

Drayton Management System Standard

Mine Closure Plan

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Document Information

1 PURPOSE

The purpose of this management plan is to provide a framework for mine closure at the completion of mining operations at Anglo Coal Drayton Mine.

2 SCOPE

This procedure describes:

- Statutory requirements
- Closure criteria
- Baseline environmental data
- Stakeholder involvement
- Risk assessment
- Closure costing and provisioning
- Preliminary closure action planning

3 DEFINITIONS

S & SD Manager

Safety, Health, Environment and Community Manager

DoP

NSW Department of Planning

4 PROCEDURAL REQUIREMENT

4.1 Responsibilities

Environment Coordinator

The Environment Coordinator shall be responsible for monitoring and recording all environmental monitoring and management aspects of mine closure. The Environment Coordinator shall also coordinate the revegetation and remediation of contaminated sites.

Safety & Sustainable Development (S&SD) Manager

The S & SD Manager shall be responsible for maintaining compliance with all regulations relating to the Anglo Coal Drayton Mine. The S&SD Manager shall oversee the stakeholder consultation process throughout mine closure.

Technical Services Manager

The Technical Services Manager shall oversee the compilation of final mine closure plans that meet regulatory and community expectations and signoffs.

4.2 Audit/Review Schedule

This procedure shall be subject to a review during the preparation and submission of Drayton's Mining Operations Plan. The S & SD Manager shall be responsible for such review.

4.3 Records Management

All records relating to mine closure details will be kept on file within the Anglo Coal Australia for a period of not less than five years post closure.

4.4 Revision Status

This is the first controlled version of this document.

4.5 References

- Project Approval Conditions Anglo Coal (Drayton Management) Pty Limited issued by Department of Planning NSW (Ref 06-0202)
- Anglo Coal Drayton Mine Environmental Assessment 2007
- ANZEC Guidelines: Strategic Framework for Mine Closure

4.6 Documents

4.6.1 Policy

It is Anglo Coal Drayton's policy that mine closure shall be managed in accordance with regulatory compliance and community acceptability.

4.6.2 Introduction & Project Description

Anglo Coal Drayton is an open cut coal mining operation located 13 kilometres south of Muswellbrook in the Upper Hunter of NSW approximately 100 kilometres north west of the port of Newcastle. Owned and operated by Anglo Coal Australia, Drayton is a joint venture consisting of five separate parties, of which Anglo Coal Australia have the operational control. This consists of

- Anglo Coal Australia Pty Ltd 88.17%
- Mitsui Coal development (Australia) Pty Ltd 3.83%
- Mitsui Mining Australia Pty Limited 3.0%
- Hyundai Australia Pty Limited 2.5%
- Daesung Australia Limited 2.5%

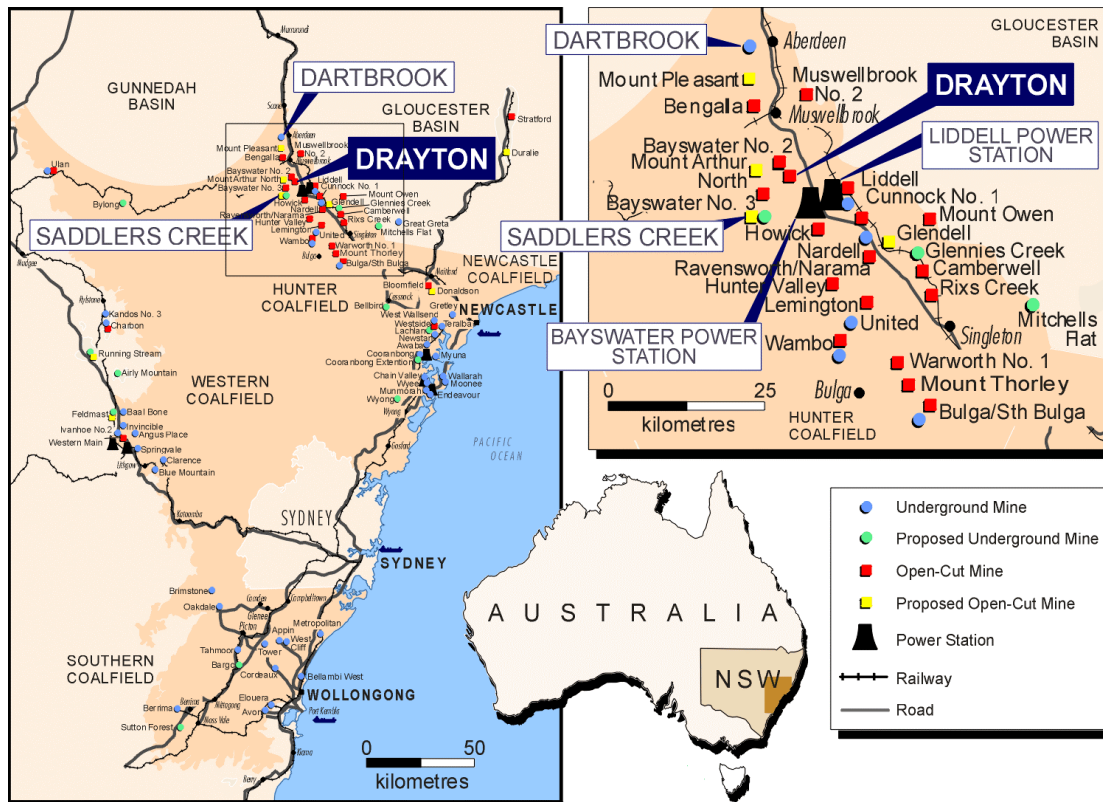
The Drayton lease is bounded by BHP Billiton's Mt Arthur Coal Mine to the west and by a conveyor to the Bayswater Power Station to the east and south.

The location and layout of Drayton and Saddlers Creek is illustrated in Figure 1.

Drayton has been in operation since 1982 commencing coal production in 1983. Drayton currently produces around 5 million tonnes of coal, but has approval to produce up to 8 million tonnes as per a development consent issued on 2nd February 2008. Drayton supplies both domestic and export markets with high quality steaming coal, primarily used in power generation. Mining operations are currently being undertaken under the current consent conditions up to 2017.

Drayton was originally granted development consent in 1981 from Muswellbrook Shire Council however the current consent conditions relate to the NSW Department of Planning as issued in 2008. In 2008, Drayton employed 332 full time employees or equivalents.

Figure 1
Regional Location of Drayton Mine



4.6.3 Statutory Requirements

The Department of Planning NSW is the consent authority for this development. DoP have set specific guidelines with regard to the mine closure plan. These conditions are as follows:

Condition	Details	Reference
S3.41	The Mine Closure Plan must: a) define the objectives and criteria for mine closure b) investigate options for the future use of the site, including the final voids; c) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local employment levels; d) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and e) describe how the performance of these measures would be monitored over time	This document

4.6.4 Land Tenure

Drayton lease and land ownership covers a total of 1968.8 hectares. Drayton’s mine leases cover 1767.1 ha with approximately 67% is affected by mining operations either past or as approved. An area of 164.1 hectares to the north of the current mining areas was proclaimed as a wildlife refuge in 1987.

Figure 2 shows current land tenure as at September 2008. Table 1 gives a detailed breakdown of land tenure.

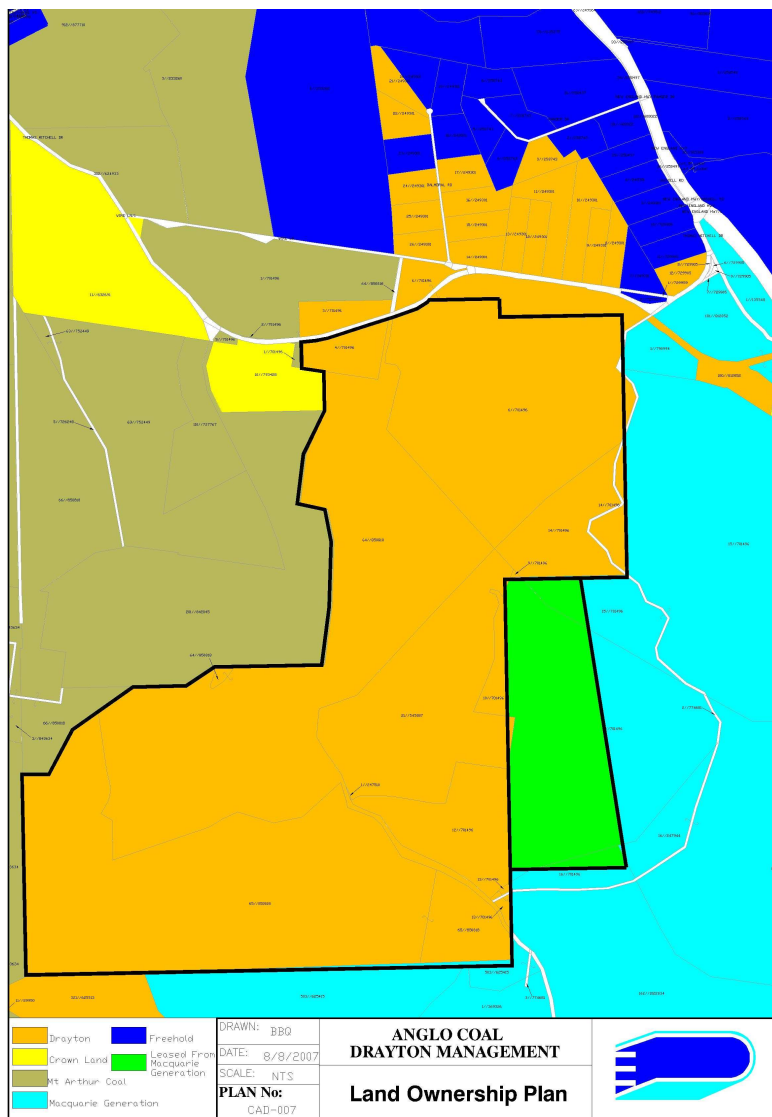
Table 1: Land Tenure

Category	Area Owned (ha)	Area Leased (ha)
ML 229	1583	
ML 1531		186.4
CL 395	3.8	
Wildlife Refuge	164.1	
Offsite ownership	31.5	
TOTAL:	1782.4	186.4

A Landowner's Plan for Drayton is shown in Figure 2.

Figure 2

Landowners Plan



4.6.5 Closure Objectives and Criteria

Drayton's objectives of mine closure are as follows:

- Provide a landscape that is safe for the community;
- Minimise potential environmental impact and liability arising from mine closure;
- Remove any waste or potentially hazardous materials from site;
- Minimise the potential impacts from decommissioning;
- Develop landforms that return land affected by mining to a condition that is suitable for a range of sustainable land uses;
- To create a stable, free draining post mining landform, which is compatible with the surrounding landscape and which is capable of a productive land use that achieves a land capability equal to that of pre mining conditions;
- Establish vegetation that is self sustaining, perpetual and provides a sustainable habitat for local fauna and successive flora species. Drayton shall strive to achieve a long term sustainability for its land synchronised with the proposed end use of the land;
- To create a post mining landform which enhances the local and regional habitat corridors as presented in the Synoptic Plan: Integrated Landscapes for Coal Mine rehabilitation in the Hunter Valley of new South Wales (Synoptic Plan – DMR 1999)
- Develop land uses that benefit the future use of the site for the local community; and to
- Develop a landscape that reduces the requirement for long term monitoring and management.

To achieve these objectives, Drayton will be divided into domains that best represent the current and future options for each zone. Each domain will be assessed and a management plan will be developed for actual mine closure. Each domain will be integrated into an overall plan. The proposed long term objective of each domain is summarised in Table 2. A more intense domain assessment will be conducted within five years from mine closure.

Table 2: Long Term Domain breakdown

Domain Type	Proposed End Land Use
Existing open cut pit voids	Remain physically stable and closed to public access via high wall. Voids will fill naturally with groundwater. Other potential uses for final voids could include municipal dump, fly ash disposal for nearby coal fired power stations, tailing disposal for nearby mining operations, water supply for nearby mining and power generation, industrial landfill. Drayton has a number of voids available at the end of mine life and as such a combination of these uses may be considered and utilized.
Mining Infrastructure areas	Drayton has a number of large workshops and hardstand areas which would be ideal for industrial purposes. Drayton proposes that such buildings remain to be utilized for industrial purposes by external contractors. Dependent upon the requirements for the proposed Saddlers Creek development, this infrastructure may remain in use for this development. A final decision on this area will be determined closer to final mine closure.

Coal Handling Plant and associated infrastructure	This domain will be dismantled and removed. The area would be ideal for industrial purposes. The area is proposed to be subdivided into industrial blocks. Dependent upon the requirements for the proposed Saddlers Creek development, this infrastructure may remain in use for this development. A final decision on this area will be determined closer to final mine closure.
Rail Infrastructure	This domain must remain. BHP Billiton's Mt Arthur Coal operation is a joint user of the Antiene Rail Spur and as such this infrastructure will remain in place. Dependent upon the requirements for the proposed Saddlers Creek development, this infrastructure may remain in use for this development also. A final decision on this area will be determined closer to final mine closure.
Water management Structures	Major dams on site will remain. These can be utilized as water availability for grazing of rehabilitated areas and for water supply for native fauna.
Rehabilitated areas	Active mining spoil piles will be progressively rehabilitated throughout the normal operations of the mine. Areas will be sown to improved pastures with native tree corridors also being established to allow for shelter, shade and safe passage for native animals through the rehabilitated areas. These areas will be progressively fenced and returned to grazing as the preferred use of this land.
Antiene area	This area consists of non mining impacted land. This land will be returned to grazing capacity.
Privately owned residential blocks in Antiene	These blocks will be sold

4.6.6 Legal and other Obligations

Key regulatory acts and obligations relevant to the Drayton operation are detailed in Table 3.

Table 3 Legal and other obligations

Jurisdiction	Act / Regulation / policy
Federal	Threatened Species Conservation Act 1995
	Environmental Protection and Biodiversity Conservation Act 1999
	National Strategy for Ecological Sustainable Development
State	Environmental Planning and Assessment Act 1979
	Mining Act 1992
	Protection of the Environment Operations Act 1997
	Dam Safety Act 1978
	Coal Mines Health and Safety Act 2002
	Coal Mines Regulation Act and Coal Mines Regulations 1999
	Roads Act 1993
	Environment Planning & Assessment Regulation 2000
	National Parks & Wildlife Act 1974
	Water Management Act 2000
	Water Act 1912
Local	Muswellbrook Local Environment Plan
	Hunter Regional Environment Plan 1989
Other	Anglo American Policies
	Greenhouse Challenge
	Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of New South Wales

Drayton's existing operations are covered by three mining leases: CL229, CL395 and ML1531. CL229, which covers the majority of the operation, was originally issued in February 1982 and renewed in 2003. CL395 was issued in June 1992 to cover an area of reserves exchanged with Bayswater No 2 CL395. This lease was renewed in 2007 for a period of a further 21 years. ML1531 over a part of Authorisation to Prospect (ATP) 173 also exists which covers the land in the south east corner of the mine over which a large degree of the proposed mine extension occurs.

4.6.7 Stakeholder Identification

Stakeholder identification is integral in mine closure planning. Mine closure will have impacts on local communities, families, supporting industries and the social and economic aspects related to these. To enable the impacts of this to be fully considered, consultation with identified key groups will be transparent, consultative and informative.

Drayton has an established consultative record with the local community and stakeholders through a community consultative process which commenced in the early 1990's. Drayton's Community Consultative Committee meets on a quarterly basis and membership consist of local councillors, local residents and community members representing the broader community. Quarterly meetings focus on ongoing environmental performance, mine rehabilitation, mine development issues and new developments.

Drayton also has a well established relationship with key regulators through various forms of communication. Annual inspections are undertaken by the NSW Department of Primary Industries (Minerals) and Dam Safety Committee.

A comprehensive Annual Environment Management Report is completed at the end of each year, which presents and summarises all environmental monitoring results and performance of the mine. It also addresses other aspects of the mining operation including production statistics, complaints, heritage, rehabilitation, social impacts and other specific information relevant to

defined government agencies. This report is also available to the public via the Anglo Coal Australia website as well as the local council and community consultative committee.

Key stakeholders have been identified during the mine closure planning process and include but are not limited to the following groups:

Drayton: Employees
Management
Joint Venture partners
Unions

Community: Near Neighbours
CCC Members
Macquarie Generation
Mt Arthur Coal
Muswellbrook Shire Council
Muswellbrook Chamber of Commerce
Aboriginal groups

Regulators: Department of Primary Industries
Department of Planning
Department of Environment and Climate Change
Department of Water and Energy
Dam Safety Committee
Mine Subsidence Board

NGO: Minewatch

Other: Anglo Coal Australia
NSW Minerals Council
Representative service providers and local businesses
Centrelink

Legals: Sparke Helmore

4.6.8 Post Closure Monitoring and Maintenance

Post Closure monitoring and maintenance will demonstrate that the site is self sustaining and stable, with no detriment to the receiving environment being evident. It is estimated that a monitoring period of five years will be required to ensure sustainability under normal weather conditions. This is deemed sufficient time to demonstrate that the revegetation and rehabilitation of the site is successful and is self sustaining to natural environmental impacts. Water quality will also be monitored and landform stability is acceptable to NSW regulatory requirements.

Decommissioning will occur when the site is rehabilitated to a level that is considered acceptable by the NSW Department of Primary Industries.

Drayton proposes the following conceptual post closure monitoring and maintenance schedule.

Table 4: Post Closure Monitoring Program

Post Closure Year	Actions to be undertaken
Year 1	Quarterly revegetation survey Quarterly water quality sampling Quarterly groundwater assessment Undertake remediation work as may be required following outcome of revegetation survey Weed control as required
Year 2	Six monthly revegetation survey Undertake soil assessment on rehabilitation areas Quarterly water quality monitoring Quarterly groundwater assessment Weed control as necessary
Year 3	Annual revegetation survey Six monthly water quality sampling Six monthly groundwater assessment Biodiversity assessment
Year 4	Annual revegetation survey Six monthly water quality sampling Six monthly groundwater assessment Biodiversity assessment
Year 5	Biodiversity assessment Relinquishment

4.6.9 Remediation

Prior to mine closure, Drayton shall review its contaminated sites register to assess the potential for contaminated lands on site. Identified potential contaminated sites will be assessed following NSW Department of Environment and Climate Change guidelines. Monitoring results will ultimately determine the disposal methods for each site.

If analysis results indicate material requires offsite disposal, any material removed from site will be tracked and disposed of in accordance with the relevant legislation at the time of disposal.

Following the removal of wastes, sites will be capped with suitable material, prior to revegetation.

Any location on site that has been listed on the contaminated sites register shall be monitored through the post closure and monitoring program.

4.6.10 Revegetation

The majority of land at Drayton will be returned to grazing as the preferred long term option. Linked into these grazing zones, native tree corridors will be developed, in general accordance with the Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of New South Wales. Figure 3 illustrates the general conceptual final rehabilitation landform as depicted in the 2007 Environmental Assessment.

The revegetation program at Drayton seeks to establish significant vegetated areas that result in a net increase in woodland vegetation and under storey development. It will also aim to establish as much floristic diversity as possible by utilising endemic plant species characteristic of the original flora in the areas and shall focus on the reestablishment of Hunter Lowland Redgum Forest species where possible.

Initial revegetation will be completed on a progressive basis, as areas become available following mining operations using improved pasture species. Table 5 details typical application rates.

Table 5: Typical application rates

Pasture Sown	Spring Rate (kg/ha)	Autumn Rate (kg/ha)
Kangaroo Valley Rye	5	5
Seaton park Sub Clover	5	5
Haifa White Clover	10	10
Phalaris	10	10
Kikuyu	5	5
Hulled Couch	5	5
Millet	10	
Sorghum	10	
Lucerne		10
Oats		20
Granulok Fertiliser	250	250

Tree establishment will also be completed with the key species being sown being similar in nature to surrounding remnant vegetation. Major tree species include *Eucalyptus maculata*, *E melliodora*, *E punctata*, *E tereticornis*, *E crebra*, *Casuarinas pp* and *Acacia spp*. Understorey species will also be established such as *hardenbergia*, *Acacia spp*, *Cassias* and small native shrubs.

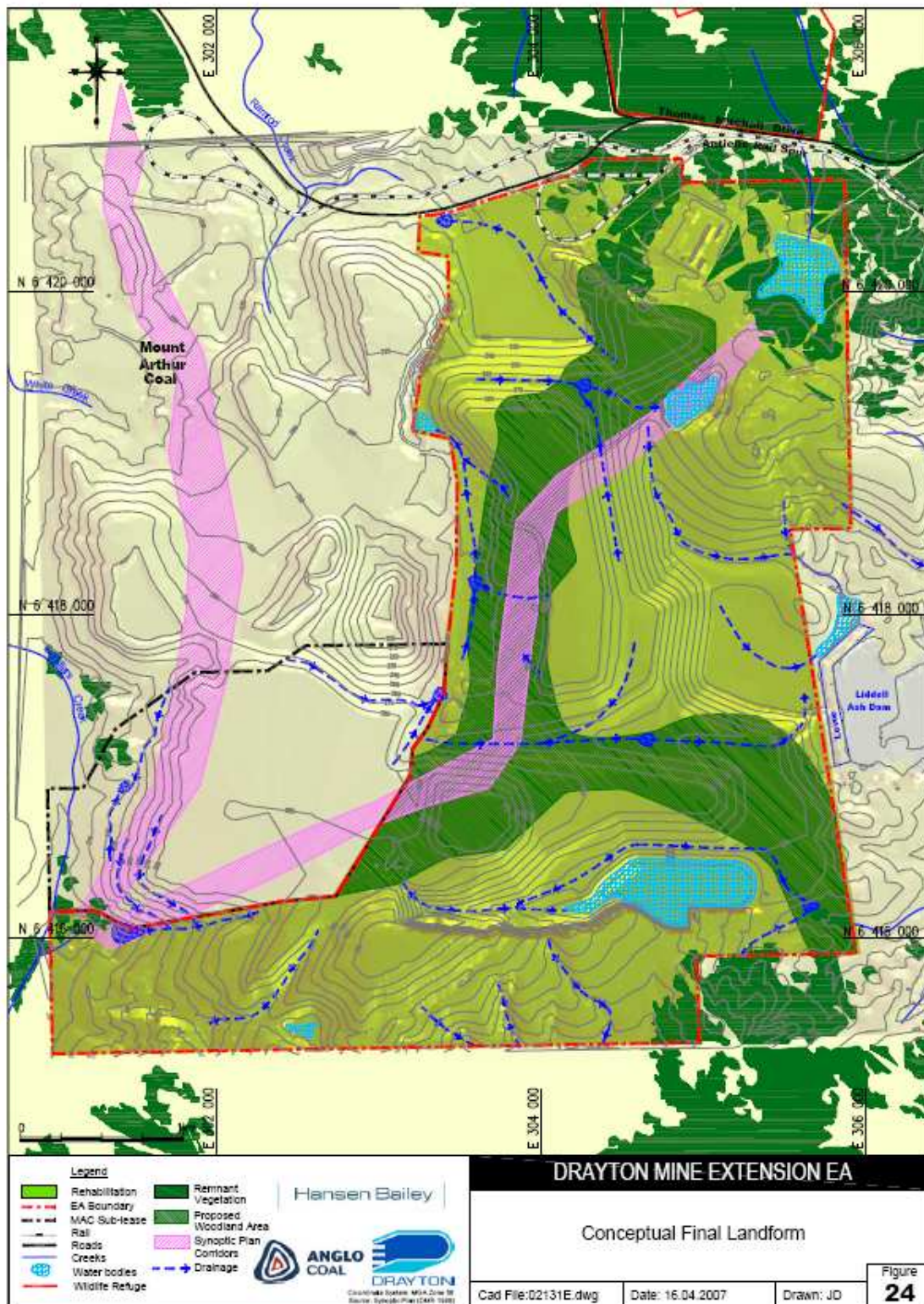


Figure 3: Conceptual Final Landform

4.6.11 Heritage

European heritage sites as well as Aboriginal heritage sites exist at Drayton.

European Sites: A total of five sites were identified and recorded as required by the 2007 Part 3A approval process. Those sites remaining after mining completion will not be impacted and will not require additional closure monitoring or management.

Cultural Heritage Sites: A total of 39 sites were identified during the 2007 Part 3A approval process. Of these, 26 sites will be salvaged as necessary by the local Aboriginal representatives. The remaining 13 sites will be conserved at this point as they lie outside the zone of disturbance and as such these will remain intact. All sites have been fenced to restrict access and to preserve identified artifacts.

A salvage program will be undertaken in 2009 to retrieve the 26 sites. This will be completed in consultation with the local Aboriginal community and regulatory authorities. An Aboriginal Cultural Heritage Management Plan has been developed which details ongoing management of cultural heritage sites.

4.6.12 Land and Property Holding

Table 6 shows a breakdown of land and property holding

Table 6: Property Holdings (Onsite and Offsite)

Holding	Property Description	Background Tenure	Title/Location	Document/Plan Held?
Anglo Coal (Drayton Management) Pty Ltd	Lot 6 Antiene	Freehold	F.I. 6/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd & Anglo Coal (Drayton) Pty Ltd	Lot 9 Antiene	Freehold	F.I. 9/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 10 Antiene	Freehold	F.I. 10/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 11 Antiene	Freehold	F.I. 11/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 12 Antiene	Freehold	F.I. 12/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 13 Antiene	Freehold	F.I. 13/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 14 Antiene	Freehold	F.I. 14/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 15 Antiene	Freehold	F.I. 15/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 16 Antiene	Freehold	F.I. 16/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 17 Antiene	Freehold	F.I. 17/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 24 Antiene	Freehold	F.I. 24/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 25 Antiene	Freehold	F.I. 25/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 26 Antiene	Freehold	F.I. 26/249301	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Lot 3 Pamger Drive	Freehold	F.I. 3/258743	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd & Anglo Coal	Part of Drayton mine	Freehold	F.I. 21/545087	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd & Anglo Coal	Part of Drayton mine	Freehold	F.I. 6/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 3/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 4/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 1/247510	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 9/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 10/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 12/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 13/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 14/701496	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd & Anglo Coal	Part of Drayton mine	Freehold	F.I. 65/850818	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd & Anglo Coal	Part of Drayton mine	Freehold	F.I. 64/850818	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 12/729905	Anglo Coal Drayton Mine
Anglo Coal (Drayton Management) Pty Ltd	Part of Drayton mine	Freehold	F.I. 180/812852	Anglo Coal Drayton Mine

Offsite:

Holding	Property Description	Background Tenure	Title/Location	Comments
Anglo Coal (Drayton Management) Pty Ltd	Residential - Muswellbrook	Freehold	F.I. 21/249301	21 Balmoral Rd
Anglo Coal (Drayton Management) Pty Ltd	Residential - Muswellbrook	Freehold	F.I. 22/249301	22 Balmoral Rd
Anglo Coal (Drayton Management) Pty Ltd	Residential - Muswellbrook	Freehold	F.I. 8/249301	Lot 8 Antiene
Anglo Coal (Drayton Management) Pty Ltd	Residential - Muswellbrook	Freehold	F.I. 3/258743	Pamger Drive

4.6.13 Baseline Environmental Data

General environmental effects resulting from mining operations should largely cease upon mine closure for most environmental aspects. These would include noise, dust, blasting and vibration. However, some aspects may require additional monitoring and measurement to continue post mining to minimise and manage any ongoing environmental effects left by the mining operation.

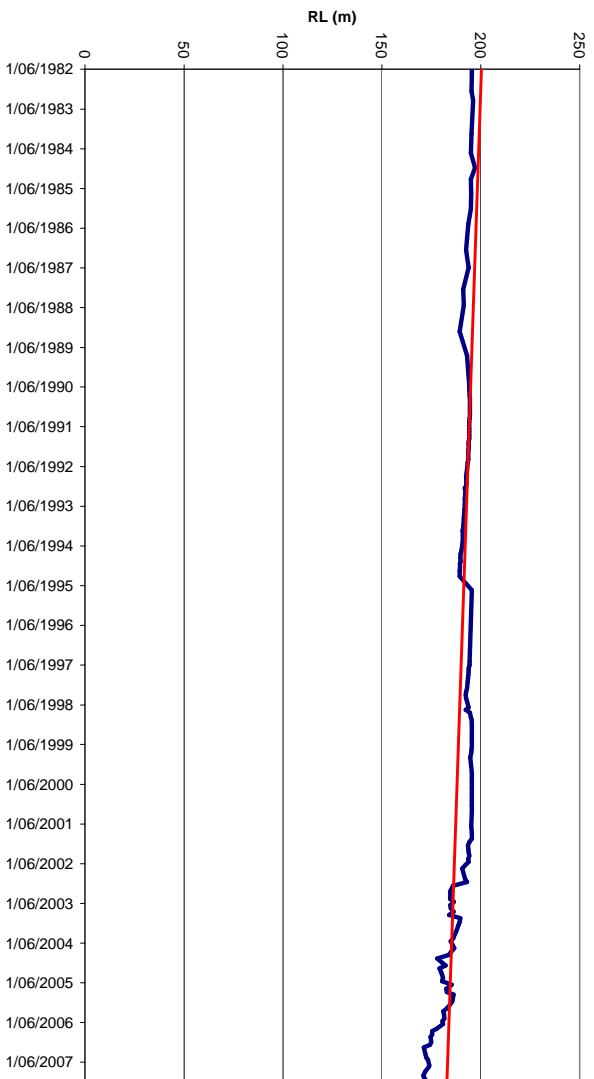
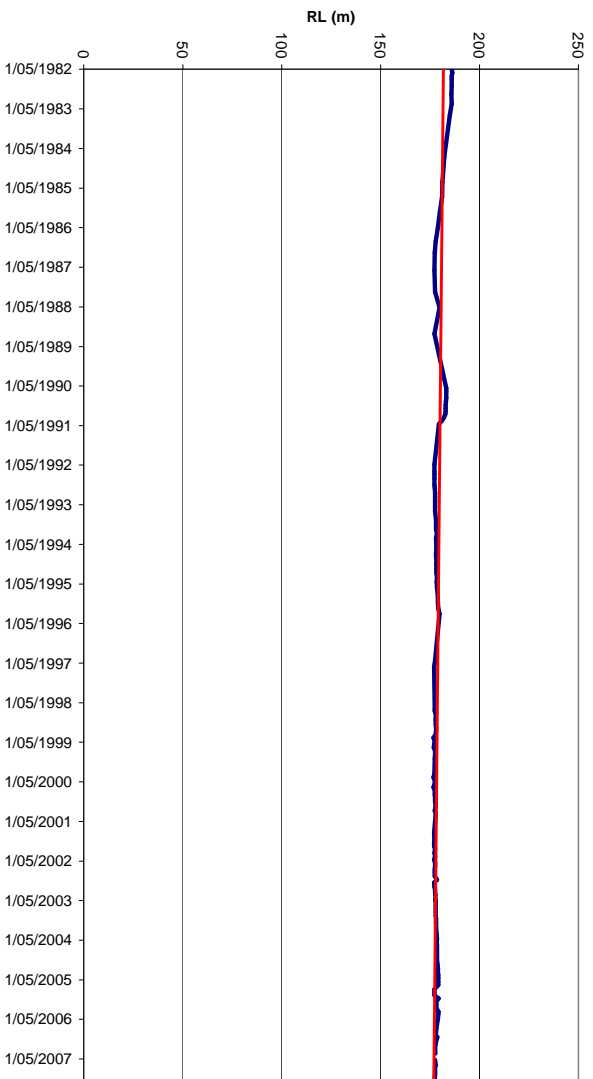
These would largely include groundwater – both water quality and groundwater levels, and surface water quality in dams that remain post mining.

Groundwater

Groundwater monitoring has been undertaken at Drayton since pre mining period. Some monitoring sites have remained intact since the early 1980's, giving access to long term data when considering the trends associated with mining activity on regional groundwaters. Data in this version of the mine closure plan represents data collected between the period of 1982 – 2007 in selected piezometers which can demonstrate groundwater trends over a period on regional sites surrounding previous and current mining operations. Reference locations for these sites are illustrated in Figure 5.

Figure 4: Long Term Piezometric Trends





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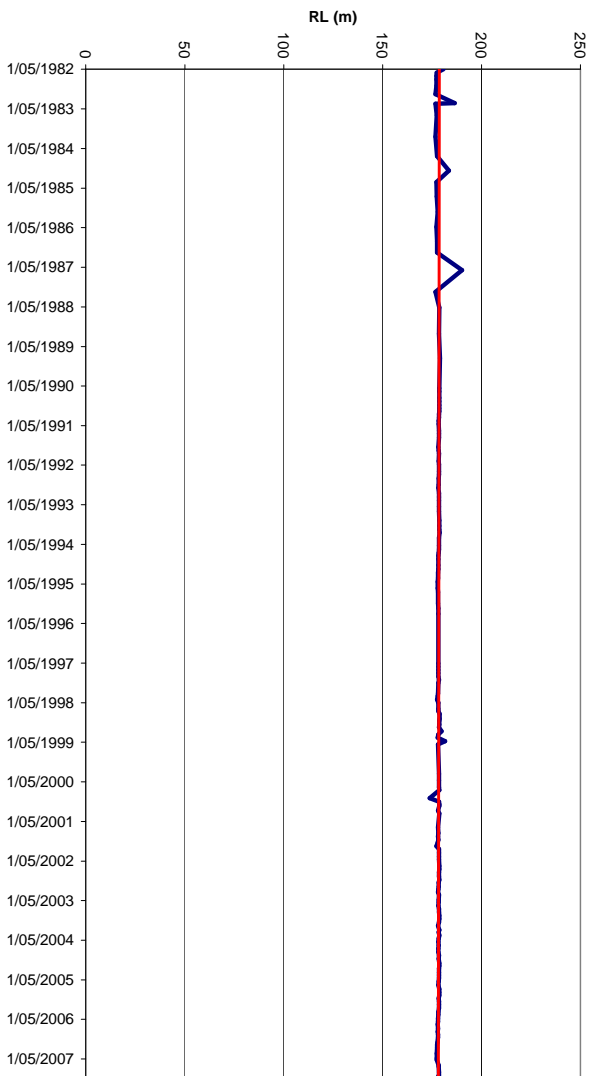


Figure 5 details the location of each of these piezometers.

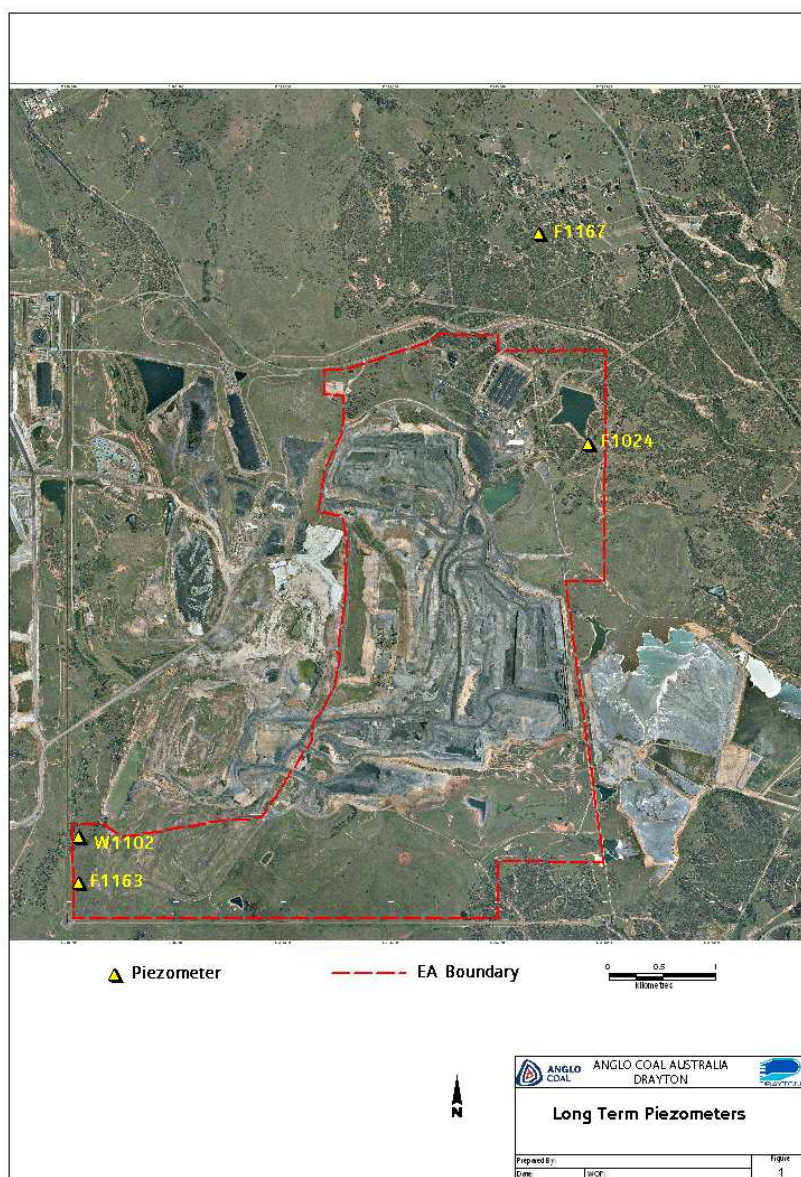


Figure 5: Location of Long Term Monitoring Piezometers

From the current monitoring information and the history associated with each of these piezometers, it is proposed that these piezometers be monitored for both water quality and standing water level for a period of up to five years post closure. Dependent upon ongoing analysis of these, monitoring may continue past this proposed period, however this would be in consultation and agreement with regulatory authorities at a future time.

Water quality

Several dams will be retained post mining, primarily for water supply for grazing and native animals. These dams will rely on rainfall for replenishment and as such should return to ambient background levels post closure. Water quality will respond accordingly to rainfall, so timing of the return to natural levels will be totally dependent on weather conditions prevailing post closure.

These dams will be monitored for water quality, in particular salinity levels, post closure for a period of five years, weather dependent though.

4.6.14 Progressive Rehabilitation

Drayton will undertake progressive rehabilitation during the life of the mining operation. This will result in post closure areas remaining to be rehabilitated to be minimised. The NSW Department of Primary Industries – Minerals requires rehabilitation to be undertaken on a progressive nature as per Mining Operation Plan commitments. An annual inspection is then undertaken to review progress against this plan.

4.6.15 Final Land Use

Final land use options for Drayton have been considered in previous Mining Operations Plans as submitted to the Department of Primary Industries however these have been conceptual due to the life expectancy of the mine. Drayton is committed to a process of consultation with key regulatory authorities regarding final land use, considering the site as a total asset rather than separate landuses.

Final voids have potential uses such as ash disposal areas, due to the close proximity to local power stations; potential tailings dams for local neighbouring mines; water storage for local mines; and waste disposal areas.

Drayton and Macquarie Generation have already entered into a Deed of Settlement and Release which proposes potential final land use options available to Macquarie Generation post mining.

Some rehabilitation areas will be revegetated to open grazing land suitable for cattle grazing. Tree establishment is a key component of Drayton's rehabilitation plans. This ensures adequate shade and wildlife corridors to be established and effective prior to mine closure.

Industrial areas such as coal handling plant and associated infrastructure of buildings, workshops, administration buildings may serve a useful purpose to local industries and community. Final land use options for these will be investigated closer to mine closure following a consultative process involving key stakeholders such as community, industry, local council and regulatory authorities.

4.6.16 Socio – Economic Effects

Social and human impacts related to Drayton's mine closure will have a substantial impact on the direct workforce. At present Drayton has an aging workforce, with a large number of employees reaching retirement age around the time of mine closure. This will result in a large number of employees being eligible for remuneration which could include both severance payments and superannuation. Severance pay would be at the applicable standards at the time of closure but would also be dependent upon the enterprise agreement in place at the time of closure.

Younger employees would be eligible and encouraged to remain in the mining industry and every effort will be undertaken to assist them in gaining further employment at neighbouring mines and support industries.

Anglo Coal will also offer alternative employment at other Anglo mines within Australia and may assist in relocation of employees. This of course will be dependent upon individual circumstances and business needs at the time of closure.

It is considered that retraining of employees to acquire new and additional skill will not be required as current mining opportunities should ensure ongoing employment opportunities will be available.

It is considered that the closure of Drayton will not significantly impact on the local community of Muswellbrook. Muswellbrook has a large number of mining operations, support industries located within the industrial confines as well as two power stations. These industries are generally in

demand for general workforce employees and will no doubt employ a large number of ex Drayton employees.

Other community aspects such as schools and education enterprises, commercial industries, hospitals and tourism should not be adversely affected. This will be because the existing mines and industries having direct positive support within Muswellbrook.

Anglo Coal's Socio Economic Assessment Toolkit (SEAT) is an assessment process to analyse social and economic impacts on local communities. This assessment was initially implemented in 2005 and has been utilized by Drayton to assess its impacts both negative and positive on the local community since. This tool will be utilized to further assess Drayton's impact as mine closure approaches. This is a consultative process which will be utilized to gauge community views on the social impacts on the community of mine closure.

4.6.17 Health & Safety

Health impacts relating to the coal mining industry have received increased focus over recent years from both community and regulatory bodies. Cumulative impact research has highlighted the need for additional research into health affects of mining. These have been linked to alleged increased respiratory illnesses in the Upper Hunter. It is of the belief that the mining industry is a significant contributor to this issue, however it has not been confirmed through formal research at this point in time.

Health implications of the coal mining industry, including Drayton, are therefore unsubstantiated by research. Drayton will continue to be proactive and shall assist further research in areas where Drayton believes it can have a positive involvement. Research findings will be incorporated into the final mine closure plan when required.

With regard to safety, Anglo Coal holds safety as the most important aspect of mining and associated works. Safety is not compromised under any circumstance. During the mine closure, all works will be completed with safety being the primary concern. Risk assessments will be undertaken for all tasks with actions being implemented to ensure the safety of all employees at all times.

4.6.18 Documentation , Reporting and Records Management

Documentation including all reports, data, records and inspections will be retained by Drayton during the mine closure process. All information pertaining to mine closure will be retained for a period of at least seven years, post finalization of closure at a location to be determined at mine closure. Administration of these records will be the responsibility of an independent body. It has not been determined at this point in time the final logistics of this information, however any information relevant to mine closure and post closure monitoring will be available to authorities as may be required.

Annual reporting of post closure performance of rehabilitation works will be completed and submitted to relevant authorities. These annual reports will be completed to the standard applicable to the relevant authorities at the time of closure.

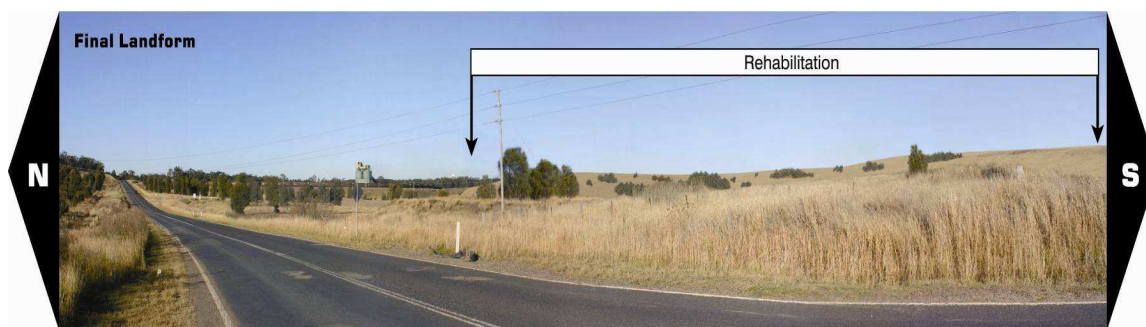
4.6.19 Aesthetics

During the Part 3A approval process, a visual impact assessment was conducted. Visually, it was found that Drayton has a low visual impact on the local community, except for a small mining area adjacent to Thomas Mitchell Drive. Progressive rehabilitation will be visual, however should be unobtrusive. A tree buffer adjacent to Thomas Mitchell Drive should assist this aesthetic aspect. Additional trees will be planted within this buffer zone, if it is evident that the current buffer is inadequate for visual amenity.

Areas of rehabilitation will appear as open grazing land with tree establishments breaking up the expanses of grazing land. Trees that have been established will be native and shall foster self seeding in those areas where trees have been established for an extended period.

Areas to the north, which will be visual to the Thomas Mitchell Drive area, will have native trees established on the northern face. Figure 6 below is indicative of the long term rehabilitation of the NN pit adjacent to Thomas Mitchell Drive.

Figure 6: Long term view of Rehabilitation of Northern End of East Pit



(2007 Environmental Assessment: Integral Landscape Architecture and Visual Planning)

4.6.20 Ongoing Measures To Minimise And Manage Environmental Effects

Mine closure will be a progressive process from both an operational and environmental perspective. Environmental monitoring is currently integral in managing both operational and environmental issues on site. Monitoring of environmental aspects has been ongoing since pre mining with some aspects still being monitored at the same locations. This history of data, allows for extensive comparisons from pre mining, mining and post mining impacts can be easily assessed.

To this effect, dust, water, groundwater, noise, blasting and vibration have extensive histories of performances. Post mining, some of these aspects will no longer be relevant such as blasting and vibration.

During the decommissioning process of the mine, all current parameters will still be monitored for compliance with statutory and regulatory conditions. All monitoring information will be reported, summarised and analyses in the Annual Environment Management Report. Monitoring shall continue until the decommissioning phase has been completed.

If during the decommissioning phase it is revealed that environmental effects such as dust or noise levels are of concern, operational controls will be implemented to manage and minimise the impact on the local community and environment.

Post decommissioning monitoring will consist of groundwater quality and standing water levels and surface water quality as per section 4.6.8.

4.6.21 Risk Assessment

An internal risk assessment has been completed to assess general risks associated with mine closure. Aspects assessed included environmental, commercial, legal obligations, human resources, health and safety and rehabilitation. A copy of this assessment is contained in Table 7.

Table 7: Risk Assessment on Mine Closure

KEY ISSUE	DETAILED ASPECTS	ISSUES	PRE CONTROL RISK RANK	CONTROLS (IMPLEMENTED/PLANNED)	WHO	WHEN
COMMERCIAL	REHABILITATION PROVISIONING	Is the Rehabilitation Liability Template (RLT) Adequate?	H	Annual review of template and costings	Comm Mgr / Env Coord	Business Plan (Annual)
		Are there sufficient funds available?				
		Is the RLT calculated accurately?				
ENVIRONMENT	BASELINE DATA	Is there adequate baseline environmental data	H	Annual review in Annual Environment Management Report	S&SD Mgr / Env Coord	AEMR
		Is additional and ongoing monitoring required (eg water, biodiversity)		Conduct a gap analysis or peer review	S&SD Mgr / Env Coord	2010
LEGAL	LEGAL OBLIGATIONS	Is Drayton in compliance with current consent and approval conditions	M	Undertake compliance auditing	S&SD Mgr / Env Coord	As per consent approvals
		Is Drayton keeping up with any legal and legislative changes		Continue involvement with NSWMC and ACA	S&SD Mgr / Env Coord	Ongoing
		Is Drayton compliant with the Workplace Relations Act 1996			HR	Ongoing
		Is Drayton in compliance with the consent agreement			HR	Ongoing

KEY ISSUE	DETAILED ASPECTS	ISSUES	PRE CONTROL RISK RANK	CONTROLS (IMPLEMENTED/PLANNED)	WHO	WHEN
STAKEHOLDER	STAKEHOLDER INVOLVEMENT	Does Drayton understand government expectations involving mine closure	M	Document and agree mine closure standards with DPI	S&SD Mgr / Env Coord	Next MOP
		Does Drayton understand community expectations involving mine closure		Continue Community Consultative Committee forum	S&SD Mgr / Env Coord	Ongoing
		Does Drayton understand stakeholder expectations		Develop stakeholder engagement strategy	S&SD Mgr / Env Coord	2010

LEGACIES	SPONTANEOUS COMBUSTION	Potential development of spontaneous combustion in rehabilitation	H	Spontaneous Combustion Management Plan; Increased monitoring and surveillance (eg thermal assessments)	S&SD Mgr / Env Coord	Ongoing
		Correct utilisation of capping material		Monitoring of capping material and placement	TES Mgr, Geologist	Ongoing
	WATER	Ongoing management of final voids	M	Rehabilitation Management Plan and Final Void Management Plan	S&SD Mgr / Env Coord	Next MOP
		Management of water quality in final voids		Explore and research options in remote and innovative monitoring	S&SD Mgr / Env Coord	2010
		Management of salinity of water in final voids		Explore and research options in remote and innovative monitoring	S&SD Mgr / Env Coord	2010
		Management of ash disposal		Develop ash management plan in consultation with supplier	TES Mgr, S&SD Mgr	2012
		Management of tailings		Develop tailings management plan in consultation with supplier	TES Mgr, S&SD Mgr	2012

KEY ISSUE	DETAILED ASPECTS	ISSUES	PRE CONTROL RISK RANK	CONTROLS (IMPLEMENTED/PLANNED)	WHO	WHEN
LEGACIES	WATER	Management of runoff and discharge in/out of final void	M	Rehabilitation Management Plan and Final Void Management Plan	S&SD Mgr / Env Coord	Next MOP
		Are there other final use opportunities (eg waste disposal, aquaculture)		Explore and research options		
	REHABILITATION	Is the current rehabilitation of an acceptable quality to regulators	L	Follow Mining Operations Plan and final landform design; Review ongoing maintenance requirements Continue annual review process with DPI	Mine Mgr / TES Mgr / S&SD Mgr	Ongoing
		Will there be a backlog of rehabilitation at the end of mine life	H	Develop a life of asset business plan/ rehab plan (including final MOP landform)		
	HR	EMPLOYEES	Lack of sufficient workforce planning	M	Identify of potential retirements, redundancies, redeployments and business critical roles for the closure of the mine. Develop a labour engagement strategy	HR
Employee transition to post Drayton life			M	Engagement of out-placement service	HR	2yrs pre mine closure
Contractor management			M	Review of contractual terms and obligations by all contract holders	HR	2yrs pre mine closure

KEY ISSUE	DETAILED ASPECTS	ISSUES	PRE CONTROL RISK RANK	CONTROLS (IMPLEMENTED/PLANNED)	WHO	WHEN
HR	EMPLOYEES	Consult and engage with relevant external bodies	M	Develop an appropriate strategy for CFMEU, workplace authority and long service board	HR	2yrs pre mine closure
DECOMMISSIONING & REMEDIATION		Final Mine plan and Infrastructure plan	L	Develop a decommissioning plan	S&SD Mgr	2012
		Ongoing management of contaminated sites	M	Review contaminated sites register	Env Coord	2009
				Minimise the occurrence of new sites.	Mine Mgr	Ongoing
				Develop a detailed management plan for mine closure	EC/S&SD	2012
HEALTH & SAFETY	WORKERS COMPENSATION / CASES	Management of hearing loss claims	H	Conduct health assessments to establish baseline data	S&SD Mgr / OHS Advisor	Ongoing
				Increase noise exposure monitoring	S&SD Mgr / OHS Advisor	Ongoing
		Management of ongoing claims, new cases and legal aspects	H	Implement regular health assessments	S&SD Mgr / OHS Advisor	2010
				Continue proactive injury management practices	S&SD Mgr / OHS Advisor	Ongoing
				Establish regular case reviews with CMI	S&SD Mgr / OHS Advisor	2010
				Implement an electronic medical file system	S&SD Mgr / OHS Advisor	2012
				Conduct exit medicals for all personnel	S&SD Mgr / OHS Advisor	Final Year

KEY ISSUE	DETAILED ASPECTS	ISSUES	PRE CONTROL RISK RANK	CONTROLS (IMPLEMENTED/PLANNED)	WHO	WHEN
HEALTH & SAFETY	CHRONIC HEALTH DISEASES	Risks related to chronic health diseases	H	Conduct occupational monitoring	S&SD Mgr / OHS Advisor	Ongoing
	SITE SECURITY	Ensuring site security is adequate during decommissioning	M	Include site security in decommissioning management plan	S&SD Mgr	2012
TENEMENT RELINQUISHMENT	DPI APPROVAL	What is the standard for decommissioning	M	Document and agree the standard of decommissioning with regulatory authorities	S&SD Mgr	2011
		No tenements relinquished to date in local region...why?	M	Investigate with regulatory bodies	S&SD Mgr	2011
POST CLOSURE	MONITORING	Is there a risk of insufficient monitoring and maintenance (environmental)	L	Include in decommissioning plan	S&SD Mgr	2012
		What is the time frame for decommissioning		Include in decommissioning plan	S&SD Mgr	2012
DOCUMENTATION MANAGEMENT		Failure to locate key documents post closure	H	Consider document control of records management in decommissioning plan	S&SD Mgr	2012
				Identify documents required to be retained	SLT	2011
OFFSET MANAGEMENT	POST CLOSURE	Management of Offset area	M	Include in offset strategy	S&SD Mgr	2009

5 APPENDICES

Nil