

19 March, 2010

Davit Kitto
Department of Planning
23-33 Bridge Street
SYDNEY 2000
AUSTRALIA

Our Reference: 0079383L01.DOC

Attention: David Kitto

Dear David,



RE: NRE NO.1 COLLIERY PRELIMINARY WORKS PROJECT

1. INTRODUCTION

Gujarat NRE Coking Coal Ltd (NRE) seeks approval for the continuation of mining and ancillary operations at NRE No. 1 Colliery in the Southern Coalfield (the 'Project'). NRE No. 1 Colliery is located at Russell Vale, to the west of Bellambi, in the Illawarra region of New South Wales (NSW). A locality map is presented as *Figure 1.1*.

The Project will have an estimated capital investment value of \$114 million. It will include the following activities:

- o continuing operation of the Colliery, including:
 - o augmenting, upgrading and using the existing infrastructure; and
 - o extracting remnant coal reserves within existing mining areas;
- o extracting up to 1 million tonnes of run-of-mine coal a year from the Bulli and Wongawilli Seams; and
- o transporting run-of mine coal from the mine via truck haulage.

The Project Application Area (PAA) comprises Consolidated Coal Lease (CCL) 745, Mining Purposes Lease (MPL) 271 and Mining Lease (ML) 1575. Extensive underground mining has been undertaken within the PAA, dating from the mid 19th Century, however a substantial volume of high quality coking coal reserves remain with some thermal coal as a by-product.

Pursuant to provisions of *State Environmental Planning Policy – Major Development 2005*, the Project requires approval under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

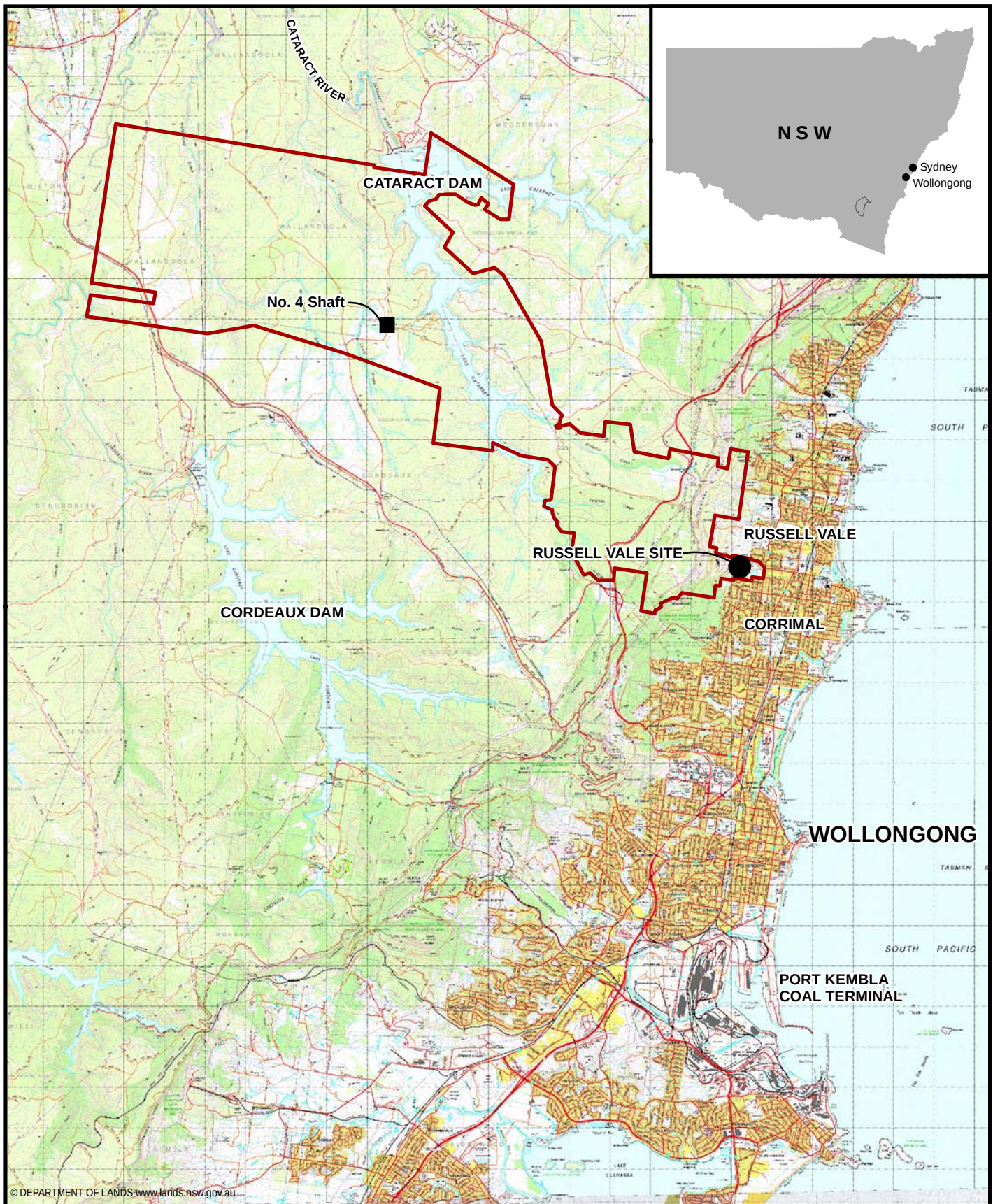
Environmental Resources Management Australia Pty Ltd (ERM) has been commissioned by NRE to prepare the Project Application for the Project. This document is being submitted to the Department of Planning (DoP) to request the Director-General's requirements (DGRs) for the Project. Subsequent to receipt of the DGRs, an Environmental Assessment Report (EAR) will be prepared and submitted to the Minister for Planning to seek project approval under Part 3A of the EP&A Act.

1.1 RELATED PROJECTS

Gujarat NRE Coking Coal Ltd is also currently seeking approval for the expansion of its existing operations and upgrade of associated surface facilities at NRE No. 1 Colliery in the Southern Coalfield (MP 09_0013). This larger project will have an estimated capital investment value of \$250 million. It will include the following activities:

- o coal extraction (from the Bulli, Balgownie and Wongawilli seams) ramping up to coal production of up to 3 million tonnes per annum (mpta) with a projected mine life of at least 18 years;
- o upgrade of existing mine infrastructure and services at Russell Vale, including surface conveyors and coal handling infrastructure, coal sizing, screening, crushing and load-out facilities, site noise and dust controls and a stockpile for run-of-mine (ROM) coal;
- o continued use of No.4 Shaft for mine access (for men and material), bath house, offices and parking area;
- o essential maintenance and refurbishment of existing ventilation shafts and power and water supply arrangements;
- o upgrade of all site water management including mine water and stormwater controls;
- o continued road haulage of the unwashed coal to Port Kembla Coal Terminal (PKCT) for shipment to India, using the existing haulage route; and
- o progressive site rehabilitation.

The NRE No.1 Colliery Preliminary Works Project will facilitate a continuation of existing operations until the larger EA is completed and approved.



Legend

Project Application Area

Client: Gujarat NRE Coking Coal Limited
Project: NRE No.1 Colliery Preliminary Works

Drawing No: 0079383s_PW_GIS001_R0.mxd
Date: 18/03/2010 Drawing size: A4
Drawn by: JF Reviewed by: MK
Scale: Refer to Scale Bar



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Maps and figures contained within this document may be based on third party data, may not be to scale and is intended for use as a guide only. ERM does not warrant the accuracy of any such maps or figures.

Figure 1.1
Locality Map

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Port Macquarie, Sydney



2. PROJECT DESCRIPTION

2.1 PROJECT APPLICATION AREA

2.1.1 Location

The PAA is approximately 8 km north of Wollongong and 70 km south of Sydney, within the local government areas (LGAs) of Wollongong and Wollondilly in the Illawarra region of NSW. It covers approximately 6,858 ha, encompassing CCL 745, MPL 271 and ML 1575. CCL 745 is valid until 30 December 2023, MPL 271 until 9 May 2012 and ML 1575 until 18 October 2010.

The PAA comprises an extensive underground area, the majority of which is covered by native bushland and the Cataract Dam, with perennial creeks, ephemeral tributary streams and upland headwater swamps. Infrastructure above the proposed mining area includes a Telstra fibre optic cable, electrical transmission lines and roads.

NRE has surface leases at the Russell Vale site and six other surface sites, being the No. 4 Shaft, MPL 271 and four ventilation shaft sites (No. 1, 2, 3 and 5 Shafts). A number of surface leases also exist for various infrastructure easements across the PAA.

i. Russell Vale Site

The Russell Vale site occupies approximately 100 ha at the eastern extent of CCL 745, within the Wollongong suburb of Russell Vale, adjacent to the suburb of Bellambi. It is on freehold and leasehold land on the lower slopes of the Illawarra Escarpment. Site access is via the Princes Highway, at its intersection with Bellambi Lane. The Russell Vale site contains the majority of the surface infrastructure for the colliery including administration offices, workshops; portal entries and coal handling facilities.

ii. No. 4 Shaft

The No. 4 Shaft and associated facilities are approximately 10 km north west of the Russell Vale Site and surrounded by native bushland within the SCA Metropolitan Special Area. The No. 4 Shaft is a downcast shaft for men and materials. Site facilities include a winder, offices, bath-house, stores, workshop, car parking area, water management facility, sewage treatment plant, electrical sub-station and explosives magazine.

2.2 MINING

2.2.1 *Description of the Resource*

More than 300 million tonnes of coking coal resources remain within the PAA in the Bulli, Balgownie and Wongawilli seams. The Bulli seam is 0 to 490 m below the ground surface and has been extensively mined for more than 120 years within CCL 745. The Balgownie seam is approximately 8 to 10 m beneath the Bulli seam and the Wongawilli seam lies 22 to 25 m below the Balgownie seam. It is estimated that a total of approximately 2.2 million tonnes of ROM coal will be recovered from the mine as part of this project. This represents a project life of up to 3 years, with a supply peak extraction rate of 1 mtpa.

2.2.2 *Bulli Seam*

It is proposed to continue coal extraction from the Bulli seam including (see *Figure 2.1*):

- o Bulli seam extraction in 309 panel;
- o first workings in H Panels; and
- o development & pillar extraction in “V” Mains.

Pillar extraction will continue in the 309 panel (the T and W mains), within the western portion of the lease. The coal will be continuously removed from the working face by a series of conveyors that transfer the coal to the surface. Once pillars are removed, the unsupported strata collapses into the resulting void which is known as a goaf. Collapse of overlying strata into the goaf results in surface subsidence. Pillar extraction within 309 panel (T & W mains) was approved via a Section 138 approval under the *Coal Mines Regulations Act 1982* issued by Industry and Investment NSW (IIN) in 2004 effective until December 2008. In 2007 the approval was extended until December 2010.

First workings are proposed in H Panel within the central portion of the lease. Approval for the H Panel was issued by IIN under Section 363(1) of the *Mining Act 1992* in September 2005.

First workings will be developed using continuous miners with integrated roof and rib bolting rigs. The roadway roof will be supported by installation of steel roof bolts into the stone above the coal seam, and by pillars of coal which are left behind. Coal will be transported from the continuous miners to the conveyor system via shuttle cars.

First workings leave the coal pillars intact and the overlying strata fully supported and results in 'zero' subsidence, which is defined by IIN as vertical downward movement of the ground surface that is less than or equal to 20 mm.

It is proposed to continue development of the Bulli seam in the V Mains using first workings. First workings will involve development of 5.5 m wide (approximate) headings or roadways within the coal seam, and interconnecting cut-throughs. These will provide access to the coal resource, mine ventilation and corridors for personnel and material movement within the seam and coal conveyor network. Following completion of first workings in the Bulli seam at the V Mains, the retained pillars of coal will be extracted by a remote controlled continuous miner using pillar extraction.

A subsidence management plan (SMP) has been prepared and submitted to IIN to gain approval for first workings and pillar extraction from the V Mains within the Bulli seam. Production from the V Mains is anticipated to commence in 2010.

2.2.3 Wongawilli Seam

It is proposed to continue coal extraction from the Wongawilli seam including (see *Figure 2.1*):

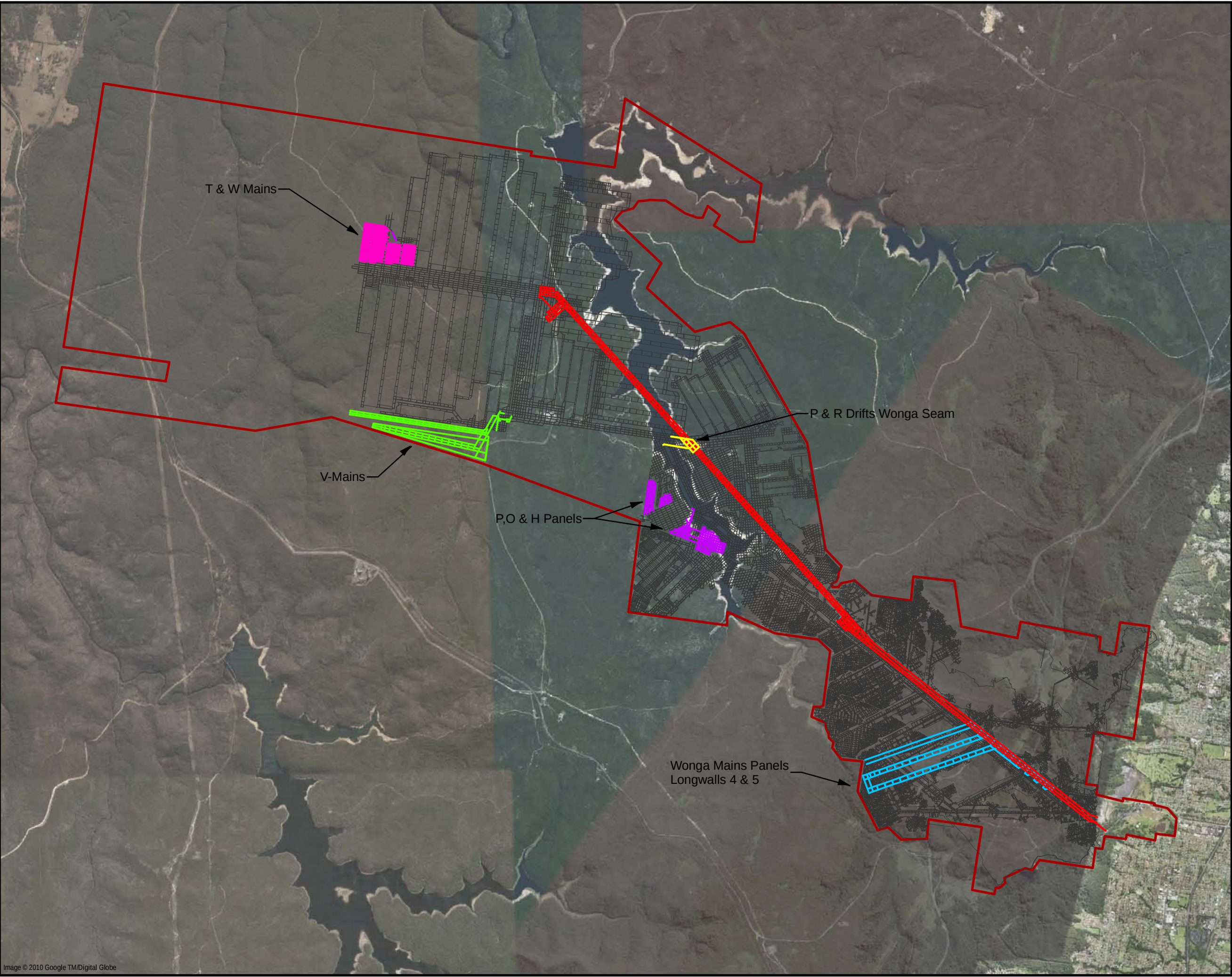
- o continued development of Wonga Mains underground access roadways in the Wongawilli coal seam from P & R Drifts to Russell Vale; and
- o development of underground access roadways and gate roads for proposed longwall panels 4 and 5 in Wonga East.

Approval for the P and R drifts was issued by IIN under Section 363(1) of the *Mining Act 1992* in January 2010.

2.3 COAL HANDLING FACILITIES

2.3.1 Existing Facilities

ROM coal is transported from the working face to the surface at the Russell Vale site via an underground belt conveyor/ vibrating feeder complex. There are two decline conveyors which transport coal from the portal to the stockpile area at the Russell Vale site. These belts are referred to as the Bulli decline belt and the Balgownie decline belt. The Balgownie decline belt is not currently in use. Both belt conveyors are partially enclosed, to reduce dust emissions.



Legend

Project Application Area

Figure 2.1

Proposed Mining

Client:

Gujarat NRE Coking Coal Limited

Project:

NRE No.1 Colliery Preliminary Works

Drawing No:

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Date:

18/03/2010

Drawing size:

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Brisbane, Canberra, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

Coal from the Bulli decline belt is deposited into a coal bin at the base of the decline. Clearance holes in the bin allow the coal to then be deposited on the ground. Coal is then pushed up using a dozer to form the stockpile. The stockpile area has a capacity of 315,000t. From the stockpile coal is then loaded through a vibrating screen sizer using an excavator. The coal is processed through the vibrating screen sizer and deposited onto the reclaim tunnel, which delivers coal to the sizing unit.

From the sizing unit coal travels to a 600 tonne bin which feeds the coal to the truck loading facilities. The truck loading facilities consist of a number of bins & chutes to allow loading without relocating the truck.

2.3.2 *New Facilities*

ROM coal will continue to be transported from the working face to the surface at the Russell Vale site in accordance with the existing operations. Bulli seam coal will continue to be transported via the Bulli seam belt to the stock pile.

The Balgownie belt and storage bin will be removed and a newly designed Wongawilli decline belt will be constructed on a similar alignment. A new screening and sizing plant and temporary short stack out conveyor will be constructed at the end of the Wongawilli decline belt to deliver Wongawilli seam coal to the stockpile.

Appropriate acoustic screening and bunding will be provided.

There will be no changes to facilities at No.4 Shaft.

2.3.3 *Product Transport*

In accordance with existing operations, unwashed coal will continue to be loaded into trucks for haulage to PKCT and loading into ships. Trucks are currently dispatched between 7 am and 6pm, Monday to Saturday.

Truck load-out facilities as described in *Section 2.3.1* will be remain unchanged for this Project.

2.4 WATER MANAGEMENT

Water demands at the Russell Vale Site are met by town water supplied by connection to Wollongong's reticulated water supply and by recycled water from stormwater harvesting and mine dewatering.

Water demands at No. 4 Shaft are met by raw water purchased from SCA and by recycled water captured and treated on-site, from the bath house, car parking area and roofs.

Surplus ground water is pumped from the mine workings to the surface at the Russell Vale Site and at No. 4 Shaft, and treated and reused within the surface water management system.

Recycled water is used for a range of non-potable uses at the surface and underground including dust suppression, vehicle wash, fire fighting and road cleaning. Existing water supply infrastructure will remain unchanged.

'Dirty' stormwater runoff is directed to a series of site dams for settling, prior to entering an on-site stormwater control dam for primary treatment. From here it is pumped to on-site water treatment facilities. The treated water is either reused on-site or discharged to Bellambi Gully in accordance with conditions of Environment Protection License (EPL) 12040.

At the No. 4 Shaft, stormwater runoff from the workshop which has been routed through oil interceptors is directed to the site's main collector dam for recycling.

Sewage generated at the Russell Vale Site is disposed of via connection to Wollongong's reticulated domestic sewage disposal system. At the No. 4 Shaft, sewage is collected and treated at an on-site sewage treatment plant, which is designed to handle wastes from an equivalent population of 1,000 people. It is disposed of by evaporation and transpiration.

These systems will continue to be managed in accordance with existing operations.

2.4.1 *Proposed Upgrades*

The existing drainage of the Russell Vale site includes a clean water bypass pipe which directs clean water flowing in Bellambi Gully underneath and past the current stockpiling and coal loading arrangements. It is proposed to remove this pipe and replace it with a suitably designed and engineered open bypass channel constructed on the southern side of the coal stockpile area.

This channel will follow an alignment along the southern side of the coal stockpile and coal handling facilities and form a new alignment for Bellambi Gully. The drainage system will focus on ensuring that Bellambi Gully by-passes the stockpile area in normal and extreme weather conditions.

The bypass channel will cascade into a water stilling pond that will dissipate the flow rate prior to the water discharging back into the current alignment of Bellambi Gully.

No changes to the quality or quantity of water flowing through Bellambi Gully are proposed as part of this Project.

2.5 PERSONNEL AND MATERIAL ACCESS/ EGRESS

Personnel and materials will continue to access the working mine areas via the No. 4 Shaft and winder and the portals at the Russell Vale site. No. 4 Shaft is the primary access for personnel.

2.6 EMPLOYMENT AND HOURS OF OPERATION

NRE currently employs approximately 320 permanent staff and 75 contractors. No additional operational staff will be required for this project. It is estimated that this project will require an additional 25 construction contractors during a six month construction phase for these works.

Current underground mining operational hours are 24 hours/day, 7 days/week. Surface facilities operate 24 hours/day, 7 days/ week.

Coal haulage operations occur between 7 am-6 pm (Mon-Sat).

Hours of operation will remain unchanged for this Project.

2.7 PROJECT TIMING AND SCHEDULE

Once the necessary approvals are in place, construction will begin for new surface infrastructure elements. Underground mining of the Bulli and Wongawilli seam will constitute a continuation of existing operations.

3. RISK ASSESSMENT

Table 3.1 contains an assessment of the potential environmental, social and economic risks identified for this Project. This risk assessment is intended to guide the level of assessment undertaken in the EA. It is important to note that all risk ratings are based on the proposed activities taking place with no management measures in place.

Table 3.1 Risk Assessment

Aspect		Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Subsidence	V mains	Vertical subsidence of ground surface, ground tilts and strains and non-conventional subsidence effects, with associated environmental impacts.	Moderate	Rely on detailed subsidence assessment undertaken for the V mains SMP, currently being reviewed by IIN.	Assessment for this area has already been undertaken. Monitoring and management plans have been developed to manage subsidence within this area.
	Panel 309	Vertical subsidence of ground surface, ground tilts and strains and non-conventional subsidence effects, with associated environmental impacts.	Low	Rely on subsidence assessment undertaken for s138 approval and monitoring undertaken to date to show impacts are negligible.	An assessment for pillar extraction in this location has already been undertaken and approved by IIN. Monitoring undertaken to date indicates no adverse effect of subsidence on natural and manmade features. Subsidence recorded is 153 mm with strains of +0.25 mm/m and – 0.959 mm/m.
Landform and Topography		Alterations to landform from subsidence or minor earthworks.	Low	No additional assessment required.	Subsidence is not expected to result in obvious changes to landform. Earthworks will be minor and within the existing footprint of surface operations.

Aspect		Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Infrastructure	Subsidence Impacts	Disruptions/ impacts on Telstra fibre optic cable, customer access cables, electrical transmission lines, water pipelines, fire trails and/ or public roads above the mining area.	Moderate	Rely on assessments undertaken for the V mains SMP and Panel 309 s138 approval and monitoring undertaken to date to show impacts are negligible.	An assessment for pillar extraction has already been undertaken and appropriate management and monitoring plans have been developed in conjunction with the SMP. Management & monitoring plans have proven to be effective with no apparent adverse effects to date.
	Demand for Infrastructure	Existing services will be adequate for the project	Low	existing services will be documented	An assessment for pillar extraction has already been undertaken.

Aspect		Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Surface Water	Surface Operations	Altered water quality and flows in receiving streams due to changes in site runoff or off-site discharges during construction and operation.	Low	- Review suitability of site erosion and sediment controls and water and wastewater management strategies. - Identify any additional management, mitigation and monitoring measures required during construction and operation.	A detailed impact assessment is not required as no changes to the water quantity or quality are proposed. Existing measures and water treatment devices are in place to minimise impacts on off-site water resources. All discharge will be in accordance with current licence.
	Underground Operations	Subsidence-related alterations to stream flows, water quality, fluvial geomorphology, bank stability and/ or flooding regime at Lizard, Bellambi, Wallandoola, and/ or Cataract Creeks and tributaries. Altered drainage paths and localised ponding.	Moderate	Rely on assessments undertaken for the V mains SMP and Panel 309 s138 approval and monitoring undertaken to date to show impacts are negligible.	An assessment for pillar extraction has already been undertaken. Management plans have been developed and monitoring of the 312, 311 & 310 pillar extraction has not identified any adverse impacts

Aspect		Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Groundwater	Underground Operations	Subsidence-induced changes to groundwater levels, flow paths, water chemistry and/ or recharge rates, resulting in potential impacts to groundwater dependent ecosystems and groundwater users.	Low	Rely on assessments undertaken for the V mains SMP and Panel 309,s138 approval and monitoring undertaken to date to show impacts are negligible.	An assessment for pillar extraction has already been undertaken. Areas to be mined are predominantly remnant parcels of coal surrounded by previous larger scale extraction. Hence minor impacts to groundwater are expected due to proximity of older extraction.
	Mine Water Management	Additional groundwater inflow into mine workings.	Low	Document existing management system	Groundwater inflows will be managed by NRE's existing mine water management system.
Air Quality	Surface facilities	Existing operations coupled with additional plant have the potential to create adverse impacts on air quality at adjacent residences.	Low	Document existing dust management system. and results of current dust deposition monitoring	Detailed impacted assessment is not required as there will be minimal changes to dust emission sources as a result of the proposal.

Aspect		Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Greenhouse Gas		GHG emissions from electricity consumption, releases from coal and rock strata and combustion of fossil fuels.	Low	Identify GHG reduction and energy conservation measures.	Detailed impacted assessment is not required as no new GHG emission sources are proposed.
Acoustics	Construction noise	Short-term increase in noise levels at sensitive receivers near the Russell Vale Site.	Low	- Calculate construction noise levels to be experienced at surrounding residence. - Assess predicted noise levels against DECCW guidelines.	Construction impacts are short-term in nature and the proposed assessment approach is in keeping with DECCW policy.

Aspect	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Operational noise	Operational noise levels have the potential to affect sensitive receivers near the Russell Vale Site.	Moderate	- Quantify the existing noise environment, including monitoring of noise levels. - Predict future noise levels at sensitive receivers by quantitative modelling. - Assess predicted noise levels against DECCW guidelines. - Identify any additional management, mitigation and monitoring measures required.	This level of assessment is in keeping with DECCW guidance. Detailed assessment is warranted to address the potential for changes to noise levels at sensitive receivers.
	Increased traffic noise levels at residences along the haul route.	Low	Document existing traffic noise management practices.	Detailed impacted assessment is not required as no increase in traffic movements is proposed.

Aspect		Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Ecology	Surface Operations	Adverse impacts on aquatic ecology associated with potential impacts on receiving streams for site runoff and discharges.	Low	- Review suitability of site erosion and sediment controls and water and wastewater management strategies. - Identify any additional management, mitigation and monitoring measures required.	As discussed above, proposed changes to surface operations are not expected to significantly alter site run-off or discharges. Impacts on off-site water resources are minimised through existing site water management. Therefore detailed assessment is not deemed necessary.
	Underground Operations	Subsidence impacts on habitat of threatened flora and fauna species and endangered ecological communities.	Low	Rely on assessments undertaken for the V mains SMP and Panel 309 s138 approval and monitoring undertaken to date to show impacts are negligible	An assessment for pillar extraction has already been undertaken. Subsidence monitoring to date has recorded no impacts.
Non-indigenous heritage		Impacts to heritage values of heritage listed items at the Russell Vale Site.	Low	Review existing studies/ data.	A heritage survey of the site has been conducted as part of the larger NRE No.1 Colliery project. The data collected in this survey will be used to inform this assessment.

Aspect	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Aboriginal heritage	Impacts to Aboriginal heritage items or values as a result of subsidence or construction activities.	Moderate	Rely on assessments undertaken for the V mains SMP and Panel 309 s138 approval and monitoring undertaken to date to show impacts are negligible.	An assessment for pillar extraction has already been undertaken. Potential subsidence impacts have been previously assess as low to negligible and this is supported by monitoring
Traffic and transport	Impacts on the safety and capacity of the surrounding road network.	Low	Document exiting traffic management practices.	A detailed impact assessment is not required as no increase to traffic moments is proposed.
Visual	Adverse impact on visual amenity of sensitive receivers.	Low	- Brief visual analysis. - Identify measures to minimise visual impact of construction and operation.	Given the limited views of surface infrastructure and the fact that no changes to the mining character of the Russell Vale Site are proposed, a detailed visual assessment is not proposed.

Aspect	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Waste Management	Increased waste generation.	Low	- Identify types and volumes of waste to be generated. - Identify proposed management and disposal strategies.	Waste production at the site is not expected to increase significantly.
Hazard and Risk	Release of hazardous material to the environment, fire, public safety	Low	Identify all potential hazards	The Project is not expected to increase risk. All hazards and risks will be managed via existing practices.
Socio-economic Considerations	Social and economic benefits to the local and regional community and government through employment and revenue generation.	Positive Impact	Identify ways to enhance the benefits of the development.	Documentation of positive impacts of the Project.
	Adverse impacts to amenity of nearby residents.	Low	Identify measures to mitigate any potentially negative impacts.	A detailed assessment is not required as changes to the local amenity are not expected.

4. CONCLUSIONS

NRE seeks approval for ongoing operation of its underground coal mine and associated surface facilities at NRE No. 1 Colliery in the Southern Coalfield. This will include construction of some new surface infrastructure. Production rates will continue at up to 1 mtpa for up to 3 years. The unwashed coal will be trucked to PKCT for shipment to India.

This project application has identified the potential environmental, social and economic implications associated with the Project and outlined the proposed scope of works to be undertaken as part of the EA. These issues will be addressed in greater detail in the EAR and suitable mitigation, monitoring and management measures developed to address potential impacts identified.

Yours sincerely,
for Environmental Resources Management Australia Pty Ltd



Christine Allen
Project Manager



Mike Shelley
Partner