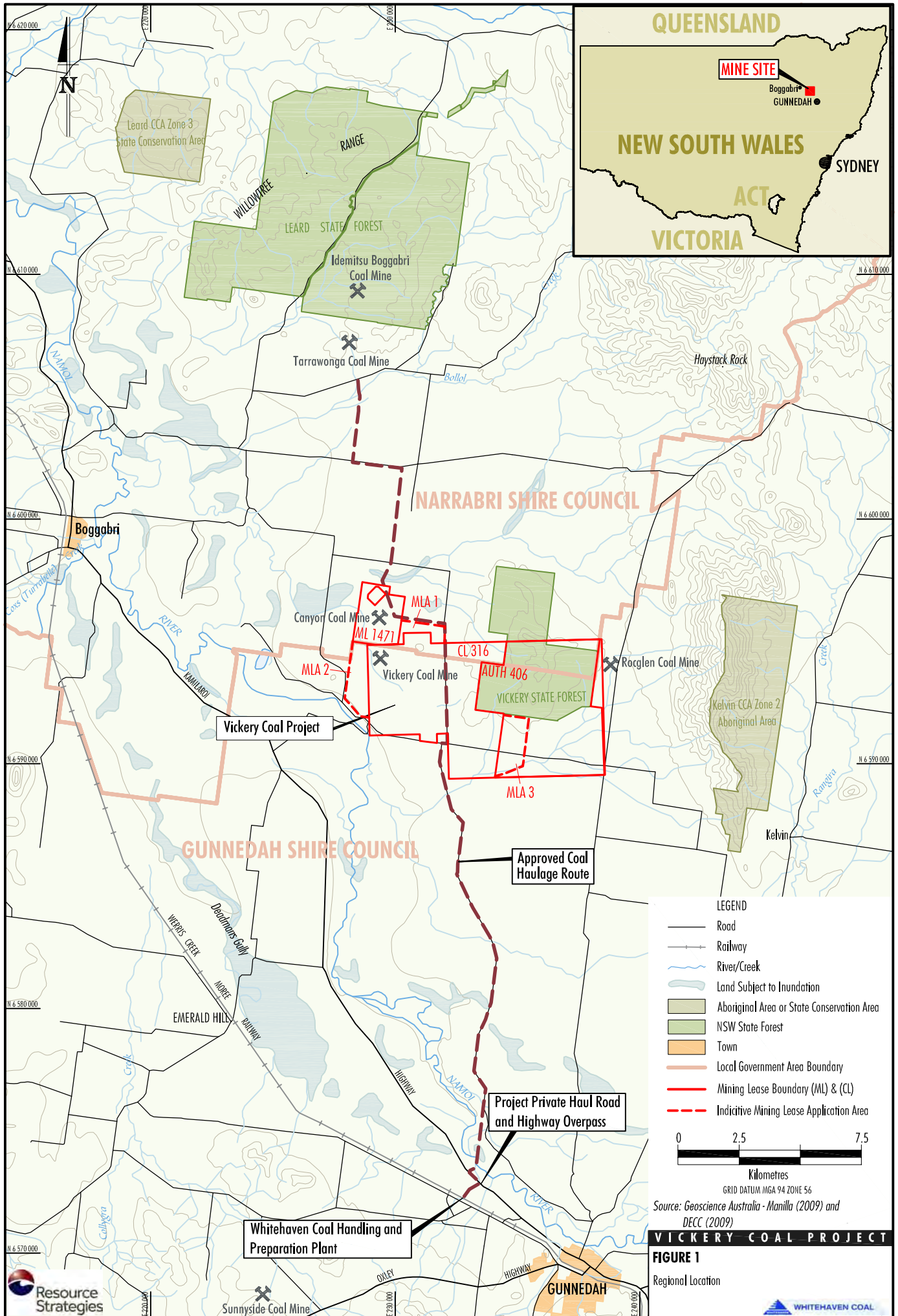
Mining commenced in 1986 with a small underground operation which continued until March 1991. Three minor modifications to the Development Consent were approved between 1987 and 1990. From 1991 to 1998 approximately 4 million tonnes of coal was extracted using open cut mining methods.

Mining operations at the Vickery Coal Mine ceased in May 1998, when approval from the Department of Primary Industries was granted to suspend operations and complete rehabilitation works on-site.

In September 2008, the then Department of Planning (DoP) approved a modification to the Development Consent in accordance with Section 96(1A) of the EP&A Act to extend the mine life by an additional three years (to 15 June 2012) to allow for further coal exploration, continued environmental monitoring and rehabilitation.

Rehabilitation activities are now complete and the site is currently in care and maintenance.

Whitehaven acquired 100% of Coal Lease (CL) 316 and Authorisation (AUTH) 406 from Rio Tinto Limited in January 2010.



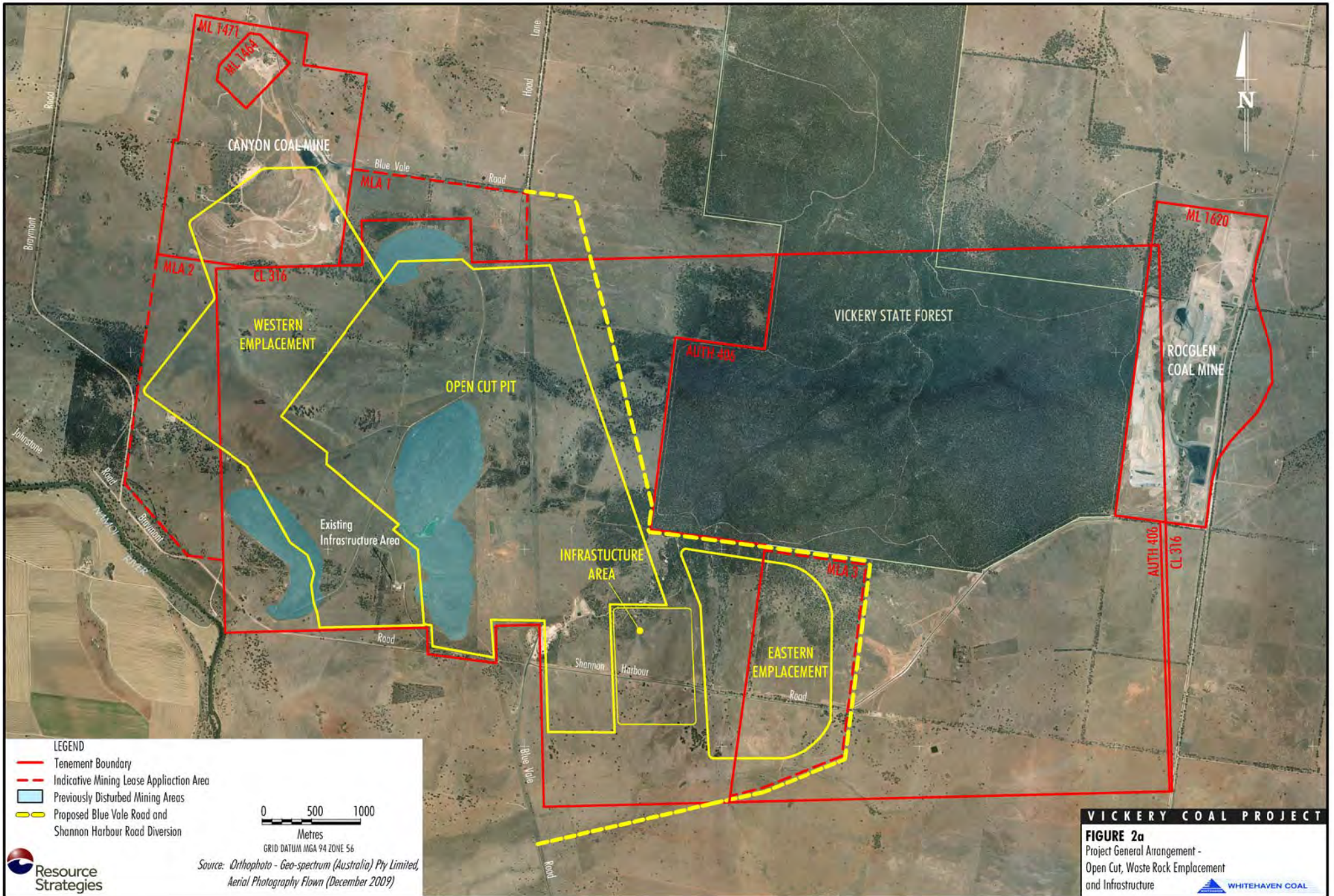
1.3 PROJECT OVERVIEW

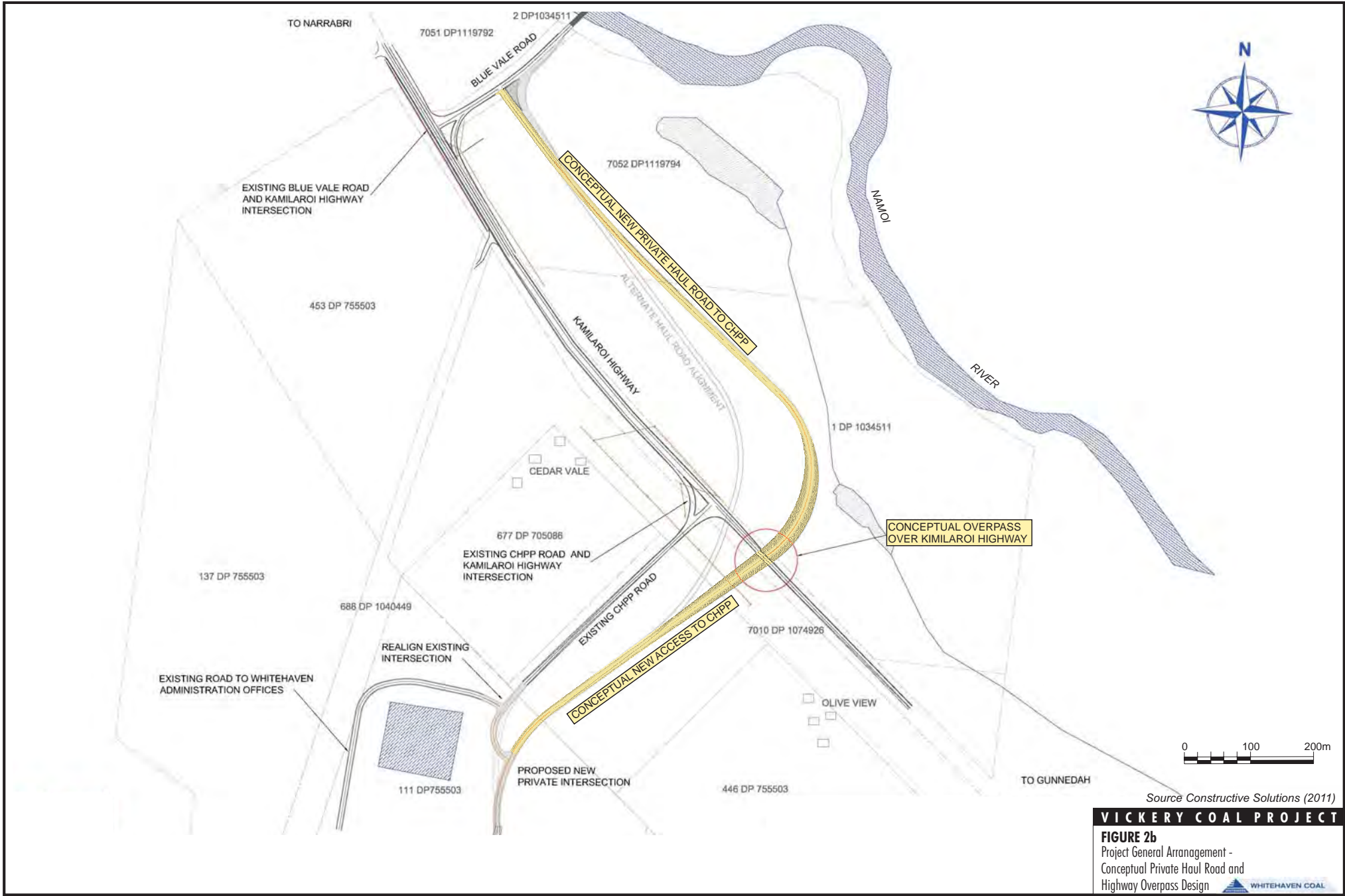
The Project would involve the recommencement of open cut mining activities at the Vickery Coal Mine and would seek approval to operate for 30 years.

The key components of the proposed Project are summarised below:

- Use of conventional mining equipment, haul trucks and excavators to remove waste rock and coal from the planned open cut.
- Run-of-mine (ROM) coal production of up to 4.5 million tonnes per annum (Mtpa).
- Mine life of approximately 30 years.
- Total life of mine coal production of approximately 140 million tonnes (Mt).
- Total waste rock production of approximately 1,400 million bank cubic metres (Mbcm).
- Development of external waste rock emplacements to the west and east of the planned open cut (i.e. Western Emplacement and Eastern Emplacement).
- Development of an infrastructure area including coal crushing and screening facilities.
- Construction and use of new soil stockpile areas.
- Construction and use of new dams, channels, dewatering bores and other control measures in addition to existing water management infrastructure to manage groundwater and surface water within and around the mine site.
- Transport of ROM coal by haulage trucks to the Whitehaven Coal Handling and Processing Plant (CHPP) on the outskirts of Gunnedah (approximately 20 km to the south of the Project open cut).
- Realignment of sections of Blue Vale Road and Shannon Harbour Road to the east and south of the open cut.
- Construction of an approximately 1 km section of private haul road (including an overpass over the Kamilaroi Highway) between Blue Vale Road and the Whitehaven CHPP.

An indicative general arrangement of the Project open cut, waste rock emplacements and infrastructure area is shown on Figure 2a, including the approximate extent of previous mining activities. Figure 2b shows the indicative general arrangement of the proposed section of private haul road and Kamilaroi Highway overpass near the Whitehaven CHPP.





Source Constructive Solutions (2011)

VICKERY COAL PROJECT

FIGURE 2b
 Project General Arrangement -
 Conceptual Private Haul Road and
 Highway Overpass Design



2 LOCAL AND REGIONAL CONTEXT

2.1 LOCATION AND MINING TENEMENTS

The Project would involve open cut mining activities within CL 316 and the adjoining Mining Lease (ML) 1471 as well as mining related activities in Mining Lease Application (MLA) areas 1, 2 and 3 (Figure 2a).

The Development Application Area¹ for the Project is made up of two separate areas. The larger of the two areas would encompass the planned activities associated with the open cut mine (Figure 2a). The smaller part of the Development Application Area would cover the section of private haul road near the Whitehaven CHPP (Figure 2b). These two parts of the Development Application Area are referred to herein as the 'Project mining area' and the 'Project private haul road and highway overpass' respectively. A description of the Development Application Area is provided in Attachment A and a preliminary Schedule of Lands is provided in Attachment B.

The Development Application Area is situated within the Gunnedah and Narrabri Local Government Areas (LGAs) (Figure 1).

2.2 LAND USE

Project Mining Area

The majority of the Project mining area is comprised of previously cleared agricultural areas and rehabilitated open cut workings from prior mining activities. The area is now predominately used for cattle grazing. Rainfed crop production would most likely have occurred historically on the flatter areas within the north-western part of CL 316.

Rainfed cropping and grazing of cattle is conducted to the north and south of the Project mining area on lands classified as Central Mixed Soil Floodplains. Irrigated and rainfed crop production is conducted on the Central Black Earth Floodplains to the west of the Namoi River.

The Vickery State Forest is located to the immediate east of the Project mining area. No mining, overburden emplacement or disturbance is proposed within the Vickery State Forest.

As mentioned in Section 1.2, open cut and underground mining activities were previously conducted in the Project mining area. Three areas associated with historical open cuts and associated waste rock emplacements (the Red Hill Pit, Greenwood/Shannon Hill Pit and Blue Vale Pit) are located within CL 316 (Figure 2a). In addition, part of the final void associated with the Canyon Coal Mine (closed in 2009) occurs in the north-western portion of the Project mining area.

Operating mines in the vicinity of the Project mining area include (Figure 1):

- Rocglen Coal Mine, approximately 5 km east (Whitehaven owned);
- Tarrawonga Coal Mine, approximately 10 km north (Joint venture between Whitehaven and Idemitsu Boggabri Coal); and
- Idemitsu Boggabri Coal Mine, approximately 12 km north.

An Environmental Assessment under Part 3A of the EP&A Act was submitted to the DP&I in July 2011 for the Maules Creek Coal Project (owned by Aston Resources), which is located approximately 15 km northwest of the Project mining area.

The Vickery South Project (owned by Coalworks) is located to the immediate south of the Project mining area. A Development Application has not been lodged for the Vickery South Project at this stage.

Whitehaven owns the land within the Project mining area, with the exception of a small parcel of land owned by the Gunnedah Shire Council.

Project Private Haul Road and Highway Overpass

The Project private haul road and highway overpass would be located between the Kamilaroi Highway and the Namoi River. The highway overpass would be located adjacent to the current CHPP access road.

The area between the Kamilaroi Highway and the Namoi River is approximately 400 to 600 metres (m) wide and has been previously cleared with some scattered trees remaining. The area is currently used for cattle grazing.

The land within the Project private haul road and highway overpass area comprises freehold, Gunnedah Shire Council and State of NSW land.

¹ Note the Development Application Area may be subject to change following further environmental assessment and mine planning studies conducted for the EIS.

2.3 TOPOGRAPHY AND WATER RESOURCES

Project Mining Area

The topography of the Project mining area comprises rolling hills in the central part the proposed open cut and Western Emplacement (largely due to the landform associated with the previous mining activities), with flatter areas to the north. The elevation of the south-eastern part of the Project mining area decreases from approximately 330 metres m Australian Height Datum (AHD) near the boundary of the Vickery State Forest, to around 270 m AHD at the southern extent of the eastern waste emplacement. Red Hill is located at the very northern extent of the proposed open cut, rising to an elevation of approximately 310 m AHD.

The Project mining area is situated within the Namoi River Catchment. The Namoi River abuts the south-western extent of CL 316 (Figure 1) and generally flows in a westerly direction from its headwaters in the Great Dividing Range and ultimately into the Barwon River.

The headwaters of Driggle Draggie Creek and a number of other un-named ephemeral streams originate in the slopes of the Vickery State Forest (Figure 2a). As they descend onto the flatter areas to the north and south of the Project mining area they become less well defined drainage paths which become expansive, ponded, overland flow areas during and following heavy rainfall. These flows slowly move down gradient and merge with the Namoi River floodplain.

Mapping from the NSW Office of Water (2010) indicates that two groundwater systems are associated with the Project mining area:

- a porous rock groundwater system; and
- an alluvial groundwater system.

The Project coal resource is located within the Maules Creek sub-basin of the Early Bellata Group which is within the porous rock (i.e. sedimentary rock) groundwater systems of the Gunnedah Basin and lies within the boundary defined in the *Draft Water Sharing Plan for the NSW Murray-Darling Basin Porous Rock Groundwater Sources 2011*. The Project coal resource is wholly located within the Management Zone of the Gunnedah-Oxley Basin – Namoi within the Porous Rock groundwater system (NSW Office of Water, 2010).

The Project mining area is bounded to the north, south and west by the alluvial sediments of the Upper Namoi Alluvium with the alluvial groundwater forming part of the Upper Namoi Zone 4, Namoi Valley (Keepit Dan to Gin's Leap) Groundwater Source of the *Water Sharing Plan for the Upper and Lower Namoi Groundwater Source, 2003*. No part of the open cut or the waste emplacements would extend into the Upper Namoi Alluvium.

Project Private Haul Road and Highway Overpass

The area between the Kamilaroi Highway and the Namoi River where the Project private haul road would be located is very flat with the elevation along the banks of the Namoi River along this reach being approximately 260 m AHD.

2.4 ENVIRONMENTALLY SENSITIVE AREAS

A preliminary investigation of environmentally sensitive areas of State significance (as defined in the *State Environmental Planning Policy (State and Regional Development) 2011* [State and Regional Development SEPP]) with respect to the Project has identified the following:

- The Development Application Area is not within coastal waters of the State.
- No lands protected or preserved under *State Environmental Planning Policy No. 14 - Coastal Wetlands* or *State Environmental Planning Policy No. 26 - Littoral Rainforests* occur within the Development Application Area.
- No lands reserved as an aquatic reserve under the *NSW Fisheries Management Act, 1994* or as a marine park under the *NSW Marine Parks Act, 1997* occur within the Development Application Area.
- No lands within a wetland of international significance declared under the Ramsar Convention on Wetlands or lands within a World Heritage area declared under the World Heritage Convention occur within or near the Development Application Area.
- No lands identified in an Environmental Planning Instrument (EPI) as being of high Aboriginal cultural significance or high biodiversity significance have been identified within the Development Application Area at this stage. Further investigations would be undertaken as a component of the EIS.

- No State Conservation Areas reserved under the NSW *National Parks and Wildlife Act, 1974* occur within the Development Application Area.
- No lands, places, buildings or structures listed on the State Heritage Register occur within the Development Application Area.
- No lands reserved or dedicated under the NSW *Crown Lands Act, 1989* for the preservation of flora, fauna, geological formations or for other environmental protection purposes have been identified within the Development Application Area at this stage. Further investigations would be undertaken as a component of the EIS.
- No lands declared as critical habitat under the NSW *Threatened Species Conservation Act, 1995* or *Fisheries Management Act, 1994* occurs within the Development Application Area.

3 PROJECT DESCRIPTION AND JUSTIFICATION

3.1 PROPONENT

Whitehaven (ABN 68124 425 396) is the proponent for the Project. The contact details for Whitehaven are:

Whitehaven Coal Limited
PO Box 600
Gunnedah NSW 2380 Australia
Phone: (02) 6742 4337

Further information on the proponent and its coal mining operations can be found at:

<http://www.whitehavencoal.com.au/>

3.2 PROJECT DESCRIPTION

The indicative Project general arrangement is shown on Figures 2a and 2b.

Table 1 provides a summary of activities associated with the Project.

Additional details of each of the main Project components are discussed below.

Open Cut Mining Operations

Whitehaven plans to use conventional truck and excavator mining methods to mine approximately 140 Mt of ROM coal from the following seven seams within the Maules Creek Formation:

- Tralee Seam;
- Gundawarra Seam;
- Kurrumbede Seam;
- Shannon Harbour Seam;
- Stratford Seam;
- Bluevale Seam; and
- Cranleigh Seam.

The seams generally dip to the east and have thicknesses ranging from approximately 0.5 m to greater than 3 m.

The stripping ratio across the proposed open cut area averages approximately 10:1.

The Karu and Woodlands Fault generally constrains the eastern extent of the proposed open cut, while the Whitehaven Fault generally defines its western boundary.

The general sequence of open cut mining would be as follows:

1. Vegetation clearance.
2. Topsoil and subsoil stripping. Stripped topsoil and subsoil would be used directly in progressive rehabilitation or would be placed in stockpiles for later re-use.
3. Removal of weathered or friable overburden.
4. Drilling and blasting of competent overburden (and interburden).
5. Overburden (and interburden) removal by excavator and dump truck, with supporting dozers. Overburden and interburden placed in out-of-pit mine waste rock emplacements, or as infill in the mine void, behind the advancing open cut mining operations.
6. Mining of exposed coal seams by excavator/loader and loading into haul trucks for transport to the ROM coal stockpile area for crushing.
7. Progressive landform profiling and rehabilitation of mine waste rock emplacements.

The mining fleet would typically consist of hydraulic excavators and dump trucks, with a support fleet of dozers, scrapers, graders, front end loaders, drill rigs and water trucks.

Life of Mine

The mine life would be approximately 30 years.

Operational Hours

Mining activities would be undertaken 24 hours/day, 7 days/week.

**Table 1
Overview of the Project**

Project Feature	Description
Mine life	Approximately 30 years.
Mining method	Open cut truck and excavator mining.
Annual ROM coal production rate	4.5 Mtpa.
Open cut operating hours	24 hours per day, seven days per week.
Life of mine ROM coal quantity	Approximately 140 Mt of thermal and metallurgical coal.
Life of mine overburden quantity	Approximately 1,460 Mbcm.
Waste rock emplacement areas	Western Emplacement, Eastern Emplacement and in-filling of the open cut.
On-site crushing and screening	On-site coal crushing and screening facilities located within the infrastructure area operating up to 24 hours per day, seven days per week. Coal to be transported off-site by road to the Whitehaven CHPP.
Road construction requirements	Staged construction of Blue Vale Road and Shannon Harbour Road diversions. Construction and use of a private haul road between Blue Vale Road (between the Namoi River and the Kamilaroi Highway) and the Whitehaven CHPP, including an overpass over the Kamilaroi Highway.
Road transport requirements	Use of Blue Vale Road and the private haul road for transport of ROM coal by truck to the Whitehaven CHPP. Diversion of a section of Blue Vale Road and Shannon Harbour Road to the east of the open cut and Eastern Emplacement.
Water supply	Mine water supply to be obtained from surface inflows to open cut area, sediment basins and storage dams, plus surface water and/or groundwater licences as required.
Water management	On-site water management system comprising water management storages and collection drains, runoff diversions, sediment control and open cut dewatering. Potential disposal of excess surface water through licensed discharge points subject to water quality parameters.
Electricity supply	Connection to the regional electrical grid at the infrastructure area via an existing dedicated powerline.
Mine infrastructure, service facilities and soil stockpiles	Construction and use of an infrastructure area adjacent to Shannon Harbour Road comprising ROM coal handling infrastructure, administration facilities, employee amenities and stores buildings, workshop compound, bunded fuel tank area, transformer and other related infrastructure. Decommissioning and removal of existing Vickery pit top infrastructure in advance of waste emplacement,
Workforce	Up to 150 full-time construction workforce plus additional contract personnel. Up to 400 full-time on-site operational personnel plus additional contract personnel.
Exploration	Exploration activities within CL 316 and AUTH 406.
Remediation and rehabilitation works	Progressive rehabilitation of waste emplacements and surface disturbance areas (e.g. exploration drill pads).

Project Infrastructure Area

A new Project infrastructure area would be constructed between the Eastern Emplacement and the open cut (Figure 2a). The new Project infrastructure area would include ROM coal handling infrastructure, administration facilities, employee amenities and stores buildings, workshop compound, bunded fuel tank area, transformer and other related infrastructure.

The existing 'pit top' infrastructure area associated with the previous mining operations is located within CL 316 (Figure 2a). An assessment of the existing infrastructure would be made to determine which items are able to be reused prior to it being decommissioned and removed.

Road Diversions

A section of Blue Vale Road and Shannon Harbour Road would require diversion as a result of the progression of the open cut and the construction of the Eastern Emplacement. A road diversion would be constructed between the mining operations and the Vickery State Forest, and along the eastern margin of the Eastern Emplacement before reconnecting with Blue Vale Road south of the Project.

ROM Coal Handling and Transport

ROM coal would be loaded by excavator/loader into dump trucks and transported to the ROM crusher pad within the new Project infrastructure area. ROM coal would be either direct dumped, or reclaimed and transferred, into a loading hopper and conveyed to the on-site coal crushing and screening facility. Sized ROM coal would then be conveyed to the coal load-out bin for loading into on-highway haul trucks.

Sized ROM coal would be transported between the Project and the Whitehaven CHPP by a haulage contractor using a fleet of on-highway haulage trucks (e.g. B-Doubles) (Figure 1). The haulage distance between the Project mining area and the Whitehaven CHPP is approximately 20 km.

A small quantity (in the order of 150 kilotonnes per year) of ROM coal will be made available for domestic purchase. This ROM coal would be picked up at the gate of the Project

Project Private Haul Road and Highway Overpass

Haulage trucks from the Tarrawonga and Rocglen coal mines currently travel down Blue Vale Road to access the Whitehaven CHPP. The trucks currently travel along a short (1 km) section of the Kamilaroi Highway before they enter the Whitehaven CHPP. Intersections at Blue Vale Road/Kamilaroi Highway and Kamilaroi Highway/CHPP access road have been designed with separate deceleration and acceleration lanes to accommodate slower moving haulage trucks and minimise disruption to through traffic on the Kamilaroi Highway.

As a result of consultation with stakeholders during the preparation of the Project Description and Preliminary Environmental Assessment, and in order to remove the interaction between haulage trucks and highway traffic, Whitehaven would construct a 1 km section of private haul road between Blue Vale Road and the Whitehaven CHPP, including an overpass over the Kamilaroi Highway. Haulage trucks from the Project and the Rocglen Coal Mine would use this route to access the CHPP. This would significantly reduce the impacts of the Project on the regional road network.

The private haul road would run between the Kamilaroi Highway and Namoi River, with the overpass located adjacent to the existing CHPP access road. The private haul road would connect to Blue Vale Road between the intersection with the Kamilaroi Highway and the Namoi River crossing (Figure 2b). This intersection would be designed to allow safe navigation by the haulage trucks and minimise potential impacts to traffic travelling along Blue Vale Road.

A conceptual design and assessment of potential environmental impacts associated with the Project private haul road and highway overpass would be presented in the EIS.

Mine Waste Rock and Coal Rejects

Mine waste rock (including overburden and interburden) generated from the open cut would be placed in one of two external waste rock emplacements (i.e. Western Emplacement and Eastern Emplacement) or as infill in the mine void behind the advancing mining operations (i.e. in-pit emplacement).

Coarse rejects generated at the Whitehaven CHPP would be returned to the Project (i.e. backloaded in coal haulage contractor's trucks) for emplacement within the mine pit.

Fine reject material generated at the Whitehaven CHPP would be pumped to a series of ponds, where they would be dewatered before being transported to the final void associated with the former Brickworks Open Cut Mine or other approved areas for disposal.

Water Supply and Management

Key features of the Project water management system would include:

- diversion of surface water runoff from undisturbed or rehabilitated areas around or away from disturbed mine areas;
- collection of runoff from disturbed mine areas (e.g. active waste rock emplacement areas and infrastructure areas) via constructed drains/banks to sediment basins, to allow suspended sediments to settle out of the collected water; and
- transfer of mine-affected water (e.g. runoff and infiltration from waste rock emplacements, and groundwater inflows into the mine pit) collected in a sump(s) in the base of the open cut to a mine water dam for storage.

Operational water requirements would be sourced from water storages containing runoff from disturbed mine areas or mine-affected water. Additional make-up water would be sourced from water storages containing runoff from undisturbed/rehabilitated areas, from licensed bores and/or licensed extraction from the Namoi River.

As part of the EIS, a site water balance model would be developed for the Project to determine water supply and if necessary, discharge requirements (Section 5).

Residual Pit Void

The progression of the mine would result in residual voids in the north-eastern corner and south-eastern corner of the proposed open cut at the end of the mine life.

The EIS would assess the potential impacts of these voids on groundwater and surface water resources. In particular, it would evaluate whether a pit lake(s) would develop after mining and pit dewatering ceases, and how the voids would interact with surface water features. The EIS would also consider how the final rehabilitated landform would be integrated with the surrounding landscape post closure.

Power Supply

The existing 'pit top' infrastructure area at the Vickery Coal Mine is currently connected to mains power (66 kV). This existing power supply would be extended to connect with the new Project infrastructure area.

Other Activities

Other activities that would be conducted as a component of the Project include exploration, monitoring, rehabilitation of surface disturbance, and development of other associated minor infrastructure, plant, equipment and activities.

Employment

A construction workforce of approximately 150 personnel and a full time operational workforce of approximately 400 personnel would be required for the Project.

Capital Investment Value

The expected capital investment value for the Project is in the order of \$400 million.

Project Integration

Sized ROM coal produced by the Project would be processed at the Whitehaven CHPP prior to rail transport to Newcastle.

Whitehaven would schedule the ROM coal production rates from the Project, Tarrawonga Coal Mine and the Rocglen Coal Mine such that the overall quantity of sized ROM coal that is transported from its operations along Blue Vale Road to the Whitehaven CHPP would not exceed 4.5 Mtpa.

Relevant modifications to the Whitehaven CHPP Development Consent (DA 0079.2002) to accommodate the processing and rail load-out of Project coal would be obtained through separate assessment and approval processes if required.

The Vickery South Project is proposed to be developed by Coalworks to the southwest of the Project mining area. At this stage there is limited project description information available for the Vickery South Project, however Whitehaven will continue to consult with Coalworks in relation to their project.

3.3 PROJECT JUSTIFICATION OVERVIEW

Alternatives to the proposed location, scale, mining methods and ROM coal transportation and processing methods have been considered by Whitehaven in the development of the Project description and will be further evaluated during the preparation of the EIS. An overview of the consideration of alternatives to date is provided below:

- **Project Location** – the location of the open cut is dictated by the presence of coal seams able to be economically mined.
- **Scale** – the Project mining reserve is estimated at approximately 140 Mt of ROM coal within the seven seams proposed to be mined. The mining rate of 4.5 Mtpa optimises the use of established infrastructure.
- **Mining Method** – up to seven coal seams are present within the coal measures at the Project, all of which are amenable to extraction by open cut mining methods. Variations in coal quality across the coal seams are managed through the preparation process to produce the required products. Underground mining would limit the resource recovery as the majority of the seams are not amenable to underground extraction.
- **ROM Coal Transport and Processing** – Whitehaven has evaluated a number of options for the transport and processing of ROM coal, including the construction of an overland conveyor between the Project and the Whitehaven CHPP. Road transport to the existing Whitehaven CHPP allows for the ongoing use of existing facilities and infrastructure. This facility has been recently refurbished.

Further consideration of alternatives to location, scale, methods and management would be undertaken as a component of the comprehensive assessment undertaken for the EIS.

Project Justification

The Project would employ approximately 400 people during the operations phase and in the order of 150 employees during the construction phase. The Project would also result in the payment of royalties to the State and other tax payments. It would also provide employment for the mine workforce and flow-on employment benefits to local and regional businesses.

A detailed evaluation and justification of the Project on social, environmental and economic grounds, including consideration of the principles of Ecologically Sustainable Development (ESD), would be included in the EIS.

4 PLANNING CONSIDERATIONS

4.1 APPLICABILITY OF DIVISION 4.1 OF PART 4 OF ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Approval for the Project would be sought from the NSW Minister for Planning and Infrastructure under the State Significant Development provisions (Division 4.1) of Part 4 of the EP&A Act. The EP&A Act and EP&A Regulation set the framework for planning and environmental assessment in NSW.

Clause 5 of Schedule 1 of the State and Regional Development SEPP provides:

5 Mining

(1) Development for the purpose of mining that:

(a) is coal or mineral sands mining, or

...

The Project represents development for the purpose of coal mining (Section 3.2).

It is anticipated that the Minister for Planning and Infrastructure would form the view that the Project is one to which Division 4.1 of Part 4 applies. Development Consent would thus be sought from the NSW Minister for Planning and Infrastructure.

4.2 PLANNING PROVISIONS

State Environmental Planning Policies

The following State Environmental Planning Policies (SEPPs) may potentially be relevant to the Project:

- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP);
- *State Environmental Planning Policy No. 33 (Hazardous and Offensive Development)* (SEPP 33);
- *State Environmental Planning Policy No. 44 - Koala Habitat Protection*; and
- *State Environmental Planning Policy No. 55 (Remediation of Land)*.
- *State Environmental Planning Policy (Infrastructure) 2007*.

Relevant provisions and objectives of the above SEPPs would be considered in the preparation of the EIS.

Local Environmental Plans

The Development Application Area is within the Narrabri and Gunnedah LGAs (Figure 1).

The Development Application Area is located within the lands covered by the *Narrabri Local Environmental Plan, 1992* (Narrabri LEP) and the *Gunnedah Local Environmental Plan, 1998* (Gunnedah LEP).

The Narrabri LEP and Gunnedah LEP are discussed further in Section 4.3.

Mining Act, 1992

Whitehaven would lodge applications for the MLAs separately with the Division of Resources and Energy (DRE) (within the Department of Trade and Investment, Regional Infrastructure and Services) for Project development areas outside the existing CL 316, ML 1471 and AUTH 406. Indicative MLA areas are shown on Figure 2a and in Attachment A.

Under the NSW *Mining Act, 1992*, environmental protection and rehabilitation are regulated by conditions attached to all mining leases, including requirements for the submission of a Mining Operations Plan prior to the commencement of operations, and subsequent Annual Environmental Management Reports.

Under section 89K of the EP&A Act, if the Project is approved, the grant of mining leases under the *Mining Act, 1992* cannot be refused and the condition of the lease(s) must be substantially consistent with any Development Consent under Part 4 of the EP&A Act.

Protection of the Environment Operations Act, 1997

The NSW *Protection of the Environment Operations Act, 1997* (PoEO Act) and the NSW *Protection of the Environment Operations (General) Regulation, 2009* set out the general obligations for environmental protection.

If the Project is approved, Whitehaven would apply for an Environment Protection Licence for the Project.

Under section 89K of the EP&A Act, if the Project is approved, an Environment Protection Licence under the PoEO Act cannot be refused and the conditions of the licence must be substantially consistent with any Development Consent under Part 4 of the EP&A Act.

Roads Act, 1993

If the Project is approved, Whitehaven would apply for the necessary consents under section 138 of the NSW *Roads Act, 1993* associated with the construction of road diversions and intersections with public roads (Section 3.2).

Under section 89K of the EP&A Act, if the Project is approved, consent under section 138 of the *Roads Act, 1993* cannot be refused and would be substantially consistent with any Development Consent under Part 4 of the EP&A Act.

Commonwealth Environment Protection and Biodiversity Conservation Act, 1999

The Project would be referred to the Commonwealth Minister for the Environment for consideration as to whether it constitutes a 'Controlled Action' and therefore requires approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act).

Commonwealth Native Title Act, 1993

The Commonwealth *Native Title Act, 1993* (CNTA) provides for the recognition and protection of native title rights in Australia. The CNTA provides a mechanism to determine whether native title exists and what the rights and interests are that comprise that native title. The process is designed to ensure that indigenous people who profess an interest in the land (or any part thereof) have the opportunity to express this interest formally, and to negotiate with the Government and the applicant about the proposed grant or renewal, or consent to access native title land.

The NSW *Mining Act, 1992* must be administered in accordance with the CNTA. The primary effect of the CNTA on exploration and mining approvals is to provide native title parties with a 'Rights to Negotiate' about the grant and some renewals by governments of exploration and mining titles.

The CNTA, where applicable, would be complied with in relation to the granting and renewal of any necessary mining tenements for the Project.

4.3 PERMISSIBILITY OF THE PROJECT

Section 89E of the EP&A Act provides that Development Consent may not be granted under Division 4.1 of Part 4 if the development is wholly prohibited by an environmental planning instrument, but may be granted despite the development being partly prohibited by an environmental planning instrument.

The permissibility of the Project under the Gunnedah LEP and the Narrabri LEP is described below.

Gunnedah LEP

The portion of the Development Application Area within the Gunnedah LGA (including the Project private haul road and highway) includes land zoned under the Gunnedah LEP as Zone No 1 (a) (Rural [Agricultural Protection]).

Under clause 10 of the Gunnedah LEP "mines" and "roads" are permissible on lands zoned Zone No 1 (a) (Rural [Agricultural Protection]) with Development Consent as mining and roads are not listed as being a prohibited use in the zoning table. Therefore, all development for the purpose of the Project would be permissible under the Gunnedah LEP.

A draft Gunnedah LEP to replace the existing Gunnedah LEP is currently on exhibition. The draft LEP describes the land zoning relevant to the Project as RU1 Primary Production which is consistent with the zoning of the existing Gunnedah LEP.

In accordance with the Land Use Table in Part 2 of the draft Gunnedah LEP, open cut mining is permitted with consent in land zoned as RU1 Primary Production. Roads are permitted without consent in land zoned as RU1 Primary Production. Therefore all development for the purpose of the Project would be permissible under the draft Gunnedah LEP.

Narrabri LEP

The portion of the Project mining area within the Narrabri LGA (i.e. the Project mining area) includes land zoned under the Narrabri LEP as Zone No 1 (a) (General Rural).

Under clause 9 of the Narrabri LEP "mines" are permissible on lands zoned Zone No 1 (a) (General Rural) with Development Consent as mining is not listed as being a prohibited use in the zoning table. Therefore, all development for the purpose of the Project would be permissible under the Narrabri LEP.

5 PRELIMINARY ENVIRONMENTAL ASSESSMENT

The following Preliminary Environmental Assessment has been prepared to identify the key potential environmental issues associated with the construction and operation of the Project. This information has been prepared to assist the DP&I with the issuing of the DGRs for the Project under clause 3 of Schedule 2 of the EP&A Regulation.

This Preliminary Environmental Assessment has drawn on:

- Whitehaven's experience from conducting the environmental impact assessments and operating the nearby Tarawonga and Rocglen coal mines;
- understanding of the local and regional context (Section 2) and the Project (Section 3);
- feedback from stakeholder consultation undertaken to date; and
- the outcomes of a preliminary risk assessment.

The preliminary risk assessment was undertaken in general accordance with the draft *Preparing Part 3A Applications Guidelines* (DoP, 2011) and the previous Department of Infrastructure, Planning and Natural Resources (DIPNR) guideline (DIPNR, 2005).

The preliminary risk assessment involved the following:

1. **Identification of Potential Issues** – Identification of likely key environmental issues of relevance to the Project including: physical or biological aspects of the environment; natural or community resources; environmentally sensitive areas; areas allocated for conservation purposes; and areas sensitive because of community factors.
2. **Identification of Key Potential Environmental Issues** – For the key issues, consideration of the extent of the potential impacts; the nature of the potential impacts; and the potential impacts on environmentally sensitive areas.
3. **Preliminary Consideration of the Study Requirements** – Consideration of the level and scope of assessment that would be required for each key issue within the EIS.

The key environmental issues identified by the preliminary risk assessment are provided in Table 2, along with a preliminary list of study requirements to address these issues. Specialist environmental consultants will be commissioned to conduct the studies outlined in Table 2, and independent peer reviews will be conducted for key studies.

In addition to consideration of the key potential environmental impacts (Table 2), the following studies will be undertaken as a component of the EIS to address other potential impacts:

- geochemistry assessment;
- Aboriginal cultural heritage assessment;
- non-Aboriginal heritage assessment;
- land contamination assessment;
- rehabilitation strategy; and
- preliminary hazard analysis in accordance with SEPP 33.

A quantitative environmental risk assessment would also be undertaken to inform the preparation of the EIS. Significant issues identified in this environmental risk assessment would be assessed in the EIS.

Assessment of the key potential environmental issues (Table 2) and the other potential impacts identified above would include consideration of:

- existing environment using sufficient baseline data;
- potential impacts of all stages of the Project including any cumulative impacts;
- measures that could be implemented to avoid, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the Project; and
- contingency plans and/or adaptive management for managing any potentially significant residual risks to the environment.

The assessments of potential impacts would consider relevant policies, guidelines and plans included in contemporary DGRs for major mining projects. Therefore, these policies, guidelines and plans have not been repeated within this document.

Table 2
Key Potential Environmental Issues and Proposed Level and Scope of Environmental Assessment

Key Potential Environmental Issue	Likely Extent and Nature of Potential Impacts	Proposed Level and Scope of Environmental Assessment
Road transport related impacts on the surrounding community.	<ul style="list-style-type: none"> Project road movements and noise impacts associated with coal haulage, employees, contractor access and deliveries. Construction of a private haul road to remove the need for haul trucks to travel on the Kamilaroi Highway. 	<ul style="list-style-type: none"> Road transport assessment of potential cumulative impacts on the safety and performance of the road network. Noise assessment of potential traffic noise impacts in accordance with the <i>NSW Road Noise Policy</i> (NSW Department of Environment, Climate Change and Water [DECCW], 2011). Identification of potential road improvements and management requirements.
Impacts on local and regional groundwater resources.	<ul style="list-style-type: none"> Potential drawdown of groundwater levels and alteration of groundwater flow directions due to depressurisation associated with the development of the open cut and mine de-watering activities. Impacts on groundwater quality. Long-term changes to groundwater levels, flow direction and quality in the vicinity of the final void. 	<ul style="list-style-type: none"> Groundwater assessment involving numerical modelling to quantify potential impacts on groundwater resources. Groundwater investigation programme to assess the hydrogeological characteristics of the Project mining area and surrounds. Development of management and monitoring systems to minimise potential impacts.
Impacts on surface water resources.	<ul style="list-style-type: none"> Changes to catchment areas and flow characteristics due to the construction of water storage dams, waste rock emplacements and the final void. Increased potential for erosion and sedimentation due to the increased area of land disturbance. Potential extraction and/or discharge of water as part of the on-site water management system. 	<ul style="list-style-type: none"> Surface water assessment involving hydrological models to quantify potential impacts to surface water resources. Development of a site water balance to assess water supply and/or discharge requirements. Development of management and monitoring systems to minimise potential impacts.
Impacts to the agricultural suitability of lands in the Development Application Area and surrounds.	<ul style="list-style-type: none"> Changes to the potential uses of land directly disturbed or otherwise impacted as a result of mining activities. 	<ul style="list-style-type: none"> Agricultural impact assessment of land within and surrounding the Development Application Area to determine the existing agricultural productivity capacity. Assessment of potential agricultural productivity capacity following the completion of mining activities and rehabilitation of disturbed land.
Noise and blasting impacts on nearby private receivers.	<ul style="list-style-type: none"> Noise impacts associated with the use of mining equipment. Blast overpressure and ground vibration impacts due to blasting. 	<ul style="list-style-type: none"> Development and use of a predictive noise model to quantify potential noise impacts. Analysis of potential blasting impacts including blast overpressure and ground vibration.
Air quality impacts on nearby private receivers.	<ul style="list-style-type: none"> Air quality impacts associated with dust generation from land disturbance, blasting, excavation, hauling and handling of waste rock and ROM coal and greenhouse gas emissions. 	<ul style="list-style-type: none"> Development and use of a predictive air quality model to quantify potential air quality impacts. Assessment of potential greenhouse gas emissions in accordance with the <i>National Greenhouse Accounts Factors</i> (Department of Climate Change and Energy Efficiency, 2010 or its latest version).

Table 2 (Continued)
Key Potential Environmental Issues and Proposed Level and Scope of Environmental Assessment

Key Potential Environmental Issue	Likely Extent and Nature of Potential Impacts	Proposed Level and Scope of Environmental Assessment
Impacts on ecology as a result of vegetation disturbance.	<ul style="list-style-type: none"> • Vegetation clearance related impacts on flora, fauna and their habitats. • Introduction of weeds and feral animals. • Impacts on groundwater dependent ecosystems as a result of groundwater drawdown. • Potential impacts of vegetation disturbance associated with the Project. 	<ul style="list-style-type: none"> • Targeted surveys for threatened flora and fauna species known or considered possible occurrences within the Development Application Area. • Assessment of potential impacts on any terrestrial species, populations, ecological communities or their habitats. • Identification of measures that would be implemented to maintain or improve the biodiversity values of the surrounding region in the medium to long-term.
Impacts on visual amenity.	<ul style="list-style-type: none"> • Modification of the existing views from sensitive receptors of the Development Application Area due to the development of the open cut and waste rock emplacements. • Use of night-lighting for the Project. 	<ul style="list-style-type: none"> • Identification of sensitive receptors (including nearby residences and public roads) and assessment of potential visual impacts at these sites. • Development of a three-dimensional digital terrain model incorporating visual simulations (where appropriate).
Positive impacts on the regional and NSW economy.	<ul style="list-style-type: none"> • Employment of approximately 400 personnel, including flow-on effects to the regional and NSW economy. • Employment of approximately 150 construction personnel. • Payment of royalties to the State and other tax payments. 	<ul style="list-style-type: none"> • Socio-economic assessment of potential impacts on the regional and NSW community and economy, including a cost-benefit analysis. • Project justification, including consideration of alternatives, principles of ESD and the objects of the EP&A Act.

6 STAKEHOLDER CONSULTATION

6.1 CONSULTATION UNDERTAKEN TO DATE

Consultation undertaken to date in relation to the Project has included:

- Initial Project briefings with the DP&I in June and September 2011.
- Conceptual Project Development Plan meeting with representatives of DRE and DP&I in September 2011.
- Consultation with Aboriginal stakeholder groups through the Aboriginal cultural heritage assessment process commenced in September 2011.

6.2 STAKEHOLDER ENGAGEMENT PROGRAMME

A stakeholder engagement programme has been developed for the Project. Key objectives of this programme are to:

- inform government and public stakeholders about the progress and nature of the Project;
- recognise and respond to local interest or concerns regarding the Project; and
- continue the ongoing dialogue between Whitehaven and stakeholders initiated through the development of the Tarrawonga and Rocglen coal mine operations.

The programme involves the use of a variety of consultation mechanisms which in summary include actions such as:

- public exhibition of key documents (e.g. this document and the EIS);
- consultation with the local community;
- provision of Project information on the Whitehaven website;
- meetings with the general community including Aboriginal groups and directly affected landowners;
- meetings with relevant government agencies and councils;
- public information displays; and
- community information brochures.

The consultation would include, but not necessarily be limited to, the following government agencies and authorities:

- DP&I;
- NSW Office of Environment and Heritage;
- NSW Department of Primary Industries (including the NSW Office of Water);
- DRE;
- NSW Roads and Traffic Authority;
- Narrabri Shire Council;
- Gunnedah Shire Council; and
- Commonwealth Department of Sustainability, Environment, Water, Population and Communities.

Consultation with the Aboriginal community would be conducted in consideration of the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010).

The issues raised and outcomes of the consultation programme would be reported in the EIS.

7 REFERENCES

Constructive Solutions (2011) *Proposed Private Haul Road from the CHPP to Blue Vale Road*. Concept Report prepared for Whitehaven Coal Limited.

Department of Environment, Climate Change and Water (2010) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

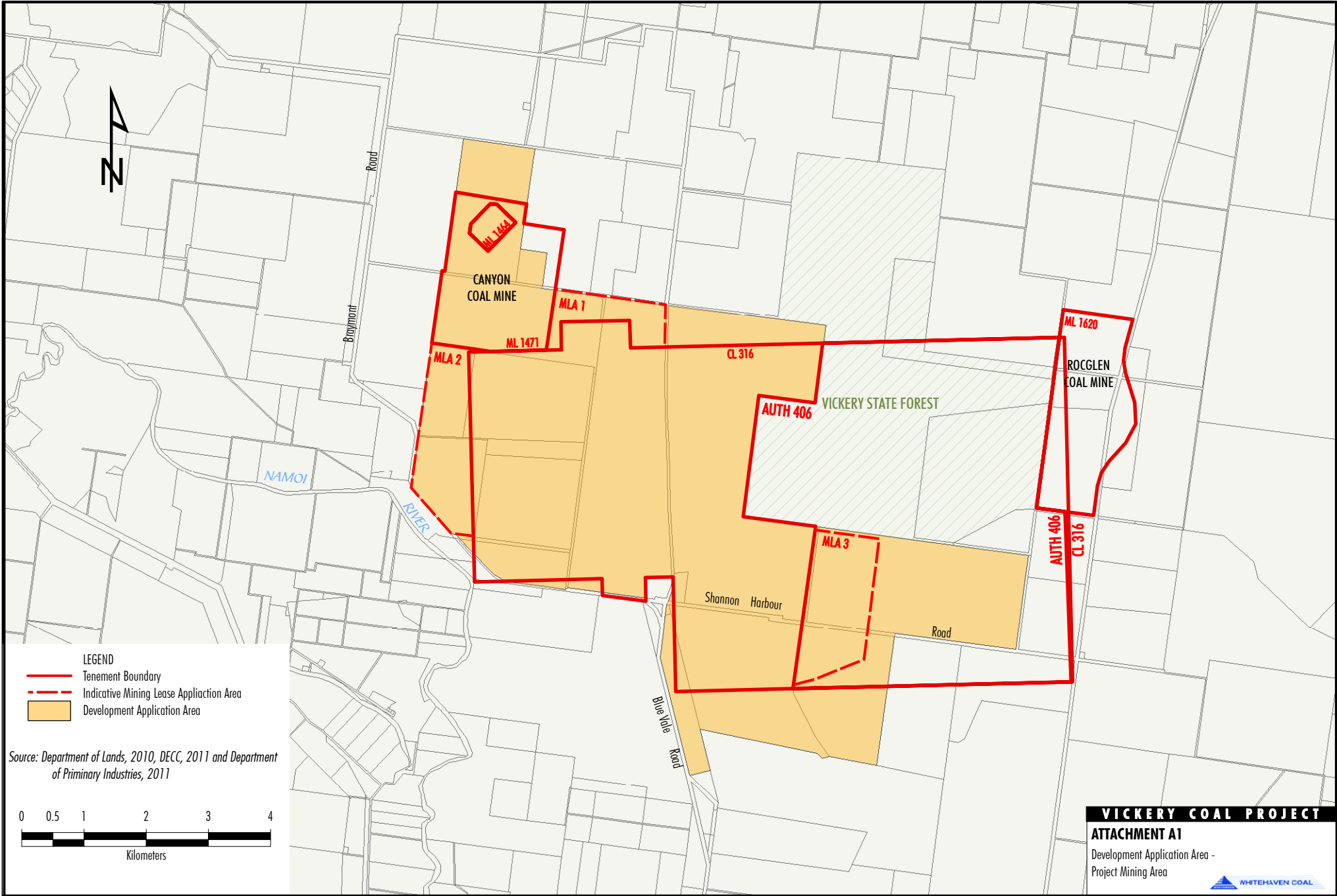
Department of Infrastructure, Planning and Natural Resources (2005b) *Draft Guideline: What is the Level and Scope of Assessment for Major Projects? Preliminary Assessment*.

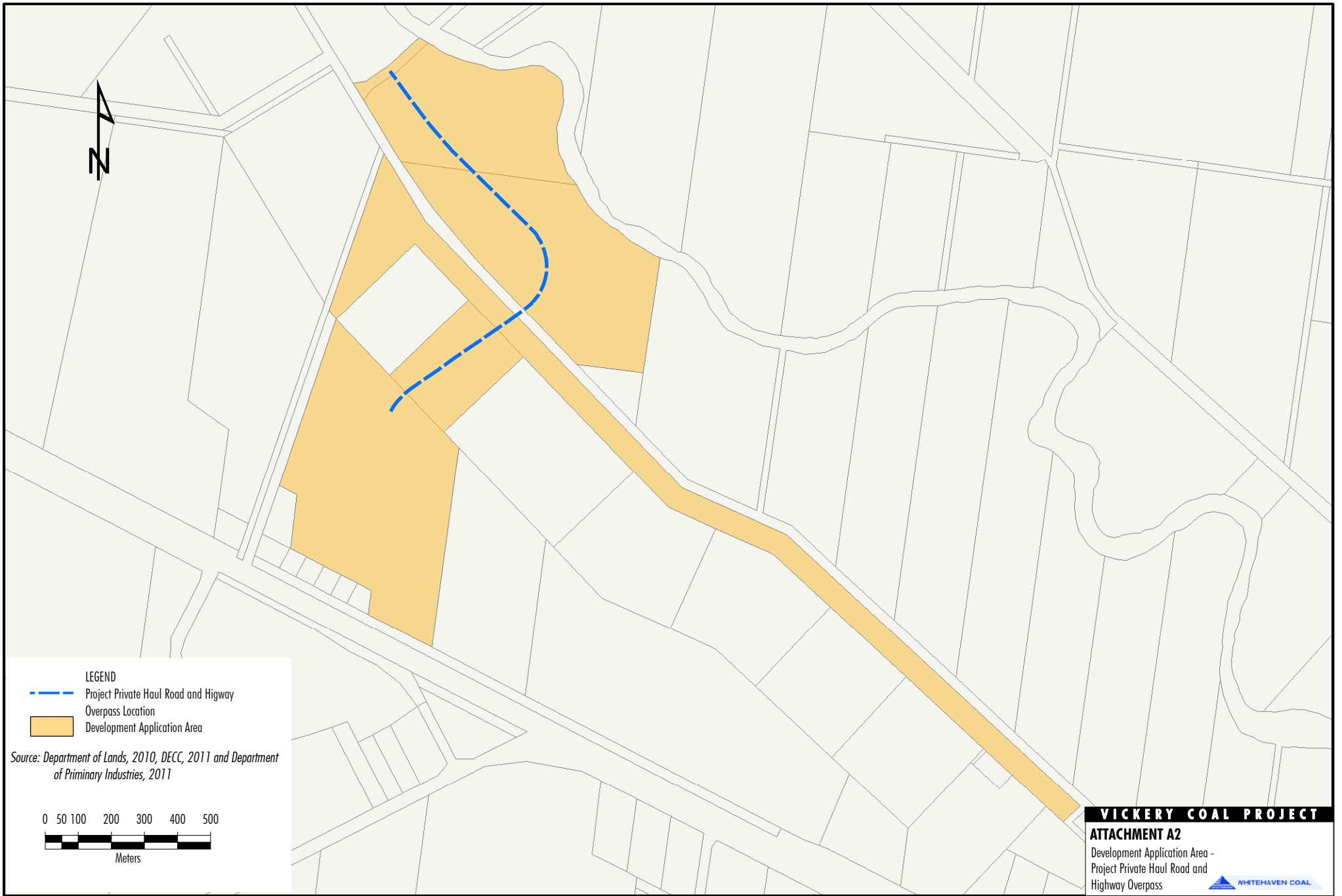
Department of Planning (2011) *Draft Proponent's Guide: Preparing Part 3A Applications*.

Environment Protection Authority (1999) *Environmental Criteria for Road Traffic Noise*.

NSW Office of Water (2010) *Upper Namoi Groundwater Sources: Resource Condition Assessment Report – 2010*.

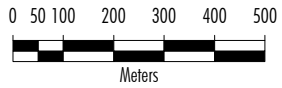
ATTACHMENT A
DEVELOPMENT APPLICATION AREA





- LEGEND**
-  Project Private Haul Road and Highway Overpass Location
 -  Development Application Area

Source: Department of Lands, 2010, DECC, 2011 and Department of Primary Industries, 2011



VICKERY COAL PROJECT

ATTACHMENT A2

Development Application Area -
Project Private Haul Road and
Highway Overpass



ATTACHMENT B
SCHEDULE OF LANDS

**Table B-1
Project Mining Area Schedule of Lands**

Tenure Type	Lot Number	Deposited Plan Number
FREEHOLD	2	1038308
FREEHOLD	3	1038308
FREEHOLD	37	754929
FREEHOLD	39	754929
FREEHOLD	1	570414
FREEHOLD	2	570414
FREEHOLD	1	1018347
FREEHOLD	2	1018347
FREEHOLD	3	1018347
FREEHOLD	5	1018347
FREEHOLD	2	1102940
FREEHOLD	1	219923
FREEHOLD	2	219923
FREEHOLD	3	219923
FREEHOLD	7	1018347
FREEHOLD	23	754929
GUNNEDAH SHIRE COUNCIL	1	1102940

**Table B-2
Project Private Haul Road and Highway Overpass Schedule of Lands**

Tenure Type	Lot Number	Deposited Plan Number
GUNNEDAH SHIRE COUNCIL	2	1034511
STATE OF NEW SOUTH WALES	7052	1119794
FREEHOLD	1	1034511
STATE OF NEW SOUTH WALES	7010	1074926
FREEHOLD	678	705086
FREEHOLD	111	755503