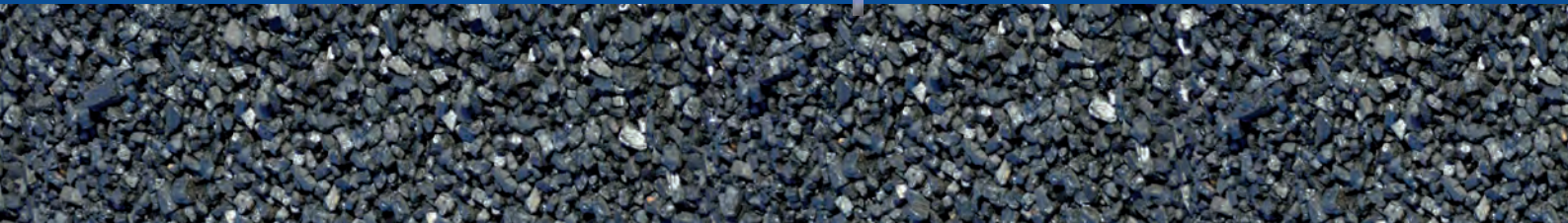


Vickery Coal Project

Environmental  
Impact  
Statement



## EXECUTIVE SUMMARY

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## ES1 OVERVIEW

### Background

Development Consent for the Vickery Coal Mine was originally granted in October 1986. Initial mining activities were underground, and were limited to the 'Red Hill' area. From 1991 to 1998 the 'Shannon Hill', 'Blue Vale' and 'Greenwood' open cuts were developed to mine coal seams near the surface. Mining at the Vickery Coal Mine ceased in 1998 and the site was subsequently rehabilitated. The site is currently under care and maintenance.

### Project Environmental Impact Assessment

Whitehaven Coal Limited (Whitehaven) is planning to recommence open cut mining at Vickery. The Vickery Coal Project (the Project) would involve the development and operation of an open cut coal mine that would mine the deeper seams not extracted by the former Vickery Coal Mine. The Project is located approximately 15 kilometres (km) south-east of Boggabri and approximately 25 km north of Gunnedah in New South Wales (Figure ES-1).

This document is an Environmental Impact Statement (EIS) for the Project. It has been prepared to address the Director-General's Requirements issued by the NSW Department of Planning and Infrastructure (DP&I) and will be assessed under Part 4 of the *Environmental Planning and Assessment Act, 1979*.

The specialist studies completed for the Project are comprehensive and address the Director-General's Requirements. The Project environmental studies included analysis of potential cumulative and Project-only impacts and development of suitable mitigation measures.

### Nature of the Project

The Project would involve the development of an open cut coal mine producing up to approximately 4.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal for a period of approximately 30 years.

Waste rock generated by the open cut mining (i.e. overburden and interburden/partings) would be placed within external emplacements to the west and east of the planned open cut (i.e. Western Emplacement and Eastern Emplacement) and within the mined-out voids (Figure ES-2).

A new Mine Infrastructure Area (MIA) would be constructed to produce sized ROM coal. It would also contain workshops, offices and mine services and facilities.

The sized ROM coal would be transported by haulage trucks to the existing Whitehaven Coal Handling and Preparation Plant (CHPP) and rail load-out facility, which is situated on the outskirts of Gunnedah (approximately 20 km to the south of the Project open cut).

The Project also includes construction of an approximately 1 km long section of private haul road (including an overpass over the Kamilaroi Highway) between Blue Vale Road and the Whitehaven CHPP. This would remove the need for coal trucks to cross the Highway (Figure ES-3).

### Key Features of the Project

The Project is located within an 'island' of Permian-aged sedimentary rocks of the Maules Creek Formation, which is surrounded by the Upper Namoi Alluvium associated with the floodplains of the Namoi River. The geological setting has influenced the topography, soils and vegetation, which in turn has influenced the current and historical agricultural land use of the area.

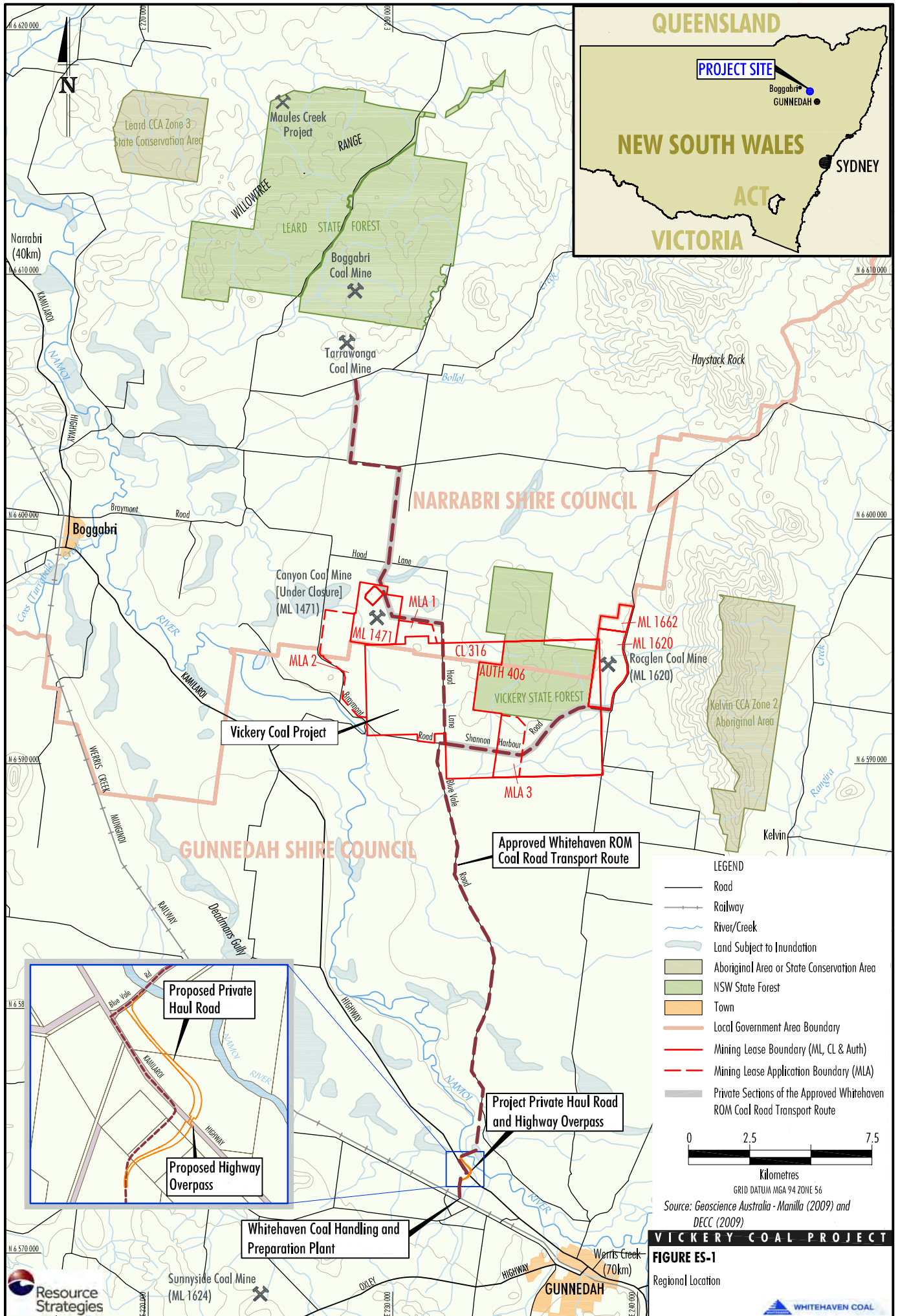
The topography is more elevated and undulating within the Project mining area, when compared with the adjoining floodplains to the south, west and north. In addition, the soils are generally thinner and less fertile than the adjoining floodplains.

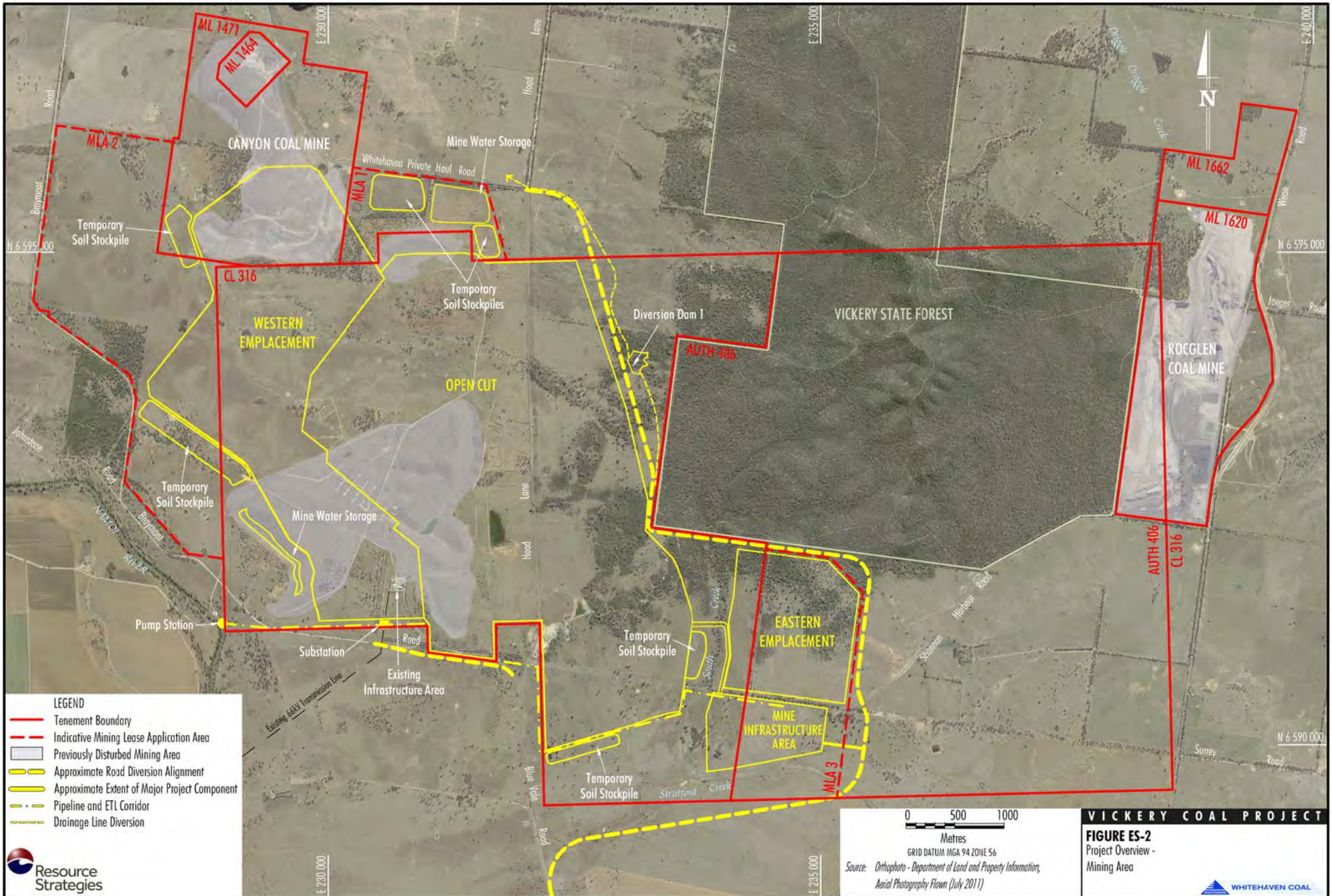
The majority of the Project mining area (i.e. 1,284 hectares [ha]) is cleared and is dominated by native pasture species and occasional regrowth trees. Approximately 464 ha within the Project area consists of scattered remnants of woodland, semi-cleared woodland, and White Cypress Pine regrowth. In addition, the Project includes some 405 ha of land that has been previously disturbed by mining activities and is now rehabilitated.

Whitehaven has bought several properties surrounding the site that would otherwise have been adversely affected by the Project. These purchases limit the number of private receivers affected by Project groundwater drawdown effects, and noise and air quality emissions. Best practice management would be used during the Project life to reduce amenity impacts on the remaining privately-owned properties in the local area.

A significant biodiversity offset area, comprising approximately 1,671 ha of freehold land adjoining Mount Kaputar National Park, is a key feature of the Project.

The Socio-Economic assessment indicates the Project would provide a net production benefit of approximately \$915 million and would provide significant economic stimulus to the regional and New South Wales economies.





- LEGEND**
- Tenement Boundary
  - - - Indicative Mining Lease Application Area
  - Previously Disturbed Mining Area
  - Approximate Road Diversion Alignment
  - Approximate Extent of Major Project Component
  - - - Pipeline and ETL Corridor
  - - - Drainage Line Diversion



0 500 1000  
Metres  
GRID DATUM MGA 94 ZONE 56  
Source: Orthophoto - Department of Land and Property Information,  
Aerial Photography Flown (July 2011)

**VICKERY COAL PROJECT**  
**FIGURE ES-2**  
Project Overview -  
Mining Area



## ES2 CONSULTATION

The Project consultation program has been comprehensive and has assisted with the identification of issues that are of concern or interest to stakeholders.

Key New South Wales Government agencies were consulted during the preparation of this EIS, including presentation of various refinements to the Project, key findings of the environmental studies and design considerations for environmental management measures.

Meetings were held with representatives of Narrabri Shire Council and Gunnedah Shire Council during the development of this EIS. Discussions included potential impacts on the road network and potential financial contributions.

Whitehaven lodged a Referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999* in January 2012. In May 2012 the Project was declared to be 'not a controlled action if undertaken in a particular manner'. The particular measures required to be implemented relate to the management of the threatened flora species Winged Peppergrass (*Lepidium monoplacoides*), and are specified in the Notice of Determination Decision (EPBC 2012/6263).

A community information day was held in September 2012, and Whitehaven has provided Project updates to the local community through several Project newsletters. In addition, Whitehaven has consulted with local landholders who participated in the Project bore census and landholders in the immediate vicinity of the mine with regard to visual, noise and air quality assessments and potential property acquisitions.

Aboriginal community consultation was undertaken in accordance with *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. Numerous registrations of interest were received from Aboriginal stakeholders and these stakeholders were invited to participate in the Project Aboriginal Cultural Heritage Assessment.

Where relevant to the Project, the issues raised by the parties above during the consultation program have been considered during the preparation of this EIS.

## ES3 KEY FEATURES OF THE PROJECT

### *Project Description*

The main activities associated with the development of the Project are listed below:

- Development and operation of an open cut mine within Coal Lease 316, Authorisation 406, Mining Lease 1471, Mining Lease Application (MLA) 1, MLA 2 and MLA 3.
- Use of conventional mining equipment, haul trucks and excavators to remove up to 4.5 Mtpa of ROM coal and approximately 48 million bank cubic metres of waste rock per annum from the planned open cut.
- Placement of waste rock (i.e. overburden and interburden/partings) within external emplacements to the west and east of the planned open cut (i.e. Western Emplacement and Eastern Emplacement) and within mined-out voids.
- Construction and use of a MIA, including on-site coal crushing, screening and handling facilities to produce sized ROM coal, workshops, offices and services.
- Transport of ROM coal by haulage trucks to the Whitehaven CHPP on the outskirts of Gunnedah (approximately 20 km to the south of the Project open cut) for processing.
- Use of an on-site mobile crusher for coal crushing and screening of up to 150,000 tonnes of domestic specification coal per annum for direct collection by customers at the Project site.
- Use an on-site mobile crusher to produce up to approximately 90,000 cubic metres of gravel materials per annum for direct collection by customers at the Project site.
- Construction and use of a water supply bore, and a surface water extraction point on the bank of the Namoi River and associated pump and pipeline systems.
- Construction and use of new dams, sediment basins, channels, dewatering bores and other water management infrastructure required to operate the mine.
- Construction and use of new soil stockpile areas, laydown areas and gravel/borrow areas.
- Construction of a 66 kilovolt (kV)/11 kV electricity substation and 11 kV electricity transmission line.

- Transport of coarse rejects generated within the Whitehaven CHPP via truck to the Project for emplacement within an in-pit emplacement area.
- Transport of tailings (i.e. fine rejects) generated within the Whitehaven CHPP via truck to the Project for emplacement within co-disposal storage areas in the open cut and/or disposal in existing off-site licensed facilities (e.g. the Brickworks Pit).
- Realignment of sections of Blue Vale Road, Shannon Harbour Road and Hoad Lane to the east and south of the open cut.
- Realignment of the southern extent of Braymont Road to the south of the open cut.
- Construction of an approximately 1 km long section of private haul road (including an overpass over the Kamilaroi Highway) between Blue Vale Road and the Whitehaven CHPP (referred to as the private haul road and Kamilaroi Highway overpass).
- Ongoing exploration, monitoring and rehabilitation activities.
- Construction and use of other associated infrastructure, equipment and mine service facilities.

Approximately 135 million tonnes of ROM coal would be mined from the open cut during the life of the Project. Mining operations would be conducted up to 24 hours per day, seven days per week.

#### **Benefits of the Project**

The Project would involve the production of up to 4.5 Mtpa of ROM coal over a mine life of 30 years. The Project would produce a combination of thermal and semi-soft coking coal that would be sold domestically or exported for electricity generation and steel production overseas.

Project coal production would contribute to New South Wales export income, royalties and State and Commonwealth tax revenue, as well as contributing to manufacturing and electricity supply in countries that purchase Project coal. The Project would also provide a reliable supply of coal for a number of manufacturing and other commercial industries in Australia.

In addition, the Project would involve the production of gravel for use as construction material. Gravel production at the mine site would be a beneficial use of waste rock to be generated by the Project.

The Socio-Economic Assessment indicates that operation of the Project is predicted to have the following positive impacts on the regional economy (the statistical local areas of Narrabri and Gunnedah):

- \$588 million in annual direct and indirect regional output or business turnover;
- \$271 million in annual direct and indirect regional value-added;
- \$38 million in annual household income; and
- 423 direct and indirect jobs.

The Project would have even more pronounced positive impacts on the New South Wales economy, comprising:

- \$1,111 million in annual direct and indirect output or business turnover;
- \$520 million in annual direct and indirect value-added;
- \$196 million in annual household income; and
- 2,292 direct and indirect jobs.

The Socio-Economic Assessment indicates a net benefit of approximately \$915 million would be forgone if the Project is not implemented.

## **ES4 KEY ENVIRONMENTAL ASSESSMENT ISSUES AND MANAGEMENT**

### **Land Resources**

The natural topography in the Project mining area consists of undulating hills and slopes, with the elevation ranging from approximately 255 metres (m) Australian Height Datum (AHD) to approximately 325 m AHD. The topography is more dissected and steeper within the Vickery State Forest to the east of the Project where it rises to approximately 479 m AHD. To the north, south and west of the Project mining area the topography is gently sloping to almost flat, and generally drains towards the Namoi River.

An Agricultural Impact Statement has been prepared for the Project in accordance with the DP&I's guidelines, and the *New England North West Strategic Regional Land Use Plan* which was released in September 2012.



The entire Project mining area is currently owned by Whitehaven (with the exception of a small block of land owned by the Gunnedah Shire Council), with the land being used for cattle grazing by several local landholders under licence. There are no occupied dwellings within the Project mining area.

Development of the Project mining area would result in disturbance to 1,520 ha of Class 4 Agricultural Suitability land, 595 ha of Class 3 land, and 123 ha of Class 2 land. These areas would be progressively disturbed during the 30 year life of the Project as the open cut advances. Areas of the Project mining area that would not be disturbed until later in the mine life would continue to be used for cattle grazing until such time as they are required.

The private haul road and Kamilaroi Highway overpass would disturb 4 ha of Class 2 and 3 Agricultural Suitability land.

The rehabilitation and mine closure strategy for the Project includes restoration of approximately 1,360 ha of native forest/woodland and approximately 780 ha of agricultural land suitable for grazing and some rotation cropping in parts.

### **Groundwater**

A Groundwater Assessment for the Project was undertaken by Heritage Computing and was reviewed by Dr Frans Kalf.

The Groundwater Assessment has evaluated the potential impacts of the Project on groundwater resources using a regional numerical groundwater model.

The model covers an area of approximately 957 square kilometres. It incorporates the Tarawonga Coal Mine to the north and the Rocglen Coal Mine the east, as well as relevant data and information from the mine plans and groundwater models developed for these projects.

A transient calibration of the numerical regional groundwater model was conducted and the model was then used to simulate the potential effects of the Project on the local and regional aquifer systems and groundwater users.

The two main groundwater systems that occur within the Project mining area and surrounds are:

- porous and fractured hard rock groundwater systems within the coal measures of the Maules Creek Formation; and
- aquifers associated with the unconsolidated alluvial sediments of the Namoi River floodplain (i.e. the Upper Namoi Alluvium aquifer).

The model was also used to estimate the potential magnitude of annual groundwater inflows to the open cut over the life of the Project (and post-mining) from these two systems for the purposes of water licensing and water management planning.

The groundwater modelling predicts that the zone of groundwater drawdown surrounding the Project open cut during operations and post-closure would be largely restricted to the Maules Creek Formation.

There is one privately-owned bore within the island of Maules Creek Formation in which the Project is located (i.e. Bore SK1). This bore has been drilled to a depth of between 85 and 87 m and is predicted to experience a drawdown of 1 to 5 m. For Bore SK1, Whitehaven would provide mitigation/compensation/offset measures commensurate with the level of impact.

No privately-owned census bores within the Upper Namoi Alluvium groundwater system surrounding the Project are predicted to be materially impacted during mining operations or post closure (i.e. any drawdown effect would be less than 1 m and is therefore considered to be negligible). The Project would therefore not impact the agricultural use of the Upper Namoi Alluvium groundwater system for irrigation or other agricultural purposes.

A groundwater monitoring program would be developed and implemented for the Project. This program, and ongoing validation of the regional numerical groundwater model, would be used to identify, assess, and manage potential impacts on groundwater users in the vicinity of the Project.

### **Surface Water**

A Surface Water Assessment for the Project was undertaken by Evans & Peck.

The Project mining area is largely located within the Stratford Creek and Driggle Draggie Creek sub-catchments which ultimately flow into the Namoi River south of Boggabri. Runoff from the south-western extent of the Project mining area flows directly into the Namoi River.

The private haul road and Kamilaroi Highway overpass is located approximately 200 m to the west of the Namoi River on its floodplain.

Potential impacts of the Project on surface water quality include the reduction in surface water quality due to uncontrolled site runoff, controlled licensed discharges and/or alteration of groundwater quality affecting baseflow in surface water resources.

The Project water management system would be designed to maintain separation between surface water runoff from undisturbed, rehabilitated and active mining areas, in order to:

- minimise the capture of surface water runoff from undisturbed areas, by optimising the diversion of up-catchment water to downstream receiving waters;
- provide controlled release for surface water runoff from rehabilitated mine areas through licensed discharge points in accordance with Environment Protection Licence conditions;
- capture, store and manage surface water runoff from partially rehabilitated mine areas and infrastructure areas, and provide controlled release of these waters through licensed discharge points in accordance with Environment Protection Licence conditions; and
- capture and store surface water runoff from active mining areas and mine-affected water, with no release off-site.

The Project would result in changes to flows in local creeks due to the progressive extension of the open cut and associated capture and re-use of drainage from operational disturbance areas and controlled releases from licensed discharge points.

The southern part of the Project open cut and the MIA would be protected from extreme flooding events from local watercourses by both temporary and permanent flood bunds.

A Water Management Plan, incorporating the Site Water Balance, Erosion and Sediment Control Plan, Surface Water Monitoring Program, Groundwater Monitoring Program, and the Surface Water and Groundwater Response Plan would be prepared for the Project.

The Surface Water and Groundwater Response Plan would describe how Whitehaven would respond to any potential exceedances of water performance criteria, and it would describe the contingent mitigation/compensation/offset measures that would be implemented in the event that downstream water users or riparian vegetation are adversely affected by the Project.

### **Noise and Blasting**

A Noise and Blasting Impact Assessment for the Project was undertaken by Wilkinson Murray. The Project would operate 24 hours per day and seven days per week.

An acoustic model was developed that simulates the Project components using noise source information (i.e. sound levels and locations) and predicts noise levels at relevant receiver locations. The model considers meteorological effects, surrounding terrain, distance from source to receiver and noise attenuation.

A number of iterative steps were undertaken to assess the potential noise impacts and develop appropriate mitigation measures for the Project.

Whitehaven commits to the implementation of a pro-active noise management system for the Project. This is a system where meteorological forecasting and real-time noise and meteorological monitoring is used to anticipate upcoming periods of adverse weather conditions that may generate evening and/or night-time noise exceedances at private receivers. In response, mining operations would be altered when unfavourable meteorological conditions are predicted to target compliance with noise criteria.

In summary, with these measures in place, the operational noise assessment indicates:

- During periods of calm meteorological conditions, operational noise from the Project would comply with the 35 A-weighted decibels (dBA)  $L_{Aeq,15min}$  criterion at all privately-owned receivers.
- During the daytime, operational noise levels (assessed under relevant meteorological conditions) are predicted to exceed the 35 dBA  $L_{Aeq,15min}$  criterion at four receivers. In most instances, Project operational noise levels at receiver locations would be less during the daytime than during the evening and night.
- During the night, exceedances of the 35 dBA  $L_{Aeq,15min}$  criterion by between 1 to 2 dBA are predicted for two privately-owned receivers during adverse meteorological conditions.
- During the night, exceedances of the 35 dBA  $L_{Aeq,15min}$  criterion by between 3 to 5 dBA are predicted for two privately-owned receivers during adverse meteorological conditions.

- During the night, exceedances of the 35 dBA  $L_{Aeq,15min}$  criterion by greater than 5 dBA are predicted for two privately-owned receivers during adverse meteorological conditions.

The Noise and Blasting Assessment also indicates that the Project would comply with relevant blasting criteria at all privately-owned residences.

A Noise Management Plan would be prepared and implemented for the Project. It would describe the noise management system to be used at the mine, including details of:

- noise mitigation measures and real-time noise and meteorological monitoring locations for the Project;
- the predictive meteorological forecasting and the pro-active noise management system;
- trigger levels and protocols for implementing additional mitigation measures; and
- complaint response protocols.

A Blast Management Plan would also be developed and implemented for the Project.

### **Air Quality**

An Air Quality and Greenhouse Gas Assessment for the Project was undertaken by PAEHolmes. Modelling was used to assess potential air quality impacts associated with the Project.

Emission inventories were prepared for the Project in consideration of the anticipated mining activities including coal extraction, waste rock removal rates, haul road distances and routes, stockpile and open cut areas and equipment operating hours. Best practice air quality management measures were considered by PAEHolmes in the development of the Project emission inventories.

The Air Quality and Greenhouse Gas Assessment indicates that no exceedance of the relevant criteria is predicted at any privately-owned existing residence for the Project-only particulate matter concentrations or dust deposition levels.

One approved, but yet to be constructed, dwelling site is predicted to experience 24-hour average  $PM_{10}$  concentrations above the relevant criteria.

A network of real-time dust monitors in the vicinity of the Project would be used to continuously log short-term particulate concentrations and report the data to a web based recording system.

When specified short-term trigger levels are reached or exceeded, a message would alert a Whitehaven representative to the elevated short-term dust levels. The Project meteorological station would report wind conditions at the time, allowing personnel to evaluate the likely origin of the elevated dust levels enabling appropriate mitigation and response measures to be implemented.

An additional component of the dust management system would be a meteorological forecasting system to predict what the meteorological conditions would be, enabling short-term mine planning to be conducted in consideration of potential upcoming weather conditions with the potential to exacerbate air quality impacts (e.g. increasing the levels of controls or limiting mining activities in certain areas).

The real-time air quality monitoring would complement the existing and proposed monitoring systems for other mining operations in the area (e.g. the Tarrawonga, Rocglen and Boggabri Coal Mines and the Maules Creek Coal Project).

An Air Quality and Greenhouse Gas Management Plan would be prepared and implemented during construction and operation of the Project. The plan would include details of the air quality monitoring system as well as dust mitigation measures to be used at the Project (e.g. water application on haul roads and other best practice management strategies to reduce amenity impacts on privately-owned properties).

Blasting activities also have the potential to result in fugitive fume and particulate matter emissions. A Blast Management Plan would be prepared and would include measures for the minimisation of fume and particulate matter emissions from Project blasts.

### **Terrestrial Ecology**

An Ecological Assessment has been prepared for the Project by Niche Environment and Heritage.

The Project is positioned on the foothills and slopes adjoining the eastern boundary of the Vickery State Forest (Figures ES-1 and ES-2). Land use to the north, south and west is dominated by grazing and cereal/fodder cropping on the flatter and more fertile areas.

The Project would require the progressive removal of approximately 464 ha of scattered remnants of native woodland, semi-cleared woodland and White Cypress regrowth. It would also involve disturbance to approximately 1,284 ha of grassland areas with occasional regrowth trees. The remainder of the Project disturbance area consists of previously disturbed rehabilitation areas (405 ha) and other non-vegetation areas such as farm dams, roads, tracks and existing infrastructure.

Approximately 6 ha of Box-Gum Woodland, which is an endangered ecological community (EEC), would be cleared within the Project mining area and private haul road and Kamilaroi Highway overpass area. In addition, approximately 1 ha of the Weeping Myall Woodland EEC would be cleared for the Project.

The Fauna Assessment indicates the Project would require the progressive removal of approximately 273 ha of woodland and forest habitat and approximately 1,284 ha of grassland habitat.

Whitehaven would prepare and implement a Biodiversity Management Plan for the Project to manage potential impacts on flora and fauna. The Project biodiversity offset addresses residual impacts of the Project on flora and fauna and maintenance of biodiversity values of the region in the medium to long-term.

Section ES5 provides a summary of rehabilitation and the biodiversity offset for the Project. The Project rehabilitation program would include the reinstatement of key agricultural and ecological values (Figures ES-4 and ES-5).

#### **Other Assessments**

An Environmental Risk Assessment was undertaken to identify key environmental issues that would require further assessment for the Project. The key issues identified are addressed in this EIS.

Other issues addressed in this EIS studies include greenhouse gas emissions, road transport, visual impacts, Aboriginal and non-Aboriginal heritage, regional economics, community infrastructure demand and hazards and risks.

## **ES5 REHABILITATION AND BIODIVERSITY OFFSET**

### ***Final Landform and Rehabilitation***

The overall rehabilitation goal for the Project mining area is to enhance the cover and connectivity of native woodland across the Project area, while retaining areas of agricultural land capable of supporting cattle grazing and cropping in rotation with sown pastures.

The Project final landform and revegetation program would provide for a combination of approximately 1,360 ha of native woodland/forest and some 780 ha of Class 3 and Class 4 Agricultural Suitability land (Figure ES-5).

Revegetation of native woodland/forest areas would include the planting of endemic native species characteristic of the local woodland/forest communities. This may include species characteristic of the Box-Gum Woodland EEC (e.g. White Box overstorey as well as appropriate understorey) in areas with suitable soil, slope and aspect.

Areas to be revegetated with native woodland/forest would have topsoil applied to a depth of approximately 0.3 m. Areas that are rehabilitated for agricultural use would have topsoil applied to a depth of approximately 0.9 m.

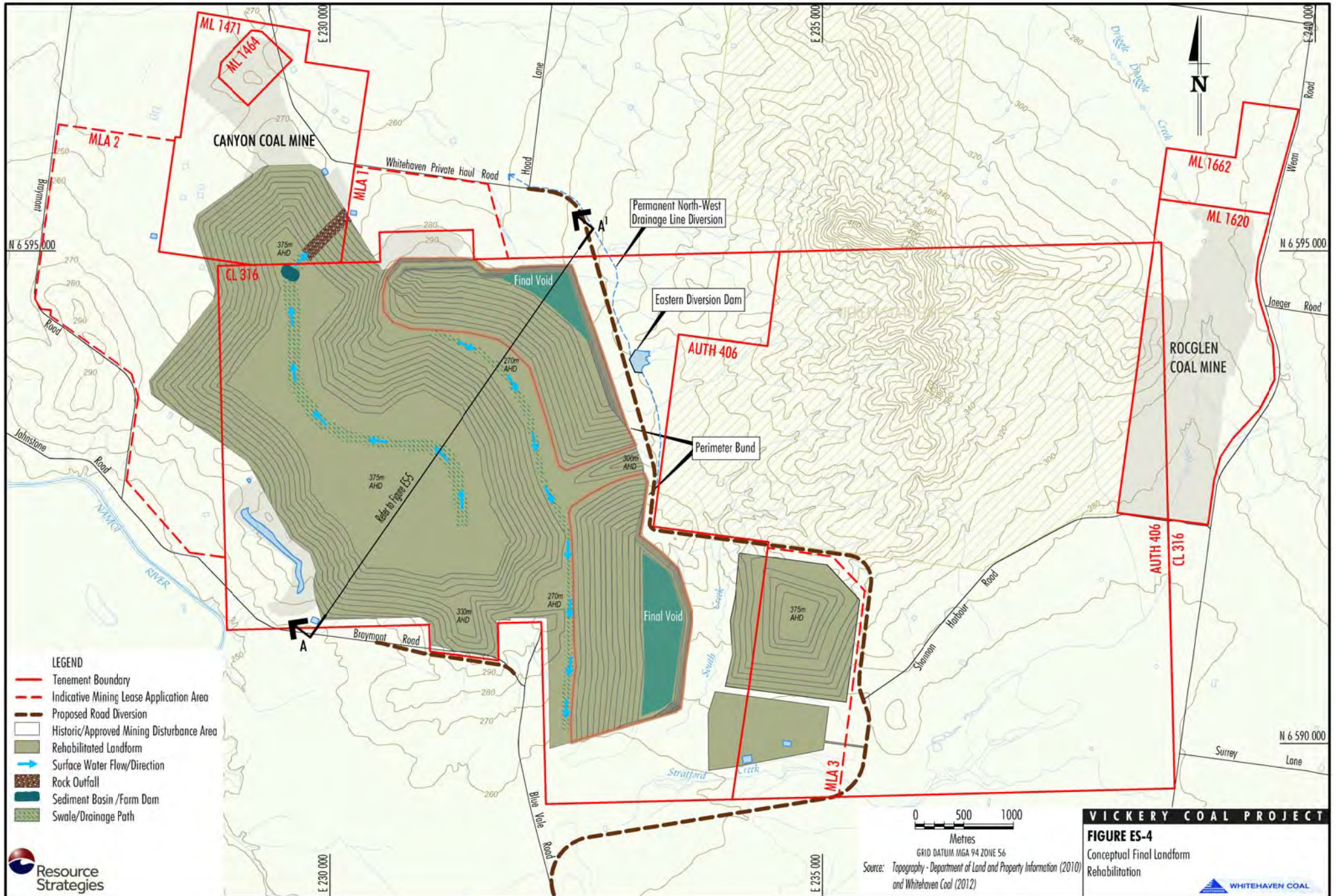
The Project would include two final voids in which pit lakes would form post closure. The pit lakes are not predicted to spill under any simulated climatic sequences. An adaptive management approach to the final void design and mine closure planning would be adopted during the life of the Project.

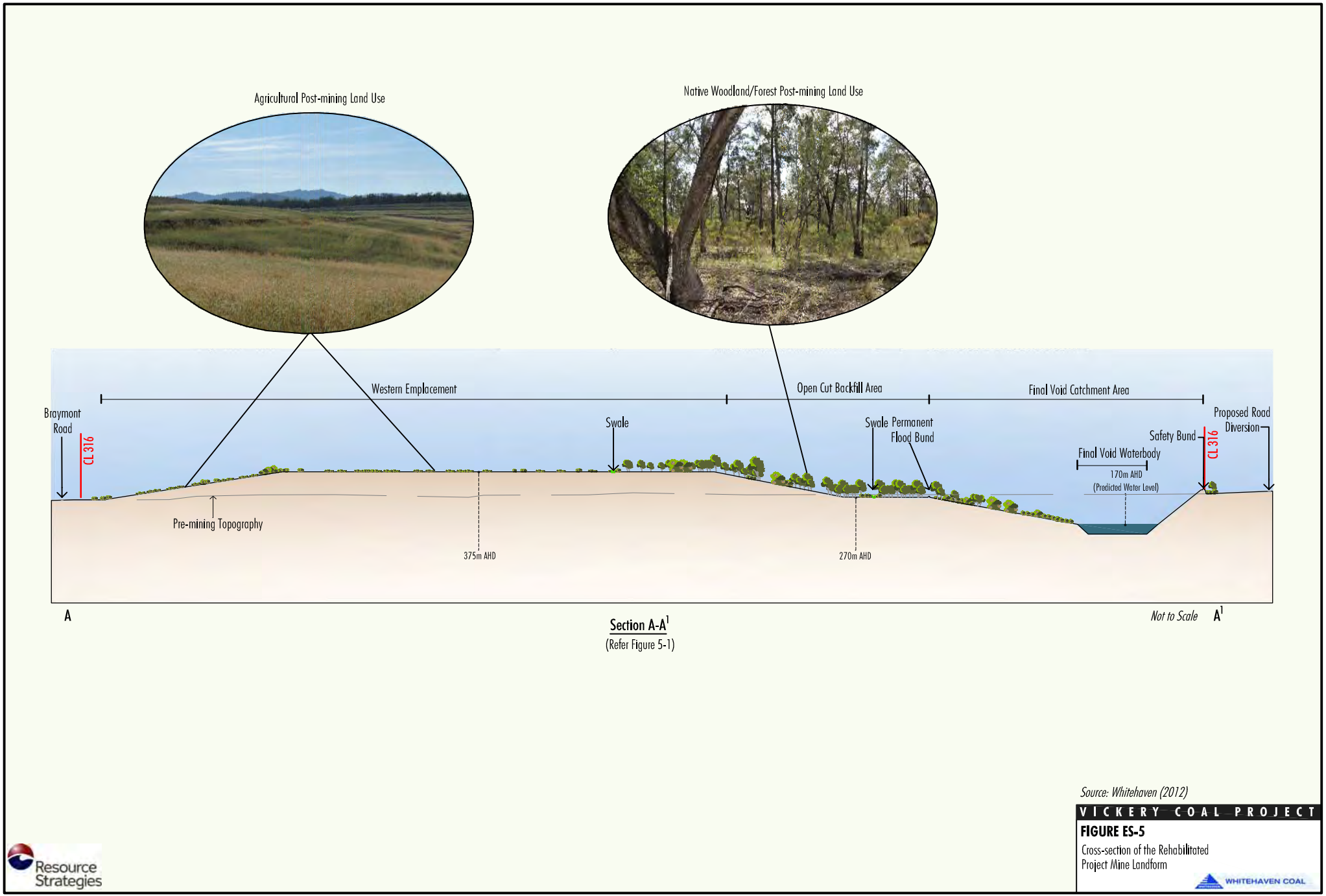
A schematic cross-section of the rehabilitated Project landform, including the northern final void and pit lake, is shown on Figure ES-5.

A Rehabilitation Management Plan would be developed and implemented for the Project, including a rehabilitation monitoring program designed to track the progress of rehabilitation and revegetation.

### ***Biodiversity Offset***

The biodiversity offset for the Project comprises approximately 1,671 ha of freehold land that has been purchased by Whitehaven. The offset is situated approximately 35 km to the north-northeast of the Project and adjoins Mount Kaputar National Park (Figure ES-6).





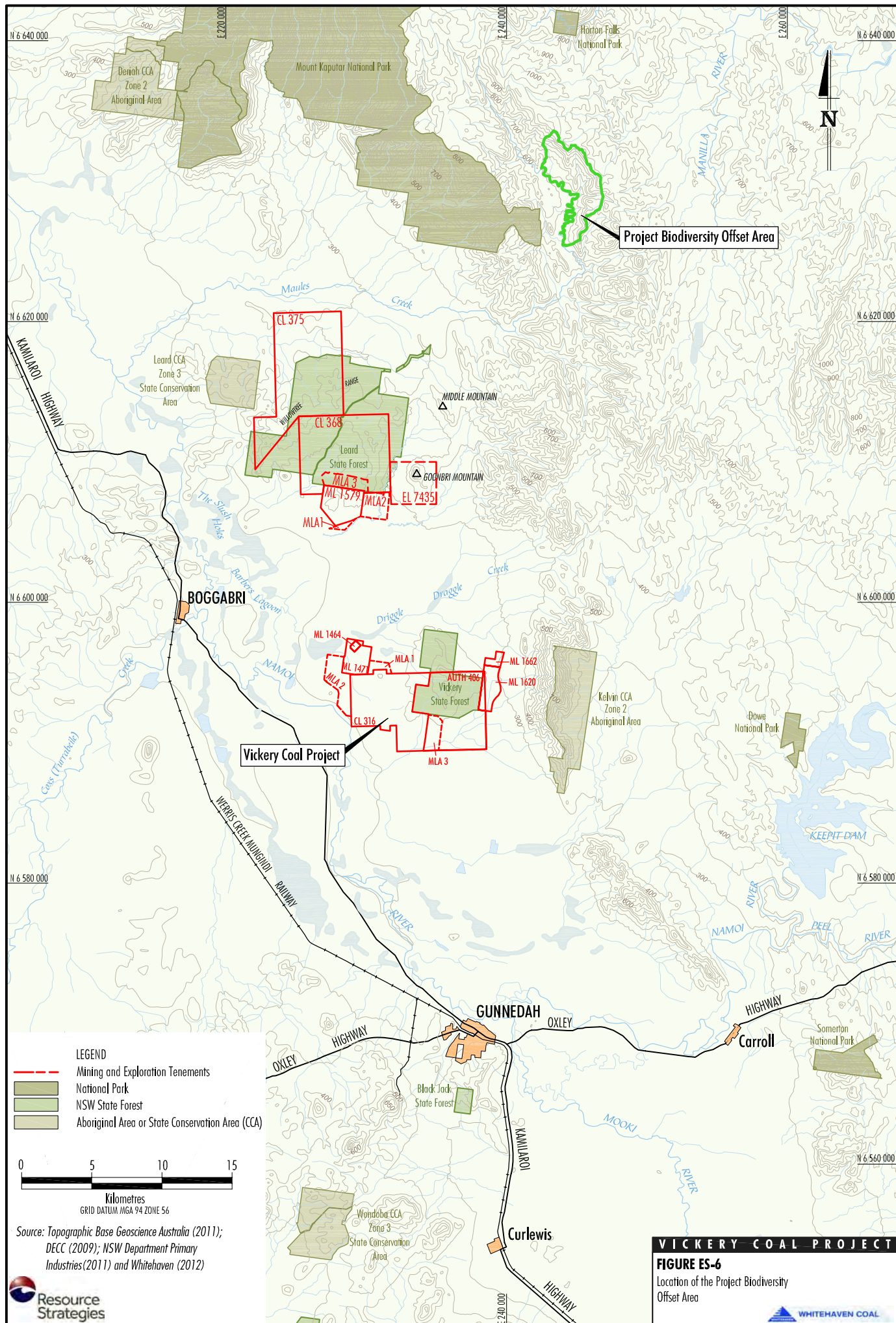
Source: Whitehaven (2012)

**VICKERY COAL PROJECT**

**FIGURE ES-5**

Cross-section of the Rehabilitated Project Mine Landform





The biodiversity offset area includes similar vegetation communities/fauna habitats and biodiversity values to the Project area, and has substantial areas of the Box-Gum Woodland EEC.

A number of management measures to enhance the offset area's flora and fauna values would be detailed in the Biodiversity Offset Strategy Plan to be prepared for the Project.

Whitehaven intends to reach an agreement with the New South Wales Government so that the biodiversity offset area can be permanently added to the adjoining Mount Kaputar National Park.

## **ES6 SUMMARY OF ENVIRONMENTAL MANAGEMENT AND MONITORING MEASURES**

Key environmental management and offset measures to be implemented for the Project include:

- implementation of a pro-active noise management system for the Project;
- management and mitigation of operational dust using the a combination of real-time monitoring and best practice dust management measures;
- progressive stripping, stockpiling and re-use of soil and vegetation resources in the Project rehabilitation program;
- rehabilitation of Project disturbance areas, to enhance the connectivity and ecological values of across the Project area, while retaining areas of agricultural land capable of supporting cattle grazing and cropping in rotation with sown pastures;
- provision of biodiversity offset measures for the Project; and
- management of the Project final voids to minimise potential long-term impacts on water resources.