ASSESSMENT REPORT

PROPOSED EXTENSION OF THE CLARENCE COAL MINE

1. BACKGROUND

Centennial Coal Company Limited (the Applicant) is proposing to extend underground mining operations at its Clarence Coal Mine (the mine), located approximately 10 kilometres east of Lithgow in the Lithgow local government area (see Figures 1 and 2).

Development approval for the mine and associated surface facilities was granted by the then Blaxland Shire Council in 1976, and the mine has been operating since this time. In 1993, the development approval was amended to reflect modifications to reject emplacement areas. In 1994, Lithgow City Council granted development consent for an extension to underground coal mining, which included associated extension to the reject emplacement areas and processing structures.

The approvals allow the production of up to 3 million tonnes of run-of-mine (ROM) coal per year from the mine. Coal is extracted from the Katoomba and Lithgow Seams using bord and pillar techniques, which currently involves first workings and partial extraction (ie. stable pillars of coal are left in-situ to minimise surface subsidence). ROM coal is extracted using continuous miners and transported via conveyor system to the coal handling and processing facility on the surface. Following processing, product coal is stockpiled prior to dispatch by rail via the mine’s rail loop and the Main Western Railway. In addition, approximately 200,000 tonnes per year is transported by road to domestic markets, primarily in Sydney. The existing approvals do not specifically permit road transportation of coal.

The mine provides employment for approximately 80 people.

Figure 1: Locality Plan showing existing regional coal mines
2. PROPOSED DEVELOPMENT

The Applicant proposes to extend the underground mine into a number of new mining lease areas, identified as:

- Assessment Lease Application No.5 (ALA 5);
- ALA 8;
- Authorisation No.307 (A 307); and
- Exploration Licence No.5072 (EL 5072).

The location of these tenements is shown on Figure 2.

Since lodgement of the Development Application (DA), the Applicant has made a number of changes to the proposed development, as detailed below. The changes have arisen following detailed mine planning, and in response to concerns raised by public authorities and the community about the impacts of the development as originally proposed.
2.1 Approval Originally Sought

The main components of the development as originally proposed included:

- Extension of the mine into tenements ALA 5, ALA 8, A307 and EL 5072;
- Mining using three levels of extraction, namely first workings, partial extraction and full extraction, with nominated areas of subsidence protection where mining would be limited to first workings or partial extraction;
- Transportation of up to:
  - 200,000 tonnes per annum (tpa) by road to Sydney;
  - 200,000 tpa by road through Lithgow to Wallerawang and/or Mt. Piper Power Stations; and
  - the balance by rail to Sydney.

The EIS states that the proposal would not require any new surface facilities or changes to existing coal processing activities, and that existing approved emplacements would cater for the waste produced by the development. The application does not propose any change to the mine’s production rate of 3 Mtpa of ROM coal.

The mine plan as originally proposed is shown on Figure 3 below.
2.2 Variations to the Proposal

In May 2005, the Applicant made the following variations to the proposal:

<table>
<thead>
<tr>
<th>Variation</th>
<th>Reason for Variation</th>
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<tbody>
<tr>
<td>Reducing the proposed area to be mined in tenements ALA 5, ALA 8, A307 and EL 5072</td>
<td>Following further assessment of the Katoomba Seam resource</td>
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<tr>
<td>Mining using only two levels of extraction, namely first workings and partial extraction (ie. No full extraction)</td>
<td>Following concerns about subsidence and groundwater impacts associated with full extraction</td>
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<tr>
<td>Removing the proposal to transport 200,000 tpa of coal by road to the Wallerawang and/or Mount Piper Power Stations</td>
<td>Following concerns about traffic impacts on Lithgow City, and the lack of an existing contract with the power stations to supply coal</td>
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The revised mine plan is shown on Figure 4.

![Figure 4: Revised Mine Plan](image-url)
3. **STATUTORY CONTEXT**

Under the EP&A Act the proposal is classified as State significant, integrated and designated development.

4.1 **Permissibility**

The land subject to the DA is zoned 1(a) Rural General, 1(c) Rural Small Holdings, and 1(f) Rural Forestry, under the *Greater Lithgow City Council Local Environmental Plan (LEP) 1994*.

Under the Lithgow LEP, development for the purpose of mining is permissible in these rural zones with development consent.

4.2 **State Significant Development**

The proposal is classified as State significant development, under Section 76A(7) of the EP&A Act, because it meets the criteria in the Minister’s declaration dated 4 June 1987, as it involves a new coal mine [extension] that requires new coal leases. Consequently, the Minister is the consent authority for the DA.

Originally, the DA was lodged as local development with Lithgow City Council. However, following a detailed review in 2005, the Department determined that Council did not have the jurisdiction to determine the DA, as it was classified as State significant – not local – development.

Following this determination, Council forwarded the DA to the Department. The Department reviewed the assessment process to date, and was satisfied that the DA has been exhibited in accordance with the requirements for public participation in the EP&A Regulation. Consequently, the Minister may determine the application without re-exhibition.

4.3 **Designated Development**

The proposal is classified as designated development, under Section 77A of the EP&A Act and Schedule 3 of the EP&A Regulation, because it is an underground coal mine.

4.4 **Integrated Development**

The proposal is classified as integrated development under Section 91 of the EP&A Act because it requires additional approvals from the:

- Department of Environment and Conservation, under the *Protection of the Environment Operations (POEO) Act 1997*; and
- Department of Natural Resources, under the *Water Act 1912*.

The integrated approval bodies have determined that they are able to issue the relevant approvals for the development and have provided their General Terms of Approval.

DEC(NPWS) raised some concerns regarding subsidence and its potential impact on Aboriginal archaeology, flora and fauna and protected areas. The Department has considered these issues in Section 5 of this report.

4. **CONSULTATION**

On 30 October 2000, the Applicant lodged a DA and EIS for the proposal with Lithgow City Council.

Council subsequently:

- notified all residents who could be affected by the proposal in writing;
- notified the Department and relevant State Government agencies;
- advertised the exhibition of the DA and EIS in the Lithgow Mercury Argus; and
- exhibited the DA and EIS at 3 locations between 24 November 2000 and 28 February 2001.

This satisfies the requirements for public participation in the EP&A Regulation.

As discussed in Section 2, the Applicant has amended the proposal since exhibition of the DA and EIS. The Department believes that the amendments (in particular the withdrawal of full extraction from the proposal) have resulted in a significant reduction in the potential environmental impacts associated with the proposal, and that the application as amended differs in only minor respects from the original application. As such, the Department is satisfied that further public exhibition is not required.
However, given the significant public interest in the DA as originally proposed (see below) and the reduced environmental impacts associated with the amended DA, Council and the Department requested that the community be made aware of the changes. Accordingly, the Applicant undertook further community consultation in relation to the amended proposal in September 2005. The additional community consultation included:

- Mailout of an information newsletter to Clarence residents;
- Informing key special interest groups directly via phone-call; and
- An offer to meet with any concerned residents on a one-on-one basis.

The Department is satisfied that the Applicant’s consultation program has adequately informed the community of the changes to the proposal.

4.1 Submissions Received

During the exhibition period, Council received 150 submissions on the DA, including:

- 6 from public authorities: including Lithgow City Council, Department of Primary Industries, Sydney Catchment Authority, Mine Subsidence Board, State Rail and the RTA;
- 22 from special interest groups; and
- 122 from the general public.

The vast majority of the public and special interest group submissions objected to the proposal as presented in the EIS. Many of these objections were qualified, stating that the Applicant should be asked to amend its application to partial extraction methods only. As stated in Section 2, the Applicant has since amended its proposal accordingly.

None of the government authority submissions made an objection to the proposal.

The issues raised in the submissions are outlined below. The Department has assessed all of the issues raised in the various submissions in Section 5 of this report.

**Lithgow City Council**

Council raised no objection to the proposal, but made a number of comments including:

- that it is imperative that no coal haulage be allowed through Lithgow;
- that subsidence impacts must be comprehensively considered prior to determination;
- that any proposed Community Consultative Committee for the mine be appropriately represented by Council and Department officers;
- that potential groundwater impacts be comprehensively considered; and
- that the Applicant be made to undertake additional community consultation to inform the community of the amendments to the proposal.

**Department of Primary Industries**

DPI expressed its support for the proposal, stating that the additional areas are a logical extension of the existing mining operations. DPI noted that the separate approval process under section 138 of the Coal Mines Regulation Act 1982 would consider impacts related to subsidence and the need to protect sensitive surface features.

The Department notes that in March 2004 (after the DPI’s submission), the DPI introduced a revised approval process for underground coal mining potentially causing subsidence. The key element of the revised process is that an approved Subsidence Management Plan (SMP) is now required wherever underground mining is likely to lead to subsidence (see Section 6.2.3 for further detail).

DPI (as former NSW Fisheries) raised some concerns about subsidence and its potential impacts on waterbodies and aquatic habitat.

**Sydney Catchment Authority**

The SCA provided its conditional support for the proposal, subject to the Applicant:

- complying with subsidence performance criteria, namely that there is no impact as a result of subsidence on upland swamps and watercourses, and that the development does not cause adverse hydraulic connections with creeks within the Sydney drinking water catchment;
- preparing comprehensive Subsidence Management Plan/s;
- commissioning independent audits of the subsidence, surface water and groundwater impacts of the development, and mitigate any identified impacts; and
**Mine Subsidence Board**

The Mine Subsidence Board made no objection and noted that all improvements in the proposed mining area are covered by the *Mine Subsidence Compensation (MSC) Act 1961* and that the Board could rectify or compensate any damage.

The Board commented that predicted subsidence for Clarence Village where partial extraction is to occur would not impact on surface improvements.

The Board also noted that loss of water was not covered under the MSC Act, and that this is usually covered by the DPI through the *Mining Act 1992*.

**State Rail**

State Rail raised no objection to the proposal, but requested that no work on the mine should be allowed which has any potential to materially affect rail infrastructure by way of noise, drainage, stability, and in particular, subsidence-related impacts. The Department notes that the Applicant has placed a first workings subsidence protection zone within the vicinity of rail infrastructure.

**RTA**

The RTA raised no objection to the proposal, requesting only to be consulted if additional road transport was proposed to the west (ie. through Lithgow). The Department notes that the Applicant has withdrawn the proposed road transport of 200,000 tonnes per year of coal west of the mine through Lithgow.

**Special Interest Group Submissions**

The main issues raised in the submissions were related to subsidence, and its potential to impact upon:

- the World Heritage Area (WHA) and other protected areas (through subsidence generating further groundwater flows to the mine, requiring more ‘polluted’ water discharges into the Wollangambe River);
- groundwater aquifers;
- escarpments and pagoda formations; and
- upland swamps and other water dependent ecosystems.

All but one of the special interest group submissions objected to the proposal, but as stated above nearly all of these objections were qualified, stating that the Applicant should be asked to amend its application to partial extraction methods only (which the Applicant has since done).

Many of the submissions also stated that the Applicant should be required to stop polluting the Wollangambe River, and that it should instead discharge adequately treated water to the Coxs River catchment. As discussed in Section 6.2.2, the Applicant and Government is currently working on a new water management system for the mine which aims to divert mine discharges from the Wollangambe River catchment to the Coxs River catchment to ultimately supplement Sydney’s drinking water supply.

**Public Submissions**

The main issues raised in the public submissions were also related to subsidence, and its potential to impact upon:

- houses and other structures in Clarence Village;
- groundwater supply bores;
- the WHA and other protected areas;
- escarpments and pagoda formations; and
- upland swamps and other water dependent ecosystems.

113 of the 122 public submissions objected to the proposal. Approximately one third of these objections were qualified, stating that the Applicant should be asked to amend its application to partial extraction methods only (which the Applicant has since done).

A small number of public submissions raised an issue relating to a dispute in relation to the location of boundaries of EL5072, which follow the boundaries of the Newnes State Forest. The Applicant provided a clarification of this issue from the then Chief Surveyor of the NSW Forestry Commission, which confirms that the boundaries were misrepresented on earlier maps. The Forestry Commission subsequently clarified the erroneous boundaries (in its File No.4452). The Applicant has confirmed that the boundaries of EL5072 conform to the adjusted boundaries of the Newnes State Forest.
5. **SECTION 79C CONSIDERATION**

Section 79C of the EP&A Act sets out the matters that a consent authority must take into consideration when it determines a DA. The Department’s consideration of these matters is presented below.

6.1 **Environmental Planning Instruments**

The following environmental planning instruments are relevant to the proposal:

- *State Environmental Planning Policy No. 11 – Traffic Generating Developments*;
- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*;
- *State Environmental Planning Policy No. 44 – Koala Habitat*;
- *State Environmental Planning Policy No. 55 – Remediation of Land*;
- *State Environmental Planning Policy No. 58 – Protecting Sydney’s Water Supply*; and
- *Greater Lithgow Local Environmental Plan 1994*.

The Department’s assessment of the proposal against these planning instruments is attached in Appendix A. Following this assessment, the Department is satisfied that the proposal can be conducted in a manner that is broadly consistent with the relevant requirements of these instruments, insofar as they are applicable to the development.

It is noted that SEPP 58 does not require the concurrence of the Sydney Catchment Authority (SCA) for the State significant development. Notwithstanding, the SCA was consulted and has provided its recommended conditions for the proposal (see Section 4.1). The Department has incorporated the SCA’s recommended conditions into the conditions of consent (see tagged B).

6.2 **Environmental Impacts**

The Department’s assessment of the key environmental issues is presented in the following sections.

6.2.1 **Groundwater**

Previous longwall mining at Clarence was believed to be the cause of significant groundwater flows into the mine, which currently occurs at a rate of approximately 14 megalitres (ML) per day. This water make is dewatered by pumping via two boreholes and discharged to the Wollangambe River following on-site treatment.

The EIS did not include a specialist groundwater impact assessment, concluding that the proposal would not increase the amount of water make into the mine due to the limited amount of full extraction associated with the proposal.

Understandably, a large number of submissions raised concerns regarding the adequacy of the groundwater assessment in the EIS, and the potential groundwater impacts on:

- groundwater users at Clarence Village;
- sensitive wetlands and surface waterbodies; and
- baseflows in the Coxs River and Wollangambe River.

The Department of Natural Resources (DNR) and the Sydney Catchment Authority (SCA) requested additional information on groundwater impacts, including requiring a detailed hydrogeological investigation of the proposal. The Applicant submitted a specialist hydrogeological assessment report, undertaken by Environmental Resources Management Pty Ltd, in December 2003.

Following a number of additional requests for information and meetings during 2004, the SCA and the DNR were finally satisfied that, subject to conditions, the proposal could be managed such that it would not result in a significant groundwater impact. Subsequently, the authorities were able to forward their respective conditional concurrence and General Terms of Approval for the development.

The hydrogeological assessment indicates that the aquifer exploited by the Clarence Village groundwater users is a shallow aquifer, separated from the larger, deeper aquifer which was thought to be the source of the current water make to the mine. The Department, DNR and the SCA are satisfied that the proposed partial extraction beneath the Clarence Village would not have a significant impact on the shallow aquifer, subject to implementation of the recommended conditions below.

The authorities were also satisfied that, with the implementation of adequate subsidence protection zones, the proposal would not have a significant impact on sensitive wetlands and waterbodies above the mine, or on baseflows to the Coxs and Wollangambe River.
In May 2005, the Applicant varied the proposal by removing full extraction from the mine plan (see Section 2.2). This variation would minimise subsidence associated with mining operations (see Section 6.2.3), and as such further reduce the potential for impact on the aquifers above the mine.

Notwithstanding the reduced potential for impact, upon reclassification of the DA as State significant development the Department commissioned an independent groundwater expert, Mr Peter Dundon of Peter Dundon and Associates Pty Ltd, to review the potential groundwater impacts of the proposal. The independent expert’s report is attached as Appendix B.

Interestingly, Mr Dundon disputed the accepted theory on the source of the 14ML/day water make into the mine. It was thought that this water make was caused by the early longwall mining’s impact to the integrity of overlying aquifers, through cracking and subsidence of the overlying strata. However, based on available evidence Mr Dundon considered that the water make is more likely sourced from recharge through the permeable coal seam itself, in up-dip areas where the coal seam outcrops the surface. If this is correct, the conclusion drawn by the Applicant presents a more conservative approach, and is likely to overstate the potential for impact.

Mr Dundon concurred with, and supplemented, the recommended conditions proposed by the Department, DNR and the SCA.

In consideration of the above, the Department is satisfied that the proposal is unlikely to have any significant impacts on the groundwater resource, groundwater users in the vicinity of the mine, or on waterbodies and groundwater-dependent ecosystems above the mine extension. However, the Department believes the Applicant should be required to:

- establish and implement a comprehensive Groundwater Monitoring Program, providing for:
  - detailed baseline data;
  - groundwater impact assessment criteria;
  - a program to monitor water make;
  - a program to monitor groundwater in all applicable geologic formations;
  - a protocol for investigation, notification, mitigation and/or compensation of any impacts;
- establish and implement a Surface Water and Groundwater Response Plan, providing for:
  - prompt investigation of any exceedances of established groundwater trigger levels;
  - measures to mitigate, remediate and/or compensate any identified impacts;
- comply with subsidence minimisation measures (see Section 6.2.3 below); and
- develop a Mine Closure Strategy that defines a long term strategy for the ongoing management of water inflow to the mine.

6.2.2 Surface Water

Surface water features above the proposed mining area include a 1 kilometre section of Bungleboori Creek, a number of ephemeral creeks and drainage lines, and a number of sensitive wetlands/swamps including Gooches Crater, a natural landform of high ecological and recreational value.

The western and southern portions of the proposed mining area fall within the Sydney drinking water catchment, with flows draining into Farmers Creek and Dargans Creek, and eventually to the Coxs River system and Lake Burragorang.

The potential impacts of the proposal on surface water resources via loss of baseflow in creeks and wetlands is directly related to groundwater impacts and subsidence impacts, which are discussed in Sections 6.2.1 and 6.2.3 respectively. The Department is satisfied that the proposal would not result in significant groundwater or subsidence impacts, subject to conditions, and is therefore satisfied that the proposal would not have a significant impact on flows in surface water features.

With regard to surface water quality, the Department acknowledges that the proposal essentially involves a continuation of existing mining activities, and that the proposal does not involve any changes to surface facilities. The Applicant currently has a Pollution Reduction Program (PRP) in place with the DEC, which has seen the upgrading of the mine’s Water Treatment Plant, with further upgrade works to be implemented in 2005. The Department is satisfied that these water management improvements are being adequately managed through the existing PRP.

The Department also recognises that the Applicant has been working with government authorities over a number of years to design and implement a new Water Transfer Scheme for the mine. The objective of this scheme is to divert the majority of the mine’s treated water releases (including the 14ML daily water make) to Farmers Creek and the Coxs River catchment, to ultimately supplement Sydney’s drinking water supply. At present, treated water from the mine is released to the Wollangambe River, which drains directly into the Greater Blue Mountains World Heritage Area. The Department notes that
the new Water Transfer Scheme is being managed by State Water, and as such acknowledges that the Applicant is not directly responsible for these works.

The Department is satisfied that the proposal would not result in any additional impacts on surface water resources or water quality. Nonetheless, the Department believes the Applicant should be required to develop and implement an integrated Water Management Plan for the mine, including:

- a Water Balance, to manage and minimise water use associated with the development, and monitor water make into the mine;
- a Surface Water Monitoring Program, including a protocol for the investigation, notification and mitigation of any identified impacts; and
- an Erosion and Sediment Control Plan.

6.2.3 Subsidence and Landforms

The EIS included a subsidence impact assessment undertaken by Shepard Mining Geotechnics Pty Ltd. The assessment, based on data gathered from the mine over a 15 year period, estimated that the proposal would result in the following maximum vertical surface subsidence:

- First Workings: <5 mm;
- Partial Extraction: ≤10 mm; and
- Full Extraction: <1,000 mm.

To avoid subsidence impacts, the EIS nominated subsidence protection zones which would limit mining to First Workings beneath the Bells Line of Road, the Main Western Railway Line, and near significant cliffs and valleys, and to Partial Extraction beneath Clarence Village and sensitive surface water features.

The assessment concluded that, with these subsidence protection zones, the development would not have any significant impact on infrastructure, surface improvements and development (in particular, Clarence Village houses), landforms or sensitive waterbodies.

As discussed in Section 4.1, the DPI and the Mine Subsidence Board are satisfied that the proposal could be conducted in a manner that would avoid any significant subsidence related impact. The DPI noted that the separate approval process under section 138 of the Coal Mines Regulation Act 1982 would consider impacts related to subsidence and the need to protect sensitive surface features. The MSB commented that predicted subsidence for Clarence Village where partial extraction is to occur would not impact on surface improvements, and noted that all improvements in the proposed mining area are covered by the Mine Subsidence Compensation (MSC) Act 1961 and that the Board could rectify or compensate any damage.

However, a large number of submissions raised concerns about the potential for subsidence to impact upon homes and other buildings/infrastructure in Clarence Village, the groundwater resource upon which many residents rely, and on significant environmental features of the area.

In response to community concerns about the impacts of subsidence, the Applicant withdrew Full Extraction from the proposal in May 2005. The Applicant also supplied additional information from Strata Engineering Pty Ltd on the likely tolerable subsidence levels for Clarence Village homes and significant environmental features of the area. These levels are shown in Table 1 below.

<table>
<thead>
<tr>
<th>Table 1: Tolerable Subsidence Limits to Avoid Any Significant Damage</th>
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<tr>
<td><strong>Extraction Level</strong></td>
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<tr>
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<tr>
<td>Partial Extraction</td>
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<tr>
<td>First Workings</td>
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* Vertical subsidence does not cause damage in itself, as damage is related to pressure associated with tilts and strains. The vertical subsidence limits presented are consistent with the tilt and strain levels.

The Mine Subsidence Board agreed that these levels of subsidence were unlikely to result in any significant damage to surface features, and noted that thresholds for significant damage are likely to be significantly higher than these levels.

Based on this information, the Department is satisfied that the development can be managed such that it would not result in any significant subsidence related impacts to:

- Clarence homes and associated structures;
• aquifers above the mine, and Clarence groundwater supplies;
• escarpments and pagoda formations;
• upland swamps and other water dependent ecosystems; and
• the WHA and other protected areas.

The Department notes that the Applicant will be required to obtain a separate approval for subsidence, in accordance with the new approval process under the Mining Act 1992, prior to undertaking any operations that would potentially lead to subsidence of the land surface. Before an approval is granted, the Applicant will be required to prepare a Subsidence Management Plan (SMP) for the proposal in accordance with DPI guidelines. Preparation of the SMP and adherence to its terms is managed by the DPI under the Mining Act 1992.

The SMP is required to be built on a full land use description and impact assessment, including the physical landforms and environment of the area. Applications for approval of SMPs are determined by the Director-General of the DPI. Prior to this, an interagency review committee will review all draft SMPs and advise the Director-General on approval conditions. The Committee will also participate in ongoing monitoring of subsidence management. The SMP process also incorporates a public consultation process, including requirements on the Applicant to advertise its intention to develop a draft SMP in a local and a State newspaper, identify and consult with all directly affected landholders and Councils, and take their views into account. Applicants must readvertise when the draft SMP is finalised and submitted to DPI. Community members are able to make submissions to DPI in its consideration of the draft SMP.

The Department also notes that all improvements in the proposed mining area are covered by the Mine Subsidence Compensation (MSC) Act 1961 and that, in the unlikely event of damage to surface structures, the Mine Subsidence Board could rectify or compensate any such damage.

The Department is satisfied that these measures would ensure that the development does not result in any significant subsidence related impacts. Notwithstanding, the Department believes the Applicant should be required to:
• comply with strict subsidence impact assessment criteria;
• prepare a Subsidence Management Plan/s for the development in accordance with DPI guidelines, which includes:
  - procedures for monitoring the development against the subsidence criteria;
  - provisions for notification of relevant authorities in the event of any exceedance of the subsidence criteria; and
  - consultation with the relevant authorities and the Community Consultative Committee.

6.2.4 Noise

The EIS included a basic background noise assessment undertaken by Atkins Acoustics and Associates Pty Ltd. The assessment was undertaken with reference to the nearest sensitive receiver to the mine, namely the residences of Newnes Junction which are located close to the mine’s rail loop, and about 600 metres from the mine’s surface facilities.

The assessment indicates that background noise levels (L_{A90}) are low at about 33 dB(A) during the day and 30dB(A) at night. The ambient noise ambient noise levels (L_{Aeq}) however are significantly higher at about 53dBA during the day and 52 dB(A) at night. The difference between background and ambient (or ‘average’) noise levels indicates that the receiver is subject to existing noise influence – in this case these influences are likely to include rail traffic and coal loading, and to a lesser extent road noise and mine operations. Attended noise monitoring undertaken by the Applicant indicates that noise levels during coal loading are up to 58 dB(A) L_{Aeq}, and about 39 dB(A) during mine operations without coal loading.

Although the existing ambient noise levels are significantly above the background noise levels in the area, the Department acknowledges that the situation is a longstanding one, with the rail loop/mine and residences having been established in close proximity for many years. The DEC reports that it does not receive a significant number of complaints from Newnes Junction residents, probably due to the long history of this noise source.

The Department is satisfied that the existing ambient noise levels, excluding train loading and rail operations, appear to be only marginally above the project specific noise level criteria (ie. 38 dB(A) daytime PSNL against an ambient noise level of 39dB(A)). Accordingly, the Department has recommended conditions requiring the Applicant to:
• comply with the project specific noise level criteria for all operations excluding train loading and rail operations; and
• prepare and implement a Noise Management Plan which includes:
  – a monitoring program for evaluating compliance with the noise criteria;
  – a plan for the management and minimisation of train loading and rail noise; and
  – a protocol for the investigation, notification and mitigation of identified exceedances of the noise criteria.

The DEC has determined that it is able to licence the development under the Protection of the Environment Operations Act 1997, and has forwarded its General Terms of Approval. The DEC has reviewed and agrees with the Department’s approach to noise management of the mine.

6.2.5 Air Quality

The EIS states that air quality in the area of the proposed extension and the existing surface facilities is good. Emissions associated with existing mine include exhausted air from underground workings, vehicle, locomotive and plant exhaust, and fugitive emissions from stockpiles, conveyors and unsealed roadways.

The EIS states that the development would not result in any significant change to existing air quality, as the proposal involves underground operations and does not involve any intensification or expansion of surface facilities or operations.

The Department is satisfied that the proposal is unlikely to result in any significant air quality impacts. However, the Department believes the Applicant should be required to:
• comply with contemporary air quality criteria at all stages of the development;
• establish and maintain an air quality monitoring program for the development; and
• monitor greenhouse gas emissions and investigate ways to reduce these emissions, to the satisfaction of the Director-General.

The DEC has determined that it is able to licence the development under the Protection of the Environment Operations Act 1997, and has forwarded its General Terms of Approval.

6.2.6 Traffic and Transport

Originally, the Applicant sought approval to transport up to 200,000 tpa of coal by road to Sydney, and a further 200,000 tpa through Lithgow to the Wallerawang and/or Mount Piper Power Stations. The balance would be transported by rail via the existing rail loop.

Following concerns raised by Council and the community, the Applicant withdrew the proposed road transport through Lithgow in May 2005.

The Department is satisfied that the proposal as amended is unlikely to result in any significant traffic related impacts. The RTA did not raise any objection to the proposal, requesting only to be consulted if additional road transport was proposed to the west (ie. through Lithgow).

6.2.7 Flora and Fauna

Following the withdrawal of full extraction from the proposal, and the subsequent minimisation of subsidence, the Department is satisfied that the proposal is unlikely to have any significant direct impact on flora and fauna. As discussed in Section 6.2.2, the Department is also satisfied that the proposal is unlikely to have any significant indirect impact through impacts on sensitive wetlands and waterbodies above the mine. Notwithstanding, the Department believes that the Applicant should be required to monitor the wetlands as part of its Surface Water Monitoring Program (see Section 6.2.2).

6.2.8 Archaeology and Heritage

Following the withdrawal of full extraction from the proposal, and the subsequent minimisation of subsidence, the Department is satisfied that the proposal is unlikely to have any significant impact on indigenous and non-indigenous heritage.

6.2.9 Visual Amenity

The Department is satisfied that the proposal does not involve any significant change to surface facilities and improvements, and as such is satisfied that the proposal is unlikely to impact on the visual amenity of the locality. Nonetheless, the Department believes the Applicant should be required to minimise the visual and lighting effects of the proposal to the satisfaction of the Director-General.
6.2.10 Other Issues

Other issues raised in the EIS, by government agencies or by way of public submission are considered to be minor issues, components of key issues or of minor environmental impact.

6.3 Suitability of the Site

The Department is satisfied that the site is suitable for the development. Following the withdrawal of full extraction from the proposal, the Department is satisfied that the underground mining operations are able to be managed such that any affects on the ground surface above the mine would be negligible. Further, the Department is satisfied that the proposal is unlikely to have any significant impact on the groundwater resource above the mine and on landowners who utilise this resource for domestic and stock purposes.

The underground coal mine is an existing operation that has been operating since the mid 1970’s. Following its environmental assessment the Department is satisfied that the proposed extension is a logical expansion of the underground mine. The development will utilise, and would not require any expansion to, the existing and established surface facilities. The mine has good proximity to existing and established transport infrastructure, including the Main Western Railway and the Bells Line of Road.

The Department recognises that the site is adjacent to the Greater Blue Mountains World Heritage Area (WHA) and the Blue Mountains National Park. However, with the underground mining activities able to be undertaken without any significant effects on the ground surface, and the ability of the mine’s surface facilities to be managed in accordance with contemporary environmental criteria, the Department is satisfied that the proposal is able to be conducted in a manner that does not significantly impact upon the outstanding universal values of the WHA/National Park. The Department notes that the mine has been working with government authorities over a number of years with regard to implementing a new Water Transfer Scheme for the mine, which will significantly reduce the amount of water discharged into the Wollangambe River and the WHA (as discussed in Section 6.2.2).

6.4 Submissions on the Proposal and the Public Interest

During the exhibition period the Department received 122 submissions from the community and 22 from special interest groups objecting to the development as originally proposed (see Section 4). The Department received 4 public submissions in support of the proposed development. No government authorities objected to the proposal.

In consideration of the range of submissions received during the exhibition period, the Department considers that there was a relatively significant opposition to the proposal as originally proposed.

However, as noted in Section 4 a large proportion of these objections were qualified, stating that the Applicant should be asked to amend its application to partial extraction methods only. Following the Applicant’s concession to partial extraction in May 2005, the Department believes that much of the opposition to the development has been mitigated.

Notwithstanding the opposition, the Department believes that the proposal is broadly in the wider public interest, given:
• the ability to extract the resource using existing infrastructure;
• the ability of the proposal to be conducted generally in accordance with applicable environmental criteria; and
• the socio-economic benefits of the proposal, including the continuation of 80 jobs, and associated capital investment in the mine.

7. RECOMMENDED CONDITIONS OF CONSENT

The Department has prepared recommended Conditions of Consent for the proposal. A summary of the recommended conditions is provided in Appendix C.

These conditions are required to:
• prevent, minimise and/or offset adverse environmental impacts;
• set standards and performance measures for acceptable environmental performance;
• require regular monitoring and reporting; and
• provide for the ongoing environmental management of the development.

The Applicant does not object to these recommended conditions.
8. CONCLUSION

The Department has assessed the DA, EIS and submissions on the proposal, and is satisfied that the impacts of the proposal can be mitigated and/or managed to ensure an acceptable level of environmental performance.

The Department acknowledges that the Applicant has taken on board the concerns expressed by the community and accordingly amended the proposal, including removing the contentious full coal extraction component of the development, as well as removing the proposal to transport coal through the City of Lithgow. The Department believes that these changes address much of the concern raised by stakeholders in relation to the mine expansion.

The Department recognises that the proposal has raised a number of understandable concerns, particularly from Clarence Village residents, about subsidence related impacts on homes and structures, groundwater supplies and significant environmental features of the area. However, following detailed assessment and advice, the Department is confident that the proposal would not result in any significant impact on surface and sub-surface features above the mine. The Department notes that the Applicant will be required to secure additional approvals before it commences any operations that may cause subsidence, which will require comprehensive assessment, management planning and community consultation.

Importantly, the proposal would provide significant economic and social benefits for the region and the State, by providing continued employment for about 80 people, and securing up to 3 million tonnes of coal per year through an existing fully developed mine and associated infrastructure.

On balance, the Department believes the benefits of the proposal outweigh its potential costs, and consequently believes it is in the public interest and should be approved.

9. RECOMMENDATION

It is RECOMMENDED that the Minister:

• consider the findings and recommendations of this report;
• approve the DA under Section 80 of the EP&A Act, subject to the conditions set out in the attached instrument of consent; and
• sign the attached instrument of consent.

David Kitto
Manager
Mining & Extractive Industries

Sam Haddad
Deputy Director-General
APPENDIX A

ENVIRONMENTAL PLANNING INSTRUMENTS CONSIDERATION

A.1 State Environmental Planning Policy (SEPP) No.11 – Traffic Generating Development

The proposal is affected by the provisions of SEPP 11, as an ‘extractive industry or mining’ (Schedule 1(m)). As such, the application was referred to the RTA, who subsequently confirmed that it had no objection to the proposal, requesting only to be consulted if additional road transport was proposed to the west (ie. through Lithgow) (see Section 4.1).

A.2 SEPP No.33 – Hazardous and Offensive Development

The proposal does not involve any changes to the storage or handling of dangerous goods or hazardous substances associated with the mine. As such, the Department is satisfied that the proposal is not potentially hazardous or offensive, and that the proposal is generally consistent with the aims, objectives, and requirements of SEPP 33.

A.3 SEPP No.44 – Koala Habitat Protection

Following the withdrawal of full extraction from the proposal, and the subsequent minimisation of subsidence, the Department is satisfied that the proposal is unlikely to have any significant direct impact on flora and fauna above the mine. As such, the Department is satisfied that the proposal is generally consistent with the aims, objectives, and requirements of SEPP 44.

A.4 SEPP No.55 – Remediation of Land

The Department is satisfied that the land subject to the development application does not have a significant risk of contamination given its historical landuse, and that the proposal is generally consistent with the aims, objectives, and requirements of SEPP 55.

A.5 SEPP No.58 – Protecting Sydney’s Water Supply

A portion of the land to which the DA applies is within the Coxs River catchment which forms part of the catchment of Sydney’s water supply. As such SEPP 58 applies to the proposal.

Clause 10 of the SEPP requires a consent authority to consider the following matters:
(a) whether the development or activity will have a neutral or beneficial effect on the water quality of rivers, streams or groundwater in the hydrological catchment, including during periods of wet weather;
(b) whether the water quality management practices proposed to be carried out as part of the development or activity are sustainable over the long term; and
(c) whether the development or activity is compatible with relevant environmental objectives and water quality standards for the hydrological catchment when these objectives and standards are established by the Government.

The Department is satisfied that the proposal is unlikely to result in any significant impacts to the surface water quality of the Coxs River catchment (see Section 6.2.2 for further detail).

Clause 11 requires the concurrence of the Chief Executive of the Sydney Catchment Authority for certain developments including designated developments, but excludes this requirement where the proposal is State Significant development. Although the proposal (as State Significant development) does not require concurrence under SEPP 58, the SCA has been consulted and its recommended conditions of consent received. The Department has incorporated these conditions into its recommended conditions of consent.

A.6 Lithgow City Local Environmental Plan 1994

The land subject to the DA is zoned 1(a) Rural General, 1(c) Rural Small Holdings, and 1(f) Rural Forestry, under the Greater Lithgow City Council Local Environmental Plan (LEP) 1994.

Under the LEP, development for the purpose of mining is permissible in these rural zones, with development consent.

Clause 11 of the LEP requires a consent authority to take into consideration the following matters before determining a development application relating to land within zones 1(a) or 1(c):
(a) the present use of the land, and the potential for sustained agricultural production of so much (if any) of the land as is prime crop and pasture land – The Department is satisfied that the proposal would not result in any significant adverse effect on agricultural or other landuse, including as a result of surface subsidence (see Section 6.2.3);

(b) vegetation, timber production, land capability and water resources (including the quality of the water, stability of water courses, ground water storage and riparian rights) – The Department is satisfied that the proposal would not result in any significant impact to flora and fauna, landforms and water resources, including as a result of surface subsidence (see Section 6.2);

(c) the future recovery from known or prospective areas of valuable deposits of minerals, coal, petroleum, sand, gravel or other extractive materials – The proposal facilitates the recovery of valuable coal deposits;

(d) the protection of areas of nature conservation significance or of high scenic or recreational value, and of items of heritage significance – Following its assessment of subsidence, the Department is satisfied that the proposal would not result in any significant impact to surface features including pagoda formations, cliff lines, heritage items and the adjacent World Heritage Area (see Section 6.2);

(e) the cost of providing, extending and maintaining public amenities and services – The Department acknowledges that the proposal would utilise existing fully developed infrastructure and that the proposal is unlikely to have any significant impact on utilities and services (see Section 6.2);

(f) development on adjoining land and on other land in the locality, including any cumulative impact – Following its environmental assessment, the Department is satisfied that the proposal can be managed such that it would not have any significant impact on the locality. With regard to cumulative impacts, the Department notes that the proposal involves a continuation of the existing Clarence mine at the existing production rates. As such, the proposal is not expected to present any significant increase in cumulative impacts;

(g) the future expansion of settlements in the locality – Following its assessment of subsidence and other environmental aspects, the Department is satisfied that the proposal would not significantly affect the anticipated and reasonable future expansion of Clarence Village, Newnes Junction and other settlements in the locality.

Schedule 1 of the LEP lists heritage items in the City of Lithgow. Railway items associated with the Main West Line are the only listed heritage items in the vicinity of the proposed development. Following its assessment of subsidence (see Section 6.2.3), the Department is satisfied that the proposal is unlikely to result in any significant impact to any items of heritage significance.
APPENDIX C

SUMMARY OF RECOMMENDED CONDITIONS OF CONSENT

The Department has recommended a number of conditions of consent, including requirements to:

- limit production to 3 million tonnes of Run-of-Mine coal per year;
- limit road transport to 200,000 tonnes per year, with no transport through the City of Lithgow;
- comply with strict subsidence criteria, based on ensuring no impact to homes and other improvements, infrastructure, groundwater supplies or environmental features of the locality;
- develop a Subsidence Management Plan in accordance with DPI guidelines, including requirements for monitoring against the subsidence criteria, and consultation with authorities and the community;
- comply with contemporary water discharge criteria;
- develop a integrated Water Management Plan, including a Water Balance, Erosion and Sediment Control Plan, Surface Water Monitoring Program, Groundwater Monitoring Programs, and a Surface water and Groundwater Response Plan;
- comply with contemporary air quality criteria, and develop an air quality monitoring program;
- comply with contemporary noise criteria;
- develop a Noise Management Plan, including a monitoring program and a plan to reduce train loading noise;
- Develop a Mine Closure Strategy;
- establish and maintain a comprehensive Environmental Management Strategy, prepare detailed Annual Environment Management Reports and commission regular independent audits; and
- establish a Community Consultative Committee to oversee the environmental management of the mine, and ensure access by the public to environmental reporting on the mine.