



NSW GOVERNMENT
Department of Planning

***MAJOR PROJECT ASSESSMENT:
Sunnyside Coal Project
MP 06_0308***



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

September 2008

Cover Photograph: View looking west over the proposed Sunnyside Coal Project site.

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EXECUTIVE SUMMARY

Namoi Mining Pty Limited (Namoi Mining), a subsidiary company of Whitehaven Coal Limited, proposes to establish a new coal mine approximately 15 kilometres (km) west of Gunnedah (see Figure 1).

The proposal, known as the Sunnyside Coal Project, involves establishing and operating an open cut coal mine, a range of associated infrastructure including a coal crushing facility and transporting coal to the Whitehaven Siding Coal Handling and Preparation Plant (CHPP). Namoi Mining seeks approval to extract up to 1 million tonnes of run-of-mine (ROM) coal a year for up to 7 years.

The project has a capital investment value of \$15 million, and would employ up to 40 people during operations. Over its life, the mine would extract coal worth \$1 billion and provide royalties and tax income to Government.

The proposal constitutes a 'major project' under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and consequently the Minister for Planning is the approval authority for the project application.

The Department exhibited the project's Environmental Assessment (EA) for 4 weeks from 18 April 2008, and received 31 submissions on the proposal, including 5 from government authorities and 26 from the general public. None of the government authorities objected to the proposal, although they did raise a number of issues for consideration and/or recommended conditions of approval. The issues raised included ground and surface water management, transport impacts, flora and fauna impacts, air quality and noise management, visual impacts and rehabilitation of the site.

Most public submissions included objections to the project, raising concerns about a broad array of potential impacts including water, noise, air quality and traffic impacts.

The Department has assessed the project application, EA, submissions on the project and Namoi Mining's response to these submissions in accordance with the objects of the EP&A Act and principles of ecological sustainable development, and is satisfied that there is sufficient information available to determine the application.

The Department is satisfied that the proposal can meet applicable amenity, health and environmental standards. The Department is also satisfied that the residual environmental and socio-economic impacts of the project can be adequately mitigated and/or managed and has recommended a comprehensive range of conditions to ensure this occurs.

Namoi Mining would also establish a \$500,000 Community Enhancement Fund to assist Gunnedah Shire Council with community development projects to offset the socio-economic impacts of the project.

After careful consideration, the Department considers that the project's benefits sufficiently outweigh its costs, and that it is therefore in the public interest. Consequently, the Department recommends that the Sunnyside Coal Project be approved subject to strict conditions of approval.

1. PROPOSED PROJECT

1.1 Project Description

Namoi Mining Pty Limited (Namoi Mining) proposes to establish a new open-cut coal mine and associated infrastructure near Gunnedah (see Figure 1). Namoi Mining is a subsidiary company of Whitehaven Coal Limited, which owns/operates the Whitehaven, Tarrawonga, Glenroc and Narrabri Coal Mines in the Gunnedah-Narrabri district and the Whitehaven Siding Coal Handling and Preparation Plant (CHPP) and its associated rail loading facility at Gunnedah.

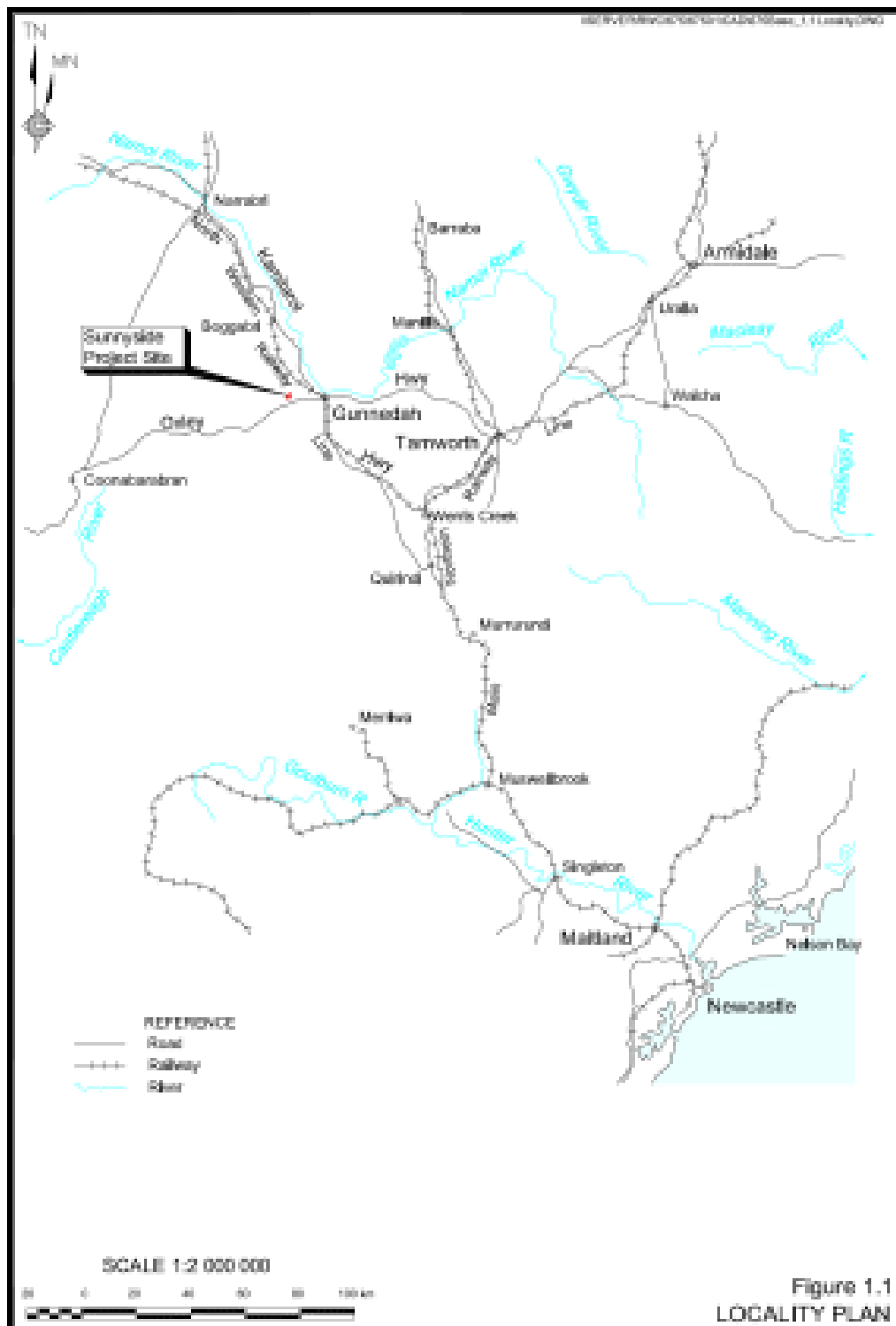


Figure 1: Project Location

The key components of the proposal are summarised in Table 1, and depicted in Figure 2. The proposal is described in full in the Environmental Assessment (EA - see Appendix D).

Table 1: Key components of the Sunnyside Coal Project

Aspect	Description
Project Summary	Construction and operation of an open cut coal mine, extracting up to 1 million tonnes per annum (Mtpa) of run of mine (ROM) coal for processing and supply to export markets. Construction and operation of mine surface facilities.
<i>Mining and Reserves</i>	Extraction of coal from the Hoskissons coal seam, using open cut and auger mining methods. Mineable reserve of 5.9 Mt.
<i>Project Life</i>	An expected project life of up to 7 years.
<i>Coal Production</i>	Production of up to 1 Mtpa of ROM coal.
<i>Coal Processing</i>	ROM coal would be crushed and stockpiled on-site.
<i>Construction</i>	Establishment of mine infrastructure would involve the construction of: ▪ mine entrance and internal access roads; ▪ a realignment of Coocooboonah Lane; ▪ a coal crushing facility, conveyor and coal load out bin; ▪ ROM coal stockpile; ▪ water management structures, including 2 storage facilities; ▪ amenity bunds near the processing area and along the eastern boundary of the mining area; and ▪ ancillary surface facilities including offices and workshop.
<i>Water Demand and Supply</i>	Annual water demand would be between 75-100 megalitres (ML) per year (up to 0.3 ML per day), mainly for dust suppression. Water would be sourced primarily from pit inflows, from the adjacent Gunnedah No. 5 underground workings and from surface run-off feeding 2 water storages. Adequate water supplies are available to meet all projected water requirements.
<i>Minewater Management</i>	Pit inflows would be pumped to 2 purpose built dams. Water make in excess of the capacity of the dams would be pumped to the Gunnedah No. 5 underground workings.
<i>Employment</i>	20 full time workers would be employed during construction. The operational workforce would be up to 40 full time equivalent workers.
<i>Hours of Operation</i>	Operations would take place between 6.00am – 10.00pm, Monday to Friday and 7:00am – 6:00pm on Saturdays. No operations would occur on Sundays or Public Holidays.
<i>Construction Hours</i>	Construction of the surface facilities would be undertaken Monday to Friday between 7.00 am and 10.00 pm.
<i>Product Coal Transport</i>	Product coal would be loaded onto trucks (up to 125 laden trucks per day) and transported to the Whitehaven Siding CHPP and Coal Loading Facility.
<i>Mine Access</i>	Access to the mine via the realigned Coocooboonah Lane from the Oxley Highway.
<i>Flora and Fauna</i>	The land adjacent to the site is core Koala habitat and Coocooboonah Lane would be realigned to limit impacts to Koala habitat along the road verge. Additional planting of Koala feed trees would be undertaken along the site's eastern and western boundaries to improve Koala habitat and movement corridors. Almost 131 hectares (ha) of Koala habitat would be protected post-mining.
<i>Rehabilitation and Final Landform</i>	The disturbed area (163 ha) would be progressively rehabilitated with the aim of returning the land to grazing and cropping activities. Class 2 agricultural land in the area of disturbance would reduce from 97% to 70% post-mining. The reshaped final void (with slopes no greater than 10°) would cover 20 ha and would no longer be available for agricultural production.

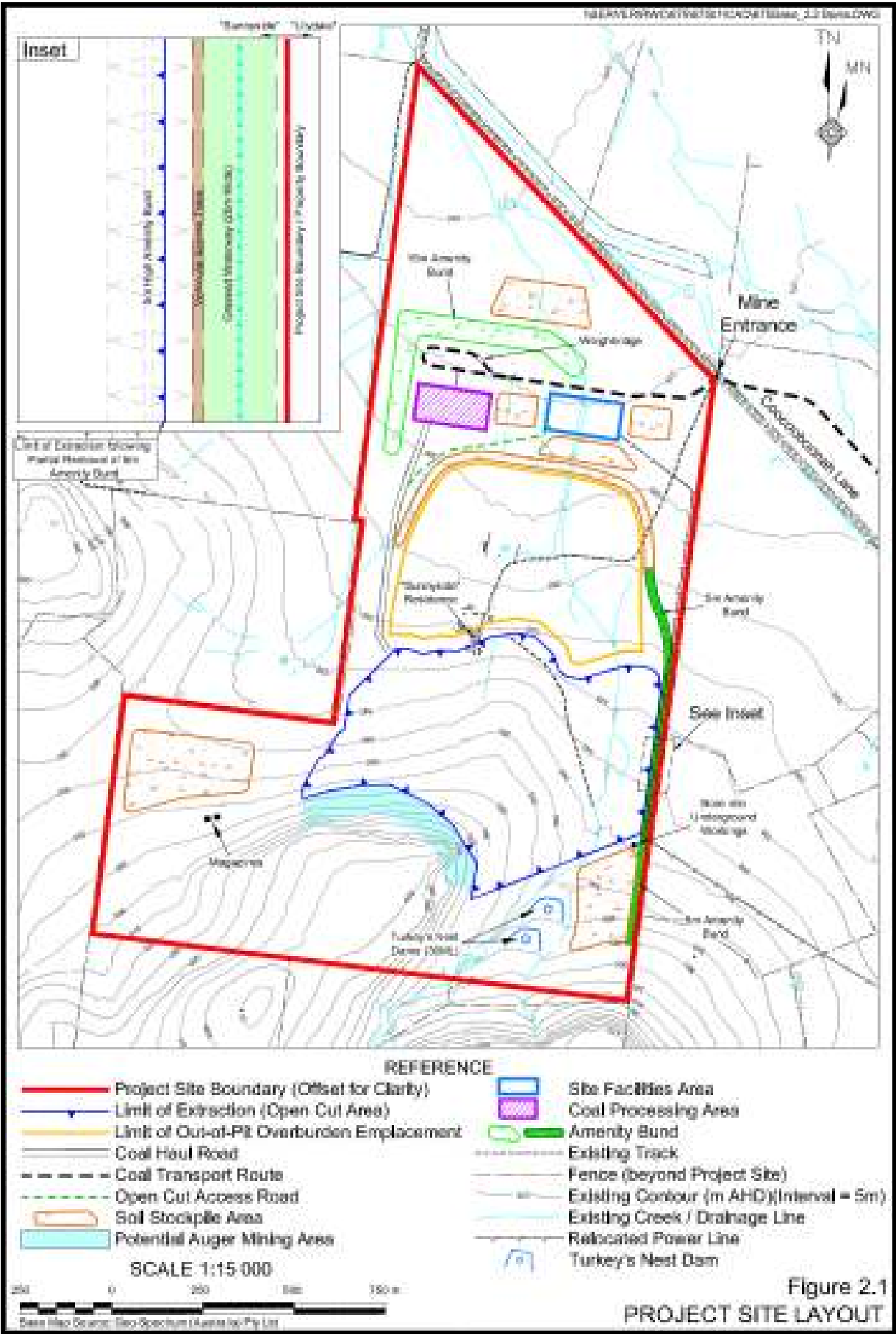


Figure 2: Project Site Layout

1.3 Project Setting

The project site is located 2 km north of the Oxley Highway, approximately 15 km west of Gunnedah (see Figure 1). The project is located 25 km from the nearest operating mines (Whitehaven and Tarrawonga open cut coal mines) and would therefore be an extension of coal mining activity in the Gunnedah-Narrabri district (see Figure 3).

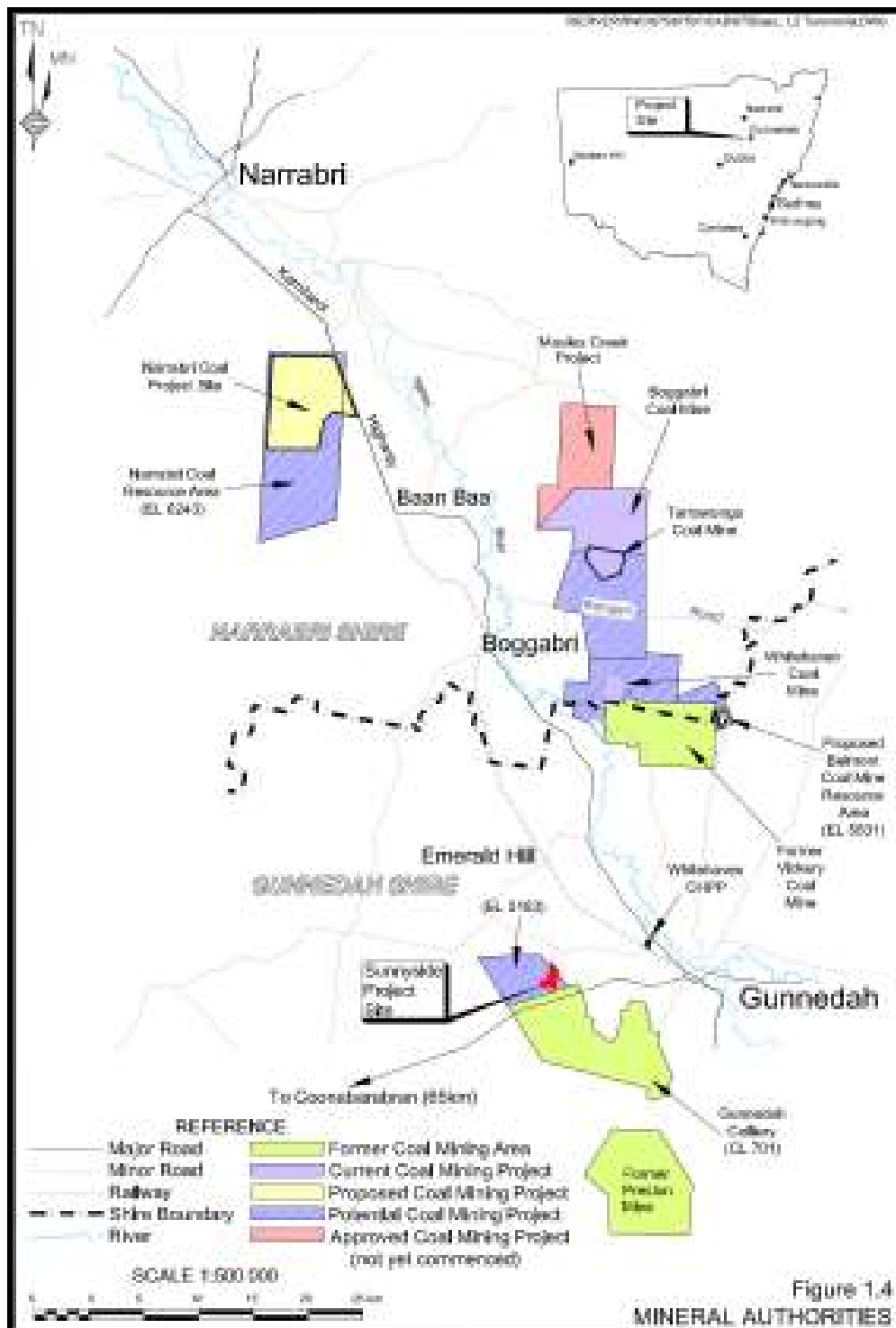


Figure 3: Coal mining activity in the Gunnedah-Narrabri district

The project site lies in the Namoi River Valley. The alluvial lands of the Namoi floodplain are extensively used for intensive irrigation for crops such as cotton. The majority of the site has been cleared for agricultural purposes and is surrounded on 3 sides by similar land-uses. The southern tip of the site rises gently and contains some native vegetation, including Koala habitat. The neighbouring area is lightly settled with 20 private residences within 3 km of the site (see Figure 4).

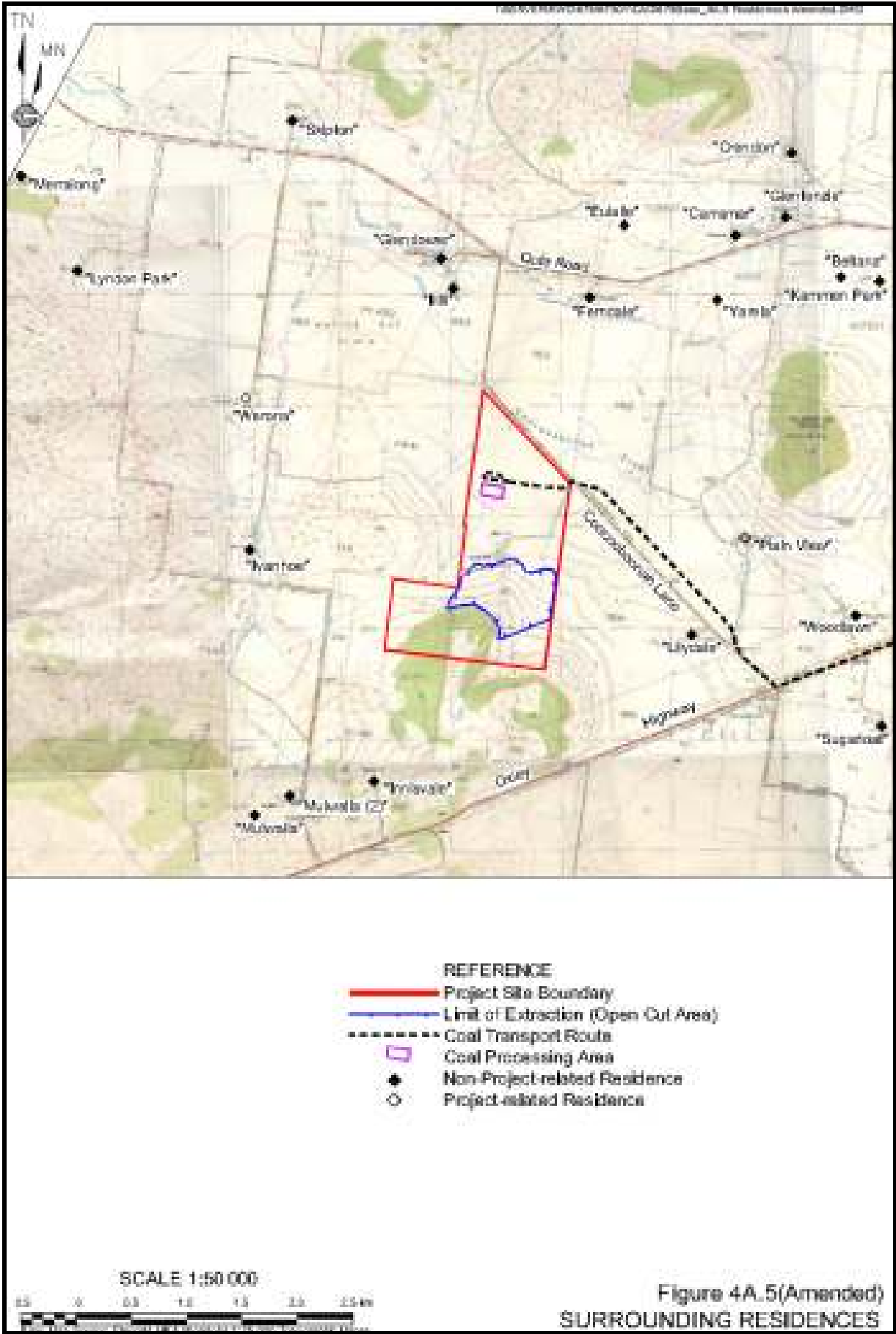


Figure 4: Residences in the vicinity of the project site

1.4 Project Need and Justification

The Department recognises that society is heavily reliant on coal to meet its basic energy needs (both at a domestic and international level). Coal provides around 90% of NSW's energy needs, 75% of Australia's energy needs, 24% of global energy needs, and is used to produce 39% of the world's electricity.

Access to energy remains a critical development need, particularly for the one-third of the world's population without electricity. As living standards and development in Third World countries increase, it is expected that the demand for coal will rise to satisfy increasing energy requirements. The Sunnyside Coal Project would contribute to supplying this annual coal demand. Therefore the ultimate need for the project is driven by both domestic and international energy markets.

The Department therefore considers that it is global energy demand that is driving new coal mining proposals in New South Wales; and if the project was not allowed to proceed, any resultant shortfall in coal supply would be filled by another coal resource either in NSW, Australia or overseas.

However, the Department also recognises that a balance must be found in the promotion and co-ordination of the orderly and economic use of land, the proper management and development of the State's resources, the protection of the environment and ecologically sustainable development.

The project is justified by a combination of coal resource availability and market opportunity over the likely mine life. Namoi Mining has put forward a case which clearly demonstrates the benefits that would accrue to the local, State and Federal economies, in addition to the generation of a significant number of direct and indirect employment opportunities. In achieving these goals Namoi Mining is committed to developing a safe and economically viable mine that maximises coal resource recovery, while minimising its environmental and social impacts. The project would also deliver a number of key benefits, including long-term permanent employment opportunities for up to 40 people, \$15 million initial capital investment, flow-on regional economic benefits, and significant royalty and tax income.

Consequently, the Department is satisfied that there is a demonstrable need for the project in terms of meeting society's need for adequate, reliable and affordable energy. Further, that this need could be met in a manner that has due regard to the economic, social and environmental impacts of the project.

2. STATUTORY CONTEXT

2.1 Major Project

The proposal is classified as a major project under Part 3A of the EP&A Act, as it is development for the purpose of coal mining and meets the criteria in clause 5 of schedule 1 of *State Environmental Planning Policy (Major Projects) 2005*. The Minister for Planning is therefore the approval authority for the project.

2.2 Permissibility

The proposal is located within Gunnedah LGA and is zoned 1(a) (General Rural) under the *Gunnedah Local Environmental Plan 1998*. This zone permits mining and associated surface activities with development consent.

2.3 Exhibition

Under Section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment of a project publicly available for at least 30 days.

After accepting the project EA, the Department:

- made the EA publicly available from 18 April 2008 until 19 May 2008:
 - on the Department's website, and
 - at the Department's Information Centre and the offices of Gunnedah Shire Council, the Nature Conservation Council and at Namoi Mining's information shop in Gunnedah;
- notified relevant State and local government authorities by letter; and
- advertised the public exhibition in the Namoi Valley Independent on 17 and 24 April 2008.

This satisfies the requirements of Section 75H(3) of the EP&A Act.

2.4 Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act. The objects of most relevance to the Minister's decision on whether or not to approve the project are found in Section 5(a)(i),(ii),(vi)&(vii). They are:

"The objects of this Act are:

- (a) to encourage:*
 - (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) the promotion and co-ordination of the orderly and economic use and development of land,*
 - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) ecologically sustainable development"*

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD "requires the effective integration of economic and environmental considerations in decision-making processes" and that ESD "can be achieved through" the implementation of the principles and programs including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms. In applying the precautionary principle, public decisions should be guided by careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment and an assessment of the risk-weighted consequences of various options.

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the project application. The assessment integrates all significant economic and environmental considerations and seeks to avoid any potential serious or irreversible damage to the environment, based on an assessment of risk-weighted consequences. Namoi Mining has also considered a number of alternatives to the proposed development, including that of not proceeding, and considered the proposal in the light of ESD principles.

2.5 Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is required to include a copy of or reference to the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project.

The Department has considered the proposal against the relevant provisions of SEPPs 11, 33, 44 and 55 and is satisfied that none of these SEPPs substantially govern the carrying out of this project (see Appendix C). The Mining, Petroleum Production and Extractive Industries SEPP 2007 does not apply to the project since the project application was lodged prior to the SEPP's commencement on 16 February 2007.

2.6 Statement of Compliance

Under Section 75I of the EP&A Act, the Director-General's report is required to include a statement relating to compliance with the environmental assessment requirements with respect to the project. The Department is satisfied that the Director-General's environmental assessment requirements have been complied with.

3. ISSUES RAISED IN SUBMISSIONS

During the exhibition period, the Department received a total of 31 submissions. These included 5 submissions from public authorities, one submission from a special interest group (the United Mineworkers Federation) and 25 submissions from individuals.

A summary of the issues raised in submissions is provided below. A full copy of these submissions is attached in Appendix E.

3.1 Public Authorities

Department of Primary Industries (DPI) supports the project. It requested that a mining operations plan including detailed final landform design and rehabilitation completion criteria should be submitted to it prior to any works commencing. DPI also provided the following comments:

- a security deposit would be required to cover the full cost of rehabilitating the project site;
- groundwater and surface water monitoring programs should be established;
- construction of culverts or causeways on the proposed transport route should be in accordance with DPI guidelines; and
- a weighbridge should be installed at the project site to avoid trucks being overloaded.

Department of Environment and Climate Change (DECC) stated it was able to support the project and provided a set of recommended conditions of approval for consideration. It also provided the following key comments:

- dirty water areas should have discharge limits and sedimentation dams should be designed to capture runoff from a minimum 5 day 90th percentile storm event. A management plan for discharging pit inflows to the Gunnedah No. 5 underground workings should be prepared and the mine's water balance reviewed annually;
- the Koala habitat should be adequately fenced;
- a final void design and management plan should be prepared to ensure the final landform is compatible with final land-uses;
- a PM₁₀ monitor should be installed;
- overburden emplacement should be restricted during temperature inversions; and
- a traffic noise management plan should be prepared.

Roads & Traffic Authority (RTA) does not oppose the project. It offered the following comments:

- any roadworks on the Oxley Highway would need to be designed to AUSTROADS standards;
- adequate funding should be provided for the maintenance of roads on the coal transport route through an agreement with Gunnedah Shire Council; and
- Namoi Mining should upgrade the intersection of Quia Road and Torrens Road to improve safety for southbound right-turning traffic.

Namoi Catchment Management Authority (CMA) does not object to the project. It provided the following comments:

- the surface water and groundwater impact assessments are acceptable but highlighted the need for a contingency plan should the mine impact local groundwater users;
- sufficient topsoil would be required to successfully rehabilitate the site; and
- the slopes of the final void should be flattened to enable a higher post-mining land capability.

Gunnedah Shire Council (Council) does not object to the project. Council raised a number of issues, including the need for:

- noise attenuation for on-site diesel generators;
- dust suppression measures;
- establishment of a Community Enhancement Fund;
- a road maintenance agreement to offset the impacts of coal haulage;
- road upgrades on the haulage route; and
- construction of school bus stops.

3.2 Special Interest Groups and the General Public

The United Mineworkers' Federation of Australia (UMFA) was generally supportive of the project.

22 individuals objected to the project and 3 were generally supportive of the project but raised concerns. The objections and concerns included that:

- the project would increase truck movements on local roads and impact upon road safety;
- the project would impact upon the Koala population in its vicinity and would cause dieback of remnant vegetation;
- noise from the mine would impact the amenity of local residents and blasts may cause structural damage to houses;
- the mine would reduce yields in local groundwater bores;
- dust would impact upon tank water, agricultural land and livestock;
- the mine would reduce property values; and
- light spill from night lighting at the mine would cause inconvenience to neighbouring residents.

4. ASSESSMENT

The Department considers the key environmental issues for the Sunnyside Coal Project to be noise, coal transportation from the proposed mine to the Whitehaven Siding CHPP, water management, air quality and flora and fauna.

4.1 Noise

The project site is located in a rural area with very low background noise levels, except for locations close to the Oxley Highway. The noise generated by the proposed mine has the potential to annoy existing residents and create land use conflicts. This potential annoyance would however be greatly reduced through Namoi Mining's proposal to not operate the mine between 10 pm and 7 am (ie night hours).

A noise impact assessment (NIA) was undertaken by Spectrum Acoustics Pty Limited and was prepared in accordance with DECC's *NSW Industrial Noise Policy* (INP). Where noise issues are not covered by the INP (eg construction noise criteria) then the *NSW Environmental Noise Control Manual* (ENCM) was used. Site-based, traffic and construction noise sources under a range of meteorological conditions were modelled. Temperature inversion conditions were found to represent the "worst case scenario" for consideration under the INP. Off-site traffic noise was modelled using *Environmental Criteria for Road Traffic Noise* (ECRTN).

Project specific noise levels (PSNL) were established for residences (see Figure 4) at representative locations around the site with reference to the INP intrusiveness criterion which limits noise levels to a value of "background plus 5 dB(A)". Based on the assumed INP floor background noise level of 30 dB(A), the PSNL is 35 dB(A).

ENCM construction noise criteria apply to the realignment of Coocooboonah Lane, establishment of site facilities, environmental bunds and the pit access ramp. Noise levels for construction activities between 4-26 weeks are limited to a value of "background plus 10 dB(A)". After 26 weeks the operational noise criterion applies. Therefore, the applicable criterion for the Coocooboonah Lane realignment, site facilities, bunds and ramp is 40 dB(A)($L_{A10} 15 \text{ minute}$), with 35 dB(A) ($L_{Aeq} 15 \text{ minute}$), applying to construction of the overburden emplacement area (OEA).

Construction noise levels would comply with the ENCM criterion under all meteorological conditions at all non-project related residences for the realignment of Coocooboonah Lane, site facilities, bunds and the pit access ramp with the exception of R9 "Lilydale" where exceedances of up to 6 dB(A) would occur under a range of meteorological conditions. These exceedances would however be of a short duration when construction of the Coocooboonah Lane realignment is at the closest point to the receiver. Construction of the OEA would lead to minor exceedances (1-2 dB(A)) at 4 residences, moderate exceedances (3-5 dB(A)) at a further 2 residences and major (5-6 dB(A)) exceedances at 2 residences under a range of meteorological conditions (see Table 2 and Figure 4).

Table 2: Predicted exceedances during construction of the OEA (ie Year 0 of Operations)

Location	Meteorological Condition			Criterion Day/Evening
	ENE Wind	SSW Wind	Inversion	
"Innisvale"	34	17	36	35 dB(A)
"Ivanhoe"	38	20	40	35 dB(A)
"Illili"	32	39	37	35 dB(A)
"Ferndale"	32	39	37	35 dB(A)
"Plain View"	28	32	36	35 dB(A)
"Glendower"	30	36	33	35 dB(A)

Namoi Mining stated that the noise levels in Table 2 would be difficult to reduce due to the OEA being downslope from the pit area and argued that the PSNL should be increased by up to 5 dB(A) to account for this. DECC does not support increasing the PSNL as a management measure, and believes that Namoi Mining should implement all reasonable and feasible mitigation measures to reduce noise levels during the OEA's construction.

During Year 1 of operations, minor exceedances of up to 2 dB(A) are predicted to occur at "Illili", "Ferndale" and "Glendower" (see Figure 4) under SSW winds and during inversion conditions when 2 scrapers are used at ground level. From Year 2 until the end of the mine's life, exceedances of up to 4 dB(A) are predicted to occur at "Illili" and "Ferndale" during south-southwest winds and temperature inversions when high level waste emplacement is undertaken. These exceedances would be able to be mitigated under all meteorological conditions by using an in-pit emplacement, which would be made available from Year 2.

The Department and DECC believe that Namoi Mining should seek to negotiate agreements with affected residents if on-site mitigation measures are not effective or practicable. The Department also believes Namoi Mining should initially undertake the following mitigation measures as outlined in the EA:

- initially emplacing overburden between the coal processing area and the northern extent of the pit to provide acoustic shielding between infrastructure areas and residences to the north;
- reducing the number of scrapers from 2 to 1 during adverse wind conditions and temperature inversions;
- utilising an in-pit OEA during adverse wind conditions or temperature inversions;
- assessing sound power levels of plant and equipment prior to their selection;
- restricting overburden emplacement to the leading side of the OEA to locate the noise source at the maximum distance possible from downwind residences;
- using smart reversing alarms on all equipment; and
- developing a noise management plan incorporating the above measures.

The Department considers that in addition to the above mitigation measures, and in recognition of the low background noise levels in the vicinity of the site, Namoi Mining should acquire "Lilydale" if requested by the landowner. It should also offer architectural treatment for residences where noise monitoring shows that project related noise levels exceed 37 dB(A). The Department has recommended conditions of approval to achieve these outcomes.

The Department has also recommended conditions of approval that would require Namoi Mining to establish a detailed noise monitoring program, in consultation with DECC, to assess whether it is complying with noise goals. In particular, operational noise levels should be monitored at "Illili" and "Ferndale", where moderate exceedances of noise criteria are predicted. If monitoring shows that compliance cannot be achieved, then Namoi Mining should negotiate with affected residents to reach agreement in managing project related noise impacts.

Regarding road traffic noise, Namoi Mining's assessment showed that predicted truck noise levels would equal the ECRTN criterion of 55 dB(A) at 2 residences adjacent to Torrens Road, near the Whitehaven Siding CHPP. To manage its traffic noise, Namoi Mining would prepare a traffic noise management plan and would monitor truck noise levels at these residences. The Department recommends that Namoi Mining should be required to offer architectural treatment for these residences as it would be the major contributor to traffic noise on Torrens Road and it has recommended a condition of approval to reflect this.

The Department believes that the recommended noise mitigation and monitoring measures would adequately manage the noise impacts associated with the project. The Department has recommended conditions of approval that would ensure adverse noise impacts would be effectively managed and mitigated at the closest residences to the project site.

4.2 Traffic and Transport

The project would generate traffic impacts through the transport of coal to the Whitehaven Siding CHPP, by workers travelling to the site and from delivery of equipment and materials.

The EA outlined the route that coal trucks would use from the mine to the CHPP (see Figure 5). The route is approximately 16 km long and mostly contains rural roads with small volumes of traffic. It also contains a 6.7 km section of the Oxley Highway which is maintained by Council. Workers would use the Oxley Highway and the realigned Coocooboonah Lane to access the mine. An additional 30 light vehicle movements a day would be generated during construction and operation of the project. The Department considers this increase to be negligible.

However, heavy vehicle movements would increase significantly, as all coal would be transported by road. The maximum increase in truck movements would be 250 per day (125 laden trips), Monday to Friday, and 172 truck movements (86 laden trips) on Saturdays, based on the use of 28 tonne trucks. This represents a 50% increase to the current volume of heavy vehicle movements on the 6.7 km section of the Oxley Highway and increases up to 350% on the other roads on the route. If 40 tonne capacity B-doubles are used, the number of movements would reduce to 176 and 122 respectively.

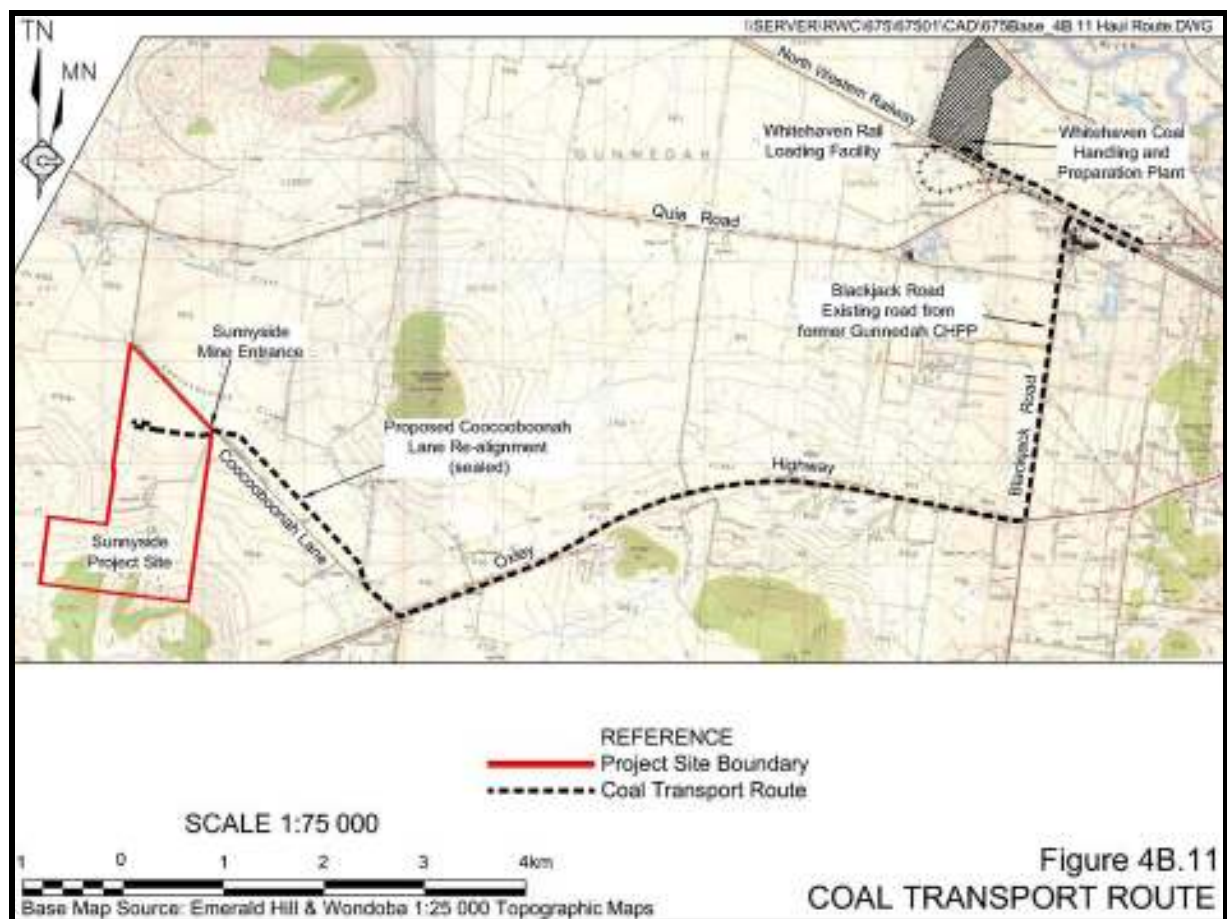


Figure 5: Coal transport route

The RTA, Council and several residents raised concerns that included:

- impacts to identified Koala habitat along Coocooboonah Lane;
- the need for intersection upgrades along the coal transport route;
- impacts of project related traffic along Blackjack Road and Quia Road;
- impacts on the AgQuip festival (held adjacent to Blackjack Road); and
- impacts of rail transport through Gunnedah from increased coal production due to the project.

To address these road traffic concerns Namoi Mining has committed to the following road works:

- constructing a realigned Coocooboonah Lane with 3.5 m lanes and sealed shoulders to avoid Koala habitat;
- upgrading the Coocooboonah Lane/Oxley Highway intersection to provide an acceleration lane for laden coal trucks and a protected deceleration lane for unladen coal trucks;
- entering into a maintenance agreement with Council for shoulder maintenance along the Oxley Highway between Coocooboonah Lane and Blackjack Road;
- creating designated left and right turning lanes at the Oxley Highway/Blackjack Road intersection;
- providing 3.5 m wide lanes with 0.5 m sealed shoulders for the full length of the coal transport section of Blackjack Road;
- creating an auxiliary right turn lane at the Blackjack Road/Quia Road intersection;
- providing 3.5 m wide lanes with 0.5 m sealed shoulders along Quia Road;
- upgrading the Quia Road/Farrar Road intersection and the Torrens Road/Quia Road intersection at either side of the existing rail underpass;
- providing 3.5 m wide lanes with 0.5 m sealed shoulders along Torrens Road; and
- erecting 'truck entering' signage at all coal transport route intersections.

To avoid impacting on the AgQuip festival, held on Blackjack Road in August each year, Namoi Mining would suspend haulage while the festival is operating.

In regard to increases in the impacts from rail transport of coal from the CHPP, the Department notes that, on 17 April 2008, Council approved a modification to the development consent for the Whitehaven Siding CHPP under delegated approval authority. The modification included increasing the maximum amount of coal to be dispatched by rail from 3.0 Mtpa to 4.1 Mtpa. Processing the coal extracted from the Sunnyside Coal Project at the CHPP would have no effect on the amount of coal received, processed and dispatched from the CHPP as these volumes are controlled by conditions of consent for the facility.

The coal production from the project would not therefore impact upon the approved number of coal trains on the rail line. Therefore, no additional impact due to rail transportation would occur that has not been previously assessed. In addition, recent track upgrades on the rail line provide further efficiency in the transport of coal through Gunnedah and reduce delays at level crossings within the town.

Residents raised concerns regarding the safety of children who are collected and dropped off by a school bus on the Oxley Highway. Council requested that Namoi Mining provide additional bus stops to ensure the safety of the children. In response, Namoi Mining has committed to the construction of 2 bus stops on the Oxley Highway in the vicinity of the realigned Coocooboonah Lane. It would also schedule truck driver breaks to coincide with the school bus operating times. The Department has included a condition of approval to confirm this.

The Department is satisfied that Namoi Mining has adequately addressed road traffic, access and safety issues associated with the project and has recommended a condition of approval that requires the road works outlined in the EA to be undertaken prior to the commencement of coal extraction. The Department believes that this would provide for the safety of, and minimise any inconvenience to, all users of the Oxley Highway and local roads along the proposed coal transport route.

4.3 Water Management

Groundwater

The EA's groundwater assessment was conducted by GeoTerra Pty Limited and predicted groundwater inflows to the open cut pit as well as impacts to groundwater quantity and quality in the vicinity of the proposed mine. The assessment showed that limited drawdown would occur at groundwater bores on neighbouring properties and that standing water levels in these bores would not change due to groundwater level declines in close proximity to the open cut pit. Water quality at these bores would also not be impacted as a result of the project.

The Department believes that local groundwater users would not be adversely impacted by the project. However, as a precautionary measure, Namoi Mining should be required to prepare a Groundwater Contingency Plan that sets impact trigger levels and responses to prevent or mitigate groundwater impacts.

The Department also believes that Namoi Mining should be required to establish a groundwater monitoring program, in consultation with DWE, to provide information on baseline groundwater quality at locations within aquifers, in order that any deviations from modelled predictions can be detected as early as possible.

Water Balance

Namoi Mining would utilise a system of on-site water storages to ensure water would not be discharged from the site to the surrounding environment. Total pit inflows would be up to 133.7 million litres (ML) per year and this water would be initially pumped to two 30 ML capacity purpose-built turkeys nest dams at the south of the site (see Figure 2). Excess water would be discharged underground under licence to the former Gunnedah No. 5 underground workings south-east of the site.

Run-off would be stored in 4 dams on site. Water needed on site would be sourced primarily from pit inflows and rainfall. At the commencement of operations, this would be augmented by a 31 ML stored water resource in the former Gunnedah No. 5 underground workings.

As coal processing (other than ROM coal crushing and screening) would not be required, only a small amount of water would be needed for operations (0.27 ML/day), mostly for dust suppression of coal stockpiles and internal access roads. A simplified water balance is shown in Figure 6, which represents the worst case conditions in terms of volumes of water to be managed (ie Year 4 of operations).

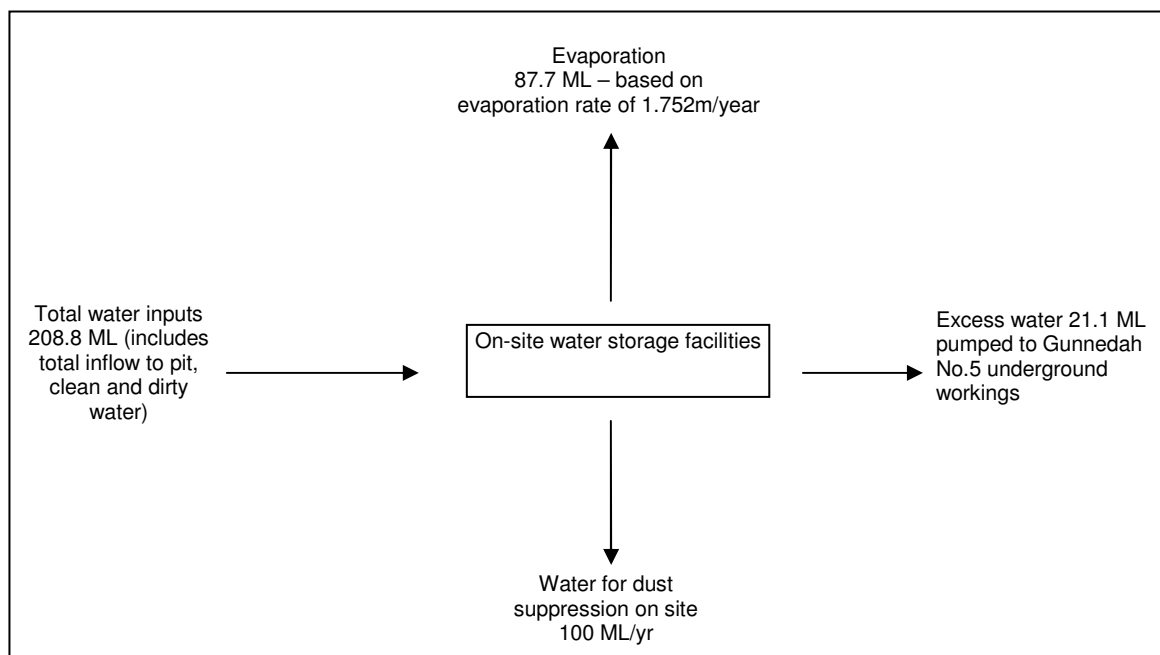


Figure 6: Water balance under worst case conditions

The Department is satisfied that Namoi Mining has addressed the issue of on-site water management in a robust manner by its consideration of:

- over 100 years of rainfall data;
- 10 percentile, median and 90 percentile rainfall sequences;
- groundwater inflow scenarios;
- storage options; and
- discharging excess water to the disused Gunnedah No. 5 workings.

Surface Water

The Department is satisfied with Namoi Mining's plans to manage surface water at the site. These plans involve the containment and collection of runoff from disturbed areas for use on site and the diversion of clean runoff around disturbed areas. Less than 1% of the normal surface flow within the Coocooboonah Creek catchment would be diverted by the project. Accordingly, the Department

believes that there would be negligible impact on water quality or volumes in local surface watercourses.

Namoi Mining also considered the likelihood of flood events in Coocooboonah Creek. The creek is an ephemeral watercourse which only runs after rainfall events. Namoi Mining would construct appropriate causeways over the creek to allow the overland flow of water should a flood event occur.

Conclusion

The Department is generally satisfied that Namoi Mining has assessed the potential impacts of the project on the groundwater regime, local watercourses and potential water users. In its consideration of the groundwater model and impact predictions, the Department has concluded that:

- negligible impacts would occur to private groundwater bores;
- impacts on water quality or volumes in local watercourses would be negligible;
- adequate water storage capacity would be available on-site; and
- there would be no change to flood characteristics of local watercourses.

The Department believes that a precautionary approach is warranted and has recommended a number of conditions of approval to ensure that the impacts of the project on water resources are satisfactorily managed and/or mitigated. The Department believes Namoi Mining should be required to:

- establish a groundwater monitoring program;
- prepare and implement a detailed site water management plan;
- validate and update the site water balance annually;
- develop management and mitigation measures to avoid and or minimise adverse groundwater impacts based on monitoring results and validated model outcomes; and
- develop contingency measures should unexpected impacts occur.

4.4 Air Quality

The proposed mine would generate dust during its construction phase and, once operational, the potential exists for dust to disperse from the site. An air quality assessment (AQA) for the proposed mine was undertaken by Heggies Pty Ltd, in accordance with DECC's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*. The assessment was based on the use of the Ausplume air dispersion model, which used estimated emissions and local meteorological data to predict resultant dust concentration and deposition levels. The AQA indicated that the risk of air quality impacts would be reduced by the implementation of proposed mitigation measures, which include:

- tar sealing the mine access road and realigned Coocooboonah Lane;
- watering all internal roads and the ROM stockpile; and
- constructing an environmental bund around the ROM pad and revegetating amenity bunds to reduce wind erosion.

Concerns were raised by residents that dust from the site would contaminate tank water supplies. In response to this concern Namoi Mining has committed to the installation of 'first flush' water diverter systems at 13 residences in the vicinity of the site.

There would be minor emissions from vehicles and mining equipment, including carbon monoxide (CO), sulfur dioxide (SO₂) and nitrogen dioxide (NO₂). Due to their low levels, these were not considered in detail by the AQA. Table 3 provides a summary of the maximum predicted air quality impact of the project at non-project related residences in the vicinity of the mine. In all cases, the relevant DECC air quality criteria would be met easily. The incremental increase in particulate concentrations or dust deposition rates are low, both in relative and absolute terms.

Table 3: Air Quality Impacts

Air Quality Parameter	Background	Maximum Increment Attributable to the Project	Background + Increment	DECC Criteria
Deposited Dust (g/m ² /month)	1.8	0.5	2.3	4.0
PM ₁₀ Max 24-hour average (µg/m ³)	39.5	2.0	41.5	50
PM ₁₀ Annual average (µg/m ³)	16.5	2.0	18.5	30

The Department is satisfied with the proposed dust minimisation and mitigation measures. However, the Department has recommended a condition of approval that requires Namoi Mining to implement a comprehensive air quality monitoring program to ensure that the predicted low level of air quality impacts is achieved and maintained over the life of the mine.

4.5 Flora and Fauna

The project would result in the removal of 90 hectares (ha) of mainly grassland, with a few scattered trees towards the southern end of the proposed open cut. Namoi Mining's flora and fauna assessment found no threatened species in the areas that would be cleared. However, the immediate vicinity of the project site supports a viable population of Koalas and the fauna assessment identified woodland within and adjacent to the project site as core Koala habitat. In order to minimise impacts on the local Koala population, Namoi Mining prepared a Koala Management Plan as required by *State Environmental Planning Policy No. 44 – Koala Habitat*, which outlined 3 key requirements for ongoing sustainability. These were availability of feed trees, existence of movement corridors and protection from key threatening processes, including removal of habitat.

Namoi Mining has proposed that it would realign Coochooboonah Lane (see Figure 5) to protect the existing stand of feed trees along its current alignment. In addition, Namoi Mining would protect the tree corridor along the western boundary of the project area and protect Koala habitat south of the mining area (see Figures 2 and 7). Koala habitat areas would be fenced to exclude livestock and a Koala-proof fence would be erected to isolate the mining area.

Namoi Mining proposes to minimise its traffic impacts on Koalas through the installation of signage along the haul route aimed at awareness of Koalas in the area and the introduction of a 40 km per hour speed limit on Coochooboonah Lane. Mine employees would also undergo induction training which would highlight the significance of the local Koala population.

Namoi Mining has also committed to the improvement of Koala habitat and movement corridors. Enrichment planting of koala feed tree species would be undertaken along the site's western boundary (9.8 ha) and new planting would be undertaken at its eastern boundary (9 ha – see Figure 7). Overall, the proposed management actions in the Koala management plan would ensure the protection and enhancement of almost 131 ha of Koala habitat.

The Department considers that the project would have minor impacts to local and regional biodiversity values and that the actions proposed in the Koala management plan, in addition to the realignment of Coochooboonah Lane, would minimise impacts to the local Koala population. Namoi Mining has included these actions in its Statement of Commitments. However, to add focus to these important protection and enhancement measures, the Department has recommended a specific condition of project approval.

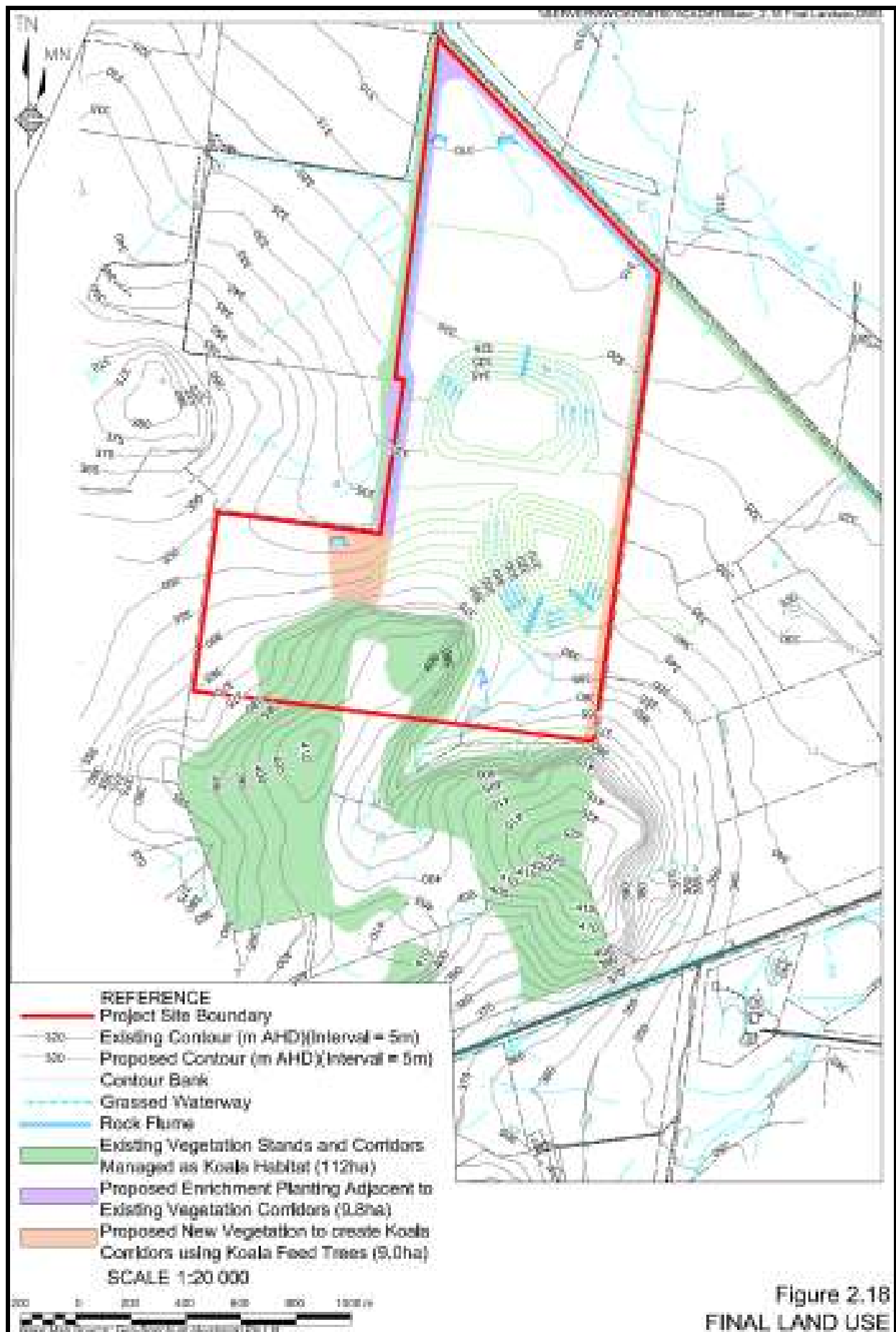


Figure 7: Final land-use showing proposed improvements to Koala habitat

4.6 Other Issues

<i>Issue</i>	<i>Potential Impacts</i>	<i>Mitigating Factors</i>
Auger Mining Impacts	- Auger mining methods have been known to cause surface subsidence. - Areas proposed to be undermined by auger mining methods contain Koala habitat.	- No surface subsidence is predicted to occur, as the spacing of the auger holes would optimise roof strength to avoid impacts to the stability of the overlying slope. - No additional noise, air quality or water impacts would occur through use of auger mining methods. - Geotechnical and geological assessments would be undertaken to confirm it is safe to undertake auger mining. - Impacts to Koala habitat above proposed auger mining areas would be negligible as no subsidence is predicted to occur.
Aboriginal Cultural Heritage	4 Aboriginal heritage sites (including an axe grinding groove) have been identified in the vicinity of the site.	- The sites would not be directly impacted by mining or infrastructure construction. - The 4 sites would be listed on the AHIMS register. - The axe grinding groove would be protected from blasting impacts. - Namoi Mining would prepare and implement an Aboriginal Cultural Heritage Management Plan for the project.
Blasting	Blasting may impact on local structures in the vicinity of the mine site.	- Namoi Mining predicts relevant blasting impact criteria would be met at all privately-owned residences in the vicinity of the mine. - A Blast Monitoring Program would be developed for the project. - Structural inspections would be undertaken at nearby residences prior to the commencement of blasting.
Visual & Lighting	- The project would be visible from neighbouring residences and travellers on the Oxley Highway. - Lighting from the project site would impact on the amenity of neighbouring residences.	- An amenity bund would be constructed along the eastern boundary of the site and the coal processing area. - The OEA would be constructed to replicate existing topographic features where possible. - Following site establishment, areas not required for site operations would be revegetated. - Lighting would be directed downwards (below the horizontal) and away from residences. - No plant lighting would be used on-site after 10 pm.
Greenhouse Gas (GHG) Emissions	The project would contribute both directly and indirectly to climate change.	- The direct GHG emissions for the project would be 73,000 tonnes a year CO₂-e, which represents 0.013% of all annual net Australian GHG emissions. - The indirect GHG emissions from the burning of coal from the project would be 2.9 Mtpa CO₂-e, which represents less than 0.01% of estimated annual global emissions from fuel burning. - Namoi Mining would develop and implement a comprehensive Energy Savings Action Plan to reduce its on-site GHG emissions.
Socio- Economic	- The project would place minor strain on local services and infrastructure. - The project would provide employment and income for local workers.	- The project would create up to 40 full time equivalent jobs. - The project would generate \$4.5 million in wages each year. - Most employees would be sourced from the local area. - The project includes upgrades to local roads. - Namoi Mining would establish a \$500,000

<i>Issue</i>	<i>Potential Impacts</i>	<i>Mitigating Factors</i>
		Community Enhancement Fund, to be managed by Council.
		▪ The project would contribute royalty income to the State.
<i>Agricultural lands and soils</i>	▪ 163 ha of land would be temporarily removed from agricultural production for the duration of the project. ▪ 20 ha of land would be permanently removed from agricultural production.	▪ Undisturbed land would be fenced off to allow ongoing agricultural activities. ▪ Namoi Mining would implement a program of conservation and stockpiling of topsoil for use in the rehabilitation of the site. ▪ The site would be returned to agricultural production where possible (see below).
<i>Mine Closure/Final Void/Rehabilitation</i>	▪ The site would be rehabilitated following the completion of mining. ▪ Reshaped landforms may be unsuitable for agricultural production.	▪ A rehabilitation and land management plan would be prepared and implemented. ▪ A mine closure plan would be prepared and implemented. ▪ Approximately 50% of the backfilled open-cut pit would be returned to pre-mining levels of agricultural suitability. ▪ The site would be progressively rehabilitated to provide a low maintenance geotechnically stable landform (see Figure 7). This landform includes a final void of 20 ha and 40 m depth, and an OEA of 30 ha and 25 m height. ▪ The OEA would be flat-topped, sown to pasture and drained by rock flumes. ▪ The final void would be reshaped to slopes of less than 10° and run-off would be directed away from the void. ▪ The final landform would also have slopes less than 10° to allow the land to be used for grazing.

5. RECOMMENDED CONDITIONS

The recommended conditions are required to:

- prevent and/or minimise adverse impacts of the proposal;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting in accordance with current best practice;
- provide for the ongoing environmental management of the project; and
- ensure that long term rehabilitation and final land use objectives for the mine are satisfactorily achieved.

The recommended conditions address management of groundwater impacts, noise and air quality impacts, Aboriginal heritage impacts, greenhouse gas emissions, landscape and rehabilitation management, environmental management systems, on-going environmental monitoring, community consultation, community enhancement measures, and complaints management and performance audits.

A summary of the recommended conditions of approval is provided in Appendix A and a full set appears in Appendix B. Namoi Mining has reviewed these conditions and accepted them. The Department believes these conditions reflect current best practice for the regulation of coal mines in NSW.

6. CONCLUSION

The Department has assessed the project application, the EA, submissions received following exhibition of the application and Namoi Mining's response to submissions and is satisfied that there is sufficient information available to determine the application. The key issues identified in the Department's assessment or raised in submissions concern noise and air quality impacts, traffic impacts, water management and flora and fauna impacts at the mine.

Noise impacts would be effectively managed through the implementation of a comprehensive noise monitoring program at nearby residences. In addition, the Department has included conditions of approval that require Namoi Mining to acquire one property at the request of the landowner where impacts would be excessive and to offer architectural treatment to residents otherwise predicted to be affected by noise from the mine.

Air quality impacts would not be significant throughout the life of the mine. However, in response to concerns from residents that dust from the mine would contaminate tank water supplies, Namoi Mining has committed to the installation of first flush water diverters at a number of properties.

Truck movements would increase on a number of roads, however the impacts would be able to be managed effectively through proposed road and intersection upgrades as well as the implementation of a traffic management plan. Namoi Mining has also committed to the construction of 2 new school bus stops on the Oxley Highway.

Water management systems at the mine would be implemented through the construction of storage facilities and the diversion of clean run-off. Pit inflows would be able to be effectively managed through discharge to a nearby disused underground mine.

The project would limit impacts to the existing Koala population by realigning Coocooboonah Lane to avoid the existing stand of feed trees. Proposed new planting of Koala feed tree species and improvements to existing habitat and movement corridors would ensure the protection and enhancement of almost 131 ha of Koala habitat.

Other impacts were considered to require careful management, but not to be of sufficient magnitude to cause significant impacts to the surrounding landowners or the regional community.

The project has a capital investment value of \$15 million and would create up to 40 full time mining jobs for up to 7 years. Namoi Mining would also establish a \$500,000 Community Enhancement Fund to assist Council with the development of local community projects. The Department is satisfied that the residual environmental and socio-economic impacts of the project can be adequately mitigated and/or managed and that the benefits significantly outweigh their costs. The Department recommends approval of the project, subject to recommended conditions which cover all proposed operations.

7. RECOMMENDATION

It is RECOMMENDED that the Minister:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions, under section 75J of the *Environmental Planning and Assessment Act 1979*; and
- sign the attached instrument of approval (Tagged B).

David Kitto
Director
Major Development Assessment

Chris Wilson
Executive Director
Major Project Assessment

Sam Haddad
Director-General

APPENDIX A. CONDITIONS OF APPROVAL SUMMARY

Aspect	Condition	Requirement
Schedule 2: Administrative Conditions		
Terms of Approval	5	Approval for mining restricted to 7 years
	6	Restriction on production to 1 million tonnes of ROM coal a year
	7	All coal to be transported by road
	15	Establishment of a \$500,000 Community Enhancement Fund
Schedule 3: Specific Environmental Conditions		
Acquisition upon request	1	Acquisition of "Lilydale" upon request from the landowner
Noise	2-3	Noise impact assessment criteria
	4	Land acquisition criteria
	5	Additional noise mitigation measures
	8	Requirement to seek continual improvement of noise performance
	9	Noise Monitoring Program
Blasting	10-11	Blast impact assessment criteria
	12-13	Restriction on blasting frequency and hours
	14-16	Rights for structural property inspections for properties potentially affected by blasting
	17	Blast Monitoring Program
Air Quality	18	Air quality impact assessment criteria
	19-20	Air Quality Monitoring Program, and meteorological monitoring
Surface and Groundwater	21	Restriction on discharge of water from the site
	22-26	Water management and monitoring
	27	Groundwater Contingency Plan
Koala Habitat	28	Requirement to protect and enhance Koala habitat at the project site
Rehabilitation and Landscape Management	29	Requirement to rehabilitate the site
	30	Rehabilitation and Landscape Management Plan
	31	Mine Closure Plan
Heritage	32-33	Aboriginal Cultural Heritage Management Plan
Transport	34	Requirement to upgrade local roads
	36	Requirement for road maintenance agreement with Council
	37	Requirement to construct school bus stops
Visual Impact	39-40	Requirement to minimise the project's visual and lighting impacts
Greenhouse Gas	41	Energy Savings Action Plan and GHG minimisation
Waste Minimisation	42	Requirement to monitor and minimise waste
Schedule 4: Additional Procedures		
Notification	1-2	Notification of Director-General and residents of monitoring results
Independent Review of Impacts	3-4	Right to independent review of predicted impacts for affected residents
	5	Requirement to undertake measures to ensure compliance if independent review shows non-compliance or to reach agreement with affected residents
Land Acquisition	7-9	Requirement to make a binding written offer to landowners with acquisition rights, following a written request from those landowners.
Schedule 5: Environmental Management, Monitoring Auditing and Reporting		
Environmental Management Strategy/ Monitoring Program	1-2	Environmental Management Strategy / Environmental Monitoring Program
Incident Reporting	3-4	Requirement to report incidents
Annual Reporting	5	Annual Environmental Management Report
Auditing	6-8	Requirement to undertake regular independent environmental audits
CCC	9	Requirement for Community Consultative Committee
Access to Information	10-11	Requirement to publicly report environmental management plans/programs/strategies, and monitoring results

APPENDIX B. RECOMMENDED CONDITIONS OF APPROVAL

APPENDIX C. CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policy (Major Projects)

See discussion in Section 2.5.

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 paragraph 'm'). As such, the application was referred to the RTA, which subsequently confirmed that it had no objection to the project.

SEPP No. 33 – Hazardous and Offensive Development

SEPP 33 requires consideration of whether an industrial proposal is a potentially hazardous or offensive industry. This is defined as a development that *'would pose a significant risk in relation the locality: to human health, life or property; or to the biophysical environment, and includes a hazardous industry and a hazardous storage establishment'*.

The EA details management considerations for various aspects such as waste management, fuel storage and emergency response. All hazardous materials would be managed in general accordance with the company's existing management procedures that have successfully operated for the nearby Narrabri, Tarrawonga and Whitehaven coal mines. An Environment Protection Licence (EPL) would be obtained for the proposed development. As such, the Department is satisfied that the proposal is generally consistent with the aims, objectives, and requirements of SEPP 33.

SEPP No. 44 – Koala Habitat

The Environmental Assessment identified that the project site contains 'core' Koala habitat and has a resident population of Koalas. A Koala Management Plan for the project was prepared as required by SEPP No. 44. Namoi Mining has committed to the realignment of Coocooboonah Lane to avoid impacts to Koala feed trees as well as the protection and enhancement of up to 131 ha of Koala habitat at the project site. The Department is therefore satisfied that the proposal is generally consistent with the aims, objectives, and requirements of SEPP 44.

SEPP No. 55 – Remediation of Land

SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. In particular, this policy requires consideration of whether a development requires a consent for remediation works or not and requires that remediation works meet certain standards and notification requirements. It also requires a consent authority to consider whether, if land is contaminated, it is suitable in this state for the proposed development.

The Department is satisfied that the proposal is generally consistent with the aims, objectives and requirements of SEPP 55.

Orana Regional Environmental Plan (REP) No 1 –Siding Spring

The proposal lies within the Siding Spring Observatory Dark Skies Region. Under Part 8 of the REP, consultation and/or concurrence is only required for locations within 100 km of the observatory. Consequently the REP has not been considered further. However, the Department has recommended a condition of approval requiring Namoi Mining to minimise lighting impacts from the project.

APPENDIX D. PROPONENT'S RESPONSES TO SUBMISSIONS STATEMENT OF COMMITMENTS

See attached CD-ROM containing files entitled *Sunnyside Coal Project Response to Submissions* (dated June 2008), *Sunnyside Coal Project Supplementary Response to Submissions* (dated July 2008) and *Sunnyside Coal Project Final Statement of Commitments* (dated July 2008).

APPENDIX E. SUBMISSIONS

See the attached CD-ROM containing a folder entitled *Sunnyside Coal Project Submissions*.

APPENDIX F. ENVIRONMENTAL ASSESSMENT REPORT

See the attached CD-ROM entitled *Sunnyside Coal Project Environmental Assessment*, dated April 2008.