Centennial Coal Company Limited

CHARBON COAL

Annual Environmental Management Report

January – December 2010

Titles/ Mining Leases :	CCL732, ML1318, ML1384, ML1501, ML1524
Leaseholder :	Charbon Coal Pty Ltd
Reporting Officer:	Matt Gray
Title:	Environment and Community Coordinator Charbon
Signature:	
Date:	02 November 2011
MOP Approval	September 2010
MOP Expiry :	August 2014

Prepared in accordance with Department of Mineral Resources Guidelines to the Mining, Rehabilitation and Environmental Management Process.

January 2006

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1.0 Introduction

Charbon Coal is located in the western coalfields south of the townships of Kandos and Charbon. The Colliery is approximately 230 kilometres north-west of Sydney.

Attachment 1. Regional Location

Attachment 2. Locality and Layout

The mine is owned 95% by the Centennial Coal Company Ltd and 5% by SK Energy Australia, a wholly owned subsidiary of SK Corporation, South Korea. During the reporting period Centennial Coal Company Ltd became a subsidiary company wholly owned by Banpu public Company Ltd. Mining commenced at the Operation in the 1920's.

Charbon Coal was previously owned and operated by the Blue Circle Southern Cement (BCSC) Ltd, supplying the nearby BCSC Charbon Cement works for many years. Following closure of the cement works in 1977, BCSC kept the colliery in production to meet regional demand for steaming coal. In 1994, BCSC sold its coal interests to Centennial Coal Company Ltd (Centennial).

Charbon Colliery currently employs both underground and open cut mining methods to produce in the order of 1.3 Million tonnes of run of mine (ROM) coal annually. The Colliery directly employs 103 people, including 10 apprentices, with up to approximately 40 people employed by the open cut mining contractor. Of the combined approximately 143 positions at the Colliery.

In addition, the Cement Australia Kandos Cement Works and Charbon Lime Works rely on coal provided by Charbon Colliery for their continued operation. The operators of those facilities have indicated that they employ approximately 100 and 28 people respectively on a full-time basis. Local contractors are also used for regular maintenance and project work.

Internal coal handling and transport occurs via a conveyor system from the underground and open cut workings to the Pit Top area, located approximately 6 kilometres north of the current workings.

Although the majority of coal leaves the colliery by rail, Charbon has maintained valuable local markets, with close to 100,000 tonnes being sold to local industry by road haulage.

1.1 Consent and Mining History

Mining commenced at Charbon in the 1920's. An Environmental Impact Statement (EIS) was prepared in 1985 to allow for the upgrade of the colliery. This allowed for a rail loading facility, Coal preparation plant and an increase in production from 180,000 tonnes to 600,000 tonnes per annum.

A subsequent EIS was submitted to the Minister for Planning in 1992 to allow for the development of an additional mine entry as well as associated coal processing systems. Consent was granted in 1993.

Open cut mining commenced following the submission of an EIS and approval from the Rylstone Shire Council in 1995. The open cut commenced mining in 1996. This open cut was modified in 2002 to allow for additional open cut mining. The area applied for extended to the underground mine. Approval was granted and extraction took place in late 2002.

In 2003, an EIS was prepared to accompany a development application to extend the open cut mining area for an area known as the Southern Open Cut (SOC). This was approved in late 2003 and mining commenced in 2004. Mining is carried out through the use of dozers to rip and push the overburden which is loaded into dump trucks using front end loaders.

During 2010 development consent 08_0211 for the continued operations of Charbon Colliery was granted. The consent included the addition of 6 small open cut areas and a new western underground area with a total resource of 5.2 million tonnes and a maximum mining rate of up to 1.5 million tonnes a year.

1.2 Consents, Leases and Licences

Consents, leases and licenses held by Charbon Coal are summarized in **Table 1**.

Table 1 Consents, Leases and Licences at Charbon Coal

CONSENTS			
Issuing Authority	**Number**	**Approval Date**	**Covering**
Department of Planning[1]	78/1465	21st March 1985	Coal Washery, rail loop, loading facilities and modifications to pit top.
Department of Planning[1]	S91-05681-Z02	24th June 1993	Construction and operation of mine entry, infrastructure, coal washery rejects and tailings disposal system, and expansion of underground mining
Rylstone Shire Council[1]	94/95	21st December 1995	Third Entry Open Cut (modified on 25/6/02)
Rylstone Shire Council[1]	1999/65	29th June 1999	Mt View Access Road (lapsed 29/6/04)
Department of Infrastructure, Planning and Natural Resources[1]	122-3-2003	19th Dec 2003	Southern Open Cut including Areas 3 and 4
Department of Planning	08_0211	7th September 2010	Continued Operations of Charbon Colliery – Including 5 additional open cut areas and the Western underground mine.

[1] As per condition 8 of schedule 2 of the 08_0211 consent. All these consents will be surrended by the 7th September 2011.

LEASES			
Lease Type	**Number**	**Approval Date**	**Expiry**
Consolidated Coal Lease	726[1]	29th June 1982	18th November 2028
Consolidated Coal Lease	732	13th December 1989	2nd December 2025
Coal Lease	1318	29th June 1993	June 2014
Mining Lease	1384	19th January 1996	18th January 2017
Mining Lease	1501	21st December 2001	20th December 2022
Mining Lease	1524	28th October 2002	27th October 2023
Mining Purposes Leases	270, 499, 505, 526, 670, 964		
Exploration Lease	7123	9th April 2008	9th April 2011

[1] Part CCL726 is subleased from Kandos Coilleries Pty Limited.

LICENCES			
Licence Issuer	**Number**	**Renewal Date**	**Covering**
Environment Protection Authority - EPL	528	Yearly in October	Surface lease area
Surface Water Licences	80SL095832 80SL095833	May 27 2013 “	Reedy Creek Dam 2 x Bywash Dam
Bore Licences	80BL243771 80BL244068 80BL244069 80BL244070	Perpetuity March 21 2012 “ “	Mine dewatering Groundwater Bore “ “

OTHER APPROVALS				
Issuer	**Approval**	**Number**	**Approval Date**	**Expiry Date**
Department of Primary Industries	Mining Operations Plan 2010	-	September 2010	August 2014
Department of Primary Industries	Clause 88(2)(e)Approvals. Approval to Extract Pillar Coal in Panels 901 to 905 (inclusive) and 8 & 9 Trunk Panels	-	25th May 2008	1st December 2011
Department of Primary Industries	Subsidence Management Plan	-	19th April, 2007	1st May, 2014
National Parks & Wildlife Service	Consent to Destroy	733	27th March 1995	
National Parks & Wildlife Service	Consent to Destroy	1923	21st May 2004	

The total lease area is just less than 2,200 hectares. No other approvals or modifications were granted during the report period.

1.3 Mine Contacts

Mine contacts for Charbon Colliery is presented in **Table 2**.

Table 2 Mine Contacts

Name	Position	Contact Number
Brian Nicholls	Mine Manager	(02) 6357 9201 0428 992 419
Matt Gray	Environment and Community Coordinator	(02) 6357 9206 0427 271 776

1.4 Actions Required at Previous AEMR Review

The NSW Department of Primary Industries – Mineral Resources (DPI-DMR), in minutes of a meeting to review the Charbon 2009 AEMR onsite with mine staff and DECCW officer, stated that the Department was satisfied with the (site) inspection and the detail provided in the report.

1.5 AEMR Plan Requirements

Table 3 presents a summary of the plans required as per the AEMR Guidelines.

Table 3 Plans Required as per AEMR Guidelines

Plan Required	Locality in AEMR and/or Drawing Number
Recent Aerial Photograph with Site Facilities	Attachment 6
Plan 4 – Proposed Mining Activities	Attachment 3
Plan 5 - Proposed Rehabilitation	Attachment 13
Plan 6 – Final Rehabilitation for Lease Relinquishment	Not changed from MOP area

Final Landform has not been changed since the MOP approval. For further plans on the Southern Open Cut, refer to the 2006 MOP, approved on 2 November 2006.

1.6 Report on Activities Proposed for 2010

Table 4 Report on Activities proposed for the 2009 Reporting Period

Proposed 2010 Activity	Progress During 2010
Weed spraying according to Weed Management Plan	Complete
Implement Contaminated Land Remediation Action Plan	Partial complete
Feral animal control	In progress
Energy Savings Action Plan	Ongoing
Continued soil microbial research	Ongoing

2.0 Operations During the Report Period

2.1 Exploration

There was no exploration carried out during 2010.

2.2 Land Preparation

Land clearing during the reporting period was undertaken by dozers over 6.0 ha of the Southern Open Cut (SOC).

Attachment 3. Mining Activity 2010/2011

Prior to any excavation work, topsoil is pre-stripped and stockpiled separately close to areas of future rehabilitation. Stockpiles are generally less than 2 metres high. During the reporting period, approximately 5500m^3 of topsoil was removed and stockpiled.

2.3 Construction

No construction was undertaken during the reporting period

2.4 Mining

Table 5 presents the production and waste summary at Charbon for the 2010 reporting period.

Table 5 Production and Waste Summary

	Cumulative Production	
	Start of 2010	End of 2010
Topsoil Stripped (m^3)	132,000	137, 500
Topsoil Used/Spread (m^3)	70,000	70 000
ROM Coal (t)	8,674,441	9,159 403
Coal Washed (t)	6,713,392	7,487 077
Processing Waste (t)	1,112,487	1,746 208
Product (t)	6,891,252	7,542 447

The variation in ROM coal, Coal Washed and Product coal is a combination of the effect of stockpiles and that not all coal being washed before sale.

2.4.1 Underground Mining

The panels extracted during 2010 were 9 trunk, 8 trunk mains and 905 sub panel. The panels that were developed were 9 trunk and 802A panel.

Attachment 3. Mining Activity 2010/2011

2.4.2 Open Cut Mining

Open cut mining in the reporting period continued in the Southern Open Cut. The SOC area showing existing and proposed mining areas is shown on the plan below.

Attachment 3. Mining Activity 2010/2011

Overburden is removed by dozer ripping, with ripped material being then pushed into piles for loading into dump trucks by front end loader. In some cases, material can be dozed directly into its final position but the majority is transported by dump truck into previously mined strips for placement. Blasting for overburden removal commenced on 14th November 2006. Overburden from successive strips is backfilled in pit as far as practicable. There was a limited number of blasting at Charbon during the reporting period.

Once exposed, the seam surfaces are cleaned down to the desired seam section. This process improves the quality of the raw coal by removing any high ash or diluted coal material. Any waste material containing coal fractions is dumped in pit at least 5 m below the final surface level. Exposed raw coal is then be ripped, loaded and transported to the Run-of-Mine stockpile at the Southern Open Cut surface facilities area or transported to the 3rd entry and loaded onto the conveyor belt.

2.5 Mineral Processing

Figure 1 is a flowchart showing the processes involved in coal production at Charbon washery.

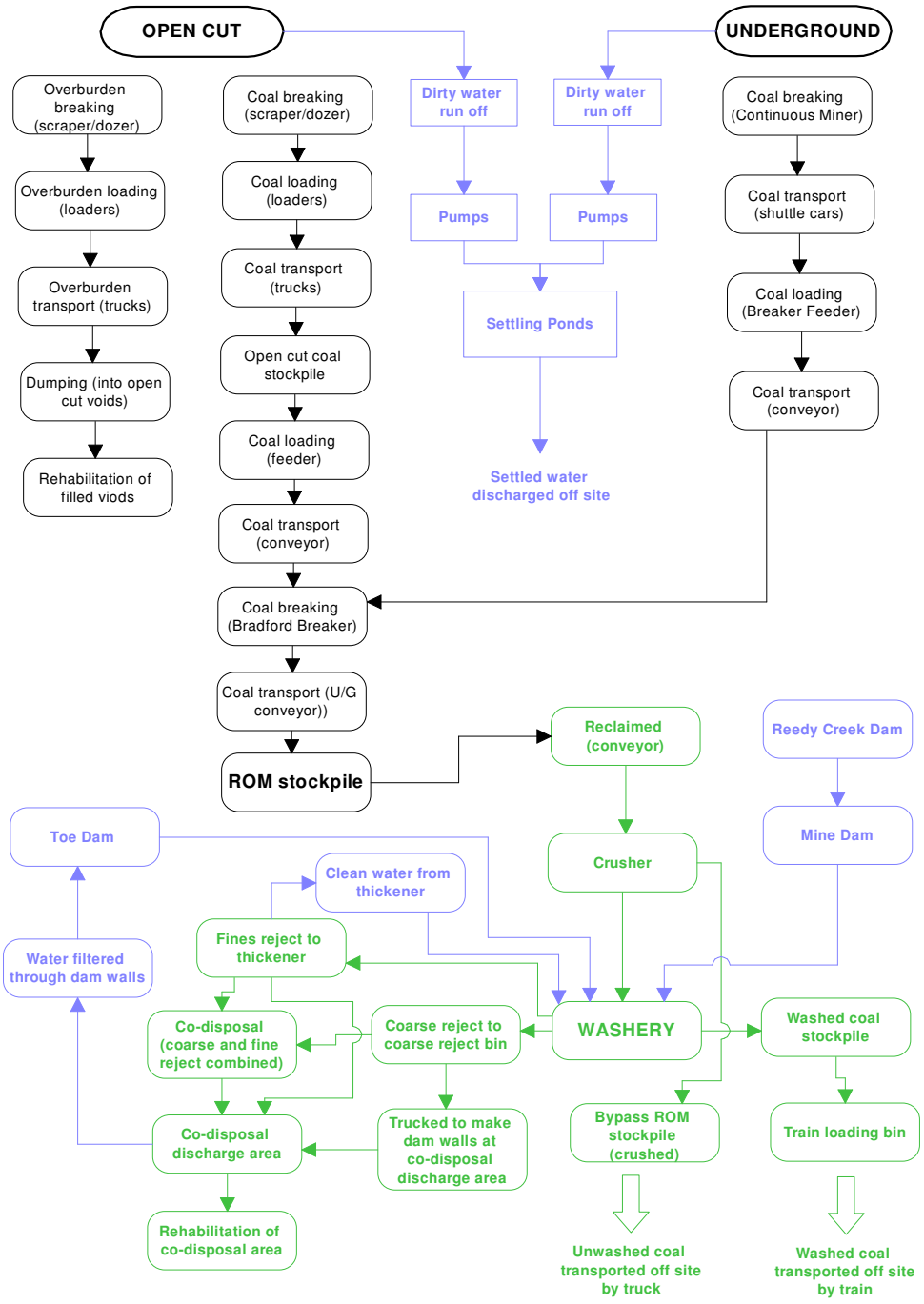


Figure 1 – Process Flow Diagram (Charbon Colliery)

2.5 Waste Management

2.5.1 Reject Emplacement

There are two streams of waste material directed into the reject emplacement area. Tailings are pumped and coarse rejects are trucked from the washery. Coarse reject is used to construct the dam wall (and cells) and the tailings are emplaced in the cells. Reject characteristics are listed in **Table 6** below.

Table 6 Reject characteristics

COMPOSITION	ASH	SIZE	pH	Ec
	78%	0.5 – 50mm	7.3	220 µS/cm

Water recycled from the reject emplacement area is collected in a catchment dam (the "Toe Dam") and pumped back to the washery for reuse. Inspections are conducted each shift on the tailings pipeline and discharge areas when they are in use.

2.5.2 Sewerage

There is one Sewage Treatment Plant (STP) on site –at the pit top to service the washery, bathhouse and offices. This STP discharges to transpiration beds and is covered under the Charbon EPA Licence (LDP 1).

2.5.3 Oil and Grease Containment and Disposal

A fully bunded bulk diesel storage facility is established within the surface facilities area of the 3rd Entry, SOC workshop and at the Washery. Diesel is delivered approximately twice weekly depending on demand from the open cut equipment.

Oil and grease stores are located at the stores area, adjacent to the workshop at the third entry and the SOC facilities. A waste oil tank is located adjacent to the workshops and is used during equipment servicing. These facilities are fully bunded and designed to contain 120% of the maximum storage volume. Proper use of these areas will ensure that there is very little hydrocarbon contamination of soils or waterways on site.

2.5.4 Rubbish Disposal

Rubbish is collected into industrial waste containers that are serviced by a waste disposal contractor. The containers are emptied at the local rubbish tip. Scrap metal is collected in a separate bin and recycled. Paper and cardboard is sorted on site and is recycled by the waste contractor.

2.6 Ore and Product Stockpiles

There are four stockpile areas used at the mine.

Open cut stockpile: Capacity of the stockpile area is around 60,000 tonnes of ROM coal. Coal is fed from the stockpile to the underground conveyor system.

Washery ROM stockpile: Fed from the underground conveyor under the main crusher with the coal having to be pushed by bulldozer for full utilisation of the stockpile area. Capacity is around 20,000 tonnes.

Export stockpile: Fed from the washing plant with either washed or ROM coal, depending on customer requirements. The capacity of the stockpile is around 100 000 tonnes. Coal is loaded into trains from the stockpile via a hopper and chute arrangement. The facility is classified as a Class A loading facility by Freight Corp. The western batter of this stockpile was shaped, drained and grassed in 2008.

Domestic Stockpile: Fed from WC2 conveyor from the washing plant. Coal from this stockpile (which is immediately adjacent to the export stockpile), is loaded into trucks by front end loader for delivery to domestic customers by road. The capacity of this stockpile is approximately 100,000 tonnes.

2.7 Water Management

Table 7 Water Storage

Water Storage	Volume Held (ML)		
	Start of Reporting Period	**End of Reporting Period**	**Storage Capacity**
Clean Water			
Reedy Creek Dam	200	219	220
Southern Open Cut Sediment (Pollution Control) Dam	20	45	46
Third Entry Sediment (Pollution Control) Dam	12	34	35
Mine Dam	50	45	50
Total Clean Water	**296**	**343**	**351**
Dirty Water			
Tails Dam	2	2	2
Toe Dam	4	4	4
Various Sediment Dams	13	14	15
Total Dirty Water	**19**	**20**	**21**
Contaminated Water	Nil	Nil	Nil

2.7.1 Water Supply and Use

There are two separate supply systems for the mine – potable water and process water.

Potable Water is taken from the town water supply system and stored in a 20 000 litre concrete tank. Potable water used primarily within the bathhouse, office and amenities. Annual use is approximately 12 ML.

Process water (non-potable) is used within the washery, underground and surface dust suppression. Water supply is sourced locally from existing water storages and recycling. Current process water demand is approximately 256 ML per year, 79 ML of which is used for dust suppression. The 136 ML used in the washery is mostly recycled water with makeup water being supplied from the colliery owned dam on Reedy Creek (under a Water Licence issued by the NSW Office of Water). Water for dust suppression is sourced primarily from the Southern Open Cut Sediment (Pollution Control) Dam.

Recycled water comes from the reject emplacement system. The water used to pump coal fines is filtered through walls of coarse reject before gravitating back to the Toe Dam. From there it is pumped back to the washery as required for make up water.

2.7.2 Water Management

Water management on site is shown in a water cycle diagram in **Attachment 4**,

There are three separate water management systems on site: the Southern Open Cut, Third Entry and Pit Top (including Washery). The premise for water management on site is to keep clean and dirty water separate. Clean water from the surrounding catchment area is diverted around the edge of the dirty area by the clean water drain. Dirty water is channelled from the workings into sedimentation ponds. This design minimises the clean water entering the dirty water treatment system.

During 2007 the water management system was modified at the rehabilitated open cut and 3rd entry. These modifications were further refined during 2008 and 2009. The modifications allow for greater flexibility in managing run of mine water and runoff from the old open cut. Previously run off and run of mine water reported to three dams on the western side of the old open cut, these have since been modified by the addition of another cell to make 4 cells, and all the cells were cleaned out to improve capacity. Water is collected in cell 1 and this is allowed to settle depending on the volume of water. Alternatively water is allowed to move into cells 2 and 2a and let settle in these cells. Once the water has been flocculated it is allowed to move into cell 3 which contains Licensed Discharge Point 2, if the water meets the requirements of the EPL the water is allowed to be discharged into the creek system, if not the water is pumped back, with a Solar powered pump, to the evaporation dam. The water management system is shown in detail on Figure 2.

The Southern Open Cut operation has a self contained water management system. The system maximises the use of the large existing farm dams both above and below the Southern Open Cut. Prior to construction works commencing, additional 3 ML pollution control ponds were constructed. The first dam is located at the base of the out of pit emplacement. This pond collects runoff from the emplacement during its development and

contains solids prior to revegetation works becoming established. This pond discharges into the Southern Open Cut Discharge Dam which holds approximately 46 ML and is also the point LDP3 discharges. This dam is generally low as water is extracted to be used for dust suppression.

An additional farm dam is located below the licensed discharge point. This dam remains for stock and will contain natural runoff from surrounding farmland and areas undisturbed by mining activities. Mine discharge water is contained within this lower pond prior to leaving the mine site.

Water Management at the Third Entry also uses the principle of minimising dirty water generation. Clean water cut-off drains flank the Third Entry area. Dirty water from the open cut rehabilitation site, Third entry workshop and contractors facilities drains to two large sediment dams called the Third Entry Discharge Dams. Water from these dams discharges through Licensed Discharge Point 2.

The Pit Top is also isolated via clean water cut-off drains. Dirty water from the pit top largely reports to the mine dam. Dirty water from the Reject Emplacement Area (REA) discharges to the Toe Dam. The entire Pit Top and REA is located above Reedy Creek Dam which has a capacity of 220ML. The mine sources process water from Reedy Creek Dam and therefore this is generally a closed system.

Charbon plan to update the water management plan during the reporting period as per conditions 29-33 of schedule 3 of the development consent 08_0211. The water management plan will include:

- Site Water Balance;
- Erosion and sediment Control plan; and
- Surface Water and Groundwater Monitoring Programs.

The updated Water Management plan will include all existing and proposed development across the site.

Attachment 4. Water Cycle

Attachment 9. Monitoring Sites

2.8 Hazardous Material Management

No explosives were stored on site during the reporting period. Explosives used for open cut overburden removal are managed by blast contractors.

The Colliery does not hold a Licence for Dangerous Goods. There are no other chemicals on site that are classed as hazardous materials

2.9 Other Infrastructure Management

2.9.1 Facility Alterations

During the reporting period there were no facility alterations or new construction on site. The surface layout is shown in **Attachments** 5 and 6.

Attachment 5. Surface Layout

Attachment 6. Charbon Colliery Aerial Photograph

3.0 Environmental Management and Performance

This section details environmental risks, management/mitigation procedures and environmental performance.

Environmental management at the colliery is implemented through the use of appropriate management plans and regular inspections, audits and monitoring.

Environmental Risk Assessment

Environmental Management at Charbon Colliery is undertaken through a risk driven methodology. Environmental performance is recorded through various monitoring programs and inspections carried out daily, weekly and monthly. Assessing risk against predetermined consequence and probability criteria allows for site resources to be efficiently deployed toward high risk or high consequence issues. During the reporting period an Environmental Risk Assessment was undertaken.

Environment Protection Licence

Charbon has an EPA Licence (No.528) issued by the Department of Environment Climate Change (DECC). It allows for two scheduled activities including Coal Mines and Coal Works. The scale of the activity allows for the production of 500,000 – 2 million tones per annum. This licence provides three licensed discharge points. Due to the approval of the continued operations of Charbon Colliery a major variation of the EPL will be occurring in the next reporting period.

Attachment 7. EPA Licence No.528

Annual Return

The Charbon Annual Return reports on the mines performance over the period 31 October 2009 through to 30 October 2010. The Return was submitted during December. A copy of the Annual Return is included in **Attachment 8**.

There were no non-compliances over the EPL reporting period.

3.1 Meteorological Monitoring

Under Schedule 2, Condition 23, of development consent 08_0211 Charbon is required to monitor meteorological (met) data. The met station is required to comply with the requirements in the *Approved Methods for Sampling of Air Pollutants in NSW* guideline. All data is downloaded to a website – follow this link: http://www2.ecowise.com.au/

Username: Charbon

Password: metdata

The rainfall data was recorded from a rain gauge at the Southern Open Cut. Due to technical issues the meteorological station has been out of service from March until the end of the reporting period. The meteorological station has still been working however the data is unavailable. Data from Airly Coal weather station (approx 15km South) has been utilised for temperature and wind data for the period not covered by the Charbon meteorological station.

3.1.1 Rainfall

The total monthly rainfall and number of rain days (>0.5 mm rainfall) for the reporting period is shown in **Table 8**.

Table 8 Monthly Rainfall Data (Southern Open Cut)

Period		Total Rainfall (mm)	Rain Days
2010	January	60	10
	February	103	6
	March	79	6
	April	65	2
	May	55	7
	June	31	6
	July	90	10
	August	84.5	14
	September	78	4
	October	99.5	8
	November	155.5	10
	December	240	11
Total		**1140.5**	**94**

Rainfall for 2010 totalled 1140.5 mm. This was 579.5mm more than 2009 where 561mm fell. There were 94 rain days (rainfall greater than 0.5mm) for 2010 compared with 75 for 2009. (Source – rain gauge at SOC). Rainfall was well above the average for the area especially in November and December.

3.1.2 Temperature

The maximum temperature experienced was 33 degrees Celsius in December. The minimum Temperature was -4.2 degrees Celsius in June.

3.1.3 Wind

Average wind speed in the reporting period was 8km/hour

Easterlies and South Easterlies dominated the wind through 2010 year round.

3.2 Air Quality

Operations at Charbon Coal are operated to minimise the generation of airborne dust. A water truck works continually during dry conditions to ensure that dust from workings and haul roads is controlled. Topsoil stripping is undertaken, whenever possible, during times when there is little or no wind. During the next reporting period Charbon will implement an Air Quality Management Plan.

There are no current requirements for Charbon to monitor dust under its EPA Licence. Despite this, Condition 19 of Schedule 3 of development consent 08_0211 requires that the air pollution generated by the development does not exceed the criteria listed in **Table 9** and Condition 21 requires monitoring of deposited dust.

Table 9 Air quality impact assessment criteria for particulate matter concentrations

Pollutant	Limit	Averaging Period
Total suspended particulate matter (TSP)	90 µg/m3	Annual mean
Particulate matter < 10 µm (PM10)	50 µg/m3	24-hour maximum
	30 µg/m3	Annual mean

Pollutant	Max increase in deposited dust	Max total deposited dust level	Averaging Period
Deposited Dust	2 g/m2/month	4 g/m^2/month	annual

These limits are adopted as the impact assessment criteria in the Air Quality Management Plan and are the same as the impact assessment criteria in the EPA's *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW*.

There are four dust gauges monitoring deposited dust at Charbon. **Attachment 9** shows the location of the dust monitoring sites. These sites will be monitored monthly for the life of the Southern Open Cut.

A site has been established at Nioka with fully functional TSP and PM10 monitors. These will sample for 24hrs each sixth day which started at the beginning of the reporting period. **Attachment 9**. Monitoring Sites

3.2.1 Dust Monitoring

A total of 4 dust gauges are monitored for dust fall out on a monthly basis. The annual average dust fallout (insoluble solids) from each gauge for the past 4 years is presented in **Table 10**.

Table 10 Average Dust Deposition Data for 2003 to 2010

Site	Insoluble Solids (g/m^2/month)						
	2003	2004	2005	2007	2008	2009	2010
DM South	1.2	0.7	1.9	1.4	1.6	2.4	0.7
DM West	1.1	0.6	1.0	1.1	0.9	2.3	0.6
Pit Top	ND	0.9	1.3	1.0	1.3	2.1	0.5
Nioka	ND	0.4	0.6	0.6	0.7	1.5	0.9

ND – No Data

There were 0 non-compliances with the dust sampling during 2010.

3.3 Erosion and Sediment

An Erosion and Sediment Control Management Plan has been developed and is implemented on site. This will be reviewed as part of the Water Management Plan that will be developed in the next reporting period.

The primary objective of the erosion and sediment control system is to safeguard against soil loss and in turn, minimise the risk of water quality impacts. Surface runoff occurs during heavy rainfall events and particular attention is paid to site drainage and erosion control.

Temporary erosion and sedimentation control structures, as described in Section 3.3.1, are put in place prior to any clearing of vegetation, soil stripping or haul road construction activities. Any exposed areas where erosion hazards exist are controlled to avoid sedimentation impacts on downstream waterways. Erosion control structures are installed around the site with the principle aim of containing sediment at its source. All runoff is generally contained in the main pollution control ponds. The aim of the erosion control measures is to increase batter and bench stability prior to establishment of permanent rehabilitation measures. Erosion control structures are inspected regularly, particularly after heavy rainfall, and repaired where necessary.

3.3.1 Control Structures

The following control structures are used on site to minimise sedimentation and erosion where necessary and appropriate:

- Clean and dirty water drains in the open cut built to reduce run off water velocity and are rock lined where necessary to promote stability.
- Silt fences erected downstream of all exposed haul road batters, topsoil and excavation material stockpiles.
- Table drains installed along internal roads to collect and divert runoff away from the road surface.
- Headwalls, scour protection and sedimentation traps to minimise erosion of the table drains.
- Sedimentation dams
- Prompt revegetation
- Appropriately constructed drainage channels

Structures (as presented above) are regularly inspected, repaired and cleaned of sediment when appropriate.

3.4 Surface Water Pollution

Charbon Colliery had three EPA licensed discharge points during the reporting period. These points relate to the spray irrigation disposal of treated sewage (LD1), discharge from the sedimentation dam to the Carwell Creek catchment via Reillys Creek (LD2) and discharge from the Southern Open Cut sedimentation dam into the same creeks (LD3). The EPA Licence effective during the reporting period is presented in **Attachment 7.**

Licensed Discharge Points are shown in **Attachment 9**. There were no non compliances during the EPL reporting period (October 2009- October 2010) however there was non compliances associated with the abnormally heavy rains during December. These non-compliances were associated with volume exceedances and TSS limits exceedances.

Details on the water management system for Charbon Colliery are included in Section 2.7.

3.4.1 Surface Water Quality Monitoring and Interpretation

The EPA Licence requires water quality monitoring at LD2, LD3. The results of the monitoring are shown in **Appendix 14**. TSS results of 270 at LDP2 and >999 at LDP3 were recorded. This discharge continued between the 1/12/2010 and the 10/12/2010 due to rain events over that period totalling 186mm. This incident was reported to the Environment Pollution line and a detailed report sent to DECCW within 7 days of the incident occurring. Down stream samples of TSS were taken at both LDP3 and LDP2 during the discharges with results ranging from 13-21mg/L indicating that the downstream impacts were negligible. Charbon has committed to undertaking a water management system audit of the site and increase the capacity of pollution control dams.

Attachment 8. Annual Return.

3.5 Groundwater Pollution

Water from the mine workings is pumped to the black tanks which then feed the water to the coalface for use in dust suppression. Small quantities of mine water are occasionally used to feed into the 3rd Entry pollution control dams, where it acts as an excellent flocculent.

3.6 Contaminated Polluted Land

A Phase 1 contamination assessment for the whole site was completed in 2010. The recommendations from the report will be implemented in 2011.

3.7 Threatened Flora/ Fauna

A Flora & Fauna Management Plan has been developed and approved prior to mining in the Access Road Open Cut area and the Southern Open Cut area. Seeds from threatened flora species, particularly *Eucalyptus cannonii* are currently being collected for future rehabilitation use in accordance with the Management Plan. Three thousand *Eucalyptus cannonii* seedlings collected on site are to be utilised for rehabilitation of the disturbed areas.

3.7.1 Compensatory Habitat

A Compensatory Habitat Management Plan was prepared in May 2004 and approved to satisfy Condition 2 of Schedule 4 of the development consent for the SOC. A Landscape Management Plan will be undertaken during the reporting period as per condition 6 of schedule 4 of the development consent 08_0211. The Landscape management plan will also include a:

Rehabilitation and offsets Management Plan; and

Mine Closure plan.

The Biodiversity offset area as specified in Condition 1 of Schedule 4 of development consent 08_0211 is shown below.

Table 11 Habitat Offset Area

Vegetation Community	Area (ha)
Grey Gum-Stringybark Forest	41
Mountain Grey Gum-Grey Gum-Mountain Hickory Sheltered Forest	13
Stringybark-Blakely's Red Gum – Yellow Box Woodland	13
Yellow Box – Blakely's Red Gum Woodland (EEC)	57
Cleared Land (to be revegetated)	47
Total	**171**

The primary objective of the plan is to manage the habitat in a way that effectively provides long term habitat in the area.

Attachment 10. Vegetation Map – SOC and Compensatory Habitat Area

The compensatory habitat area during the reporting period is approximately 73 ha in size, and contains a mixture of approximately 41 ha of Grey Gum Woodland, 5 ha of cleared grazing land, 19 ha of Narrabeen Sandstone Woodland and 8 ha of scattered timber. The

habitat value of each of the areas was described in detail as part of the EIS process, and is used as the baseline data for the existing habitat.

Given the vast tracts of woodland in the immediately adjoining area, the amount of vegetation to be removed by the SOC is negligible on a local and regional scale. However, the Compensatory Habitat has been dedicated to permanently preserve this woodland type in return for the area to be removed by open cut mining. This is in accordance with Condition 1 of Schedule 4 of the development consent.

Six monthly inspections of the Compensatory Habitat Area took place in 2010 along with a flora and fauna survey in March 2010 and December 2010. Results of the flora and fauna monitoring are provided in Section 3.7.2 below.

There was no level of active disturbance to the area during the reporting period.

3.7.2 Flora and Fauna Monitoring

Flora and fauna monitoring was carried out in the Compensatory Habitat area and the 9 Trunk SMP Area for the Subsidence Management Plan (SMP). The following sections detail the results and conclusions of these fauna and flora surveys.

Attachment 9. Monitoring Sites

Fauna Monitoring

A Fauna survey was conducted from 23/03/2010 to 26/03/2010 by AES Environmental Consultancy in the Compensatory Habitat Area and the 9 Trunk SMP Area. The sampling methods used included spotlight surveys, trapping, general diurnal observations and insectivorous bat surveys. **Table 12** lists the threatened species identified in the survey.

Table 12 Field Survey Results – Listed Species on the TSC Act

Scientific Name	Common Name	Status
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V
Saccolaimus flaviventris	Yellow-bellied Sheathtail Bat	V
Vespadelus troughtoni	Eastern Cave Bat	V
Miniopterus schreibersii oceanensis	Eastern Bentwing Bat	V
Chalinolobus dwyeri	Large-eared Pied Bat	V
Chalinolobus picatus	Little Pied Bat	V

V Listed as Vulnerable

E Listed as Endangered

There are also two species listed as threatened on the TSC Act that have been identified within 10 km of the site. These are listed in **Table 13**

Table 13 Listed Species on the TSC Act Identified within 10km of the Site

Scientific Name	Common Name	Status
Daphaenositta chrysoptera	Varied Sittella	V
Petroica boodang	Scarlet Robin	V

V Listed as Vulnerable

E Listed as Endangered

The report concluded there was some degree of habitat value degradation in the Compensatory Habitat Area and SMP area due to the presence of feral goats, rabbits and the European Red Fox (*Vulpes vulpes*). The report recommended a feral animal shooting program that Charbon Colliery has since commenced and will supplement with other control methods along with neighbouring properties.

Flora Monitoring

The 9 trunk area and Compensatory Habitat Areas were surveyed by Gingra Ecological Surveys in March 2010 over a two day period with the SMP area again surveyed in December. The Flora Monitoring Program has permanent survey quadrats ($400m^2$) at a number of locations within the SMP area and Compensatory Habitat Area which were used during this survey.

Table 14 lists the threatened flora species known to occur within a 5 km radius of the SMP application area.

Table 14 Threatened Flora in the Charbon Area

SPECIES	RISK CODE	LOCATION	HABITAT
Eucalyptus cannonii	V	Charbon, Capertee, Ilford, Mt Piper, Avisford NR, Gardens of Stone NP, Winburndale NR	Woodland and forest on Permian and older sediments, lower slopes
Grevillea obtusiflora subsp. fecunda	E	Capertee valley and south-east of Kandos	Sandy loam soils in dry sclerophyll forest
Persoonia marginata	V	Clandulla SF	Sandy soils, dry sclerophyll forest on sandstone
Pultenaea sp. 'Genowlan Point'	E	Genowlan Point	Heath, dry sclerophyll forest on sandstone
Prostanthera stricta	V	Airly Trig, Airly Mountain	Sclerophyll forest

V Listed as Vulnerable E Listed as Endangered

The only species recorded from the SMP application area is Capertee Stringybark (*E. cannonii*). The habitat of Capertee Stringybark is not sensitive to the impacts of subsidence. Populations will be monitored as part of the ongoing flora monitoring program. Capertee Stringybark is one of the tree species which is being used in rehabilitation works at Charbon Colliery. Flora monitoring for 2010 indicated no significant changes in species diversity in the SMP area attributable to seasonal conditions and the response of individual species to seasonal patterns. This sort of response is consistent with data recorded for other flora monitoring sites within the central tablelands.

At this stage of the Compensatory Habitat flora monitoring it is premature to select particular species as indicator species. A suitable list will be developed as monitoring proceeds. New monitoring quadrats will be established in the extended Compensatory Habitat areas in the next reporting period.

3.8 Weed Management

A noxious weed management plan has been implemented at Charbon Colliery and weed spraying is normally conducted annually. The following weeds are targeted as part of the weed management plan: St Johns Wort, Blackberry, Sweet Briar, Spear Thistle, Paterson's Curse and Saffron Thistle.

Approximately 100ha was sprayed for blackberry in 2010, while another 150 ha of land affected by St Johns Wort was treated. A similar control program is scheduled for 2011. Wet and windy conditions limited some weed control efforts in the reporting period.

3.9 Blasting

Blasting commenced at Charbon in November 2006 and occurred on the following dates during 2010:

All Blasting for 2010 was in compliance with the Blasting criteria in EPL 528 as shown in the tables below.

Date	Blast overpressure (dB)	Vibration (mm/s)
23/02/10	No Trigger	No Trigger
05/03/10	No Trigger	No Trigger
17/03/10	No Trigger	No Trigger
30/03/10	No Trigger	No Trigger
16/04/10	No Trigger	No Trigger
20/04/10	No Trigger	No Trigger
28/04/10	92.8	0.81
01/06/10	No Trigger	No Trigger
15/06/10	No Trigger	No Trigger
09/07/10	No Trigger	No Trigger
05/08/10	No Trigger	No Trigger
20/08/10	108.4	0.32

Table 15 EPA Licence Blasting Limits

Condition	Overpressure (dB)	Vibration (mm/sec)
No more than 5% of total blasts	115	5
At any time	120	10

3.9.1 Blast Monitoring

Blast monitoring occurred at the nearest residence to the blasting operations, Mt View. Blasting results were well within EPA limits (no exceedances) with average vibration of 1.15 mm/sec and average overpressure of 108.4 dB. During the next reporting period Charbon will implement a Blast monitoring Program.

Attachment 7. EPA Licence No. 528

3.10 Operational Noise

3.10.1 Noise Criteria and Controls

The noise limits stipulated in the development consent 08_211 (Condition 1 of Schedule 3) are shown in **Table 16**. The Noise limits that were established prior to the development consent 08_0211 are shown in **Table 17**.

Table 16 Noise Limits

	DB(A) $L_{Aeq(15\ min)}$			
Location	**Limit (Day)**	**Limit (Evening)**	**Limit (Night)**	**Night (L_{A1} (1 min))**
Residence P	35	39	39	45
All residents within 150m of, and including, Residence Q	38	38	38	45
Residence M	36	37	35	45
All remaining locations	35	35	35	45

Table 17 Noise Limits from EPL 528 (Variation to be undertaken in 2011)

	DB(A) $L_{Aeq(15\ min)}$		
Location	**Limit (Day)**	**Limit (Evening)**	**Limit (Night)**
R1 – North West of Areas 3 & 4	36	35	35
R2 – Tannhausen	36	35	35
R3 – South West of Areas 3 & 4	36	35	35
R4 – Nioka	35	35	35
R5 – Mount View	35	35	35
R6 – West of Southern Open Cut – Brogans Creek Rd	35	35	35
R7 – Eaglevale	35	35	35

3.10.2 Noise Monitoring

Atkins Acoustics were commissioned by Centennial Coal to undertake noise monitoring at Charbon to determine compliance with above mentioned criteria (**Table 17**). Noise monitoring was conducted on the 24 March 2010 at monitoring sites as shown in **Attachment 9**. The results of the monitoring are shown in **Appendix 14**

There were no non-compliances or exceedance of noise levels during 2010. The noise monitoring was assessed against noise limits specified in EPL 528.

3.11 Visual, Stray Light

Lighting at the SOC and 3rd Entry areas is switched off at close of operations (10pm at the latest).

3.12 Aboriginal Heritage

During the reporting period an extensive archaeological survey was undertaken over the Charbon mine site. The surveys identified 12 additional indigenous heritage sites which comprise:

- Six (6) open sites with PAD;
- One (1) scar tree;
- Four (4) possible scar trees; and
- One (1) rock shelter with PAD.

All archaeological sites identified during the survey will be addressed in the updated version of the Aboriginal Cultural Heritage Management Plan **(ACHMP).** The **ACHMP** will be developed in accordance with DECCW and the Aboriginal community**.** All the Archaeological sites identified from survey's conducted at Charbon are shown in **Attachment 15.** The archaeological report undertaken in 2010 concluded that 1 potential scar tree and 1 Sensitive Archaeological landform (SAL) 4 would be directly impacted by mining. These sites will be managed in accordance with the approved **ACHMP**.

3.13 Natural Heritage

There are no known natural heritage issues for the site.

3.14 Spontaneous Combustion

There were no incidents of spontaneous combustion during the reporting period and there have been none over the history of the site. Lithgow seam coal has a low propensity to spontaneous combustion.

3.15 Bushfire

Charbon finalised the Bushfire Risk Management Plan during 2007. The Rural Fire Service has approved this Plan which is still current. The bushfire Management is currently being revised and will be finalised in consultation with the Cudgegong Bushfire Management Committee in 2012.

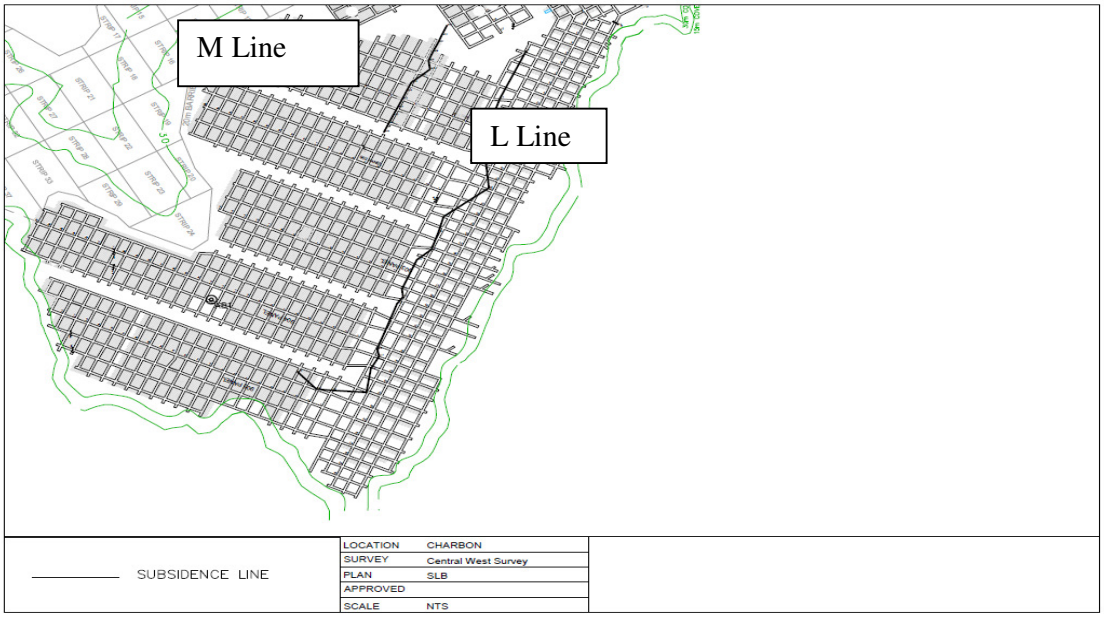
3.16 Mine Subsidence

Subsidence predictions and previous site experience with the extraction mining activities proposed at Charbon indicate that there will be no identifiable surface impacts apart from some surface cracking. Maximum predicted subsidence is approximately 1.32 m with the maximum tilts and strains 65 mm/m and 35 mm/m respectively. This is predicted over mid panel of full extraction areas.

The technique of partial extraction will be used in more sensitive areas to protect the ridge and cliff line. The method of partial extraction is predicted to produce subsidence of 33 mm with 10.5 m lifts.

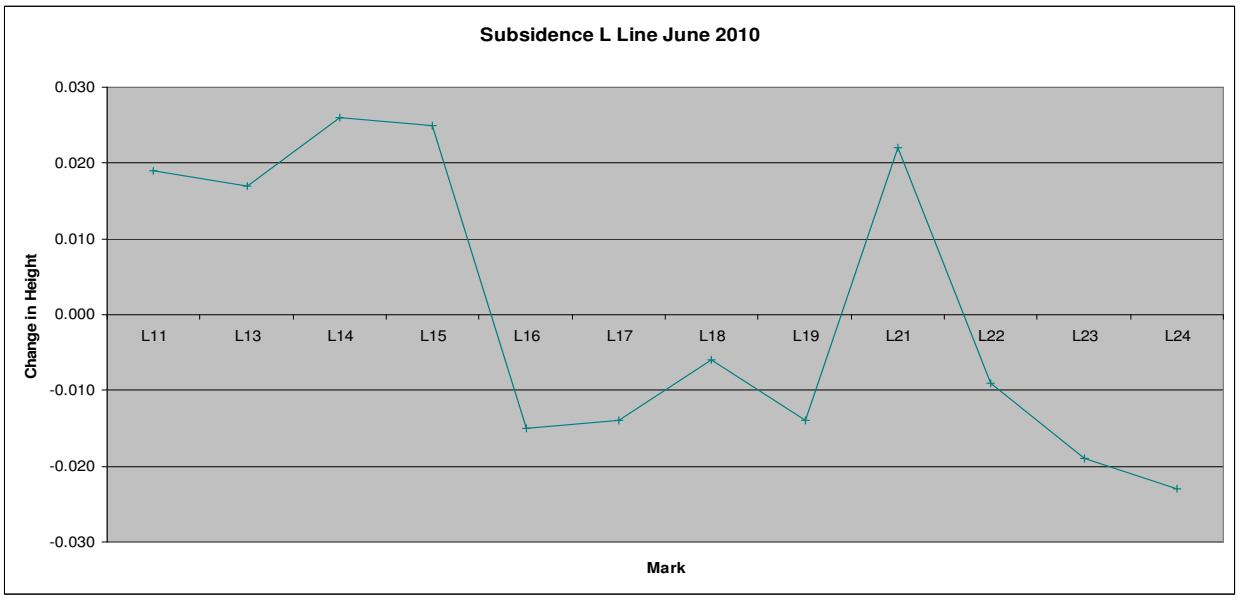
3.16.1 Monitoring

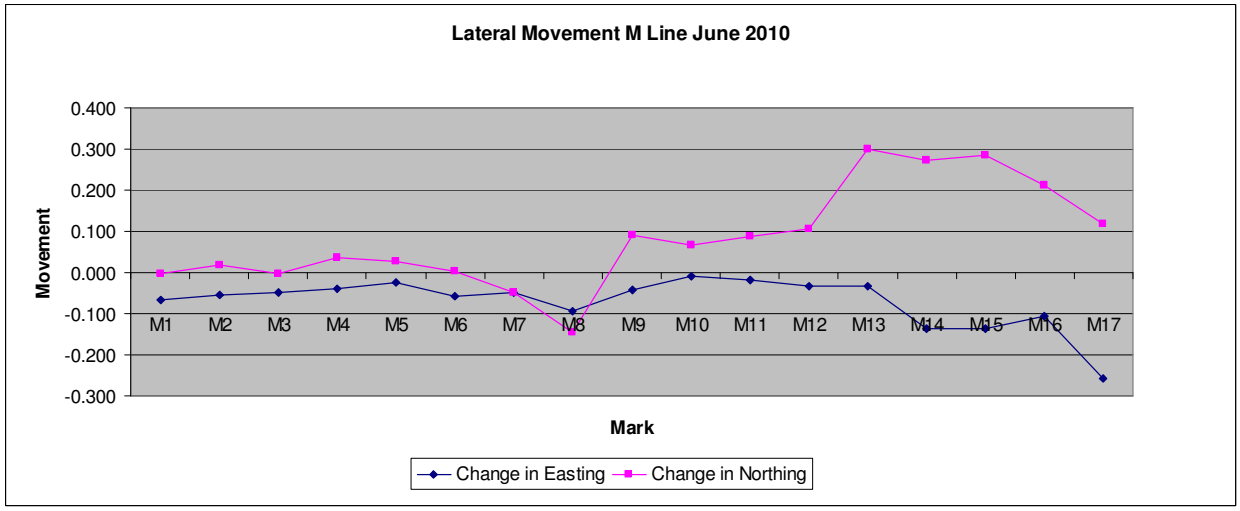
The most recent survey of the Subsidence Lines M & L took place in June 2010 as per the requirements of the SMP approval, results are shown below.

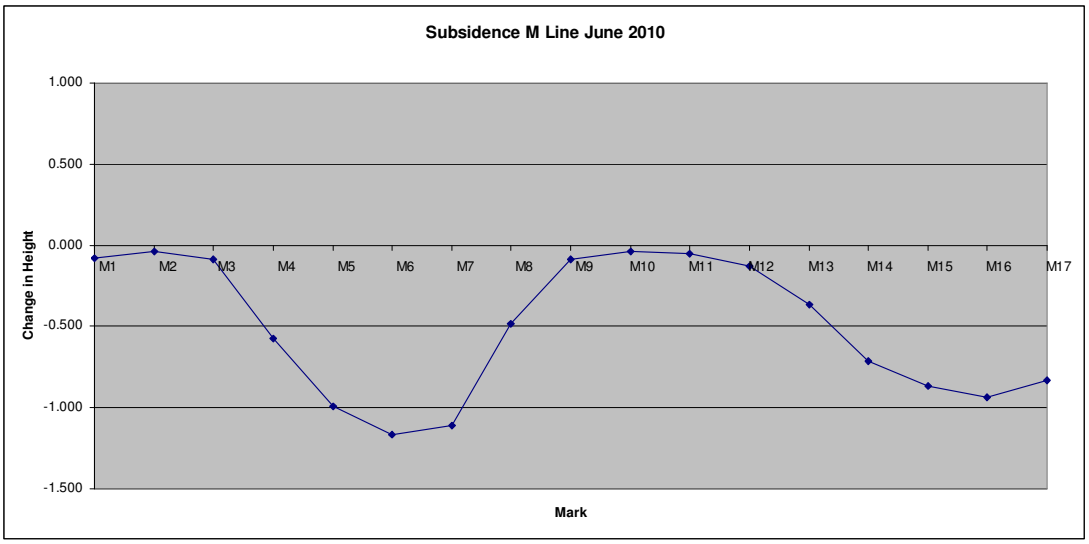


Location Plan Subsidence Lines M & L

- All of the survey results indicate limited vertical subsidence values of less than 1.16 m on full extraction and typically less than 25 mm on partial extraction;
- All of the monitoring stations indicate lower levels of expected subsidence due to the nature of the mining method where stooks and webs are left behind;


Subsidence L Line June 2010
0.030
0.020
0.010
0.000
-0.010
-0.020
-0.030
Change in Height
L11
L13
L14
L15
L16
L17
L18
L19
L21
L22
L23
L24
Mark


Lateral Movement M Line June 2010
0.400
0.300
0.200
0.100
0.000
-0.100
-0.200
-0.300
Movement
M1
M2
M3
M4
M5
M6
M7
M8
M9
M10
M11
M12
M13
M14
M15
M16
M17
Mark
Change in Easting
Change in Northing


Subsidence M Line June 2010
1.000
0.500
0.000
-0.500
-1.000
-1.500
Change in Height
M1
M2
M3
M4
M5
M6
M7
M8
M9
M10
M11
M12
M13
M14
M15
M16
M17
Mark

- Subsidence Line M has had a maximum movement in height of 1.16m since installation in August 2007. This movement has occurred after full extraction of the area has taken place.
- The lateral movement as shown on the chart below is between -25mm and 29 mm.
- Subsidence Line L has had a maximum movement in height of 0.25mm since installation in August 2007. This movement has occurred after partial extraction of the area has taken place. Lateral movement has been measured to be less than 1mm.Mining is currently occurring in the 8 Trunk area which has no Subsidence lines in that area.
-

3.17 Hydrocarbon Contamination

A phase 1 contamination assessment was undertaken during 2010. The results of the contamination assessment recommended that a phase 2 investigation be undertaken at a number of strategic places around the site. The phase 2 contamination assessment is scheduled to commence in 2012.

3.18 Methane Drainage/Ventilation

This is not applicable as there is no methane in the coal seam.

3.19 Public Safety

An audit of fencing, general access and security commenced in 2008 and was completed in 2009. Gates are locked on weekends and at other times when the mine is not operational. There were no incidents concerning public safety in 2010. Extra signage warning of subsidence areas was installed in 2008.

A Public Safety Management Plan manages safety issues associated with the SMP area.

3.19.1 Land Ownership

Land Tenure in relation to Charbon Coal Leases is shown in **Attachment 5**. There were no property purchases during the reporting period.

3.19.2 Consent Requirements

Charbon Colliery received development consent 08_0211 for the continued operations of Charbon Colliery during the reporting period. The consent requires an Environmental Management Strategy, Environmental Monitoring Program and various Environmental Management Plans that will be updated and completed during the next reporting period.

The consent has a number of requirements for reporting within the AEMR. **Table 18** provides a summary of the consent conditions are where they are addressed in this AEMR.

Table 18 Consent Conditions

Schedule	Condition	Requirement
5	**3**	By 31 March 2011, and annually thereafter, the Proponent shall submit a report to the Director-General reviewing the annual environmental performance of the project to the satisfaction of the Director-General. This review must;
	(a)	Describe the works that were carried out in the previous calendar year, and the works that are to be proposed to be carried out over the current calendar year;
	(b)	Include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against: • The relevant statutory requirements, limits or performance measures/criteria; • The monitoring results of previous years; and • The relevant predictions in the EA;
	(c)	Identify any non-compliance over the previous calendar year, and describe what actions were (or are being) taken to ensure compliance;
	(d)	Identify any trends in the monitoring data over the life of the project;
	(e)	Identify any significant discrepancies; and
	(f)	describe what measure will be implemented over the current calendar year to improve the environmental performance of the project.

4.0 Community Relations

4.1 Environmental Complaints

The Colliery did not receive any community complaints during the reporting period.

Table 18 Summary of Community Complaints – 2001 to 2010

Year	Total No. Complaints	Date	Complainant	Issue
2010	0	-	-	-
2009	2			
2008	5	15/02/08 08/04/08 12/06/08 01/08/08 26/11/08	Neighbouring resident “ “ “ “	Noise blasting blasting dust noise
2007	6	07/08/07 08/08/07 28/08/07 03/11/07 07/11/07 15/12/07	Neighbouring resident “ “ “ “ “	Dust Dust Dust Noise No issue noise
2006	1	27/10/06	Neighbouring resident	Stray light/hours of operation
2005	2	22/1/05	Neighbouring resident	Dust
		1/4/05	Neighbouring resident	Stray light/hours of operation
2004	1	31/8/04	Neighbouring resident	Hours of operation
2003	0	-	-	-
2002	0	-	-	-
2001	0	-	-	-

4.2 Community Liaison

The Colliery makes a positive contribution to the local community and enjoys a good relationship with surrounding neighbours.

4.3 Community Consultative Committee

The Southern Open Cut Community Consultative Committee (CCC) was established during 2004. There was 1 meeting during the reporting period on the 19/04/2010. A copy of the minutes from these meetings is provided in **Attachment 11**.

5.0 Rehabilitation

Rehabilitation Domains are shown in **Attachment 12** and current and proposed rehabilitation is shown in **Attachment 13**. A comprehensive Rehabilitation and offsets Management plan along with a Mine Closure Plan will be developed during the next reporting period as required by the 2010 development consent conditions.

Attachment 12. Rehabilitation Domains

Attachment 13. Proposed Rehabilitation

5.1 Buildings

No buildings were renovated or removed at Charbon Colliery during the reporting period.

5.2 Rehabilitation of Disturbed Land

No new rehabilitation occurred during 2010 due to unfavourable seasonal conditions. All areas marked as rehabilitated in **Attachment 13** were done prior to the current reporting period. Rehabilitation planned for 2010 will now occur in spring 2011.

Charbon Colliery undertook 5 ha of rehabilitation maintenance during 2010 including erosion control works and soil treatment. .

5.3 Other Infrastructure

No rehabilitation of infrastructure areas took place during the reporting period.

5.4 Rehabilitation Trials and Research

Some minor trials were commenced during 2010 using various pasture and turf species as initial stabilizing groundcovers for disturbed land. More comprehensive native vegetation trials and research will be commenced in 2011.

Table 19 Rehabilitation Summary (Open cut & Underground)

	Cumulative Area Affected (hectares)		
	End of 2009	**End of 2010**	**End of 2011 (estimated)**
A: MINE LEASE AREA			
A1 Mine Lease(s) Area	2198.26 ha		
B: DISTURBED AREAS			
B1 Infrastructure Area	25	25	25
B2 Active Mining Area	15	21	53
B3 Waste Emplacements	21.1	21.1	20
B4 Tailings and Co-disposal	14	14	14
B5 Shaped Waste Emplacements	34.0	34	20
ALL DISTURBED AREAS	109.1	109.1	132
C: REHABILITATION PROGRESS			
C1 Total Rehabilitated Area	55	55	55*
D: REHABILITATION ON SLOPES			
D1 10 To 18 Degrees	0	0	0
D2 Greater than 18 Degrees	0	0	0
E: SURFACE OF REHABILITATED LAND			
E1 Pasture and Grasses	48.9	48.9	23.9
E2 Native Forest/Ecosystem	16.2	16.2	16.2
E3 Plantations/ Crops	0	0	0
E4 Other	0	0	0

*** 50 ha to be shaped, drained and seeded spring/summer 2011**

Table 20 Maintenance Activities on Rehabilitated Land

NATURE OF TREATMENT	Area Treated (hectares)		
	Report period	Next Period	Comment/control/strategies
Additional Erosion control works	10	10	Ripped soil on contours
Re-covering	0	0	
Soil treatment	0	10	Lime and Gypsum to 3rd Entry OC
Treatment/Management	6	0	
Re-seeding/replanting	0	30	Native tree seed in Autumn
Adversely Affected by Weeds	100	150	Spray blackberry and St Johns Wort
Feral Animal Control	0	1500	Goat control by mustering

6.0 Activities Proposed in Next Reporting Period

Charbon will endeavour to carry out the following activities during the 2011 reporting period:

- Weed spraying according to Weed management Plan
- 50ha of rehabilitation commenced
- Feral animal control
- Implementation of September 2010 planning approval and management plans
- Variation of EPL 528 to reflect development in accordance with development consent 08_0211.
- Implementation of the Statement of Commitments made by Charbon (**Attachment 16**)

Attachments

LIST OF ATTACHMENTS

Attachment 1: Regional Location

Attachment 2: Locality and Layout

Attachment 3: Mining Activity 2010-11

Attachment 4: Water Cycle

Attachment 5: Surface Layout

Attachment 6 a, b : Charbon Colliery Aerial Photographs

Attachment 7: EPA Licence No.528

Attachment 8: Annual Return

Attachment 9: Monitoring Sites

Attachment 10: Vegetation Map - SOC and Compensatory Habitat Area

Attachment 11: CCC Minutes

Attachment 12: Previously Disturbed Areas

Attachment 13: Proposed Rehabilitation

Attachment 14: Monitoring results

Attachment 15: Archaeological sites

Attachment 16: Statement of commitments

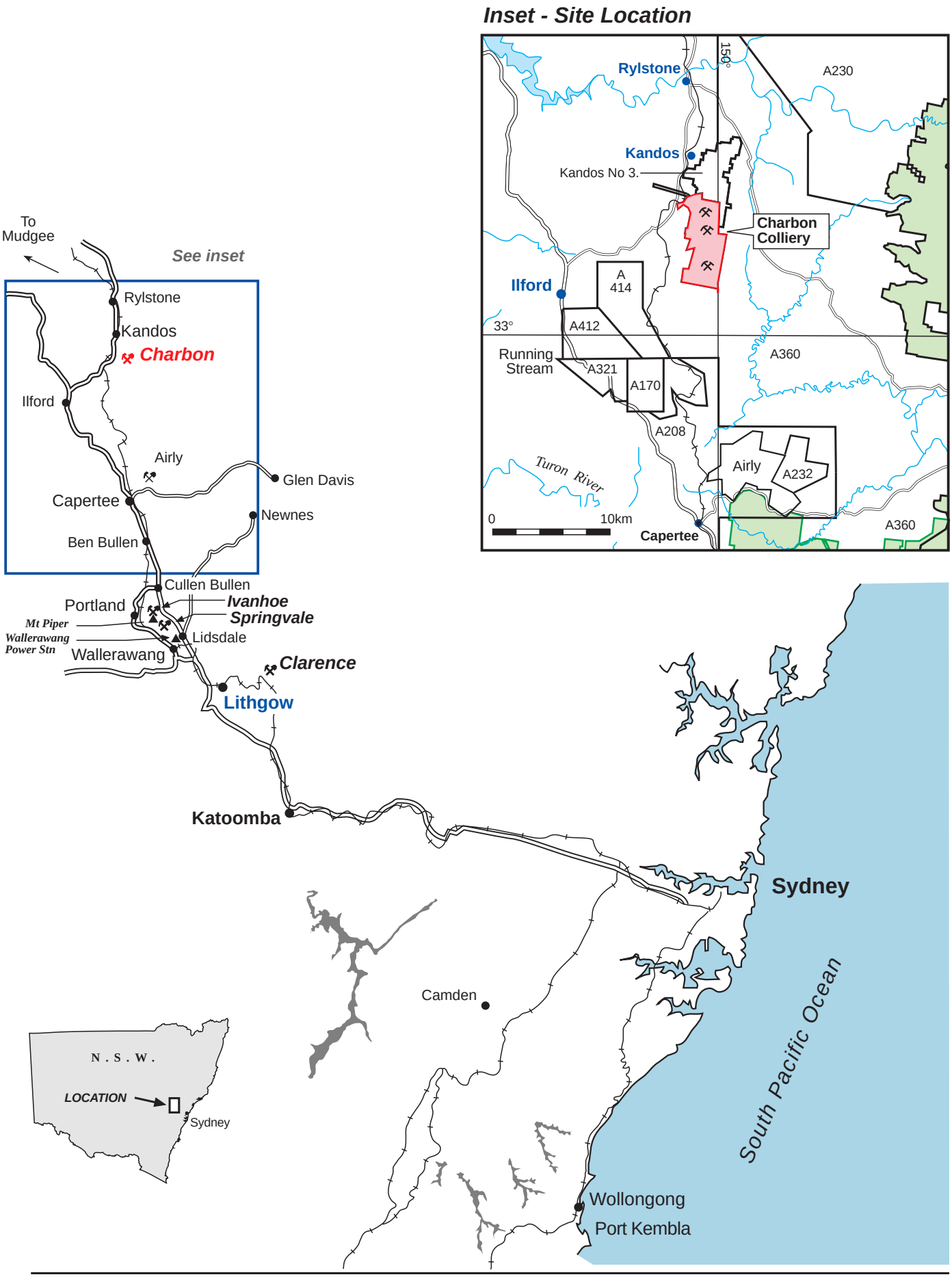


FIGURE 1
Locality Plan

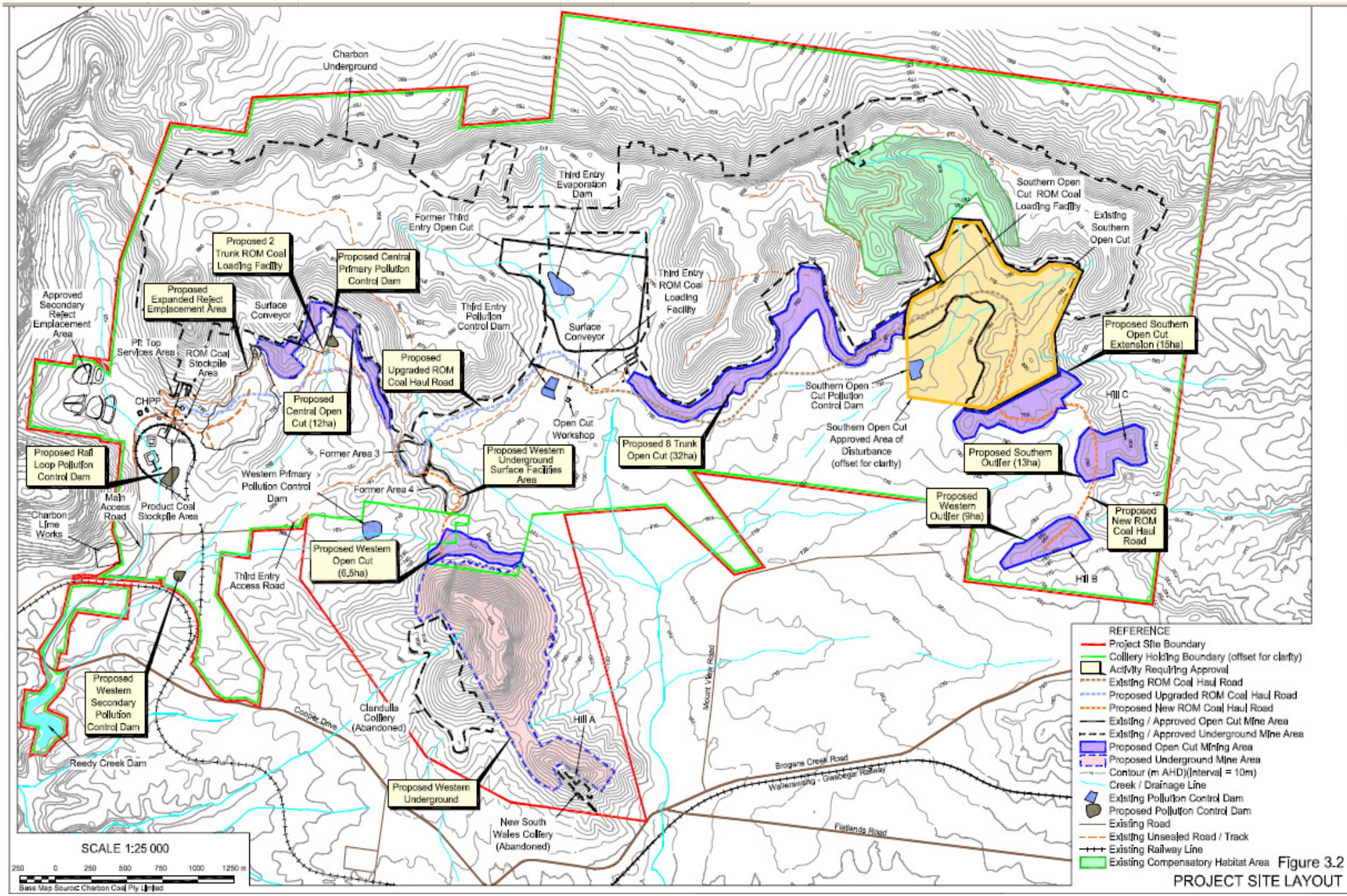
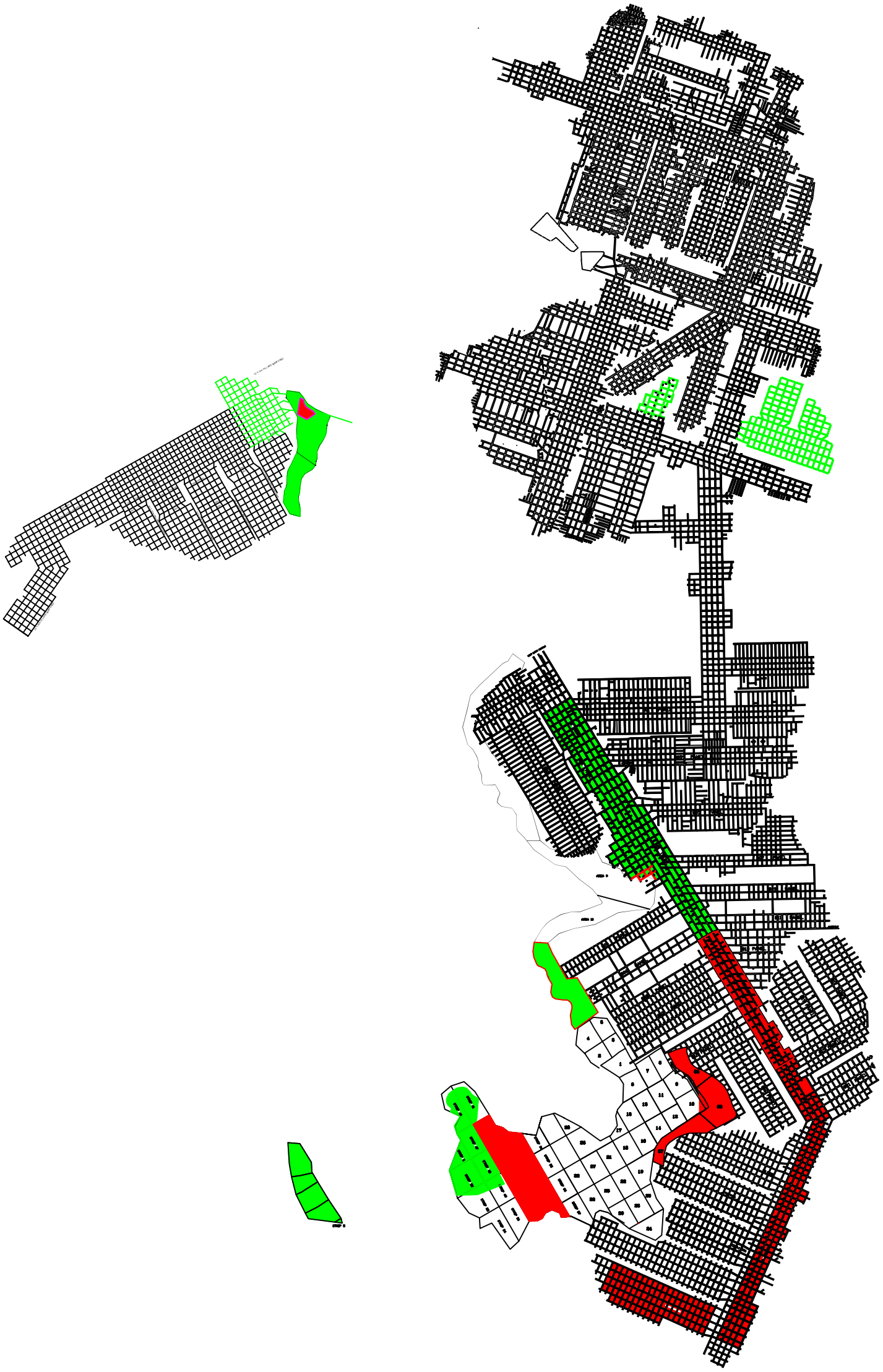


Figure 3.2
PROJECT SITE LAYOUT



LEGEND

Production 2010

Proposed 2011

LOCATION	CHARBON
SURVEY	Central West Survey
PLAN	J COOKE
APPROVED	
SCALE	1:25 000

PRODUCTION 2010 AND
PROPOSED PRODUCTION 2011

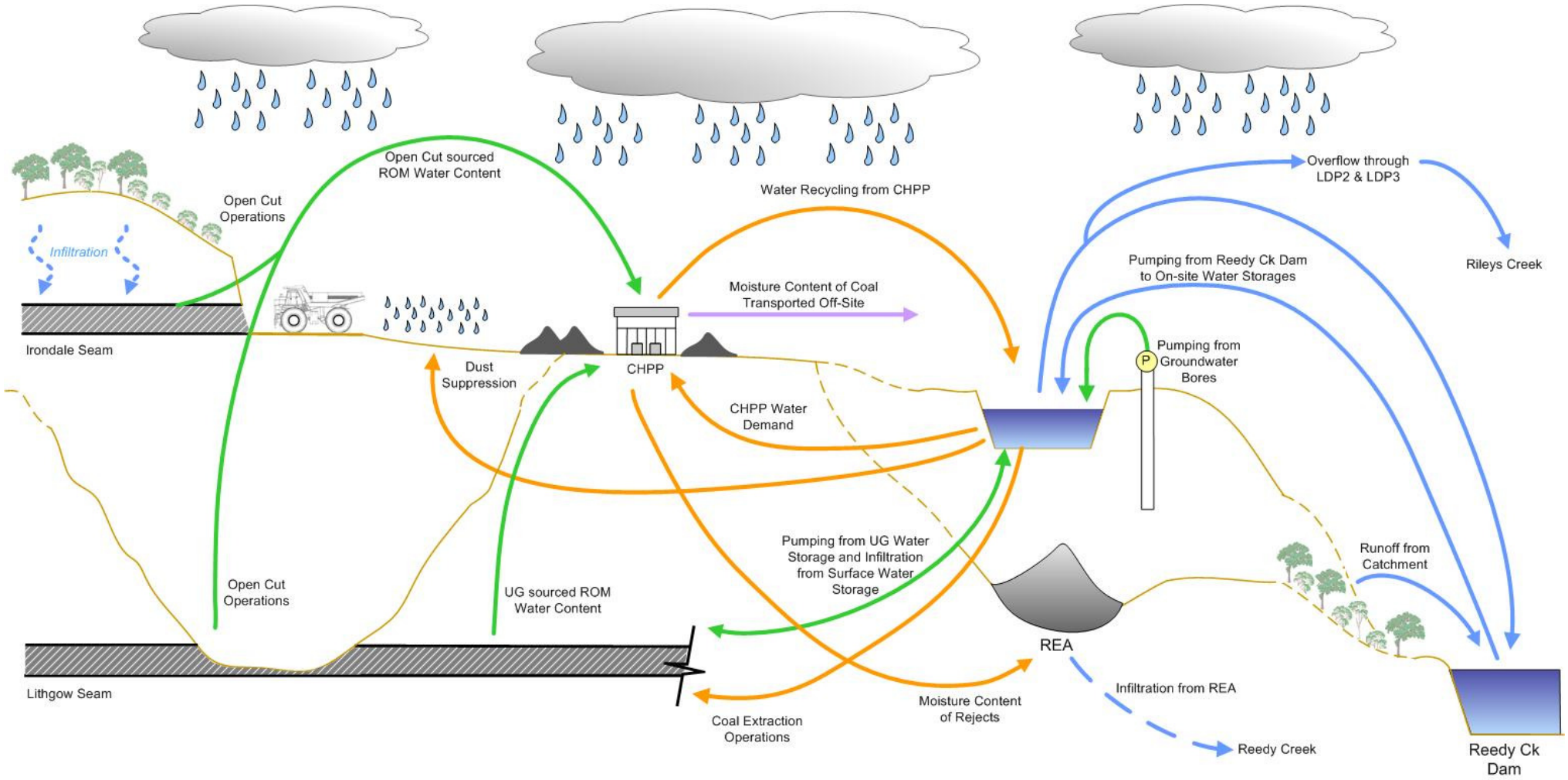
Centennial Charbon

DATE: 28th March 2011

A3

CH_0006A

Plot: CH0006A



LEGEND

- Clean Water
- Groundwater
- Dirty Water
- Product Coal Moisture

LOCATION	CHARBON
SEAM	
DRAWN	F.M
CHECKED	
APPROVED	
SCALE	

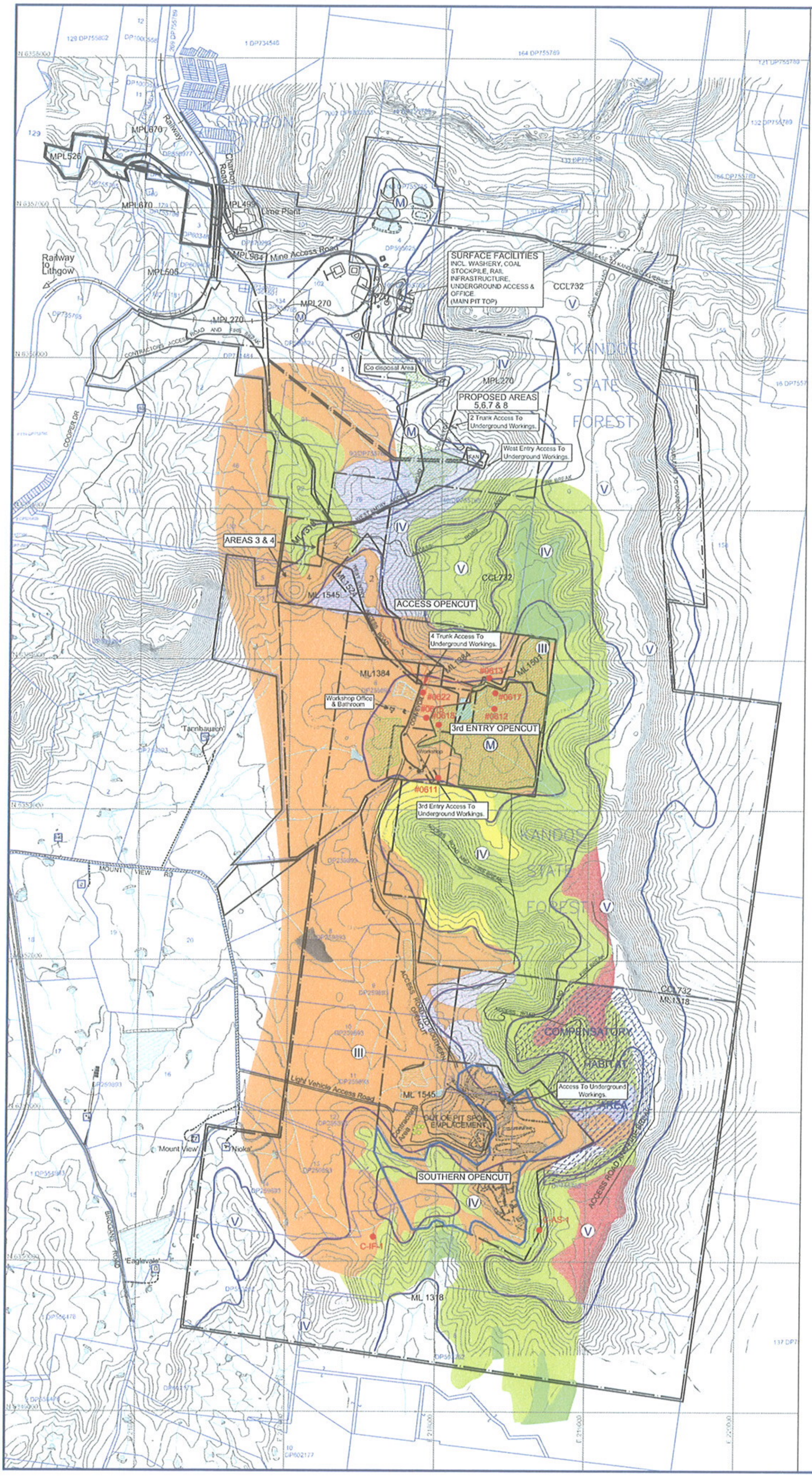
Charbon Mine
Charbon Mine Water Cycle Schematic

Charbon Coal Pty Ltd
Charbon Colliery

DATE 20-08-2009

Figure 3-2

GIS Filename: \\ghdnet\ghd\AU\Newcastle\Projects\22\14537\GIS\Maps\2214537_Fig3-2_MiningWaterCycle_20090820_A.mxd



CENTRAL WEST SURVEYS

4/72 CHURCH STREET
MUDGEE NSW 2850
Ph (02) 6372 6994
Fax (02) 6372 4326

CHARBON COAL PTY LTD.
CHARBON COLLIERY
PRE MOP ENVIRONMENT.

Date	AUGUST 2006
Scale	1:25000 (A3)
Sheet	PLAN 2 OF 9
Plan No	CH_CWS021
Datum / Contour Interval	AHD / 10m
Grid	MGA 56

Signed: ____________ (Mine Manager)
Date: ____________

Signed: ____________ (Mine Surveyor)
Date: ____________

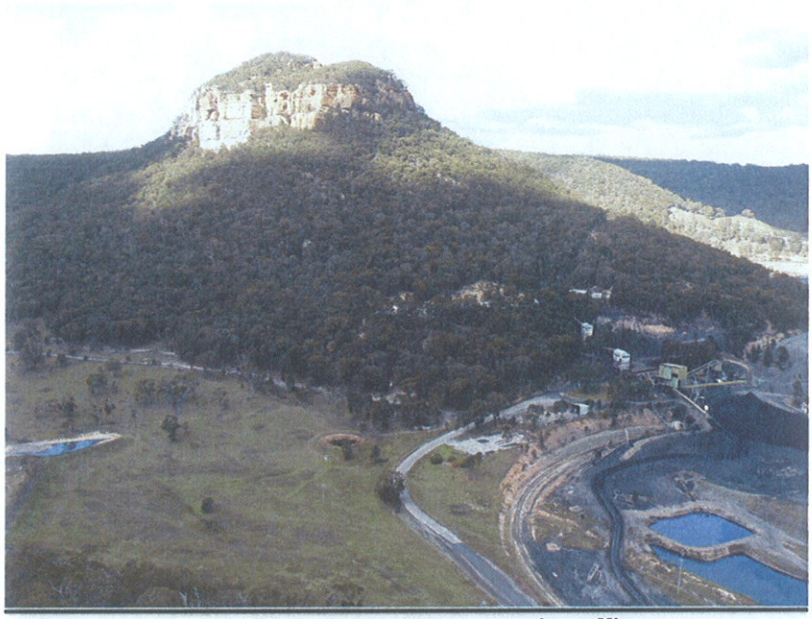
HOLDING BOUNDARY.
LEASEHOLD BOUNDARY.
SUB LEASE BOUNDARY.
CADASTRAL BOUNDARIES.
SOUTHERN OPENCUT.
EXISTING STABLE REHAB AREA.
LAND DEDICATED FOR CONSERVATION PURPOSES
C-OS-1 HERITAGE SITES

PRE MINING LAND CAPABILITY AREAS.
(M) MINING.
(V) CLASS V LAND CAPABILITIES.
(IV) CLASS IV LAND CAPABILITIES.
(III) CLASS III LAND CAPABILITIES.

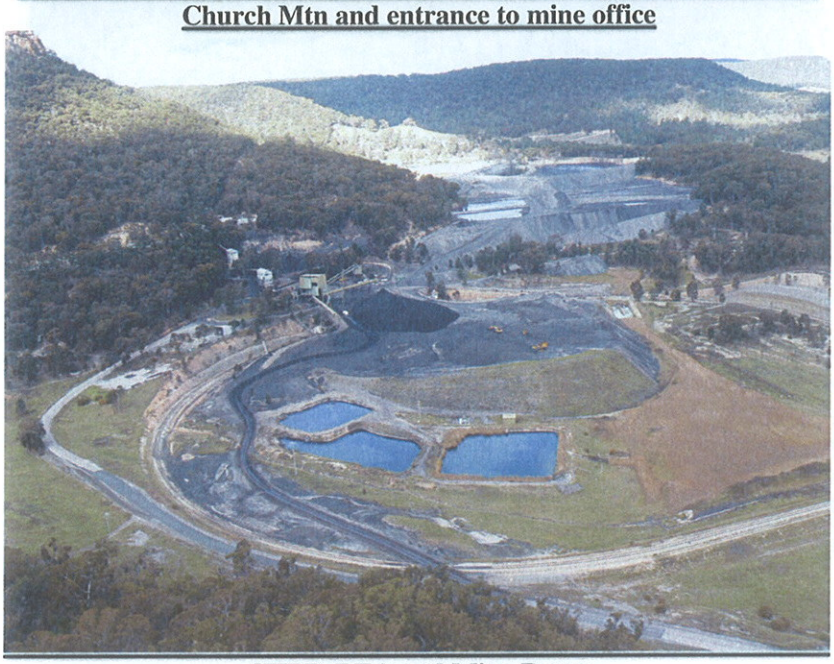
Vegetation Communities
- Grey Gum Woodlands
- Narrabeen Sandstone Woodland
- Valley Woodlands
- Box - Gum Woodlands
- Scattered Trees
- Cleared Land
- Individual Trees

0m 500m 1000m
Note: Plan for conceptual use only.

Aerial Photographs taken from helicopter showing various views of the Charbon mine.



Church Mtn and entrance to mine office



CHPP, REA and Mine Dams

3rd Entry Open Cut rehab

Southern Open Cut


129 DP755802
DP1000558
1 DP734546
164 DP755789
DP1000558
11
DP14561
7002 DP1032333
49 DP755789
157 DP755789
129
48
1
DP856977
20
13
DP613183
133 DP755789
165 DP75578
DP755765
180
CLANDULLA STATE FOREST
179
DP755765
146
101
DP879293
130 DP755789
3
DP603460
4
DP593625
11 DP755765
1
DP609409
2
102
DP879293
DP361601
182
181
160
14
134
DP755765
DP755765
11
155
1
DP593624
86
11
DP731484
108 DP755765
110 DP755765
1 DP234412
12
DP731484
91
PT19 DP755765
COOPER DR
90
46
42
133
132
146
2 DP505405
1 DP127384
2 DP748897
76
156
188 DP755765
1
5
23
184
DP755765
2
DP593264
175
43
DP755765
172
3
185
6
DP259893
177 DP755765
202
201
DP705315
4
DP259893
2
3
4
1
KANDOS
STATE
FOREST
MOUNT VIEW RD
7
DP259893
18
19
20
8
9
10
17
DP259893
16
22
11
167 DP755765
12
1 DP248713
1 DP554963
15
14
13
1 DP249903
21
1
32651
8
DP593262
1 DP558476
8
DP593262
9
DP602177
2 DP558476
10

Section 55 Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 528

Department of
Environment, Climate Change and Water NSW

Licence Details	
Number:	528
Anniversary Date:	31-October
Review Due Date:	10-Sep-2014

Licensee

CHARBON COAL PTY LIMITED
LEVEL 18, BT TOWER, 1 MARKET STREET
SYDNEY NSW 2000

Licence Type

Premises

Premises

CHARBON COAL PTY LIMITED
CHARBON ROAD
CHARBON NSW 2848

Scheduled Activity

Mining for coal
Coal works

Fee Based Activity	**Scale**
Mining for coal	> 500000 - 2000000 T produced
Coal works	0 - 2000000 T loaded

Region

North West - Bathurst
Lvl 2, 203-209 Russell Street
BATHURST NSW 2795
Phone: 02 6332 7600
Fax: 02 6332 7630

PO Box 1388 BATHURST
NSW 2795

Environment Protection Licence

Licence - 528

Department of
Environment, Climate Change and Water NSW

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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

CHARBON COAL PTY LIMITED
LEVEL 18, BT TOWER, 1 MARKET STREET
SYDNEY NSW 2000

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Mining for coal
Coal works

Fee Based Activity	Scale
Mining for coal	> 500000 - 2000000 T produced
Coal works	0 - 2000000 T loaded

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
CHARBON COAL PTY LIMITED
CHARBON ROAD
CHARBON
NSW
2848

Premises Details
PORTION 7; PORTION 134; LOT 1 DP 626060; LOT 1 DP 593624; LOT 1 DP 46452, PARISH OF CLANDULLA, COUNTY OF ROXBURGH. LOT 6 DP 259893; LOT 4 DP 593625; LOT 2 DP 709449; LOTS 76 AND 146 DP 755765; PORTION 86; PORTION 146; MINING PURPOSES LEASES NO'S 1237, 1916, 1227 AND 160; MINING PUPOSES LEASE APPLICATION NO.'S 203 AND 231; MINERAL LEASE NO.'S. 509; AND 1384; PARISH OF CLANDULLA, COUNTY OF ROXBURGH. LOT 7, 8, 9, 10, 11, 12, 13 DP 259893; LOT 76, 90, 146 DP 755765; LOT 23 DP 259893, PARISH OF CLANDULLA, COUNTY OF ROXBURGH.

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1	Discharge to utilisation area	Discharge to utilisation area	Utilisation area labelled as 'Sewer Irrigation Area' on Charbon Colliery Plan dated 26/06/01.
2	Discharge to waters; Discharge quality monitoring; Volume monitoring	Discharge to waters; Discharge quality monitoring; Volume monitoring	Discharge from sedimentation dam to Reillys Creek labelled as No. 002 on drawing titled 'Finished Surfaces Plot IC' submitted to the EPA with the Licence Information Form dated 10/9/99.
3	Discharge to waters; Discharge quality monitoring; Discharge volume monitoring point.	Discharge to waters; Discharge quality monitoring; Discharge volume monitoring point.	Discharge point from southern open cut sedimentation dam labelled as 'LD3' in 'Figure 2: Charbon Colliery Environmental Monitoring Locations' in the 'Charbon Coal Annual Environmental Management Report Jan-Dec 2007' dated Janaury 2006.

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

Water and Land

POINT 2

Pollutant	Units of Measure	-	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	milligrams per litre				10
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				50

POINT 3

Pollutant	Units of Measure	-	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Oil and Grease	milligrams per litre				10
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				50

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

(a) liquids discharged to water; or;

(b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
2	kilolitres per day	5000
3	kilolitres per day	5000

L5 Waste

L5.1 Not applicable.

L6 Noise Limits

L6.1 Noise from the premises must not exceed the limits specified in the table below:

dB(A) $L_{Aeq(15\ minute)}$			Land Number
Day	Evening	Night	
36	*35*	*35*	*R1 – North West of Areas 3 & 4*
36	*35*	*35*	*R2 - Tannhausen*
36	*35*	*35*	*R3 – South West of Areas 3 & 4*
35	*35*	*35*	*R4 – Nioka*
35	*35*	*35*	*R5 – Mount View*
35	*35*	*35*	*R6 – West of Southern Open Cut – Brogans Creek Road*
35	*35*	*35*	*R7 – Eaglevale*
35	*35*	*35*	*All other land*

Note: the land references (R1, R2 etc) used in the above table correspond to those used in map labelled as 'Figure 2' in the 'Charbon Coal Annual Environmental Management Report' dated November 2006.

L6.2 For the purpose of Condition L6.1:
- Day is defined as the period from 7am to 6 pm seven days a week,
- Evening is defined as the period between 6pm to 10pm Monday to Friday, and
- Night is defined as all other times.

L6.3 To determine compliance with condition(s) L6.1 noise must be measured at, or computed for, at the locations listed in the above table. A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "Environmental Noise Management - NSW Industrial Noise Policy (January 2000)".

L6.4 The noise emission limits identified in this licence apply under all meteorological conditions except:
(a) during rain and wind speeds (at 10m height) greater than 3m/s; and
(b) under "non-significant weather conditions".

Note: Field meteorological indicators for non-significant weather conditions are described in the NSW Industrial Noise Policy, Chapter 5 and Appendix E in relation to wind and temperature inversions.

L7 Blasting

L7.1 The overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.2 The overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.3 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.4 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L8 Hours of Operation

L8.1 Not applicable.

4 Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:
(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
(a) must be maintained in a proper and efficient condition; and
(b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O3.2 Haulage trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading. The tailgates of all haulage trucks leaving the premises must be securely fixed prior to loading or immediately after unloading to prevent loss of material.

O4 Management of utilisation area

O4.1 Waste water must only be applied to the following areas: the waste water utilisation area as specified in the environmental impact statement relating to development DA 122-3-2003-i.

O4.2 Effluent application must not occur in a manner which causes surface runoff.

O4.3 Spray from effluent application must not drift beyond the boundary of the premises.

O4.4 The quantity of effluent/solids applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent/solids.

For the purpose of this condition, 'effectively utilise' includes the use of the effluent/solids for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
(a) in a legible form, or in a form that can readily be reduced to a legible form;
(b) kept for at least 4 years after the monitoring or event to which they relate took place; and
(c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Water and Land

POINT 2

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Daily during any discharge	Grab sample
Oil and Grease	milligrams per litre	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample
pH	pH	Daily during any discharge	Grab sample

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Daily during any discharge	Grab sample
Oil and Grease	milligrams per litre	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample
pH	pH	Daily during any discharge	Grab sample

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:
(a) the date and time of the complaint;

(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;
(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
(a) the date of the issue of this licence or
(b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6 Requirement to monitor volume or mass

M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:

(a) the volume of liquids discharged to water or applied to the area;
(b) the mass of solids applied to the area;
(c) the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 2

Frequency	Unit Of Measure	Sampling Method
Weekly	kilolitres per day	Estimate

POINT 3

Frequency	Unit Of Measure	Sampling Method
Daily during any discharge	kilolitres per day	In line instrumentation

M7 Blast Monitoring

M7.1 To determine compliance with condition(s) L7.1, L7.2, L7.3 and L7.4:

a) Airblast overpressure and ground vibration levels must be measured and electronically recorded at the nearest impacted residence or other noise sensitive location (such as a school or hospital) - for all blasts carried out in or on the premises; and
b) Instrumentation used to measure the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard AS 2187.2-2006.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
(a) a Statement of Compliance; and
(b) a Monitoring and Complaints Summary.
A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:
(a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
(b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or

(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
(a) the licence holder; or
(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
(a) where this licence applies to premises, an event has occurred at the premises; or
(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
(a) the cause, time and duration of the event;
(b) the type, volume and concentration of every pollutant discharged as a result of the event;
(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
(g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Pollution studies and reduction programs

U1.1 Not applicable.

Special conditions

E1.1 Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.

flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Mr Grahame Clarke

Environment Protection Authority

(By Delegation)

Date of this edition - 09-Sep-2009

End Notes

1	Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
2	Licence varied by notice 1009727, issued on 30-Aug-2001, which came into effect on 30-Aug-2001.
3	Licence varied by notice 1021727, issued on 05-Nov-2002, which came into effect on 30-Nov-2002.
4	Licence varied by notice 1026418, issued on 16-May-2003, which came into effect on 10-Jun-2003.
5	Licence varied by notice 1037993, issued on 01-Jul-2004, which came into effect on 01-Jul-2004.
6	Licence varied by change to record due to LGA amalgamation, issued on 26-Nov-2004, which came into effect on 26-Nov-2004.

End Notes

7	Licence varied by notice 1063300, issued on 24-Jul-2006, which came into effect on 24-Jul-2006.
8	Licence varied by notice 1070461, issued on 02-Mar-2007, which came into effect on 02-Mar-2007.
9	Licence varied by notice 1070973, issued on 15-Mar-2007, which came into effect on 15-Mar-2007.
10	Licence varied by notice 1074668, issued on 20-Jun-2007, which came into effect on 20-Jun-2007.
11	Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
12	Licence varied by notice 1103020, issued on 09-Sep-2009, which came into effect on 09-Sep-2009.

NSW GOVERNMENT | Environment, Climate Change & Water

ANNUAL RETURN

LICENCE NO.	528
LICENCE HOLDER	CHARBON COAL PTY LIMITED
REPORTING PERIOD	31-Oct-2009 to 30-Oct-2010

If your licence has been transferred, suspended, surrendered or revoked by the EPA during this reporting period, cross out the dates above and specify the new dates to which this Annual Return relates below:

REVISED REPORTING PERIOD _____/_____/_____ **to** _____/_____/_____

(**Note:** the revised reporting period also needs to be entered in Section E)

THIS ANNUAL RETURN MUST BE RECEIVED BY THE EPA BEFORE 30-Dec-2010

Your Annual Return must be completed, including certification in Section E, and submitted to the EPA no later than 60 Days after the end of the reporting period for your licence.

Failure to submit this Annual Return within 60 days after the reporting period ends may result in:

- **the issue of a Penalty Notice for $750 (individuals) or $1500 (corporations);**

OR

- **prosecution.**

Please send your completed Annual Return by **Registered Post** to:

Regulatory and Compliance Support Unit
Department of Environment, Climate Change and Water
PO Box A290
SYDNEY SOUTH NSW 1232

It is an offence to supply any information in this form to the EPA that is false or misleading in a material respect, or to certify a statement that is false or misleading in a material respect.

THERE IS A MAXIMUM PENALTY OF $250,000 FOR A CORPORATION OR $120,000 FOR AN INDIVIDUAL.

Details provided in this Annual Return will be available on the EPA's Public Register in accordance with section 308 of the Protection of the Environment Operations Act 1997.

Protection of the Environment Operations Act 1997

Annual Return

CHARBON COAL PTY LIMITED

NSW GOVERNMENT Environment, Climate Change & Water

Use the checklist below to ensure that you have completed your Annual Return correctly.
(✓ the boxes)

CHECKLIST		
☑	Section A:	All licence details are correct
☑	Section B1:	You have entered the correct number in the complaints table
☑	Section B2 – B3:	If there are tables, you have provided the required details
☑	Section C:	You have answered question 1, and 2 if applicable
☑	Section D:	If applicable, you have completed all load calculation worksheets
☑	Section E:	The Annual Return has been signed by appropriate person(s) and, if applicable, the revised reporting period entered
☑	Make a copy of the completed Annual Return and keep it with your licence records	
☑	Attach a cheque (unless you have paid separately) for the payment of the administrative fee for the next licence fee period N/A	

Please send your completed Annual Return by **Registered Post** to:

Regulatory and Compliance Support Unit
Department of Environment, Climate Change and Water
PO Box A290
SYDNEY SOUTH NSW 1232

Protection of the Environment Operations Act 1997

Annual Return

CHARBON COAL PTY LIMITED

Environment, Climate Change & Water

A Statement of Compliance – Licence Details

ALL licence holders must check that the licence details in Section A are correct.

If there are changes to any of these details **you must advise the EPA and apply as soon as possible for a variation to your licence or for a licence transfer.**

Licence variation and transfer application forms are available on the EPA website at: http://www.environment.nsw.gov.au/licensing, or from regional offices of the EPA, or by contacting us on telephone 02 9995 5700.

If you are applying to vary or transfer your licence you must still complete this Annual Return.

A1 Licence Holder

Licence Number	528
Licence Holder	CHARBON COAL PTY LIMITED
Trading Name *(if applicable)*	
ABN	71 064 237 118

A2 Type of Licence

Scheduled Activity - Premises Based

A3 Premises to which Licence Applies

common name *(if any)*	CHARBON COAL PTY LIMITED
premises	CHARBON ROAD, CHARBON, NSW
	or PORTION 7; PORTION 134; LOT 1 DP 626060; LOT 1 DP 593624; LOT 1 DP 46452, PARISH OF CLANDULLA, COUNTY OF ROXBURGH. LOT 6 DP 259893; LOT 4 DP 593625; LOT 2 DP 709449; LOTS 76 AND 146 DP 755765; PORTION 86; PORTION 146; MINING PURPOSES LEASES NO'S 1237, 1916, 1227 AND 160; MINING PUPOSES LEASE APPLICATION NO.'S 203 AND 231; MINERAL LEASE NO.'S. 509; AND 1384; PARISH OF CLANDULLA, COUNTY OF ROXBURGH. LOT 7, 8, 9, 10, 11, 12, 13 DP 259893; LOT 76, 90, 146 DP 755765; LOT 23 DP 259893, PARISH OF CLANDULLA, COUNTY OF ROXBURGH.

A4 Activities to which Licence Applies

Scheduled Activity

Mining for coal

Coal works

A5 Other Activities (Not Applicable)

A6 Fee-Based Activity Classifications

Note that the fee based activity classification is used to calculate the **administrative fee.**

Fee-based activity	Activity scale	Unit of measure
Coal works	> 0 - 2000000	T loaded
Mining for coal	> 500000 - 2000000	T produced

A7 Assessable Pollutants (Not Applicable)

B Monitoring and Complaints Summary

B1 Number of Pollution Complaints

Number of complaints recorded by the licensee during the reporting period (as required by condition M4 of the licence). **If no complaints were received enter nil.**	NIL

B2 Concentration Monitoring Summary

For each monitoring point identified in your licence, (see licence conditions M2 and R1), complete all the details for each pollutant listed in the tables provided below.

If concentration monitoring is **not** required by licence conditions M2 and R1, **no tables** will appear below.

Note that this does not exclude the need to conduct appropriate concentration monitoring of assessable pollutants as required by load-based licensing (if applicable).

Discharge & Monitoring Point 2

777583 East 6358397 North

Discharge from sedimentation dam to Reillys Creek labelled as No. 002 on drawing titled 'Finished Surfaces Plot IC' submitted to the EPA with the Licence Information Form dated 10/9/99.

Pollutant	Unit of measure	No. of samples required by licence	No. of samples you collected and analysed	Lowest sample value	Mean of samples	Highest sample value
Conductivity	microsiemens per centimetre					
Oil and Grease	milligrams per litre	16	16	<2	<2	<2
pH	pH	16	16	6.6	7.44	8.1
Total suspended solids	milligrams per litre	16	16	5	15.2	29

Discharge & Monitoring Point 3

777583 East 6358397 North

Discharge point from southern open cut sedimentation dam labelled as 'LD3' in 'Figure 2: Charbon Colliery Environmental Monitoring Locations' in the 'Charbon Coal Annual Environmental Management Report Jan-Dec 2007' dated Janaury 2006.

Pollutant *	Unit of measure	No. of samples required by licence	No. of samples you collected and analysed	Lowest sample value	Mean of samples	Highest sample value
Total suspended solids	milligrams per litre					
pH	pH					
Oil and Grease	milligrams per litre					
Conductivity	microsiemens per centimetre					

* NO DISCHARGE DURING REPORTING PERIOD

B3 Volume or Mass Monitoring Summary

For each monitoring point identified in your licence, (see licence conditions M6 and R1), complete the details of the volume or mass monitoring indicated in the tables provided below.

If volume or mass monitoring is not required by licence conditions M6 and R1, **no tables** will appear below.

Note that this does not exclude the need to conduct appropriate concentration monitoring of assessable pollutants as required by load-based licensing (if applicable).

Discharge & Monitoring Point 2

777583 East 6358397 North

Discharge from sedimentation dam to Reillys Creek labelled as No. 002 on drawing titled 'Finished Surfaces Plot IC' submitted to the EPA with the Licence Information Form dated 10/9/99.

Unit of measure	Frequency	No. of measurements made	Lowest result	Mean result	Highest result
kilolitres per day	Weekly	16	3500	4300	4920

~~Method: Estimate~~ In line instrumentation

Discharge & Monitoring Point 3

777583 East 6358397 North

Discharge point from southern open cut sedimentation dam labelled as 'LD3' in 'Figure 2: Charbon Colliery Environmental Monitoring Locations' in the 'Charbon Coal Annual Environmental Management Report Jan-Dec 2007' dated Janaury 2006.

Unit of measure	Frequency	No. of measurements made	Lowest result	Mean result	Highest result
kilolitres per day *	Daily during any discharge				

Method: In line instrumentation

* NO DISCHARGE DURING REPORTING PERIOD

C Statement of Compliance – Licence Conditions

C1 Compliance with Licence Conditions

(✓ the boxes)

1 Were all conditions of the licence complied with (including monitoring and reporting requirements)? ☑ Yes ☐ No

(✓ a box)

2 If you answered 'No' to question 1, please supply the following details for each non-compliance in the format, or similar format, provided on the following page.

Please use a separate page for each licence condition that has not been complied with.

a) What was the specific licence condition that was not complied with?

b) What were the particulars of the non-compliance?

c) What were the date(s) when the non-compliance occurred, if applicable?

d) If relevant, what was the precise location where the non-compliance occurred?

Attach a map or diagram to the Statement to show the precise location.

e) What were the registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance?

f) What was the cause of the non-compliance?

g) What action has been, or will be, taken to mitigate any adverse effects of the non-compliance?

h) What action has been, or will be, taken to prevent a recurrence of the non-compliance?

3. How many pages have you attached?

Each attached page must be initialled by the person(s) who signs Section E of this Annual Return

0

C2 Details of Non-Compliance with Licence

Licence condition number not complied with
Summary of particulars of the non-compliance **(NO MORE THAN 50 WORDS)**
If required, further details on particulars of non-compliance
Date(s) when the non-compliance occurred, if applicable
If relevant, precise location where the non-compliance occurred (attach a map or diagram)
If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance
Cause of non-compliance
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Action taken or that will be taken to prevent a recurrence of the non-compliance

D Statement of Compliance - Load-Based Fee Calculation Worksheets

If you are **not** required to monitor assessable pollutants by your licence (see **A7** on this **Annual Return**), **no worksheets** will appear below. Please go to Section E.

If assessable pollutants have been identified on your licence (see licence condition L2), complete the following worksheets for each assessable pollutant to determine your load-based fee for the licence fee period to which this Annual Return relates.

A load-based licensing online fee calculator is available on the EPA's website at www.environment.nsw.gov.au

Loads of assessable pollutants must be calculated using any of the methods provided in the EPA's Load Calculation Protocol for the relevant activity. A Load Calculation Protocol would have been sent to you with your licence. If you require additional copies you can download the Protocol from the EPA's website or you can contact us on telephone 02 9995 5700.

You are required to keep all records used to calculate licence fees for four years after the licence fee was paid or became payable, whichever is the later date.

PENALTIES APPLY FOR SUPPLYING FALSE OR MISLEADING INFORMATION

D1 – D6 (Not Applicable)

Protection of the Environment Operations Act 1997

Annual Return

CHARBON COAL PTY LIMITED

NSW GOVERNMENT | Environment, Climate Change & Water

E Signature and Certification

This Annual Return may only be signed by a person(s) with legal authority to sign it as set out in the categories below. **Please tick (✓) the box** next to the category that describes how this Annual Return is being signed.

If you are uncertain about who is entitled to sign or which category to tick, please contact us on telephone 02 9995 5700.

If the licence holder is:		the Annual Return must be signed and certified:
an individual	☐	by the individual licence holder, or
	☐	by a person approved in writing by the EPA to sign on the licence holder's behalf
a company	☐	by affixing the common seal in accordance with Corporations Act 2001, or
	☐	by 2 directors, or
	☑	by a director and a company secretary, or
	☐	if a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	☐	by a person delegated to sign on the company's behalf in accordance with the Corporations Act 2001 **and** approved in writing by the EPA to sign on the company's behalf.
a public authority (other than a council)	☐	by the Chief Executive Officer of the public authority, or
	☐	by a person delegated to sign on the public authority's behalf in accordance with its legislation **and** approved in writing by the EPA to sign on the public authority's behalf.
a local council	☐	by the General Manager in accordance with s.377 of the Local Government Act 1993, or
	☐	by affixing the seal of the council in a manner authorised under that Act.

It is an offence to supply any information in this form that is false or misleading in a material respect, or to certify a statement that is false or misleading in a material respect. There is a maximum penalty of $250,000 for a corporation or $120,000 for an individual.

I/We

- *declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and*
- *certify that the information in the Statement of Compliance in sections A, C and D and any pages attached to Section C is correct and not false or misleading in a material respect.*

If your licence has been transferred, suspended, surrendered or revoked by the EPA during this reporting period, cross out the dates below and specify the new dates to which this Annual Return relates below:

For the reporting period 31-Oct-2009 to 30-Oct-2010 **or** ____/____/____ to ____/____/____

SIGNATURE: [signature] | SIGNATURE: Tony Macko

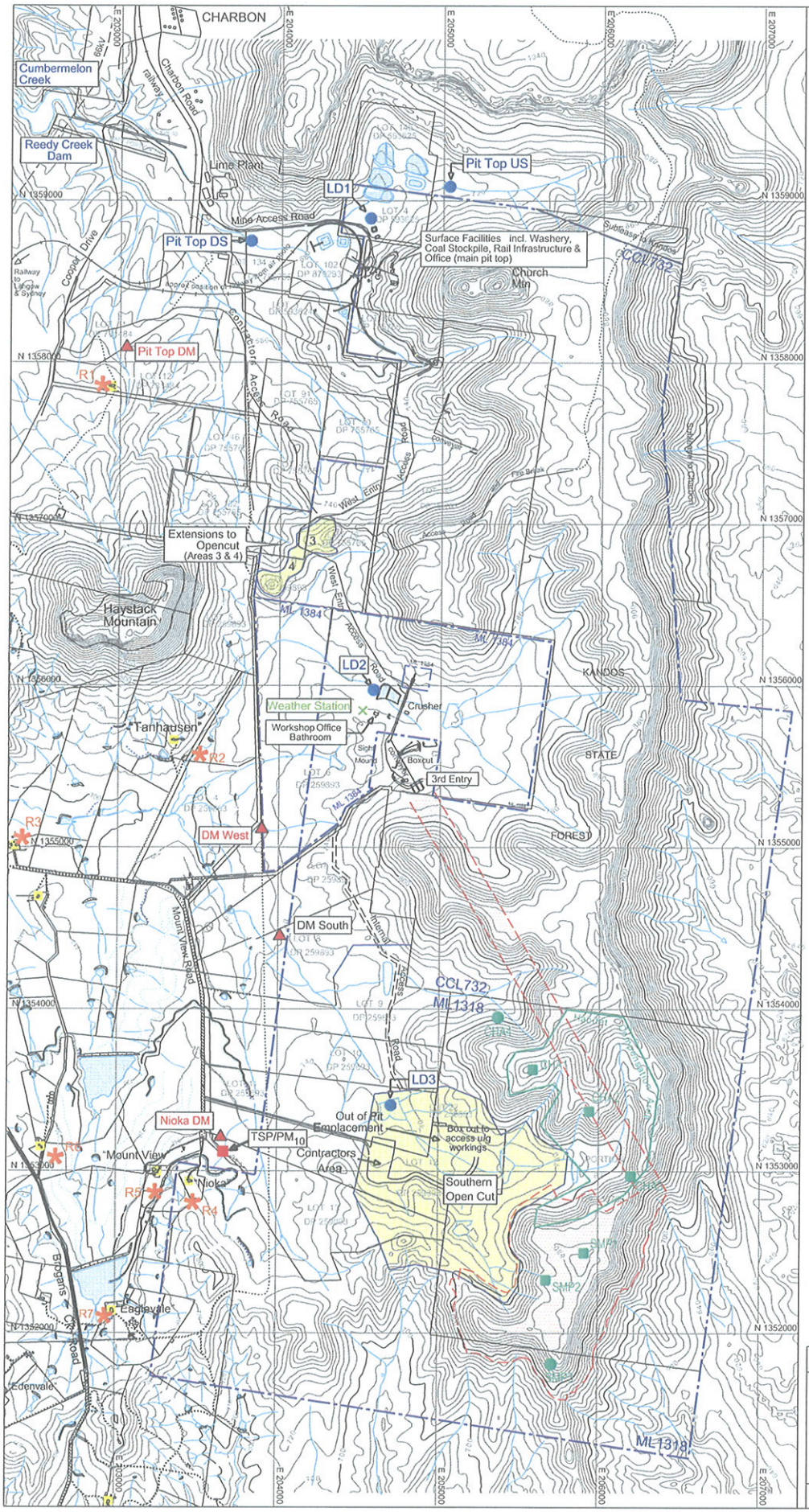
NAME: (printed) David J Moult | NAME: (printed) Tony Macko

POSITION: DIRECTOR | POSITION: COMPANY SECRETARY

DATE: 14/12/2010 | DATE: ____/____/____

SEAL(if signing under seal)

PLEASE ENSURE THAT ALL APPROPRIATE BOXES HAVE BEEN COMPLETED AND THAT THE CHECKLIST ON PAGE 2 OF THE ANNUAL RETURN HAS BEEN COMPLETED

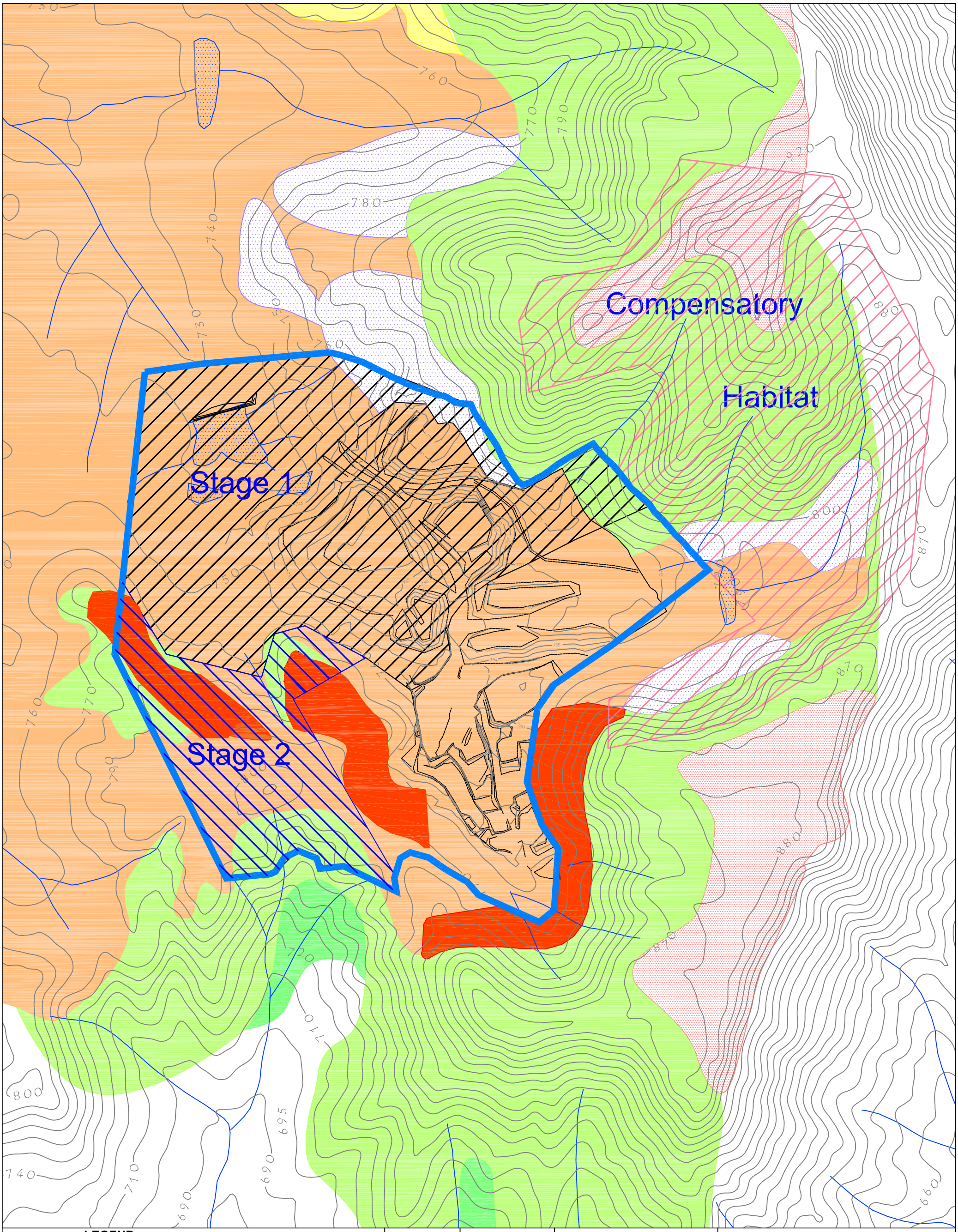


CHARBON COAL PTY LTD

CHARBON COLLIERY
Environmental Monitoring Locations

Date : Nov 2006

Figure : 2



LEGEND

- Grey Gum Woodland
- Narrabeen Sandstone Woodland
- Valley Woodland
- Red Stringy Bark Woodland
- Scattered Trees
- Cleared Land
- Stage 1
- Stage 2
- Compensatory Habitat Area
- Southern Opencut Boundary

LOCATION	CHARBON
SURVEY	Central West Survey
PLAN	T Bondin
APPROVED	
SCALE	1:8000

VEGETATION MAP

Charbon Coal
Charbon

DATE: 12/12/06

A3

Figure 2

CHARBON COAL PTY. LIMITED

ABN 71 064 237 118

A subsidiary of

Centennial Coal Company Limited

CHARBON COAL

CHARBON COLLIERY

SOUTHERN OPEN CUT COMMUNITY CONSULTATIVE COMMITTEE

MINUTES MEETING 19/04/10

Present: Esme Martens (Council Representative and Chair), Brian Nichols (Charbon Mine Manager), Matt Gray (Charbon Environmental Co-ordinator), Margaret Clementson (Community Representative), Bob Cooke (Community Representative), Bob Craze (Community Representative) Stephen Livingstone-Belvins, Charbon Mining Engineer (observer).

Apologies: Ron Leo (Big Rim Representative)

1) Members were welcomed by Esme Martens to the Committee and the agenda reviewed.

2) Previous minutes from the Committee Meeting on 19/10/09 were accepted. There was no business arising from the minutes.

3) Bob Cooke noted that he was not notified of blasts that occurred on the 23/2, 17/3 and the 16/4. Matt Gray was going to look into this. Bob also asked what happens if Matt Gray is not at work? Matt replied that the mining engineer would be able to take calls.

4) Matt Gray gave a presentation on the environmental performance of the mine. A copy of the Power Point presentation will be made available for members of the Committee. The presentation outline was as follows:

• EPA Licence No. 528 - There had been 1 non-compliance with the conditions of the EPA Licence since the last meeting.

• Noise – Noise monitoring had been undertaken generally on a 3 monthly basis as outlined in the SOC Consent Management Plans. All results obtained complied with consent limits.

• Blasting continued in the last 6 mth period. All blast results to date have complied with licence requirements.

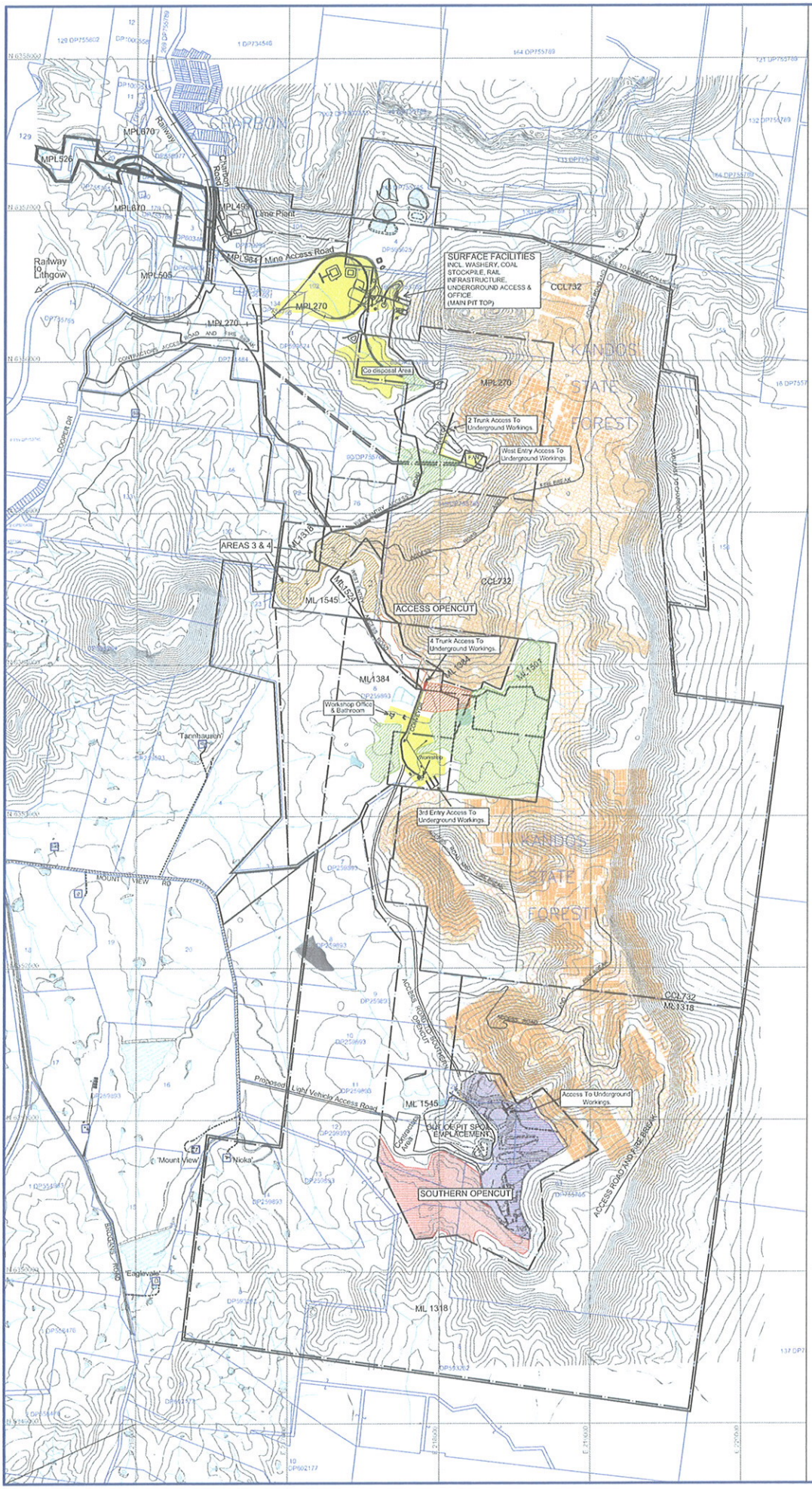
5) Community Complaints – No Complaints had been received since the last meeting.

6) Bob noted that he had dust settling on his roof and was concerned it was getting in his rainwater tank. Matt noted that there was one dust exceedance since the last meeting. This was due to it being very hot and dry and that the wind direction predominately came from the unsealed gravel road, and this would have been a major contributor.

7) It was noted that following the new consent conditions for the continued operations of Charbon the make-up of the CCC would change.

8) General Business. An update on the Inglenook project was given

Meeting Closed.



CENTRAL WEST SURVEYS
4/72 CHURCH STREET
MUDGEE NSW 2850
Ph (02) 6372 6994
Fax (02) 6372 4326

CHARBON COAL PTY LTD. CHARBON COLLIERY MINE SITE AND CONTEXT

Date	AUGUST 2006
Scale	1:25000 (A3)
Sheet	PLAN 1 OF 9
Plan No	CH_CWS020
Datum / Contour Interval	AHD / 10m
Grid	MGA 56

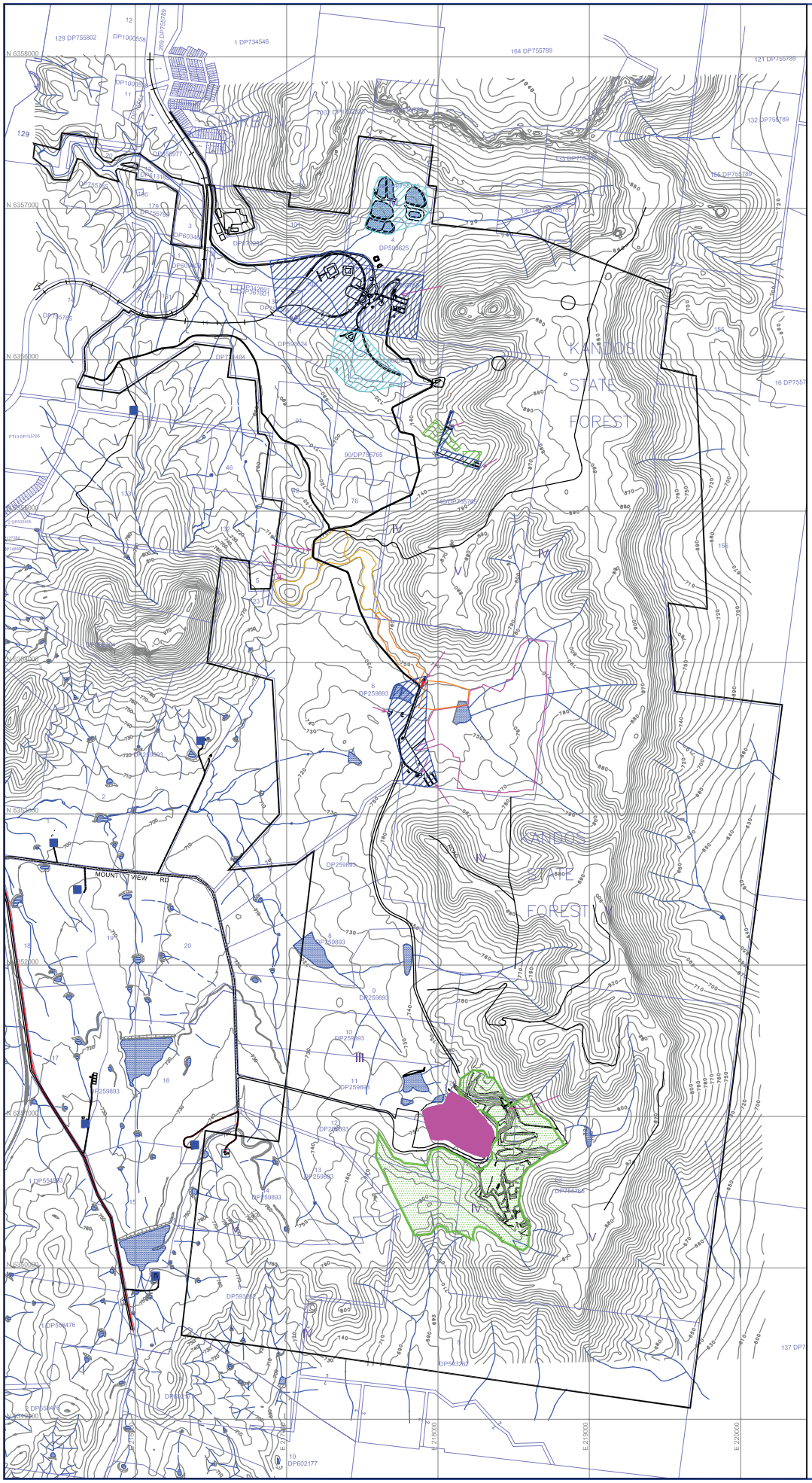
Signed: ..... (Mine Manager)
Date: .....

Signed: ..... (Mine Surveyor)
Date: .....

- HOLDING BOUNDARY.
- LEASEHOLD BOUNDARY.
- SUB LEASE BOUNDARY.
- CADASTRAL BOUNDARIES.
- AREA DISTURBED BY INFRASTRUCTURE.
- SOUTHERN OPENCUT AREA DISTURBED. (prior to this MOP)
- SOUTHERN OPENCUT AREA TO BE DISTURBED. (this MOP)
- EXISTING STABLE REHAB AREA.
- AREA TO BE SEEDED FOR REHABILITATION.
- AREA TO BE SHAPED FOR REHABILITATION.
- EXISTING UNDERGROUND WORKINGS
- NEARBY RESIDENCES
- WATERCOURSE & DAM
- ACCESS ROADS

0m 500m 1000m

Note: Plan for conceptual use only.



Centennial Charbon

ATTACHMENT 18: CHARBON COAL PTY LTD. CHARBON COLLIERY REHABILITATION DOMAINS

Date	MARCH 2008
Scale	1:25000 (A3)
Sheet	PLAN 1 OF 1
Plan No	CH_CWS021
Datum / Contour Interval	AHD / 10m
Grid	MGA 56

Signed: _____ (Mine Manager)
Date: _____

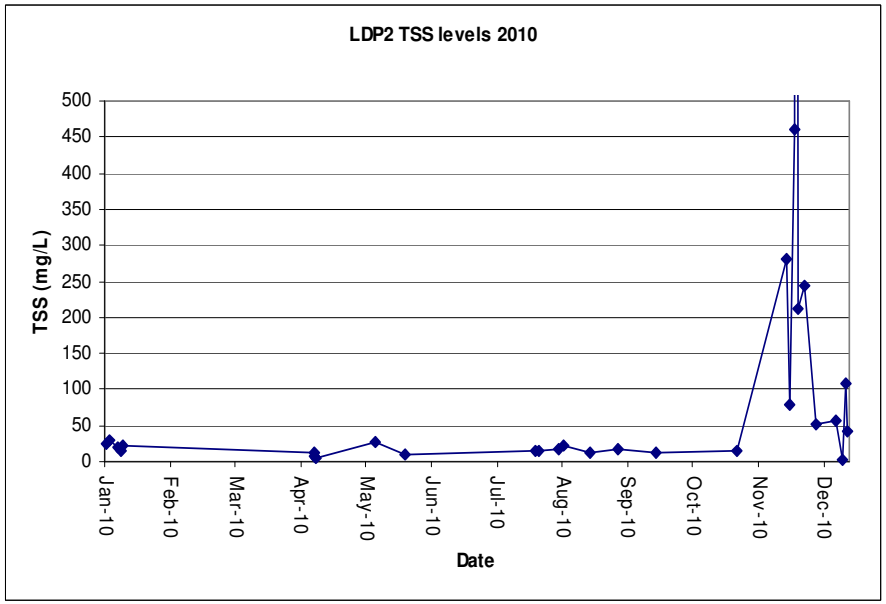
Signed: _____ (Mine Surveyor)
Date: _____

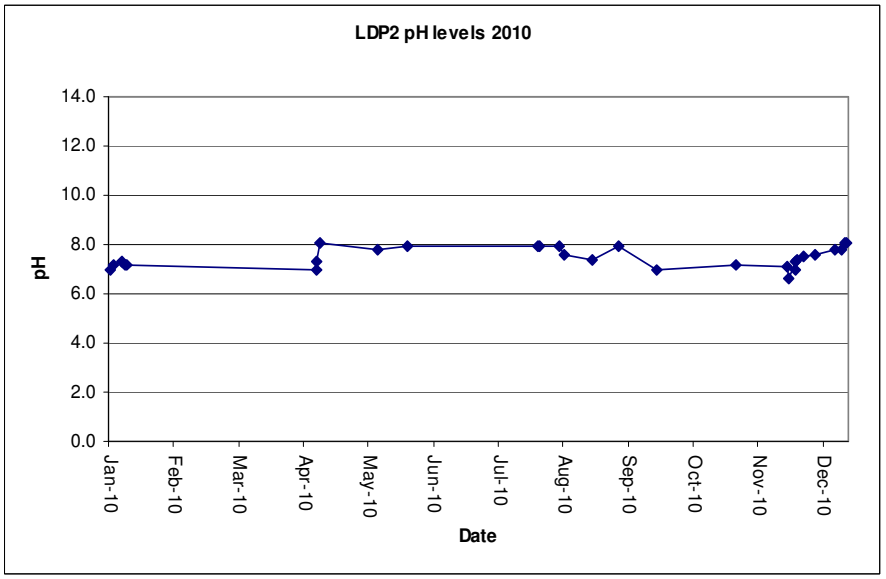
- HOLDING BOUNDARY.
- LEASEHOLD BOUNDARY.
- SUB LEASE BOUNDARY.
- DOMAIN 1 - INFRASTRUCTURE & ROADS
- DOMAIN 2 - TAILINGS & REJECT EMPLACEMENTS
- DOMAIN 3 - OVERBURDEN & WASTE EMPLACEMENTS
- DOMAIN 4 - ACTIVE MINE, VOIDS & SURFACE DISTURBANCES
- DOMAIN 5 - OTHER

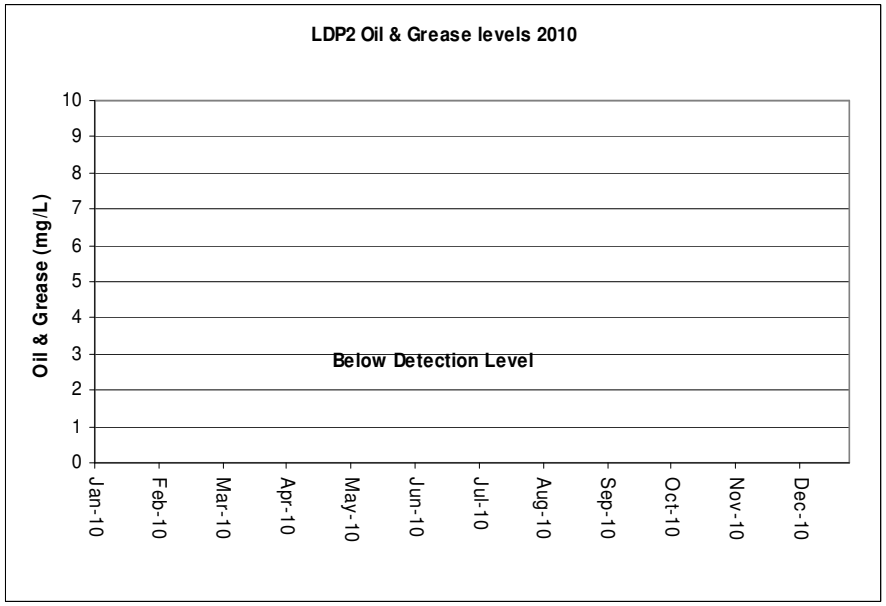
N

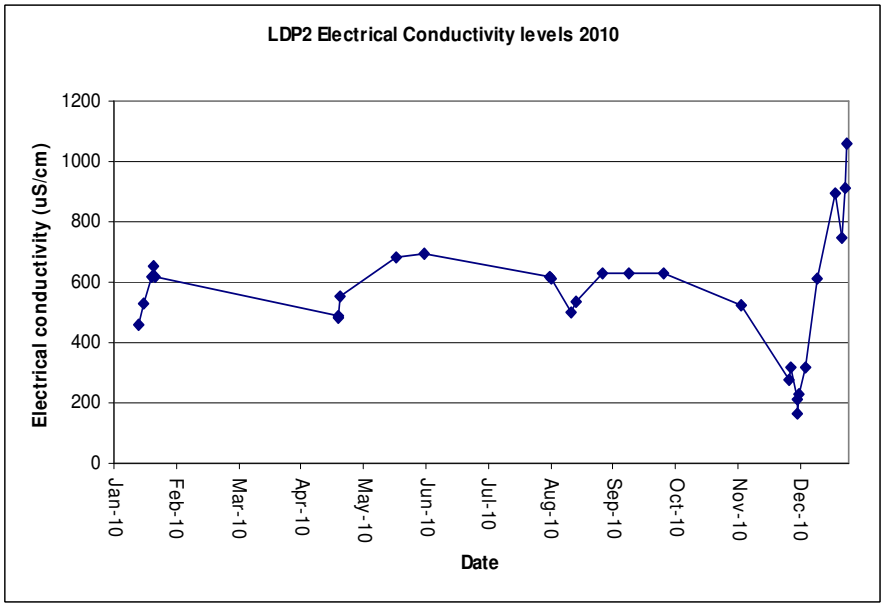
0m 500m 1000m

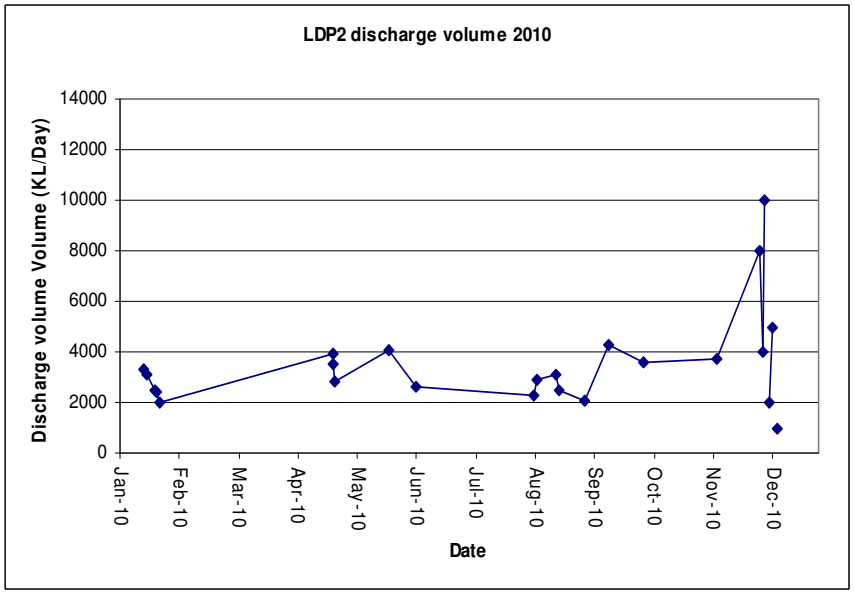
Note: Plan for conceptual use only.

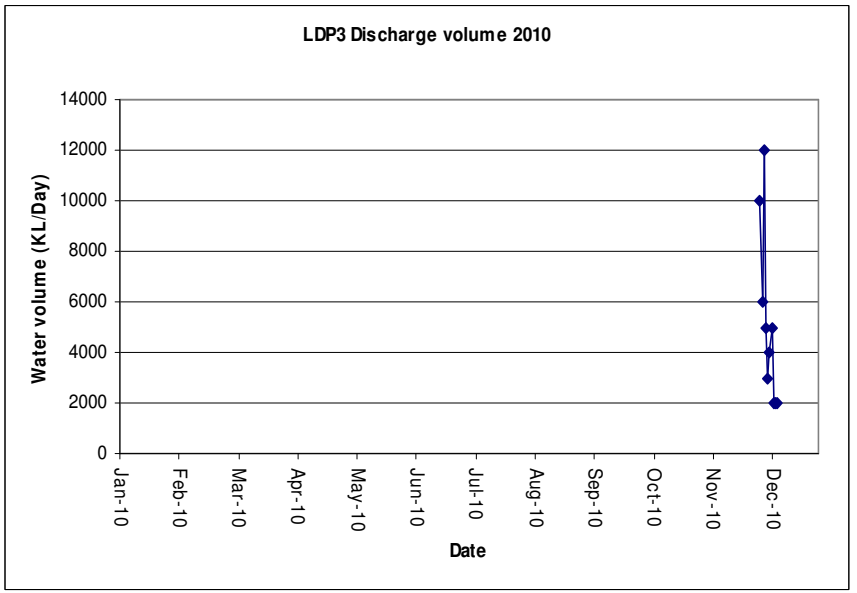

LDP2 TSS levels 2010
TSS (mg/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

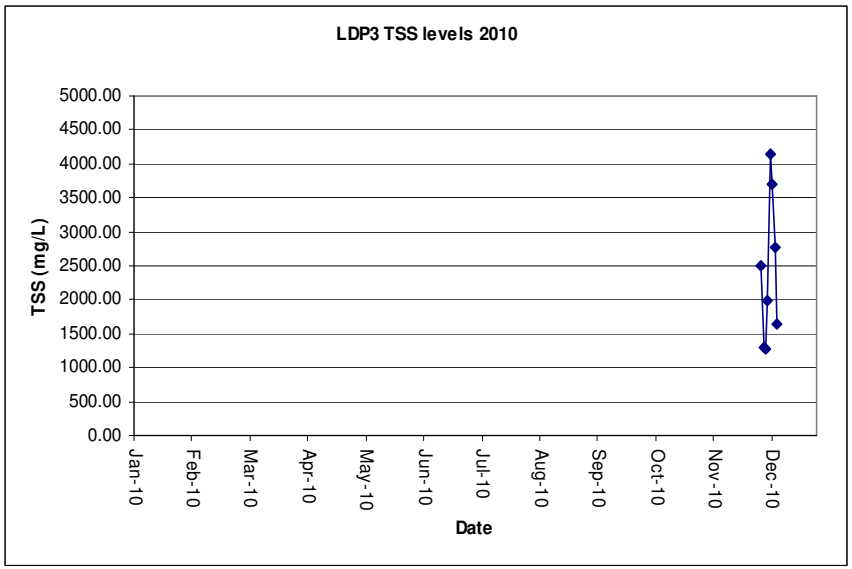

LDP2 pH levels 2010
pH
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

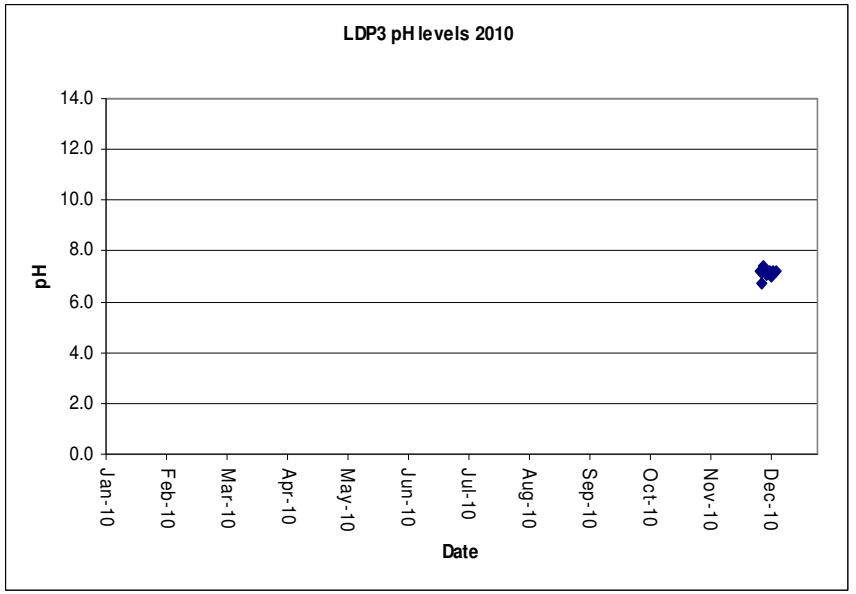

LDP2 Oil & Grease levels 2010
Oil & Grease (mg/L)
10
9
8
7
6
5
4
3
2
1
0
Below Detection Level
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10

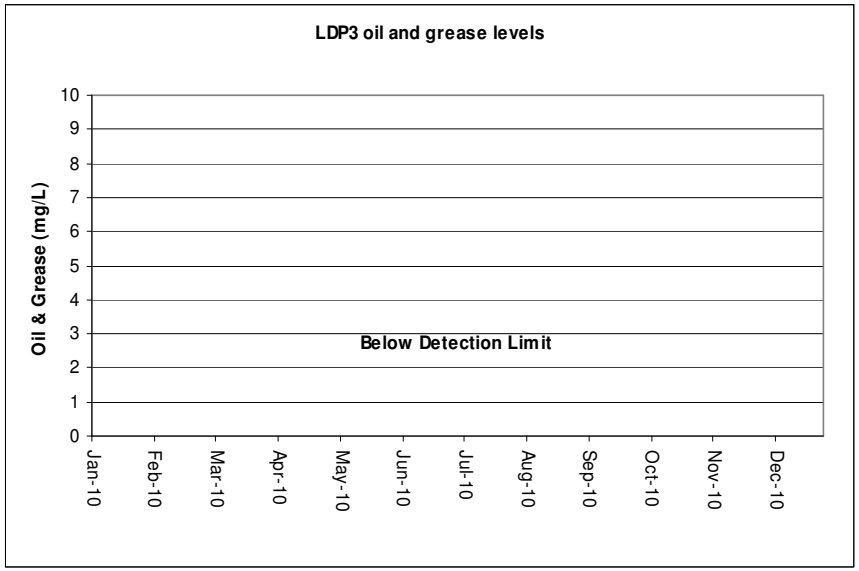

LDP2 Electrical Conductivity levels 2010
Electrical conductivity (uS/cm)
1200
1000
800
600
400
200
0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

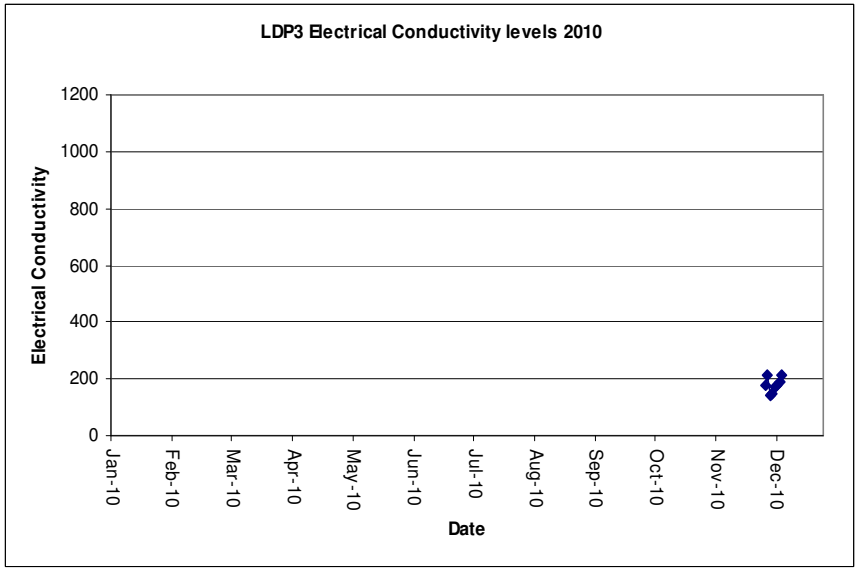

LDP2 discharge volume 2010
Discharge volume Volume (KL/Day)
14000
12000
10000
8000
6000
4000
2000
0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

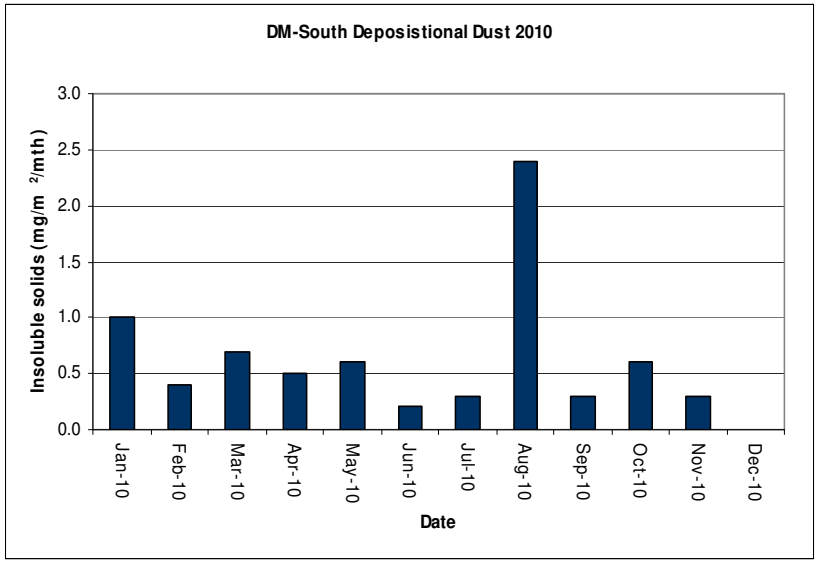

LDP3 Discharge volume 2010
Water volume (KL/Day)
14000
12000
10000
8000
6000
4000
2000
0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

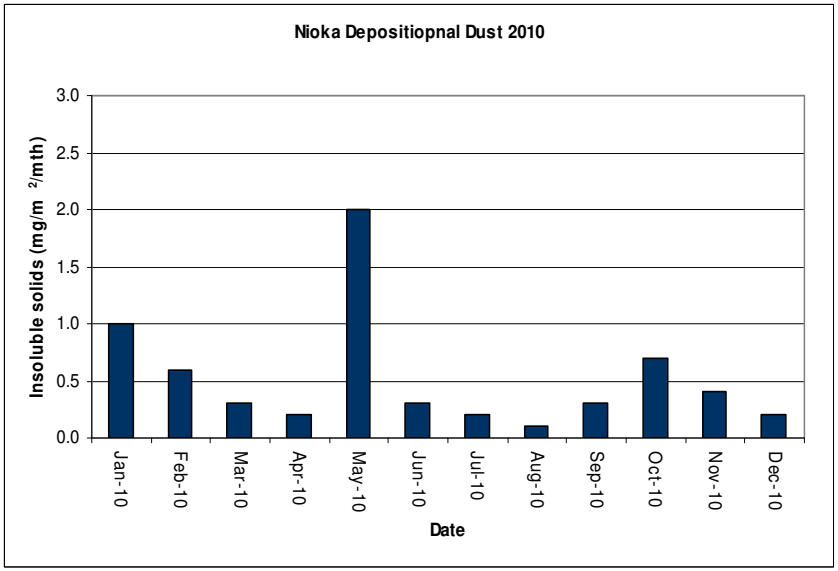

LDP3 TSS levels 2010
TSS (mg/L)
5000.00
4500.00
4000.00
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
0.00
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

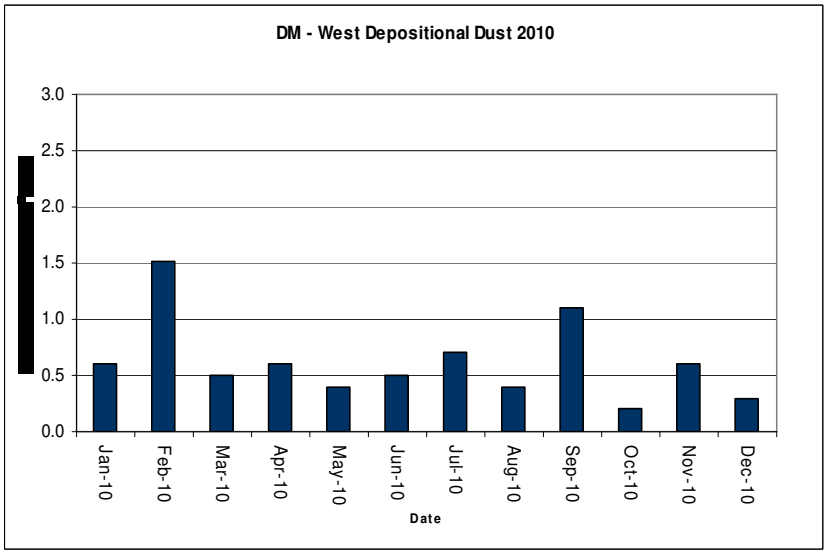

LDP3 pH levels 2010
pH
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

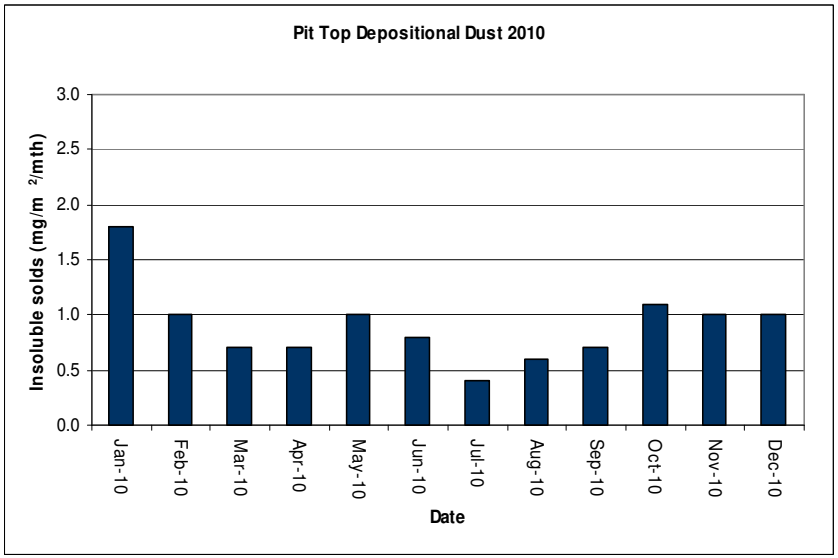

LDP3 oil and grease levels
Oil & Grease (mg/L)
10
9
8
7
6
5
4
3
2
1
0
Below Detection Limit
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10


LDP3 Electrical Conductivity levels 2010
Electrical Conductivity
1200
1000
800
600
400
200
0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date


DM-South Deposistional Dust 2010
Insoluble solids (mg/m 2/mth)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date


Nioka Depositiopnal Dust 2010
Insoluble solids (mg/m 2/mth)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date


DM - West Depositional Dust 2010
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date


Pit Top Depositional Dust 2010
Insoluble solds (mg/m 2/mth)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Date

Day time	Site	LA1 15min	LA90 15min	Calculated contribution from the Southern Open Cut	LAeq15min	Description of noise sources
24/03/10	R1	52.5	33.9	<34	42.9	birds, traffic, CHPP
24/03/10	R2	47.6	30.3	<24	38.2	birds, insects, domestic, 3rd Entry breaker, SOC just audible
24/03/10	R3	44.9	28.5	<25	38.3	birds, dogs, insests, SOC just audible
24/03/10	R4	60.6	29.8	<25	46.8	birds, SOC occasionally audible, haul truck on road
24/03/10	R5	52.2	30.2	<25	46.8	birds, insects, SOC occasionally audible
24/03/10	R6	42.1	33.2	<25	37.1	birds, insects, SOC occasionally audible
24/03/10	R7	50.1	28.5	<24	38.5	birds, insects, SOC occasionally audible
Night time						
24/03/01	R1	45.7	35.4	Not operational	38.9	birds, traffic, CHPP occasionally audible, Lime Works
24/03/10	R2	45.8	30.5	Not operational	39.9	insects, crickets, birds, 3rd Entry breaker occaisionally audible
24/03/10	R3	47.2	30.9	Not operational	37.6	insects, crickets, birds, 3rd Entry breaker occasionally audible
24/03/10	R4/5	53.8	31.8	Not operational	44	insects, crickets, birds, 3rd Entry breaker occasionally just audible
24/03/10	R6	52.4	33.9	Not operational	42.7	insects, crickets, birds, 3rd Entry breaker occasionally just audible
24/03/10	R7	43.2	29.4	Not operational	37.3	insects, crickets, birds

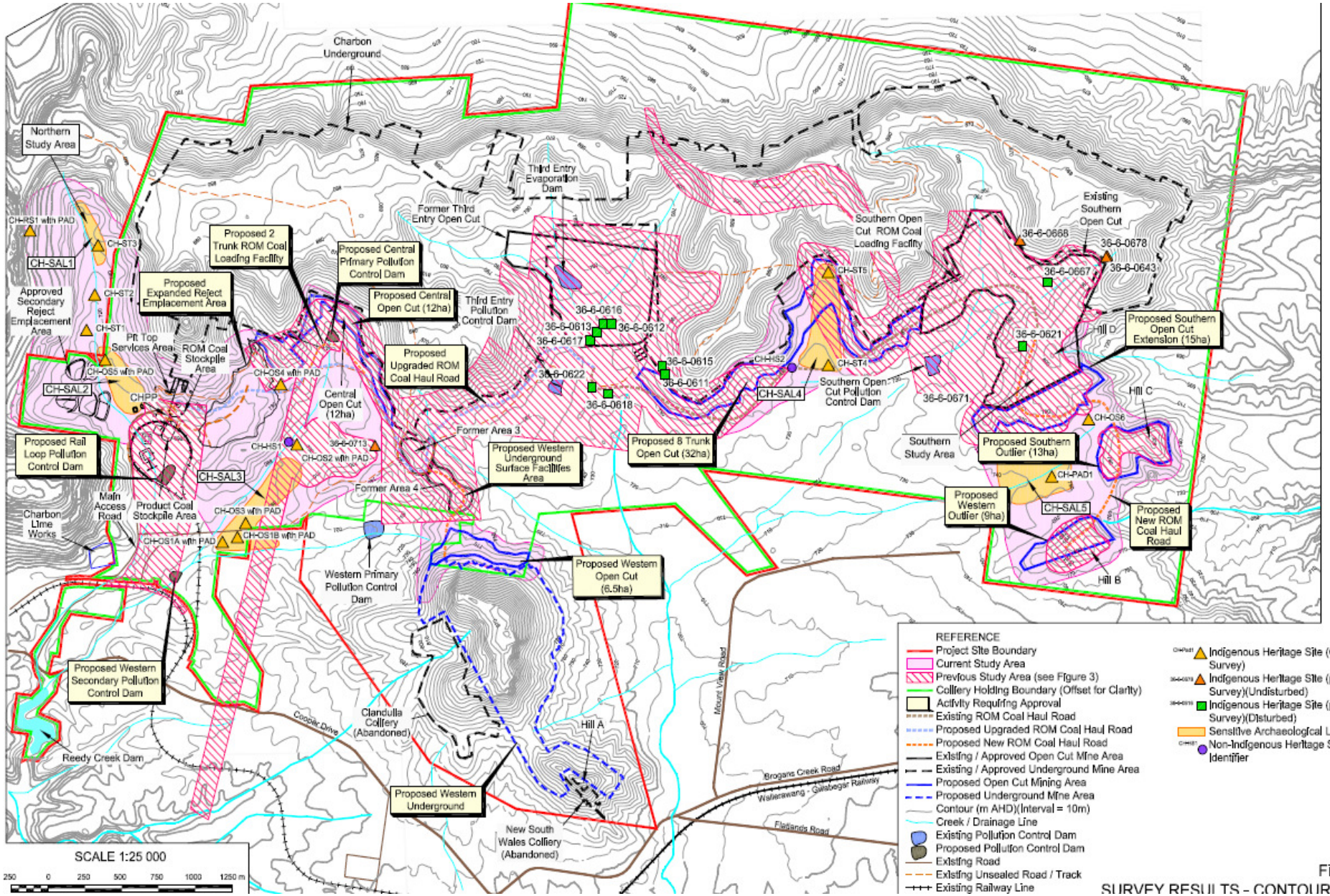


Figure 4
SURVEY RESULTS - CONTOUR PLAN

APPENDIX 3
STATEMENT OF COMMITMENTS

Continued Operations of Charbon Colliery February 2010

Desired Outcome	Action	Timing
1. General		
All operations are undertaken in a manner that will minimise the environmental impacts associated with the Project.	1.1 Operate generally in accordance with the Environmental Assessment and conditions of approvals, licences or consents.	Continuous.
	1.2 Develop management plans to manage and mitigation impacts of the Project.	
2. Hours of Operation		
All operations are undertaken within the approved operating hours.	2.1 Land Preparation – Daylight hours, Monday to Saturday.	On campaign basis.
	2.2 Underground Mining – 24 hours, 7 days per week.	Continuous.
	2.3 Open Cut Mining – Monday to Friday 7.00am to 10.00pm, Saturday 7.00am to 6.00pm.	Continuous – winter, spring, summer.
	2.4 Open Cut Mining – Monday to Saturday 7.00am to 6.00pm.	Continuous – autumn.
	2.5 ROM Coal Loading Operations – 24 hours, 7 days per week.	Continuous.
	2.6 Blasting Operations – 9.00am to 5.00pm, Monday to Saturday.	Continuous.
	2.7 Maintenance Operations – 24 hours, 7 days per week.	Continuous.
	2.8 CHPP – 24 hours, 7 days per week.	Continuous.
	2.9 Product Coal Loading Despatch (rail) – 24 hours, 7 days per week.	Continuous.
	2.10 Product Coal Loading and Dispatch (road) – 6.00am to 10.00pm, 7 days per week.	Continuous.
	2.11 Rehabilitation – Daylight hours, Monday to Saturday.	On campaign basis.

Desired Outcome	Action	Timing
3. Noise Management		
Project-related noise impacts on surrounding residences minimised.	3.1 Prepare and implement a **Noise Monitoring and Management Plan**, including a noise monitoring protocol.	Within 6 months of receipt of Project approval.
	3.2 Prepare an updated noise model.	Within 12 months of receipt of Project approval.
	3.3 Limit the hours of open cut mining operations to 7:00am to 10:00pm to avoid noise impacts on surrounding residents during the night and thereby minimise sleep disturbance and intrusion during the quietest part of the day.	Continuous.
	3.4 Limit the hours of open cut mining operations during autumn to 7:00am to 6:00pm unless a real time noise monitoring program is developed as part of the Noise Monitoring and Management Plan.	Continuous.
4. Ecology Management		
Minimise Project-related impacts on flora and fauna within and surrounding the Project Site.	4.1 Prepare a **Fauna Handling and Management Plan** identifying procedures for inspection of vegetation prior to removal and management of any fauna identified during the inspection or clearing operations.	Prior to commencement of land preparation operations.
Implementation of an appropriate ecology monitoring program to monitor undisturbed sections of the Project Site and areas undergoing rehabilitation.	4.2 Modify and implement the existing **Ecology Monitoring Program** within the Compensatory Habitat Area to include other areas that would not be disturbed within the Project Site as well as areas of progressive rehabilitation.	Within 6 months of receipt of Project approval
	4.3 Prepare a detailed **Rehabilitation and Vegetation Management Plan**, including a detailed description of rehabilitation procedures to be implemented and tree, shrub and grass species to be used during rehabilitation.	Prior to the commencement of land preparation operations.
	4.4 Develop and implement an appropriate **Biodiversity Land Management Strategy** in consultation with the consent authority and other relevant Government agencies.	Within 12 months of receipt of Project approval.

Desired Outcome	Action	Timing
5. Air Quality Management		
Site activities are undertaken, as far as practicable, without exceeding DECCW air quality criteria or goals.	5.1 Complete and implement an **Air Quality Management Plan** which identifies dust management practices that effectively minimise dust emissions including when water is not available for dust suppression.	Within 6 months of receipt of Project approval.
	5.2 Prepare and implement an **Air Quality Monitoring Protocol**, including continued monitoring of deposited dust, PM_{10} and TSP.	Within 6 months of receipt of Project approval.
	5.3 Prepare an updated air quality model.	Within 12 months of receipt of Project approval.
	5.4 Continue onsite existing meteorological monitoring.	Continuous.
Appropriate arrangement with impacted residents negotiated.	5.5 Negotiate an appropriate arrangement with the owner of Residence G to ensure that there is no potential for adverse health-related impacts associated with dust emissions.	Prior to commencing mining operations within the Western Outlier.
6. Greenhouse Gas Management		
Appropriately manage and minimise greenhouse gas emissions.	6.1 Prepare an **Energy Savings Action Plan** in accordance with the requirements of the DECCW.	Within 6 months of receipt of Project approval.
7. Indigenous Heritage Management		
Identified and unidentified Aboriginal sites are appropriately managed.	7.1 Prepare an **Indigenous Heritage Management Plan** in consultation with the registered Indigenous groups and individuals, including a procedure for managing identified sites of heritage significance or sensitivity and for limiting the potential for damage to unidentified sites.	Prior to commencing land preparation operations in the vicinity of identified sites of Indigenous heritage significance.

Desired Outcome	Action	Timing
	7.2 Complete further investigations in the vicinity of possible scar tree CH-ST5 and SAL 4.	Prior to commencing land preparation operations in the vicinity of CH-ST5 and SAL 4.
8. Blasting Management		
Project-related blasting impacts within relevant Guidelines.	8.1 Undertake blasting within the Southern Open Cut Extension only.	Continuous during blasting operations.
	8.2 Do not initiate blasting outside the hours of 9:00am and 5:00pm, Monday to Saturday, except for safety or emergency reasons.	Continuous during blasting operations.
	8.3 Prepare a **Blast Management and Monitoring Plan** that includes contingencies to address any community concerns about blasting impacts to residences.	Within 6 months of receipt of Project approval.
9. Surface Water and Groundwater		
All surface water and groundwater managed such that water-related impacts are minimised to the greatest extent practicable.	9.1 Prepare a **Sediment and Erosion Control Plan**.	Prior to land preparation operations in each area of proposed disturbance.
	9.2 Prepare updated site water balance.	Within 12 months of receipt of Project approval.
	9.3 Prepare a salinity balance.	
	9.4 Prepare a **Surface and Groundwater Water Management Plan** which will include detailed water monitoring and response protocols in consultation with the NSW Office of Water.	Within 12 months of receipt of Project approval.
	9.5 Complete an assessment of downstream impacts to drainage lines and creeks.	Within 6 months of the receipt of Project approval.
	9.6 Complete an assessment of onsite irrigation of effluent.	Within 6 months of the receipt of Project approval.

Desired Outcome	Action	Timing
10. Traffic and Transportation Management		
Project-related impacts on transportation and the road network surrounding the Project Site are limited.	10.1 Prepare a **Transportation Management Plan** including a Driver's Code of Conduct and fatigue management procedures.	Within 6 months of the receipt of Project approval.
	10.2 Ensure that all heavy vehicles transporting coal from the Project Site via public roads do so between the hours of 7:00am and 10:00pm.	Continuous.
	10.3 Develop a Voluntary Planning Agreement with Council in lieu of existing and future Section 94 contributions or revert to the Section 94 contributions process.	Within 12 months of the receipt of Project approval.
11. Subsidence Management		
No significant surface subsidence associated with the Western Underground.	11.1 Undertake first workings only.	Continuous during mining of the Western Underground.
	11.2 Restrict subsidence levels to < 20mm of subsidence.	Continuous during mining of the Western Underground.
	11.3 Prepare a Western Underground **Subsidence Monitoring Plan** as part of the Strata Control Management Plan in consultation with DII.	Prior to mining of the Western Underground.
12. Visual Amenity Management		
Day-time visibility of site activities limited.	12.1 Complete the proposed visual amenity plantings in the vicinity of Mount View Road.	As soon as practicable.
	12.2 Ensure that the western section of Hill B, located to the west of the Western Outlier, remains undisturbed.	During mining operations within the Western Outlier.
	12.3 Ensure, where practicable, that mining and waste rock placement operations are undertaken behind a 4m and 5m high barrier respectively, particularly during the evening, to limit visual impacts associated with moving mining equipment and lights.	Continuous during mining operations.

Desired Outcome	Action	Timing
	12.4 Ensure that all open cut mining-related lights are extinguished at the completion of each day's mining operations, with the exception of those required for activities that may be undertaken between 10:00pm and 7:00am or those that are required for safety or security-related purposes.	Continuous during evening mining operations.
13. Soil Management		
The Proponent's activities do not result in soil degradation or loss.	13.1 Prepare and implement a **Soil Management Plan**. This plan may be prepared as a component of the **Surface and Groundwater Management Plan**, or the **Sediment and Erosion Control Plan** or the **Rehabilitation and Vegetation Management Plan.**	Within 6 months of the receipt of Project approval.
14. Environmental Monitoring		
Implementation of an appropriate water monitoring program to ensure continuing compliance with relevant water quality criteria.	14.1 Expand the licensed discharge point water quality monitoring program to include the monitoring locations identified in Section 5.8.6	During discharge events.
	14.2 Monitor all accessible registered bores in the vicinity of the Project Site, subject to landholder approval, for standing water level, pH and electrical conductivity.	Monthly.
	14.3 Monitor all accessible registered bores in the vicinity of the Project Site, subject to landholder approval, for laboratory-based water quality analysis.	Annual.
	14.4 Monitor the volume and quality of water used or transferred around the Project Site.	Continuous.