

EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) supports the development application for the proposed No. 1 Open Cut Extension by the Muswellbrook Coal Company Limited (MCC). The land to which the development application applies is shown in **Figure i**. Land owned by MCC is shown in **Figure ii** with the landowners identified in that figure and the accompanying "Land Ownership Table". MCC is a wholly-owned subsidiary of Apollo Resources which, in turn, is owned by Idemitsu Kosan Pty Ltd. Idemitsu Kosan Pty Ltd is a Japanese based international resources company.

MCC has been involved in the coal industry at Muswellbrook since 1907 and has a long tradition of provision of employment to the Muswellbrook district from that time until the present. During that time MCC's operations have involved both underground and open cut coal mining. In 1944 MCC developed mechanised open cut coal mining at Muswellbrook at a site that is now utilised as sporting fields. This was the first substantial open cut coal mine in Australia. The No. 1 Open Cut Extension offers the opportunity for MCC to maintain continuous coal mining operations in Muswellbrook past 2007 which will be its centenary year.

The No. 1 Open Cut Extension is located to the east of the residential area of North Muswellbrook. At their nearest point, mining operations will be approximately 1.6 km from the residents of Queen Street. The No. 1 Open Cut Extension has a planned life of approximately 10 years and will extend from the existing No. 1 Open Cut void to the edge of previously mined lands of the No. 2 Open Cut. Mining will take place entirely within the existing Consolidated Coal Lease 713 and the freehold lands of MCC with the exception of a portion of Coal Road, a public road. Application has been made to close the affected portion of Coal Road, which provides access only to lands owned by MCC. The proposal envisages coal production of around 1.5 Mtpa, which is similar to that of the currently operating No. 2 Open Cut.

The proposed development is designated, local development, and as it does not involve more than \$20 million investment, it falls outside the scope of SEPP 34. The proposal is classified as local development pursuant to Section 76A(4) of the *Environmental Planning and Assessment Act 1979*. Muswellbrook Shire Council is the consent authority. The proposal has been developed in full accord with both regional and local environmental plans. Under the Hunter Regional Environmental Plan 1989 – Heritage, no items of significance have been identified. Consultation with the local community and Muswellbrook Shire Council and other interested parties has been, and will continue to be, both extensive and ongoing.

Existing mining operations are centred on the No. 2 Open Cut which has an annual production rate of 1.4 Mt, but has been as high as 1.7 Mt in the past. The mine produces thermal coal for both domestic and export markets. Export coal is hauled by highway trucks to the Ravensworth Coal Terminal (RCT) and then transported by rail to the Port of Newcastle. Coal for use in domestic power stations is hauled by road to Bayswater Power Station.

Coal is produced from the Greta Coal Measures which has the operational advantage that it does not require treatment by a coal preparation plant prior to sale. An aspect of the Greta Coal Measures is the propensity for coal produced from these measures to spontaneously combust under certain circumstances. A feature of mining, stockpiling and land rehabilitation techniques is the need to manage the risk of spontaneous combustion.

The No. 2 Open Cut is drawing towards the end of its economic life. It is planned that overburden removal will cease in 2004 and the last coal will be won in 2005. The existing mine is constrained by geological features such as faults, cindering of coal and steeply dipping coal seams. The mine will reach a situation in 2004/2005 where the amount of overburden that is needed to be removed to uncover the mineable coal will be too great to continue mining in the No. 2 Open Cut.

The No. 2 Open Cut operates as a truck and shovel mine. Overburden is removed by a combination of an electric face shovel and an excavator loading overburden into 190 tonne dump trucks. Coal is hauled from the mine by 77 tonne contractor trucks to be crushed and sorted into export and domestic market stockpiles. The mine currently employs 69 personnel with, on average 39 contractors. The contractors are principally involved with the removal of interburden and coal in the latter stages of the No. 2 Open Cut.

Overburden is emplaced within the pit in the void space created by earlier mining operations. As particular areas of the emplacement reach their final height, the spoil is reshaped to create a stable and erosion-resistant landform, adequate drainage installed, inert capping material placed to seal areas of potential spontaneous combustion, topsoil spread on the surface and then seeded with a mixture of grasses, understorey species and trees. The aim of MCC's land rehabilitation programme is to return the land to a state that is able to support cattle grazing and provide habitat for wildlife.

The existing mine has been designed for minimal environmental impact as the infrastructure has been located away from residential areas. Extensive environmental monitoring programmes for air, noise, blasting and water quality have been established and maintained by MCC. The mine has developed a comprehensive Mine Safety Plan to manage health and safety systems.

MCC supports a Community Consultative Committee which reports to and informs the representatives of the Muswellbrook district community on the Company's environmental performance and intended actions. MCC maintains an environmental complaints register and a 24 hour "hotline" to receive enquiries from the community.

The proposed No. 1 Open Cut Extension relies upon the use of existing mining infrastructure such as administration offices, workshops, workers amenities, coal crushing and sorting facilities and stockpile areas such that new environmental impacts are minimal. Existing arrangements for coal transportation will continue and involve similar annual tonnages to current levels.

Environmental monitoring under the proposal draws on the system already implemented at the mine. This monitoring system includes extensive monitoring of surface waters, groundwater, dust deposition monitors, high volume air sampling and the monitoring of all blasts for overpressure and ground vibration.

The likely impacts of the proposal on the environment have been investigated by a series of specialist studies. Due to the location of the proposed No. 1 Open Cut Extension in an area that is surrounded by lands owned by MCC, the number and extent of private properties directly affected by the proposal are minimised. Specifically, noise and dust impacts are predicted to be within relevant EPA guidelines; no endangered flora or fauna will be significantly affected; there will be negligible impacts on traffic and services; there are no major watercourses or large areas of undisturbed bushland in the areas to be mined; and no users of ground or surface waters in that area of land.

It is recognised that care will be required in the scheduling of mining operations in the initial years of the No. 1 Open Cut Extension when activities will be conducted at points closest to the urban areas of North Muswellbrook. Measures planned to control impacts include a relatively low rate of overburden and coal removal in the first two to three years of operation, the placement of overburden below natural ground level within the existing No. 1 Open Cut void working behind the bund wall of the No. 1 Open Cut spoil between the operation and North Muswellbrook and the use of an in-pit coal crusher.

The proposal will provide significant benefits in terms of safety and environmental issues associated with mine subsidence and spontaneous combustion. The No. 1 Open Cut Extension will mine through areas where the coal seams have been previously mined by underground, and in some cases open cut, methods. Some of the material overlying the underground workings is prone to collapse in a form of subsidence known as “potholing”. The underground workings are unable to be completely sealed from the atmosphere which has contributed to the development of spontaneous combustion or “heating” of the coal seams. The only assured, long-term solution to these problems is the complete removal of the coal which will remove the source of fuel (coal) for spontaneous combustion and also allow the rehabilitated landform following mining to be free of the potential for “potholing”.

The impacts upon groundwater quality are predicted to be negligible. As the proposal is located in the headwaters of Sandy and Muscle Creeks there will be minimal impact upon surface waters in terms of alteration to flow volumes or water quality. There are no registered bores for the use of groundwater that will be affected by the proposal with the nearest bores being 4 km to the west in the alluvial lands of the Hunter River.

Modelling of MCC’s water management system predicts that the mine will operate in water deficit for all years of the development under dry and median conditions. For wet conditions the mine will operate in excess for all years. The comprehensive water monitoring program already in place will continue to ensure compliance with all applicable standards, and early warning of any emerging problems.

Soils have been mapped and those suitable for recovery and use in rehabilitation activities have been identified. The rehabilitated mining areas will have a similar agricultural productive capacity to that which existed prior to mining and will also be used as wildlife habitat to maintain connectivity between the vegetated areas of Bells Mountain and Skeletar Ridge. The potential exists for the final void to be used as a waste management facility. Until there are definite plans for such usage, this area will be treated in line with the Department of Mineral Resources (DMR) guidelines for the management of final voids.

The No. 1 Open Cut Extension proposal provides a means to source sufficient inert capping material to effectively manage potential spontaneous combustion areas for both the No. 1 Open Cut Extension and the No. 2 Open Cut. The use of substantial layer of inert capping material to exclude oxygen from residual coal and carbonaceous material will assure the effective treatment of this potential problem. The exclusion of oxygen prevents the oxidation of the carbonaceous material which in turn, prevents heating of this material to occur. This technique has been demonstrated to be effective by MCC's treatment of the existing No. 1 Open Cut spoil emplacement located between North Muswellbrook and the existing No. 1 Open Cut void. The inert material will be also used to seal exposed coal seams left in highwalls at the cessation of mining activities.

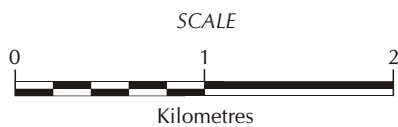
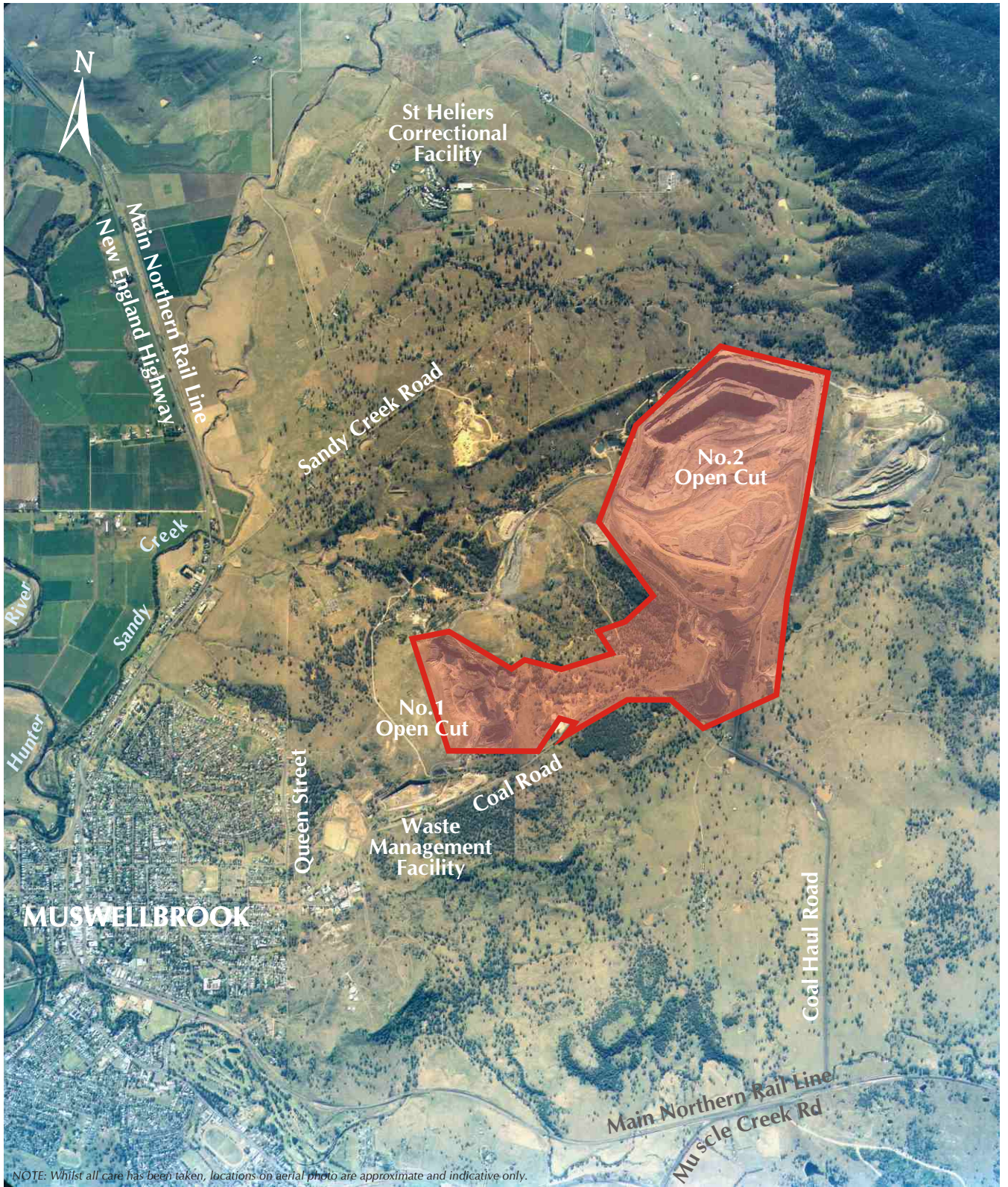
Aboriginal heritage sites will be destroyed by the proposed mining operations. Four occupation sites of low archaeological significance were located during an archaeological survey of the proposed mining area. This survey was undertaken with the involvement of the local Aboriginal community. Two scarred trees were located, both being assessed as of moderate archaeological significance. One tree is located in the path of the proposed No. 1 Open Cut Extension while the other tree is located on the northern boundary. There were no items of non-Indigenous heritage located within the proposed No. 1 Open Cut Extension. However, due to their proximity, the Muswellbrook Brickworks were assessed for impacts from the proposed No. 1 Open Cut Extension. These impacts were assessed as being minimal.

The socio-economic impact of the proposal is positive with the major benefit being that long-term employment will be maintained. Mine operations will continue to spend around \$10 million per year in wages, \$36.5 million per year on materials and services, contribute \$4.8 million per year to port and rail services and pay \$2.5 million per year in royalties to the NSW Government.

An analysis of feasible alternatives considered that underground mining or the use of a coal preparation plant were not economically feasible for the recovery of coal from the proposed No. 1 Open Cut Extension area. The use of most of the currently used items of mining equipment is favoured over alternatives such as a dragline. As the proposal relies heavily on existing mine infrastructure, any alternative that duplicated such facilities was deemed unfeasible, for both economic and environmental reasons.

Not proceeding with the proposal at all would result in a considerable loss of employment and the loss of many millions of dollars, in wages, expenditures, production and government revenues. This would have major social and economic effects on Muswellbrook and other local shires, with impacts also being felt at a regional, State and national level. A major effect of not proceeding with the proposal concerns the issues of subsidence potholing and spontaneous combustion. If the proposal does not proceed areas of ground will continue to be subject to unpredictable collapse with the resultant risk to safety and the environment. Potholing also allows air to enter underground workings does not allow spontaneous combustion to be eliminated. Not proceeding with the proposal would lead to a shortfall in the volumes of inert capping material that are needed to effectively treat all areas of potential spontaneous combustion of the No. 1 and No. 2 Open Cut mine sites.

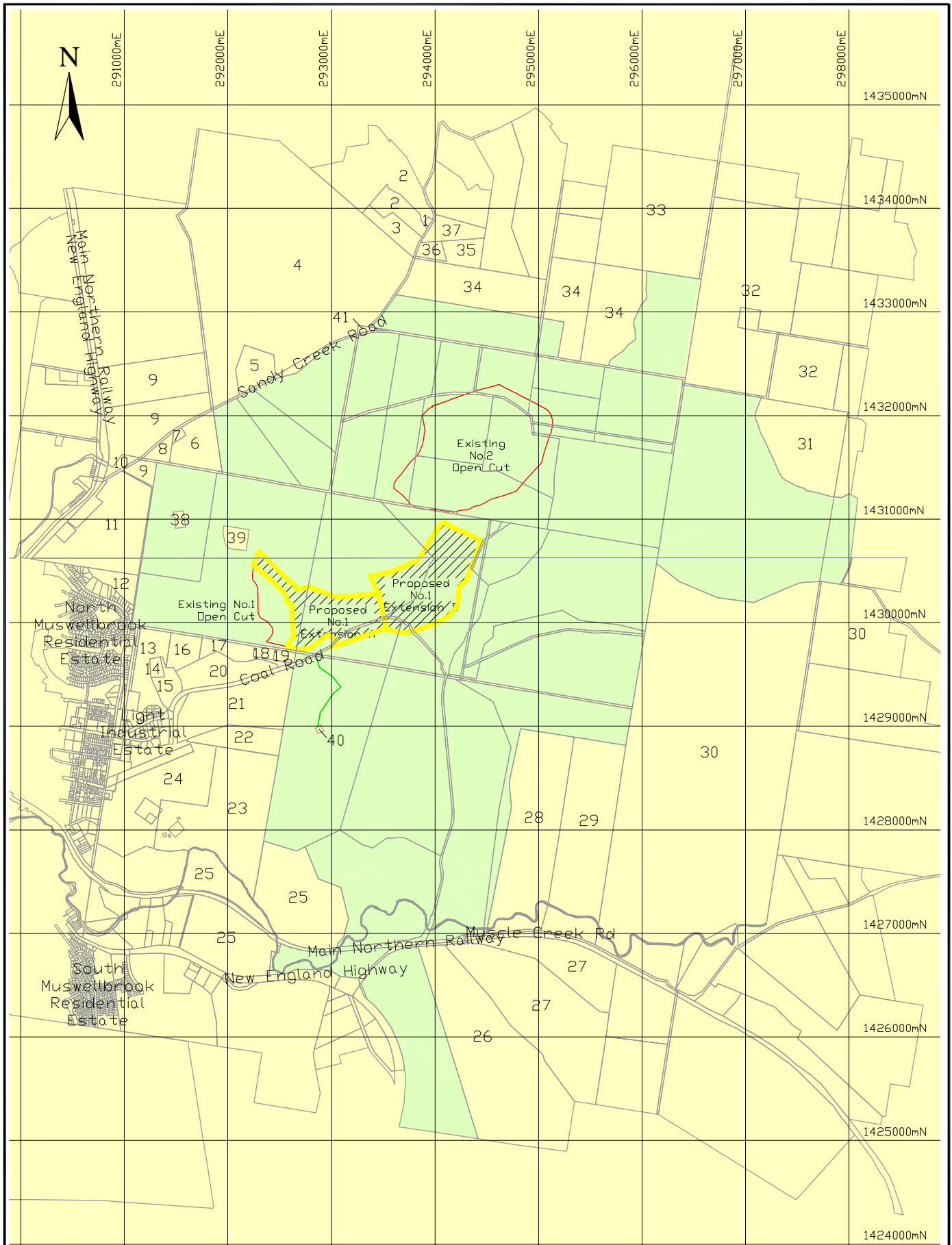
Overall, the mine represents a major investment in both the local community, State and national economies. The social benefits, principally the securing of jobs in the region, are considerable. As the proposed development is an extension of an already operating mine, new environmental impacts are minimal. Where impacts have been identified, effective management strategies have been established. Approving the proposal has many social, environmental and economic positives, while negative impacts are minimal and manageable.



MUSWELLBROOK COAL COMPANY LIMITED

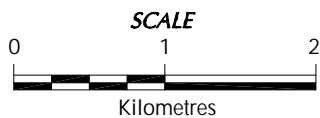
Land to which the Development
Application Applies

FIGURE i



LEGEND

 Land Owned by Muswellbrook Coal Company



MUSWELLBROOK COAL COMPANY LIMITED

Land Ownership Plan

FIGURE ii

Land Ownership Table

Information from Land Titles Office as at 21 June 2002

Number	Owner
1	R G & G A Watts
2	V M French
3	J F & S J Aird
4	Department of Corrective Services
5	Nil Australia Pty Ltd
6	D G McMaster
7	Jehovah's Witnesses (NSW) Congregations
8	Crown Land (Rural Land Protection Board)
9	F A Harriet, Athol J R Madden, Lyall H Wilkes
10	Crown Land
11	Enef Pty Limited
12	Muswellbrook Shire Council
13	Crown Land
14	Crown Land
15	Crown Land
16	Crown Land
17	Crown Land
18	Crown Land
19	Crown Land
20	Muswellbrook Shire Council
21	Wanaruah Local Aboriginal Land Council
22	Wanaruah Local Aboriginal Land Council
23	Wanaruah Local Aboriginal Land Council
24	Wanaruah Local Aboriginal Land Council
25	Gyarran Pty Ltd
26	Ian J & Barbara A Gordon
27	Ardee Holdings Pty Ltd
28	Willowglen Pty Ltd
29	Mary M Bowman
30	A S Bowman Pty Limited
31	Lloyd R Jones
32	Michael H Keegan
33	William T Canning
34	Roger V Gyles & Colin P Davidson
35	NSW Electricity Transmission Authority
36	Raymond G & Glenda A Watts
37	Raymond J & Dorothy M Neilsen
38	Shortland Electricity
39	Steven Goodridge
40	Telstra Corporation Limited
41	Crown Land

**Schedule
Muswellbrook Coal Company Ltd
Land Descriptions & Title Details
No.1 Open Cut Extension**

Property Description Lot No / Por No.	DP+B36	Certificate of Title Volume & Folio
Lot 72	DP 629631	V14969 F250
Lot 682	DP 611756	V14249 F152
Lot 811	DP 534516	V11117 F246
Lot 82	DP 231202	V10496 F201
Lot 102	DP 578075	V12859 F102
Lot 1	DP 614842	V14390 F169
Lot 1	DP 571355	V12592 F199
Por 70 & 71	Psh Rowan	V9635 F249
Lot 681	DP 611756	V14249 F151
Lot 3	DP 571355	V12592 F201
Lot 1	DP 45525	V14968 F 68
Part Portion 61	Psh Rowan	V4536 F 40
Part Portion 60	Psh Rowan	V4536 F 50
Lot 97	DP 752484	Folio Id 97/752484
Por 59, 60	Psh Rowan Cty Durham	V3769 F217
Lot 1	DP 723294	Folio Id 1/723294
Lot 2	DP 723294	Folio Id 2/723294
Lot 71	DP 629631	Folio Id 71/629631
Lot 1	DP 46760	Folio Id 1/46760
Lot 2	DP 614842	Folio Id 2/614842
Lot 39	DP 793463	Folio Id 39/793463
EP 45517		
Lot 5	DP 26760	Folio Id 5/ 26760
Lot 6	DP 26760	Folio Id 6/ 26760
Enlosure Permit 45518		Not Applicable
Lot 1	DP 45194	Folio ID 1/45194