MOOLARBEN COAL PROJECT

ENVIRONMENTAL ASSESSMENT REPORT

Volume I

Moolarben Coal Mines Pty Limited

Moolarben Coal Mines Pty Limited

Moolarben Coal Project

Environmental Assessment Report

Volume 1

September 2006

Wells Environmental Services

Preparation and submission of Environmental Assessment report prepared under Part 3A of the Environmental Planning and Assessment Act 1979

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Major Projects Application	
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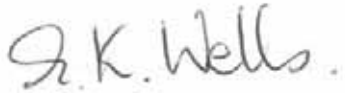
Land to be developed:	Property description of land to be developed is contained in the Major Projects Application.
Proposed development:	Moolarben Coal Project as described in the Environmental Assessment Report.
Environmental Assessment	☑ An Environmental Assessment report is attached which addresses all matters listed under Part 3A of the Environmental Planning and Assessment Act 1979.
Certificate	I, Alan Wells of Wells Environmental Services, certify that I have prepared the Environmental Assessment for the Moolarben Coal Project. I certify that to the best of my knowledge the Environmental Assessment contains relevant information that is neither false nor misleading.
Signature:	
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MOOLARBEN COAL PROJECT

CONTENTS PAGE

List of Figures and Plans

This Environmental Assessment report has been written to allow the inclusion of a separate Volume of A3 size plans to aid the readers understanding of the project. The table below lists Figures used within the **Volume 1** text, their description and corresponding Plan Number within **Volume 2.** Not all Figures have a corresponding Plan Number.

Figure Number in Volume 1	**Plan Description**	**Plan Number in Volume 2**
Figure 1.1	Location of Ulan and the Moolarben Coal Project	Plan 1
Figure 1.2	Moolarben EL 6288 and Development Application Areas	Plan 2
Figure 4.1	Generalised stratigraphic section of Ulan Coal	-
Figure 4.2	Proposed working sections of Ulan Coal for Underground and Open Cut operations	-
Figure 4.3	General Arrangement	Plan 3
Figure 4.4	Moolarben Coal Project Main Infrastructure Areas	Plan 4
Figure 4.6	Moolarben Coal Project at 6 Months	Plan 5
Figure 4.7	Moolarben Coal Project at 2 Years	Plan 6
Figure 4.8	Moolarben Coal Project at 5 Years	Plan 7
Figure 4.9	Moolarben Coal Project at 8 Years	Plan 8
Figure 4.10	Moolarben Coal Project at 10 Years	Plan 9
Figure 4.11	Open Cut 1 Access and Conveyor Arrangement	Plan 10
Figure 4.12	Layout of Underground No.4 Longwall Layout and Staging	Plan 11
Figure 4.13	Schematic diagram of a longwall mining operation	-
Figure 4.14	Schematic diagram of the Water Management System for the MCP	Plan 12
Figure 4.15	Proposed Water Management in Main Infrastructure Area	Plan 12a
Figure 5.1	Environmental Baseline Monitoring Locations	Plan 13
Figure 5.2	Year 2 - Predicted Annual Average PM10 Dust Emissions	Plan 14
Figure 5.3	Year 5 - Predicted Annual Average PM10 Dust Emissions	Plan 15
Figure 5.4	Year 8 - Predicted Annual Average PM10 Dust Emissions	Plan 16

Figure Number in Volume 1	Plan Description	Plan Number in Volume 2
Figure 5.5	Year 10 - Predicted Annual Average PM10 Dust Emissions	Plan 17
Figure 5.6	1 Year - Predicted LAeq(15 minute) noise levels - ENE wind	Plan 18
Figure 5.7	2 Year - Predicted LAeq(15 minute) noise levels - ENE wind	Plan 19
Figure 5.8	Year 6 - Predicted LAeq (15 min) noise levels -ENE wind	Plan 20
Figure 5.9	Year 8 - Predicted noise levels LAeq(15min) - start of Pit 3 (inversion)	Plan 21
Figure 5.10	Year 10 - Predicted noise levels LAeq(15min) - end of Pit 3 (inversion)	Plan 22
Figure 5.11	Hydrological Units	Plan 23
Figure 5.12	Existing Groundwater Levels in the Ulan Seam - Permian Coal Measures	Plan 24
Figure 5.13	Surficial Groundwater Contours	Plan 25
Figure 5.14	Predicted Drawdowns - Ulan Seam at Completion of Mining (2022-2023)	Plan 26
Figure 5.15	Conceptual Stormwater Management at 6 Months	Plan 27
Figure 5.16	Conceptual Stormwater Management at Year 10	Plan 28
Figure 5.17	Surface Level Features above Underground No.4	Plan 29
Figure 5.18	Predicted Subsidence Levels for Undergound No.4	Plan 30
Figure 5.19	Soil Type Boundaries	Plan 31
Figure 5.20	Land Capability	Plan 32
Figure 5.21	Agricultural Suitability	Plan 33
Figure 5.22	Terrestial Stratification Units	Plan 34
Figure 5.23	Vegetation Associations	Plan 35
Figure 5.24	Threatened Flora Species	Plan 36
Figure 5.25	Endangered Ecological Communities	Plan 37
Figure 5.26	Threatened Fauna Species	Plan 38
Figure 5.27	Preferred Final Landuse and Mitigation Strategy	Plan 39
Figure 5.28	Aboriginal Heritage Locations	Plan 40
Figure 5.29	European Heritage Locations	Plan 41
Figure 5.32	Visual Impact from Ulan Village	Plan 42

List of Appendices

Appendices	Study	Consultant	Volume
Appendix 1	Director General Requirements dated 16 March 2006		1
Appendix 2	Moolarben Coal Project Newsletters 1, 2 and 3		1
Appendix 3	Air Quality	Holmes Air Sciences	1
Appendix 3A	Health Risk Assessment	Holmes Air Sciences	1
Appendix 4	Noise and Blasting	Spectrum Acoustics	1
Appendix 5	Ground Waters	Peter Dundon & Associates Pty Ltd	3
Appendix 6	Surface Waters	Patterson Britton & Partners Pty Ltd	3
Appendix 7	Flooding	Patterson Britton & Partners Pty Ltd	3
Appendix 8	Subsidence	Strata Engineering (Australia) Pty Ltd	4
Appendix 9	Soils	Jammel Environmental & Planning Services Pty Ltd	4
Appendix 10	Geo-Chemical Assessment	Environmental Geochemistry International	4
Appendix 11	Flora/Fauna & Aquatic	Moolarben Biota	4
Appendix 12	Aboriginal Heritage	Archaeological Risk Assessment Services	5
Appendix 13	European Heritage	Archaeological Risk Assessment Services	5
Appendix 14	Socio Economic	Hunter Valley Research Foundation	5
Appendix 15	Transport	Sinclair Knight Merz	5
Appendix 16	Hazards & Risks	Sinclair Knight Merz	5
Appendix 17	Visuals	O'Hanlon Design Pty Ltd	5

MOOLARBEN COAL PROJECT

Executive Summary

MOOLARBEN COAL PROJECT

Executive Summary – Environmental Assessment Report

Introduction

This Environmental Assessment report assesses the proposed development of the Moolarben Coal Project. The proponent for the project is Moolarben Coal Mines Pty Ltd, which is a wholly owned subsidiary of Felix Resources Limited, a publicly listed company on the Australian Stock Exchange. The Moolarben coal exploration area is located in the northern portion of the Western Coalfields, approximately 40 kilometres (kms) north-east of the Mudgee township and east of the village of Ulan. The project includes the development of three open cut and one underground mining operation, together with the construction and operation of both a coal handling and preparation plant and rail and train loading infrastructure. The project has an estimated value of $150 million and will directly employ approximately 220 construction workers and at its peak 317 permanent employees.

Coal Exploration at Ulan

Coal in the Ulan area has been continuously mined by open cut and underground methods since 1924. Due to the relatively long and stable history of coal mining activity, the Ulan area has been extensively explored. Initial investigations were carried out by the New South Wales Mines Department in 1950, and later by the Joint Coal Board in 1977. In the late 1970's the Energy Recycling Corporation conducted a regional drilling program, which included a number of exploration holes in the project area.

In the early part of 1980 and again in the late 1980's, Ulan Coal Mines Pty Limited investigated the northern part of the project area. This work was part of a proposed expansion to the Ulan Colliery. During the period 1999 to 2003, the Department of Mineral Resources drilled a number of open and cored drill holes in the southern and central part of the project area. Following completion of this program, the Department of Mineral Resources invited expressions for exploration and development of the Moolarben resource. After evaluation of submissions, Moolarben Coal Mines Pty Ltd was awarded the area, which was granted as Exploration Licence 6288 in August 2004.

Project Overview

Development consent is being sought for the construction and operation of Stage 1 of the Moolarben Coal Project producing approximately 10Mtpa of product coals. Further open cut and underground mines within Exploration Licence 6288 will be the subject of future staged development. A summary of the major project components is provided below:-

- Three open cut mines to produce coal for export and domestic markets;
- An underground coal mine to produce coal predominantly for the export market;
- Coal handling facilities incorporating crushing plants, conveyors, raw coal and product coal stockpiles, coal preparation plant, coal stacking and reclaiming by overhead trippers and reclaim tunnels;
- Rail spur, rail loop, train loading infrastructure and transportation of product coals to market by train;
- Mine access roads, internal access roads and haul roads;
- Water management infrastructure, including the construction of culverts across Bora and Moolarben Creeks;

- Water supply bores, associated pump and pipeline systems, surface water storages and water treatment systems for discharge to the Goulburn River, and;
- 66kV transmission line and substation;
- The establishment of a water treatment and discharge scheme via Bora Creek and/or water sharing with adjoining coal mines if future inflow rates from dewatering the underground mine are consistent with ground water modelling;
- The use of common infrastructure (rail, coal handling facilities, coal preparation plant water storages, bores and pipelines) for future mining activities (subject to the necessary approvals) in other parts of Exploration Licence 6288;
- Placement of overburden and coarse reject within mined-out voids and emplacement areas;
- In pit reject and tailings disposal and emergency tailings storage;
- Rehabilitation of final mine landforms, embellishment of landscapes, and dedication of lands to the Department of Environment and Conservation estate;
- Relocation, closure and temporary closure of public roads within the area to be mined;
- Relocation of utility infrastructure such as electrical and communication facilities impacted by mining or the location of mine related infrastructure; and
- Achievement of long term biodiversity and agricultural land values through Voluntary Conservation Agreements and Farm Management Plans

Investment in the Moolarben Coal Project for the construction phase is estimated to be around $150 million. Approximately 220 people will be employed during the construction phase and approximately 320 people during operations.

Further Environmental Assessment reports will be prepared and approvals sought for those coal resources (open cut and underground) which exist within Exploration Licence 6288 but are located outside the scope of Stage 1 of the Moolarben Coal Project.

Development Approval Process

The assessment of environmental impacts associated with the Moolarben Coal Project will be undertaken by the New South Wales Department of Planning in accordance with the requirements of the Environmental Planning and Assessment Act, 1979 and the Environmental Planning and Assessment Regulations, 2000.

The Department of Planning, in conjunction with key statutory authorities and the proponent, held a Planning Focus Meeting on 20 October 2005. Following the Planning Focus Meeting, the proponent formally submitted to the New South Wales Department of Planning an application for project approval under Part 3A of the Environmental Planning and Assessment Act, 1979 and notified the public by the placement of public notices in the Mudgee Guardian newspaper.

An outcome of the Planning Focus Meeting process was the issuing of the Director General Requirements for the preparation of the Environmental Assessment report. The Environmental Assessment report provides an assessment of the project's potential impacts, and safeguards and mitigation measures relevant to the Moolarben Coal Project.

Content of the Environmental Assessment report

The Environmental Assessment report is presented in five (5) volumes. Volume 1 of the report contains both summary and detailed descriptions of the project, the process involved in obtaining approval, an overview of community consultation, identification and analysis of environmental interactions, management safeguards and risk analysis. Volume 1 also

contains the proponent's Statement of Commitments, references and abbreviations used within the Environmental Assessment report. Volume 2 contains plans, whilst specialist studies are contained in Volumes 1, 3, 4 and 5. The specialist studies provide a detailed technical analysis of key issues identified and associated with the project.

Community Consultation

The grant of Exploration Licence 6288 by the Minister for Mineral Resources in August 2004 contained a special condition requiring the establishment of the Moolarben Coal Exploration Community Consultative Committee. The purpose of the committee is to provide a forum for open discussion between the exploration licence holder, appointed community representatives, relevant government authorities and other interested stakeholders concerning the conduct of exploration drilling and knowledge of the area's geological and environmental composition.

Following the grant of Exploration Licence 6288, Moolarben Coal Mines Pty Ltd introduced a community consultation program. The community consultation program incorporates the following aspects: -

- Land Access Protocols for exploration drilling and environmental studies;
- Community Information Sessions;
- Newspaper Notices;
- Newsletters; and
- "One on One" Discussions.

Issues of concern raised during community consultation include impacts upon or resulting from aboriginal heritage, air quality, blasting, chemicals, creeks and river systems, fauna, flora, future of Ulan village, global warming, land acquisition, lighting, noise, property values, rail movements, roads, salinity, surface and ground waters, traffic, subsidence and Transgrid power lines.

Consultation with Government Authorities by Proponent

The proponent's representatives have been communicating and liaising with government authorities concerning the project.

The Department of Planning received written submissions advising the requirements of each organisation. An outcome of the Planning Focus Meeting was the issuing of the Director General Requirements as required under Part 3A of the Environmental Planning and Assessment Act, 1979. Since the Planning Focus Meeting, consultation with the government organisations and authorities has occurred to clarify and assist the proponent's understanding of agency requirements to enable the preparation of the Environmental Assessment report, including the proponent's draft Statement of Commitments.

Key issues identified during the Environmental Assessment process for the Moolarben Coal Project include potential impacts on the physical and social environs of the area. These are summarised on the following pages.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
Air Quality.	Exceedences of adopted air quality criteria for sensitive receptors include: • Potential exceedences at 33 residences for the 24 hour average PM10 criteria at Open Cut 1 that will require real time monitoring and management; • 2 dwellings near Open Cut 2 (Yr 8) will experience an exceedence of annual average PM10 assessment criterion and will be subject to negotiated agreements; • Potential exceedences at two residences for the 24 hour average PM10 criteria at Open Cut 2 that will require real time monitoring and management; • 1 dwellings near Open Cut 2 (Yr 8) will experience an exceedence of annual average PM10 assessment criterion and will be subject to negotiated agreements; • 2 dwellings near Open Cut 3 (Yr 10) dwellings will experience exceedences of the annual average PM10 assessment criteria and will be subject to negotiated agreements; and • Potential exceedences at six residences for the 24 hour average PM10 criteria at Open Cut 3 that will require real time monitoring and management.	• Refine limits of Open Cut 1 to incorporate out of pit emplacements and infrastructure, to maintain set back from Ulan Village; • Reduction of mining rate for first three years of Open Cut 1; • Adopt progressive rehabilitation of mining operations to minimise exposed soils; • Ensure coal handling facilities employ appropriate dust suppression methods; • Use water carts on all trafficked areas to minimise dust generation as necessary; • Use constructed roads only, minimisation of access roads and removal of obsolete access roads; and • Liaison with potentially impacted receptors to determine most appropriate management action.	• Prepare Air Quality Management Plan; • Apply for Environmental Protection Licence (EPL); • Employment of suitably experienced environmental officer to ensure implementation of controls and management plan; • Liaison with potentially impacted receptors to determine most appropriate management action; and • Implement real time environmental monitoring program to ensure the air quality criteria is not breached.
	• Greenhouse gas emissions from the consumption of energy for mining will be 384,620,000 kg of CO_2-equivalent per year.		• The regular maintenance of plant and equipment; • Promotion of car pooling; • Responsible use of energy;

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
			• Consideration of energy efficiency in the purchase of plant and equipment; • The establishment of large tracts of vegetation • Moolarben Coal Mines to maintain their role under the Greenhouse Challenge Plus Program Framework; and • The use of alternate forms of power (where appropriate) for site specific applications around the site.
	• Air quality risk to human health.	• Undertake above controls.	• Undertake above actions.
Acoustics, blasting and vibration.	Exceedences of noise criteria at sensitive receptors surrounding the MCP in worst case meteorological and operational conditions: • 2 dwellings will be subject to negotiated agreements for Open Cut 1; • 6 dwellings will be subject to a Plan of Management for Open Cut 1; • Ulan Village has a 1 dBA predicted exceedence for the Year 2 scenario and will require a Plan of Management; • 3 dwellings will be subject to negotiated agreements for Open Cut 2; • 6 dwellings will be subject to a plan of management; • 3 dwellings will be subject to negotiated agreements for Open Cut 3; and	• Refine limits of Open Cut 1 to incorporate out of pit emplacements and infrastructure, to maintain set back from Ulan Village; • Build environmental bunds on western and northern sides of Open Cut 1 and facilities, and Open Cut 2; • Work south to north moving away from Ulan Village; • Design overburden emplacement to shield mining operations; • Locate open cut ROM hopper and primary crusher below ground level in box cut; and • Liaison with potentially impacted receptors to determine most appropriate management action.	• Prepare Construction Noise Management Plan; • Prepare Operational Noise Management Plan; • Apply for Environmental Protection Licence (EPL); and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
	• 2 dwellings will be subject to a Plan of Management for Open Cut 3.		
	Exceedences of ARTC EPL noise criteria at sensitive receptors adjacent to rail line between the site and Muswellbrook, and the site and Wallerwang Power Station near Lithgow. • 22 dwellings were identified as being potentially impacted between the site and Muswellbrook; and • 16 dwellings were identified as being potentially impacted between the site and Wallerwang near Lithgow.	• General location and number of sensitive receptors along railway line identified.	• Notify ARTC and relevant rail authorities of potential noise impacts.
	Exceedences of overpressure and vibration criteria at nearby sensitive receptors and structures as a result of blasting: • 1 dwelling will be impacted at Open Cut 1; • Providing blasts are minimised in early years of Open Cut 1 no impact to Ulan Village; • 1 dwelling at Open Cut 2 will be impacted by blasting; and • 3 dwellings at Open Cut 3 will be impacted by blasting.	• Model maximum instantaneous charge weights to predict impacted residents; • Adjust charge weights to minimise impacts where possible; and • Liaison with potentially impacted receptors to determine most appropriate management action.	• Develop blasting site law; • Prepare Blasting Management Plan; • Apply for Environmental Protection Licence (EPL); • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
Flora, Fauna and Aquatic Ecology.	The significant ecological values likely/potentially affected in Open Cuts 1 and 2 include: • EEC - White Box Yellow Box Blakely's Red Gum Woodland; • Threatened and declining woodland birds; • Threatened plants - Narrow-leaved Goodenia (Goodenia macbarronii), Capertee Stringybark (Eucalyptus cannonii); • Foraging habitat for the threatened Glossy Black Cockatoo; • Habitat for the threatened Painted Honeyeater; • Potential occasional foraging habitat for the threatened Regent Honeyeater; • Midslopes vegetation that supports local fauna movements; • Threatened woodland bird - Grey-crowned Babbler; • Threatened mammal - Squirrel Glider; • Habitat for threatened microchiropteran bats; and • Likely foraging habitat for threatened microchiropteran bats.	• Refine limits of Open Cut 1 to incorporate out of pit emplacements and infrastructure, to maintain set back from Ulan Village and stands of native vegetation; • Adaptation of out of pit emplacements for Open Cuts 1 and 2 to minimise impacts on native vegetation, EEC's and threatened species; • Redesign of pit and infrastructure to retain Ulan Airstrip to avoid relocation and subsequent displacement of native flora and fauna; and • Re-design of previously approved infrastructure in the main infrastructure area to minimise impacts to Bora Creek and associated riparian vegetation. Development of mitigation and offset strategy that incorporates: - • Rehabilitation of open cut disturbance in accordance with methodology proposed in *Section 5*; • Revegetation of lands within the MCP DA area that are outside the mine footprint; • Management of ongoing non-mine related impacts to enhance the value of the residual vegetation cover; and • Use of ameliorative works to reduce the extent of direct impacts during preparatory land clearing events.	• Prepare Land Rehabilitation Management Plan; • Prepare Construction Flora, Fauna and Aquatic Management Plan; • Entering into Voluntary Conservation Agreements to ensure long-term management in conjunction with Farm Management Plans. • Preparation of Farm Management Plans to manage agricultural lands; • Prepare Operational Flora, Fauna and Aquatic Management Plan; • Prepare Weed and Animal Pest Control Plan; • Potentially the dedication of mine owned lands to the DEC estate; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plan.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
Groundwater.	• Groundwater inflows into underground and open cut workings; • Reduction in groundwater levels in and adjacent to underground and opencut operations as a result of dewatering; • Impacts to some adjoining groundwater users; • Changes in water quality in waters extracted from groundwater; • Predicted water inflows into Underground No. 4 ranging from 0.3ML/day in Year 1 to 6.5ML/day in the final year of mining; • Small volume of mine water inflows at Open Cuts 1 and 3; • Lowering of Permian water levels by 5m 10km to the east of Underground No. 4; • Significant impact to Ulan Coal Mine bore field; and • Predicted shortfall in project water mine inflows in Year 1, and Years 3 to 11.	• Undertake groundwater census of the MCP to determine quantity and quality of existing groundwater; • Installation of a regime of piezometers and test bores consistent with density guidelines; • Conduct regular monitoring and analysis of results since piezometer installation; • Utilisation of neighbouring coal mines groundwater data where available; and • Independent audit and review of water management and the groundwater inflow predictions	• Prepare Groundwater Management Plan; • Prepare Water Supply Bore-field Plan; • Apply for Environmental Protection Licence (EPL); • Apply for relevant licences under the Water Act 1912 and Water Management Act 2000; • Continue negotiations with adjoining landholders about availability of water for use in operation; • Investigation of management options for surplus waters; • Continue to implement monitoring program; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.
Surface Water.	• Reduced surface water flows to Moolarben Creek and Goulburn River from the capturing of rainfall from within the disturbed mine areas; • Installation of culverts on Bora and Moolarben Creeks; • The construction of a water storages on Bora Creek; • Subsidence impacts in the area of Underground No.4 may also impact the catchment yield by temporarily increasing the percolation characteristics of strata until the fractures anneal and seal;	• Minimise the area of disturbance; • Design and construct infrastructure to minimize impacts on creeks and related surface water features (Bora Creek and Spring Creek); • Undertake mining operations using best practice techniques in water diversion, containment and treatment; • Install and maintain erosion and sedimentation control; • Minimise the contamination and maximise the	• Prepare Site Water Management Plan. • Apply for Environmental Protection Licence (EPL); • Apply for relevant licences under the Water Act 1912 and Water Management Act 2000; • Continue negotiations with adjoining landholders about water sharing with adjoining mines; • Investigation of management options for surplus

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
	• Potential water quality impacts including the mobilisation and release of sediments, salts, acid, and hydrocarbons (oils, fuels and grease) from infrastructure and mining areas; and • Potential water surplus.	reuse of water; • Progressive stabilisation and revegetation of disturbed areas; • Enhancement and stabilisation of existing lands outside the area of the mine foot print; and • Treatment and discharge of excess water to Goulburn River in accordance with DEC requirements.	waters; • Continue to implement monitoring program; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.
Aboriginal Heritage.	• High risk of subsidence impacts to 11 sites above Underground No.4; • Moderate risk of subsidence impacts at 1 site above Underground No.4; • Disturbance of 105 sites in Open Cuts 1, 2 and 3; and • Disturbance of 22 sites in infrastructure areas.	• Re-design of previously approved infrastructure in the main infrastructure area to minimise impacts to Bora Creek, associated riparian vegetation and aboriginal objects; Development of an archaeology management strategy that incorporates -: • Conservation and preservation of aboriginal sites and objects from likely mine construction impacts; • Archaeological salvage and test excavations of aboriginal sites and aboriginal objects ; • Surface collection of aboriginal objects; • Intensive insitu recording of aboriginal sites likely to be impacted from mining development; and • On going monitoring and assessment of subsidence impacts for sites located in the approved Underground No. 4 area.	• Prepare Subsidence Management Plan; • Prepare Aboriginal Cultural Heritage Management Plan; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
European Heritage.	• Disturbance – impact of items of european heritage from open-cut and underground mining operations. • Possible exhumation of sites 3 and 4 (burial sites) near Open Cut 2.	• The heritage study recorded details of the area that may have (without the MCP) been lost; • Erection of physical barriers around identified heritage sites that are within the MCP DA area but outside the impacted area; and • Consultation with relevant persons prior to exhumation and reburial of two burial sites.	• Prepare archival recordings to meet guidelines of Heritage Office of New South Wales; • Submit copies of Heritage Study to local libraries and historical society; and • Employment of suitably experienced environmental officer to ensure implementation of management plans.
Subsidence.	• Subsidence prediction of between 1.81m to 2.44m of cover depths ranging from 85m to 215m; • Possible hydraulic connectivity between surface and coal seam where depth of cover less then 100m; • Structures on Westwood property will be damaged to varying degrees; • 5 aboriginal sites will be damaged to varying degrees; • 5 dams above the Underground No.4 area may require repair; and • Some ponding may occur in drainage lines resulting in localised boggy ground.	• Longwall panels 12, 13 and 14 have been shortened to minimise risk of impacts to the Goulburn River and The Drip; and • Design of underground layout to minimise impacts to Ulan-Cassilis Road.	• Prepare Subsidence Management Plan; • The Subsidence Management Plan will include details of subsidence monitoring and subsequent geotechnical model refinement; and • Employment of suitably experienced environmental officer to ensure implementation of management plans.
Visuals.	• Moderate to high daytime visual disturbance for road users along Ulan , Moolarben, Cope and Wollar Roads; and • Moderate to high night-time lighting impacts for road users and adjoining residents.	• Refine limits of Open Cut 1 to incorporate out of pit emplacements and infrastructure, to maintain set back from Ulan Village and stands of native vegetation; • Build environmental bunds on western and northern sides of Open Cut 1 and facilities and Open Cut 2; • Adaptation of out of pit emplacements for Open Cuts 1 and 2 to minimise impacts on native	• Prepare Visual Management Plan to review and address the visual performance of the mine; • Prepare Land Rehabilitation Management Plan; and • Employment of suitably experienced environmental officer to ensure implementation of management plan.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
		vegetation, EEC's and threatened species; • Redesign of pit and infrastructure to retain Ulan Airstrip to avoid relocation and subsequent displacement of native flora and fauna; • Re-design of previously approved infrastructure in the main infrastructure area to minimise impacts to Bora Creek and associated riparian vegetation; • Shape emplacements (in pit and out of pit) to include localised relief to avoid flat un-natural landforms; • Shape bunds, where not screened by trees to incorporate some small topographic features such as spurs and gullies; • Screen Wollar Road with native vegetation; • Screen Open Cut 3 facilities with native vegetation; • Face workshop doors to east; • Shield flood lights to maximum extent practical; • Design lighting to restrict stray light; and • Investigate use of long haul road side markers to minimise need for high beam on trucks;	
Traffic and Transport.	• Short term disruption of traffic associated with the construction of intersections; • Short term disruption of traffic by wide load trucks that may disrupt traffic on route to the site during construction; • Little or no disruption to main roads during operations; • Minor disruption to traffic when blasting within 500m of transport infrastructure;	• Intersections designed inaccordance with the RTA's Road Design Guidelines; • Partial realignment of Ulan-Wollar Road for resource recovery and the improvement of road geometry and pavement, for the benefit of public road users • Realignment or closure of Carrs Gap Road; and • Partial realignment of Moolarben Road for	• Construction Traffic Management Plan; • Each wide load will require an individual management plan; • MCM to contribute toward the upgrade of the Mudgee – Ulan Road and the Gulgong to Ulan Road based upon the MCP's level of impact; • Blast Management Plan; and

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
	• Road safety for public road users and mine employees associated with road delineation, road edge formation and shoulder provision; and • Minor delays at railway level crossing due to increased rail traffic.	resource recovery and the improvement of road geometry and pavement, for the benefit of public road users.	• Traffic Management Plan.
Geochemical Assessment.	• Erosion of sodic and dispersive soils; • Saline or acid water generation from ROM coal and product coal stockpiles; and • Rejects appear to have a higher ARD risk than other mine materials, and are likely to require specific management to control ARD.	• Application of ameliorant (gypsum or lime) to sodic and dispersive soils; • Implement water management strategy that retains dirty or contaminated water for onsite treatment and reuse; and • Reject material could be dosed using limestone or a similar ameliorant prior to disposal within the overburden, or be blended with overburden and capped with a suitable cover. The final disposal technique (dosage of limestone or cover methods) will be subject to further material characterisation.	• Routine system of testing to be established to monitor characteristics of overburden, ROM coal, product coal and reject as part of the Site Water Management Plan; • Undertake leach column testing to determine suitability of blending reject and different overburden strata; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.
Rehabilitation, Final Landform and Final Void Management.	• Incompatible rehabilitations; • Incompatible landforms; and • Final voids in Open Cuts 1, 2 and 3.	• Commitment to progressive rehabilitation; • Design of mine plan to minimise final voids; • Use of final voids during future mining operations including water storages within Open Cut 1 void; • Shaping of landforms to seek compatibility with existing topography; • Commitment to rehabilitation comprising agricultural lands and biodiversity offsets; • Battering of final voids slopes; • Benching and revegetation of final void slopes	• Prepare Erosion and Sediment Control Plan; • Negations with landholders and key agencies for suitable outcomes on Voluntary Conservation Agreements and Farm Management Plans • Prepare Land Rehabilitation Management Plan; • Prepare Flora, Fauna and Aquatic Management Plan; • Prepare Final Void Management Plan; and • Prepare Mine Closure Plan.

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
		where possible; • Rehabilitation as detailed in Flora, Fauna and Aquatic Ecology section above; and • Undertake soil management practices in accordance with recommendations below.	• Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.
Social and Economics.	The social and economic impacts associated with this project not being approved include the loss of: • S94 contributions to the local Council; • Road improvements; • Public sector benefit from taxation during construction of $22 million; • Construction induced benefits of $267 million; • Cumulative induced employment benefit of 438 equivalent full time jobs during construction; • Annual output of up to $664 million; • Cumulative employment benefit of 910 equivalent full time jobs during operation; • Public sector taxation benefit of more then $69 million per year (approximately $966 million over project life); • Loss of royalties to the state government in the order of $341 million over the project life; and • Overall a public sector benefit of approximately $1.8 billion dollars from royalties, taxation and construction inputs over project life.	• Preparation of adequate Environmental Assessment report under Part 3A of the EP&A Act, 1979.	• Enter into formal Planning Agreement with Mid Western Regional Council; and • Continue consultation with key stakeholders

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
Preliminary Hazard Analysis.	• The study determined there will be no offsite impacts, however it is possible for the identified hazards to occur.	• While no impacts, MCM propose to include identified potential incidents in the site Emergency Response Plan, along with other incidents identified to have onsite impact to mine personnel and equipment; • Conduct regular emergency response drills, and include identified hazards in the drill exercises; and • All vehicles on site be fitted with at least one dry powder type extinguisher.	• Develop Emergency Response Plan.
Bushfire	• The safety of personnel and residents of the area (i.e. contact with smoke and flame); • Damage to plant and buildings (i.e. vehicles, machinery, administration centre); • Damage to non-mine owned dwellings; • Ignition of coal stockpiles and flammable materials such as fuel and lube storages; • Interruption of mining and agricultural operations; • Loss of rehabilitation/ revegetation works; and • Increased bushfire ignition risks; and • Potential for biodiversity impacts to adjoining DEC estate.		• Preparation of Construction Bushfire Management Plan; • Preparation of Operational Bushfire Management Plan; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.
Land Capability and Agricultural Suitability.	• Loss of Class 3 agricultural lands for the MCP; • Loss of Class V and VI land capability in Open Cut 1; • Loss of a small area of Class III land capability in	• Offset reduction in land capability and agricultural suitability with re-establishment of native vegetation consistent with broad government biodiversity and catchment management targets;	• Prepare Erosion and Sediment Control Plan; • Prepare Land Rehabilitation Plan; and • Employment of suitably experienced environmental officer to ensure implementation

Aspect	Issue	Proposed Control as a result of Environmental Assessment (Details of impacts are located with the relevant discipline section in *Section 5*)	Further Actions to be Adopted as part of Statement of Commitments and MOP.
	Open Cut 2; and • Loss of a small area of Class III land in Open Cut 3.	and • Establishment of Farm Management Plans for continued agriculture in Open Cuts 2 and 3 lands.	of controls and management plans.
Soils.	• Erosion of existing soils; • Erosion of proposed landforms; • Infrastructure areas have Yellow Solodics and Earthy Sands, which have a high erodibility hazard; • Yellow Solodic exhibits an acid soil pH trend (pHcacl <5.0) and poor fertility characteristics; • Open Cut 1 contains Yellow Solodic soils, and shallow Lithosol that all have a very high erodibility hazard; and • Open Cut 3 contains Yellow Podzolic and Red Podzolic, that have moderate erodibility hazard.	• Soil survey identified sensitive soils and topsoil stripping depths; • Immediately after construction of infrastructure areas Earthy Sands will be hydro mulched and seeded with native grasses endemic to the area; • Application of gypsum or lime to correct soil dispersion or acidity in soils; • Application of fertiliser to soils to raise nutrient availability; • Establishment of cover crops to stabilize soils; and • Investigate use of biosolids to boost organic material in soils.	• Prepare Construction Erosion and Sediment Control Plan; • Prepare Land Rehabilitation Plan; • Prepare Operational Erosion and Sediment Control Plan; and • Employment of suitably experienced environmental officer to ensure implementation of controls and management plans.