



ASHTON COAL OPERATIONS PTY LIMITED

South East Open Cut

PRELIMINARY ENVIRONMENTAL ASSESSMENT



Prepared by
Wells Environmental Services
PO Box 205
East Maitland NSW 2323

FEBRUARY 2009

This page is deliberately left blank

EXECUTIVE SUMMARY

Ashton Coal Operations Pty Limited (ACOL) operates the Ashton Coal Project (ACP) which is located approximately 14 kilometres (km) north-west of Singleton in the Camberwell district of the upper Hunter Valley, NSW. The site is bounded by the Main Northern Railway to the north, the Hunter River to the south and Glennies Creek to the east. The proposed South East Open Cut (SEOC) effectively replaces the existing Ashton North East Open Cut (NEOC).

Ownership

The Ashton Joint Venture is currently comprised of the following participants:

- Felix Resources Limited (60%);
- International Marine Corporation Group (30%); and
- ICRA Ashton (10%).

The Currently Approved Ashton Coal Project

Development Consent (DA) 309-11-2001-i was granted to ACOL by the Minister for Planning in October 2002. The approval was subsequently modified in 2003, 2005 and 2007. The approval allows the extraction of coal at a rate of up to 5.2 Million tonnes per annum (Mtpa) of Run of Mine (ROM) coal and for the undertaking of associated coal mining activities at Ashton which comprises:

- The North East Open Cut Coal Mine;
- The Underground coal mine, a four seam descending underground longwall mine;
- Coal Handling and Preparation Plant (CHPP);
- Surface infrastructure; and
- Rail load-out facility.

ACOL operates within Mining Lease (ML) 1533, ML 1529, ML1623 and various other regulatory approvals.

Construction commenced in September 2003 with the open cut operations beginning in January 2004. The first ROM coal was produced from the Open Cut in March 2004. The CHPP was commissioned in April 2004.

Development of the Underground operation commenced in December 2005 with extraction of development coal only until the commencement of the longwall coal extraction in March 2007. During late 2006 early 2007 an expansion of the CHPP was undertaken increasing its capacity from 400t/hr to 1000t/hr to allow for the processing of the longwall coal. The construction of a tailings dam commenced in early 2007 in the old Ravensworth Void 4 (DA 309-11-2001, 29 February 2007) which is now part of Macquarie Generation (Mac Gen) owned land. The first emplacement of tailings commenced in early June 2007.

Since, March 2005 the ACP has been entirely operated by ACOL.

Open cut resources in the NEOC are expected to be depleted by mid 2010. The SEOC is proposed to provide a continuation of open cut mining operations.

The Proposed Project Applications

ACOL seeks project approval under Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the South East Open Cut Project (**SEOC**). The SEOC and associated facilities are to be located approximately 2.5km south-east of the ACP processing plant, immediately to the south of Camberwell Village. The project will comprise;

- An open cut coal mine (SEOC) east of Glennies Creek and south of the New England Highway producing up to 3.6 Mtpa of ROM coal;
- Infrastructure and facilities to support the SEOC; and
- Coal handling facilities that will integrate with the existing ACP coal handling, preparation and train loading facilities.

The SEOC straddles two Exploration Licences, EL4918 and EL 5860A, both held by White Mining Pty Limited (a subsidiary of Felix Resources Limited). Authorisation 81 held by Navidale (Camberwell Mine) exists to the east of EL 5860A where it is proposed to construct out of pit emplacements, water management facilities and infrastructure.

The SEOC will be operated as part of the ACP and utilize the coal handling, preparation and loading facilities, and other office and surface facilities approved by the Ashton Development Consent (DA) 309-11-2001-i. In order to allow the effective integration and combined operation of the SEOC with the existing ACP an application to modify the existing ACP Development Consent under Section 75W of the EP&A Act will also be lodged. ACOL seeks to modify the existing ACP Development Consent in the following manner:

- Increase the through put of the CHPP and rail loading facilities to cater for approximately 8.6Mtpa of ROM coal (or an additional 2.3Mtpa of product coal);
- Modification of the existing CHPP facilities to allow the receipt of coal from the SEOC;
- Disposal of coal tailings from the existing underground coal mine in the SEOC final void;
- Increased coal extraction rate from 2.95Mtpa ROM to 5.0Mtpa ROM coal in the existing underground coal mine; and
- Associated modifications to the conditions of (DA) 309-11-2001-i to facilitate the above changes.

A single Environmental Assessment Report will be prepared to address both the Major Project Application for the SEOC and the application to modify the existing ACP Development Consent.

Mine Schedule

The SEOC will produce up to 2.4 Mtpa of product coal from the proposed 3.6 Mtpa of ROM coal to be extracted. The mine will commence approximately 3 months prior to the completion of the Barrett Pit within the NEOC to ensure continuity of employment for mine workers and coal production.

Surface Facilities

The SEOC will include offices, bathhouse and workshop facilities accessed via a new intersection off the New England Highway. Coal handling facilities will consist of a ROM hopper station and conveyor network through to the existing ACP coal handling, preparation and train loading facilities. Coal will be processed by the existing facilities and loaded onto trains for rail transport to export or domestic markets.

Major Project Application

Under Clause 6(1) of the State Environmental Planning Policy (Major Projects) 2005, the proposed SEOC is a development referred to in Clause 5(1)(a) “development for the purposes of mining that is coal mining” – and as of 9 September 2008 has been declared by the Director General as delegate of the Minister for Planning to be a project to which Part 3A of the EP&A Act applies.

This document is a Preliminary Environmental Assessment which provides the following:

- The background information on the project and the site;
- A detailed description of the project;
- Details of permissibility and relevant statutory controls; and
- A general overview of the environmental issues potentially associated with the project (including identification and preliminary consideration of the key issues).

The document will form the basis upon which the Department of Planning consults with other public authorities and for the preparation of the Director-General’s environmental assessment requirements for the project.

Key Environmental Planning Issues

Environmental studies undertaken for the project have identified the following key environmental planning issues:

- Impacts upon the residents of Camberwell Village (social and environmental);
- Land use allocation;
- Groundwater effects; including those to the Glennies Creek alluvium;
- Surface water effects;
- Dust and noise effects on the air and acoustic environment;
- Greenhouse gas emissions and ecologically sustainable development;
- Impacts on critically endangered ecological communities and threatened species;
- The rehabilitation and final land use after mining with respect to the *Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in Hunter Valley of NSW*;
- Management of archaeological and heritage sites;
- Closure / relocation of the Camberwell Village ‘Common’;
- Cumulative impacts with respect to air quality, noise and vibration, groundwater, surface water, flora and fauna; and
- The positive socio-economic impacts associated with the project.

The SEOC will result in the recovery of a valuable State owned coal resource which will facilitate the SEOC producing up to 2.4 Mtpa of product coal that will result in material economic benefits for the community in the form of Royalties, employment, local State and Federal taxes.

This page is deliberately left blank

**SOUTH EAST OPEN CUT
PRELIMINARY ENVIRONMENTAL ASSESSMENT****TABLE OF CONTENTS**

1	PROJECT BACKGROUND.....	1
2	PROJECT DESCRIPTION.....	4
2.1	THE COAL RESOURCE AND GEOLOGY	7
2.1.1	Regional Setting	7
2.1.2	Exploration.....	7
2.1.3	Coal Seams to be Mined	8
2.1.4	Coal Quality	8
2.2	LAND OWNERSHIP AND LAND USE.....	8
2.3	SOUTH EAST OPEN CUT MINE	11
2.3.1	Mining Schedule	11
2.3.2	Reject and Tailings	11
2.3.3	Surface Facilities	12
2.3.4	Water	12
2.3.5	Utilities and Services	13
2.3.6	Relocation and Closure of Roads and Crown Land.....	13
2.3.7	Employment and Shift Times	13
2.4	MODIFICATION TO THE APPROVED ASHTON COAL PROJECT	13
2.4.1	The Approved CHPP and Rail Facilities	15
2.4.2	Modification of the Existing CHPP Facilities	15
2.4.3	Disposal of Reject in the SEOC Final Void.	15
2.4.4	The Approved Underground Mine	15
3	LEGISLATION AND CONSULTATION	16
3.1	INTRODUCTION.....	16
3.2	ENVIRONMENTAL PLANNING AND ASSESSMENT ACT	16
3.2.1	SEOC Project Approval Authority.....	16
3.2.2	Existing Development Consent Modification.....	16
3.2.3	Permissibility of the SEOC	17
3.3	STATE AND REGIONAL ENVIRONMENTAL PLANS	18
3.4	LEGISLATIVE CONTEXT	19
3.4.1	Section 75U EPA Act	19
3.4.2	Section 75V EPA Act.....	19
3.4.3	Mining Act 1992.....	19

3.4.4	Protection of the Environment Operations Act 1997	19
3.4.5	Roads Act 1993	19
3.4.6	Water	20
3.4.7	Crown Lands Act 1989	20
3.4.8	Coal Mine Health and Safety Act 2002	20
3.5	COMMONWEALTH LEGISLATION	21
3.6	PROJECT CONSULTATION	21
3.6.1	General Consultation.....	21
3.6.2	Consultation with Agencies	21
4	ENVIRONMENTAL ASSESSMENT AND IDENTIFICATION OF CRITICAL ISSUES.....	22
4.1	ENVIRONMENTAL SUMMARY.....	22
4.2	CLIMATE	22
4.2.1	Rainfall and Evaporation	22
4.2.2	Temperature and Humidity.....	23
4.2.3	Winds.....	23
4.2.4	Inversions	23
4.2.5	Weather Stations	23
4.3	AIR QUALITY	23
4.3.1	Air Quality Monitoring Network.....	23
4.3.2	Background Air Quality.....	25
4.3.3	Air Quality Goals.....	25
4.3.4	Issues	25
4.4	ACOUSTICS & BLASTING	26
4.4.1	Noise Monitoring.....	26
4.4.2	Acoustic Goals.....	26
4.4.3	Blasting and Vibration Goals	27
4.4.4	Issues	27
4.5	WATER MANAGEMENT	28
4.6	GROUNDWATER	28
4.6.1	Existing Monitoring and Investigations	28
4.6.2	Issues	28
4.7	SURFACE WATER AND FLOODING.....	29
4.7.1	The Catchment	29
4.7.2	Existing Monitoring Network.....	29
4.7.3	Issues	29
4.8	FLORA, FAUNA AND AQUATIC.....	31
4.8.1	Terrestrial Ecology.....	31
4.8.2	Aquatic Ecology.....	32
4.8.3	Issues	32
4.9	ABORIGINAL HERITAGE.....	32

4.9.1	Issues	32
4.10	EUROPEAN HERITAGE	33
4.10.1	Issues	33
4.11	SOILS, LAND CAPABILITY AND AGRICULTURAL SUITABILITY	33
4.11.1	Issues	34
4.12	ACID ROCK DRAINAGE.....	34
4.13	VISUALS	34
4.14	REHABILITATION AND FINAL LANDFORM.....	35
4.14.1	Rehabilitation of the NEOC	35
4.14.2	Rehabilitation at the SEOC	36
4.14.3	Issues	36
4.15	COMMUNITY LIAISON AND CONSULTATION	37
4.16	SOCIAL AND ECONOMIC IMPACTS	37
4.16.1	Camberwell Village.....	37
4.16.2	Land Ownership and Use.....	37
4.16.3	Economic Benefits of the Coal Resource.....	40
4.17	LANDHOLDER INVOLVEMENT	40
4.17.1	Access to Lands	40
4.17.2	Landholder Rights	40
5	CONCLUSION	41
6	REFERENCES.....	42

TABLES

Table 1:	Air Quality Standards/Goals for Particulate Matter Concentrations	25
Table 2:	DEC Criteria for Dust (Insoluble Solids) Fallout	25

FIGURES

Figure 1:	Location of the ACP and the proposed SEOC.	2
Figure 2:	The Approved ACP general arrangement.	3
Figure 3:	Proposed SEOC general arrangement.....	5
Figure 4:	Proposed SEOC general arrangement and topography.	6
Figure 5:	East-West geological cross section of the northern end of the SEOC.....	9
Figure 6:	East-West geological cross section of the southern end of the SEOC.	10
Figure 7:	Utilities and services adjoining the SEOC.	14
Figure 8:	ACOL air quality and noise monitoring locations.....	24
Figure 9:	ACOL surface water monitoring locations.	30
Figure 10:	Land ownership in the Ashton Coal Project area.	38
Figure 10a:	Land ownership in the SEOC Project area (Camberwell Village)	40

1 PROJECT BACKGROUND

The ACP is located 14 km north west of Singleton in the Hunter Valley of NSW within the Hunter Coalfields of the Sydney Basin. The ACP's South East Open Cut (SEOC) project is located approximately 2.5km south east of the existing ACP coal processing plant. The village of Camberwell is located approximately 400m to the north of the SEOC. The location of the ACP and the SEOC are shown by **Figure 1**.

The SEOC is proposed for development out of the area of the Exploration Licences EL 4918 and EL 5860. Authorisation 81 held by Navidale (Camberwell Mine) exists to the east of EL 5860A where it is proposed to construct out of pit emplacements and infrastructure.

The SEOC area is located immediately to the south east of the Ashton Coal Mine. The New England Highway forms the north eastern boundary of the site and Glennies Creek the western boundary. The western boundary of the SEOC generally parallel to the alignment of Glennies Creek.

EL 4918 covers an area of 370ha and EL 2860 covers an area of 272ha, comprising rural lands, freehold land, Crown land and land owned by ACOL. It is characterised by mostly cleared grazing lands with low topographical relief, with land elevation ranging from 60 m Australian Height Datum (AHD) in the west adjacent to Glennies Creek (or Fal Brook) and 100 m AHD to the east.

In October 2002 the existing ACP was granted development consent (DA No. 309-11-2001) by the Minister for Planning. The ACP comprises the North East Open Cut (NEOC) and descending underground coal mine along with a coal handling and preparation plant (CHPP) and associated surface infrastructure.

Since the ACP approval in 2002, DA 309-11-2001 has been modified on three (3) separate occasions:

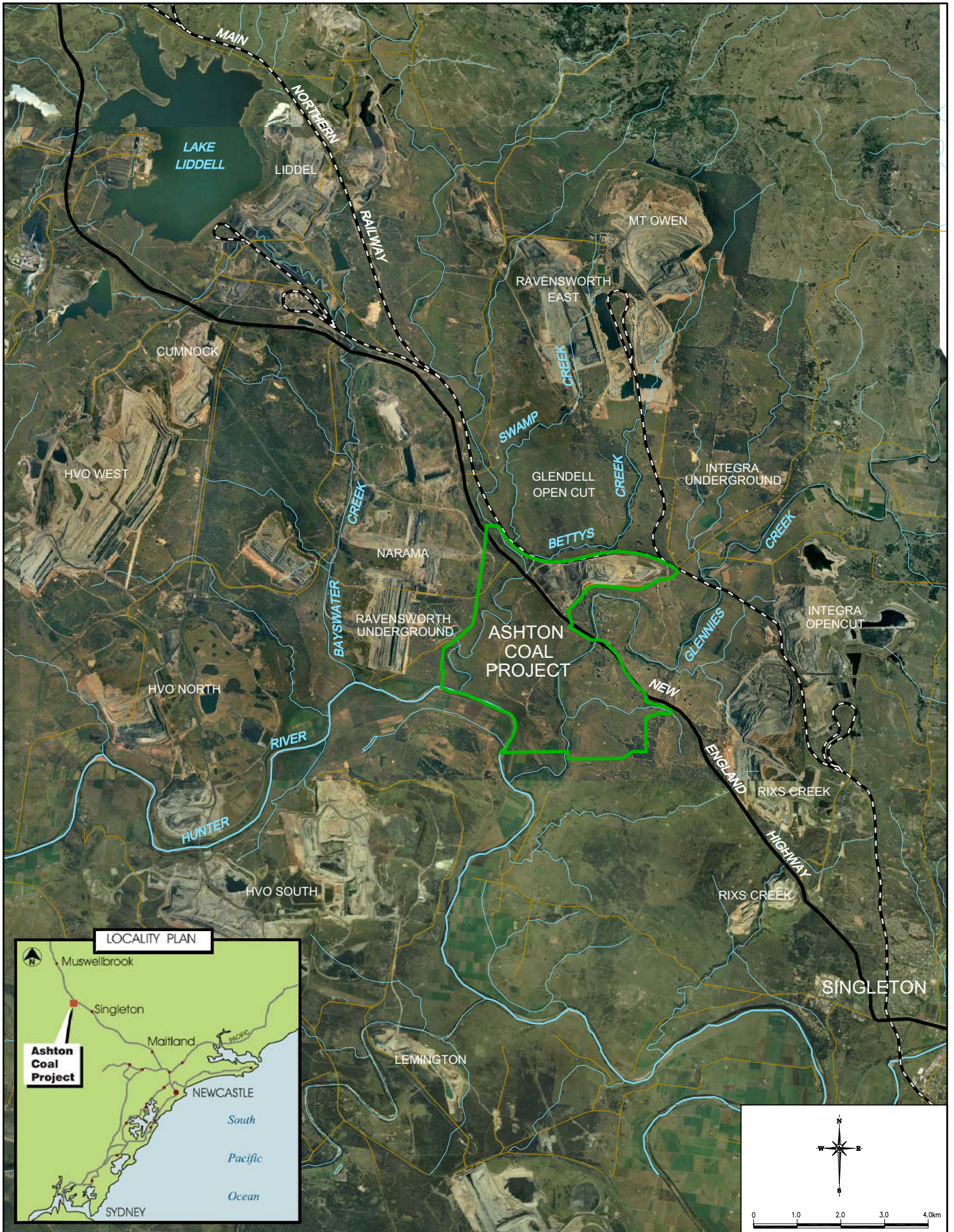
- DA 309-11-2001 (MOD 1) 15 October 2003 allows the Environment Protection Authority (EPA) to specify noise criteria in table 5;
- DA 309-11-2001 (MOD 2) 27 January 2005 permits 10m increase in the height in Eastern Emplacement Area; and
- DA 309-11-2001 (MOD 3) 29 February 2007 allows for the construction and operation of tailings pipelines between the mine and the former Ravensworth Mine.

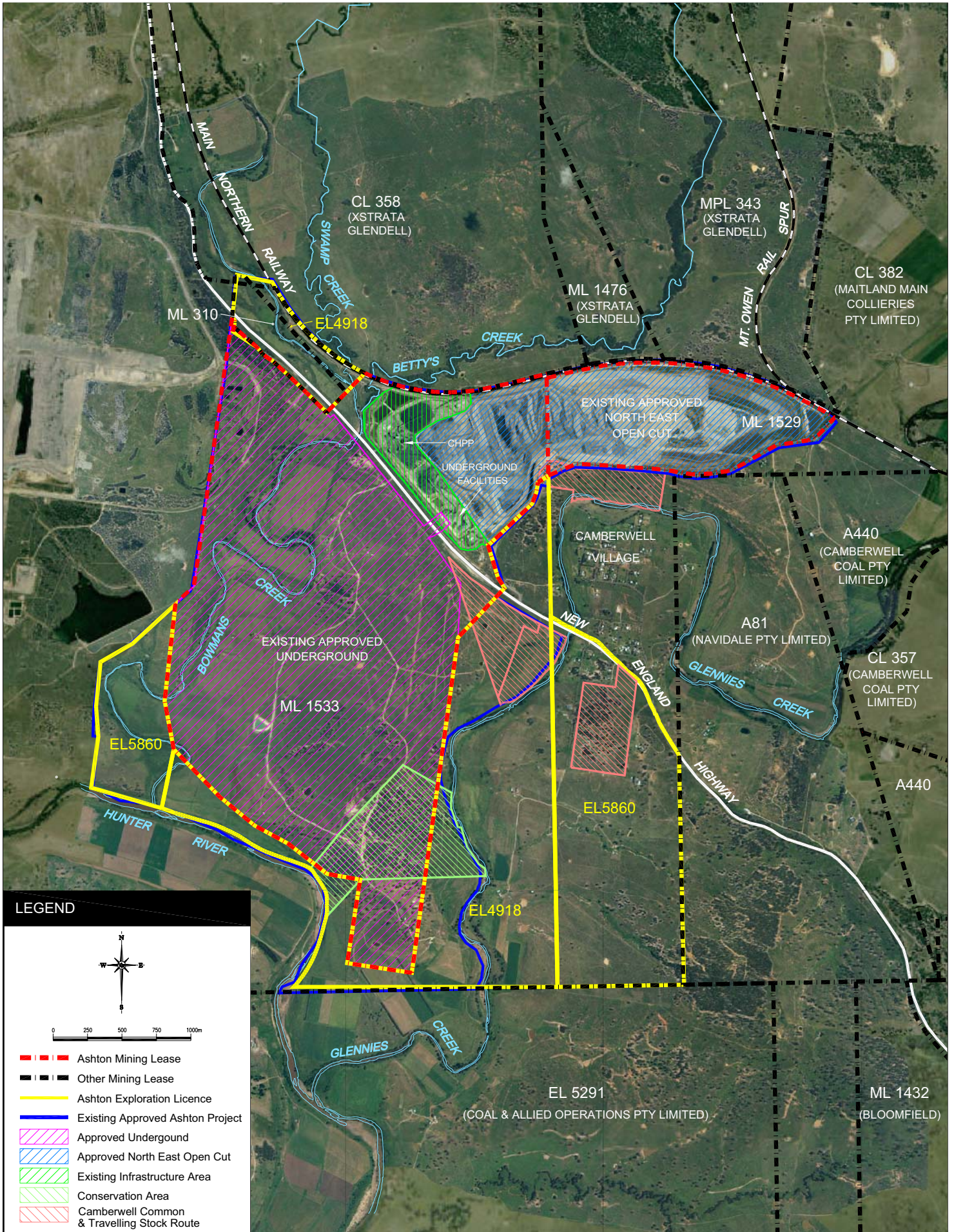
Figure 2 illustrates the approved ACP general arrangement. The ACP is currently producing 5.2 Million tonnes per annum (Mtpa) ROM coal from open cut and underground mining methods. The NEOC is scheduled to finish by mid 2010.

Feasibility studies have been conducted by ACOL to assess the viability of further mining options. The SEOC has been identified as the best option for continued open cut mining following the closure of the NEOC.

The approval of the SEOC will enable the issue of mining leases and other appropriate approvals over the SEOC, freehold and Crown land facilitating the mining use of the land to recover the insitu valuable State owned coal resource, which, is presently used for livestock grazing and in parts regular small scale cropping.

The purpose of this document is to provide a project description and summary of key issues of the ACP's SEOC for consultation by the Department of Planning with other Government Agencies and to enable the NSW Director General of Planning to assign Environmental Assessment Requirements (**EARs**) under Part 3A of the EP&A Act 1979. The SEOC is described in the following sections.





2 PROJECT DESCRIPTION

ACOL seeks project approval under Part 3A of the EP&A Act for the South East Open Cut Project (SEOC). The SEOC and associated facilities are to be located approximately 2.5km south-east of the existing ACP processing plant, immediately to the south of Camberwell Village. The project will comprise;

- One open cut pit, the SEOC producing up to 3.6Mtpa of ROM coal;
- An environmental bund constructed along the portion of the pit adjacent to the New England Highway;
- Construction of a levee along the western boundary of the SEOC;
- ROM coal facilities to provide initial coal processing prior to be conveyed to the existing ACP processing plant;
- Conveyors to transport the ROM coal to the existing ACP processing plant over Glennies Creek and the New England Highway, with light vehicle access along the conveyor route;
- Pipelines parallel with the conveyor route for tailings and water transfer;
- New workshop, bathhouse and administration buildings located east of the SEOC and south of the New England Highway;
- Site services and infrastructure such as power supply, water supply, access roads and dewatering network;
- Water storage dam between the facilities and New England Highway;
- Diversion of 132kV and 66kV power lines owned by Energy Australia and fibre optic cables; and
- Closure of Roads and part of the Camberwell Common.

Figure 3 and **Figure 4** illustrate the proposed general arrangement of the SEOC.

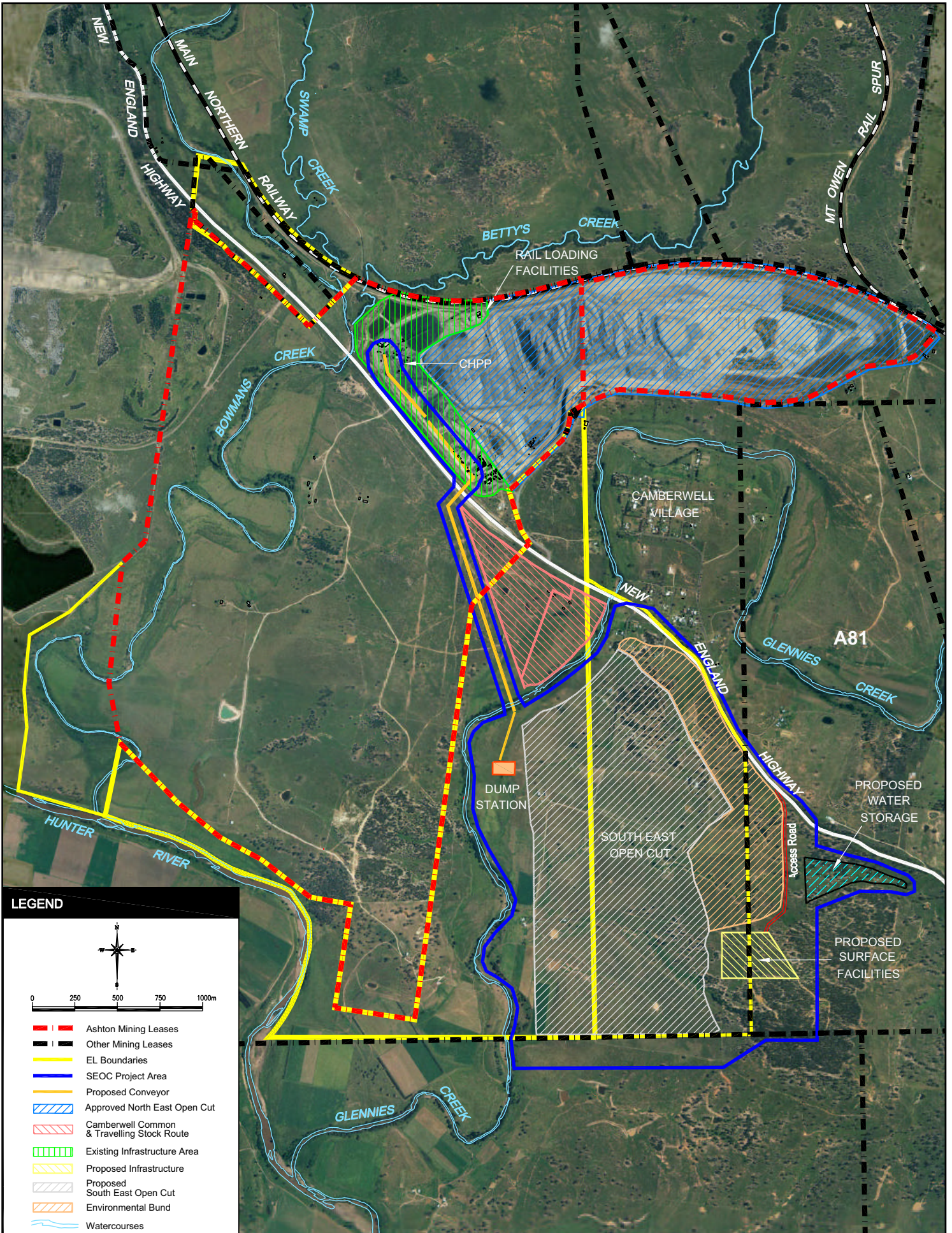
The SEOC is proposed to commence mid 2010, 3 months prior to the cessation of mining in the existing NEOC. The total ROM output of the SEOC will be in the order of 3.6Mtpa over a 7 year period.

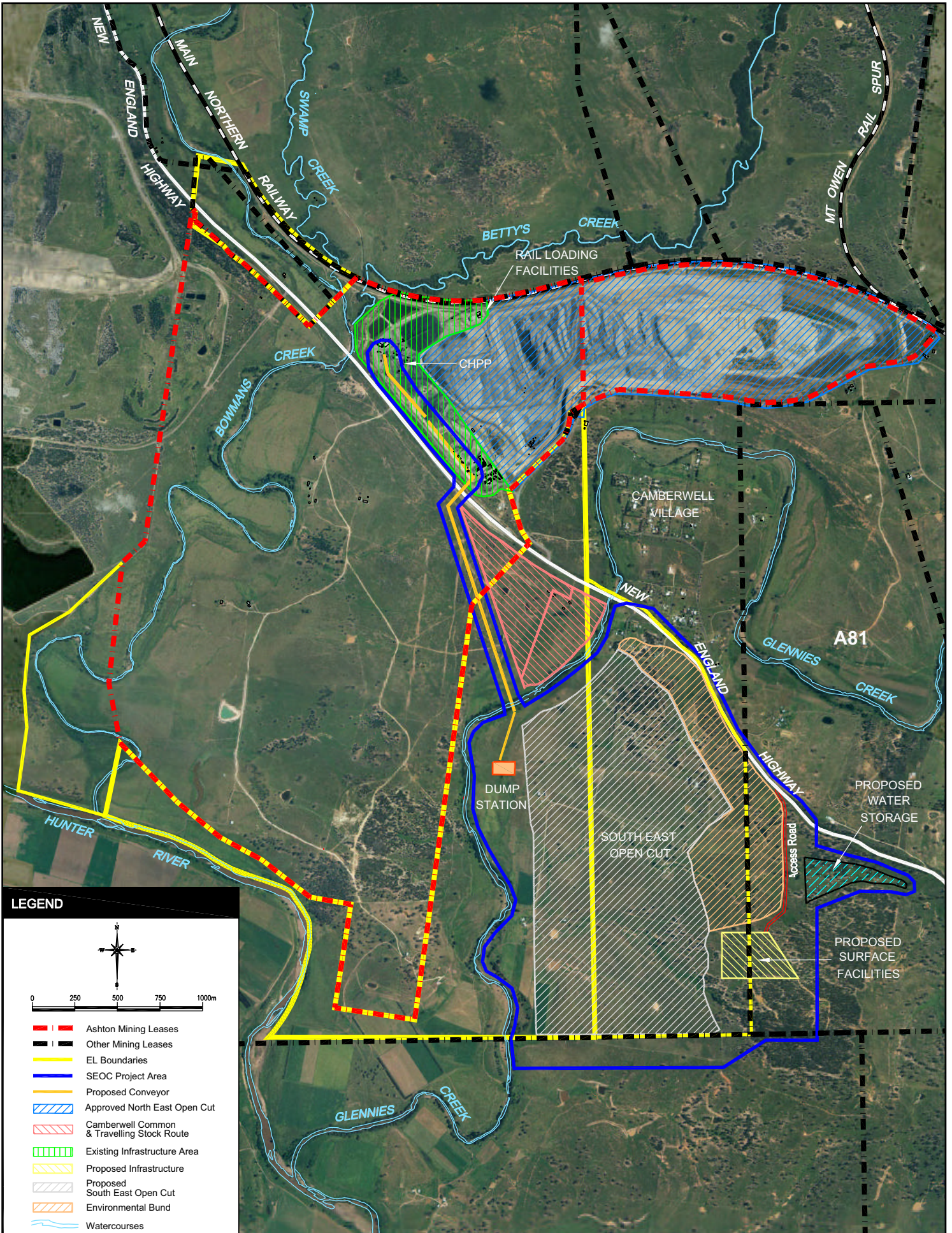
The existing NEOC workforce will be deployed to the SEOC, comprising 154 employees and 6 permanent contractors.

The mining method utilised would be primarily truck and excavator with some potential for highwall mining. Mining will commence from the north and progress to the south. Initial overburden displaced will be used to construct the environmental bund and out of pit emplacement at the northern end of the pit. Overburden will then be backfilled into the SEOC.

The SEOC will utilise the existing Ashton CHPP infrastructure and produce 2.4Mtpa of product coals consisting of soft coking coal, or low moisture, high energy, steaming coals primarily for the export market. In order to allow the effective integration and combined operation of the SEOC with the existing ACP an application to modify the existing ACP Development Consent under Section 75W of the EP&A Act will also be lodged. ACOL seeks to modify the ACP Development Consent in the following manner:

- Increase the through put of the CHPP and rail loading facilities to cater for approximately 8.6Mtpa of ROM coal (or an additional 2.3Mtpa of product coal);
- Modification of the existing CHPP facilities to allow the receipt of coal from the SEOC;





- Disposal of coal tailings from the existing underground coal mine in the SEOC final void;
- Increased coal extraction rate from 2.95Mtpa ROM to 5.0Mtpa ROM coal in the existing underground coal mine; and
- Associated modifications to the conditions of (DA) 309-11-2001-i to facilitate the above changes.

A single Environmental Assessment Report will be prepared to address both the Major Project Application for the SEOC and the application to modify the existing ACP Development Consent.

2.1 The Coal Resource and Geology

2.1.1 Regional Setting

The ACP lies within the Hunter Coalfields of the Sydney Basin and includes coal resources and reserves that occur largely within the Foybrook Formation. The Foybrook Formation is part of the Vane Subgroup of the Whittingham Coal Measures and represents the early component of the Late Permian Singleton Super Group.

The ACP lies mostly on the western limb of the Camberwell Anticline. However, in the northeast a small component is located on the crestal and eastern limb of this structure. The strata strikes in a northerly direction with dips ranging from 5 to 10 degrees and 9 to 18 degrees on the western and eastern limbs respectively. A full sequence of the Foybrook Formation, generally about 250m thick is present within ML 1533. The most important seams occur in the lower 180m of the Foybrook Formation. These are the Lemington, Pikes Gully, Upper Liddell, Upper Lower Liddell, Lower Barrett and Hebden seams.

Within the SEOC area east of ML 1533, the Foybrook Formation has been progressively eroded until at the eastern boundary of the area the coal seams have been completely eroded and the underlying Saltwater Creek Formation exposed.

Along the eastern boundary of EL 4918, Glennies Creek has incised a course into and around the plunging nose of the Camberwell Anticline. The creek appears to have preferentially followed the less resistant, coal prone, basal part of the Foybrook Formation.

The coal measure sequences are primarily fluvial and are composed of variously interbedded sandstone, siltstone, conglomerate, mudstone, shale and coal. Many of the sandstone units are massive and include significant wedges and lenses of channel filling pebble and granule, polymictic-conglomerate.

2.1.2 Exploration

The geology of the proposed SEOC mine area has been defined by surface drilling on an approximate grid of 500m.

Boreholes have been drilled in the area by three separate mining companies, each of which has a different borehole identification code. These are:

- DRM (Durham);
- GCK (Glennies Creek); and
- WML (White Mining).

The geological information has been previously modelled by SMG consultants using the Minex database. This model has recently been updated to incorporate all drilling to date, plus field information from the Ashton operating mines and information from surrounding mines.

A number of open holes and cored holes have recently been drilled in the area of the proposed SEOC. A small program of cored holes was also completed in early January 2008. Coal quality data has not yet been finalised. The quality data will be incorporated in the model when it becomes available.

2.1.3 Coal Seams to be Mined

Most important seams in the SEOC are the Liddell, Barrett, and Hebden Seams and associated splits, with the upper levels of the Foybrook Formation weathered in the SEOC area, many of the seams crop within or adjacent to the SEOC pit limits.

Geological cross sections illustrating the coal seams to be mined in the proposed SEOC are illustrated within **Figure 5** and **Figure 6** below.

2.1.4 Coal Quality

Product coal from the SEOC will have the potential to yield soft coking coal, or low moisture, high energy, and steam raising coal for both domestic and export markets. The coal generally has the following characteristics:

- 75% of product meets semi-soft specifications;
- Sulphur moderate (0.6%);
- Fluidity 500 – 2000 ddpm;
- Virtrinite reflectance 78 – 82 %
- Swell generally exceeds 6.5;
- Moisture approx 2.5% (adb);
- Ash fusion temp > 1560°C; and
- Hardgrove Index approx 50.

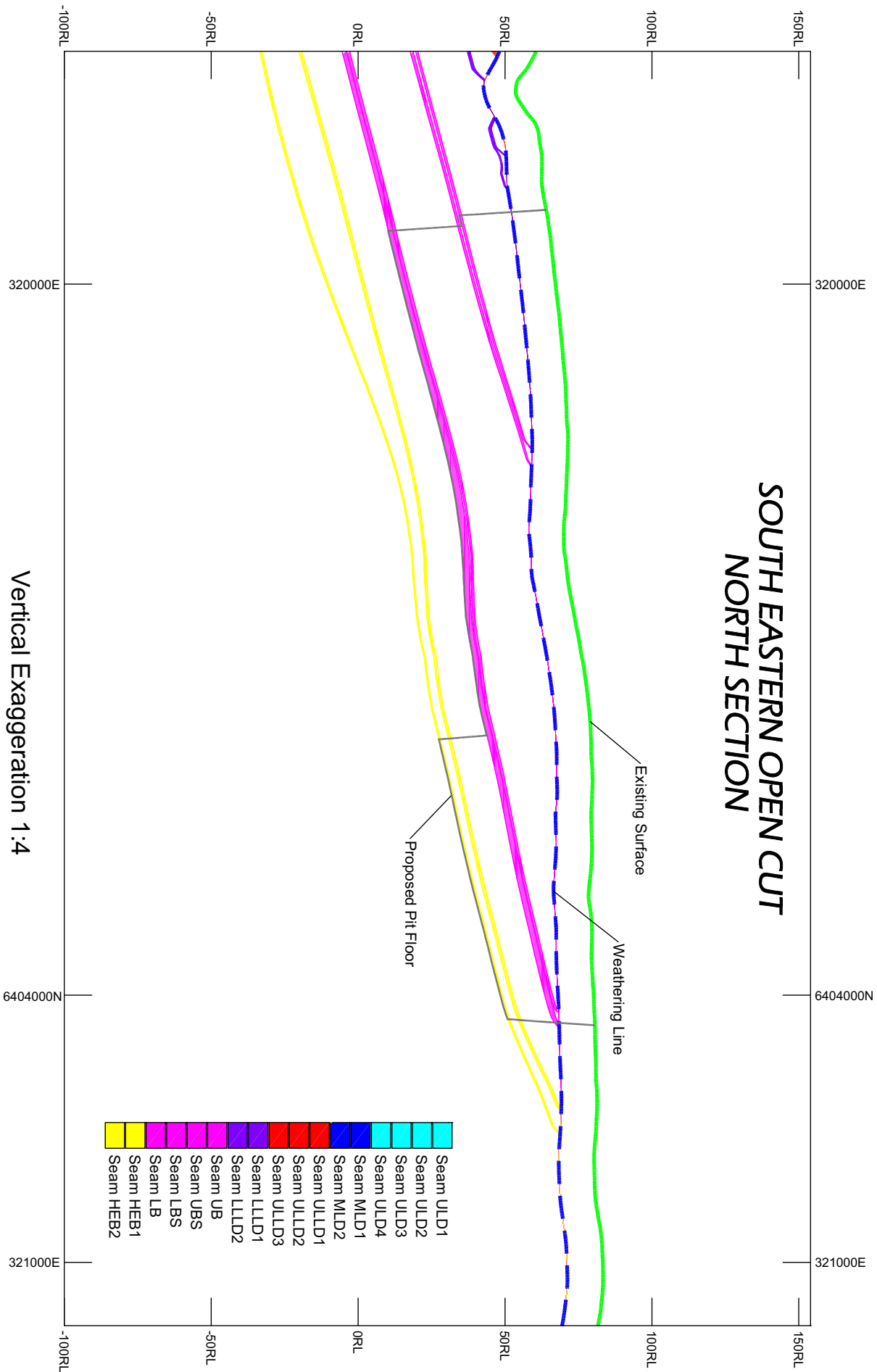
2.2 Land Ownership and Land Use

The SEOC land area is owned by the Crown, ACOL, and private landholders.

The SEOC is largely cleared of vegetation and used for grazing and occasional cultivation. There are 5 privately owned residences within the SEOC area.

The land capability classification for the SEOC area ranges from Class I to III along Glennies Creek to Class IV to VI over the majority of the area. These land classifications indicate that the land is best suited to grazing with occasional cultivation provided appropriate soil conservation practices are employed.

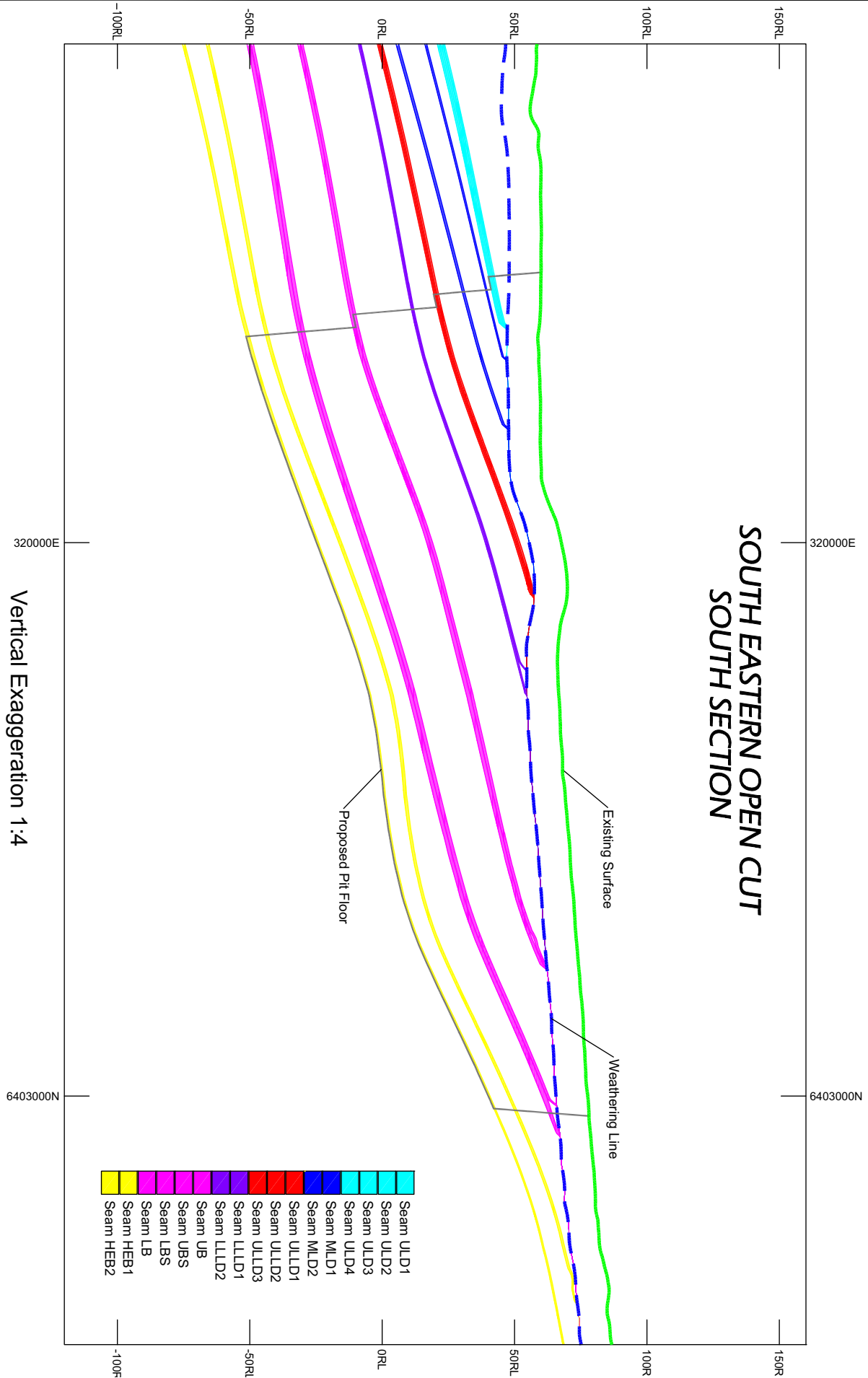
SOUTH EASTERN OPEN CUT NORTH SECTION



- Seam ULD1
- Seam ULD2
- Seam ULD3
- Seam ULD4
- Seam MLD1
- Seam MLD2
- Seam ULLD1
- Seam ULLD2
- Seam ULLD3
- Seam LLLD1
- Seam LLLD2
- Seam UB
- Seam UBS
- Seam LBS
- Seam LB
- Seam HEB1
- Seam HEB2

SOUTH EASTERN OPEN CUT SOUTH SECTION

Vertical Exaggeration 1:4



2.3 South East Open Cut Mine

The proposed SEOC occupies an area of approximately 384ha, refer to Figure 3 and Figure 4.

Total SEOC resources are estimated at 20.6Mt of ROM coal. The base of weathering ranges from 7 to 40m with pit depths up to approximately 90m.

The SEOC is constrained by the New England Highway to the north, cropping coal seams to the east, Glennies Creek and the associated alluvium to the west and mining tenement boundaries to the south. The final design of the SEOC will be dependent on further investigations on the Glennies Creek alluvium and proximity from the alluvium that safe mining can occur.

The initial out of pit overburden from the box cut and developing open cut will be located adjacent to the New England Highway forming an environmental bund to ameliorate visual and acoustical impacts. In pit dumping will be undertaken as soon as practical.

Conventional truck and excavator mining systems will be used with a haul back system to maximise in-pit backfill of waste. Variations including throw blasting and dozer push may also be used.

Access to the SEOC facilities will be from a new intersection with the New England Highway. ROM coal will be hauled from the SEOC coal face to the ROM hopper by the private haul roads within and adjacent to the open cut.

Mining in the SEOC will commence in the north and progress to the south.

The SEOC presents a potential opportunity to maximise the recovery of available coal by the use of highwall mining techniques. The incorporation of highwall mining into the mine design will require detailed mine planning and environmental investigations with respect to mine scheduling and the Glennies Creek alluvium.

The final void of the SEOC will be located in the southern corner of the open cut. The location of this void allows potential for continued open cut mining of coal reserves to the south or potential for the disposal of tailings from coal processing.

2.3.1 Mining Schedule

The SEOC will produce up to 2.4Mtpa of product coal from the proposed 3.6Mtpa of ROM coal to be extracted. At planned extraction rates the SEOC will run for approximately 7 years. The mine will commence approximately 3 months prior to the completion of the Barrett Pit within the NEOC to ensure continuity of employment for mine workers and coal production.

The open cut will operate 24 hours per day, 7 days per week.

2.3.2 Reject and Tailings

The processing of coal from the SEOC will generate approximately 1.2Mtpa of coarse and fine reject material. Disposal of coarse and fine reject will be considered for the whole of the ACP to ensure there is adequate disposal available for existing approved operations and the proposed SEOC.

Disposal of the coarse reject will be within voids associated with the NEOC, as currently undertaken or potentially by the utilisation of co-disposal techniques. The disposal of fine reject material will be consistent with current tailings storage plans that include storage within the

Ravensworth void and the future void of the NEOC. There is a potential to move toward co-disposal techniques for disposal in the NEOC void. Current estimates of existing tailings storage capacity indicates that disposal of tailings within inspoil tailings dams in the SEOC may be required and in the longer term tailings disposal within the void of the SEOC will also be required.

Tailings will be piped to the SEOC via a series of pipelines that will run generally along the conveyor route. These pipelines will have the capacity to pipe tailings to the SEOC, decant water back from the SEOC tailings storages, and clean water pipelines through to the SEOC facilities and associated water storages.

2.3.3 Surface Facilities

The SEOC will include offices, bathhouse, workshop facilities and stores accessed via a new intersection off the New England Highway. A water storage dam is proposed to be constructed to the east of the proposed SEOC facilities and additional mine water storages associated with the Open Cut pit.

Coal mined from the SEOC will be trucked to a ROM coal station. The ROM coal station will be located on the western boundary of the SEOC, and on the eastern side of Glennies Creek. Coal will be stockpiled or fed directly into the ROM coal hopper, crushed and then transported approximately 2.5km north west by conveyor that traverses Glennies Creek and the New England Highway for processing at the existing ACP CHPP.

Coal will be processed in the existing ACP CHPP and loaded onto trains for rail transport to the consumer. The location of proposed SEOC surface facilities are illustrated in Figures 3 and 4.

2.3.4 Water

2.3.4.1 Existing ACP Water Supply

The approved ACP currently sources water from the following locations:

- ACOL licenced extraction from Glennies Creek and the Hunter River;
- Water make from open cut operations;
- Water make from underground operations;
- Rainfall captured within the NEOC area; and
- Water from the Glennies Creek Mine (via a water sharing arrangement).

This application seeks to rationalise the existing water infrastructure of pumps and piping to ensure the system can be operated as efficiently as possible. Rationalisation may include aspects such as the relocation of the approved pump and piping facilities from Glennies Creek to a location more central to the SEOC.

2.3.4.2 SEOC Water Supply and Management

The water supply for the SEOC is proposed to be generally consistent with the existing ACP water management and supply system. The SEOC will utilise the proposed storage dam as a key location for storage of clean waters and prevention of inflows to the open cut.

Water management within the SEOC will generally concentrate on the diversion of clean waters where possible (by gravity or pumping) around mining operations, with exception to the proposed storage dam that will harvest clean water from the upstream catchment. Dirty waters will be captured onsite and used for dust suppression within the SEOC or piped back to the CHPP for use other areas of the ACP.

2.3.5 Utilities and Services

Several Energy Australia assets traverse the SEOC area including two 132kV, a 66kV power line and several 11kV lines feeding rural dwellings in the area. While many of the 11kV lines will become obsolete, the larger 132 and 66kV lines will require realignment. Consultation is underway with Energy Australia to determine the most appropriate alignment.

A fibre optic cable is located on the southern side of the New England Highway and may require relocation.

Several telecommunication lines traverse the SEOC area, the majority expected to terminate at rural dwellings in the SEOC area. Consultation will be undertaken with the relevant service providers to determine the extent of services that may be impacted and make alternative arrangements where required.

The environmental impact for the realignment of all utilities required due to the SEOC project will be assessed within the Environmental Assessment Report.

The proposed Queensland – Hunter gas pipeline has a proposed development corridor located more than 10km to the north and therefore does not require further consideration.

Figure 7 illustrates the location of services adjoining the SEOC.

2.3.6 Relocation and Closure of Roads and Crown Land

Several Crown Roads exist within the SEOC. These roads will require closure in consultation with the Department of Lands, Singleton Council and landowners.

The Camberwell Village Common is a portion of Crown land in the north of the SEOC area, to recover the full resource it will be necessary to relocate or close this common in consultation with the Department of Lands and the Common's Trustees.

2.3.7 Employment and Shift Times

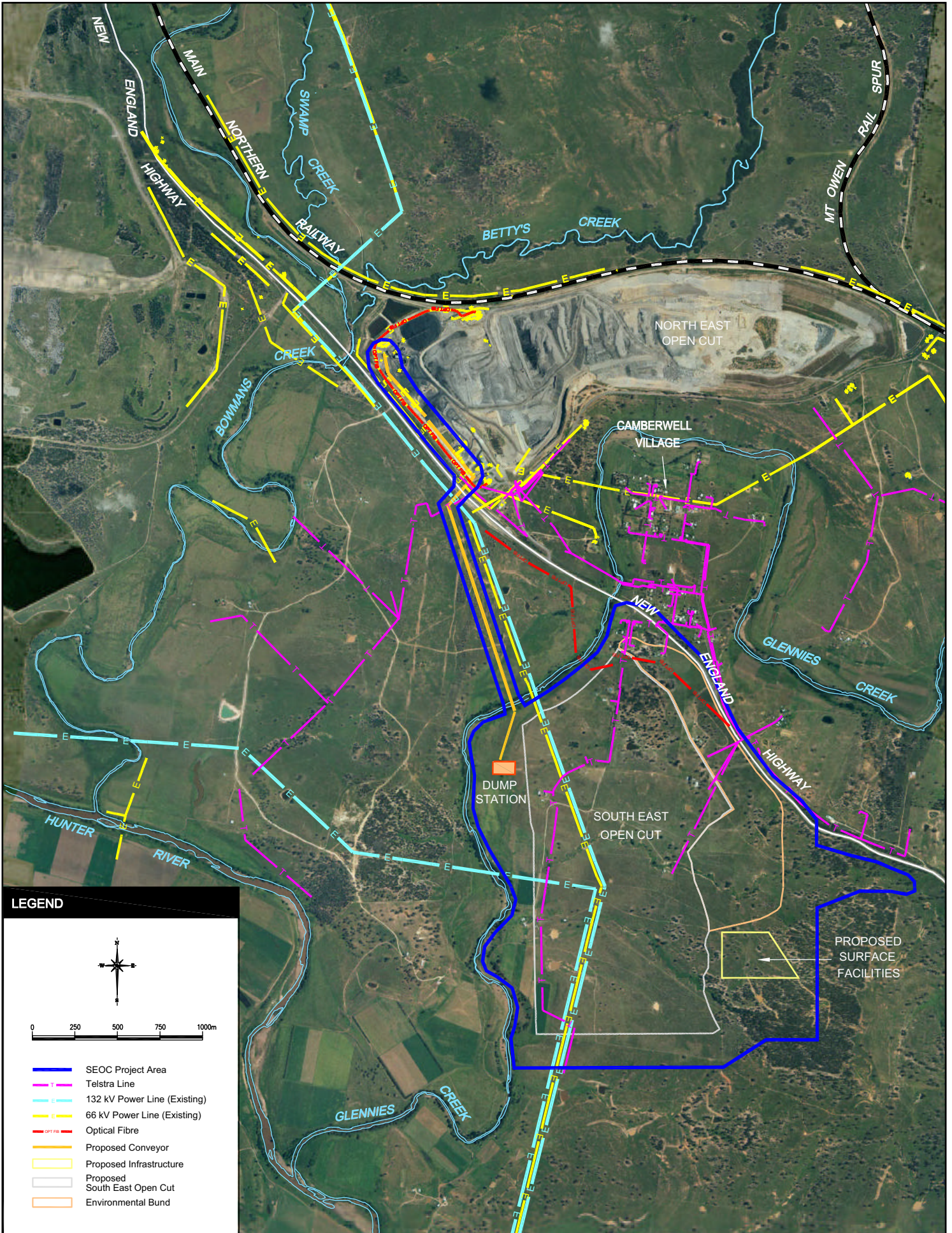
Employees in the NEOC will continue to be employed in the SEOC without change to the overall employment levels. Employment at the SEOC is expected to comprise approximately 154 employees and 6 permanent contractors.

Additional employment will be required for the construction of the facilities.

2.4 Modification to the Approved Ashton Coal Project

As detailed previously in order to allow the effective integration and combined operation of the SEOC with the existing ACP an application to modify the existing ACP Development Consent under Section 75W of the EP&A Act will also be lodged. ACOL seeks to modify the existing ACP Development Consent in the following manner:

- Increase the through put of the CHPP and rail loading facilities to cater for an additional 2.3Mtpa of product coal.
- Modification of the existing CHPP facilities to allow the receipt of coal from the SEOC;
- Disposal of coal tailings from the existing underground coal mine in the SEOC final void;
- Increased coal extraction rate from 2.95Mtpa ROM to 5.0Mtpa ROM coal in the existing underground coal mine.



A single Environmental Assessment Report will be prepared to address both the Major Project Application for the SEOC and the application to modify the existing ACP Development Consent.

2.4.1 The Approved CHPP and Rail Facilities

As previously detailed the original ACP Development Consent approved the extraction and processing through the CHPP of up to 5.2Mtpa (or 5.45Mtpa subject to approval of a modification) of ROM coal, according to the original EIS this generally equates to 4.1Mtpa of product coal that can be transported by rail from the site.

This application will seek to increase the throughput of the CHPP and coal loading facilities from the approved limit to 8.6Mtpa of ROM coal (i.e. 3.6Mtpa from the SEOC and 5Mtpa from the approved underground), resulting in an estimated 6.4Mtpa of product coals leaving the site by rail.

2.4.2 Modification of the Existing CHPP Facilities

To allow for the receipt of coal at the existing ACP processing plant from the SEOC it will be necessary for the modification of the existing facilities including additional stockpiles, reclaimers and conveyors located adjacent to the existing ACP CHPP facilities.

2.4.3 Disposal of Reject in the SEOC Final Void.

The ACP currently disposes of tailings within the Ravensworth void (pursuant to Modification 3 of DA 309-11-2001 approved on 29 February 2007) and coarse reject within the NEOC. The current reject (coarse and fine) disposal locations will not have available capacity for reject from the SEOC. To alleviate potential shortfalls in available reject capacity it is proposed to pipe reject (from the SEOC and the approved underground mine) back to the SEOC for disposal within in pit tailings cells and the final void

2.4.4 The Approved Underground Mine

The approved descending longwall underground coal mine was granted approval to operate 24 hours per day, 7 days per week. The underground is currently only operating over 5 days per week and is currently limited by the approved extraction rate. ACOL seek to increase the production from the underground to a maximum of 5Mtpa of ROM coal.

The increase in the production rate is not expected to result in any significant impacts to the environment above those already approved in the original development consent. The increase in the production rate will be modelled to determine impacts from the total ACP inclusive of the SEOC.

3 LEGISLATION AND CONSULTATION

3.1 Introduction

This section details the relevant New South Wales and Commonwealth legislation that applies to the environmental assessment of the SEOC.

Prior to entering into the formal legal approval path ACOL developed, based upon its prospecting, a mine plan to establish that there is an economically and environmental acceptably recoverable coal resource in the SEOC area of the ACP.

A Conceptual Project Development Plan (CPDP) being an in principle mine plan was developed and presented to the Department of Primary Industries – Mineral Resources (DPI-MR) on 26 June 2008 for its comments.

The DPI-MR indicated its support for the mine plan for the SEOC. The PDP mine plan for the SEOC forms the basis of this Major Project Application made to the Minister for Planning.

3.2 Environmental Planning and Assessment Act

3.2.1 SEOC Project Approval Authority

On 9 September 2008, the Director-General, as delegate of the Minister for Planning, formed an opinion under Clause 6(1) of *State Environmental Planning Policy (Major Projects) 2005*, that the Ashton South East Open Cut Coal Project is development referred to in Clause 5(1)(a) "development for the purposes of mining that is coal mining" – and is thus declared to be a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies.

The approval authority for the project will be the Minister for Planning pursuant to the provisions of Part 3A (Major Projects) of the EP&A Act 1979 and State Environmental Planning Policy (Major Project) 2005.

3.2.2 Existing Development Consent Modification

The ACP was granted development consent under Part 4 of the EP&A Act as designated, state significant, integrated development in 2002 by the Minister for Planning.

ACOL is seeking approval from the Minister of Planning to modify DA 309-11-2001 pursuant to Section 75W of the EP&A Act.

Had the ACP been approved after the commencement of Part 3A of the EP&A Act, the ACP would have been a project to which Part 3A applies because it is development for the purposes of coal mining (Schedule 1, Group 2 of the *State Environmental Planning Policy (Major Projects) 2005*).

Consequently the ACP is "A development consent in force immediately before the commencement of Part 3A" of the EP&A Act "...that would be a project to which Part 3A of the [EPA] Act applies but for the operation of clause 6(2) (a) of State Environmental Policy (Major Projects) 2005".

As such the ACP consent meets the prerequisite in Clause 8(J)8 of the EP&A Regulations 2000 entitling the Minister to "...approve of the development consent [ACP Consent] being treated as an approval for the purposes of Section 75W of the [EPA] Act".

3.2.3 Permissibility of the SEOC

3.2.3.1 Introduction

Under Section 75J(3), the Minister for Planning when deciding whether to approve the carrying out of a project may (but is not required) to take into account the provisions of any environmental planning instrument that would not (because of Section 75R) apply to the project if approved. However, the EP&A Regulations 2000 may preclude approval for the carrying out of a class of project that such an instrument would otherwise prohibit.

In this respect, Clause 8O of the EP&A Regulations states:

"8O Other projects prohibited by environmental planning instruments for which project approval may not be given

(1) *For the purposes of section 75J (3) of the Act, approval for the carrying out of a project may not be given under Part 3A of the Act for any project, or part of a project, that:*

(a) is not the subject of an authorization or requirement under section 75M of the Act to apply for approval of a concept plan, and

(b) is prohibited by an environmental planning instrument that would not (because of section 75R of the Act) apply to the project if approved."

Accordingly, it is necessary to consider whether the SEOC is prohibited by an environmental planning instrument.

3.2.3.2 SEPP (Mining)

Clause 7 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (SEPP (Mining))* states:

"7 Development permissible with consent

(1) ***Mining***

Development for any of the following purposes may be carried out only with development consent:

(a) underground mining carried out on any land,

(b) mining carried out at surface level:

(i) on land where development for the purposes of agriculture or industry may be carried out (with or without development consent), or

(ii) on land that is, immediately before the commencement of this clause, the subject of a mining lease under the [Mining Act 1992](#) or a mining license under the [Offshore Minerals Act 1999](#),"

The SEOC will constitute mining carried out at surface level.

The SEOC and associated facilities will be permissible under Clause 7(1) (b) of SEPP (Mining) if development for the purposes of agriculture or industry may be carried out (with or without development consent) under the terms of the relevant environmental planning instrument. It is

therefore necessary to consider the zonings of the land and land uses permitted under the *Singleton Local Environmental Plan 1996* to determine whether the land upon which the SEOC and associated facilities are proposed that mining, agriculture or industry is permissible development.

3.2.3.3 Singleton Local Environmental Plan 1996

Under the Singleton Local Environmental Plan 1996, the SEOC and associated facilities are located on land zoned:

- 1(a) Rural; and
- 1(d) Small Rural Holdings.

1(a) Rural

Mining is permissible with consent in the 1(a) Rural Zone. In addition, agriculture is permissible and accordingly under Clause 7(1) (b) (i) of SEPP (Mining) mining is permissible.

1(d) Small Rural Holdings

Mining is prohibited within the Small Rural Holdings Zone. The environmental bund is the main mining related feature within this zoning. Agriculture is permissible within the zone, and accordingly under Clause 7(1) (b) (i) of SEPP (Mining) mining is therefore also permissible.

3.2.3.4 Summary regarding permissibility

The SEOC and associated facilities are permissible with consent having regard to the provisions of Singleton Local Environmental Plan 1996 and Clause 7 of the SEPP Mining.

Accordingly, the Minister for Planning is not precluded from granting approval to the SEOC by the provisions of Section 75J (3) of the EP&A Act 1979 and Clause 80 of the EP&A Regulations 2000.

3.3 State and Regional Environmental Plans

In addition to the SEPP Mining the following State Environmental Planning Policies (**SEPP**) and Regional Environmental Plans would apply to consideration by the Minister for Planning of the SEOC but for Section 75R which has the effect of removing the obligation for her to consider them but allows her to do so if she so elects. The development of the SEOC is not prohibited by any of these instruments.

The Environmental Assessment will consider the following instruments:

- *SEPP No. 33 – Hazardous and Offensive Development;*
- *SEPP No. 44 – Koala Habitat Protection;*
- *SEPP No. 55 – Remediation of Land;*
- *SEPP (Major Projects) 2005;*
- *SEPP (Mining, Petroleum Production and Extractive Industries) 2007;* and
- *Hunter Regional Environmental Plan 1989.*

3.4 Legislative Context

In addition to major project approval under the EP&A Act 1979, the SEOC within the ACP will also require authorisations under various laws. These are discussed below.

3.4.1 Section 75U EPA Act

Pursuant to Section 75U of the EP&A Act 1979, there are a number of authorisations that will not be required for the SEOC if approval is granted by the Minister for Planning under Part 3A and the SEOC becomes an approved project. Relevantly, the authorisations that will not apply because of Section 75U include:

- A permit under Section 87 or a consent under Section 90 of the *National Parks and Wildlife Act 1974*; and
- A water use approval under Section 89, a water management work approval under Section 90 or an activity approval under Section 91 of the *Water Management Act 2000*.

3.4.2 Section 75V EPA Act

Pursuant to Section 75V of the EP&A Act 1979, there are a number of authorisations that must be issued in terms substantially consistent with the Part 3A approval if such approval is required for the conduct of the approved project. These authorisations are (relevantly):

- A mining lease under the *Mining Act 1992*;
- An environment protection licence (EPL) under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in Section 43 of that Act); and
- Consent under Section 138 of the *Roads Act 1993*.

3.4.3 Mining Act 1992

A mining lease will be required to carry out the SEOC. If the SEOC becomes an approved project the Minister for Mineral Resources must issue a mining lease in terms that are substantially consistent with the project approval granted by the Minister for Planning.

3.4.4 Protection of the Environment Operations Act 1997

An environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* will be required for the SEOC. If the SEOC becomes an approved project the Department of Environment and Climate Change must issue an environment protection licence in terms that are substantially consistent with the project approval granted by the Minister for Planning

3.4.5 Roads Act 1993

The SEOC requires the closure of minor local roads and unformed “paper” roads which will be affected by open cut mining. An intersection with the New England Highway is proposed to access the SEOC facilities area. An approval under Section 138 of the *Roads Act 1993* from the Roads and Traffic Authority and Singleton Shire Council will be required for these works. If the SEOC becomes an approved project the Singleton Shire Council must issue an approval under Section

138 in terms that are substantially consistent with the project approval granted by the Minister for Planning.

3.4.6 Water

The ACP and SEOC area are currently administered under both the Water Act 1912 and the Water Management Act 2000 with respect to water approvals and licensing.

The following water sharing plans are in force or have been drafted for the area:

- *Water Sharing Plan for the Hunter Regulated River Water Source 2003* – applies to Glennies Creek and the unconsolidated alluvial sediments underlying waterfront land (i.e. within 40m of the top bank); and
- *Draft Hunter Unregulated and Alluvial Water Sources Water Sharing Plan (DWSP)* – applies to the unregulated alluvial water sources (outside of Glennies Creek) across located within the Glennies Creek Extraction Management Unit within the Hunter Catchment.

Until the DWSP is commenced, licensing of activities, water use, water works and approvals are governed by the Water Act 1912. Water use approvals and activities are governed by the Water Management Act 2000. Licencing of groundwater bores within the *fractured rock aquifers and basement rocks* are and will continue to be governed by the Water Act 1912. At present, licencing of surface waters within the Project Area is also governed by the Water Act 1912. When the DWSP commences, licencing and trading rules of water associated with the unregulated rivers and alluvials associated with them (as described within the DWSP) will be governed by the rules contained within the DWSP and the approvals required under the Water Management Act 2000.

The DWSP has been on exhibition and the DWE is currently considering submissions before finalising the DWSP. It is anticipated that the DWSP will formally commence some time during 2009.

When the DWSP commences the licensing of activities, water use, water works and approvals provisions of Water Management Act 2000 (WMA) (contained within Parts 2 and 3 of the Chapter 3 of the WMA) will apply to the area of the ACP.

By virtue of Section 75U of the EP&A Act 1979 water use approvals under Section 89, water management work approvals under Section 90 and activity approvals under Section 91 are not required for a project which has been approved under Part 3A of the EPA Act. Section 75U does not provide any exemption from the obligation to secure a Water Access Licence (under Section 56 WMA).

The proposed water storage dam located to the east of the SEOC is inline within a 2nd Order stream and is likely to exceed the maximum harvestable rights dam capacity (MHRDC) as such if the DWSP is in force the dam will require licencing under the Water Management Act, if the DWSP is not in force a licence will be required for the dam under Part 2 of the Water Act 1912.

3.4.7 Crown Lands Act 1989

The approval of the Department of Lands will be required under the *Crown Lands Act 1989* for any works or mining in Crown road reserves or on Crown land. This will apply in respect of Crown roads within the project area and the Camberwell Village Temporary Common.

3.4.8 Coal Mine Health and Safety Act 2002

The primary objective of the *Coal Mine Health and Safety Act 2002* is to assist in securing the objects of the *Occupational Health and Safety Act 2000* in relation to coal operations and to put in

place special provisions necessary for the control of particular risks arising from the mining of coal. Under the *Coal Mine Health and Safety Act 2002* ACOL will be required to seek the approval of the Minister for Mineral Resources for the establishment of emplacement areas and will need to comply with the requirements for minimum barriers for underground workings.

3.5 Commonwealth Legislation

An approval from the Minister for Environment (Commonwealth) under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) is required for actions which may or will have a significant impact on a Matter of National Environmental Significance (**MNES**).

Preliminary studies have indicated that there will be no impact from the SEOC to MNES. However, an assessment and referral for the SEOC on MNES will be undertaken. An assessment under the bilateral agreement will be sought for the project.

3.6 Project Consultation

3.6.1 General Consultation

ACOL has been operating a coal mine on lands west of the SEOC since 2002. In this time considerable consultation with the community and government agencies has occurred and has contributed to the compilation of considerable knowledge in respect to social, environmental and geological knowledge of the project area.

3.6.2 Consultation with Agencies

On 26 June 2008 ACOL and its representatives presented the SEOC CPDP to the Department of Primary Industries – Mineral Resources. From this meeting support was given to the CPDP to allow the SEOC proposal to move to the next stage in the planning process.

On 6 August 2008 a letter was sent to the Department of Planning requesting that the project be considered a project to which Part 3A of the EP&A Act applies and for the Department of Planning to convene a Planning Focus Meeting.

On 9 September 2008, the Director-General, as delegate of the Minister for Planning, formed an opinion under Clause 6(1) of *State Environmental Planning Policy (Major Projects) 2005*, that the Ashton South East Open Cut Coal Project is development referred to in Clause 5(1)(a) "*development for the purposes of mining that is coal mining*" – and is thus declared to be a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies.

4 ENVIRONMENTAL ASSESSMENT AND IDENTIFICATION OF CRITICAL ISSUES

This section identifies the principal environmental planning issues associated with the application for the approval of the SEOC for consideration by the Minister for Planning. It is to enable the Director General of Planning to issue appropriate Environmental Assessment Requirements to enable the preparation of an Environmental Assessment Report to be prepared for the proposed SEOC under Section 75F of the EP&A Act 1979.

ACOL has gained approval for and have operated the ACP since 2002, the process for which involved extensive base line environmental studies as well as the investigation of effects of mining on both the physical environment and community. Consequently ACOL already has a good understanding of the existing social and physical environment and the potential effects of mining in the ACP area.

4.1 Environmental Summary

The SEOC is located immediately to the south of the Camberwell Village wholly within the Singleton local government area.

The locality is characterised by areas of predominantly cleared agricultural land utilised for livestock grazing and cultivation and open cut and underground coal mining operations.

The climate is characterised by typically hot wet summers and cold dry winters, with temperatures exceeding 32°C in summer and frequent frosts in winter. Winds typically emanate from the north-west in winter and the south-east in summer.

The soils are characterised by yellow podsollic soils on mid and upper slopes and drainage lines with patches of yellow soloth soils in some drainage lines. Alluvial soils are present along Glennies Creek.

4.2 Climate

Approximately 17km west of the ACP, the Bureau of Meterology (BOM) station at the Jerrys Plain's Post Office holds climate records since 1884, providing long term indications of weather in the area.

4.2.1 Rainfall and Evaporation

Seasonal changes are a factor in the distribution of annual rainfall, with a greater proportion of rainfall occurring during the summer months. Over the remaining seasons, the rainfall is spread more evenly with minimum totals generally being recorded in winter. The wettest median (i.e. where 50% of records are higher and 50% of records are lower) monthly rainfall occurs in January where 65.1mm occurs over an average of 6.5 days, while the driest median monthly rainfall occurs in May with only 28.7mm of rain falling over 4.9 days. The median rainfall is 644.2mm.

The mean monthly evaporation rate for the period 1970 to 1979 was 154 mm with monthly variations between 78 mm in May and 245 mm in January.

Much of the year is characterised by a water deficit.

4.2.2 Temperature and Humidity

Summers are often characterised by extremely hot conditions with the highest temperatures exceeding 45 degrees Celsius (°C). The average temperature during summer ranges from a maximum of more than 31°C, to a minimum of 16°C. During winter temperatures have been recorded below -4 °C with the the average temperature ranging from just over 4°C to more than 18°C. Frosts occur regularly in the May to August, where on average more than 27 days per year record temperatures below 2°C (temperatures less than 2°C measured at 1.2m typically equate to a ground surface temperature of 0°C, BOM 2008).

4.2.3 Winds

Summer winds are predominantly from the south-southeast, while during winter winds are generally confined to the north-northwest and northwest. The pattern in autumn and spring are a combination of these with winds from both the north-northwest and south-southwest, with approximately equal frequency.

4.2.4 Inversions

Temperature inversions occur when relatively dense, cool air bodies are trapped below warmer, lighter air masses. Inversions typically represent calm air (no wind) conditions at the surface and the two bodies of air do not mix readily. An inversion, therefore, inhibits the dispersion of dust and gases, tending to cause higher concentrations at ground level. An inversion can also effectively “trap” sound energy near the ground leading to an increase noise levels.

The consideration of the occurrence of inversions in the SEOC area will be critical in the effective modelling of potential noise and air quality impacts from the SEOC.

4.2.5 Weather Stations

ACOL has two established meteorological monitoring stations in the vicinity of the site with the potential to collaborate data from adjoining mines. The stations are located in the village of Camberwell and at the Repeater Station on the ridge above the village. The locations of the ACOL weather stations are shown in **Figure 8**.

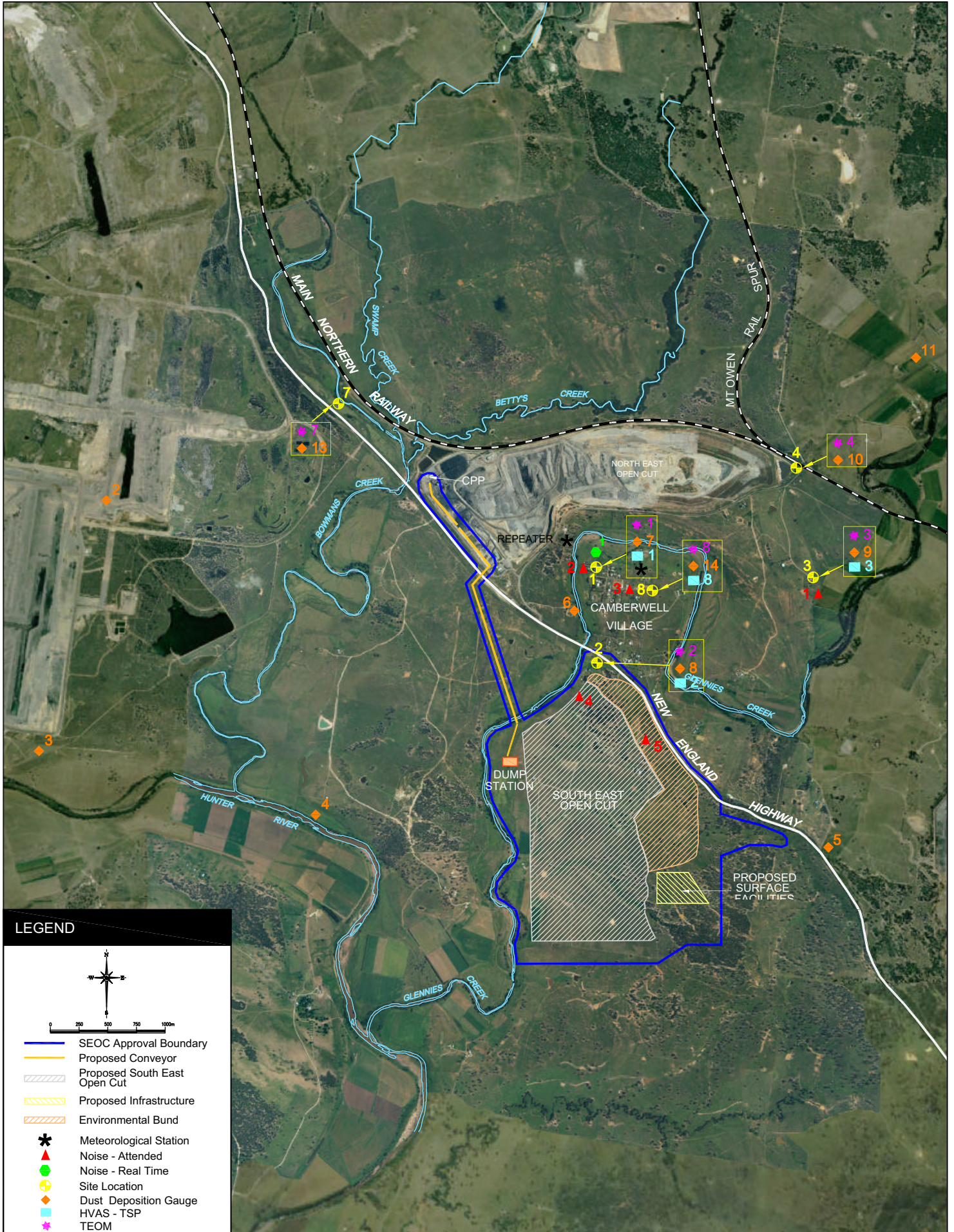
4.3 Air Quality

With the long history of coal mining in the area air quality in the vicinity of the ACP has been monitored for more than 20 years by several different mining companies. Monitoring for the ACP commenced in 1999.

Holmes Air Sciences have been engaged to undertake the air quality, greenhouse gas and health risk assessment for the SEOC. Holmes Air Sciences have a long history of air quality assessment and assessed the original ACP in 2001.

4.3.1 Air Quality Monitoring Network

ACOL has an extensive air quality monitoring network in and surrounding the existing ACP which provides an extensive baseline for the purposes of assessing potential impacts on air quality.



The ACOL air quality monitoring network includes:

- 12 dust gauges measuring dust deposition;
- 4 high volume air samplers (HVAS) for total suspended particulates (TSP); and
- 6 real time Tapered Element Oscillating Microbalances (TEOMs) measuring real time concentrations of particulate matter less than 10 micron (PM₁₀) in effective diameter.

4.3.2 Background Air Quality

Long term PM₁₀ monitoring results from 1996 to 2001 in Camberwell Village give an indication of the historic PM₁₀ levels within Camberwell Village prior to the commencement of the ACOL operations. During this five year period there are several periods in time where the historic annual average is above the cumulative annual average criteria of 30µg/m³.

A summary of the annual average air quality monitoring by ACOL for 2006-2007 is shown below:

- PM₁₀ recorded by the real time TEOMs indicate Annual Average PM₁₀ levels less than 30µg/m³ and 24hr PM₁₀ are below 150µg/m³;
- Annual average TSP ranges from 110.7µg/m³ to 77.7µg/m³; and
- Annual Average Dust Deposition ranges from 2.4 - 4.7g/m²/month in Camberwell Village to 7g/m²/month adjacent to adjoining mining operations.

4.3.3 Air Quality Goals

Tables 1 and 2 summarise the air quality goals expected to be relevant to the SEOC.

Table 1: Air Quality Standards/Goals for Particulate Matter Concentrations

Pollutant	Averaging Period	Criterion
Total suspended particulate matter (TSP)	Annual	90µg/m ³
Particulate matter < 10µm (PM ₁₀)	Annual	30µg/m ³
Particulate matter < 10µm (PM ₁₀)	24 hour	50µg/m ³

Table 2: DEC Criteria for Dust (Insoluble Solids) Fallout

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

4.3.4 Issues

The air quality issues for the environmental assessment of the SEOC are as follows;

- Impacts to the residents of the local area and in Camberwell Village are appropriately assessed;

- The location and air quality effects to all privately owned land and residences in the locality are identified;
- The assessment of the cumulative impacts from the SEOC and adjoining mines is assessed;
- Dust emissions from mining operations of SEOC are assessed for various years;
- Dust emissions from the existing and increased throughput at the CHPP are incorporated into modelling;
- A set of site-specific, synthetic meteorological data be created using The Air Pollution Model (TAPM) that where possible utilises locally collected data; and
- Scope 1,2 and 3 Greenhouse gas emissions are assessed along with the potential impacts to Climate Change; and

A large number of properties in the immediate vicinity of the SEOC have been acquired by ACOL or are under the ownership / control of adjoining coal mines. ACOL maintain their commitment for the acquisition of properties within and adjacent to the Camberwell Village when requested.

4.4 Acoustics & Blasting

Spectrum Acoustics have been engaged to undertake acoustics and blast modelling assessment for the project and consider cumulative impacts and safeguards.

Spectrum Acoustics (or its principals) have worked on the ACP since 1999, including the management, refinement and calibration of the acoustic model and attended monitoring. Modelling for the SEOC will utilise experience gained from the existing work undertaken on the ACP.

4.4.1 Noise Monitoring

ACOL currently have one real-time noise monitor (a Sentinex monitor) installed within Camberwell Village. The monitor has the functionality that allows some separation of mine noise from typical village sounds to help ACOL identify machinery that may be contributing to high noise levels. The monitor also continuously records noise.

In addition to the real time monitor ACOL monitor potentially impacted residential receptors on a quarterly basis in accordance with the ACP conditions of consent. Typically this equates to five (5) regular attended monitoring sites that are monitored by Spectrum Acoustics.

Attended noise monitoring during the 2006-2007 ACP reporting year identified exceedances of the noise criteria on five (5) occasions predominantly when winds where emanating from generally the north and north-westerly direction, (i.e. from the mine towards the Camberwell Village). During times when winds where from generally an easterly of southerly direction the noise levels from the ACP in Camberwell Village where generally inaudible.

4.4.2 Acoustic Goals

Acoustic goals for the SEOC will be developed in general accordance with the Industrial Noise Policy and National Environmental Protection Measures (NEPM) having regard to the elevated noise levels that are contributed from the New England Highway, and adjoining mining operations.

4.4.3 Blasting and Vibration Goals

Blasting and vibration goals will be developed for the SEOC, with the goals at any residence or other noise sensitive receiver expected to be consistent with the following:

- 115dB (Lin Peak) for more than 5% of the total number of blasts during each year; and
- 120dB (Lin Peak) at any time.

The criteria for ground vibration peak particle velocity from blasting operations carried out at the SEOC will be determined during the Environmental Assessment process but are expected to be generally consistent with the following:

- 5mm/s for more than 5% of the total number of blasts carried out in or on the premises during each reporting period;
- St Clements Anglican Church 2mm/s for more than 5% of the total number of blasts carried out in or on the premises during each reporting period;
- Exceed 10mm/s at any time at any residence or other noise sensitive receiver such as the St Clements Anglican Church; and
- Maintain safe ground vibration peak particle velocities at adjacent infrastructure items.

4.4.4 Issues

The anticipated noise issues for the environmental assessment of the SEOC are as follows.

- Noise and vibration effects associated with the project to all privately owned land and residences in the locality are identified;
- The cumulative impacts of the SEOC and neighbouring mines needs to be assessed and taken into account;
- Potential vibration impacts to the St Clements Church in Camberwell and New England Highway bridge are assessed;
- That noise emissions from mining operations will be assessed for various years;
- Noise emissions from the existing and increased throughput at the CHPP are incorporated into modelling;
- A set of site-specific, synthetic meteorological data be created using The Air Pollution Model (TAPM) that where possible utilises locally collected data; and
- Modelling will be in accordance with the requirements of the INP and consideration given to cumulative impacts of other industrial/mining operations.

A number of privately owned properties in the immediate vicinity of the SEOC have been acquired by ACOL or are under the ownership / control of adjoining coal mines. ACOL maintain their commitment for the acquisition of properties within and adjacent to the Camberwell Village when requested.

4.5 Water Management

The SEOC will be incorporated into the existing approved ACP site water management system and managed to minimise impact on groundwater and surface waters, whilst maintaining safety for people and equipment.

ACOL currently source water for operations from the disturbed mining areas and the dewatering of the Underground Mine. ACO has a nil discharge policy however should in the future it be required and the appropriate licences under the Hunter Valley Salinity Trading Scheme become available this may change.

A water storage dam to the east of the proposed facilities location within a natural gully is proposed as part of the SEOC operation. The storage dam will capture clean runoff from up gradient and also be supplemented if required by creek water pumped under licence. Water from this dam will be utilised in the facilities and for dust suppression and revegetation activities.

4.6 Groundwater

Aquaterra (formerly Peter Dundon & Associates) have been engaged to undertake the groundwater impact assessment for the SEOC. Aquaterra has undertaken groundwater assessments for the ACP underground mine for the purposes of the Subsidence Management Plan. Aquaterra's work at the ACP has resulted in a groundwater model that is already substantially calibrated to actual mining conditions in the locality.

4.6.1 Existing Monitoring and Investigations

Groundwater investigations for the ACP have been ongoing since 1999 with the investigations on the impacts of the ACP for the original Environmental Impact Statement, and then additional and ongoing studies associated with the development of the ACP underground mine.

Monitoring of groundwater for the ACP is currently managed by the approved Groundwater Management Plan (GWMP). Groundwater monitoring for the SEOC will be an extension of this management plan.

Investigations to date indicate that the groundwater quality varies spatially within and between each coal seam, but is generally characterised by high electrical conductivity (EC) ranging from 3,000 to 10,000 μ S/cm and near neutral to alkaline pH. The electrical conductivity of groundwater connected to mined strata typically increases.

Groundwater within the alluvium is generally of better quality having an electrical conductivity ranging from 900 to 1,200 μ S/cm and the pH near neutral to alkaline.

4.6.2 Issues

- The delineation of the Glennies Creek alluvial aquifer system;
- The mine design and groundwater assessment to consider and assess potential impacts to the Glennies Creek alluvials;
- The modelling and assessment of potential impacts, including cumulative impacts associated with adjoining mines and the ACP underground mine;

- Assessment of impacts to surrounding groundwater users including the environment; and
- The cumulative impacts to groundwater from the approved ACP underground mine, the adjoining mines and the proposed SEOC.

4.7 Surface Water and Flooding

Worley Parsons (incorporating Paterson Britton) have been engaged to assess impacts to surface water, address surface water management and undertake a flood impact assessment.

4.7.1 The Catchment

The SEOC is located within the lower reaches of the Glennies Creek (or Fal Brook) catchment. Glennies Creek is approximately 45km long and flows from its headwaters at Mount Royal (1184m AHD) to the Hunter River (50m AHD). Glennies Creek has a catchment of approximately 515km² of which a portion is impounded within Lake St Clair approximately 20km north-east of the ACP (MPR 2006). The Glennies Creek Catchment is generally characterised by agricultural properties and open cut and underground coal mines. Glennies Creek confluence with the Hunter River is approximately 1.5km to the south-west of the SEOC.

The SEOC is located on the eastern side of Glennies Creek. The SEOC area has a total catchment of approximately 600ha (6km²) of the where water drains generally in a south and westerly direction into five (5) unnamed tributaries of Glennies Creek from an elevation of 170m AHD in the east to less than 60m on Glennies Creek. The largest of the unnamed tributaries extends approximately 4km to the east from Glennies Creek and is proposed to be dammed to create water storage for the SEOC.

4.7.2 Existing Monitoring Network

The ACP currently has a network of 14 surface water monitoring sites in around the ACP, these are illustrated in **Figure 9**. The network has numerous sites on Betty's Creek, Bowmans Creek, the Hunter River and Glennies Creek. Three (3) of these sites are on Glennies Creek and five (5) are on the Hunter River and are of particular relevance to the SEOC.

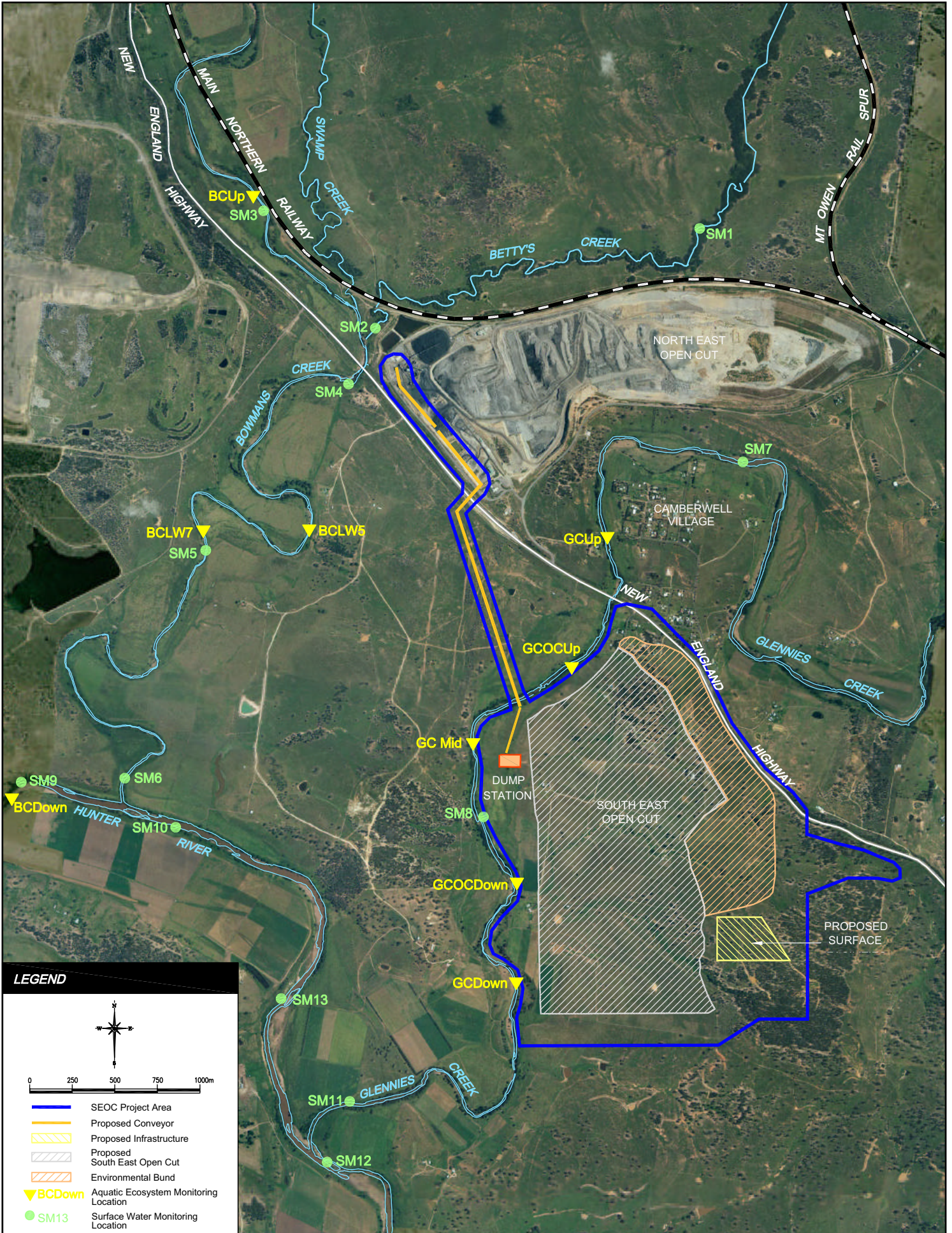
Glennies Creek had slightly alkaline pH levels during 2006-2007 with an average of 7.8-7.9. EC within Glennies Creek averaged between 390-394µS/cm.

The Hunter River had slightly alkaline pH levels during 2006-2007 with an average of 7.9-8.2, where the pH of 7.9 is located at the confluence with the Hunter River. EC within the Hunter River ranged from 444µS/cm (at the confluence with Glennies Creek) to 949µS/cm.

4.7.3 Issues

The probable surface water issues for the SEOC are as follows:

- Post-mining rehabilitation of drainage lines running through the SEOC area;
- Flooding studies will be undertaken within specific areas of the Catchment to determine 1:100, and 1:20 year flood events;
- Design of mine to consider potential impacts from flooding events;



- Water quality objectives to be reviewed against Australian and New Zealand Environment and Conservation Council (ANZECC) criteria;
- Assessment of the change in the catchment as a result of the SEOC;
- Licensing under the Water Management Act 2000;
- Collection and passage of uncontaminated water around the areas of disturbance;
- To protect and enhance water quality by collecting run off from disturbed areas; and
- Compile a water balance for various project years and consider 'wet', 'medium' and 'dry' rainfall years.

4.8 Flora, Fauna and Aquatic

Terrestrial flora, fauna values of the study area will be investigated by Environmental Resource Management Pty Limited (ERM) who have been engaged to assess the existing ecological (terrestrial) values of the area and the potential impacts to the area as a result of the SEOC.

Aquatic values of the study area will be investigated by Marine Pollution Research (MPR) who have been engaged to assess the existing ecological (aquatic) values of the area and the potential impacts to the area as a result of the SEOC.

4.8.1 Terrestrial Ecology

The SEOC area is predominantly cleared of vegetation with the exception of isolated patches of open woodland in the north and south east of the project area.

ERM have been undertaking terrestrial ecology surveys of the SEOC area since Autumn 2008. Findings to date have identified a number of threatened species occurring within the site and/or likely to be impacted by the proposed works. Of particular note to the SEOC are the following:

- Speckled Warbler;
- Grey-crowned Babbler;
- Hooded Robin;
- Squirrel Glider;
- Eastern Bentwing-bat;
- Eastern Freetail-bat;
- Large-footed Myotis;
- Greater Broad-nosed Bat; and
- An Endangered Population of River Red Gums.

With appropriate mitigation measures it is considered that the SEOC can occur with no significant impact to these species and communities.

No impact is expected to Matters of National Environmental Significance (MNES) listed under the EPBC Act.

4.8.2 Aquatic Ecology

Ecological studies for the ACP extend back to 2001 during the preparation of the Environmental Impact Statement for the original ACP.

South of the New England Highway Glennies Creek comprises a series of very long pool sections with short shallow riffle areas and very little gradient change between pools. South of the highway the creek has good to very good riparian fringe of river oaks. There is large woody debris throughout the creek line but this is mostly confined to the banks (MPR 2001). The June 2007 floods led to changes in stream channels and the destruction of riparian vegetation along Glennies Creek, which led to several locations of stream bank erosion.

In 2001 Marine Pollution Research considered that while Glennies Creek was a valuable fish habitat, no endangered or vulnerable fish species were recorded or are expected to occur in Glennies Creek. Observations in recent aquatic sampling in 2006-2007 supported this finding. Native species that are known to occur within Glennies Creek include species such as the Freshwater Catfish, Australian Bass, Flathead, Striped and Cox's Gudgeons, Short-finned and Long finned eels, Striped Mullet, Plague Minnow, Australian Smelt and Bullrout

4.8.3 Issues

The following issues may apply to the development of the SEOC:

- Identification of threatened flora and fauna of the study area;
- Where possible impacts to threatened biodiversity will be avoided, alternatively where avoidance not possible "like for like" offsets together with rehabilitation will be negotiated with NSW DECC and Commonwealth Department of Environment, Water, Heritage and Arts;
- Standoff and provide buffers and active management to reduce "edge" impacts;
- Protection and enhancement of wildlife linkages between conservation reserves and along riparian corridors;
- Rehabilitation of drainage lines post mining to ensure a stable and free draining landform; and
- Potential loss of threatened species habitat.

Should offsets be required ACOL will seek to revegetate cleared lands, particularly those that may enhance local and regional wildlife connectivity.

4.9 Aboriginal Heritage

ACOL has engaged Insite Heritage to undertake an Aboriginal cultural heritage assessment of the SEOC area.

4.9.1 Issues

The following issues relating to Aboriginal Heritage may apply to the development of the SEOC:

- Known Aboriginal sites or objects impacted on as a result of the development; and

- Areas of land assessed that may contain potential archaeological deposits in an open space context;
- The management or protection of Aboriginal sites not identified but disturbed or uncovered as a result of construction activities.

Continued liaison with the Aboriginal communities will occur to ensure the conservation of Aboriginal Heritage in conjunction with the project proceeding.

4.10 European Heritage

ACOL has engaged Heritas to undertake a European Heritage assessment of the SEOC area.

The Camberwell area, originally known as Falbrook, was surveyed by Henry Dangar in 1824. Significant early landholders in the area included Dr. James Bowman, Henry Glennie and William Nowland.

Located on the main road between Singleton and Muswellbrook the Camberwell Village was also a traveller's rest stop and coach point that enjoyed period of prosperity having a population of over 500 residents, three hotels, two wine shops, a school, a post office and a goods depot. The 1860's was the start of the decline of the Camberwell Village, a new bridge was constructed south of the main street directing traffic away from the village centre.

The Camberwell Temporary Common was first notified as a Temporary Common in 1876 and later reserved from occupation or lease in 1892. The SEOC proposes to close and/or relocate the Temporary Common.

No structures of significant heritage value are known to be located within the SEOC, with St Clements Anglican Church the closest item of historical significance located to the northeast of the SEOC.

4.10.1 Issues

- Identification of heritage items;
- Relocation or closure of the Camberwell Temporary Common; and
- Maintaining Camberwell as a Village following the closure of the mine.

4.11 Soils, Land Capability and Agricultural Suitability

Department of Lands – Soil Services have been engaged by ACOL to undertake a soil, land capability and agricultural suitability surveys of the SEOC area.

From the Soil Landscapes of the Singleton 1:250 000 Sheet (Kovac and Lawrie, 1991) the soils within the project area consist of soils within the Hunter Alluvial Soils Landscape and Roxburgh Yellow Podzolics Soil landscape.

The Hunter Alluvial Soil Landscape is confined to a small area on the western side of the SEOC area along Glennies Creek, and consists of alluvial loams, and Non Calcic Brown Soils and yellow solidic soils. These soils generally have a moderate to high erosion hazard and high structural degradation hazard. They typically have a land capability classification of Class I, II or III. Lands with this classification are suitable for most agricultural practices, with isolated areas up to 400m

from eastern side of Glennies Creek used for regular cultivation. However given the proximity of Glennies Creek the true capability of these lands is probably limited to grazing and small scale cultivation outside of the riparian buffer zone of Glennies Creek.

The majority of the SEOC area is made up of the Roxburgh Yellow Podzolics Soils Landscape that consist of weathered Permian sandstone, shale, mudstone, conglomerate and coal, with Yellow Podzolics Soils on upper to midslopes, red podzolics on rounded hills and Lithosols on Crests. Brown Podzolics Soils occur on slopes with conglomerate outcrop. Yellow Soloths may occur in some gullies. These soils generally have low soli salinity, a moderate to very high erosion hazard and high structural degradation hazard. These soils generally have a land capability classification of Class IV, V, VI. Soils with these land capabilities are not capable of regular cultivation and are suited to grazing and occasional cultivation provided appropriate soil conservation practices are implemented.

Generally the area is only suited to grazing and intermittent cropping.

4.11.1 Issues

The following soils issues may apply to the development of the SEOC operations:

- Increased erosion of soils due to erodible soil types within the project area;
- Exposure of soils due to vegetation stripping;
- Stripping of soils within mining disturbance areas;
- Soils contamination resulting from spillage of hydrocarbons and other chemicals; and
- Alteration of physical and chemical soils properties.

4.12 Acid Rock Drainage

Environmental Geochemistry International have been engaged to sample and analyse core from the SEOC area to determine whether risk exists in relation to acid rock drainage.

Like the current NEOC there is not expected to be a significant acid rock drainage issue with regard to SEOC.

4.13 Visuals

O'Hanlon Design Pty Limited has been engaged to undertake a visual analysis the SEOC.

The SEOC will require the construction of an environmental bund and out of pit emplacement along the northern boundary of the pit. This provides both screening from passing motorists and the Camberwell Village and a location for the initial out of pit emplacement. The bund will be designed to ensure a stable vegetated landform is created with topographic relief to reduce visual impacts and fit in with the surrounding landscape.

4.14 Rehabilitation and Final Landform

4.14.1 Rehabilitation of the NEOC

ACOL has gained valuable experience from rehabilitation activities at the NEOC, through trials of different cover-crops, and seed mixes aimed at improving native vegetation growth and reducing weeds.

ACOL is active in the trial of Organic Growth Medium (OGM) as a substitute for traditional fertilisers and additives and to determine the ideal application rate for OGM on topsoil and overburden areas.

OGM is a renewable urban resource composed of municipal solid waste and commercial waste generated by Global Renewables Ltd (GRL) integrating several world class technologies in the development of their Urban Resource – Reduction, Recovery and Recycling (UR-3R) Facility at Eastern Creek.

OGM is product certified under AS4454 for Composts and Soil Conditioners and has New South Wales Department of Primary Industries CA05 certification for phylloxera.

Photographs 1 and 2 illustrate the product of the rehabilitation activities occurring within the NEOC.

ACOL is also enthusiastically participating within a proposed Australian Coal Association Research Project (ACARP) that is investigating the use of computer generated modelling software in the creation of post-mining landforms that “mimic” surrounding topography and take into account soil and overburden properties with a view to creating a “natural” looking stable landforms.



Photograph 1: Example of native woodland revegetation occurring within the NEOC.



Photograph 2: Example of pasture grassland revegetation occurring within the NEOC.

4.14.2 Rehabilitation at the SEOC

Rehabilitation of the SEOC will utilise experience gained from the rehabilitation and eventual closure of the NEOC, where knowledge of local conditions will be invaluable in rehabilitation activities.

Rehabilitation of mined areas will occur progressively over the life of the project. Consideration of voids, emplacements, rehabilitation of mined areas, landscaping and use of facilities at the cessation of mining will be addressed as part of the environmental assessment.

4.14.3 Issues

The following rehabilitation and final landform issues may apply to the development of the SEOC:

- Provision of effective rehabilitation of the Open Cut following mining consistent with surrounding vegetation communities;
- Provision of effective vegetation corridor linkages between adjoining vegetation remnants;
- Establishment of a landform that is variable and “natural” like in appearance;
- Minimisation of final voids and or effective utilisation of voids post mining;
- Provision of final landforms consistent with surrounding landforms where possible; and

- Provision of a self draining stable landform.

4.15 Community Liaison and Consultation

The ACP has a Community Consultative Committee (CCC) appointed to keep the community informed on matters discussed at meetings and provide a forum for open discussion between representatives of ACOL, the community, Singleton Council and other stakeholders. The CCC's scope covers approval conditions relating to the ACP operation, environmental performance and community relations.

An important and integral element of investigations and planning for the SEOC in addition to the CCC (whose primary charter is the existing ACP) has been the attention given by ACOL to consulting and liaising with land owners, occupiers of land, vested interest groups and statutory authority undertakings.

The ACOL's consultative strategy is based upon:

- Personal regular contact between project staff and residents;
- Door to door canvassing about the project;
- Regular briefings of the Singleton Council;
- Briefings of State and Federal Members of Parliament;
- Production and distribution of regular project newsletters (since late 2003, 20 newsletters have been distributed); and
- Regular maintenance and updates of the Ashton Coal website www.ashtoncoal.com.au.

4.16 Social and Economic Impacts

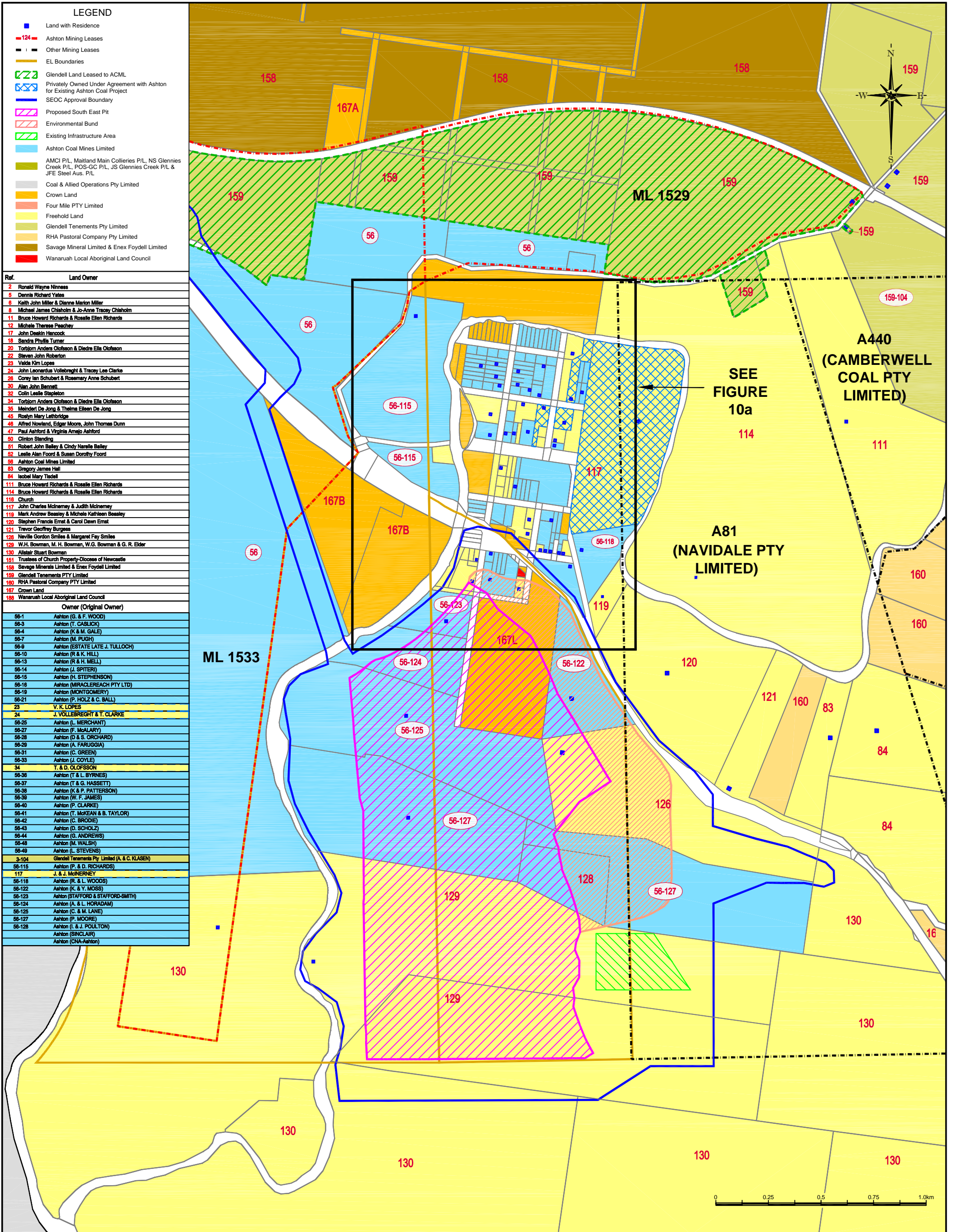
4.16.1 Camberwell Village

The social impacts of the proposed SEOC on the residents in the village of Camberwell are of high importance to ACOL. From the commencement of the development of the ACP, ACOL has had a strong commitment to purchase privately owned properties in the vicinity of the ACP following approach by the property owner. Where dwellings have been purchased by ACOL, depending on their condition, these properties have been leased to its employees and others wishing to live in Camberwell to maintain the village environment. ACOL has also provided funds for the Camberwell Community to utilise on projects to improve the village. ACOL remains committed to these aspects for the SEOC.

ACOL will undertake an assessment of the Camberwell Village and identify strategies to promote the long term survival of the village post mining.

4.16.2 Land Ownership and Use

The ownership of the land subject to SEOC is shown in **Figure 10** and **Figure 10a** and the enclosed land ownership schedule within **Appendix 1**.



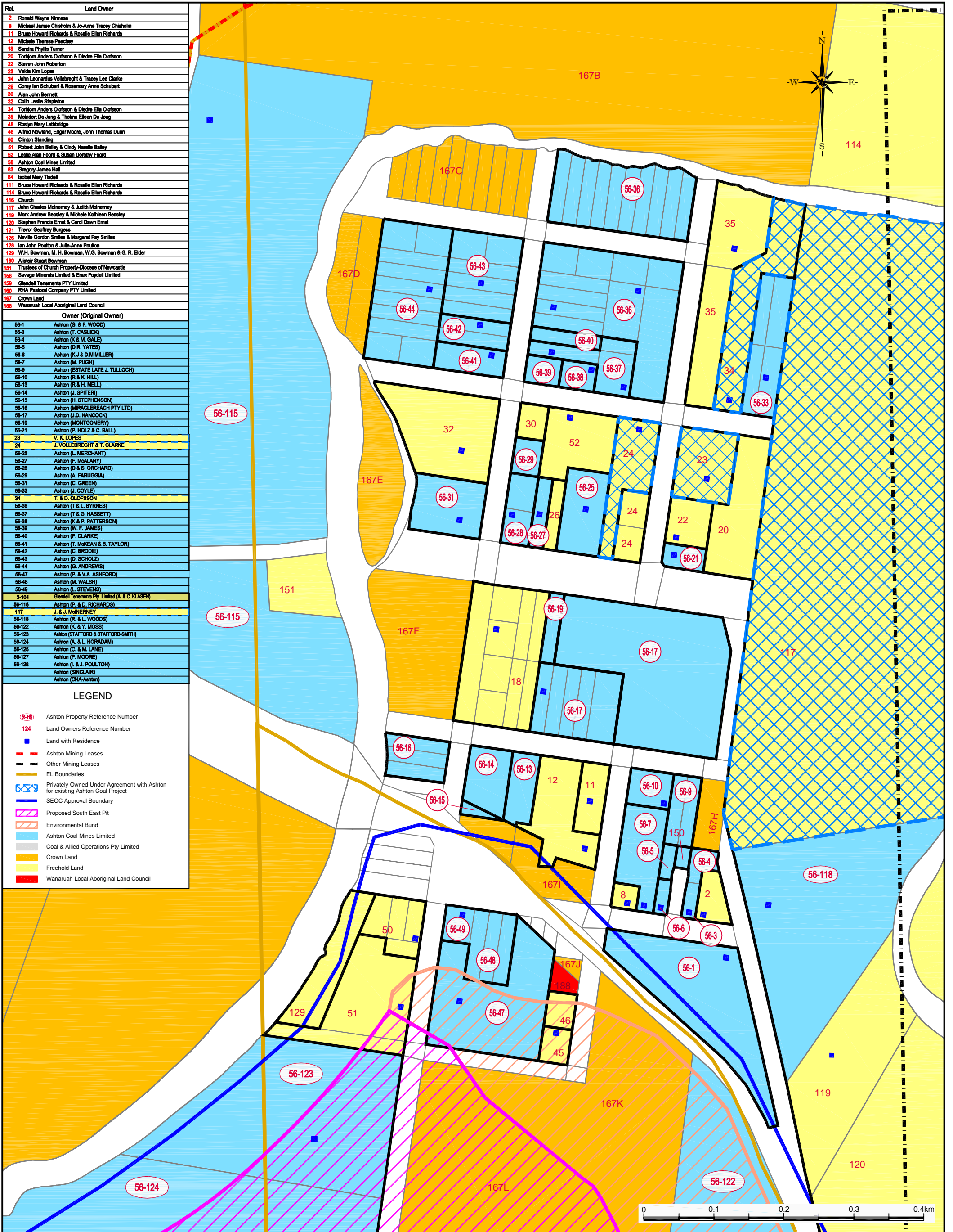
Land Ownership in the SEOC Project Area

Figure 10



Ref.	Land Owner
2	Ronald Wayne Ninnes
8	Michael James Chisholm & Jo-Anne Tracey Chisholm
11	Bruce Howard Richards & Rosalie Ellen Richards
12	Michele Therese Paschey
18	Sandra Phyllis Turner
20	Torbjorn Anders Olofsson & Diedre Ella Olofsson
22	Steven John Robertson
23	Valda Kim Lopes
24	John Leonardus Vollebreght & Tracey Lee Clarke
26	Corey Ian Schubert & Rosemary Anne Schubert
30	Alan John Bennett
32	Colin Leslie Stapleton
34	Torbjorn Anders Olofsson & Diedre Ella Olofsson
35	Meindert De Jong & Thelma Eileen De Jong
45	Roslyn Mary Lethbridge
46	Alfred Nowland, Edgar Moore, John Thomas Dunn
50	Clinton Standing
51	Robert John Bailey & Cindy Narelle Bailey
52	Leslie Alan Foord & Susan Dorothy Foord
56	Ashton Coal Mines Limited
83	Gregory James Hall
84	Isobel Mary Tisdell
111	Bruce Howard Richards & Rosalie Ellen Richards
114	Bruce Howard Richards & Rosalie Ellen Richards
116	Church
117	John Charles McInerney & Judith McInerney
119	Mark Andrew Beasley & Michele Kathleen Beasley
120	Stephen Francis Ernst & Carol Dawn Ernst
121	Trevor Geoffrey Burgess
126	Neville Gordon Smiles & Margaret Fay Smiles
128	Ian John Poulton & Julie-Anne Poulton
129	W.H. Bowman, M. H. Bowman, W.G. Bowman & G. R. Elder
130	Alister Stuart Bowman
151	Trustees of Church Property-Diocese of Newcastle
158	Savage Minerals Limited & Enxex Foydell Limited
159	Glendell Tenements PTY Limited
160	RHA Pastoral Company PTY Limited
167	Crown Land
188	Wanaruah Local Aboriginal Land Council
Owner (Original Owner)	
56-1	Ashton (G. & F. WOOD)
56-3	Ashton (T. CASLUCK)
56-4	Ashton (K. & M. GALE)
56-5	Ashton (D.R. YATES)
56-6	Ashton (K.J. & D.M. MILLER)
56-7	Ashton (M. PUGH)
56-8	Ashton (ESTATE LATE J. TULLOCH)
56-10	Ashton (R. & K. HILL)
56-13	Ashton (R. & H. MELL)
56-14	Ashton (J. SPITERI)
56-15	Ashton (H. STEPHENSON)
56-16	Ashton (MIRACLEREACH PTY LTD)
56-17	Ashton (J.D. HANCOCK)
56-19	Ashton (MONTGOMERY)
56-21	Ashton (P. HOLZ & C. BALL)
23	V. K. LOPES
24	J. VOLLEBREGHT & T. CLARKE
56-25	Ashton (L. MERCHANT)
56-27	Ashton (F. McALARY)
56-28	Ashton (D. & S. ORCHARD)
56-29	Ashton (A. FARUGGIA)
56-31	Ashton (C. GREEN)
56-33	Ashton (J. COYLE)
34	T. & D. OLOFSSON
56-36	Ashton (T. & L. BYRNES)
56-37	Ashton (T. & G. HASSETT)
56-38	Ashton (K. & P. PATTERSON)
56-39	Ashton (W. F. JAMES)
56-40	Ashton (P. CLARKE)
56-41	Ashton (T. MCKEAN & B. TAYLOR)
56-42	Ashton (C. BRODIE)
56-43	Ashton (D. SCHOLZ)
56-44	Ashton (G. ANDREWS)
56-47	Ashton (P. & V.A. ASHFORD)
56-48	Ashton (M. WALSH)
56-49	Ashton (L. STEVENS)
3-104	Glendell Tenements Pty Limited (A. & C. KLASEN)
56-115	Ashton (P. & D. RICHARDS)
117	J. & J. MCINERNEY
56-118	Ashton (R. & L. WOODS)
56-122	Ashton (K. & V. MOSS)
56-123	Ashton (STAFFORD & STAFFORD-SMITH)
56-124	Ashton (A. & L. HORADAM)
56-125	Ashton (C. & M. LANE)
56-127	Ashton (P. MOORE)
56-128	Ashton (I. & J. POULTON)
	Ashton (SINCLAIR)
	Ashton (CNA-Ashton)

LEGEND	
(56-15)	Ashton Property Reference Number
124	Land Owners Reference Number
■	Land with Residence
—	Ashton Mining Leases
—	Other Mining Leases
—	EL Boundaries
—	Privately Owned Under Agreement with Ashton for existing Ashton Coal Project
—	SEOC Approval Boundary
—	Proposed South East Pit
—	Environmental Bund
—	Ashton Coal Mines Limited
—	Coal & Allied Operations Pty Limited
—	Crown Land
—	Freehold Land
—	Wanaruah Local Aboriginal Land Council



The land to which the proposed modification applies is included within **Appendix 2** as shown within Schedule 1 of the formal notice of determination dated 11 October 2002 in respect of DA 309-11-2001 (as subsequently amended).

The environmental assessment will review and detail the occupation and existing land uses of the area which include a small number of private landholders who conduct grazing and some limited cultivation and in respect of which there are some physical improvements on the land.

The lands within the SEOC are generally used for grazing purposes with the exception of an area less than 400m from Glennies Creek within the alluvial soils that is used for cultivation and cropping.

4.16.3 Economic Benefits of the Coal Resource

The Hunter Valley Research Foundation have been engaged to undertake a socio-economic assessment of the proposed SEOC.

The granting of project approval to the SEOC will enable the recovery of valuable State owned coal resource that underlies the area. The recovery of this resource will result in considerable economic benefits for the Singleton local government area, the State of New South Wales and Australia which will flow from the royalties to be paid on coal sales, employment and flow on taxes to all levels of Government as well as the provision of services and facilities in the region. These benefits will considerably exceed the current economic return from the existing use of the land.

The SEOC will have a positive impact upon aspects of the socio-economic composition and level of service provision for facilities provided by Singleton Council. The level of impact will be analysed during the course of the environmental assessment.

ACOL will seek to enter into a Voluntary Planning Agreement with the Singleton Council or contribute monies pursuant to Section 94 of the EP&A Act 1979 in respect of the SEOC project toward the provision of public facilities and amenities.

4.17 Landholder Involvement

4.17.1 Access to Lands

ACOL have developed Rural Land Access Agreements for the conduct of environmental studies, baseline monitoring and exploration drilling in conjunction with local landowners. The agreements are based on a number of protocols which the company must observe in undertaking access on private property to conduct its activities.

4.17.2 Landholder Rights

ACOL will continue its consultation with landholders and seek to enter into appropriate landholder agreements at an early time as is practicable whereby such agreements are for acquisition, and or for compensation.

Landholders have a statutory right to compensation for "compensable loss" caused by mining under Part 13 of the Mining Act 1962. ACOL expects that any project approval will include a condition that any private landholder whose property is affected by noise, dust or vibration beyond the environmental goals determined in the project approval will have the right to require ACOL to purchase the property for the non ACOL affected market value plus compensation for relocation.

5 CONCLUSION

It is respectfully requested that the NSW Director-General of Planning issue Environmental Assessment Requirements for the SEOC Project and proposed modification under Section 75F and 75W of the EP&A Act 1979 respectively.

6 REFERENCES

Beckett, J., (1988) The Hunter Coal Field – Notes to Accompany the 1:100,000 Geological Map, Department of Minerals and Energy.

HLA-Envirosciences Pty Limited, (2001), Environmental Impact Statement – White Mining Limited - Ashton Coal Project.

Kovac, M. And Lawrie J.W. (1991). *Soil Landscapes of the Singleton 1:250,000 Sheet*. Soil Conservation Service of NSW, Sydney.

Marine Pollution Research (MPR), (2001), Appendix K - Environmental Impact Statement – White Mining Limited - Ashton Coal Project, Aquatic Ecological Aspects – Qualitative Assessment.

New South Wales State Government (1976). Environmental Planning and Assessment Act.

New South Wales State Government (1996). Protection of the Environment Operations Act.

Singleton Council (1996), Singleton Local Environmental Plan.

APPENDIX 1

SEOC Land Ownership Schedule

This page is deliberately left blank

APPENDIX 1

SEOC PROJECT						
PROPERTY SCHEDULE						
Ref	Land Owner	Lot	Section	DP	Parish	County
12	Michele Therese Peachey	5		217095	Auckland	Durham
45	Roslyn Mary Lethbridge	1	13	758214	Auckland	Durham
46	Alfred Nowland, Edgar Moore, John Thomas Dunn	2	13	758214	Auckland	Durham
47	Paul Ashford & Virginia Arnejo Ashford	96		752442	Auckland	Durham
50	Clinton Standing	1		120193	Auckland	Durham
50	Clinton Standing	2		120193	Auckland	Durham
50	Clinton Standing	3		120193	Auckland	Durham
50	Clinton Standing	4		120193	Auckland	Durham
51	Robert John Bailey & Cindy Narelle Bailey	1		244624	Auckland	Durham
51	Robert John Bailey & Cindy Narelle Bailey	1		797883	Auckland	Durham
120	Stephen Francis Ernst & Carol Dawn Ernst	31		1018512	Auckland	Durham
126	Neville Gordon Smiles & Margaret Fay Smiles	4		264089	Auckland	Durham
128	Ian John Poulton & Julie-Anne Poulton	11		877004	Auckland	Durham
129	W.H. Bowman, M. H. Bowman, W.G. Bowman & G. R. Elder	3		1111313	Auckland	Durham
129	W.H. Bowman, M. H. Bowman, W.G. Bowman & G. R. Elder	2		1111313	Auckland	Durham
130	Alistair Stuart Bowman	1		841225	Auckland	Durham
130	Alistair Stuart Bowman	1		121623	Auckland	Durham
130	Alistair Stuart Bowman	86		752442	Auckland	Durham
130	Alistair Stuart Bowman	2		71823	Auckland	Durham
130	Alistair Stuart Bowman	1		162412	Auckland	Durham
130	Alistair Stuart Bowman	70		1107703	Auckland	Durham
159	Glendell Tenements PTY Limited	1		745486	Vane	Durham
167	Crown Land	2		1114623	Vane	Durham
167	Crown Land	7004		93630	Auckland	Durham
167	Crown Land	176		1002770	Auckland	Durham
167	Crown Land	6		217095	Auckland	Durham
167	Crown Land	4		217095	Auckland	Durham
188	Wanaruah Local Aboriginal Land Council	175		1002770	Auckland	Durham
56	Ashton	3		1114623	Vane	Durham
56	Ashton	101		635131	Vane	Durham
56-1	Ashton (G. & F. WOOD)	2		747327	Auckland	Durham
56-48	Ashton (M. WALSH)	8	13	758214	Auckland	Durham
56-48	Ashton (M. WALSH)	9	13	758214	Auckland	Durham
56-48	Ashton (M. WALSH)	10	13	758214	Auckland	Durham
56-49	Ashton (L. STEVENS)	11	13	758214	Auckland	Durham
56-122	Ashton (K. & Y. MOSS)	3		747327	Auckland	Durham
56-123	Ashton (STAFFORD & STAFFORD-SMITH)	1		264089	Auckland	Durham
56-124	Ashton (A. & L. HORADAM)	2		264089	Auckland	Durham
56-125	Ashton (C. & M. LANE)	3		264089	Auckland	Durham
56-127	Ashton (P. MOORE)	12		877004	Auckland	Durham
		10		877004	Auckland	Durham

This page is deliberately left blank

APPENDIX 2

DA 309-11-2001 Land Ownership Schedule

This page is deliberately left blank

**DETERMINATION OF A DEVELOPMENT APPLICATION
FOR STATE SIGNIFICANT AND INTEGRATED DEVELOPMENT
UNDER SECTION 80 OF THE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979**

I, the Minister for Planning, under section 80 of the *Environmental Planning and Assessment Act 1979* ("the Act"), determine the development application ("the Application") referred to in Schedule 1 by granting consent subject to the conditions set out in Schedule 2.

The reasons for the imposition of conditions are to:

- a) minimise any adverse environmental impacts associated with the development;
- b) provide for environmental monitoring, reporting, and independent review; and
- c) set requirements for mine infrastructure provision.

Andrew Refshauge MP
Minister for Planning

Sydney, 11 October

2002

File No. S01/00200

SCHEDULE 1

Development Application:	DA No. 309-11-2001-i;
Applicant:	White Mining Limited (ACN009 713 893) ("the Applicant");
Consent Authority:	The Minister for Planning;
Land:	Land described as Lot 101 DP 635131; Part Lot 11 DP 261916; Lot 3 DP 195598; Part Lot 70 DP 752499; Part Lot 701 DP 828294; Lot 1 DP 745486; Part Lot 1243 DP 1007536; Lot 1 DP 195598; Lot 59 DP 752499; Crown land including Crown Roads adjoining Lot 1 DP 745486; Lot 128 DP 752499 (Reserve No.89555); Travelling Stock Reserve No. 66768; Part Camberwell Temporary Common; Main Northern Railway corridor; Glennies Creek Rd reserve; and New England Highway reserve; Parish of Vane;
Proposed Development:	Development of an open cut coal mine, an underground coal mine and construction and operation of associated surface facilities, known as the Ashton Coal Project (ACP);

State Significant Development

The proposed development is within a class of development classified as State Significant development by virtue of a Declaration made by the Minister on 29 June 2001 since it is a new coal mine which would require a new mining lease;

Integrated Development

The proposed development requires additional approvals from the **DEC** under the *Protection of the Environment Operations Act 1997*; **DIPNR** under the *Water Act 1912*; **DEC** under the *National Parks and Wildlife Act 1974*; RTA and Singleton Shire Council under the *Roads Act 1993*; and MSB under the *Mine Subsidence Compensation Act 1961*. Consequently it is classified as integrated development under section 91 of the *Environmental Planning and Assessment Act 1979*.

BCA Classification:

Class 10 – Portal, electrical substations, fan building, explosive magazines, conveyor structures, reclaim tunnels, railway bridges, pumping stations

Class 10(a) - Vehicle wash facilities, fuel farms, sewage treatment plant

Class 10(b) - Coal conveyors and coal crushing facility and associated infrastructure

Class 9(b) - Bath house

Class 8 - Coal preparation plant building, train loading station and compressor house

Class 7 - Warehouse buildings, workshops and water tanks

Class 5 - Administration buildings, rail loading control room

Note: If the Applicant is dissatisfied with this determination, section 97 of the Act grants it a right of appeal to the Land and Environment Court, which is exercisable within 12 months of receiving notice of this determination. To determine the date from which this consent operates refer to section 83 of the Act. To determine the date upon which this consent may lapse refer to section 95(1) of the Act.