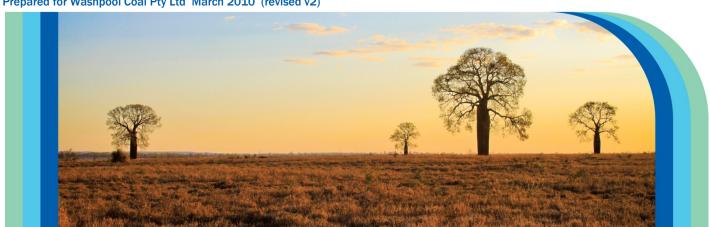
# WASHPOOL COAL MINE PROJECT

# **INITIAL ADVICE STATEMENT**

Prepared for Washpool Coal Pty Ltd March 2010 (revised v2)





# **TABLE**

# **OF CONTENTS**

1	INTRODUCTION	1	6 CONTACT DETAILS	28
1.1.	PROJECT SUMMARY	1	APPENDIX A - INTERESTED AND AFFECTED	
1.2.	THE PROPONENT	2	PERSONS	29
1.3.	PROJECT NEED	2		
1.4.	EXPLORATION HISTORY	8		
1.5.	PROJECT DELIVERY	8	LIST OF TABLES	
2	PROJECT DESCRIPTION	10	TABLE 1 / WASHPOOL PROJECT TENEMENT DETAILS  TABLE 2 / REGIONAL ECOSYSTEMS OF THE WASHPOOL	15
2.1.	MINERAL RESOURCE	10	PROJECT AREA	19
2.2.	MINING	10		
2.3.	WATER SUPPLY	15	LIST OF FIGURES	
2.4.	PROJECT TENEMENT DETAILS	15	FIGURE 1-1 / REGIONAL LOCATION PLAN	1
2.5.	EMPLOYMENT OPPORTUNITIES	16	FIGURE 1-2 / LOCATION PLAN	-
3	EXISTING ENVIRONMENT AND POTENTIAL IMPACTS	18	FIGURE 1-3 / WASHPOOL PROJECT AREA FIGURE 1-4 / PROPOSED TRANSPORT CORRIDORS	6
3.1.	LAND RESOURCES	18	FIGURE 1-5 / AQUILA'S PROJECT DELIVERY PROCESS	ç
3.2.	SURFACE WATER	19	FIGURE 2-1 / TYPICAL STRATIGRAPHIC COLUMN AND	
3.3.	GROUNDWATER	19	DETAILED SCORPIO SEAM SECTION	11
3.4.	FLORA	20	FIGURE 2-2 / WASHPOOL COAL RESOURCE	40
3.5.	FAUNA	20	CROSS-SECTION AND SUB CROP	12
3.6.	<b>ENVIRONMENT PROTECTION AND BIODIVERSITY</b>		FIGURE 2-3 / PROJECT TENURE AND LANDHOLDER	40
	CONSERVATION ACT 1999	21	PLAN	16
3.7.	AIR QUALITY	23	FIGURE 3-1 / PROJECT AREA LANDSCAPE	17
3.8.	GREENHOUSE GAS	23	FIGURE 3-2 / REGIONAL ECOSYSTEMS	21
3.9.	NOISE AND VIBRATION	23	FIGURE 4-1 / POTENTIALLY AFFECTED STAKEHOLDERS	26
3.10.	CULTURAL HERITAGE VALUES	23		
3.11.	INFRASTRUCTURE IMPACTS	24		
3.12.	VISUAL AMENITY	24		
3.13.	SOCIO-ECONOMIC	24		
4	COMMUNITY CONSULTATION	25		
5	ENVIDONMENTAL MANACEMENT	27		

WASHPOOL COAL PROJECT

### **INITIAL ADVICE STATEMENT**

Prepared for Washpool Coal Pty Ltd March 2010 (revised v2)

### 1 Introduction

### 1.1. PROJECT SUMMARY

Washpool Coal Pty Ltd (WC), a wholly owned subsidiary of Aquila Resources Limited, proposes the development of the Washpool Coal Mine Project (the Project), an open cut coal mine situated in the Bowen Basin, Central Queensland. The Project will deliver up to approximately 1.6 – 2.0 million tonnes per annum (Mt/a) of product coking coal for export markets.

The Project site is located 260 km west of Rockhampton, 60 km to the north east of Emerald and 24 km to the northwest of Blackwater (**FIGURE 1-1**). The Project is positioned between the Curragh Coal Mine (to the east) operated by Wesfarmers (Curragh) Ltd and Ensham Coal Mine (to the west) operated by Ensham Resources Pty Ltd. To the north of the Project area lies the Mackenzie River (**FIGURE 1-1**).

The Washpool Resource currently totals 138 Mt of Indicated and Inferred tonnes of high rank coal which exhibits good coking properties. Coal will be mined at approximately 4 Mt/a run-of-mine (ROM) coal which will produce approximately 1.6 – 2.0 Mt/a of product, until the depletion of reserves at approximately year 18. The coal will be mined initially using truck and shovel mining methods with a view to moving to dragline in the future, with the emphasis on in pit waste dumping. There are plans to transport the coal via rail along the existing Peak Downs – Emerald – Blackwater railway system, to the new Wiggins Island Coal Export Terminal (WICET) for export coal terminal for export to overseas markets.

Located within the Central Highlands Regional Council, the primary land uses in the region surrounding the Project site are mining and agriculture.

The coal resource for Washpool is located within Mineral Development Licence application (MDLa) 403, however, the Project study area is confined to a smaller proposed Mining Lease application (MLa) 80164. The proposed MLa area is shown in **FIGURE 1-2**. The coal resource is continuing to be defined by further exploration drilling. The MLa extent is defined by the coal resource and surface infrastructure requirements for the Project.

The Project is currently undergoing feasibility assessment which will allow for the selection of a preferred mining, preparation and transport option, and an alternative option which will initiate the internal approval and permitting process. WC is seeking to gain statutory approvals, primarily a Mining Lease within MDLa 403 together with the relevant environmental authority to allow production to commence in 2012.

The approval process for the Project will require an Environmental Impact Study (EIS) pursuant to Chapter 3 of the *Environment Protection Act* 1994 (EP Act). The purpose of this Initial Advice Statement (IAS) is provided to support an application for approval under Section 70 and Section 71 of the EP Act to prepare a voluntary EIS for the Project.

#### 1.2. THE PROPONENT

The Washpool Coal Mine Project is owned 100% by the Project Proponent, Washpool Coal Pty Ltd (WC). WC is a wholly owned subsidiary of Aquila Resources Limited (Aquila). Aquila is a publically listed exploration and mining company, with its headquarters based in Perth, Western Australia. Amongst other things, Aquila provides investors with an exposure to low-cost, long-life, small, high margin coal projects and mines.

The Aquila resource portfolio currently consists of:

- Iron Ore Western Australia and Africa.
- Coal Queensland, Botswana and South Africa.
- Manganese Africa.

The Aquila Resources Coal Group's vision is to deliver sustainable financial returns and growth through developing coal mines from exploration to operating assets. Its Queensland coal joint venture projects include:

- Isaac Plains (50% Aquila, 50% Vale) open cut operation (3.6 Mt/a metallurgical / thermal coal); and
- Eagle Downs (50% Aquila, 50% Vale) underground mine in final feasibility stage (7 Mt/a metallurgical coal); and
- Belvedere (24.5% Aquila, 24.5% AMCI and 51% Vale) underground mine in concept study stage (7-9 Mt/a metallurgical coal).

Aquila also has a number of joint venture exploration tenements owned equally with Vale which make up the Bowen Central Coal Pty Ltd portfolio of exploration tenements.

In addition to this, Aquila hold the following 100% Exploration Permits for Coal (EPC) tenements in Queensland:

- 5 EPCs in Northern Bowen Basin;
- 7 EPCs in Central Bowen Basin;
- 4 EPCs in the Surat Basin; and
- 3 EPCs in the Springsure Basin.

## 1.3. PROJECT NEED

The Project is expected to:

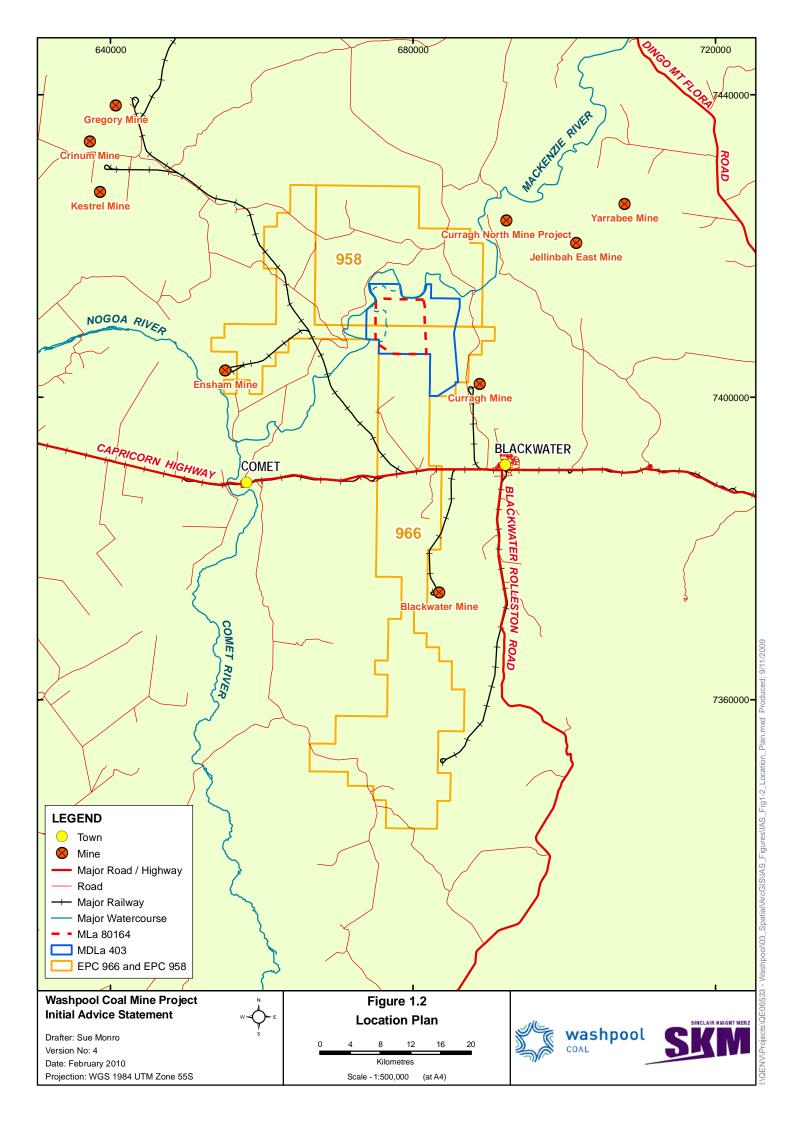
- contribute significantly to the local and State economy through the multiplier effect of associated mining related expenditure, investment, employment and opportunities for external support businesses; and
- maintain employment for up to approximately 400 people during construction and 300 people during operation (full time equivalents). Given the level of income earned by these employees, local expenditure by these employees will be a significant factor in supporting local communities.

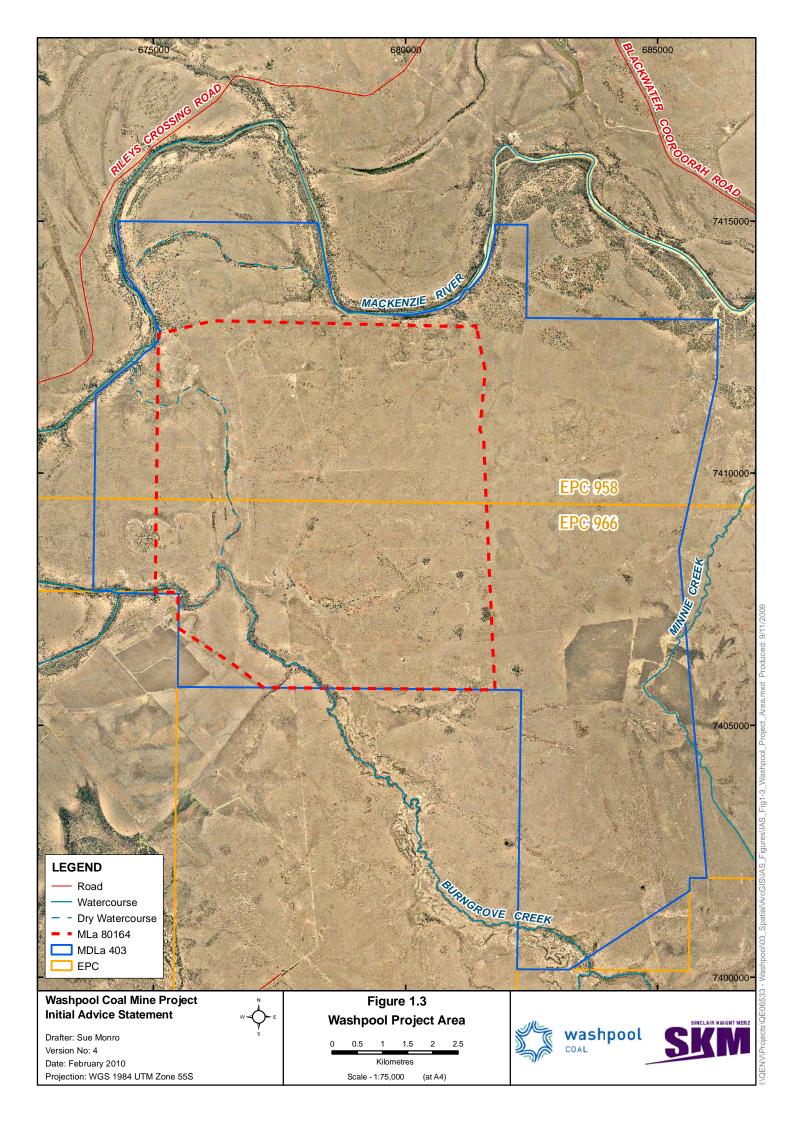
The Washpool coal resource has extremely strong coking properties, therefore making it a high value add product which can be blended with other coals, with the final blend being sold as a hard coking coal.

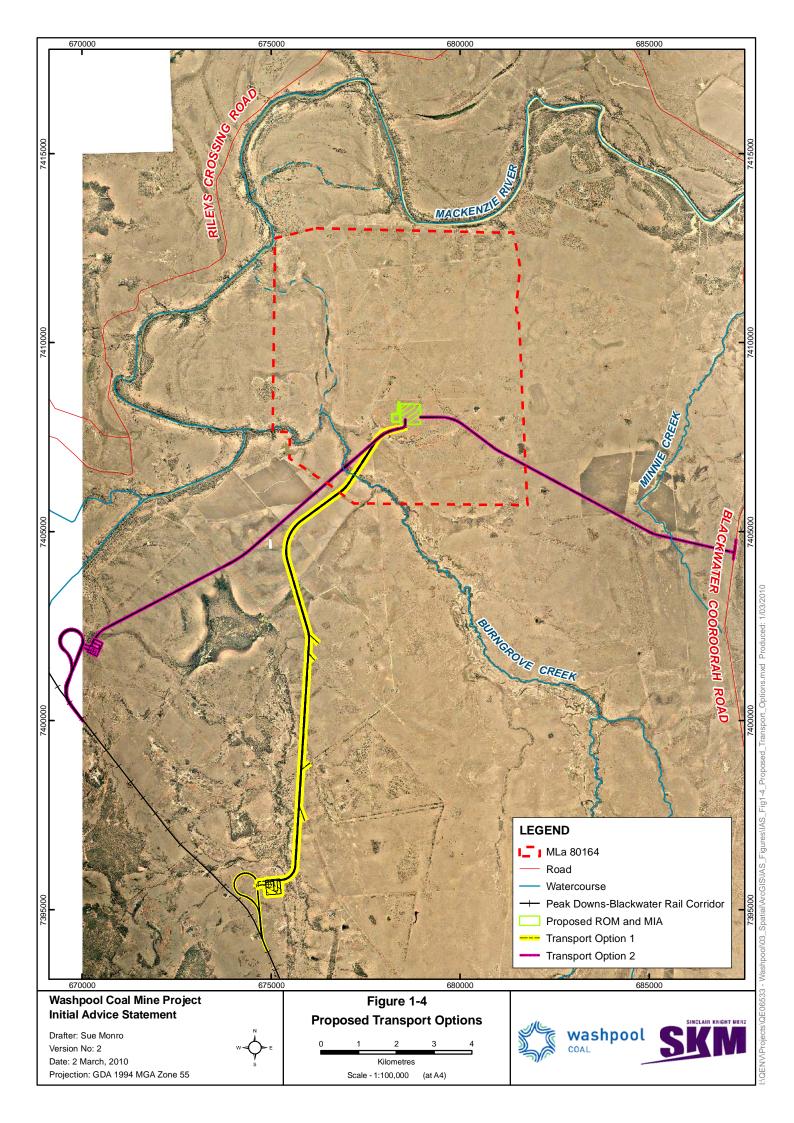
The product coal from the Project will be hauled a short distance within an infrastructure lease to a dedicated rail load out area where it will then be railed to the new Wiggins Island Coal Export Terminal for shipping to various customers predominately in China, Japan and Korea, therefore adding to royalties collected by the State.

At present WC are considering two options for an infrastructure lease. Option One being a separate haul road extending to the west and connecting to the Norwich Park branch railway system, and a light vehicle access road extending to the east from the mine industrial area, linking in with Blackwater-Cooroorah Road. Option Two has a combined haul road and light vehicle access corridor extending south from the mine industrial area. Both options are shown in **Figure 1-4** and are currently being assessed. The final preferred option will be presented in the EIS.









### PURPOSE AND SCOPE OF DOCUMENT

This Initial Advice Statement (IAS) has been prepared by WC to provide sufficient detail to enable advisory agencies and other stakeholders to have effective input into establishing the Terms of Reference (ToR) for an Environmental Impact Statement (EIS) for the Project. The EIS process will be initiated under the Queensland *Environmental Protection Act* 1994 (EP Act), where the Department of Environment and Resource Management (DERM) will be the assessment manager of applications for an Environmental Authority to carry out all mining and associated activities.

The EIS and the Environmental Management Plan (EM Plan) will provide more detailed information regarding the Project, and will be submitted to the DERM in due course following the finalisation of the ToR.

The purpose of this IAS is to give an overview of the Project and its potential impacts. It includes the following:

- project environmental setting;
- project description;
- discussion of alternatives; and
- potential environmental and social effects.

The overall emphasis of the IAS is to cover the likely worst case options under consideration that could have the most significant environmental impacts. The objective of this approach would be to obtain maximum flexibility with the Project's approvals to enable less environmentally significant options to be implemented should they be finally selected.

### 1.4. EXPLORATION HISTORY

Argos (QLD) Pty Ltd, a wholly owned company of Aquila Recourses Limited, was granted EPC 958 (Washpool) in June 2005. This was followed by EPC 966 (Mt Crocker) in April 2006. In 2006, Aquila completed four drill traverses spacing across EPC 958, which identified the resource. In 2007, Aquila commenced another exploration program to delineate the resource extent and target coal quality. A total of 69 holes, made up of ten cored drill holes and 59 chip drill holes were drilled, and from this the first JORC compliant resource was established. This data was used to identify mining and logistics options and to complete the Project Concept Study in July 2009. The Project Feasibility Study subsequently commenced following board approval, and is scheduled to be completed in the first quarter 2010.

# 1.5. PROJECT DELIVERY

A brief description of Aquila's project delivery process is described below.

Aquila approaches the development of its coal projects through a structured three stage Project Delivery Process (PDP) to systematically review options and minimise risk. This PDP is based on achieving a balance of the set of defined deliverables adapted to the unique properties of each project.

Each stage culminates in a documented report on which the decision to continue the process is made by the Board of Directors. This project delivery process will provide the platform on which a business approval can be granted to the project allowing the decision to proceed to final engineering, construction and ultimately on which operations can be based.

- Stage 1: Concept Study the purpose is to determine if an economic resource exists in a viable, fatal flaw free business case. The concept study identifies a viable business case for a project with the study demonstrating economic feasibility and provision of a framework to allow a follow-up feasibility study (this has been completed).
- Stage 2: Feasibility Study the purpose is to assess alternatives and select the base and alternate cases. The study
  document for this stage will describe the preferred installation that could realistically be built (this is currently being
  undertaken).
- Stage 3: Definitive Feasibility Study will describe the complete Project and installation to be built. This stage will
  document the Project with engineering and approvals completed for business approval, with accuracy suitable for
  external financing.

### FIGURE 1-5 / AQUILA'S PROJECT DELIVERY PROCESS



# 2 Project Description

### 2.1. MINERAL RESOURCE

The Washpool resource within MDL403 totals approximately 138 million tonnes of Indicated and Inferred tonnes, generating up to approximately 4 Mt/a run of mine (ROM) coal to provide approximately 29 million product tonnes of coal over an expected 18 year life of mine. No mine definitive reserve statement has been prepared as the mine plan and operations have yet to be optimised. This is expected at the conclusion of the Feasibility Study.

The Washpool resource is targeting the Scorpio Seam (part of the Burngrove Formation) within a perched basin structural setting that has been closed off in all directions. The seam typically ranges from 5 to 6 metres (m) in total thickness consisting of six plies and includes 1.5 to 2 m of interburden and partings. A typical stratigraphic column of the Washpool resource is shown in **FIGURE 2-1** and a north-east to south west cross section of the coal resource is shown in **FIgure 2-2**. The coal is bounded by seam sub-crops to the north, south and west with seam thinning defining the eastern resource limit. The depth limits are defined by the basin structure with a maximum depth of cover of approximately 68 m to the top of coal, and an average of 42 m. The shallow limit is defined by the base of weathering range from 22 to 35 m. Overburden material consists of unconsolidated river alluvials and mudstone / fine sandstone units. The basin's overall dimensions are approximately 6,000 m by 3,000 m.

### 2.1.1. Coal Quality

The Project will produce a hard coking coal. The high rank coal exhibits good coking properties, but with higher ash presenting some yield challenges. The objective of the Project is to either produce a coking coal within market acceptability range or identify a complementary product with which to blend the Washpool product to produce a product within the market acceptability range.

## 2.2. MINING

The proposed Washpool mining operation will use a combination of 1 to 2 dragline(s) and open cut truck and shovel strip mining methods, with the emphasis on in pit waste dumping. The base case considered will be approximately 4 Mt/a ROM coal which will produce 1.6 - 2.0 Mt/a product (at 15% ash), until the depletion of reserves at approximately year 18. This plan requires the average movement of 30 - 40 million bank cubic metres (Mbcm) of overburden removal per year.

A concept mine plan has been developed by Aquila over the coal resource. Pit limits were based on limited Lox line (oxidation line) delineation, assumption of 35 m weathering and resource extent. The current mine plan is based on:

- recoverable insitu coal of 72 Mt at a strip ratio of 8.3:1 bank cubic metres / tonne (bcm/t);
- total overburden of 600 Mbcm; and
- a range of options, moving from 23 Mbcm to 45 Mbcm per year.

The geometry of the deposit makes it amenable to east-west orientated mining strips along the long axis of the basin structure. Current plans show that an initial box cut would be located in the north-western corner of the basin (shallowest depth to coal) and this overburden disposed of out of pit. Strip mining would advance east and south with the initial overburden disposed of out of pit. A steady state regime is reached where waste is dumped into previously mined areas.

The target seam is thick at 5 to 6 m but the presence of a number of plies will either require selective mining techniques or a total mining method in conjunction with a waste strategy at the coal handling and processing plant (CHPP).

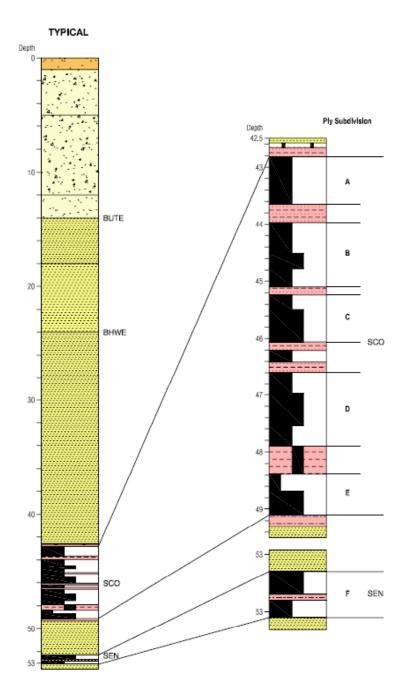
### 2.2.1. Coal Handling and Preparation

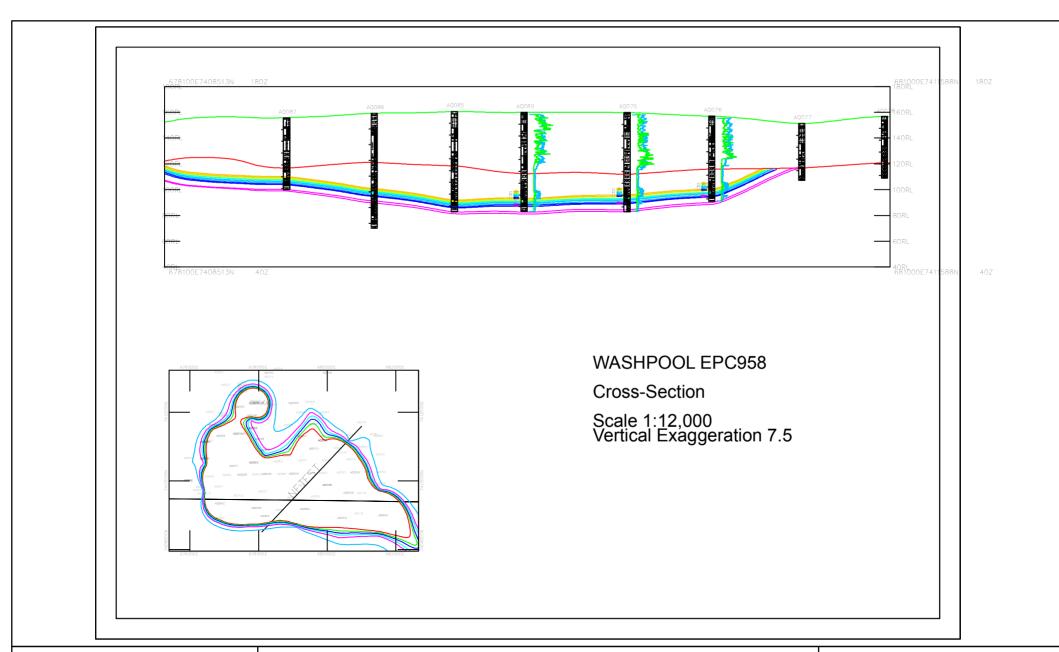
At this stage, the coal handling and preparation plant (CHPP) and rail load out facilities will be located to the south of the deposit, and the rail loadout will be located at the south-east of the MLa within an Infrastructure Lease for access to the Capricorn Highway and the Blackwater rail system for transporting to the WICET at Gladstone Port. The CHPP will have a capacity of up to 600 tonnes per hour (t/hr) feed, and be capable of processing up to 4 Mt/a producing approximately 1.6 Mt/a of product coal. This is based on an operational uptime of 7,000 hours per year. The plant is likely to operate seven days per week.

The CHPP's infrastructure will most likely comprise a run of mine (ROM) pad, ROM coal delivery system, coal washery module, coal waste delivery system (tailings and coarse rejects), clean coal delivery system, product stockpile, offices, fuel farm and workshops. The CHPP will be a system suitably sized to accommodate a maximum coal throughput of 4 Mt/a. Waste streams will include coal tailings, coarse rejects and water which is currently being assessed in the Reject Management Study.

The coal flow process design, CHPP design, and Reject Management are currently being developed for the Project's Feasibility Study.

FIGURE 2-1 / TYPICAL STRATIGRAPHIC COLUMN AND DETAILED SCORPIO SEAM SECTION



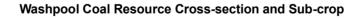


# Washpool Coal Mine Project Initial Advice Statement

Drafter: Sue Monro Version No: 2 Date: November 2009 Projection:











### 2.2.2. Waste Management

The geometry of the coal deposit makes it amenable to east - west orientated mining strips along the long axis of the basin structure. An initial box cut would be located in the north western corner of the basin (shallowest depth to coal) and this overburden disposed of out of pit, on the west and northern flanks of the Project area as engineered flood control structures (levees). These levees would be constructed in layers to a final design landform which will be subsequently topsoiled and rehabilitated. Strip mining would advance east and south with the initial overburden disposed of out of pit. A steady state regime is reached where waste is dumped into previously mined areas.

## 2.2.3. Infrastructure Requirements

The major regional infrastructure that is located within proximity to the Project site includes (see FIGURE 1-2):

- the major Blackwater-Gladstone rail corridor, which is situated 16 km south;
- the Peak Downs-Blackwater line rail corridor, which is situated 9 km to the west;
- the Capricorn Highway, which is situated 16 km south;
- the regional Ergon Energy main 132kV powerlines, which runs within 6 km of the proposed CHPP site; and
- the Mackenzie River, which flanks the site on the east, north and western boundary. This is used as a source of water by other miners in the region under license from the DERM, and administered by SunWater

The principle design requirements that will drive the site surface infrastructure will be the location of the CHPP, the infrastructure lease route, and the mine plan. Due to the yield of the mined coal, the CHPP will have to be located in close proximity to the open cut voids to facilitate co-disposal of CHPP rejects within the voids. Most site infrastructure will be positioned to the south of the MLa area to avoid the Mackenzie River, minimise the distance between the CHPP and the proposed rail spur options to the south-west, and facilitate access from the Capricorn Highway.

Construction of transport infrastructure for the Project will include work necessary to connect the Project to the regional systems and cover transport requirements on site. Access to the MLa is currently via publically gazetted roads, namely the existing Yakman Road. However, other transport options are currently being investigated which minimise the impact to the neighbouring landowners and the environment. Within the Project area, the main haul roads will be constructed north-south to connect the mining area to the ROM pad, east-west to access the various waste dumps on the site, and constructed using current mine design standards.

### 2.2.4. Transport Options

Construction of transport infrastructure for the Project will include work necessary to connect the Project to the regional systems and cover transport requirements on site.

The Blackwater railway system is 16 km south of the Project area and provides access to the coal port at Gladstone and WICET, both some 260 km to the east. There are currently three rail spur options being investigated for the Project, to transport the coal from the CHPP to the Blackwater rail system. Access to the Blackwater railway is within 9-20 km of the proposed infrastructure area, from one of three alternatives, either the southern access to the Peak Downs line (to the south west), south west across the Mackenzie River to Ensham's rail loop, or to the Curragh rail loop (to the south east). A transport options study is currently being undertaken to determine the most appropriate and feasible route with limited impacts. Once determined, an infrastructure lease application will be submitted over the area required through the Queensland Department of Employment, Economic Development and Innovation (DEEDI).

The product coal from the Project will be railed from site to the new Wiggins Island coal export terminal for shipping to export customers. The status of the rail nomination is waiting on Queensland Rail (QR) finalising the Southern Master Plan. QR is developing this plan in conjunction with the Wiggins Island Project to match forecast demand for the rail network and port. Individual nominations for coal will not be progressed until the completion of this planning work, presently scheduled for the first quarter of 2010. The proposed completion of the development of the port in 2012 coincides with the development of the Washpool Project and will be available soon after the commencement of mining.

A standing 1.6 Mt/a nomination has already been lodged with Wiggins Island coal export terminal to take the complete product stream from the mine for export.

### 2.3. WATER SUPPLY

Typical industry water usage for open cut mining operations is estimated to be in the order of 350 ML/a per 1 Mt/a ROM coal. On this basis, the Project's water usage is estimated at 1,400 ML/a, being for 4 Mt/a ROM coal, however a water demand study is currently being undertaken to determine the exact amount.

Water would be sourced from SunWater's distribution network, which services the area. SunWater has indicated that a rearrangement of existing users on the local network should provide adequate water capacity for the Project from the Mackenzie River. The connection point to the supply network has not yet been established and will be identified in the feasibility study.

The dependence on the off-site water supply will be reduced over time by strategies to increase water conservation and recycling measures.

## 2.4. PROJECT TENEMENT DETAILS

The Project area covers two discrete EPCs, owned by Argos (Qld) Pty Ltd, which is wholly owned by Aquila. The EPCs are EPC 958 (Washpool) and EPC 966 (Mt Crocker) (**FIGURE 1-3**). Mineral Development Licence application (MDLa) 403 also covers the Project area and is held by Aquila Coal Pty Ltd, which is wholly owned by Aquila Resources Limited. The MDL has been defined by the Mackenzie River to the north, resource limits to the west and south and the BMA water pipeline easement Mining lease (ML1759), and the extent of Aquila's EPC to the east (**FIGURE 2-3**).

The Project area is to be confined to a smaller MLa (80164) area, which falls within the MDL area (**FIGURE 1-3**). A proposed transport infrastructure lease will be identified in the Feasibility Study and connect off the MLa. The coal resource has been further defined by additional exploration drilling and a MLa was submitted by WC on 04 December 2009, with an application for an infrastructure lease for the rail spur location to be submitted in Q2 2010. All EIS studies necessary for the mining development will be undertaken within the MLa and transport infrastructure lease, which will be approximately 4500 hectares.

TABLE 1 / WASHPOOL PROJECT TENEMENT DETAILS

TENEMENT	NAME	HOLDING COMPANY	OWNER	STATUS
MLa 80164	Washpool Coal Mine	Washpool Coal Pty Ltd	100% Aquila Resources Ltd	Application submitted 04/12/2009
MDLa 403	Washpool Coal Project	Aquila Coal Pty Ltd	100% Aquila Resources Ltd	Application through technical review and currently awaiting sign off by the Director and then Minster for grant
EPC 958	Washpool	Argos (Qld) Pty Ltd	100% Aquila Resources Ltd	114 sub blocks granted 03/06/2005 for a three year term and is presently under renewal application. All tenement obligations are in good order.
EPC 966	Mt Crocker	Argos (Qld) Pty Ltd	100% Aquila Resources Ltd	246 sub blocks granted 03/04/2006 for a three year term. Renewal application being prepared. All tenement obligations are in good order.

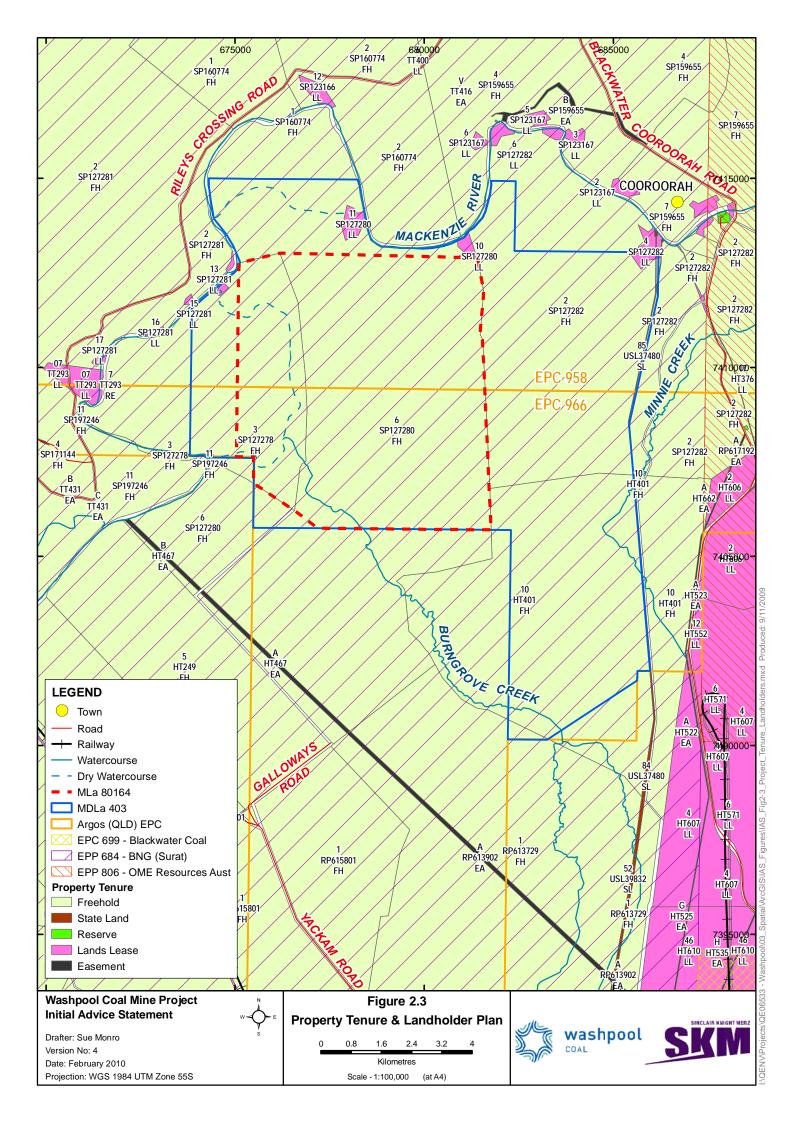
The Project area (defined by the proposed MLa area) is overlain by two separate properties held in freehold title. The MLa area also covers one Traditional Owner group, the Kangoulu People (refer to **Section 3.10**).

# 2.4.1. Petroleum Tenements

The MLa is overlain by an Exploration Permits for Petroleum (EPP) 684 held by BNG (Surat) Pty Ltd wholly owned by Queensland Gas Company (**FIGURE 2-3**).

# 2.5. EMPLOYMENT OPPORTUNITIES

The Washpool Coal Mine will employ up to approximately 400 full-time equivalent personnel over the 12 months during construction and approximately 300 personnel during operation. The construction workforce and operational workforce are expected to be housed in the local district (Emerald or Blackwater), with the workforce commuting to and from other locations, in particular the larger regional centre Rockhampton. The EIS will include a Social Impact Assessment that examines the issue of housing in more detail. It will also review accommodation options and workforce transportation to and from the site.



# 3 Existing Environment and Potential Impacts

### 3.1. LAND RESOURCES

### 3.1.1. Topography and Land Use

The topography of the Project area is gently undulating and dissected tableland with a general relief dropping north to the Mackenzie River. The surface area of the Project is confined to two private property owners within the alluvial flood plains of the Mackenzie River. The land is generally flat to gently undulating with no features of note. **FIGURE 3-1** is typical of the Project area.

FIGURE 3-1 / PROJECT AREA LANDSCAPE



The main land uses of the Project area are currently cattle breeding and grazing. The access and rail options may cross between two to five properties, depending on the preferred option.

### 3.1.2. Soils

Historical and regional data shows that the Project area is overlain by the Cainozoic cover of alluvial sediments and soils of Tertiary and Quaternary age. The soils are typically shallow, poorly developed and sandy in nature.

Mining activities will follow a conventional mining approach in which areas disturbed by mining, including spoil dumps, will be cleared first, with topsoil removed and stockpiled for later rehabilitation use in accordance with a topsoil management program. Designated topsoil stockpiles will be incorporated into the toe of out of pit spoil dumps to facilitate topsoil spreading on areas profiled to the final landform.

### 3.2. SURFACE WATER

The Project lies within the flood plain of the Mackenzie River. Surface water sheds across the Project area north towards the Mackenzie River. The Mackenzie River is a major river system in the region, comprising both the Nogoa and Comet catchments, and is the major channel for regional rain events which floods periodically during the wet season. The Project site is typified by eroded runoff channels that only carry water during storm events, but typically are dry throughout the rest of the year. The exception is Coal Mine Lagoon situated within the western edge of the Project site, which appears to be a billabong feature possibly remaining from a previous course of the Mackenzie.

The mine design will consider flood mitigation issues, and the Project elements will be designed as far as practicable to isolate the mining and industrial areas from the Mackenzie River to the north. This may be achieved through the construction of a flood protection levee, effectively separating mine runoff and recycled pit water from the natural drainage catchment for the Mackenzie River. As part of the EIS, a hydrologic and hydraulic model of the surface water catchment will be developed to determine the most appropriate location for mine infrastructure and location of any flood mitigation measures considered necessary for the Project.

A Project water balance will be prepared for the EIS with surface water runoff and direct rainfall to the pits included as inputs to the estimate. It appears at this stage that there will rarely be a surplus of water on the site, meaning that the Project will have to import water. One positive aspect of this is that the Project is unlikely to need to discharge surplus water to the Mackenzie River during normal operating conditions, although this may be required during seasonal events.

The Washpool Mine activities that may affect surface waters are changes in the landform, run-off from disturbed areas (including the infrastructure areas). The following mitigation strategies will reduce the potential impacts on surface waters:

- implementation of a "clean water dirty water" system to divert clean runoff around disturbed areas and direct run-off
   from disturbed areas to environmental dams for treatment and reuse on site; and
- the development of a detailed water management plan to ensure water released from site (if any) meets the likely licensed discharge limits in the environmental authority and the water quality objectives for the Mackenzie River.

The hydrology study as part of the EIS will consider overall water balance for the Project. The feasibility study will also evaluate the potential to fully backfill the Washpool pit at the cessation of mining.

## 3.3. GROUNDWATER

A key feature of the Washpool Project location is the proximity of the Mackenzie River, and the recent flooding in the area (2007 and 2008) and inundation of the working pit of the neighbouring Ensham Coal Mine (from the Nogoa River that flows into the Mackenzie River immediately upstream of the Project). The Washpool deposit is located above the river level.

Data obtained from the most recent drilling program indicates that two aquifer systems exist on-site. To date, eight groundwater bores have been installed on-site (one of which is dry) targeting the coal seam aquifer and the alluvial aquifer. Historical drilling undertaken on-site indicates limited groundwater resources within the Project area. The data obtained from the latest drilling program will better define the extent of groundwater in the Project area.

Given the unique geological setting of the site, groundwater input to the proposed mine pits is expected to be minimal under normal conditions. Groundwater is unlikely to be a major source of water for the Project. Groundwater does not appear to be a useful resource in the vicinity of the mine, and accordingly, mining is not likely to have significant impact on any neighbouring groundwater users. In times of flood, considering the nature of the overburden, groundwater flow may become an issue through the high permeability unconsolidated sediments that overlie the coal seams. Recharge to the coal

seam during rainfall events is anticipated to occur directly in the Project area at coal seam outcrop areas. Future geotechnical and hydrogeological studies as part of the EIS will address these issues.

#### 3.4. FLORA

Although a substantial proportion of the Washpool Project area is used for grazing, remnant vegetation occurs within the proposed MLa at the fringes of the boundary as shown in **FIGURE 3-2**. **TABLE 2** lists the Regional Ecosystems (RE's) that occur on or in the vicinity of the site and gives their status under the Queensland *Vegetation Management Act* 1999 (VM Act) and the status of analogous ecological communities as listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act).

There are 'Of Concern' REs identified within the north-east corner of the MLa Project area from DERMs regional ecosystem description database. This area (including the rest of the MLa area) will be ground truthed during the field work programme for the EIS. The balance of the Project area is primarily cleared of native vegetation and comprises improved pasture. A mosaic of Regional Ecosystems occurs in a relatively narrow zone adjacent to the Mackenzie River and to the north of the MLa, however, these are outside the MLa and will therefore not be impacted by the Project. **TABLE 2** illustrates the location of REs within the proposed MLa. Both mining and infrastructure will be arranged to minimise the impact on any remnant vegetation.

TABLE 2 / REGIONAL ECOSYSTEMS OF THE WASHPOOL PROJECT AREA

RE CODE	DESCRIPTION	VMR STATUS <sup>1</sup>	EPBC ACT STATUS
11.3.1	Acacia harpophylla and/or Casuarina cristata on alluvial plains	Endangered	Endangered
11.3.2	Eucalyptus populnea woodland to open-woodland.	Of Concern	N/A
11.3.3	Eucalyptus coolabah woodland on alluvial plains	Of Concern	N/A
11.3.25	Eucalyptus camaldulensis or E. tereticornis open-forest to woodland.	Not Of Concern	N/A
11.4.2	Eucalyptus spp. and/or Corymbia spp. grassy or shrubby woodland on Cainozoic clay plains	Of Concern	N/A
11.9.2	Eucalyptus melanophloia and/or E. orgadophila grassy woodland to openwoodland	Not of Concern	N/A

Status under the Vegetation Management Act 1999

The threatened flora of the wider locality are well known and a number of species may occur in the Project area including, but not limited to Ooline (*Cadellia pentastylis*), King Bluegrass (*Dicanthium queenslandicum*), *Polianthion minutiflorum* (A shrub), *Cyperus clarus* (A sedge) and *Daviesia discolour* (A shrub).

# 3.5. FAUNA

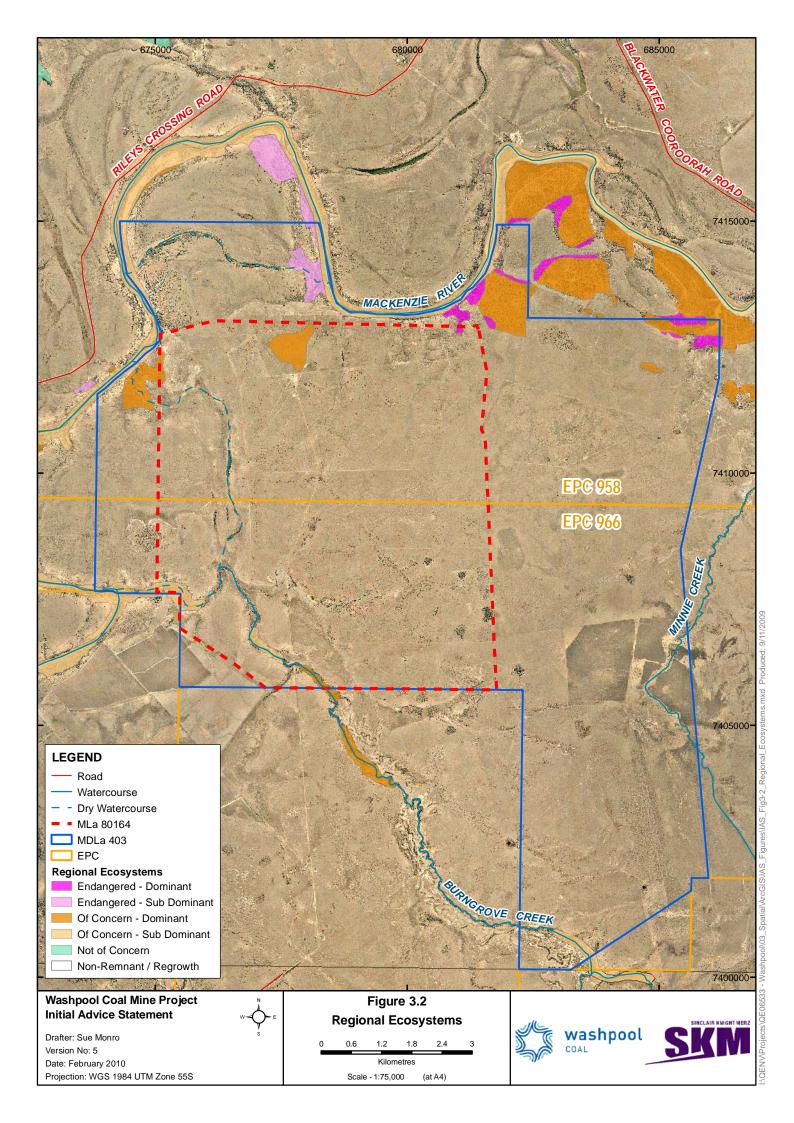
There are a number of significant fauna species which may occur in the remnant vegetation of the MLa, including the Brigalow Scalyfoot (*Paradelma orientalis*), Ornamental Snake (*Denisonia maculata*), Southern Squatter Pigeon (*Geophaps scripta scripta*) and Little Pied Bat (*Chalinolobous picatus*). The cleared portions of the Project site are likely to support lesser conservation value but may be utilised by species such as the Southern Squatter Pigeon. Additional significant species may also be present and this will be determined through field survey.

### 3.6. ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

A referral was prepared under the EPBC Act for the project and this was submitted to the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) for their consideration in December 2009. A decision detailing the decision on referral was received in February 2010 which deemed the Washpool Coal Mine Project a controlled action and as such will require assessment and approval by the Minister for the DEWHA or his delegate before the project can proceed.

It was decided that the Project was likely to have a significant impact on the listed threatened species and ecological communities as described in section 18 and 18A of the EPBC Act based on the potential of the Project to impact on the Mackenzie River which provides habitat for the listed vulnerable Fitzroy River Turtle (*Rheodytes leukops*).

As the project is a "controlled action", the project's environmental impact assessment process is to be managed by the State under a bi-lateral agreement. Under this arrangement the Commonwealth has input at the required times in the environmental impact assessment process and is responsible at the end of the process for issuing a separate conditioned approval for the proposed activity.



### 3.7. AIR QUALITY

The Project will be required to meet air quality standards for dust under the EP Act and subordinate legislation.

Assessment of the air quality and suitable mitigation methods will be outlined in the EIS. Air quality in the region is mainly influenced by pastoral conditions, open cut mining, and nearby rail and road transportation activities.

Air quality issues around the site will include dust deposition. The principal dust sources will include heavy mining equipment movements, topsoil stripping, coal handling and coal haulage to the rail loadout. During operations, dust generation will be managed by the use of water carts for road watering, sprays on coal handling and conveyor transfer points, conducting progressive rehabilitation, limiting disturbance to what is required for safe operations and, if appropriate, changing work practices during adverse meteorological conditions.

Existing monitoring data will be used to assess existing dust levels and identify potential sensitive receptors.

#### 3.8. GREENHOUSE GAS

Mining coal from the Project will result in the emission of some greenhouse gases to the atmosphere. The EIS will estimate the total quantity of greenhouse gases (including direct and indirect emissions) attributable to this element of the Project. This information will be used to assess mitigation strategies in the EIS and to provide an appropriate context for actions that are being undertaken at a corporate level by Aquila.

The EIS will also examine the contribution that the mine makes to the cumulative greenhouse gas emissions from the region.

### 3.9. NOISE AND VIBRATION

Noise and vibration in the regional of the Project area is affected by rural activities, local road and rail, and the activities at Blackwater Mine (operated by BMA), Curragh Mine (operated by Westfarmers (Curragh) Ltd) and Ensham Mine (operated by Ensham Resources). No baseline noise monitoring has been undertaken within the Project area to date, but is likely to be consistent with a rural environment.

Noise sources from the Washpool Project will include mining (trucks, shovels, dragline, blasting) and processing activities (conveyors, crushers, screens, rail load out). The level of noise at a given receptor will vary depending on the type of machinery in use and traffic in the area. A baseline noise survey will be undertaken and information from this and additional studies will be used to develop mitigation strategies for the Project. This will include identifying noise sensitive receptors in the vicinity of the Project area.

Sensitive receptors may also be affected by blasting. The Washpool Mine design processes will confirm the nature and frequency of blasting and this will also be assessed to determine appropriate mitigation measures. Noise and vibration impacts will be further addressed in the EIS.

### 3.10. CULTURAL HERITAGE VALUES

A native title claim (QC98/25) from the Kangoulu People was filed on 11 May1998, which covered the Washpool Project area. Since this time the claim has been finalised and dismissed (federal court file number QUD6195/98). There are no other native title claimants identified to date within the Project area.

Negotiations for a Cultural Heritage Management Agreement (CHMA) have commenced with the traditional owners, the Kangoulu People. All work undertaken on site to date has been subject to site inspection and clearance with the relevant Traditional Owner parties of the relevant EPCs that underlie the MLa. As part of the EIS, consultation and investigation of Aboriginal cultural heritage values and negotiation and development of a Cultural Heritage Management Plan (CHMP) will

be undertaken. The EIS will also survey and evaluate the significance of any European settlement that may be present within the Project area.

#### 3.11. INFRASTRUCTURE IMPACTS

The Washpool Coal Mine will necessitate the use and development of infrastructure in the region, including:

- power (new connections to the grid, with the possibility of supplementary on-site diesel generation); and
- transport corridor used to access the site and transport the coal product to the new Wiggins Island coal export terminal as outlined in **Figure 1-4**.

The EIS will quantify the scale of infrastructure use and its impacts from a local and regional perspective.

### 3.12. VISUAL AMENITY

The physical features associated with the Project that may have aesthetic impacts include ex-pit spoil dumps, and other infrastructure including CHPP, workshop, power lines and administration buildings. The EIS will present an assessment of the impacts that these features may have on the landscape.

#### 3.13. SOCIO-ECONOMIC

All elements of the Project are located in the Central Highlands Regional Council area.

The closest town to the Project is Blackwater, situated 21 km to the south-east of the Project area. Coal was discovered in the Blackwater area in 1845, and the township was gazetted and laid out in 1886. In the early 1960s, the town experienced rapid development with the first mine in the area opening in 1967. The town's economy relies heavily on the surrounding coal mines, and at the 2006 census had a population of 5,031. The broader area surrounding the Project generally supports broad-acre agricultural activities such as grazing and cropping.

The Project's primary positive impacts on the socio-economic environment would likely be an increase in local employment and procurement opportunities, as well as training and community development/investment opportunities. Effects such as an increase in the region's population may also result in impacts on local and regional housing markets, access to community services, as well as changes to community values and lifestyles. Through consultation and engagement with relevant stakeholders, the EIS will examine these impacts and provide recommendations to enhance the benefits of the Project and minimise any potential adverse impacts.

# 4 Community Consultation

Community consultation and stakeholder engagement forms an integral component of the assessment process for the Project. Aquila has and will continue to build strong, lasting relationships with the community and key stakeholder groups, with the objective of providing accurate and timely environmental, social and economic Project information.

Accordingly, Aquila will prepare and deliver a community and stakeholder engagement plan that is flexible in order to take full account of stakeholder input and importantly, to respond to feedback. As such, the objectives of the plan will be to:

- initiate and maintain open and honest communication with all affected and interested stakeholders on all aspects of the Project and the EIS;
- 2) identify stakeholder issues and concerns in the relation to the Project via 'one on one' meetings and community feedback;
- 3) provide a range of communication methods to engage and inform stakeholders about the Project such as newsletters and a page on the Aquila website;
- 4) address stakeholder issues and concerns through the EIS and process and communications; and
- 5) provide feedback to stakeholders on their issues or concerns and how their comments have been used via newsletters and the Aquila website.

To achieve the above mentioned objectives, a detailed community and stakeholder engagement plan will involve:

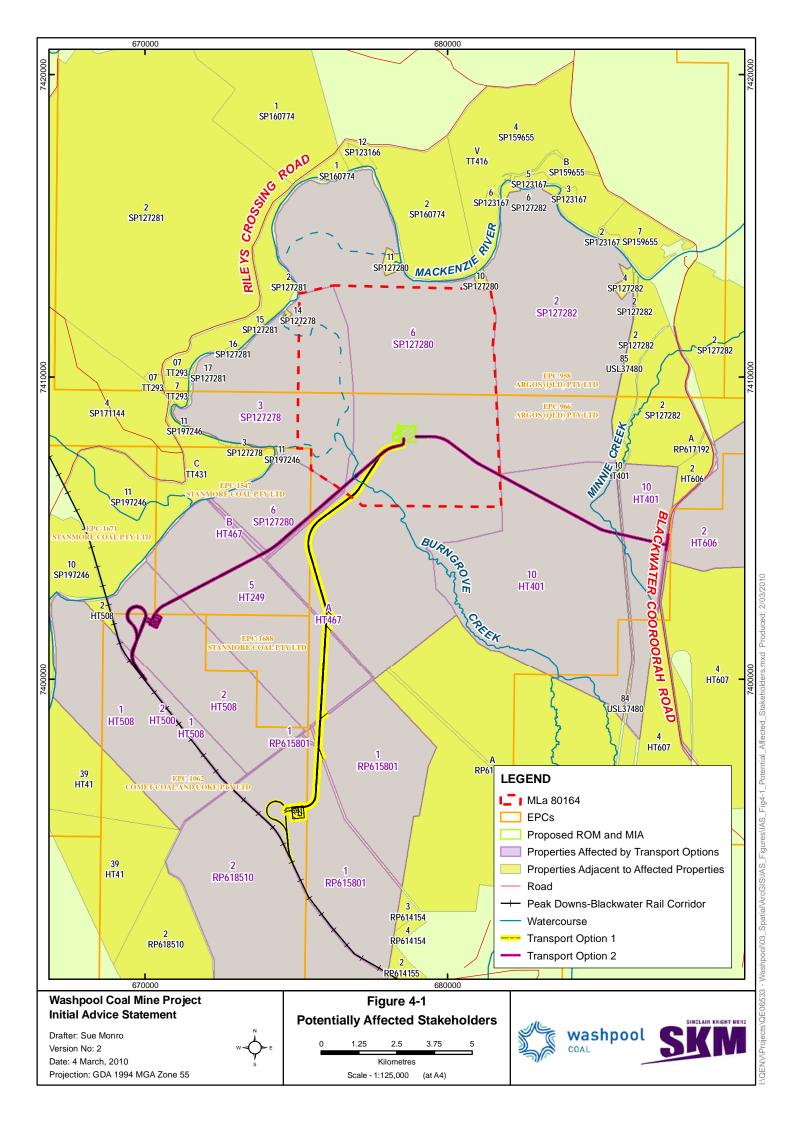
- 1) identifying key stakeholders and determine their level of interest in the Project;
- 2) determining stakeholder level of impact on the Project;
- 3) development of a communication and consultation model;
- selection of appropriate stakeholder communication and consultation tools such as 'one on one' meetings, newsletters, static displays, articles in local press as required;
- 5) development of a schedule of activities; and
- 6) ongoing documentation of community and stakeholder comments and issues of concern.

# 4.1. INTERESTED AND AFFECTED PERSONS

Under the EP Act, WC is required to undertake formal public consultation with interested and affected persons. As such, consultation will take place with, but not limited to, the following key stakeholder groups:

- 1) private land holders;
- 2) mining and petroleum tenement holders;
- 3) Traditional Owner Groups;
- 4) State Government agencies and departments;
- 5) Commonwealth agencies and departments;
- 6) Local government; and
- 7) Local interest groups.

A list of the above is presented in **Appendix A** with a spatial representation of the potentially affected stakeholders shown in **Figure 4-1**. It's noted that the names and addresses of the potentially affected landowners and adjacent landholders have been omitted from this list for privacy reasons. WC is committed to liaising and discussing the Project with all directly affected landowners and ensuring that all concerns are taken in to consideration during the EIS phase. The list of stakeholders will be an evolving document over the life of the Project.



# 5 Environmental Management

WC is committed to acting in an environmentally and socially responsible manner during the design, construction and operation of the Project.

The Project will manage environmental matters by the following commitments as documented in the Aquila environmental policy statement by:

- complying with legislative requirements;
- communicating effectively with stakeholders; and
- committing to the reduction of environmental impacts.

Aquila recognises that the above commitments are critical during the Project development stage and has developed a methodical plan to understand the potential environmental impacts of the Project and to achieve all environment expectations of this Project.

The EIS to be prepared for each element of the Project will describe the measures that will be taken to prevent or mitigate any potential adverse environmental impacts on the environment, including water resources (surface water and groundwater), land resources, air quality, noise and vibration, cultural heritage, and flora and fauna of conservation significance. The EIS will also address the potential for social impacts and present mitigation strategies to manage any potentially adverse impacts, if required.

Environmental management requirements for operations will be stipulated in the regulatory documents that are prepared as part of the approvals process prior to mining (e.g. Environmental Management Plan, EA, Plan of Operations). Regulation of environmental management during mining is the responsibility of the DERM.

Aquila operates all its projects in accordance with an Environmental Management System that ensures all environmental and social management strategies are implemented, monitored and reviewed to ensure a process of continual improvement in its operating practices.

# 6 Contact Details

For further information concerning the Washpool Coal Mine Project, please contact:

Name: Livia Maiorana

Position: Systems and Approvals Manager

Company: Aquila Resources Limited

Ph: 07 3229 5630

Email: Imaiorana@aquilaresources.com.au

Name: Damien Taylor

Position: Project Manager, Washpool Coal Mine Project EIS

Company: Sinclair Knight Merz Pty. Ltd.

Ph: 07 3026 7253 Email: dtaylor@skm.com.au

For further information about Aquila Resources Limited and the Washpool Coal Project, please refer to:

www.aquilaresources.com.au