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Statement of Environmental Effects
Modification to Development Consent
Camberwell Coal
Singleton

Prepared for

Camberwell Coal Pty Limited
PMB 7
Singleton NSW 2330

HLA-Envirosciences Project No U851

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1.0 SUMMARY

This Statement of Environmental Effects has been prepared to support an application pursuant to Section 96(2) of the Environmental Planning and Assessment Act to modify the development consent determined by the Minister for Planning on 19 March, 1990 for the Camberwell Coal Project.

Development consent is sought for the modification of the Coal Handling and Preparation Plant (CHPP) to increase its current design throughput from 545 to 800 tonnes per hour (tph) of run of mine (ROM) coal. The plant will be available for operation on 363 days of each year for 24 hours on each day. It is expected that the productive operating hours of the plant after maintenance and other delays will be 7150 hours per year or an average of 19.7 hours per day. The increased capacity of the CHPP will be achieved via modifications to the existing plant and the addition of a thickener plant for tailings.

The increase in approved capacity of the CHPP is sought to accommodate the processing of coal from the adjacent Glennies Creek Coal Mine and current production levels of the Camberwell Mine. The proposal envisages three potential scenarios for coal transport from the Glennies Creek Coal Mine portal to the CHPP.

Scenario 1 – Use of the coal haul trucks and an existing haul road through the overburden emplacement area within Camberwell Coal's North Pit;

Scenario 2 – Use of an alternative western haul road adjacent to the Main Northern Railway; and,

Scenario 3 – Use of an overland conveyor from the Glennies Creek Coal Mine portal directly to the ROM coal receival area of the CHPP.

The proposed modification to consent will leave the number of persons employed at Camberwell Mine unchanged from current levels of 203 employees. There will be little socio-economic impact from the proposal, other than efficiencies in capital expenditure resultant from the shared use of coal preparation and train-loading facilities. There are significant environmental advantages to be obtained from the avoidance of construction of coal preparation and train-loading facilities at the Glennies Creek Coal Mine.

2.0 INTRODUCTION

2.1 Location and Land Ownership

The Camberwell Coal Project (Camberwell Coal) is an operating open cut coal mine located 10 km northwest of Singleton (see **Figure 1**). The mine is operated by Camberwell Coal Pty Limited (ACN 003 825 018) on behalf of the Camberwell Coal Joint Venture. The joint venture partners are Toyota Tsusho Mining (Australia) Pty Ltd 90% (ACN 003 765 008) and Dia Coal Mining (Australia) Pty Ltd 10% (ACN 003 724 249).

The owner of the land is RHA Pastoral Company Pty Limited (RHA), which is wholly owned by the Camberwell Joint Venture. The whole of the land is within part of Coal Lease 357 for which there is no surface exception; surface operations including open cut mining can be conducted on all the land. The location of sensitive residential receptors and the land to which the modification of consent will apply is shown in **Figure 2**. **Appendix 1** contains a schedule of lands to which this application applies.

2.2 Rationale for the Proposal

The proposal will allow for the processing of coal from Camberwell Coal's neighbouring mine, Glennies Creek Coal Mine, and will utilise existing CHPP infrastructure at Camberwell Mine as well as the existing rail loading infrastructure. The proposal will allow for the processing of current levels of coal production of Camberwell Mine.

Camberwell Coal's existing CHPP is capable of processing ROM coal on a campaign basis and therefore is well equipped to process coal from different seams as encountered during the treatment of coals from Glennies Creek and Camberwell Mines. Proposed modifications to the plant will permit the required increase in processing capacity.

2.3 Statutory Planning Approval Sought

The proposed modification to Camberwell Coal's 1990 development consent is considered to be integrated, non-designated, State significant development that will be determined by the Minister for Urban Affairs and Planning. A Statement of Environmental Effects (SoEE) has been prepared to support the modification to consent. Both the application and the SoEE will be placed on public display during an advertised period of at least 30 days. During this time submissions on the proposed modification may be lodged by the public for consideration by the Minister.

2.4 Approvals Required

2.4.1 Section 96(2) Modification

The modifications to Camberwell's consent which will be sought are set out below and are such that the development to which the consent as modified relates is substantially the same development. It is thus

considered appropriate that the modification of the consent be assessed under Section 96(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

To enable the processing and dispatch of the coal from Glennies Creek and Camberwell Mines in Camberwell Coal's CHPP, modifications to the plant are proposed as follows:

- Increase the ROM coal crushing and conveyor capacity for a higher throughout and smaller sizing (with a top size of 50mm);
- Increase the capacity of ROM reclaim conveyors; and
- Alter the processing system and change processing units in the coal preparation plant by the installation of large diameter cyclones to replace a jig and smaller cyclones with the necessary accompanying changes to fine coal and tailing circuits.

The existing rail loading infrastructure at Camberwell Coal requires no modification to service this proposal. The construction of a coal conveyor from the Glennies Creek Coal Mine stockpile to the CHPP forms part of the proposed modification.

2.4.2 Other Approvals

In the normal course of managing Camberwell Mine's operations, approvals are required from various government agencies. This proposal is reliant upon the use of tailings dams to dispose of fine coal rejects produced by the processing of ROM coal through the CHPP. The currently utilised tailings dam (TD1) has an operational life of less than one year. Approval will be sought from the Department of Mineral Resources (DMR) to operate a new tailings dam (TD2) under the provisions of section 126 of the *Coal Mines Regulation Act 1982*. Existing approvals under section 126 will be utilised for the emplacement of coarse rejects within the overburden emplacement areas.

Camberwell Mine is holder of Environmental Protection Licence No. 271383 issued under section 55 of the *Protection of the Environment Operations Act 1997* (POEO Act). Should development consent for the proposed modification to operations be obtained, then a variation to Camberwell Coal's environment protection licence would be sought under section 58 of the POEO Act to allow for the planned increased rate of coal processing.

Camberwell Mine is located within the Patrick Plains Mine Subsidence District, which was proclaimed on 02 July 1980. Approval of the Mine Subsidence Board is required for any improvements including those related to mine buildings and associated works such as the proposed coal conveyor from Glennies Creek Mine to the CHPP.

2.5 Changes to Consent Conditions

Changes sought to existing development consent conditions are shown in **Table 1**. Please note that a modification, granted on 22 December 1994, to the reporting dates contained within Condition 17 has not been included in the following table.

2.6 Consultation with Governmental Agencies

Correspondence from DUAP is to be found in **Appendix 3** while the minutes of a meeting held with Singleton Shire Council is contained within **Appendix 4**. The latter Appendix contains copies of correspondence with the EPA and DLWC. Consultation with all agencies included follow-up telephone calls in addition to the formal correspondence contained in **Appendices 3** and **4**.

2.7 Planning Context

Singleton Local Environmental Plan (LEP), 1996

The Singleton LEP 1996 applies to the land. Under that instrument the land is classified 1(a) - Rural Zone. Coal mines and coal works are permitted with Council consent in this zone. The objectives of the 1(a) Rural zone are contained in Clause 16 of the LEP and they are:

(a) to protect and conserve agricultural land and to encourage continuing viable and sustainable agricultural land use;

(b) to promote the protection and preservation of natural ecological systems and processes;

(c) to allow mining where environmental impacts do not exceed acceptable limits and the land is satisfactorily rehabilitated after mining;*

(d) to maintain the scenic amenity and landscape quality of the area;

(e) to provide for the proper and co-ordinated use of rivers and water catchment areas;

(f) to promote provision of roads that are compatible with the nature and intensity of development and the character of the area.

* The definition of mining in the LEP includes coal processing.

The subject land is not listed in the LEP as being or containing any heritage item, nor is it in a heritage conservation area.

Table 1 - Consent Conditions - Original, Modified and Proposed

Condition No.	Original Consent 19 March 1990	Modified Condition 22 April 1992	Modified Condition 6 May 1999	Proposed Condition
1.	Camberwell Coal is defined by a series of documents.			
(i)	EIS dated October 1989.	"As modified by the works set out in **Figures 1** and **2** attached to this Notice of Amendment."		
(ii)	Letter to SSC re rail facilities.			
(iii)	Letter to SSC dated 29 January 1990.			
(iv)	Responses to letters of objection.			
(v)	Responses submitted by government bodies dated 5 February 1990.			
				As modified by the information contained within, and the works set out in, the "Statement of Environmental Effects, Modification to Development Consent – Camberwell Coal 2001."
2.	Duration.			
3. (i)	Protection of heritage property.			
(ii)	Maintaining "Dulwich" if acquired.			
4.	Water supply approvals.			
5. (i) (a)	Landscaping plan.			

Condition No.	Original Consent 19 March 1990	Modified Condition 22 April 1992	Modified Condition 6 May 1999	Proposed Condition
(b)	Visual appearance proposal.			
(c)	Landscape management plan.			
5. (ii)	Rehabilitation of bund walls and out of pit emplacements as soon as possible.			
6.	Visual amenity enhancement works.			
7. (i)	Purchasing affected lands and residences.			
(ii) (a)	Purchase price.			
(b)	Disturbance and relocation costs.			
(c)	Legal advice costs.			
(iii)	Purchasing disagreements.			
(iv)	Impacts on residences within zone.			
(v)	Structural surveys.			
(vi)	Private compensation agreements.			
8.	Railway works plans.			
9.	State Rail Authority.			
10.	Crown lands.			
11.	State Pollution Control Commission.			
12. (i)	Coal transportation by rail.			
12. (ii)	Emergency haulage of coal.			
12. (iii)	Road haulage through CL No. 205.			
13.	Flood lighting.			
14.	Transmission line relocations.			
15. (i)	Environmental monitoring.			

Condition No.	Original Consent 19 March 1990	Modified Condition 22 April 1992	Modified Condition 6 May 1999	Proposed Condition
(ii)	Environmental safeguards enforced.			
(iii)	Reporting of results.			
16.	Environmental Officer.			
17.	Annual report.			
(i)	Performance of the development.			
(ii)	Effectiveness of environmental controls.			
(iii)	Results of monitoring.			
(iv)	Mining operations from past 12 months.			
(v)	Workforce characteristics.			
(vi)	Modifications to mining operations.			
		The Applicant shall report progress of investigations on long-term tailings disposal by means other than tailings ponds in its annual report pursuant to Condition 17.		
		The Applicant shall meet the requirements of the Dams Safety Committee in respect of the design, operation and maintenance of the proposed tailings dams.		
18.	Financial contributions.			
19.	Off site effects.			
20.	Cumulative impact study.		Condition deleted	
21.	Land and water management plans.			
22. (i)	Access roads.			

Condition No.	Original Consent 19 March 1990	Modified Condition 22 April 1992	Modified Condition 6 May 1999	Proposed Condition
(ii)	Bank guarantee for damage to roads.			
(iii)	Annual maintenance contribution.			
23.	Closure of Middle Falbrook Road.			
24.	Blasting notifications.			
25.	Disputes regarding consent.			
26.	Rental housing.			
27.		This amendment expires on 19 March 2012		

Development Control Plans

Singleton Shire Council's Car Parking Development Control Plan is not applicable to the proposal as there is no increase in the need for car parking associated with the proposal. Current car parking arrangements are adequate for the development proposal, as original car parking facilities were designed for a larger workforce.

Singleton Shire Council's Erosion and Sediment Control Plan applies to any activity that involves or could involve:

- disturbance of or placing fill on the soil surface, and/or changes to the contours of the land
- change in the rate and/or volume of runoff flowing over land, or directly or indirectly entering "waters".

The requirements of this plan are adequately addressed by conditions in the Mine's existing consent and the provisions of the Mine Operations Plan (MOP) that is submitted to, and approved by the Department of Mineral Resources (DMR).

Section 94 Contributions

Singleton Shire Council has in place a Section 94 Contributions Plan under which it may levy contributions to be applied to the provision of public facilities.

Hunter Valley Railway Programs Task Force

The Hunter Valley Railway Programs Task Force was formed to identify the impacts of rail traffic on residents within 200 metres of the rail network. The report of the Task Force (Trudeau & Associates 1997) made 22 recommendations aimed at improving:

- The regulatory environment in which the rail network is operated, in particular the noise and vibration criteria applied to rail operations in residential areas;
- Baseline data collection relating to environmental amenity;
- Operation of the rail network, particularly mitigation of primary sources of noise and vibration;
- Management of community relations; and
- Safety of rail operations.

These recommendations for action are directed towards government agencies and corporations, such as Rail Access Corporation (RAC), Freight Rail Corporation (FreightCorp) and Environmental Protection

Authority (EPA) whom are charged with managing the operational and environmental amenity of the rail network. The Task Force concluded that:

The conveyance of freight (including coal) remains the safest, most efficient, most economic and most environmentally responsible means of transport ..... The current policy and practice of rail encouragement and development should therefore be maintained.

2.8 State Environmental Planning Policies

The following State Environmental Planning Policies (SEPPs) are applicable to this proposal.

State Environmental Planning Policy No 11 – Traffic Generating Developments

This SEPP ensures that the Roads and Traffic Authority (RTA) can make representation on development applications, that may impact on traffic, prior to determination. Mining is listed in Schedule 1 to the Policy, which specifies the types of development that consent authorities must refer to the RTA.

State Environmental Planning Policy No 44 – Koala Habitat Protection

This SEPP encourages the conservation and management of koala habitats, to ensure permanent free-living koala populations will be maintained over their present range. The policy applies to 107 local government areas including Singleton Shire (the local government area affected by this proposal). Development cannot be approved in the areas covered by the policy without a prior investigation of core koala habitat. The proposed modification of operations at Camberwell Coal only applies to land that has been previously mined by open cut methods or land that has existing infrastructure located upon it. There will be no natural vegetation removed and SEPP 44 will have no practical application.

State Environmental Planning Policy No 45 – Permissibility of Mining

This SEPP covers mining on land, where an environmental planning instrument requires the consent authority to make a value judgement as to whether such development is permissible. The policy does not affect provisions in environmental planning instruments that have no relevance in determining whether or not mining is permitted on land but only those provisions that must be satisfied for mining to be permissible. However, it is clear that the Singleton LEP permits mining in the applicable 1(a) Rural Zone.

3.0 EXISTING OPERATION

3.1 Current Approvals

The application for development consent for Camberwell Coal Mine by Camberwell Coal Pty Ltd (Camberwell) on behalf of Camberwell Joint Venture (Camberwell JV) was determined by the Minister for Local Government and the Minister for Planning on 19 March 1990 and there have been subsequent modifications. Copies of all consents and modifications can be found in **Appendix 1**.

A compliance audit of Camberwell Coal was undertaken in 1998 by AGC Woodwood-Clyde for the Department of Urban Affairs and Planning. The audit comprised an assessment of whether the mine had been constructed and was operating in the manner approved. It included a comparison of the existing mine with the original proposal in the EIS.

The audit concluded that there were no significant issues of non-compliance. One particular condition relating to a cumulative impacts study to be jointly conducted with Glennies Creek Coal Mine and Rixs Creek Coal Mine (Condition 20) was in the process of being removed by modification to the development consent. A copy of the audit is to be found in **Appendix 2** and the modification of consent is included in **Appendix 1**.

3.2 Current Coal Handling and Preparation Plant

The current CHPP has a nominal capacity to prepare 500 tph and averages 545 tph with peaks of 600 tph and is available to handle and treat coal on a 363 days per year basis. Planned maintenance and unscheduled outages result in an effective availability of the CHPP of in excess of 7000 hours per year.

The current CHPP utilises a jig, dense medium cyclones and fine coal spirals as primary means of coal preparation. This equipment is supported by ancillary pumping, screening and coal handling facilities including a fine coal rejects (tailings) thickener to increase the solids content of the tailings prior to its pumped transport by pipeline to the Mine's Tailings Dam. Coarse coal rejects are transported by haul truck from the CHPP to the overburden emplacement area where the coarse rejects are incorporated with overburden within the emplacement area.

3.3 Current On-site Coal Haulage

The current on-site coal haulage route for the delivery of Glennies Creek Coal Mine coal to Camberwell's CHPP can be seen in **Figure 3**.

Camberwell's current truck fleet is detailed in **Table 2**.

Table 2 – Camberwell Coal's Truck Fleet

Truck type	Number used
Caterpillar 789	24
Caterpillar 777 (Water Truck)	2
Caterpillar 773 (Lube Truck)	1

Currently, two of Camberwell Coal's Caterpillar 789 haul trucks transport Glennies Creek coal on a needs basis to the CHPP. Each truck is able to transport in excess of 150 tonnes of coal per journey.

3.4 Current Off-site Coal Haulage

All coal is transported from Camberwell Coal to the Port of Newcastle by rail. Coal is loaded by automated control from a load-out bin located on a rail loop located on the Camberwell Mine. This rail loop is also utilised by the adjacent Rixs Creek Mine, which has its own dedicated coal stockpiles and rail load-out bin.

For the twelve-month period to the end of February 2001 Camberwell Coal loaded 326 trains with 2,003,065 Mt saleable coal. The quantity of coal railed from Camberwell Mine has historically been within the range of 1.8 to 2.3 Mtpa.

3.5 Employment Status and Demography

The total number of employees working at Camberwell coal is 203. Employment demography is displayed in **Table 3** as it was prior to additions to the workforce which occurred in 2001.

Table 3 - Employment Demography

Place of Residence	Number	Percent %
Singleton, Bulga, Broke, Glennies Creek, Scotts Flat, Mt Olive, Glendon, Jerrys Plains, Mitchells Flat, Glendonbrook, Belford	117	75.5
Branxton, Greta	10	6
Muswellbrook	6	2.5
Cessnock, Quorrobolong, Kurri Kurri, Heddon Greta, Aberdare	9	5
Maitland, East Maitland, Metford, Morpeth, Bolwarra, Ashtonfield, Telarah, Rutherford	13	9
Elermore Vale, New Lambton, Jesmond	4	2
Total	**159**	**100**

3.6 Coal Production (ROM and Saleable)

Prior to September 1994 Camberwell Mine produced 10.52 Mt of ROM coal. **Table 4** indicates the annual production of ROM and saleable coal from both Camberwell and Glennies Creek Mines.

Table 4 - Annual Production of ROM and Saleable Coal form 94/95 to 99/00

Year	CAMBERWELL		GLENNIES CREEK	
(Sept to Aug)	ROM (Mt)	Saleable (Mt)	ROM (Mt)	Saleable (Mt)
94/95	3.24	2.02		
95/96	3.27	2.07		
96/97	3.15	1.82		
97/98	3.63	2.18		
98/99	3.65	2.23		
99/00	3.34	1.88	0.17	0.08

Saleable coal yield for Camberwell Coal has generally been in the range of 57% to 62% of the quantity of ROM coal treated by the CHPP.

4.0 THE PROPOSAL

4.1 Treatment of Namoi Hunter Coal (Glennies Creek Coal Mine)

Maitland Main, the original proponent, was granted development consent for construction and operation of an underground coal mine, known as Glennies Creek Coal Mine (DA 105/90) on 1 November 1991 (File No. N91/00267005).

The development consent was amended on 16 November 1998. In accordance with Schedule (2) in the Notice of Amendment, Condition (a) required that the development of Glennies Creek be carried out, inter alia, generally in accordance with "the Statement of Environmental Effects submitted in support of a Section 96(2) Application for Glennies Creek Coal mine dated July 1998, prepared by R W Corkery & Co. Pty Ltd". It was prepared specifically for the application for modification which sought that, "for a period of three years only, to process the coal extracted via the high wall entry within the existing approved Camberwell Coal Mine, coal preparation plant and dispatch the processed coal via the Camberwell train loader."

Namoi Hunter, the current owner and operator, will seek a further amendment to the development consent to permit the preparation and dispatch of the whole of the output of the Glennies Creek underground coal mine through the Camberwell CHPP and rail load-out system. The CHPP and rail loading system which was included in the 1991 Consent will not be required at Glennies Creek Coal Mine should the applications for modifications to the respective consents be granted.

4.2 Proposed Coal Handling and Preparation Plant Upgrades

The proposed upgrade of the existing CHPP as shown in **Figure 4** involves:

- Increasing the capacity of ROM reclaim conveyors by increasing their speeds with higher power motors and gearboxes;
- Altering the processing system and changing processing units in the coal preparation plant by the installation of large diameter cyclones to replace a jig and smaller cyclones with the necessary accompanying changes to fine coal and tailing circuits; and
- Adding a second thickener similar to, and adjacent to, the existing thickener.

The existing rail loading infrastructure at Camberwell Mine requires no modification to accommodate additional coal tonnages that are part of this proposal.

4.3 Proposed On-site Haulage

Scenario 1 – Use of existing Haulage Route

The current haul route from Glennies Creek Coal Mine to the CHPP traverses an overburden emplacement area within Camberwell Coal's North Pit. This scenario will continue to be used until the construction of the conveyor system to directly feed Glennies Creek coal into the Camberwell Coal's CHPP or until the emplacement of overburden prevents the efficient and economic use of this route.

In the event that the current route cannot be used due to the progress of the overburden emplacement level prior to the construction and operation of the conveyor option, an alternative haul route adjacent to the railway line along the western boundary of Camberwell Coal's North Pit will be utilised.

Scenario 2 – Alternate Haulage Route (adjacent to railway line)

Figure 3 shows the alternate route for on-site haulage of ROM coal along the western margin of Camberwell's North Pit, adjacent to the Main Northern Railway. This scenario would be used prior to the installation and use of the proposed conveyor in the event that the current haul road was not able to be used due to the progress with North Pit overburden emplacement. It will be kept open permanently for access to the CHPP from Glennies Creek Coal Mine and for coal haulage in emergencies when the conveyor option is not operable.

It is estimated that two to three haulage vehicles and one large front-end loader will be required to transport Glennies Creek coal.

It is expected that the rate of coal haulage by the use of trucks will be approximately 16,000 tonnes per day over three days in any week.

Scenario 3 – Use of Overland Conveyor

The preferred option for the transportation of coal from the Glennies Creek Coal Mine entry to the Camberwell Coal CHPP is the use of an overland conveyor. However, the route traverses areas of the Camberwell Mine currently in use as an overburden emplacement area. The topography of the route is under frequent change, a circumstance likely to continue for the short term. The overburden emplacement on the direct conveyor route is expected to be sufficiently completed allowing the conveyor construction to begin in 2002.

The conveyor of 1,800 tph capacity will, as it traverses the overburden emplacement, be mounted on the rehabilitated slopes. On the highest flat section of the emplacement, the conveyor floor will be at 135m RL in a trench through the final emplacement at 140 m RL.

The conveyor will be loaded through two underground draw points under a 100,000 tonne stockpile to be situated at the Glennies Creek Coal Mine entrance. Coal from the underground mine conveyor will discharge to a nominal 100,000 t ROM stockpile from a single discharge point. A bulldozer or front-end loader will be used to move the coal over the stockpile areas as it is stored and reclaimed.

The conveyor option would reduce the dependency on haul trucks for the on-site haulage of coal, resulting in less noise and dust being generated on site. Some lighting will be required for the conveyor for safety reasons, but the impact of this lighting is expected to less than the impact from large mining machinery. Having the conveyor in a trench 5m deep at its highest level will further decrease the effect of lighting. The lower impact will be achieved from the judicious positioning and shielding of fixed lighting in comparison to headlights of haul trucks which cannot be fixed in position or shielded.

4.4 Proposed Off-site Coal Haulage

All coal is transported from Camberwell Coal to the Port of Newcastle by rail. This method of product transport will not change with the proposal, although the amount of coal transported via this method will increase.

While there will be an increase in rail movements on the Camberwell Mine rail loop there will be no increase in rail movements on the Main Northern Railway from those anticipated from the combination of the separately approved Camberwell and Glennies Creek Mines. Instead of coal being loaded at two separate rail loops and then directing coal trains to the Main Northern Railway all coal trains will join the Main Line from the Camberwell Mine rail loop. The rail loading plant requires no modification to accommodate the increased CHPP capacity.

With the proposed increase in tonnage to approximately 3.4 Mtpa of saleable coal (dependent upon the actual yield of coal treated), train movements from the Camberwell site have been calculated to rise to around 540 train movements per year. This is an increase of approximately 215 train movements or an increase of approximately 66% when compared to the requirements of the current rates of saleable coal production.

5.0 ENVIRONMENTAL ANALYSIS OF THE PROPOSAL

5.1 Topography

The final landform of Camberwell Mine will not be significantly altered as a result of the proposal. The addition of roads or conveyors and disposal of coal rejects will be integrated with existing rehabilitation plans.

5.2 Erosion and Sediment Control

There are no new substantial surface works proposed. All activities such as haulage of coal, the construction of conveyors, and the upgrade of the CHPP are contained within the current footprint of mining activities of Camberwell Mine. Existing erosion control measures are implemented in accord with the Mine's sediment control plan. The effectiveness of these actions is assessed each year by the Department of Land and Water Conservation (DLWC) and the Department of Mineral Resources (DMR) and reported in the Mine's Annual Environmental Report.

5.3 Hydrology

5.3.1 Surface Water

The division of the site into subcatchments allows for the diversion of clean water to separate storage areas. Clean storm water is diverted around disturbed and mined areas while all runoff from rehabilitated areas is collected in a series of sedimentation dams designed to allow coarse particulate matter to settle out before the final release of clean water.

Camberwell Coal have engaged Hannan Environmental Management to undertake a review of the Mine's surface water management system. The review's aims will be to suggest improvements to the system with an emphasis on the diversion of clean water away from the Mine's water management facilities and towards natural drainage lines.

5.3.1.1 Water Balance

In 2000 Camberwell Coal commissioned Mackie Environmental Research to conduct water management studies for the mine site. The studies were based on the assumptions shown in **Table 5** and **Table 6**.

Table 5 – Production Rate Percentages at Camberwell Coal

Coal Stream	Yield
Product Coal	60%
Coarse rejects	30%
Fine rejects	10%

Table 6 – Moisture Content of Coal streams at Camberwell Coal

Coal Stream	Percentage Moisture
ROM coal moisture	6.5
Product coal moisture	9.0
Coarse reject moisture	10
Fine rejects moisture	70

The studies estimated that the total process water loss rate was 832 KL/day or approximately 90L/t of processed ROM coal. The studies also concluded that Camberwell Mine would benefit from increased water storage capacity to more efficiently manage the water generated on site during wet years. If additional water storages are not provided the mine runs a risk of interruption to mining activities in the South Pit due to water interfering with working areas. The studies indicated that the current tailings dam (TD1) and proposed tailings dam (TD2) provided sites with potential water storages of at least 1200ML and 2000ML respectively.

Figures 5 and **6** are sourced from Mackie's Water Management Studies. **Figure 5** shows the topography of the mine site and indicates the location of mine catchments which are referenced in the schematic of Camberwell Mine's water management system that forms **Figure 6**.

As a result of processing coal sourced from Glennies Creek Coal Mine, additonal water will be removed from the current water balance due to the export of approximately 9% moisture with coal product, water bound up with tailings and a marginal increase in water usage to control dust.

There will be no change to the water management system at Camberwell Mine as a result of the modifications being sought for the Mine's operations. Based on Mackie's figure of 90L of nett water usage per tonne of ROM coal processed, the proposal to treat approximately 2.0Mtpa of coal from Glennies Creek Mine will consume 180ML of water. This action will facilitate water management on site and ease pressures on water storage capacity during wet years, when and if they are encountered.

5.3.2 Groundwater

The proposed modifications to Camberwell Coal's operations will have no impact on groundwater. There will be no change to Camberwell Coal's current mine plan and the manner in which open cut operations interact with the local groundwater regime. The establishment of the Glennies Creek Coal Mine underground portal in the highwall of Camberwell Coal's North Pit will require that water levels are not allowed to recover to a level that would enter the portal (approximately RL45). This will interrupt the anticipated rate of recovery of the groundwater level within the spoil emplaced within the North Pit. This is not a result of the proposed modification to operations as the Glennies Creek Mine portal has been established since 1999.

5.4 Air Quality

An assessment of air quality impacts was conducted by HLA Envirosciences. The report of this assessment can be found in **Appendix 5**, an outline of the findings of the assessment are outlined in this section.

The approach to the air quality assessment has been to analyse the operation of the mine three scenarios for the transportation of coal from Glennies Creek Coal Mine to the CHPP. Estimates have been made of the dust that will be generated from each operation on the mine for each of the scenarios. The estimated emissions have then been used with a long-term model and local meteorological data to calculate annual average dust deposition rates (DDR) and concentrations of total suspended particulates (TSP) and particulate less than 10 microns (PM_{10}) at a grid of points surrounding the mine. The predicted deposition rates and concentrations have been presented as contour plots, which can be used to determine the air quality at dust sensitive locations.

Dust impacts have been assessed by comparing estimated dust concentrations and deposition levels with relevant air quality criteria. In addition, cumulative effects, taking into account the emissions from neighbouring coal mines, have been modelled and impacts assessed by comparing predicted long-term dust deposition and concentration levels with appropriate criteria.

A summary of the dust emissions has been generated and is shown in **Table 7**.

Table 7 - Summary of Estimated Dust Emissions

Estimated Dust Emissions (kg/yr)			
Activity	Scenario 1 (Central Route)	Scenario 2 (Western Route)	Scenario 3 (Conveyor)
Loading coal from Stockpile	67,860	67,860	67,860
Hauling Coal to CHPP	175,099	201,039	0*
Hauling Reject	29,183	29,183	29,183
Dumping Reject	8424	8424	8424
Wind Erosion from Coal Stockpiles	3504	3504	3504
Total	284,070	310,010	108,971
kg Dust per tonne of ROM coal	0.12	0.13	0.05

Refer to Section 4.3 for a description of Scenarios 1, 2 and 3.

* *Dust emissions from conveyors are generally only associated with transfer points.*

The air quality assessment report investigated the dust impacts expected as a result of the operation of the proposed Glennies Creek underground coal mine and the processing of increased coal tonnages through Camberwell Coal's CHPP. This study has been performed to analyse the three different coal haulage scenarios proposed as part of the development.

The modelling predictions for the first scenario (central haul road) indicate that the DDR, TSP and PM_{10} concentrations will not exceed the NSW EPA criteria for any receptor outside Camberwell Mine's defined zone of affectation. One receptor (Dulwich) within this zone is expected will experience DDR impacts at a higher level than is already being experienced.

The second scenario modelled (western haul road) was similar to the first in that the coal is hauled by trucks to the CHPP along a haul road. This option resulted in increased TSP, PM_{10} and DDR concentrations to the west of the Camberwell Mine site. The PM_{10}, TSP and DDR concentrations for the second scenario were below their respective criteria for all receptors outside the zone of affectation. As with the first scenario, the DDR concentrations exceeded the criteria at the same receptor (Dulwich) located within the Camberwell Mine's zone of affectation.

The final scenario modelled was for the ROM coal to be transported to the CHPP by conveyor. This method resulted in significant decreases in PM_{10}, TSP and DDR from the first two options. No exceedences were predicted for PM_{10} or TSP. However, the cumulative DDR concentrations continued to exceed the criteria at the same receptor (Dulwich) located within the Camberwell zone of affectation.

5.5 Noise

HLA Envirosciences conducted a Noise Impact Assessment for the proposed modifications to Camberwell Coal mine. The full report can be found in **Appendix 6**. The following section provides a summary of the assessment methodology and the results found.

Existing background data were sourced from representative 72-hour surveys conducted at three residential locations (Hardy, Wattling and Mordey) surrounding the Camberwell Coal Lease at various times during the period 1998-2000 as part of the mine's regular compliance monitoring program. These data are considered more appropriate for determining long-term ambient noise levels than a single one-week "snapshot" as would be obtained from a standard noise survey. It is also important to note that logging over weekend periods, when Camberwell was not operating, did not reveal background noise levels significantly lower than those obtained from the 10^{th} percentile L90 levels at other times.

Background noise levels were calculated from the measured data using the median of the daily tenth-percentile L90 level in each time period as specified in the EPA *NSW Industrial Noise Policy, 2000* (INP).

The mine's current noise goals of 40dB(A),L10 (night) and 50dB(A),L10 (day), are applicable under neutral atmospheric conditions. Given that the mine operates on a 24-hour basis, the night time noise goal is the governing criterion.

The noise assessment considers all significant noise emissions from Camberwell Coal that may be increased or in some way affected by the current proposal, so that a reliable prediction of intrusive noise levels may be made. Extensive noise measurements taken on and around Camberwell Mine during

March 2000 revealed that in-pit activities (shovel/loader) do not contribute significantly to mining noise levels at nearby receivers. The dominant noise sources will be those above the ground surface, as follows:

- Transfer of ROM coal from Glennies Creek to Camberwell CHPP via the existing central haul road;
- Transfer of ROM coal from Glennies Creek to the Camberwell CHPP via an overland conveyor;
- The upgraded Camberwell CHPP; and
- Additional trucks transporting rejects from the CHPP to the northern dump.

It is also possible that coal from Glennies Creek Coal Mine will occasionally be transported to the Camberwell CHPP by truck via a western haul road adjacent to the Northern Railway Line. This operation has been assessed separately.

Sound power levels for relevant noise sources were obtained from either direct measurement at Camberwell (CHPP and dumping operation) or from our acoustical database (coal conveyor).

Haulage along Central Haul Road

This scenario represents usage of the existing haul road, which is likely to continue for some time under this proposal. *Compliance with the existing night-time noise goal of 40dB(A),L10 (neutral) is predicted at all residences.*

Noise goal exceedances under the INP prevailing atmospheric conditions are predicted as follows:

Residence	Exceedance of INP dB(A)	Condition	Source(s)
Mordey	2	NW wind + inversion	Washery
Lambkin	1	NW wind + inversion	Washery
Noble	3	SE wind	North dump
Dulwich	7	SE wind	North dump, central haul road

Haulage along Western Haul Road

The western haul road is not intended as a permanent haulage route. Rather, it will be used after commissioning of the overland conveyor if there is a failure of the conveyor, or if overburden dumping in the North Pit disrupts the existing central haul route at a time prior to commissioning of the conveyor.

Use of the western haul road is predicted to result in the night time noise goal of 40 dB(A) being exceeded by 8 dB(A) at "Dulwich". *It has been decided to restrict coal haulage along the western haul road to day time hours when the day time noise goal of 50 dB(A) will be achieved.*
Noise goal exceedances under prevailing atmospheric conditions are predicted as follows:

Residence	Exceedance of INP dB(A)	Condition	Source(s)
Mordey	2	NW wind + inversion	Washery
Lambkin	1	NW wind + inversion	Washery
Noble	3	SE wind	North dump
Dulwich	12	SE wind	North dump, western haul road
Tisdell	1	SE wind	Western haul road

Coal Transfer via Overland Conveyor

This is the proposed final configuration and represents the 'normal' operating scenario. *No exceedances of the current noise goal are predicted.* Noise goal exceedances under INP prevailing atmospheric conditions are predicted as follows:

Residence	Exceedance of INP dB(A)	Condition	Source(s)
Mordey	1	NW wind + inversion	Washery
Dulwich	3	SE wind	North dump

The downstream effects of noise as a result of the additional coal being transported to the Port of Newcastle have been identified and assessed at the time the Glennies Creek EIS was submitted.

5.6 Visual Aspects and Night Lighting

Existing operations at Camberwell Coal, including truck movements, operate 24 hours a day. The additional truck movements associated with the haulage of coal from Glennies Creek Coal Mine to the CHPP will not result in any significant change in operations of these trucks. They will be of the same type as existing machinery and will operate along existing haul routes used for overburden and reject transport.

The proposal to construct a conveyor from the Glennies Creek Coal Mine stockpile to the CHPP will be over an area of Camberwell Mine that lies on higher terrain than the existing truck route. The conveyor will not be as high (from the ground's surface) as the haulage trucks and will not utilise as much lighting. There is expected to be no significant change in the visual aspect of Camberwell Coal's operations. In the long term, the installation of the conveyor system will have less visual impact than hauling coal by truck on-site. The conveyor will be in a 5m deep trench as it traverses the higher levels of the rehabilitated overburden emplacement of the former North Pit.

5.7 Flora and Fauna

The existing haul route, and planned path of the conveyor system have previously been totally disturbed. Any vegetation in these locations is a result of successful mine site rehabilitation. A photograph of the proposed conveyor route is shown below in **Plate 1**.

Plate 1 – Conveyor Route - The foreground of this photograph shows an area typical of the proposed conveyor route (prior to rehabilitation works).

The path of the proposed western haul route (adjacent to the railway line) will be along the western margin of Camberwell Coal's North Pit.

The original EIS for Camberwell Coal listed flora and fauna species recorded during surveys conducted in 1985. Due to the age of this report and the level of disturbance since this study due to open-cut mining activities on site, more recent reports have been reviewed for potential species likely to be affected by this proposal.

A flora and fauna study (Wildthing Environmental Consultants, 1997) was undertaken as part of a Review of Environmental Factors for the upgrade and partial construction of Stony Creek Road. This road is

road is adjacent to the north of Camberwell Mine site and is in close proximity to the proposed conveyor route and Camberwell's CHPP.

The study was completed in August 1997, and presented a list of plant species observed on site and an expected fauna species list. The methodology adopted to produce the expected fauna species list involved an assessment of the potential use of the site by Schedule 1 and 2 fauna identified in the database, and confirmation and supplementation of the expected species lists by observation in the area.

The Wildthing Environmental Consultants' report found that no rare or threatened Australian plant species had been recorded within 10 km of the site, nor were any observed during the survey. This finding was related to the relatively high degree of disturbance of the area by the removal of large sections of vegetation for grazing and the impact of the road corridor with respect to introduced species.

The Wildthing Environmental Consultants' fauna assessment considered five threatened species, none of which were recorded on site during fieldwork. Species considered were those recorded within 5km of the site on the NPWS database, those species recorded within 10 km that have preferred habitat on site, and those species known from the region with suitable habitat present on site.

Schedule 1 & 2 Species within 5 km of the site:

- Red Goshawk *Erythrotriorchis radiatus*

Schedule 1 & 2 Species within 10km with potential habitat on site:

- Tiger Quoll *Dasyurus maculata*
- Brush-tailed Phascogale *Phascogale tapoaatafa*
- Squirrel Glider *Petaurus norfolcensis*

Other species:

- Glossy Black-Cockatoo *Calyptorhynchus lathami*

The report also identified that the habitat in the area was well represented in adjacent areas, particularly to the North.

A flora and fauna survey conducted in 1999 by Environmental Appraisal & Planning Pty Ltd as part of the Camberwell Coal's previously planned Western Excavated Overburden Emplacement Area was also reviewed for species which may be affected by this proposal. This study covered an area immediately to the south west of the proposed western haul route.

The report identified the following threatened species to which and eight-part Test of Significance was applied:

- Barking Owl *Ninox connivens*
- Glossy Black Cockatoo *Calyptorhynchus lathami*
- Squirrel Glider *Petaurus norfolcensis*
- Koala *Phascolarctos cinereus*

In addition to the above species the following species, was identified from the interrogation of the NPWS Wildlife Atlas database in July 2001:

- Common bentwing Bat *Mimiopterus schreibersii*

5.7.1 Considerations under Section 5A of the EP&A Act

An assessment of the considerations of section 5A for the species identified as threatened or endangered in the 1997 Wildthing Environmental Consultant's report, the 1999 Environmental Appraisal & Planning Pty Ltd report and the NPWS Wildlife Atlas database was conducted for this proposal.

Eight-part tests concerning the possible impacts of this proposal on identified endangered species can be found in **Appendix 7**.

The completion of the eight-part tests found that there will be no significant effect on the assessed threatened species due to the extent of previous disturbance on site and the lack of suitable habitat in the proposal area. Consequently, there is no need to conduct Species Impact Statements for the proposed modification to Camberwell Coal's Development Consent.

5.8 Waste Management

The proposed modification to operations will not impact upon current arrangements that utilise contractors to remove and dispose of general "household" waste and the removal and recycling of waste oils and scrap metals.

Waste generated from the handling and preparation plant will be in one of two forms: coarse reject (larger size coal reject) and fines disposal (tailings).

5.8.1 Reject Emplacement

Reject produced as a result of processing coal produced by Glennies Creek Coal Mine will be incorporated into Camberwell Mine's existing plans for rejects disposal within the overburden emplacement.

5.8.2 Tailings Disposal

The current tailings dam (TD1) has adequate capacity to be operational for approximately nine months as estimated from current and predicted requirements. The location of TD1 and TD2 is shown in **Figure 3**.

It is Camberwell Coal's intention to seek the Department of Mineral Resources approval for a new tailings dam (TD2) in the latter half of 2001. The new tailings dam will have a sufficient capacity for 10 years of tailings disposal at the increased capacity of the CHPP.

5.9 Heritage

5.9.1 Archaeology

The existing on-site haul route, the western haul route and proposed route of the conveyor traverse areas of the mine site that have been completely disturbed by open cut mining activities. Archaeological sites will no longer be found in these locations.

Upgrades to the CHPP and extension to the ROM stockpile area will not involve earthworks in any previously undisturbed areas, thus the possibility of discovering any sites or items of aboriginal archaeology is extremely unlikely. In addition, no items of aboriginal archaeology were identified in the vicinity of the CHPP in the original 1989 EIS.

5.9.2 Post-Contact Heritage

Approximately 700m to the west of the proposed western haul route (along the railway line) is a building known as "Dulwich". This item is listed under "Part 3 – Items classified as being of local significance" of Schedule 3 of the Singleton Local Environmental Plan 1996 (SLEP).

Camberwell Coal's development consent conditions require that all necessary measures shall be taken to ensure that the building known as "Dulwich" is not materially damaged by blasting arising from the development. In accordance with this requirement and additional requirements set out in Camberwell Mine's Environment Protection License, regular vibration monitoring and structural surveys are conducted at "Dulwich". The results of these monitoring activities is contained in the Annual Environment Management Report and is submitted to the EPA, Singleton Shire Council, DUAP, DLWC and DMR.

The proposed modifications to operations at Camberwell Coal do not include any additional blasting activities. The monitoring currently conducted at Dulwich provides a means of assessment of impact, or otherwise, of the proposed modifications. It is not expected that the modifications to operations will impact on the structural stability of Dulwich.

6.0 ENVIRONMENTAL MANAGEMENT

6.1 Dust

Existing dust control measures on stockpile areas and water trucks used on haul routes have been assessed to be adequate to cope with the increased capacities required by the processing of coal from Glennies Creek Coal Mine and the current production levels of coal from Camberwell Mine.

The air quality assessment found that impacts which result in an exceedance of the criteria are not likely to occur regardless of which option is chosen for the transfer of coal from the Glennies Creek Coal Mine to the CHPP.

6.2 Water

It is expected that water management on Camberwell Coal's site will be generally unaffected by the proposal.

With the increased water requirements associated with the increased throughput of the CHPP, more water can be utilised and transported off site with saleable coal product. This will relieve pressure on the current water management system which operates at full capacity during extended wet periods.

6.3 Noise

No exceedances of the current noise goals are predicted outside of the zone of affectation for either the usage of the existing central haul road or the proposed overland conveyor. Compliance with the day time noise goal will be achieved when the Western haul road is utilised. The night time noise goal would be exceeded at Dulwich leading to a proposed restriction on the use of the western route for coal haulage between the hours of 10.00 p.m. and 7.00 a.m. or 8.00 a.m. on public holidays and Sundays.

When assessed under the INP, minor exceedances up to 3 dB are predicted at the Mordey, Lambkin and Noble residences, when the central haul road is used. The exceedance will decrease to 1 dB at the Mordey residence, and will be eliminated at the Lambkin and Noble residences, when the overland conveyor is in use.

6.4 Flora and Fauna

As a result of the proposed modifications, no previously undisturbed areas of the mine site will be affected. Based on the flora and fauna assessment conducted for this report, and the review of assessments completed for areas both north and south west of Camberwell Coal mine, no threatened or endangered species or populations were identified, and as such none will be affected by the proposed modifications.

6.5 Archaeology

Due to the use of the Camberwell Mine site for open-cut mining and associated activities all of the ground surface affected by the various components of the proposed modification has been disturbed. Consequently no archaeological sites remain to be damaged or threatened by the proposal.

7.0 SOCIO-ECONOMIC MANAGEMENT

The total number of employees working at Camberwell Coal is 203; a figure that is expected to be unaffected by the proposal. Employment at Camberwell Coal will be positively affected by the proposal as the operational life of the CHPP and it's associated infrastructure will be preserved beyond original estimates.

The use of the CHPP, stockpiling, train-loading and reject disposal facilities on the Camberwell Mine site by coal sourced from Glennies Creek Coal Mine enables economic efficiencies to be achieved. These efficiencies accrue from a reduction in the capital requirement by Glennies Creek Coal Mine to construct duplicate facilities and increased throughput of the existing / upgraded facilities at Camberwell Mine. Both mines will achieve improved economic viability which in turn produces increased security of employment at both mines.

As shown in **Table 2** most (over 75%) employees of Camberwell Coal live in and around Singleton. Most of the disposable income of Camberwell Coal's workforce is spent in the Singleton district, and helps underpin the local economy and maintain the current level of services in the district. The Mine is also an important contributor to the State economy by way of coal royalties, state taxes, rail freight charges and port charges. The national economy benefits from export income earned from the sale of Camberwell Mine's coal and taxes paid by the Joint Venture and its workforce.

The proposed modifications to operations will allow current economic and social benefits to continue and also allow Glennies Creek Coal Mine to process and transport coal from its operations in an economically efficient manner. There is assessed to be no adverse socio-economic effects from the proposed modification.

8.0 ALTERNATIVES

The "Do Nothing" Approach

To be able to continue mining operations in an economically sustainable manner, Glennies Creek Coal Mine requires an increased capacity to prepare ROM coal for the export market. Failure to process increased production rates will affect the viability of the mine and the economic benefits it provides to the local, State and national economies. Camberwell Mine would be able to continue operating as it currently does, should the modification not proceed.

Installation of coal handling and preparation equipment at Glennies Creek

The utilisation of Camberwell Coal's existing coal handling and preparation infrastructure (with some slight modifications) will remove the need for neighbouring Glennies Creek Coal Mine to duplicate these facilities. This option will greatly reduce the predicted impacts of the Glennies Creek Coal Mine and have little affect on the current level of impacts of the existing Camberwell Mine.

As Glennies Creek Coal Mine has a mine life expectancy greater than Camberwell Coal, the useful life of the existing facilities has the potential to be extended.

Construction of a rail loading facility at Glennies Creek Coal Mine

The 1990 Glennies Creek Coal Mine EIS incorporated details of the affect of the construction and operation of its own rail loading facilities. The option of transporting ROM coal by truck to Camberwell Coal was considered, but was ruled out due to the expenses involved in haulage. However, haulage of ROM coal to Camberwell Coal's CHPP and rail loading facilities is now a viable option for Glennies Creek Mine.

The option of constructing separate rail loading facilities on Glennies Creek Mine site would cause an environmental impact. Given the close proximity of Camberwell Coal's facilities, and their capacity to load Glennies Creek Mine's coal, this impact can be avoided. In addition to the environmental benefits, socio-economic benefits are also achieved, as the proposal will enhance the viability of the Glennies Creek Coal Mine operations.

9.0 JUSTIFICATION

9.1 Justification for Proposal

A noteworthy feature of this combined development for both mines is that Glennies Creek Coal Mine will not have to build and operate a CHPP, coal rejects disposal areas or rail loading system. There will be a significant decrease in the impact of the Glennies Creek Coal Mine when compared to the development approved by its original consent in 1991.

With the provision of some upgrades, the existing CHPP at Camberwell Coal is capable of handling the requirements of the Glennies Creek Coal Mine as well as the current levels of coal production from Camberwell Mine. No upgrade of the rail loading facility is required to accommodate the additional coal produced from Glennies Creek Coal Mine.

The downstream effects of the proposal, including the effects of the movement of coal by rail have previously been considered separately, both in the 1990 Glennies Creek Coal Mine EIS and in the 1989 Camberwell Coal EIS.

9.2 Justification for the use of Section 96(2)

The proposed modifications do not significantly alter the approved existing development, as was discussed in Sections 4 & 5 of this report. Therefore consent for the proposal is sought as a modification of consent under Section 96(2) of the *Environmental Planning and Assessment Act 1979*.

The proposed modification has, in part, been foreshadowed in the 1990 Camberwell EIS and by a recommendation put forward by the Commissioners of the Rixs Creek Coal Mine Inquiry. That recommendation proposed a joint-user train loading facility for the Rixs Creek, Camberwell and possibly the Glennies Creek Mines. The EIS stated that the Camberwell Joint Venture *"views this alternative as an environmentally desirable option"*. While the current modification does not propose a jointly-owned train loading and stockpiling facility, the principle of the three coal mines sharing one rail loop, and the utilisation of stockpiling and train loading facilities for coal produced from Camberwell and Glennies Creek Mines is in keeping with the 1990 Camberwell EIS.

The utilisation of the Camberwell CHPP to prepare coal from Glennies Creek Coal Mine is, in effect, a refinement of the 1990 alternative that produces an enhanced *"environmentally desirable option"*.

The proposed modification is clearly substantially the same development to that for which consent was originally granted.

9.3 Relevant Matters under Section 79C of the EP&A Act

General matters for consideration under section 79C of the EP&A Act have been covered in previous sections of this SoEE. The relevant sections and page numbers of the text relating to these matters are shown in **Table 8**.

Table 8 - Section 79C matters for consideration

Section 79C Matters for consideration	Report Reference
1 (a) the provisions of:	
(i) any environmental planning instrument, and	Section 2.8
(ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority, and	None Applicable
(iii) any development control plan, and	Section 2.6
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,	SoEE formulated to conform to the Act and regulations
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	Section 5.0 Section 7.0
(c) the suitability of the site for the development,	The site is an approved operating open cut coal mine on suitably zoned land. The proposed modification relates to matters concerning coal processing and transport on the site.
(d) any submissions made in accordance with this Act or the regulations,	Any submissions will be reviewed by DUAP and the Minister.
(e) the public interest.	Section 7.0

10.0 CHECKLIST OF DUAP REQUIREMENTS

Sections relating to the requirements of the Director General of the Department of Urban Affairs and Planning are summarised in **Table 9**. A copy of the correspondence from DUAP is included in **Appendix 3**.

Table 9 - DUAP Director General Requirements for SoEE (6/04/01)

Director General Requirements	Report Reference
Justification for the use of section 96(2) to modify the consent, by demonstration that the development as modified would be substantially the same development as the approved development.	Section 9.2 Page No. 31
Details of how the proposed modification will affect the existing development consent for Camberwell Coal Mine.	Section 2.5 Table 1
Include details and documentation of consultation undertaken with the Department of Land and Water Conservation, the Environment Protection Authority and Singleton Council in regards to the proposed modification.	Section 2.6 Page No.4
A detailed description of all elements of the proposed modification and the land on which these elements are to be located.	Section 4.0 Page No. 14
A clear map showing the current development with all proposed new or modified elements clearly marked.	Figure No. 3
A schedule of property descriptions to which this application applies, together with ownership details.	**Appendix 1**
A copy of all current development consents for the subject development (both Minister's consents and Council consents) and any previous modifications.	**Appendix 1**
A description of the environment of the area.	Section 5.0
An assessment of the potential environmental impacts of the proposed modifications, by reference to the relevant matters in section 79C of the *Environmental Planning and Assessment Act, 1979*, including noise and dust impacts and impacts on Aboriginal sites and heritage items.	Section 9.3 Page No. 32
Impact on flora and fauna, particularly critical habitats; threatened species, populations or ecological communities, or their habitats. The assessment should involve the following steps:	
i) Conduct baseline surveys, and consult relevant databases and listings by the Scientific Committee.	Section 5.7 Page No. 23
ii) Describe the types and condition of habitats in, and adjacent to, the land to be affected by the proposal.	Section 5.7 Page No. 23
iii) Prepare a list of species, populations or ecological communities, or their habitats, that may occur on the site, and conduct targeted surveys for these.	Section 5.7 Page No. 23
iv) Apply the "8 Part Test" (section 5A of the EP&A Act) to species, populations or ecological communities, on their habitats, that may be affected by the proposal. The SoEE must justify any decision to not apply the test to all of the species, populations or ecological communities identified in step iii).	**Appendix 7**

Director General Requirements	Report Reference
v) Prepare a Species Impact Statement for any critical habitats; species, populations or ecological communities, or their habitats that are likely to be significantly affected by the proposal (note: An SIS must be prepared in accordance with any requirements of the Director-General of National Parks and Wildlife Service).	Not Applicable

11.0 CONCLUSION

As the proposed modification to consent relates to activities at, and within, an existing operating coal mine, new environmental impacts are minimal and manageable. The proposal will enable the use of Camberwell Coal's CHPP and train loading facility for coal sourced from the adjacent Glennies Creek Coal Mine.

Significant environmental impacts will be avoided as much of the previously planned surface infrastructure for Glennies Creek Coal Mine will not be constructed.

Overall, approving the proposed modification has many social, environmental and economic positives, while the few negative impacts are minimal and manageable.

12.0 REFERENCES

Camberwell Coal Project, Glennies Creek, NSW. Environmental Impact Statement, 1989. Camberwell Coal Joint Venture.

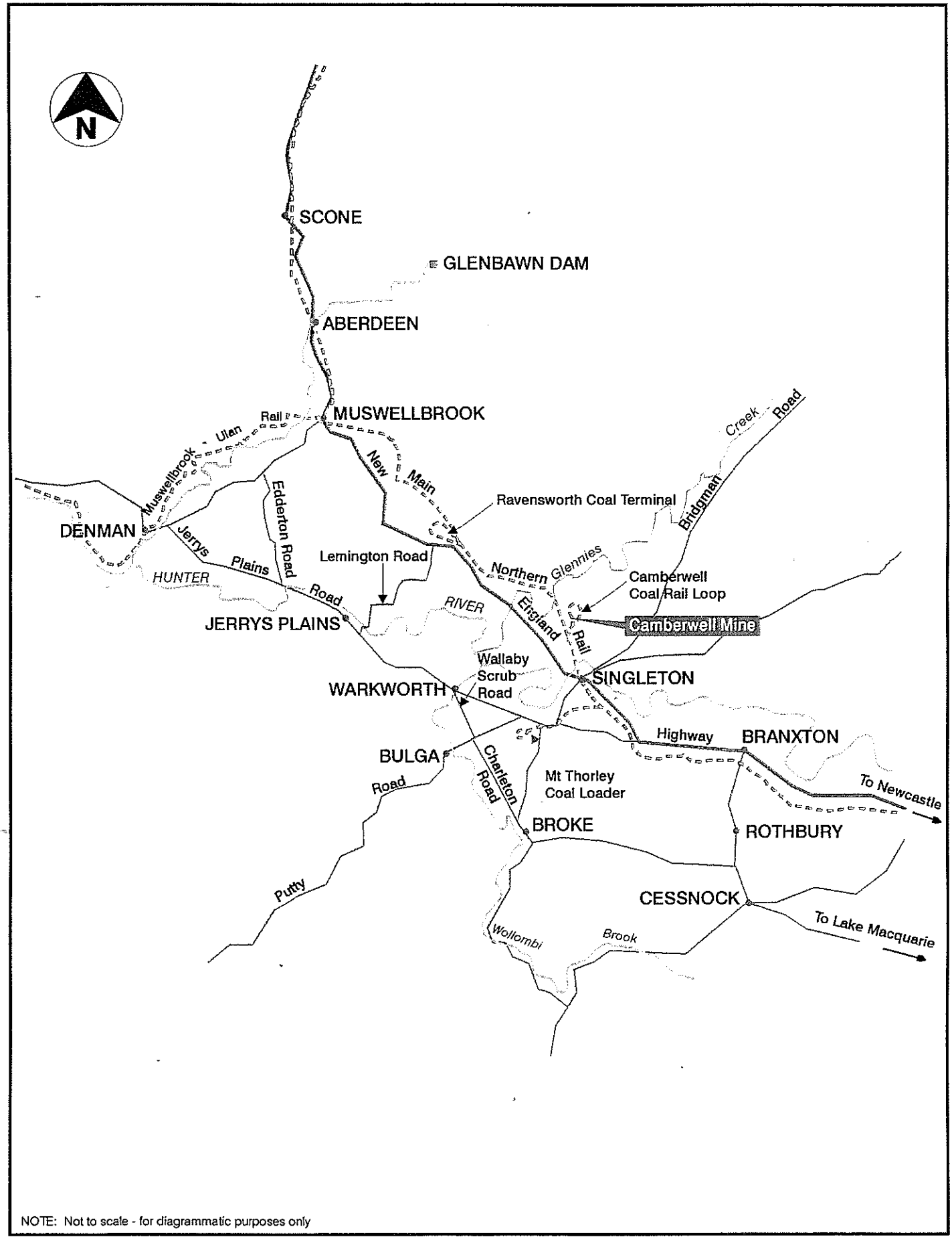
Environmental Appraisal & Planning Pty Ltd, 1999. Flora and Fauna Assessment Component - Statement of Environmental Effects of Proposed Excavated Overburden Emplacement, for HLA Envirosciences for Camberwell Coal Pty Limited.

Glennies Creek Coal Mine, Environmental Impact Statement, 1990. Maitland Main Collieries Pty Limited.

Mackie Environmental Research (2000). Camberwell Coal Water Management Studies – Final Report July 2000, prepared for Camberwell Coal Pty Limited, Singleton.

Trudeau & Associates (1997). Report of the Hunter Valley Railway Programs Task Force, Volumes 1-2, prepared for Department of Urban Affairs and Planning, Sydney.

Wildthing Environmental Consultants, 1997. Flora and Fauna Study as part of a Review of Environmental Factors for the proposed upgrade and partial construction of Stony Creek Road, Singleton NSW for Pacrim Environmental Pty Ltd.



NOTE: Not to scale - for diagrammatic purposes only

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LOCATION OF CAMBERWELL MINE

FIGURE **1**

DRAWN	PROJECT - TASK NUMBER	APPROVED	DATE
	U851		June 2001

N

LEGEND:

Current Zone of Affectation

Sensitive Receptors (see table below for description)

Land to which the Modification of Consent applies

Receptor No.	Receptor
1	Dewar and Fairhall
2	Flynn
3	Watson
4	D. Wilson
5	J. Kemp
6	Scott
7	D. Bridge
8	A. Noble
9	J. Moore
10	B. Cherry
11	G. Cheetham
12	A. Donehue
13	Payne
14	Mr and Mrs B. Evans
15	G. Hamilton
16	D. Hamilton
17	Mr and Mrs G. Lambkin
18	Mrs G. Peebles
19	Mr R. H. Andrews
20	Mr G. Cooper
21	Mr and Mrs C. Lambkin
22	Mr and Mrs A. Lambkin
23	Mr and Mrs G. Barnett
24	Mrs Hogan
25	J. Russell
26	Mr and Mrs F. Ferraro
27	Mr and Mrs E. Kleinmann
28	Mr and Mrs W. Pendered
29	B. Mordey
30	Mr and Mrs H. Morante
31	Mr and Mrs J. Bradford
32	Mr K. Murray
33	Mr and Mrs W. Cox
34	Mr and Mrs D. Cox
35	Mr and Mrs L. Cox
36	Mr and Mrs L. Cox (unoccupied)
37	Mr and Mrs C. Whiting
38	T. Tisdell
39	R. Hall (Dulwich)
40	B. Richards
41	Mr and Mrs A. Klasen
42	Mrs J. Watling
43	Mt Esther
44	Mr Proctor
45	Burgess
46	Burgess
47	Hall

0.0 1.0 2.0 3.0

Kilometres

Scale: 1 : 50 000

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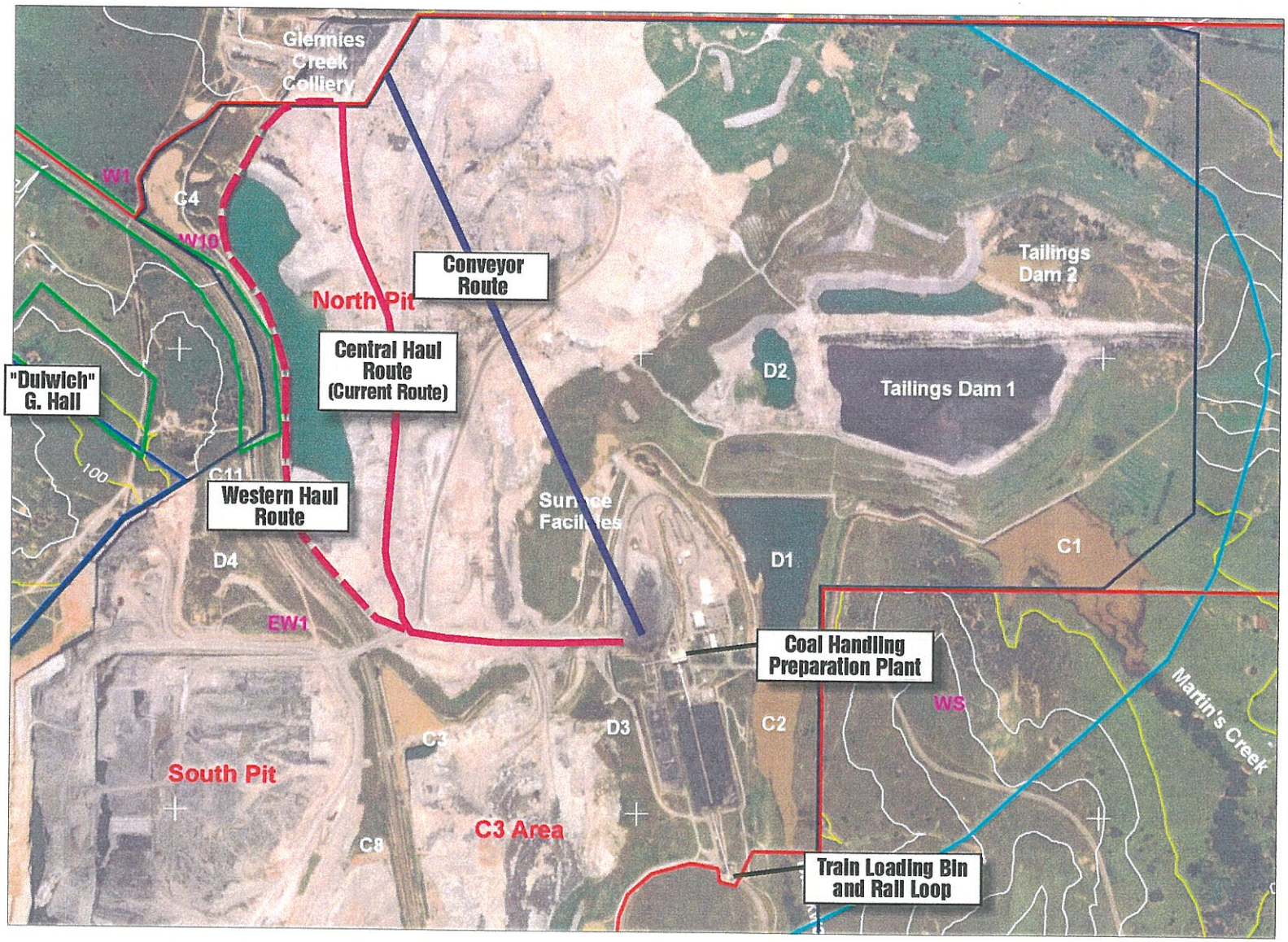
LOCATION OF SENSITIVE RECEPTORS

FIGURE **2**

DRAWN	PROJECT - TASK NUMBER	APPROVED	DATE
	U851		June 2001



0.0 0.5 1.0

Kilometres

Scale: 1 : 20 000

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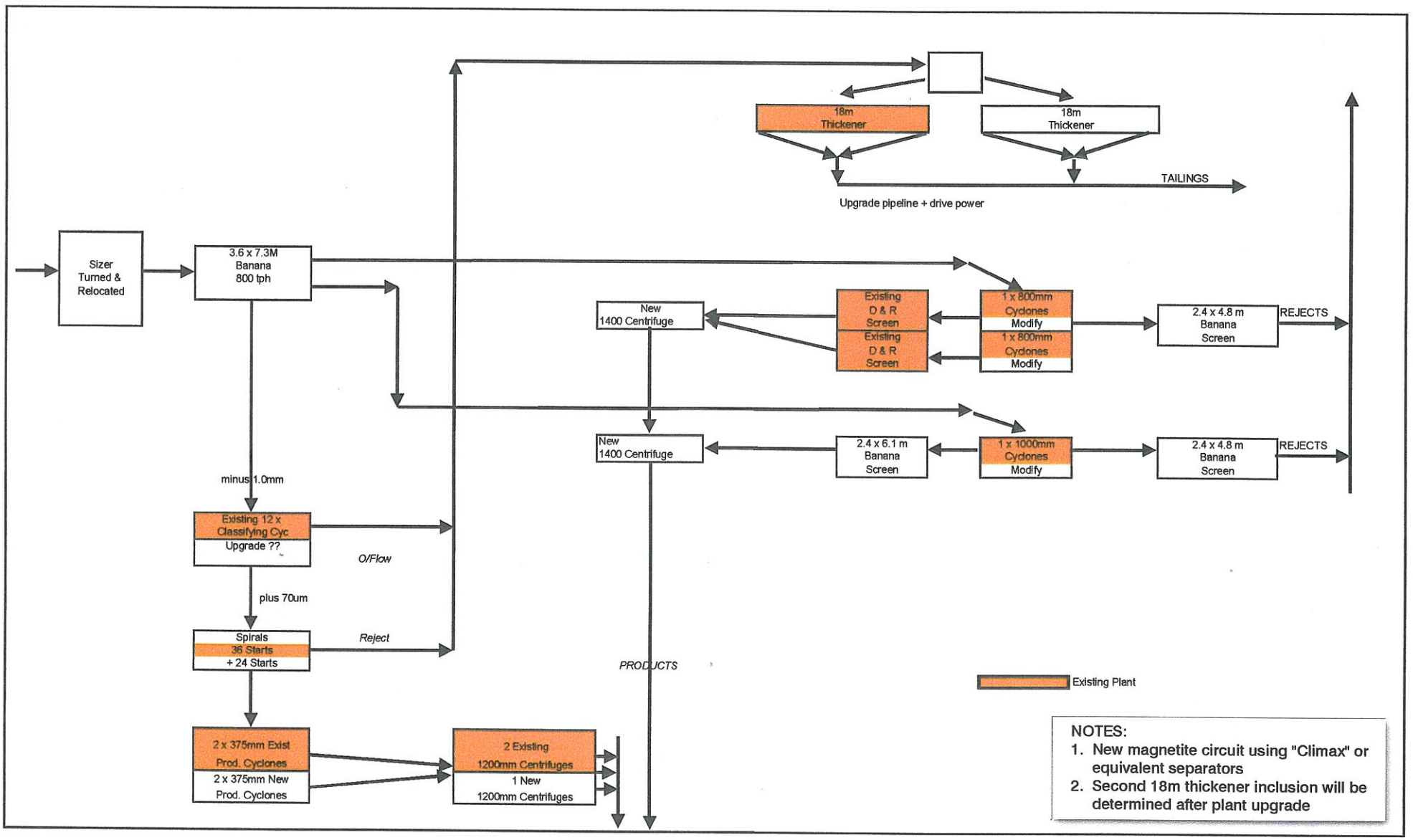
CAMBERWELL MINE AERIAL PHOTOGRAPH (2001) SHOWING CURRENT OPERATIONS AND PROPOSED MODIFICATIONS

FIGURE **3**

DRAWN	PROJECT - TASK NUMBER	APPROVED	DATE
	U851		June 2001



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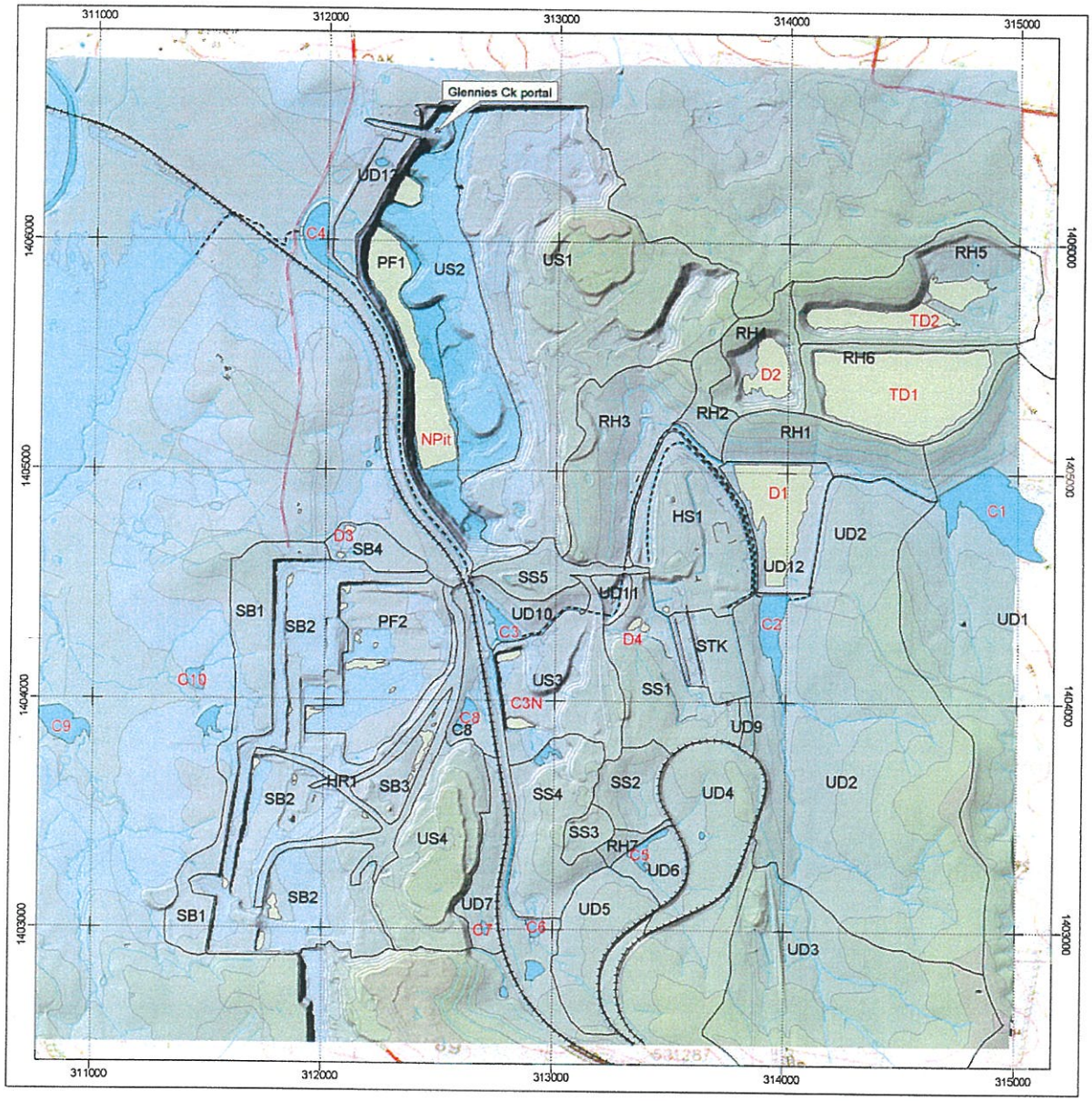
PROPOSED MODIFICATIONS TO COAL HANDLING AND PREPARATION PLANT

FIGURE
4

DRAWN	PROJECT - TASK NUMBER	APPROVED	DATE
	U851		July 2001



0 300 600 900 Metres

Scale 1: 30000 Base map information from 1:25,000 topo series (Central Mapping)
Additional data supplied by Camberwell Mine

- mine water storages
- clean water dams
- mine catchments
- Diversions
- minor road
- sealed road
- railway
- creeks
- river

Elevation in mAHD

-20 - -10	50 - 60	120 - 130
-10 - 0	60 - 70	130 - 140
0 - 10	70 - 80	140 - 150
10 - 20	80 - 90	150 - 160
20 - 30	90 - 100	160 - 170
30 - 40	100 - 110	170 - 180
40 - 50	110 - 120	180 - 190

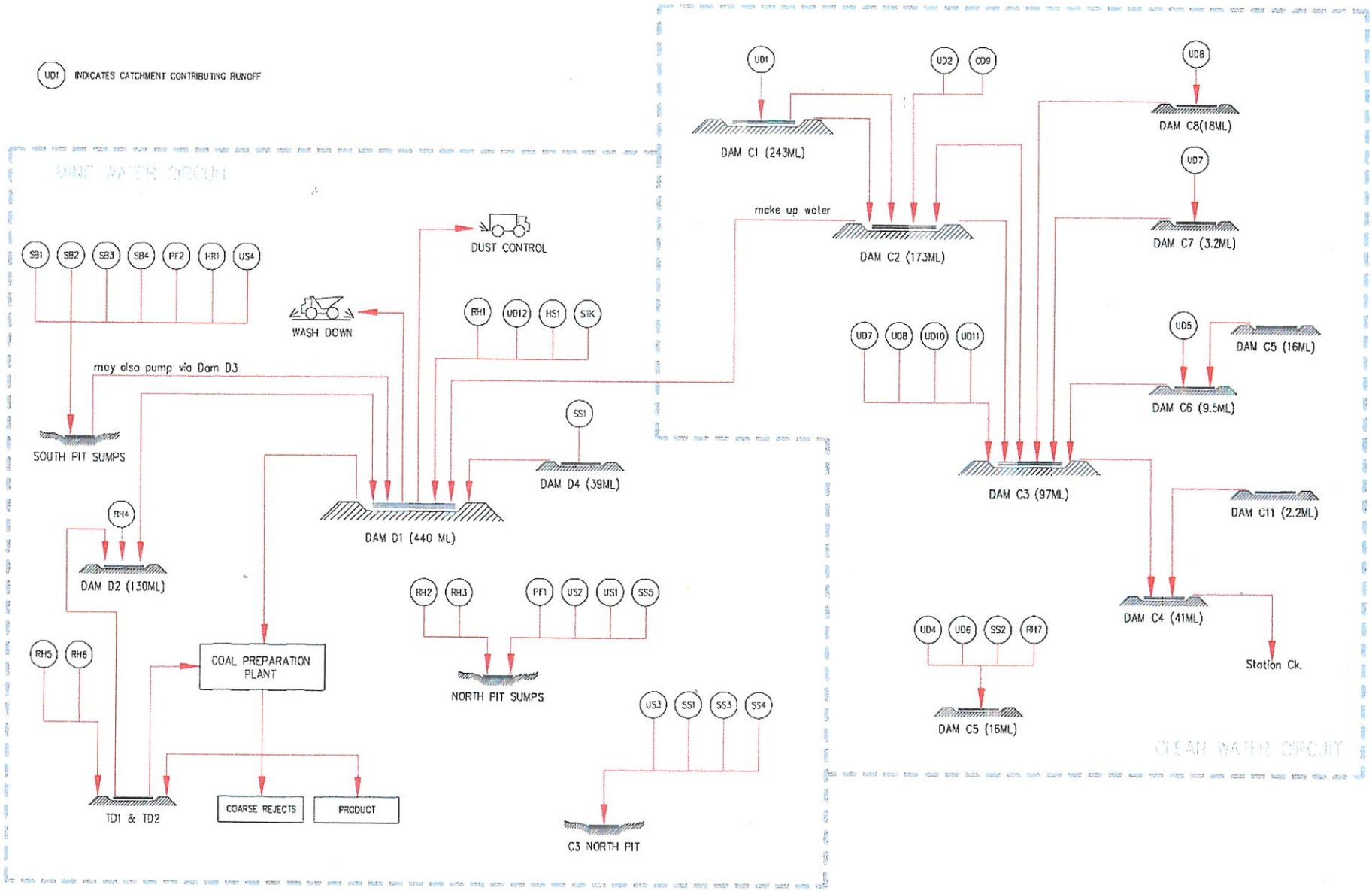
Mackie Environmental Research

HLA-Envirosciences Pty Limited
18 Warabrook Boulevarde
Warabrook, NSW
(02) 4968-0044

TOPOGRAPHY AND MINE CATCHMENTS

FIGURE **5**

DRAWN	PROJECT - TASK NUMBER	APPROVED	DATE
	U851		June 2001



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Warabrook, NSW
(02) 4968-0044

SCHEMATIC OF CAMBERWELL COAL MINE WATER MANAGEMENT SYSTEM

FIGURE
6

DRAWN	PROJECT - TASK NUMBER	APPROVED	DATE
	U851		July 2001

DISTRIBUTION

Statement of Environmental Effects -
Modification of Development Consent
For Camberwell Coal Pty Ltd, Singleton

2 July 2001

Original **Camberwell Coal Pty Limited**
PMB 7
Singleton NSW 2330

Copy HLA-Envirosciences Project File

Quality Control Reviewer

Colin Phillips.

Colin Phillips
Senior Environmental Scientist