Washing of Mandalong Coal at Newstan
Section 96(1A) Application
Statement of Environmental Effects

ADDITIONAL INFORMATION REQUEST

Introduction

On 13 October 2009, Centennial Coal Company Limited (Centennial) on behalf of its subsidiaries which respectively operate the Newstan and Mandalong mines, lodged an application to modify existing consents to enable:

(a) Coal from Mandalong to be washed at Newstan, and

(b) Coal to be transported to Newstan via a conveyor to Eraring Power Station (**Eraring**), and then by truck on the existing haul road to Newstan, for a temporary period only until the link road from Mandalong is completed (estimated to be February – March 2010).

A Statement of Environmental Effects was prepared to accompany a Section 96(1A) applications to modify existing Part 4 development consents for Newstan Colliery (Newstan) and Mandalong Mine (**Mandalong**). This Statement of Environmental Effects and the section 96(1A) applications were forwarded to the Department of Planning (**DOP**) on the 13 October 2009.

Following the lodgement of the application, the Department of Planning (**DOP**) requested additional information to support the application. This addendum to the section 96(1A) application provides this additional information.

Additional Information

(A) Provision of landholder consent for the use of Eraring Energy Land

In the Statement of Environmental Effects submitted on the 13th October 2009, Centennial indicated that Landowner's consent is not required as both Newstan and Mandalong can rely on clause 14 in Schedule 1 of the Mining Act 1992.

Centennial Coal and Eraring Energy hold commercial agreements for the use of the Private Haul Roads linking Eraring and Newstan, and Cooranbong and Newstan. Whilst the terms of these agreements are commercially sensitive, these agreements provide consent to Mandalong and Newstan to use the road in accordance with the terms of the respective Agreements.

(B) Review of Eraring Energy Consent

Centennial Coal has approached Eraring Energy to confirm whether the proposed modification will impact on any approvals granted for the use of the Haul Road.

Eraring Energy has indicated that, following review of existing approvals, there are no specific conditions in the Eraring development consent relevant to the proposed modifications.

To further this, Centennial Coal and Eraring Energy hold commercial agreements for the use of the Private Haul Roads linking Eraring and Newstan, and Cooranbong and Newstan. Whilst the terms of these agreements are commercially sensitive there is reliance in the agreements on compliance with relevant statutory approvals relating to the haul road.

Centennial believes that, the information provided by Eraring Energy, the terms of these agreements, and the obligations placed on both parties in these agreements, adequately determine the appropriateness of consistency between the current haul road approval held by Eraring and the proposed modifications by Centennial.

No specific conditions in the Eraring Energy development consent relating to the transport of coal on the haul road.

(C) Maximum and Likely Tonnages of Mandalong Coal to be Washed at Newstan

The Mandalong consent includes approval to dispatch two (2) million tonnes per annum by road from the Cooranbong site to the Newstan rail loop for export.

Amongst other matters, the Cooranbong Colliery Life Extension Area EIS of 1998 (**Mandalong 1998 EIS**) assessed the environmental impacts associated with the construction and upgrade of infrastructure to wash at Cooranbong prior to dispatch to Newstan. To date, this approved Modular Coal Handling Plant proposed in the Mandalong 1998 EIS has not been constructed.

Rather than construct additional coal washing facilities at Cooranbong, Centennial Coal has elected to modify existing development approvals to enable the washing of this coal at the nearby Newstan Colliery.

In the Newstan Colliery Life Extension Area Environmental Impact Statement of 1998 (**Newstan 1998 EIS**), the maximum throughput of the coal handling plant assessed was four (4) million tonnes per annum. Newstan's washed coal production for the past six years is presented in **Table 1.** Production at the mine has reduced significantly as reserves are exhausted. This table demonstrates that the Newstan coal handling plant has not produced at maximum approved limits for some time.

Table 1: Saleable production at Newstan (2004 to 2009)

Year	Saleable Production (tonnes)
2004	2,830,721
2005	2,461,098
2006	1,207,769
2007	1,781,829
2008	1,999,434
2009	1,223,514

Centennial Coal is not proposing to wash more than the approved 4 million tonnes of coal at the Newstan coal handling plant; rather Centennial Coal is seeking a proportion of this coal (up to 2 million tonnes) be sourced from the Mandalong Mine.

(D) Quantification of Coarse and Fine Reject

Washability assessment has been undertaken based on run of mine (**ROM**) samples from the Cooranbong Mine. As no coal washing has been undertaken to date, no extensive testing of reject produced by washing Mandalong coal has been possible.

However, estimates of recovery have been made based on the limited washability testing undertaken to date. This testing indicates that 87% of the coal is recoverable during washing. Using a ratio of 70% coarse and 30% fine, **Table 2** summarises the maximum quantities, in tonnes, likely to be produced.

Table 2: Quantity (in tonnes) of coarse and fine reject produced from washing Mandalong coal

ROM Coal	Coarse Reject	Fine Reject
2,000,000	182,000	78,000

(E) Capacity of Newstan Reject Emplacement Area to Accept Mandalong Reject

The Newstan 1998 EIS assessed recovery of coal to be approximately 80% and estimated reject and tailings volumes based on this recovery. Section 3.5.4.2 of the Newstan 1998 EIS discussed the projected maximum reject quantities associated with the Newstan Life Extension Project. These quantities (summarised for the period 2004 to 2009 and totalled to 2019) are detailed in **Table 3.**

Table 3:Projected maximum reject quantities for Newstan Life Extension Project ***(source: Newstan Life Extension Project Environmental Impact Statement, 1998)***

Year	Projected Production (Mt)	Projected Reject
2004	3.5	700,000
2005	4.0	800,000
2006	4.0	800,000
2007	4.0	800,000
2008	4.0	800,000
2009	4.0	800,000
TOTAL	**23.5**	**4,700,000**
2010 - 2019	*36*	*7,200,000*
TOTAL	*59.5*	*11,900,000*

Actual saleable production at Newstan for the period 2004 to 2009 has been significantly less than forecast for a number of reasons. Difficult mining conditions have hampered production as has the reduction in available reserves. **Table 4** details the actual and average saleable production and actual and average reject volumes produced from 2004 to 2009.

Table 4: Actual and average Newstan saleable production and actual and average reject volumes from 2004 to 2009

Year	Saleable Production (tonnes)	Reject (tonnes)
2004	2,830,721	566,144
2005	2,461,098	492,220
2006	1,207,769	241,554
2007	1,781,829	356,366
2008	1,999,434	399,887
2009	1,223,514	244,703
TOTAL	**11,504,365**	**2,300,874**
Average	***1,917,394***	***383,479***

The Newstan 1998 EIS described the methodology for placement of reject and tailings material at the Northern Reject Emplacement Area, the Southern Reject Emplacement Area and to underground workings. The Newstan 1998 EIS anticipated that the Northern Reject Emplacement Area would cater for up to eight (8) years of reject disposal. In 2006, eight years after the Newstan 1998 EIS, reject placement at the Northern Reject Emplacement Area ceased.

In 2006, placement of reject material commenced at the Southern Reject Emplacement Area. The Southern Reject Emplacement Area strategy relied on the ability to continue to emplace tailings into disused underground workings. This practice continued until 2006 when, following a number of tailings related incidents, placement of tailings to underground workings ceased.

The Southern Reject Emplacement Area was specifically designed in the Newstan 1998 EIS to accommodate the possibility of another feasible option becoming available during the life of the project. As such, the Southern Reject Emplacement Area design has been staged to minimise exposure of disturbed land, with the initial stage approved in the Newstan 1998 EIS. Future expansion of the Southern Reject Emplacement Area will be subject to further assessment and approval.

The Southern Reject Emplacement Area strategy also identifies that if alternative reject disposal options have not been identified by approximately year 14 (2012) then emplacement would continue in a southerly and easterly direction in the valley.

With average saleable production between 2004 and 2009 below that predicted in the Newstan 1998 EIS, and the addition of two (2) million tonnes per annum of Mandalong coal washed at the Newstan coal handling plant, the capacity of the Newstan Reject Emplacement Area to accept reject from the washing of Mandalong coal will not be exceeded.

With total reject production from washing Mandalong coal expected to be 260,000 tonnes per annum, the capacity of the existing Reject Emplacement Area at Newstan to accommodate this volume of reject material will not be exceeded.

(F) Chemical Characteristics of Mandalong Reject

Typically the sulphur content in the Mandalong coal is in the form of organic (inherent) sulphur which is bound within the structure of the coal. Therefore there is virtually no leaching of sulphur from the coal as would be the case if it was in the form of pyritic sulphur.

During development of the Cooranbong Life Extension Project, some test work was undertaken on a variety of chemical parameters including trace elements and sulphur. Sulphur content of run of mine coal from Mandalong was analysed and results indicated that sulphur levels are low, averaging around 0.30%. Whilst specific analysis of the reject material was not undertaken during either the Newstan 1998 EIS or the Mandalong 1998 EIS, recent sulphur analysis of a typical reject material has been undertaken. These solid reject material results indicate a level of around 0.20% sulphur.

It is, therefore, expected that the sulphur content of the solid reject would be lower than that of run of mine coal because of this binding nature of the organic component. The reject material from the washing of Mandalong coal is comparable to that produced through the washing of Newstan coal.