Rocklands Richfield Limited
Hillalong Project
Initial Advice Statement

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HILLALONG PROJECT
INITIAL ADVICE STATEMENT

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1 INTRODUCTION

The Hillalong Project (the Project) is a proposed open cut coal mine situated approximately 15km east of the township of Glenden and 100km west of Mackay in Central Queensland. The location of the Project is indicated in **Figure 1** and **Figure 2.** Hillalong is held by Queensland Coal Exploration Pty Ltd (QCE) under Mineral Development Licence (MDL) 324. QCE is a wholly owned subsidiary of Rocklands Richfield Limited (RCI). RCI acquired QCE in January 2006. RCI hold interest in two other mining tenements in the Bowen Basin including a 60% share in HLM Coal Australia Pty Ltd who hold 100% ownership of EPC890. The company also holds a 60% interest in EPC930 situated 150km north of Blackwater.

The Project is anticipated to involve the development of a conventional truck and excavator open cut coal mine producing approximately 1.5-1.8 million tonnes per annum (Mtpa) of high volatile coking and thermal coal. It is anticipated that after the extraction of approximately 17 million tonnes (mt) of run of mine (ROM) coal, the Project will potentially shift to an underground focus for the remainder of the resource, however, this will be determined as part of a detailed project feasibility study to be conducted by the Proponent. Subject to ongoing review of the geological model, the Hillalong deposit contains coal resources of approximately 61.3Mt; 39.4Mt being indicated and 21.9Mt being inferred, providing for a life of mine in the order of 20 years. As the Project is still in the conceptual planning stage, the Proponent proposes to utilise the MDL boundary for the basis of the study area. However, **Figure 3** represents the resource area of interest on which the mine plan will be based. The proposed ML area is anticipated to be smaller than the area of the MDL, which is in the order of 3,189ha.

Rocklands Richfield Limited is seeking to gain project statutory approvals, primarily one Mining Lease (ML) with the potential for a second ML, together with the relevant environmental authority to allow construction of the Project commencing late 2014 or early 2015. It is intended that one ML (Hillalong ML) will be applied for to allow for the mining and processing operations of the Project and there is potential for a second Infrastructure ML which will be applied for under Section 316 of the *Mineral Resources Act 1989* to allow for a transport corridor (Transport Corridor ML). It is the intention of the proponent to address and assess a number of potential transport options through the EIS process.

ROM coal will be processed on site using conventional Coal Handling and Preparation Plant (CHPP) technologies. Process waste would be disposed of at an on-site facility. While the method of process waste disposal is yet to be determined, it would likely consist of one or more of the following; separate disposal of tailings slurry and coarse reject; co-disposal of tailings slurry and coarse reject; and/or dried tailings disposed of, combined with, or separately to coarse reject. Product coal is anticipated to be transported to Dalrymple Bay Coal Terminal (DBCT) or Abbott Point Coal Terminal (APCT) dependent on the outcome of the assessment of the transport options.

Key features of the Project will include:

- One open cut pit;
- Out of pit and in pit overburden dumps;
- Potential Underground mine;
- ROM coal stockpiles;
- Product coal stockpiles;
- Water management infrastructure;
- Haul Road (location to be determined);
- CHPP (as an alternative to exporting run of mine coal) ; and
- MIA including workshops, administration buildings, fuel and chemical storage facilities, warehouse, and hardstand areas.

1.1 Hillalong Project Summary

- The identified resource area, outlined in **Figure 3**, is expected to support a mine with a planned production rate of 1.5-1.8Mtpa product coal for at least 20 years;
- As an alternative to exporting run of mine coal, a coal preparation plant is being considered in the mine design to achieve product specifications in line with market demand;
- A number of transport options will be considered as part of the EIS process (the two current preferred options as per **Figure 4**);
- The expected product types are high volatile coking and thermal coal;
- The mine will initially be developed as an open cut mining operation using conventional truck and shovel method;
- After the first 17mt of ROM coal, the mine may move into an underground mine for the remainder of the resource, however, this will be determined as part of a feasibility study; and
- Workers recruited from the domestic and local labour markets will staff the mine. These workers are expected to be accommodated locally.

1.2 Assessment Level Decision

The proposed coal production will be around 1.5-1.8Mtpa which does not trigger the requirement to prepare and submit an Environmental Impact Statement (EIS) under the *Environmental Protection Act 1994* (EP Act). However, RCl have chosen to submit a voluntary EIS. Section 70 of the EP Act allows for a proponent to make an application for approval to prepare an EIS.

1.3 Commonwealth Assessment

The Project has been referred to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities for determination under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). It has been determined the Project is a controlled action and requires an Environmental Impact Statement. A self-assessment for the proposed Transport Corridor ML will be undertaken in accordance with the *Environment Protection and Biodiversity Conservation Act 1999* once a haul road option has been determined.

The matters of national environmental significance listed in the EPBC Act Protected Matters Report are provided in **Table 1**, **Table 2** and **Table 3**.

The three Threatened Ecological Communities listed in the EPBC Act Protected Matters Report are as follows:

- Brigalow (*Acacia harpophylla* dominant and co-dominant) – Endangered;
- Natural Grasslands of the Queensland Central – Endangered; and
- Highlands and the northern Fitzroy Basin Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions – Endangered.

Table 1: Listed Threatened Species and Ecological Communities

Common Name	Scientific Name	Status	Potential to Occur within Project Area
Birds			
Red Goshawk	*Erythrotriorchis radiatus*	Vulnerable	Species or species habitat known to occur within area
Squatter Pigeon (southern)	*Geophaps scripta scripta*	Vulnerable	Species or species habitat known to occur within area
Star Finch (eastern), Star Finch (southern)	*Neochmia ruficauda ruficauda*	Endangered	Species or species habitat likely to occur within area
Black-throated Finch (southern)	*Poephila cincta cincta*	Endangered	Species or species habitat likely to occur within area

Australian Painted Snipe	*Rostratula australis*	Vulnerable	Species or species habitat may occur within area
Mammals			
Northern Quoll	*Dasyurus hallucatus*	Endangered	Species or species habitat likely to occur within area
South-eastern Long-eared Bat	*Nyctophilus corbeni*	Vulnerable	Species or species habitat may occur within area
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	*Phascolarctos cinereus* (combined populations of QLD, NSW and the ACT)	Vulnerable	Species or species habitat known to occur within area
Other			
	Cycas ophiolitica	Endangered	Species or species habitat likely to occur within area
Plants			
King Blue-grass	*Dichanthium queesnslandicum*	Vulnerable	Species or species habitat likely to occur within area
Finger Panic Grass	*Digitaria porrecta*	Endangered	Species or species habitat likely to occur within area
Black Ironbox	*Eucalyptus raveretiana*	Vulnerable	Species or species habitat likely to occur within area

	Leucopogon cuspidatus	Vulnerable	Species or species habitat likely to occur within area
Siah's Backbone, Sia's Backbone, Isaac Wood	*Streblus pendulinus*	Endangered	Species or species habitat likely to occur within area
Reptiles			
Striped-tailed Delma, Single-striped Delma	*Delma labialis*	Vulnerable	Species or species habitat may occur within area
Ornamental Snake	*Denisonia maculate*	Vulnerable	Species or species habitat may occur within area
Yakka Skink	*Egernia rugosa*	Vulnerable	Species or species habitat may occur within area
Brigalow Scaly-foot	*Paradelma orientalis*	Vulnerable	Species or species habitat may occur within area
Fitroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle	*Rheodytes leukops*	Vulnerable	Species or species habitat may occur within area

Table 2: Listed Migratory Species

Common Name	Scientific Name	Potential to Occur within Project Area
Migratory Marine Birds		
Fork-tailed Swift	*Apus pacificus*	Species or species habitat may occur within area

Great Egret, White Egret	*Ardea alba*	Species or species habitat may occur within area
Cattle Egret	*Ardea ibis*	Species or species habitat may occur within area
Migratory Terrestrial Species		
White-bellied Sea-Eagle	*Haliaeetus leucogaster*	Species or species habitat likely to occur within area
Barn Swallow	*Hirundo rustica*	Species or species habitat may occur within area
Rainbow Bee-eater	*Merops ornatus*	Species or species habitat may occur within area
Black-faced Monarch	*Monarcha melanopsis*	Species or species habitat likely to occur within area
Spectacled Monarch	*Monarcha trivirgatus*	Breeding likely to occur within area
Satin Flycatcher	*Myiagra cyanoleuca*	Species or species habitat likely to occur within area
Migratory Wetlands Species		
Great Egret, White Egret	*Ardea alba*	Species or species habitat may occur within area
Cattle Egret	*Ardea ibis*	Species or species habitat may occur within area
Latham's Snipe, Japanese Snipe	*Gallinago hardwickii*	Species or species habitat may occur within area
Painted Snipe	*Rostratula benghalensis (sensu lato)*	Vulnerable *Species or species habitat may occur within area

Table 3: Regional Ecosystems Mapped in the Project Area

ERE/RE Number	Description	Vegetation Management Status	Biodiversity status	EPBC status
11.8.13	Semi-evergreen vine thicket and microphyll vine forest on Cainozoic igneous rocks. Lowlands	Endangered	Endangered	Endangered
11.8.5	Eucalyptus orgadophila open woodland on Cainozoic igneous rocks	Least Concern	No Concern at present	Not Applicable
11.9.5	Acacia harpophylla and/or Casuarina cristata open forest on fine-grained sedimentary rocks	Endangered	Endangered	Endangered
11.9.4	Semi-evergreen vine thicket (SEVT) on fine-grained sedimentary rocks	Of Concern	Endangered	Endangered
11.9.9	Eucalyptus crebra woodland on fine-grained sedimentary rocks	Least Concern	No Concern at present	Not Applicable
11.9.2	Eucalyptus melanophloia +/- E. orgadophila woodland on fine-grained sedimentary rocks.	Least Concern	No Concern at present	Not Applicable
11.9.13	Eucalyptus moluccana or E. microcarpa open forest on fine grained sedimentary rocks	Of Concern	Of Concern	Not Applicable
11.8.4	Eucalyptus melanophloia woodland on Cainozoic igneous rocks. Hillsides	Least Concern	No Concern at present	Not Applicable

1.4 Environmentally Relevant Activities (ERAs)

The ERAs prescribed under the *Environmental Protection Act Regulation 2008* which are proposed to be undertaken on the Hillalong Mine are detailed in **Table 4.**

Table 4: Environmentally Relevant Activities

Category	Relevant Activity	Threshold	Aggregate Environmental Score
	Level 1 Mining Project; mining black coal		128
8	Chemical Storage	3a	No Score
21	Motor Vehicle Workshop		7
63	Sewage Treatment	2a(i)	14
64	Water Treatment (depending on water source/treatment)	1a	No Score
17	Abrasive Blasting (potentially)		16

1.5 Notifiable Activities

The Project will involve the following Notifiable Activities prescribed in Schedule 3 of the *Environmental Protection Act 1994*.

- 24(a) and (b) - Mine Wastes;
- 29 - Petroleum product or oil storage;
- 7 Chemical storage – depending on chemicals required for operation; and
- 1 - Potential for Abrasive blasting

2 LAND TENURE

The coal resource identified at this stage is located entirely on one property identified as 'Exevale'. Exevale is owned by the O'Loughlins.

The property over which a mining lease application will be pegged is listed in **Table 5Error! No ookmark name given.** and shown in **Figure 5**.

Table 5: Landholders and Property Descriptions for the Proposed Hillalong MDL

Landholders	Real Property Description	Total Property Area (ha)	Property Area within the ML (ha)
C.D, J.P, M.T & T.M O'Loughlin	Lot 4 on HLN225 Lot 3 on HLN29	25,480.67 ha	To be determined through the EIS

*as the area of the potential mining lease is unknown, the property area within the MDL has been calculated.

As the method of transportation for product coal is yet to be determined, the adjoining landholders for the two Transport Options are shown in **Table 6**, **Table 7** and **Figure 6**. Details of the landholders will be confirmed during the EIS process.

Table 6: Subject Lots of North West Transport Option

Landholders	Property Description	Total Property Area (ha)	Property Area within the ML (ha)
C.D, J.P, M.T & T.M O'Loughlin	Lot 4 on HLN225	25,480.67	To be determined through the EIS
P. W & L. J Fordyce	Lot 16 on CP866443	14,400.00	To be determined through the EIS

Table 7: Subject Lots of South East Transport Option

Landholders	Property Description	Total Property Area (ha)	Property Area within the ML (ha)
C.D, J.P, M.T & T.M O'Loughlin	Lot 4 on HLN225	25,480.67	To be determined through the EIS
Queensland Coal Pty Limited	Lot 13 on WHS466	6,816.15	To be determined through the EIS

Nippon Steel Australia Pty Ltd Marubeni Coal Pty Ltd Sumisho Coal Development Queensland Pty Ltd			
G.F & C. D Ross	Lot 12 on SP236271	27,800.00	To be determined through the EIS

Regional coal tenements are shown in **Figure 7** and regional petroleum tenements are shown in **Figure 8**. Tenements surrounding the transport options are shown in **Figure 9** and **Figure 10.** A list of the affected and interested persons is presented in **Section 6**.

3 GEOLOGY

3.1 Exploration Background

The Hillalong tenement straddles two main structural features, the Hillalong Anticline to the west and the south-western limb of the Exevale Syncline to the east. The Fort Cooper Coal Measures and the overlying Elphinstone Coal Measures are present in the area. An initial interpretation of the structural geology suggests that it is relatively straightforward, with several large faults and common small scale thrust faulting evident from interpreted geological cross-sections.

The economic coal seams of the Project occur within the Elphinstone Coal Measures (local equivalent to the Rangal Coal Measures). In the Project area the Permian coal measure strata are overlain by the Triassic Rewan and Clematis Groups, with Tertiary sediments and basalt flows covering some of the Permian strata to the east and west of the area.

A total of 135 drill holes were used in the construction of the geological model. These drill holes are divided up into three categories. Drill holes prefixed with a CRAE, of which there are 31 non-core holes and 12 part cored, were drilled by CRA Exploration from 1975 to 1976. Drill holes prefixed with a QCE, of which there are 7 non-core holes, 6 part cored holes and 27 Line of Oxidation (LOX) holes were drilled by Queensland Coal Exploration Ltd in 1996. Drill holes prefixed with a RCI, of which there are 28 non-core holes, 20 part cored holes and 4 LOX holes were drilled by Rocklands Richfield Limited from October 2006 to March 2007 (Refer to **Table 8**). **Figure 11** shows the drillhole locations for drillhole types covering MDL324 and adjacent areas.

RCI is presently considering a further drilling and resource evaluation program to further define the mining reserves.

Table 8: Drill Hole Data Summary - Geological Model and Database

Company	Year	Non-Core Holes	Part Cored Holes	LOX Holes	Total
CRAE	1975-76	31	12		43
QCE	1996	7	6	27	40
RCI	2006-07	28	20	4	52
TOTAL		66	38	31	135

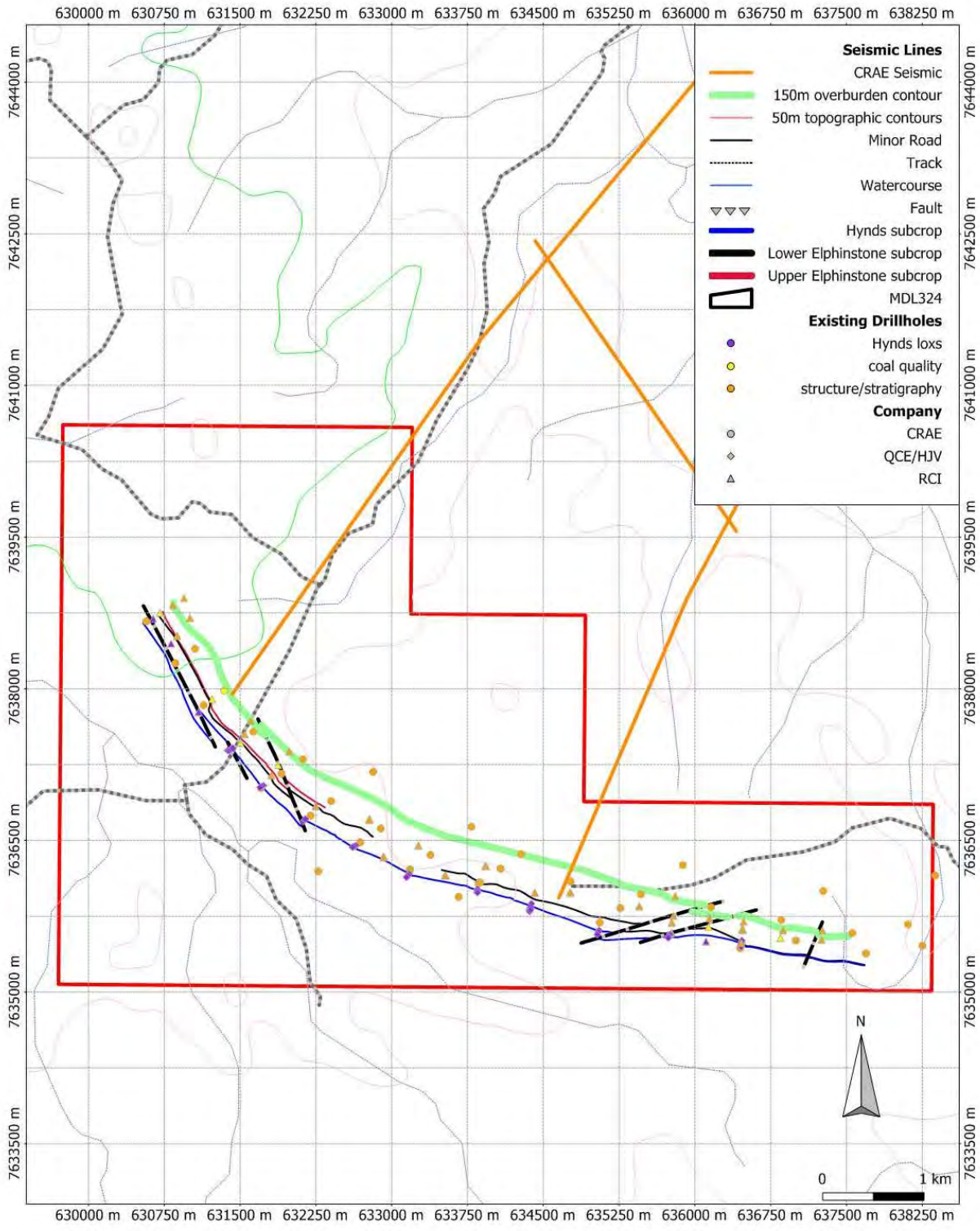

Figure 11: Hillalong Existing Drillholes and Seismic Survey *not to scale

3.2 General Geology

MDL324 is situated within the north-eastern section of the Permian Bowen Basin, the geology of which consists of thick sequences of fluvial sedimentary rocks of Permian and Triassic age and

contains widespread coal measures of economic importance (**Figure 12**). The economic coal seams in the Bowen Basin lie within the Permian Blackwater and Back Creek Groups. The Blackwater Group (deposited in a terrestrial environment) comprises two late Permian coal-bearing sequences, the Fort Cooper Coal Measures and the Rangal Coal Measures (known in some locations as the Elphinstone Coal Measures), while the Back Creek Group (deposited in a marginally marine environment) contains the Moranbah Coal Measures.

In and around the Hillalong area, the Bowen Basin rocks have been deformed into broad-scale, northwest trending anticlinal and synclinal structures. Younger rocks and sediments in the area include Cretaceous granitoid intrusions (Mt Gotthardt) to the south and east of the tenement, and Tertiary sediments and basalt flows covering some of the Permian strata. Intrusive rocks associated with both the Cretaceous intrusive rock and the Tertiary basalt flows, are also present.

Coal mines in this part of the Bowen Basin produce coal from the Rangal (or Elphinstone) Coal Measures, which contain the major economic seams in the area. Such mines include Hail Creek to the southeast, Burton to the southwest and Newlands to the northwest.

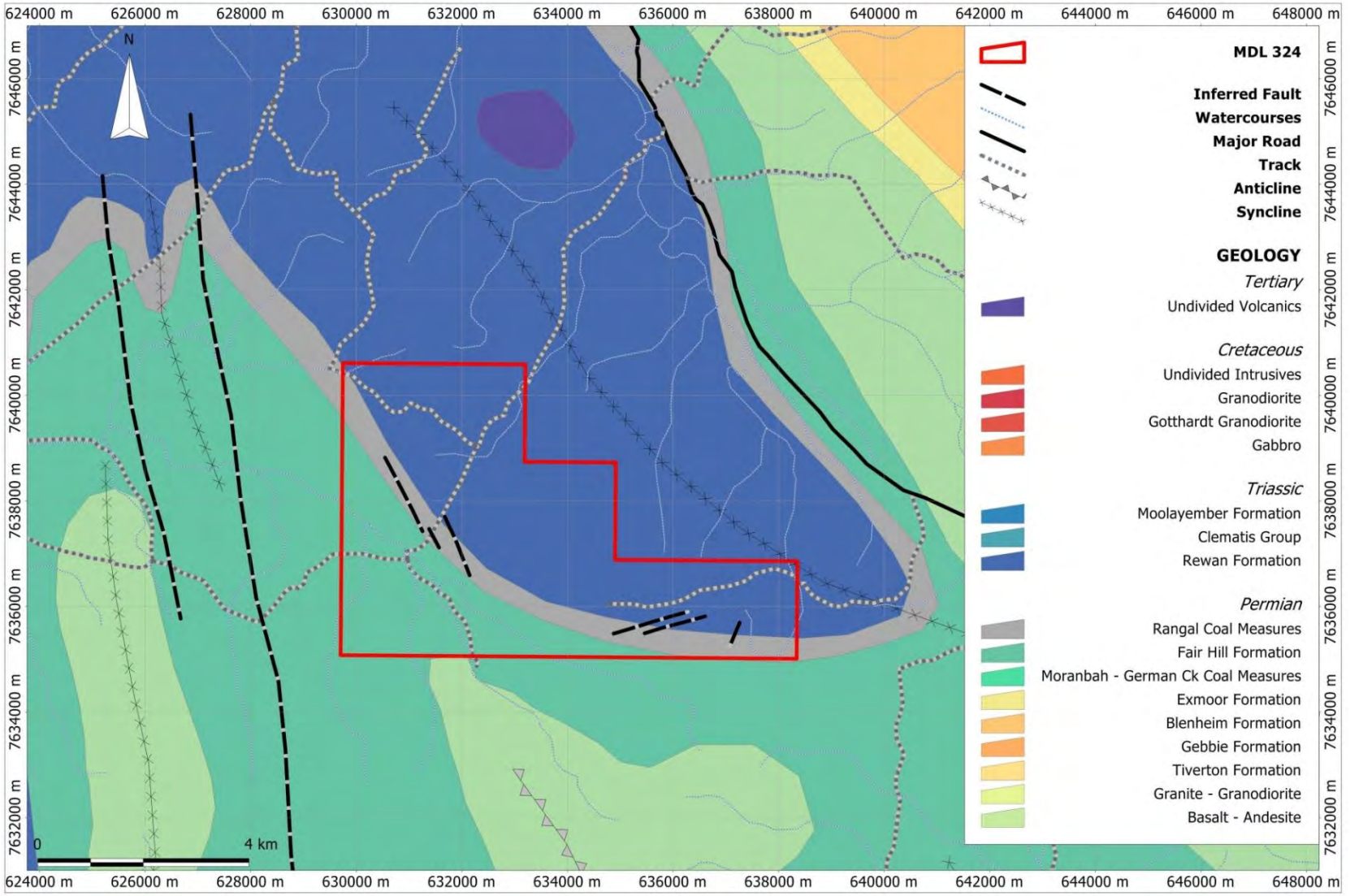

Figure 12: Regional Geology of the Hillalong Area *not to scale

3.2.1 Stratigraphy

The Hillalong Mine Project area stratigraphy is summarised in **Table 9** and **Figure 13**.

Table 9: Hillalong Area Stratigraphy

Era	Period	Group	Formation
Cainozoic	Quaternary		
	Tertiary		Suttor Formation
Mesozoic	Triassic	Clematis	
		Rewan	Arcadia Formation
			Sagittarius Sandstone
Palaeozoic	Permian	Blackwater	Elphinstone coal measures
			Fort Cooper coal measures

MDL324 lies within the Nebo Synclinorium in the north-eastern section of the Bowen Basin which consists of thick sequences of paleaozoic fluvial sedimentary rocks of Permian and Triassic age and contains widespread coal measures of economic importance. Mesozoic rocks in this part of the basin include Cretaceous granodiorite intrusions. Cainozoic sediments and basalt flows un-conformably overly the older strata.

The strata explored in the Hillalong area extend from the Late Permian Blackwater Group and Triassic Rewan Group to Tertiary basalt and Quaternary alluvium. A significant unconformity separates the Permo-Triassic rocks from the overlying Tertiary sediments and basalt flows and the unconsolidated Quaternary sands and gravels. Coal resources in the deposit area occur within the Fort Cooper Coal Measures and the overlying Rangal Coal Measures (locally called the Elphinstone Coal Measures), both coal measure sequences are members of the Blackwater Group. Underlying the Fort Cooper Coal Measures at considerable depth are the Moranbah Coal Measures which are considered uneconomic. The overburden overlying the economic coal measures consists of Quaternary, Tertiary and Triassic strata, the geology of which is explained below.

Quaternary

Thin Quaternary soils cover the Hillalong area. The soils are composed of sands, silts and clays degraded from the underlying Triassic and Permian sequences. In the east and parts of the west of

the Hillalong area, the soils are black soils developed from weathering of the underlying basalt and often include large basalt boulders. Local granodiorite outcrops in the east of the area may have contributed to the development of some thin Quaternary sands in the east of the area.

Tertiary Strata

Basalt flows were encountered in the southeast of the area, covering the underlying Triassic and Permian strata to an average thickness of 31m. These basalts are coarsely crystalline with occasional weathered clay bands between the flows. Basalt was also encountered to the northwest of the area.

Triassic Strata

The Rewan Group is divided into two sequences; the lower Sagittarius Sandstone and the upper Arcadia Formation. Both are typically composed of light greenish-grey sandstones and red-brown mudstones.

The two units are conformable, with the lower Sagittarius Sandstone predominantly composed of fine grained lithic sandstone while the upper Arcadia Formation comprises mostly siltstones and red-brown mudstones. The Rewan Group sediments typically have very little carbonaceous material indicating a fairly arid depositional environment. These sediments conformably overlie the Late Permian Elphinstone Coal Measures in this part of the Bowen Basin.

Permian Strata

Previous field mapping and drilling indicates that only the Elphinstone Coal Measures and Fort Cooper Coal Measures from the Blackwater Group sequences crop within the Hillalong area. The economic Moranbah Coal Measures from the Back Creek Group mined at North Goonyella (underground) and Eaglefield, Goonyella and Riverside (opencuts) are at considerable depths in the Hillalong area.

The Fort Cooper Coal Measures comprises grey lithic sandstones, siltstones, mudstones, coals, tuffs and tuffaceous sediments. The Girrah seam near the top of the Fort Cooper Coal Measures is a thick banded sequence of coal, cream to brown tuffaceous claystones, mudstones and siltstones. Though several parts of the seam contain coal plies up to 3.5m thick, coal quality tests indicate the coal has a high ash content and very poor coking and thermal properties. The Girrah seam was intersected in few holes in the Hillalong area, occurring approximately 3m below the Hynds seam. The Girrah seam is considered uneconomic.

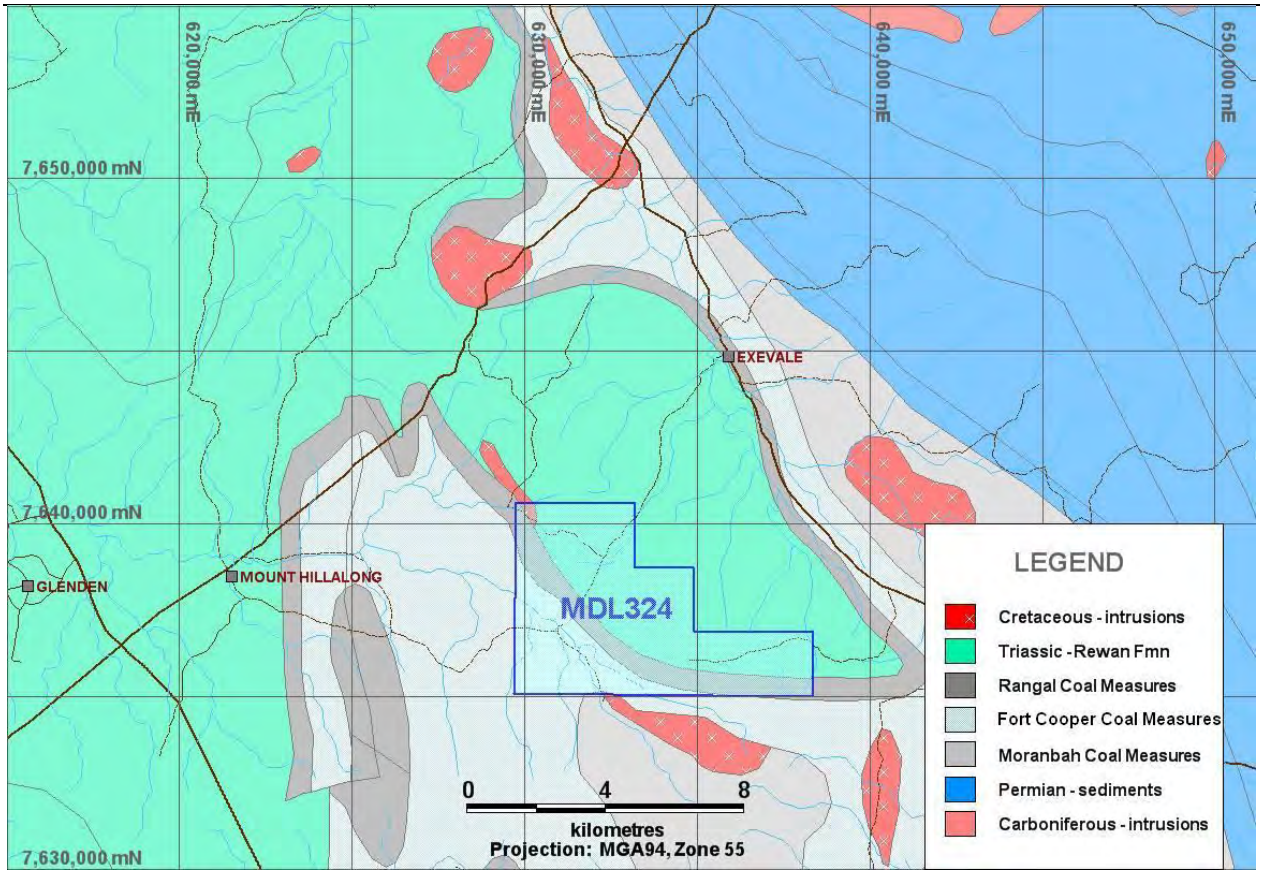

Figure 13: Stratigraphy of the Hillalong area *not to scale

3.2.2 Tenement Geology

Fort Cooper Coal Measures

The Girrah seam at the top of the Fort Cooper Coal Measures was penetrated in six (6) holes in the Hillalong area, but the base of the seam was not drilled. Based on previous testing results, the highly banded, high ash Girrah seam is currently considered uneconomic and has not been explored further. The seams in descending stratigraphic order are summarised in **Figure 14**Figure and **Table 10**.

Rangal Coal Measures (Elphinstone Coal Measures)

Generally, the Elphinstone Coal Measures comprise three seams, the Elphinstone Upper seam, the Elphinstone Lower seam and the Hynds seam. The Elphinstone Coal Measures crop out as an elongate strip, approximately 200m wide, broadly striking easterly to northwest, towards the western margin of the area. The base of the Rewan Group is generally 35m above the roof of the Hynds seam in the Hillalong area.

The Hynds seam from the Elphinstone Coal Measures is the main exploration target, though the overlying Elphinstone seams are also of interest. The seam crops out near the surface or subcrops below the Tertiary overburden in places and dips generally to the northeast at approximately 14° to 22° for much of the area.

The Elphinstone Upper seam (EU) from exploration ranged from 0.14m in the east thickening to a dirty 4.09m in the west and averaged 1.05m for the Hillalong area (as shown in **Table 10**). The interburden between the EU and the underlying Elphinstone Lower seam (EL) varies from 0.52m in the west of the deposit to 38.87m. The average interburden for most of the area where the seams are present is approximately 20m for much of the area. The EU has a poor geophysical density response and appears dull in the cuttings and is interpreted to be high in ash. The seam was not recovered for coal analytical testing.

The Elphinstone Lower seam (EL) ranges in thickness from 0.4m to 3.91m, averaging 1.52m in the areas where the seam is present. The coal quality was predicted to be poor from earlier drilling observations, as the seam is high in ash. To the east, the seam improves in quality and the EL Seam was recovered and sampled from three core holes in this area. Where the seam coalesces with the underlying Hynds seam the quality of the seam appears to improve and was recovered in one core hole. In this area the contact between the coal and the roof overburden is sharp and it is expected that the coal will separate easily from the stone when mined.

The Hynds seam (HY) consists of three plies; the upper coal ply (HY3), the Yarrabee Tuff (HY2), and the lower coal ply (HY1). The three plies vary in proximity, with drill holes observing the seams overly each other in certain areas and in other areas the HY2 and HY1 plies have been found to have separated from the overlying HY3 seam ply. The HY2 is observed in one drill hole as being 29.68m below the HY3 ply.

The HY3 ply coalesces with the overlying Elphinstone Lower (EL) coal seam in the east, with the interburden between the EL seam and HY3 ply varying from 40m in the west to 0m in the east. For much of the area the interburden varies from 40m to 20m, averaging approximately 30m.

The HY3 ply ranges from 2.66m to 7.5m and averages 4.95m, with the coal ply thickening gradually to the east (refer to **Table 10**). The HY3 ply thickens noticeably after it splits from the underlying HY2 and HY1. The HY3 ply is generally dull at the top, grading to dull with numerous bright bands at the base. In four drill holes, a sandstone roof was intersected above the HY3 ply where the seam appears to be locally thinned. In one drill hole, cobbles were cored immediately above the seam and it is interpreted that these represent the remnants of the bedload. The seam thickness at this location is thinnest at 4.58m compared with surrounding drill holes, which are approximately 5.0m thickening to 5.3m. This is evidence of localised seam thinning due to washout.

The contact between the HY3 ply and the roof is consistently sharp throughout the area and it is expected that the coal will readily part from the overlying stone which should minimise dilution.

The Yarrabee Tuff (HY2 ply) ranges from 0.15m to 0.42m and averages 0.25m.

The modelled HY1 ply ranges from 0.23m in the east to 1.91m in the west. Between drill lines the ply averages 1.16m. To the east the ply thins rapidly from 1.50m to 0.23m before it splits from the HY3 ply. Where the HY1 ply is present, the contact between the coal and the immediate floor is sharp and it is expected that the coal will readily part from the stone which should minimise the effects of dilution.

A summary of the characteristics of the seams in the Hillalong area can be found in **Table 10**.

Table 10: Typical Hillalong Seam Stratigraphy

Seam	Ply	Minimum (m)	Maximum (m)	Average Thickness (m)	Average Interburden Thickness (m)
Elphinstone Upper	EU	0.14	4.09	1.05	20
Elphinstone Lower	EL	0.40	3.91	1.52	30
Hynds Seam	HY3	2.66	7.50	4.95	0
	HY2	0.15	0.42	0.25	
	HY1	0.23	1.91	1.16	
Girrah Seam	Not Measured				

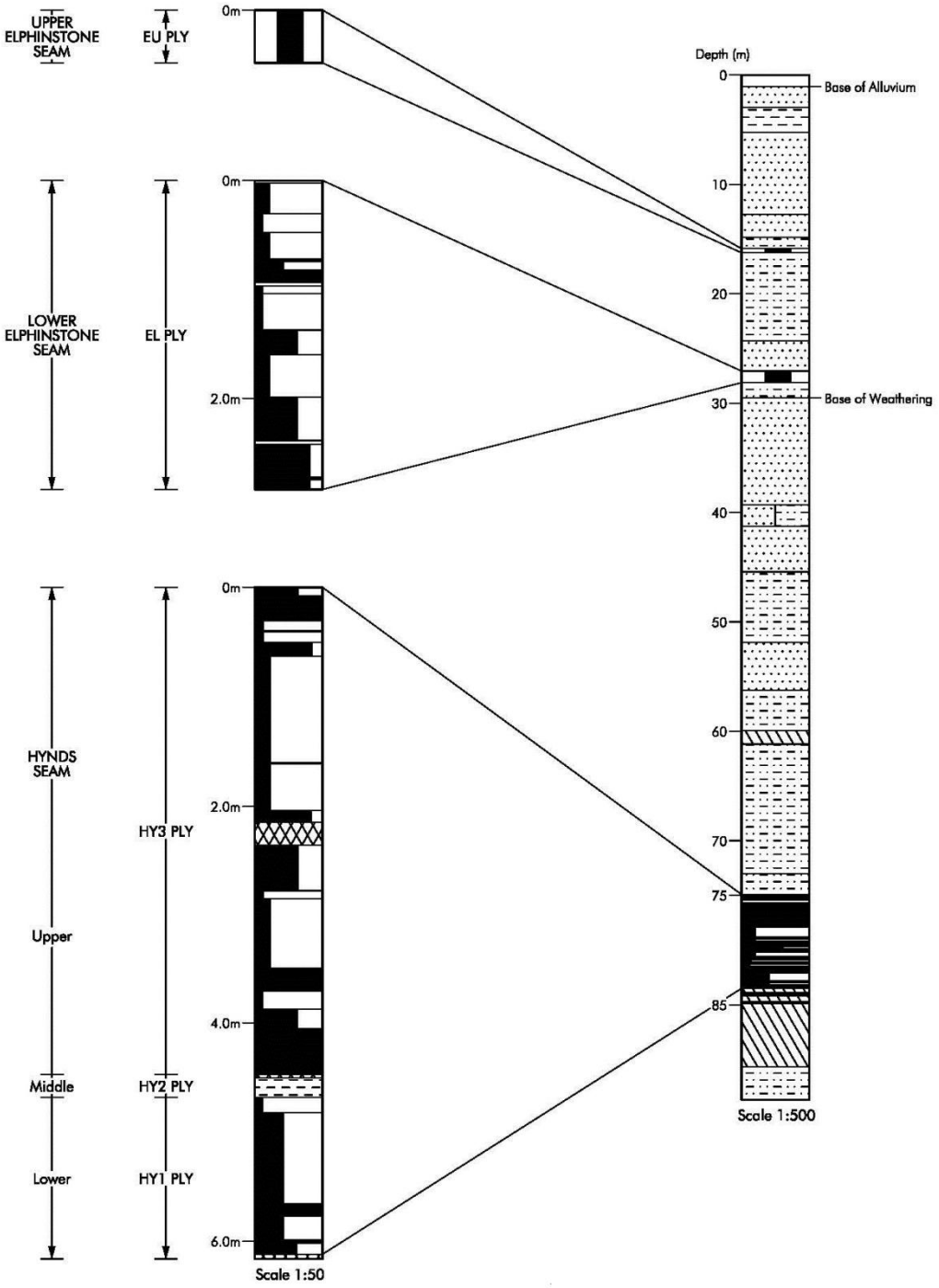

Figure 14: Hillalong Seam Stratigraphy

3.2.3 Structure

The Bowen Basin is divided into broad morphotectonic zones which represent areas of maximum sediment accumulation and adjacent shelf areas. Subdivision of these zones is broadly north-northwest to south-southeast in the northern part of the basin, often bounded by major faults. In the northern part of the Bowen Basin the significant elements are the Collinsville Shelf in the west and the Nebo Synclinorium to the east, both formed in extensional grabens in the early Permian.

Post-depositional structure of the Bowen Basin sequence is dominated by compressional tectonics with the major direction of tectonic transport to the west and southwest in the north of the basin. This compressional tectonic phase has formed large regional scale meridional north-northwest trending easterly dipping thrust faults.

MDL324 lies within the Nebo Synclinorium in the north-eastern section of the Bowen Basin, the geology of which consists of thick sequences of fluvial sedimentary rocks of Permian and Triassic age and contains widespread coal measures of economic importance. In and around the area, the Bowen Basin rocks have been deformed into broad scale, northwest-southeast trending anticlinal and synclinal structures that formed in response to regional stresses during the Triassic. Younger rocks and sediments in the area include Cretaceous granitoid intrusions (Mt Gotthardt) to the south and east of the MDL and Tertiary sediments and basalt flows covering some of the Permian strata. Intrusive rocks associated with the both the Cretaceous intrusive rock and the Tertiary basalt flows are also present.

3.3 Coal Resources

In June 2006 geological modelling and resource estimation was completed by McElroy Bryan Geological Services Pty Ltd (MBGS) using JBMS's Maptek Vulcan software. Many current mines with 6m of seam are descending down to beyond 100m depth, therefore, in the modelling a 100m depth of cover has been applied to the resource estimation.

Currently resource estimation has only been modelled for the Hynds seam due to it being the strongest economic resource for the area. A coal quality summary for all seams excluding the Girrah seam in the Fort Cooper Coal Measures is shown in Table 11.

Table 11: Summary of Coal Resources (as of June 2006)

Resource Block	Depth Interval (m)	Seam	Resource Classification	Average Seam Thickness	Density (g/cc)	Average Ash (%)	Area (ha)	Resources (million tonnes)			
								Indicated	Inferred	Total Open cut Indicated and Inferred	Total Underground Indicated and Inferred
A	From the crop to 100m depth of cover limited	Hynds	Indicated	6.21	1.44	22.70	181.49	16.20		17.00	
			Inferred	5.89	1.45	23.40	8.97		0.80		
B	From 100 depth of cover to limit of current model	Hynds	Indicated	6.04	1.44	22.70	266.25	23.20			44.30
			Inferred	6.00	1.44	22.30	244.96		21.10		
Total								39.40	21.90	17.00	44.30
Aggregate Indicated and Inferred										61.3	

3.4 Coal Quality

A total of 20 slimcore holes were drilled in the Hillalong area in 2007, of which 19 were analysed for coal quality. Of those 100mm cores tested, all have been used to undertake a coal quality assessment of the Hynds seam, with three holes also sampling the Elphinstone Lower seam. The core recovery was very good at >95.0% recovery of coal. **Table 12** shows the results of the coal quality analysis. In one drill hole, the Elphinstone Lower and HY3 coal plies coalesced, and therefore, the results are shown in **Table 12** as EL/HY3. **Figure 15** shows the locations of the drill holes used for coal quality analysis.

Table 12: Summary of Raw Coal Analyses

Seam	Ply	Relative Density (gm/cc)	Raw Ash (%)	Moisture (%)	Volatile Matter (%)	Fixed Carbon (%)	Phosphorus (%)	Total Sulfur (%)	Chlorine (%)
Elphinstone Lower	EL	1.49	25.60	1.60	22.1	50.7	0.05	0.41	0.02
Elphinstone Lower and HY3 Coalesced	EL/HY3	Not Measured	16.90	1.60	23.20	58.20	0.06	0.39	0.02
Hynds	HY3	1.40	22.40	1.70	23.20	52.70	0.093	0.37	0.02
	HY2	2.29	81.80	3.50	12.00	2.80	0.021	0.20	0.01
	HY1	1.47	27.10	1.80	22.30	48.70	0.022	0.35	0.02

Note: all values above are weighted averages using the thickness and relative density. All quoted values are on an air-dried basis unless specifically stated otherwise.

Hillalong coal test results indicate that the coal rank is in the transition region between medium and high volatile bituminous and the coal has relatively high raw ash (average 26.3%) and is low yielding (50.7% at ash of 9.8% in central part). It has low and consistent sulphur, and the average phosphorus is acceptable. A more thorough analysis is detailed below.

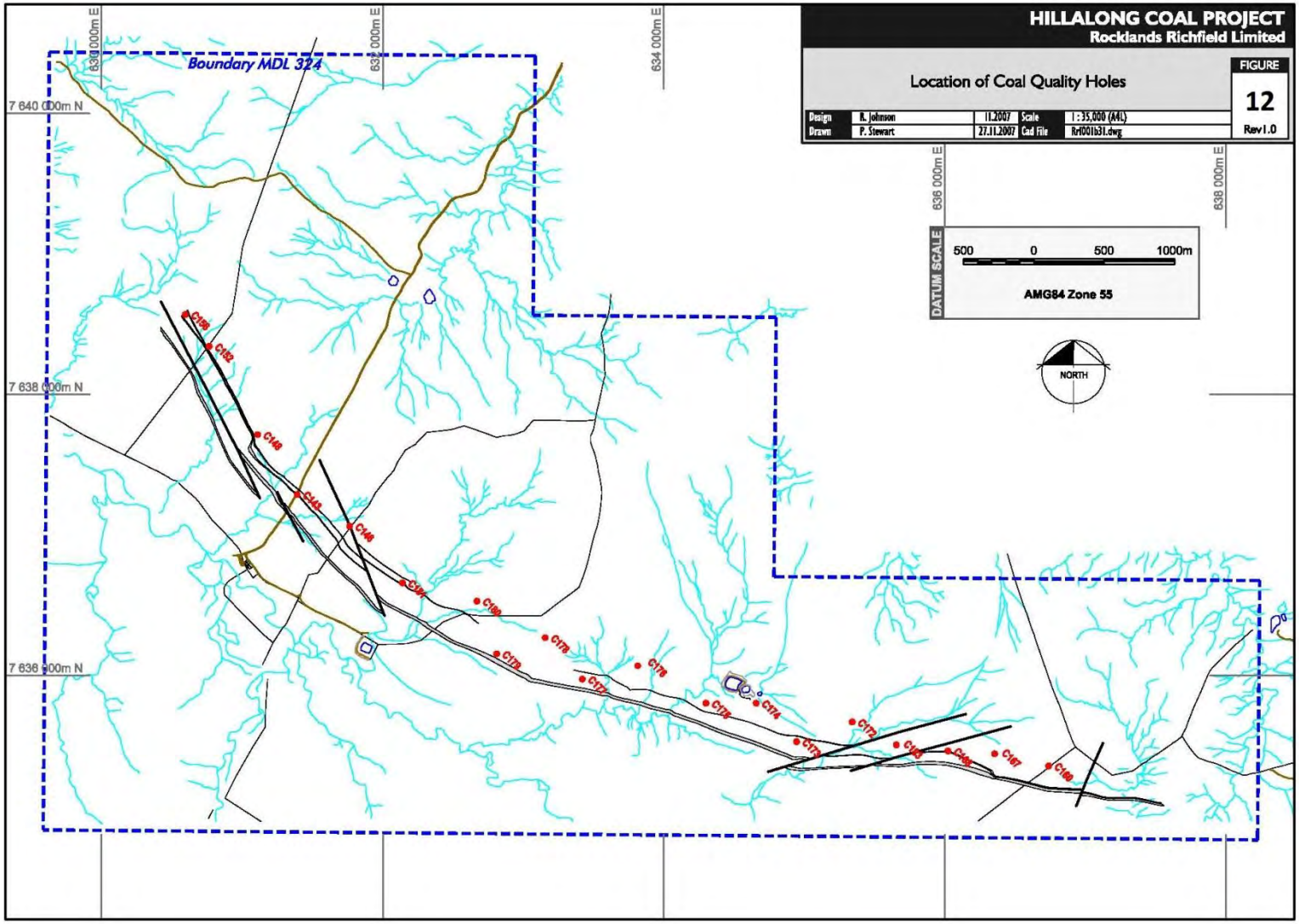

Figure 15: Location of Coal Quality Holes *not to scale

From the analytical testing it is apparent that only a thermal coal product can be made from the Hynds seam west of coal quality hole C148. In this area the thermal yield ranges 35% to 40.5% which is poor. To the east of C148 (inclusive) a soft to semi-soft coking coal can be made from the Hynds seam and where the Hynds (HY3 ply) and Elphinstone Lower seam have coalesced. On the basis of product yields and ashes, this area of Hillalong can be divided into three domains. A westerly domain occurs between coal quality holes C148 and C180 where the thermal yields range from 41.8% (ad) and 56.1% (ad), averaging 47.6% (ad) at product ashes ranging from 8.5% to 9.0% (ad). This represents a strike of approximately 2.1km in the west of the deposit area. The central domain between drill lines C179 and C168, representing a strike of approximately 3.6km, is distinctive as the yields decreases significantly ranging from 37.1% air dried (ad) to 42.8% (ad) and averaging 40.4% (ad) at product ashes ranging from 9.5% (ad) to 10.5% (ad). The eastern domain includes the area between drill lines C168 and C167, and has a small strike length of 0.7km and the coking product yields varied from 48.3% (ad) to 64.4% (ad) at product ashes varying from 8.0% (ad) to 9.0% (ad).

It may be possible to increase the product ash in some areas however this is likely to increase the phosphorus and the various mineral ash oxides which will lower the coke strength.

Total yields (coking and secondary thermal) for the Hynds seam ranges from 42.2% to 66.7%. West of coal quality hole C180 the total yield averages 50.8% with a coke split averaging 94%. In the central domain the total yields average 49.1% with a coke split averaging 85%. In the eastern domain the total yield for the Elphinstone seam is 54% at a coke split of 89%, while for the HY3 seam the total yield averages 66.2%, with a coke split of 94%. In the single drillhole where the combined EL and HY3 were tested, the total yield was 68.8% with a coke split of 94%. The ratio of coking to thermal coal product for much of the area is approximately 95:5, except the central domain where the coal yields are poorer and the coking to thermal product ratio averages about 85:15.

A soft to semi-soft coking coal with excellent caking properties could be produced with low sulphur and sporadically high phosphorus levels from the Hillalong area. The product yields are generally poor for much of the area and the product coal will need to be blended to improve its qualities and reduce the sporadic high phosphorus as it is not a stand-alone coking coal.

Summary of Coal Seam Gas Occurrence

As yet there has been no specific testing for coal seam gas, either as to quantity or quality. It therefore cannot be definitively stated if commercial coal seam gas does or does not exist at Hillalong.

There are neither gas tenements nor applications for gas tenements over the proposed Hillalong mining lease application area. The nearest coal seam gas wells are situated approximately 16km south of the MDL and 2.5km west of the South East Transport Option (refer to **Figure 10**).

4 PROPOSED OPERATIONAL DESCRIPTION

4.1 Description of Mining Activities

The Hillalong deposit is planned to be mined utilising blasting, dozing and excavator/truck operations. It is expected that the mine will be open cut for approximately 10 years. There is potential for an underground mine for another 10 years. The decision for an underground mine will centre on the depth of the coal and whether it extends beyond the open cut highwall depth. This will be determined by deep exploration drilling to obtain data on coal seam gas, geotechnical information and coal quality.

At this point in time, a preliminary mine concept plan for an open cut operation was developed as part of the 2008 economic feasibility. This concept will be reviewed in parallel to the EIS, as a more specific mine development plan is developed. As part of this, investigations will be undertaken regarding rock mechanics, wash plant simulation testing, mine planning and environmental permitting in order to further define the parameters for the opencut and underground mining operations. It is expected that the mining operations will centre on the main economic coal seams of the Elphinstone Coal Measures.

Whilst no specific mine plan exists, the main elements of the proposed coal mining development are:

- Selective stripping of available topsoil to be stockpiled for later use in the rehabilitation program;
- Development of a conventional truck and excavator open pit mine for the first 10 years of operation;
- Potentially an underground mine will be developed for the remainder of the resources, expected to be for the last 10 years of the Project;
- Suitable overburden will be initially used to construct flood levees, mine water management structures, road pavements and building hardstands;
- Processing of ROM coal initially through a simple sizing plant to reduce overall lump size and to blend coal from different seams as bypass coal product;
- Reshaping of spoil dumps, replacement of topsoil and revegetation of the mined out and backfilled areas;
- Construction of water management structures; and
- The continuation of the coal exploration program.

At this stage, while it is not anticipated that the coal will be washed prior to export, it is recognised that the potential need for washing will be considered during the EIS.

4.2 Mine Infrastructure Requirements

4.2.1 Water Supply

A feasibility study conducted in 2008 determined a water supply in the range of 750ML to 1,500ML per annum would be required to supply the mining operations. However, this is dependent on the production of the mine.

One potential water supply option exists with the Eungella Dam. Two Sunwater operated pipelines transport water from the Eungella Dam and are situated northwest of the MDL, with the nearest point being 4.4km from the Project area. The water supply options for the Hillalong area will undergo evaluation as part of the feasibility study and will be reported in the EIS.

4.2.2 Power Supply

A number of power options will be evaluated as part of the feasibility study and will be reported in the EIS. It is expected that consideration will be given to onsite generating capacity to augment mains power.

4.2.3 Mine Infrastructure

Consideration has been given to the mine infrastructure; however, no plans exist at this stage. As per other mines in the vicinity, it is expected that mine infrastructure will consist of the following:

- Site access to main road;
- Light vehicle access roads;
- Heavy vehicle haul roads;
- Communications infrastructure i.e. towers, cabling;
- Offices and administration facilities;
- Ablutions and crib room facilities;
- Water Management System (WMS);
- Wastewater treatment facilities;
- Fuel and oil storage facilities;
- High voltage transmission lines/poles and reticulation;
- Maintenance workshop, offices and associated amenities;
- CHPP (as an alternative to exporting run of mine coal);
- Coal stockpiling and blending facility; and
- Fines recovery system.

RCI remain open minded concerning the mine infrastructure and will conduct investigations as part of the feasibility study which will be reported in the EIS.

4.3 Offsite Infrastructure Requirements

4.3.1 Accommodation

It is expected that the EIS will examine three main accommodation options to determine the most effective and appropriate accommodation. These options include:

- Accommodating workers at offsite camps in Glenden;
- Accommodation workers onsite; and
- Drive in/Drive Out from Mackay

RCI is committed to local recruitment wherever possible, and anticipates that the mine's workforce will be Australian workers. RCI is also committed to maximising local benefits wherever possible, as a result of this project.

4.3.2 Roads, Rail and Port

Two haul road options are being considered for the transport of product coal as per **Figure 4**. The North West Transport Option involves the transportation of coal along a haul road moving west from the MDL and meeting with an unidentified road as per **Figure 4**. The South East Transport Option moves south along a haul road to meet Suttor Developmental Road.

Depending on the haul road option chosen, it is anticipated that the product coal will be transported by rail to Dalrymple Bay Coal Terminal (DBCT) or Abbott Point Coal Terminal (APCT), via existing Train Load Out (TLO) facilities at either the Hail Creek Mine or Newlands Mine. The EIS process and concurrent feasibility study will assess the various haul road options with a decision based on this assessment. The location of the Project in relation to the ports can be seen in **Figure 1**. The EIS process and concurrent feasibility study will assess the various haul road options with a decision based on this assessment.

Accessing port capacity will be a key factor in determining the most appropriate transport infrastructure approach. It is expected that road upgrades will be required.

The product haul road from the mine to the coal loading point would be designed to be suitable for a range of vehicles from B-Doubles through to B-Quintuples. The road would be a gravel surfaced road with a shoulder to shoulder width of 13m with the surfacing material sourced locally from ridge gravel or similar.

Although local topography and land tenure issues may necessitate local variation, the parameters below are likely to be adopted for the haul road construction:

- Carriageway width 13m;
- Maximum longitudinal gradient 5%;
- Minimum radius curve apart from low speed areas at the ends of the haul road 500m;
- Cross culverts to 1 year Average Recurrence Interval;
- 3% crossfall with super-elevated curves.

The haul road is unlikely to cause any problems by way of dust or noise given the paucity of residences in the area and would provide the required level of service and reliability.

4.4 Water Management

Mine operations have the potential to impact on downstream water quality as well as the groundwater resource. Currently no Water Management System exists, however, it is expected that the EIS will form an integral part of the options evaluation process. The key water management goals for the Project will be to minimise downstream impacts from the proposed mining operations.

A hydrological study as part of the EIS will consider overall water balance and the need to consider temporary diversion of watercourses.

4.4.1 Surface Water

Activities associated with the Project which may impact on the water quality values of Suttor Creek and smaller drainage lines in the Project area include:

- runoff from rainfall events or activities including construction, earth moving activities, vehicle movements and dust suppression;
- erosion of drainage lines, overburden dumps, stockpiles or other open areas due to rainfall events or construction and earth moving activities;
- leaching of contaminants from fuel, chemical or waste storage areas, overburden dumps or co-disposal;
- discharges of mine affected water from environmental dams;
- overflows of sediment and environmental dams during significant rainfall events;
- spills of hydrocarbons or chemicals; and
- failure of the Projects future Water Management System.

The drainage lines in the MDL can be seen in **Figure 16.**

Surface water at the Project will be managed in accordance with the relevant legislation, including Queensland Water Quality Guidelines (2009) and the ANZECC 2000 Guidelines. Current model water conditions for the Burdekin Basin are unavailable and therefore, the DERM Final Model Water Conditions for Coal Mines in the Fitzroy Basin will be utilised to ensure best management practice. Surface water will be managed in order to achieve the following water quality objectives:

- separation of runoff from disturbed and undisturbed areas;
- minimisation of contamination of surface water on site;
- containment, treatment and reuse of surface water on site with minimal discharges to the downstream environment;
- maintenance of the existing physical, chemical and biological integrity of downstream water quality within acceptable parameters including:
    - water quality monitoring results for potential contaminants in discharges consistently below the Release Contaminant Investigation Trigger Levels of the DERM Final Model Water Conditions;
    - water quality monitoring results for dams (if required) consistently below the Onsite Water Storage Contaminant Limits of the DERM Final Model Water Conditions;
    - background water quality monitoring results consistently below the Receiving Waters Contaminant Trigger Levels of the DERM Final Model Water Conditions;
    - water quality monitoring results consistently below the Stock Water Release Limits of the DERM Final Model Water Conditions; and
    - water quality monitoring results consistently below the Irrigation Water Release Limits of the DERM Final Model Water Conditions;
- management of the sewage treatment system to minimise the potential biological impacts on surface water quality;
- management of raw water usage to minimise impacts on the water supply system of the area; and
- minimisation of impacts of flood levels and frequencies both upstream and downstream of the Project.

4.4.2 Groundwater

There is also potential for construction and operational activities undertaken as part of the Project to contaminate groundwater in the area. Mine activities that may impact the groundwater include:

- Co-disposal facility seepage;
- seepage from saline overburden materials;
- seepage from non-process waste disposal and storage areas;
- seepage from workshops, hydrocarbon and chemical storage areas;
- seepage of hydrocarbon and chemical spillage from field servicing, construction and shutdown areas; and
- seepage of water of lesser quality to aquifers from storage or through active discharge to surface watercourses.

Mitigation strategies to prevent potential impacts to groundwater quality through contamination will include:

- the appropriate design and construction of the co-disposal facility in accordance with statutory requirements, standards and codes, and industry best practice;
- monitoring of groundwater bores for potential seepage and contamination as part of the groundwater monitoring program, including installation of additional monitoring bores immediately surrounding the co-disposal facility;
- inclusion of co-disposal material, coarse reject and overburden in an operational waste characterisation program;
- designated storage areas for hydrocarbons, chemicals and waste materials for transfer;
- appropriate design of hydrocarbon and chemical storage facilities, in accordance with AS1940-2004: *The storage and handling of flammable and combustible liquids*;
- development and implementation of appropriate procedures for servicing and shutdown activities (both within workshops and in field), including spill management and waste management protocols; and
- development and implementation of an appropriate water management system.

4.4.3 Flood Protection

A hydrological study as part of the EIS will consider overall water balance and flood risk of the mine. Currently no Flood Management System exists for the mine, however, the management options will be considered as part of the EIS.

4.5 Waste

Existing conditions in relation to waste reflect the existing land use of grazing and consequently waste impacts on land values are essentially non-existent in the area of the proposed mining leases. Therefore, the environmental values relative to waste are the unaffected landscape and diversity of the ecological process surrounding the proposed mine site and the health and wellbeing of the local community.

Potential impacts to the values of the area resulting from waste are:

- Direct impacts on native wildlife potentially resulting in death;
- Impacts on native habitat which may diminish the value of that habitat;
- Impacts on surrounding landholders through contamination of land and water resources;
- Impacts on air quality through odour emissions; and
- Reduction in visual amenity of surrounding area.

Waste Management Strategies will include:

- Separation of wastes into defined streams for appropriate treatment within the hierarchy of management (avoid, reduce, reuse, recycle, waste to energy, dispose);

- Designated storage areas on site;
- Use of existing disposal systems;
- Utilisation of licensed waste management contractors and recycling and disposal facilities; and
- Waste tracking and reporting.

4.5.1 Mine Waste

It is not anticipated that the coal will be washed prior to export. However, the EIS will give consideration to the potential impacts associated with a need to wash the coal. In this case, it is recognised that coal washery rejects will be generated. Water availability and plant water consumption are major considerations in the selection of tailings disposal systems so as to recover water from fines and to reduce water loss to evaporation. The method of disposal for coarse reject and tailings will be reviewed as part of the water resource study in the EIS.

4.5.2 Non-Mine Waste

General and construction waste will be generated by the Project. Off-site waste disposal according to prevailing Council regulations will be undertaken. A water treatment facility may be established and designed to handle sewage and washdown water. The facility will meet local and other statutory requirements.

4.6 Coal Handling and Processing Plant (CHPP)

As an alternative to exporting run of mine coal, a coal handling and processing plants is being considered in the mine design and will be assessed during the EIS process. If this option was to be selected, run of mine coal would be processed on site using conventional Coal Handling and Preparation Plant (CHPP) technologies. The method of process waste disposal is yet to be determined, it would likely consist of one or more of the following: separate disposal of tailings slurry and coarse reject; co-disposal of tailings slurry and coarse reject; and/or dried tailings disposed of, combined with, or separate to coarse reject. Product coal is anticipated to be transported to Dalrymple Bay Coal Terminal (DBCT) or Abbott Point Coal Terminal (APCT) dependent on the assessment of the transport options.

4.7 Project Milestones

Currently no specific Project milestones are in place. However, RCI is committed to working with government with a view to achieving relevant approvals through the EIS process by late 2014 with

construction to begin in late 2014 or early 2015. Subject to approvals, mine operations are expected to begin in 2016. More detailed project milestones will be established during the course of the EIS investigations.

5 DESCRIPTION OF EXISTING ENVIRONMENT

5.1 Land Use

The mine area is predominantly used for cattle breeding and grazing. Most of the land has been cleared for agricultural purposes. Beef production and coal mining are the major land uses in the local area. The land is privately owned as indicated in **Figure 5.**

Acquisition of land for mining operations and infrastructure may take place. All landowners likely to be affected will be identified and valuations in advance of purchase negotiations will be commissioned. Sellers of land may have the option to lease back the property for grazing in areas where there is no requirement for mining.

5.2 Soils, Land Capability and Water

A soil and land capability study is to be undertaken as part of the EIS. The study will include an assessment of Strategic Cropping Land. In the local area soils appear to include grey clays overlying weathered rock.

Topography

Topography in the area rises gently to the northeast from the coal seam crop area across the western limb of the Exevale Syncline. Topography ranges from 370m to 420m with sporadic local Tertiary hills rising to 440m. The area is steepest in the north on the Hillalong Anticline where the thrust ramps have steepened the topography significantly ranging from 410m to 460m in this area.

Surface Water

The main drainage feature within the Hillalong MDL324 area is Suttor Creek which flows generally in a north-westerly direction across the MDL (**Figure 16**). Suttor Creek and the five minor tributaries associated with it will most likely be impacted by the Project. Minor diversions of these creeks will be required to enable mining to progress. The nature and extent of the impacts will be determined by the hydrology baseline studies, conducted as part of the EIS process.

The practicality of construction of dams to collect surface water is limited by the small available catchments on MDL324.

Since there is limited information on surface water parameters, a hydrological study as part of the EIS is required.

Groundwater

During investigation drilling on the site there was no groundwater encountered of sufficient flow to indicate a reliable groundwater source for the demand required. Local landowners have also indicated that this is the case and the Department of Natural Resources and Water (DNRW) groundwater licensing division, now known as Department of Environment and Heritage Protection (DEHP) have also confirmed that the area in question is unlikely to provide a reliable source of water.

In the Hillalong area the coal seams are interpreted to be the only permeable laterally extensive units. The basalt hills to the west and east contain some water though it is interpreted that these aquifers are fractured zones and though they have good permeability they do not have substantial storativity and recharge is restricted to the areas where the fractures are open to the surface. The coal seam aquifer system is recharged by a number of small streams where they traverse the subcrops of each of the seams and also along the strike of the seam subcrop.

During exploration drilling, all significant flow rates were measured using a V-Notch Weir (VNW) airlift test. Flow rates varied from 0.003 to 4.45 litres per second. In the middle of the MDL area, most of the airlift flows are very small (i.e. less than 0.10 litres per second). Where significant flows were produced, they generally occurred in fractured zones in the overburden sequences probably associated with local faulting.

A potentiometric surface from groundwater measurements ranges from 332.0m RL to 422.9m RL, averaging around 372.6m RL for most of the area. Assessment of the results indicates the groundwater water table interpreted in the Hillalong area varies along the strike and appears to be from several fault bounded domains. The varying potentiometric surfaces may have been level at some stage, but the presence of water bores particularly in the central and western parts of the area may have lowered the water table. The recharge for the area is limited to runoff in the headwaters of Suttor Creek and the subcrop of the coal seams and is unlikely to match the rate at which the landowner has withdrawn water from the aquifer system through pumping.

This data will be included in the hydrological study being undertaken as part of the EIS.

5.3 Existing Vegetation

Current Regional Ecosystem mapping shows that approximately 1,432 ha of remnant regional ecosystem communities are present within the MDL boundary, the most dominant regional ecosystems being RE 11.9.9 dominant and RE 11.9.2 subdominant. The endangered regional

ecosystems cover a significant portion of the eastern side of the MDL (**Figure 17**). Approximately 66.2 ha of remnant Endangered Brigalow community ERE 11.9.5 are situated within the MDL with an understory of Semi-evergreen vine thicket (SEVT) on fine-grained sedimentary rocks (ERE 11.9.4). Individual patches of Semi-evergreen vine thicket and microphyll vine forest on Cainozoic igneous rocks, Lowlands (ERE 11.8.13) constitute 613ha of the MDL with mixed patches of ERE 11.8.13 and Eucalyptus orgadophila open woodland on Cainozoic igneous rocks (RE 11.8.5) adding an additional 28.97 ha of remnant community.

The EPBC Protected Matters Report compiled in August 2012 identified that 'Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin' 'may occur' within 5km of the MDL. Desktop assessment indicates this endangered remnant community is not located within the MDL, however, Flora and Fauna baseline studies will confirm this.

Due to the agricultural nature of the area, it is noted that the areas of endangered regional ecosystems may be degraded. In the region remnant vegetation is often utilised as a cattle shelter area and is generally in decline due to weed invasion. Significant changes have also occurred to soil fertility due to animal use. Detailed investigation will be undertaken as part of the flora studies during the EIS process.

The remainder of the MDL area contains non remnant vegetation comprising a total area of 1,766ha. This area has been cleared of native vegetation to establish a range of exotic and native pastures to support the cattle breeding and fattening enterprises on the "Exevale" property. Small patches of regrowth vegetation are also scattered throughout the MDL (**Figure 18**).

5.4 Fauna

Terrestrial, avian and aquatic fauna are expected to be typical of the southern Bowen Basin. Both Aquatic and Terrestrial Fauna studies will be conducted as a part of the Environmental Impact Assessment baseline studies with studies centred on winter and summer surveys. Species listed as known to occur in the area include the Red Goshawk, Squatter Pigeon (southern) and the Koala; however, this will be ground truthed as part of the EIS.

6 AFFECTED AND INTERESTED PERSONS

6.1 Affected Persons – Proposed Mining Lease, Hillalong

1. The land upon which the Hillalong Project will be developed is held as freehold and a road reserve. Stock Routes also underlie the two Transport Options. Native Title is extinguished for freehold land, however, road reserves and stock routes may be subject to Native Title conditions, therefore, prior to initial mining activities a final legal review of Native Title will be undertaken;

2. The local governments affected are the Isaac Regional Council, Mackay Regional Council and Whitsundays Regional Council;
3. The two proposed Transport Options will require the use of ports and rail, details of which are provided in **Table 13**.
4. The affected persons with properties on or contiguous with the proposed Hillalong mining lease area and transport options and their registered addresses are listed in **Table 13**.
5. The affected Principal Holders with tenements on or contiguous with the proposed Hillalong mining lease area and transport options and their registered addresses are listed in **Table 14**.

7 PROPOSED CONSULTATION PROGRAM

A preliminary stakeholder engagement strategy has been prepared (see **Appendix A**).

In summary, the objectives of the consultation program will be to:

- To provide a streamlined single point of contact with stakeholders and to provide relevant stakeholders with timely, regular and transparent information on the proposed project
- To build long-term stakeholder and community relationships based on mutual respect
- To provide stakeholders with an opportunity and mechanism by which they can advise the study team of potential issues of concern and impacts that require attention
- To provide stakeholders with an opportunity to provide feedback to the study team on issues of specific interest to them and to negotiate relevant remediation actions or recommendations
- To build stakeholder recognition of Rocklands Richfield Limited as a responsible project proponent, and
- Target activities to reduce the potential for 'consultation fatigue'.

The methodology for the engagement strategy will be designed to inform and incorporate the views of the following groups in the community:

- Referral bodies
- Other government agencies
- Elected representatives
- Landholders
- Special interest and community groups.

The proposed engagement strategy will involve the following key activities.

Referral Bodies

Site visits, where appropriate, will be held for the referral bodies and will include presentations and discussions on all issues relevant to the proposal followed by field inspections.

Other Government and Semi-Government Bodies

The proposal will be discussed with these groups to impart a general awareness of the proposal and comments and feedback will be incorporated into the project design wherever practical.

Landholders and Neighbours

The landholders and near neighbours are aware of the project proposal and further discussions will be conducted individually with the landholders during the development of the Project. Landholders concerns will be taken into account in the design and construction of the Project.

Local Community Groups

The community group with a specific interest will be identified and discussions will be held with representatives to obtain comments which will be incorporated into the design wherever practical. The local community will be given the opportunity to receive project information and provide feedback via an online engagement platform.

Local Residents

Members of the affected communities will be encouraged to participate via the project website. Via the website, local residents will be able to receive project information and provided feedback. A survey of residents will be considered as part of the engagement process, and as part of the social impact assessment methodology.

Aboriginal Representative Bodies

Discussions will be held with local Aboriginal people who have an interest in the Project area. Discussions will focus on the impacts of the Project on cultural heritage, materials and values, and potential ways that any such impacts can be avoided or ameliorated.

8 PROPOSED POST MINING LAND USE

Pre-mining land use is cattle breeding and grazing and the site has been previously extensively cleared.

The land use of areas surrounding the proposed mining lease is generally similar i.e. cattle breeding and fattening although the area to the south of the proposed development is used for coal production at the Hail Creek mine.

The proposed post-mining beneficial land use will allow for the establishment and support of native plants and animals as well as the restoration of the cattle grazing land use in order to integrate post-mining land use with the surrounding land use. Establishment of native bushland is defined as the establishment of vegetation that allows colonisation by surrounding non-weed species such that vegetation will progress towards native bushland with no designated agricultural or grazing use.

The area disturbed by infrastructure operations will be revegetated using pasture grasses with trees and shrubs used to create diversity. Post-mining grazing may be the main post mine land use. Alternative beneficial land uses will be investigated and considered as mining proceeds and the company will seek to optimise the post-mining land use within the natural limitations of the area.

The proposed rehabilitation plan will ensure that the disturbed area does not adversely affect land outside the proposed mining area. The establishment of pasture grasses, native trees and shrubs and the proposed land form will allow subsequent land owners or the community the opportunity to select future uses for the site as long as the proposed uses or intensity of use do not result in degradation of the landscape.

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148 00.0 E

150 00.0 E

152 00.0 E

20 00.0 S

22 00.0 S

24 00.0 S

TOWNSVILLE

AYR

ABBOT POINT

BOWEN

COLLINSVILLE

MACKAY

DALRYMPLE BAY

PROJECT AREA

NEBO

MORANBAH

CLERMONT

EMERALD

ROCKHAMPTON

WIGGINS ISLAND

BILOELA

Major Roads

Major Rail Lines

Coal Terminals

Major Towns

Project Location

50 0 50 100 150 200 250

kilometres

NORTH

McCollum Environmental

McCollum Environmental Management Services

Figure 1
MDL324
Project Location

Author: McCollum Environmental - MEMS19	Date: 22 August 2012	Checked: ME
Scale: 1:2,000,000 (A3P)	Projection: Longitude/Latitude (GDA94)	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120822MP_MDL324_Project Location		

7660000m

600000m

620000m

640000m

660000m

680000m

7640000m

GLENDEN

MDL324

7620000m

SUTTOR DEVELOPMENTAL ROAD

SUTTOR DEVELOPMENTAL ROAD

PEAK DOWNS HIGHWAY

MDL Boundary

Major Roads

Minor Roads/Tracks

Railway Line

NORTH

5 0 5 10 15 20 25

kilometres

McCollum Environmental

McCollum Environmental Management Services

Figure 2
MDL324
Regional Location

Author: McCollum Environmental - MEMS19	Date: 23 August 2012	Checked: ME
Scale: 1:250,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120823MP_MDL324_Regional Location		

630000m
632000m
634000m
636000m
638000m
7640000m
7638000m
7636000m
MDL324

MDL Boundary
Resource Area

NORTH

500 0 500 1000 1500 2000 2500
metres

McCollum Environmental Management Services

Figure 3
MDL324
Hillalong Resource Area

Author: McCollum Environmental - MEMS19	Date: 20 September 2012	Checked: ME
Scale: 1:25,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120920MP_MDL324_Hillalong Resource Area		

MDL324 Boundary
ERE
ERE 500m Buffer
Regrowth Veg
SCL Trigger Area
National Park
Nature Refuge
GBR Wetland
Urban Restricted Area
Town
Homestead
Building - Potential Sensitive Receptor
Major Road
Minor Road
Track
Railway
Stockroute
Watercourse
NW Transport Corridor Option 200m Buffer
SE Transport Corridor Option 200m Buffer
Transport Corridor Option
Mining Lease Boundary
Road Reserve

7640000m
7630000m
7620000m
620000m
630000m
640000m
GLENDEN
Glenden Urban Restricted Area
SUTTOR CREEK
MOUNT HILLALONG
MDL324 HILLALONG
NW Transport Corridor Option
Homevale National Park
Collinsville - Elphinstone Road
SE Transport Corridor Option
HAIL CREEK ML
Kemmis Creek Nature Refuge
LAKE ELPHINSTONE
Sutton Developmental Road

NORTH

2 0 2 4 6 8 10
kilometres

McCollum Environmental Management Services

Figure 4
MDL324
Transport Corridor Options

McCollum Environmental

Author: McCollum Environmental - MEMS18	Date: 25 September 2012	Checked: MB
Scale: 1:100,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\121128MP_MDL324_HillalongTransport Corridor Options		

626000m
628000m
630000m
632000m
634000m
636000m
638000m
640000m
642000m
7642000m
7640000m
7638000m
7636000m
3HLN29
16CP866443
EXE CREEK
COLLINSVILLE ELPHINSTONE ROAD
SUTTOR CREEK
MDL324
4HLN225
14HLN223
13WHS466

MDL Boundary
Freehold Land
Leasehold Land
Road Reserve
Water Reserve
Easement
Strata
Stockroute
Road
Watercourse
Powerline

NORTH

1 0 1 2 3 4 5
kilometres

McCollum Environmental Management Services

Figure 5
MDL324
Background Tenure

McCollum Environmental

Author: McCollum Environmental - MEMS19	Date: 10 August 2012	Checked: ME
Scale: 1:50,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120810MP_MDL324_Underlying Tenure		

620000m
630000m
640000m
7640000m
7630000m
7620000m
MDL324
TURRAWULLA ROAD
COLLINSVILLE ELPHINSTONE ROAD
NW Transport Corridor Option
SE Transport Corridor Option
11HLN219
3HLN29
4HLN225
14HLN223
16CP866443
18CP866443
13WHS466
18SP104452
2474LHDT40119
19LHDT40304
17SP236270
12SP236271
2GV210
9E1342
902E1341
409E1341
406E1341
3E1342
16WHS451
16SP236270
1SP162553
2SP162553
100SP162554
3SP162553
101SP162555
1RP608302
102SP162555
4SP162553
4WHS353
MDL Boundary
Freehold Land
Leasehold Land
Reserve
Road Reserve
Water Reserve
Easement
Strata
Stockroute
NW Transport Corridor Option 200m Buffer
SE Transport Corridor Option 200m Buffer
NORTH
2 0 2 4 6 8 10
kilometres

McCollum Environmental
McCollum Environmental Management Services
Figure 6
MDL324
Transport Options
Background Tenure
Author: McCollum Environmental - MEMS10	Date: 28 November 2012	Checked: ME
Scale: 1:100,000 (A3P)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\121128MP_MDL324_Transport Corridor Background Tenure		

626000m
628000m
630000m
632000m
634000m
636000m
638000m
640000m
642000m

7642000m
7640000m
7638000m
7636000m
7634000m

EPM18380
NAVAHO GOLD LIMITED

MDL442
BOWEN CENTRAL COAL PTY LTD

EPM18953
NAVAHO GOLD LIMITED

EPC2153
DEMYCOAL PTY LTD

MDL324
QUEENSLAND COAL EXPLORATION PTY LTD

EPC752
BOWEN CENTRAL COAL PTY LTD

EPC1867
AREA COAL PTY LTD

EPC1645
AREA COAL PTY LTD

EPC883
BOWEN CENTRAL COAL PTY LTD

EPC774
XSTRATA COAL QUEENSLAND PTY LTD

Exploration Permit Coal
Exploration Permit Minerals
Mineral Development Licence

NORTH

1 0 1 2 3 4 5
kilometres

McCollum Environmental Management Services

Figure 7
MDL324
Surrounding Mining Tenure

McCollum Environmental

Author: McCollum Environmental - MEMS19	Date: 06 February 2013	Checked: ME
Scale: 1:50,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120810MP_MDL324_Surrounding Mining Tenements		

626000m
628000m
630000m
632000m
634000m
636000m
638000m
640000m
642000m

7642000m
7640000m
7638000m
7636000m
7634000m

EPP814
EUREKA PETROLEUM PTY LTD

EPP688
BNG (SURAT) PTY LTD

PPL56AGL PIPELINES INVESTMENTS (QLD) PTY LIMITED

MDL324
QUEENSLAND COAL EXPLORATION PTY LTD

EPP749
CH4 PTY LTD

Mineral Development Licence

Petroleum Pipeline Licence

Exploration Permit for Petroleum (EPP)

NORTH

1 0 1 2 3 4 5
kilometres

McCollum Environmental Management Services

Figure 8
MDL324
Surrounding Petroleum Tenure

Author: McCollum Environmental - MEMS19	Date: 06 February 2013	Checked: ME
Scale: 1:50,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120810MP_MDL324_Surrounding PetroleumTenements		

620000m
630000m
640000m
7640000m
7630000m
7620000m
EPM18380
NAVAHO GOLD LIMITED
EPC2153
DEMYCOAL
PTY LTD
EPC2139
MATILDA COAL
PTY LTD
EPC752
BOWEN CENTRAL
COAL PTY LTD
EPC774
XSTRATA COAL
QUEENSLAND PTY LTD
EPC2151
PRECISION MINING
PTY LTD
MDL442
BOWEN CENTRAL
COAL PTY LTD
EPM18953
NAVAHO GOLD LIMITED
EPC1824
AREA COAL
PTY LTD
EPC2150
LEJXY PTY LTD
MDL324
QUEENSLAND COAL
EXPLORATION PTY LTD
NW Transport
Corridor Option
EPC2141
RIO TINTO
EXPLORATION
PTY LIMITED
EPC883
BOWEN CENTRAL
COAL PTY LTD
EPC1867
AREA COAL
PTY LTD
EPC2149
QUEENSLAND COAL
INVESTMENTS PTY LTD
EPC1645
AREA COAL
PTY LTD
EPC1639
GOLDEN CROSS
OPERATIONS PTY LTD
EPC1634
BROTHERS MINING
PTY LTD
EPM18864
OLDFIELD EXPLORATION PTY LIMITED
ML4738
QUEENSLAND COAL
PTY LIMITED
ML70221
CREMORNE ISLAND
ENTERPRISES PTY LTD
EPM19252
OLDFIELD EXPLORATION PTY LIMITED
SE Transport
Corridor Option
EPC1981
RIO TINTO
EXPLORATION
PTY LIMITED
EPC1635
RIO TINTO
EXPLORATION
PTY LIMITED
EPC1972
FMG RESOURCES
PTY LTD
EPC2164
MANAGEMENT PTY LTD
EPC1866
AREA COAL
PTY LTD
EPC1860
RIO TINTO
EXPLORATION
PTY LIMITED
EPC2109
BHP BILLITON MITSUI
COAL PTY LTD
EPC954
BOWEN CENTRAL
COAL PTY LTD
EPC1773RIO TINTO EXPLORATION PTY LIMITED
EPC818ARCH COAL AUSTRALIA HOLDIN
AUSTRALIA (CQ) PTY LTD
EPC712PEABODY WEST WALKER PTY LTD

- Exploration Permit Coal (EPC)
- Exploration Permit Minerals (EPM)
- Mineral Development Licence (MDL)
- Mining Lease (ML)
- SE Transport Corridor Option 200m Buffer
- NW Transport Corridor Option 200m Buffer
- MDL324 Boundary

NORTH

2 0 2 4 6 8 10
kilometres

McCollum Environmental

McCollum Environmental Management Services

Figure 9
MDL324
Transport Options
Surrounding Mining Tenure

Author: McCollum Environmental - MEMS10	Date: 28 November 2012	Checked: ME
Scale: 1:100,000 (A3P)	Projection: MGA94, Zone 55, GDA94	

Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\121008MP_MDL324_Transport Corridor_Surrounding Mining Tenure

620000m
630000m
640000m
7650000m
7640000m
7630000m
7620000m

EPP814
EUREKA PETROLEUM PTY LTD

EPP688
BNG (SURAT) PTY LTD

PPL56AGL PIPELINES INVESTMENTS (QLD) PTY LIMITED

NW Transport Corridor Option

MDL324
QUEENSLAND COAL EXPLORATION PTY LTD

PSL82
ARROW BOWEN PIPELINE PTY LTD

SE Transport Corridor Option

EPP749
CH4 PTY LTD

WB 20F
BURTON NORTH 1
WB 11LCV
WB 21FR
WB 22F
WB 21F
WB 11LCA
WB 10LCA
WB 003C

KC 9F
KC 8F
KC 3P
KC 4C
KEMMIS CREEK 1

EPP1103
CH4 PTY LTD

SOUTH KEMMIS CREEK 1
KC 13C

MDL324 Boundary
SE Transport Corridor Option 200m Buffer
NW Transport Corridor Option 200m Buffer
Coal Seam Gas (CSG) Well
Petroleum Pipeline Licence (PPL)
Exploration Permit for Petroleum (EPP)
Petroleum Survey Licence (PSL)

NORTH

2 0 2 4 6 8 10
kilometres

McCollum Environmental

McCollum Environmental Management Services

Figure 10
MDL324
Transport Options
Surrounding Petroleum Tenure

Author: McCollum Environmental - MEMS10	Date: 06 February 2013	Checked: ME
Scale: 1:125,000 (A3P)	Projection: MGA94, Zone 55, GDA94	

Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\121008MP_MDL324_Transport Corridor_Surrounding Petroleum Tenure

626000m
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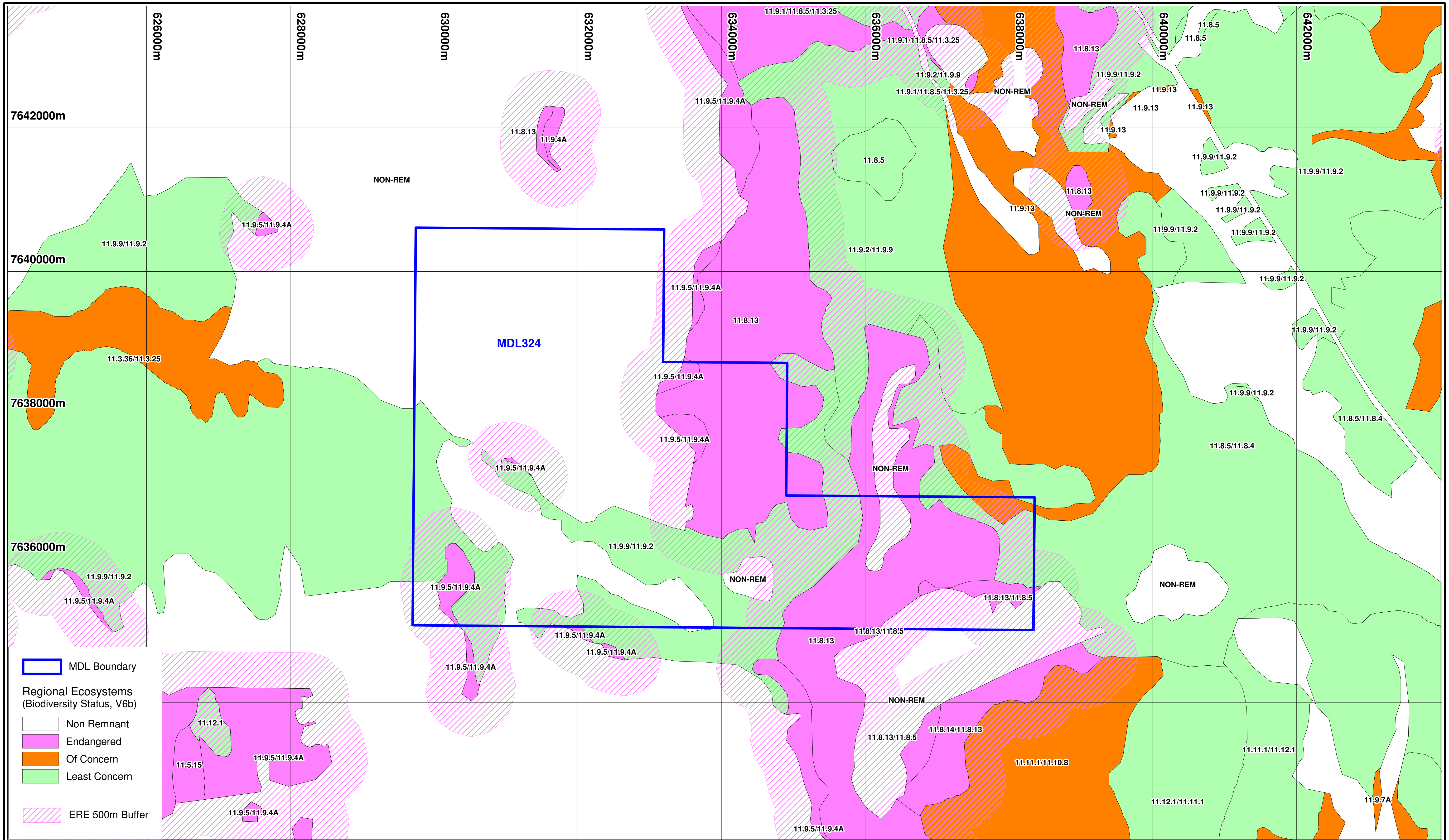
636000m
638000m
640000m
642000m
7642000m
7640000m
7638000m
7636000m
MDL324
SUTTOR CREEK
EXE CREEK
TURRAWULLA ROAD
400
450
350
MDL Boundary
Road
Watercourse
QLD Wetland Class
Lacustrine
Waterhole
50m Contours
NORTH
1 0 1 2 3 4 5
kilometres

McCollum Environmental Management Services
Figure 16
MDL324
Water Features
McCollum Environmental
Author: McCollum Environmental - MEMS18 | Date: 28 August 2012 | Checked: ME
Scale: 1:50,000 (A3L) | Projection: MGA94, Zone 55, GDA94
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\121016MP_MDL324_Water Features



Regional ecosystem linework reproduced at scale greater than 1:100,000, except in designated areas, should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100,000 is +/-100 metres. Regional ecosystem mapping reproduced with permission of the Department of Environment and Resource Management, 2009. While every care is taken to ensure the accuracy of the Information Product, the Department of Environment and Resource Management makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

NORTH

1 0 1 2 3 4 5
kilometres

McCollum Environmental Management Services

Figure 17
MDL324
Regional Ecosystems

Author: McCollum Environmental - MEMS19	Date: 16 August 2012	Checked: ME
Scale: 1:50,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120810MP_MDL324_Regional Ecosystems		

626000m
628000m
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632000m
634000m
636000m
638000m
640000m
642000m

7642000m
7640000m
7638000m
7636000m
7634000m

MDL324

MDL Boundary
Regrowth Vegetation

NORTH

1 0 1 2 3 4 5
kilometres

McCollum Environmental

McCollum Environmental Management Services

Figure 18
MDL324
Regrowth Vegetation

Author: McCollum Environmental - MEMS19	Date: 16 August 2012	Checked: ME
Scale: 1:50,000 (A3L)	Projection: MGA94, Zone 55, GDA94	
Plan: M:\GIS\Plans\2012\Rocklands Richfield\Hillalong MDL324\IAS\120810MP_MDL324_Regrowth Ecosystems		

Appendix A

Stakeholder Engagement Strategy

Stakeholder Engagement Plan

Hillalong Coal Project EIS

Draft Version 1.1

2012

Document Management

Project No.:

Document Reference: RCI Hillalong Stakeholder Engagement Plan V1.1 for EIS App.docx

Document Author: Warwick Powell & Lee Bermingham

Document Approval: 6/12/2012 12:53 PM - Warwick Powell for internal distribution

Last saved by Warwick Powell, 6/12/2012 12:53 PM

RCI Contact: Warwick Powell 0411 628 084; Lee Bermingham 0409 778 134

Resources Capital

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2.2 OBJECTIVES 6

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3.3 INFORMATION DISSEMINATION AND ISSUES IDENTIFICATION 9
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3.6 INCORPORATION OF RESULTS 9

1 INTRODUCTION

This Stakeholder Engagement Plan has been developed to guide the community consultation program and social impact assessment for the Hillalong Coal Project Environment Impact Statement (EIS). The plan sets out all significant aspects of the process of stakeholder in the assessment process.

This Plan has been prepared by Resources Capital International Pty Ltd (RCI).

RCI recognizes that stakeholder engagement is fundament to the delivery of the Environmental Impact Statement (and within it the Social Impact Management Plan – SIMP), to ensure that communities and key stakeholders are involved in implementation, and that grievances with respect to management of social and environmental impacts are properly and well managed.

1.1 CONTEXT

This Stakeholder Engagement Plan has been developed within the context of the Hillalong EIS process in general, the Queensland Government's Community Engagement Policies, Principles, Standards and Guidelines, the Queensland Government's Social Impact Assessment Guidelines, and the social context of the communities in which the proposed mine project operates.

The plan involves the following:

1. The guiding principles, purpose and objectives of the community consultation plan;
2. The framework and methodology for:
    a. Identifying interested stakeholders;
    b. Reporting stakeholder perceptions about the adverse and potentially beneficial impacts of the project;
    c. Engaging with affected stakeholders to negotiate mitigation strategies where possible;
3. Who is to be consulted (individuals, stakeholder groups, agencies);
4. The matters to be discussed (e.g. initial information about the project, assessment of impacts, possible mitigation strategies);
5. How stakeholders will be provided with an explanation of the proposed research methodology for the EIS and how the interested groups and individuals' input will influence the project (alignment adjustment and other ways);
6. Identifying and negotiating the way in which initial engagement and consultation will occur (phone, email, group meetings, door to door visits, etc);
7. How on-going participation will occur through the assessment process (e.g. stakeholder contact with consultant, availability of reports/studies, Draft EIS);
8. The number of times (or at what stages in the project) participants will be consulted;
9. How social impact assessment will be integrated with community consultation data to inform the overall impact assessment; and
10. How and when other critical data and reports (such as natural and economic environment assessment studies, traffic studies and so on) which will inform the judgement of stakeholders about environmental impacts of the project, will be made available to stakeholders and then how their response to that data will be reported on and assessed.

Consultation with stakeholders formed an integral part of the social impact assessment within the overall environmental impact assessment and environmental management processes.

2 PRINCIPLES AND OBJECTIVES

2.1 PRINCIPLES

Rocklands Richfield Limited (RRL) through its relevant subsidiary entity is the project proponent. RRL (through its consultant team) is committed to an active process of engagement with stakeholders.

RRL recognizes that consultation and engagement are two-way processes, which include informing stakeholders about progress with the project, listening to stakeholders' views and responding to legitimate concerns.

Rocklands Richfield recognizes that there are a range of stakeholders with differing interests in the project, including people and organizations that:

1. Are directed or indirectly impacted by the project;
2. Have "interests in the project or the company; and
3. Have the potential to influence project outcomes.

Rocklands Richfield recognizes that interests in the project can extend beyond a direct financial interest in the project's outcomes.

Rocklands Richfield is committed to a transparent approach to provide information to stakeholders about the proposed project and its impacts.

2.2 OBJECTIVES

The key objectives of the community engagement are to use best practice techniques:

- To provide relevant stakeholders with timely, regular and transparent information on the proposed project;
- To build long-term stakeholder and community relationships based on mutual respect;
- To provide stakeholders with an opportunity and mechanism by which they can advise the study team of potential issues of concern and impacts that require attention;
- To provide stakeholders with an opportunity to provide feedback to the study team on issues of specific interest to them and to negotiate relevant remediation actions or recommendations;
- To build stakeholder recognition of Rocklands Richfield Limited as a responsible project proponent; and
- Target activities to reduce the potential for 'consultation fatigue'.

3 STRATEGY

The Engagement Strategy utilises a variety of tools across the public participation spectrum to fulfil its objectives. Ongoing data collection will inform engagement activities with specific stakeholders, and allow the project team to undertake ongoing refinement and continual improvement of the approaches.

The Engagement Strategy consists of a number of related 'levels'. These are:

- Level 1: Key Local Decision Makers;
- Level 2: Directly Impacted Users;
- Level 3: General 'Vested Interest' Stakeholders;
- Level 4: Government Agencies; and
- Level 5: Community at Large.

Generally speaking, Levels 1 to 4 will involve direct one-to-one engagement. Level 5 will involve a combination of 'one to one' and indirect methods such as random surveys and marketing collateral/advertising.

The description of levels does not imply any order of importance or merit.

3.1 STAKEHOLDERS

Stakeholders are persons or groups (including associations) who are direct or indirectly impacted by a project. Stakeholders also include persons or groups who may have an interest in a project and/or the ability to influence its outcome. Typically stakeholders include:

1. Locally affected communities or individuals;
2. Local, state and national government authorities;
3. Elected representatives;
4. Civic organizations and groups with specific interests; and
5. Other businesses.

3.2 ENGAGEMENT METHODS

Table 1 below summarises the key stakeholder organisations in each of these levels, and provides some comments concerning key issues and responsibilities for engagement amongst the project team. Specific individuals within each organisation are to be identified by the relevant consultants.

TABLE 1: STAKEHOLDER ENGAGEMENT PARTICIPANTS AND METHODS

Level	Organisation	Discussion and Engagement Method
Level 1: Key Decision Makers	Mackay Regional Council	A range of stakeholders within MCC will be consulted throughout the EIS process. Specific officers will be consulted by the relevant consultants as required.
	Members of Parliament	High level briefings on key issues will be undertaken periodically with local MPs.
	Queensland Government Agencies (Various as per the TOR)	A range of stakeholders within the QLD Government will be consulted throughout the EIS process. Specific officers will be consulted by the relevant consultants as required on an ongoing basis. Consultations will take place in the form of one-to-one meetings, group workshops and exchange of information and correspondence as appropriate.
	Commonwealth Government	Relevant agencies with carriage over the EPBC Act will be consulted. Consultation will take place in the form of one-to-one meetings, group workshops and exchange of information and correspondence as appropriate.
Level 2: Directly Impacted Users	Land Owners and Landowner Family Members	One to one meetings. Direct correspondence and project newsletters.
	Other residents or users of the project area (if applicable)	One to one meetings. Direct correspondence and project newsletters.
	Downstream and other neighbouring communities	One to one meetings. Direct correspondence and project newsletters.
General Interest Stakeholders		
General Community	Community at large	Awareness raising through direct collateral distribution and supporting

		'free' media coverage. This will involve the establishment of a project website and the periodic distribution of project newsletters (hard and soft copy as appropriate). Establishing a database of interested community stakeholders for future engagement post-submission of EIS and release for public consultation. Feedback from 'feedback' form (hard copy and online). Quantitative Random Survey (300 Respondents) to be undertaken to gain a statistically robust insight into the state of public opinion on key issues.
	Nearby residents	Self-complete quantitative survey.

3.3 INFORMATION DISSEMINATION AND ISSUES IDENTIFICATION

All stakeholders are to be provided with information concerning the project in the form of the Initial Advice Statement, the EIS Terms of Reference and associated master planning documents. These documents will, when available, be accessible for download via the project website and the Queensland Government Department of Infrastructure website.

Respective consultants are to identify issues of relevance in consultation with stakeholders.

3.4 FEEDBACK

Where applicable, stakeholders are to be provided with confirmation that their feedback has been received and noted. This can be in the form of ongoing expert or technical reporting documentation, emails or correspondence.

At all times, stakeholders are to be encouraged to provide ongoing feedback as issues emerge or become apparent.

3.5 PROVISION OF TECHNICAL REPORTS TO STAKEHOLDERS

Technical specialist reports prepared as part of the EIS will be made available to the general public and stakeholders in accordance with the requirements of the EIS process, in conjunction with the release of the full draft EIS for public comment.

3.6 INCORPORATION OF RESULTS

The results of the engagement plan and feedback from stakeholders are to be incorporated into each of the respective specialist reports. The format in which feedback is incorporated is to be appropriate to each report.