WILPINJONG COAL PROJECT

MAIN REPORT

Attachment One
Director-General's Requirements

Department of
Infrastructure, Planning and Natural Resources

Mining & Extractive Industries
Major Development Assessment
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Fax: (02) 9762 8707
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Level 4 Henry Deane Building
20 Lee Street
GPO Box 3927
SYDNEY NSW 2001

Mr Peter Doyle
Wambo Coal Pty Limited
PO Box H287
Australia Square
Sydney NSW 1215

Dear Peter

Wilpinjong Mine Project

I refer to your recent request for the Director-General's requirements for the preparation of an Environmental Impact Statement (EIS) for the above proposal.

Statutory Issues

Attachment No. 1 outlines the statutory matters that must be included in any EIS under clauses 71 and 72 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation).

Specific Issues

Under clause 73(1) of the Regulation, the Director-General requires you to address the following specific issues in the EIS:

- **Description of the Proposal:** Describe and justify the proposal, clearly identifying the resource, the proposed site, the proposed works (including any rehabilitation works), and the proposed intensity and duration of mining operations.
- **Permissibility:** Demonstrate that the proposal is permissible with consent.
- **Statutory Instruments/Policies:** Assess the proposal against the relevant provisions in *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 Protection, State Environmental Planning Policy No. 55 – Remediation of Land, Mudgee Local Environmental Plan 1998*, and any relevant development control or section 94 contribution plans.
- **Key Issues:** Assess the following potential impacts of the proposal, and describe what measures would be implemented to avoid, mitigate, off-set and/or manage these potential impacts:
  - (a) surface and ground water;
  - (b) noise;
  - (c) blasting and vibration;
  - (d) air quality (including odour);
  - (e) heritage, both Aboriginal and non-Aboriginal;
  - (f) fauna and flora, particularly on critical habitats, threatened species, populations, or ecological communities (including potential offsets);
  - (g) soil;
  - (h) traffic, transport, utilities & services;
  - (i) hazards;
  - (j) visual;
  - (k) waste management;
  - (l) social;

(m) economic (including detailed benefit-cost analysis).

- **Environmental Monitoring & Management**: Describe in detail how the environmental performance of the proposal would be monitored and managed over time.

You should note that if the Development Application (DA) to which these requirements relate is not made within two years of the date of this letter, Clause 73(6) of the Regulation requires you to re-consult with the Director-General before you lodge the DA.

Water Resources

During the preparation of the EIS, the Department would like you to pay particular attention to the potential surface water, groundwater and water supply impacts of the proposal, both locally and regionally, and to consider the proposal's consistency and compliance with relevant water management legislation and policies.

The Department would be happy to discuss these matters in more detail before you lodge the DA for the proposal.

Flora & Fauna/Vegetation Clearing

The Department encourages you to provide it with a copy of the flora and fauna survey data and the draft 8-Part Tests as soon as possible, so that the potential flora and fauna impacts of the proposal can be discussed in more detail before you lodge the DA for the proposal.

Obviously, the flora and fauna assessment in the EIS should explicitly consider the potential impacts of the proposal on the adjoining National Parks and Nature Reserves.

EIS Guidelines

During the preparation of the EIS, you must consider the Department's EIS guideline on *Coal Mines & Associated Infrastructure.*

Integrated Development

Under section 91 of the *Environmental Planning & Assessment Act 1979* (the Act), development is classified as "integrated development" if it requires certain approvals in addition to development consent before it may be carried out.

In your form A, you indicated that the proposal would require additional approvals under the *Fisheries Management Act 1994, National Parks and Wildlife Act 1974, Protection of the Environment Operations Act 1997, Roads Act 1993, Water Act 1912* and the *Water Management Act 2000.*

The agencies that administer these Acts have provided the Department with their requirements (see Attachment No. 2), and you must address these requirements in your EIS.

If further integrated approvals are identified before you lodge the DA, you must consult with the relevant agencies, and address their requirements in your EIS.

Consultation

During the preparation of the EIS, you should consult with the relevant local, State, and Commonwealth government authorities, service providers and community groups in the area, and address any issues they may raise in the EIS.

In particular, you should consult the surrounding landowners and occupiers that are likely to be affected by the proposal.

The EIS must include a report indicating who was consulted, what consultation occurred, and what issues were raised during this consultation.

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, then it will require an additional approval under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999 (EPBC Act)*. These approvals are in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact Department of the Environment and Heritage in Canberra ((02) 6274 1111 or http://www.deh.gov.au).

State Significant Development Requirements

For all State Significant Development proposals, the Director-General requires the Applicant to:

- nominate a contact person (with telephone number) to answer public enquiries about the proposal;
- provide the Department with an electronic copy of the Executive Summary of the EIS when you lodge the DA for exhibition on the Department's website; and
- advise the Department of the relevant newspapers circulating in the area affected by the proposal.

You should notify the Department at least 3 weeks before you lodge the DA for the proposal, so that it can make the necessary arrangements to exhibit the DA and EIS.

Administration

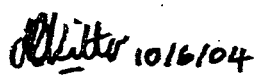
When you lodge a DA for the proposal, you must include:

- at least 40 hard copies and 25 CD copies of the EIS ;
- a cheque for the DA fee and advertising (see clauses 246 & 252 of the Regulation), made payable to the Department;
- a cheque for $715, made payable to the Department, for designated development;
- a cheque for $250, made payable to each of the integrated approval bodies; and
- a cheque for $110, made payable to the Department, for integrated development administration.

Enquiries

If you have any enquiries about the above, please contact Mike Young 9762 8154.

Yours sincerely



David Kitto
Manager
Mining & Extractive Industries

Department of
Infrastructure, Planning and Natural Resources

Attachment No. 1

STATUTORY REQUIREMENTS FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT UNDER PART 4 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

In accordance with the *Environmental Planning and Assessment Act 1979* (the Act), an environmental impact statement (EIS) must meet the following requirements.

Content of EIS

Pursuant to Schedule 2 and clause 72 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation), an EIS must include:

1. A summary of the environmental impact statement.
2. A statement of the objectives of the development or activity.
3. An analysis of any feasible alternatives to the carrying out of the development or activity, having regard to its objectives, including the consequences of not carrying out the development or activity.
4. An analysis of the development or activity, including:
   (a) a full description of the development or activity; and
   (b) a general description of the environment likely to be affected by the development or activity, together with a detailed description of those aspects of the environment that are likely to be significantly affected; and
   (c) the likely impact on the environment of the development or activity, and
   (d) a full description of the measures proposed to mitigate any adverse effects of the development or activity on the environment, and
   (e) a list of any approvals that must be obtained under any Act or law before the development or activity may be lawfully carried out.
5. A compilation, (in a single section of the environmental impact statement) of the measures referred to in item 4(d).
6. The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:
   (a) The precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
   In the application of the precautionary principle, public and private decisions should be guided by:
      (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
      (ii) an assessment of the risk-weighted consequences of various options,
   (b) Inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,
   (c) Conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
   (d) Improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as:
      (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
      (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
      (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

An environmental impact statement referred to in Section 78A(8) of the Act shall be prepared in written form. The prescribed form to accompany the environmental impact statement must comply with the requirements of clause 71 of the Regulation and be signed by the person who has prepared it.

Procedures for public exhibition of the EIS are set down in clauses 77 to 81 of the Regulation.

Attention is also drawn to clause 283 of the Regulation regarding false or misleading statements in EISs.

Note

If the development application to which the EIS relates is not made within 2 years from the date of issue of the Director-General's requirements, under clause 73(6) of the Regulation the proponent is required to reconsult with the Director-General.

ATTACHMENT No. 2

Department of
Infrastructure, Planning and Natural Resources

MEMORANDUM

TO: David Kitto

FROM: Mark Mignanelli, Resource Access Manager, Hunter Region

Date: May 3, 2004

Our ref. ER 5450

SUBJECT: WILPINJONG COAL ENVIRONMENTAL IMPACT STATEMENT - DIRECTOR GENERAL'S REQUIREMENTS

Subsequent to your letter dated 16 April 2004, and the Planning Focus meeting held on 20 April 2004, DIPNR Hunter Region provides the following comments in regard to Director General's requirements the development application.

DIPNR Hunter Region requires that the Environmental Impact Statement (EIS) address the legislative and policy principles and objectives outlined below, both in terms of open cut development adjacent to Wilpinjong Creek, Cumbo Creek and other surface and groundwater environments associated with the proposal site. The EIS should include a summary list referencing where in the document legislation and policy principles and objectives have been addressed.

LEGISLATION/POLICY REQUIREMENTS

1. Water Management Act, 2000

The Department of Infrastructure, Planning and Natural Resources (DIPNR) is responsible for the management of surface and ground water systems, and works on protected waters and floodplains. DIPNR is primarily concerned that the proposal has potential to cause significant and long term degradation of the physical environment, and consequent long term degradation of surrounding surface and ground waters. DIPNR is legally obliged to consider long term degradation to surface and ground water systems in its assessment of any development application for mining operations, as defined under the *Water Management Act, 2000*.

The principles of the Act require:

Chapter 2 Part 1 Division 1 Section 5(2)

(a) water sources, floodplains and dependent ecosystems (including groundwater and wetlands) should be protected and restored, and where possible, land should not be degraded

(b) habitats, animals and plants that benefit from water or are potentially affected by managed activities should be protected and (in the case of habitats) restored;
(c) the water quality of all water sources should be protected and, whenever possible, enhanced; and,
(h) the principles of adaptive management should be applied, which should be responsive to monitoring and improvements in understanding of ecological water requirements.

Chapter 2 Part 1 Division 1 Section 5(6)
In relation to floodplain management:
(a) floodplain management must avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land must be rehabilitated,
(b) the impacts of flood works on other water users should be avoided or minimised, and
(c) the existing and future risk to human life and property arising from occupation of floodplains must be minimised.

A requirement of the *Water Management Act, 2000* (WMA) is a State Water Management Outcomes Plan (SWMOP), which will provide statutory enforcement of protection requirements for groundwater systems. The SWMOP has thirty-one (31) targets to ensure implementation of the principles of the WMA.

The following targets of the SWMOP framework relate to groundwater:

1. T8 The degree of connectivity between aquifers and rivers must be assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved
2. T9. Groundwater dependent ecosystem protection zones must be mapped for all priority aquifers and water level sensitivity assessed to enable extraction rates to be limited and/or sustainable yields revised to protect these ecosystems
3. T29. Salt load and electrical conductivity tracking at levels consistent with the salinity targets specified in approved Catchment Management Strategies
4. T30. Significant sources of non-saline water contributing to dilution flows downstream should be prioritised to enable action to be taken to protect these sources
5. T31. Aquifer water quality vulnerability zones are to be mapped and extraction rates established to reduce the risk of lateral intrusion of poor aquifer water.

POLICY REQUIREMENTS

DIPNR is required under legislation to assess any EIS using these statutory principles. In addition, DIPNR is guided in its assessment by the principles of State policy. Policies of relevance to this proposal include:

NSW State Rivers and Estuaries Policy

The State Rivers and Estuaries Policy provides a framework for river management throughout New South Wales, and guides DIPNR in its assessment of all riverine corridor activities.

The Policy objectives state "that rivers and estuaries of New South Wales are to be managed in ways which:

- slow, halt or reverse the overall rate of degradation in the systems,
- ensure the long term sustainability of their essential biophysical functions, and
- maintain the beneficial use of these resources"

Principles of this Policy are:

1. those uses of rivers and estuaries which are non-degrading should be encouraged
2. non-sustainable resource uses which are not essential should be progressively phased out
3. environmentally degrading processes and practices should be replaced with more efficient and less degrading alternatives
4. environmentally degraded areas should be rehabilitated and their biophysical functions restored
5. remnant areas of significant environmental values should be accorded special protection
6. an ethos for the sustainable management of river and estuarine resources should be encouraged in all agencies and individuals who own, manage or use these resources.

NSW Groundwater Quantity Management Policy

NSW Groundwater Quantity Management Policy requires the Department of Land and Water Conservation to provide:

1. clear definitions of sustainable yield;
2. options for reducing or maintaining allocations to within sustainable yields;
3. strategies for managing interference effects between groundwater users;
4. strategies for ensuring that groundwater pumping does not have unacceptable impacts on groundwater quality;

NSW Groundwater Quality Protection Policy

The State Groundwater Quality Protection Policy has objectives to encourage the ecologically sustainable development and management of the State's groundwater resources so as to:

1. slow and halt, or reverse, any degradation of groundwater resources
2. ensure sustainability of groundwater-dependent ecosystems;
3. maintain the range of beneficial uses of these resources; and
4. maximise economic benefit to the Region, State and nation

NSW Groundwater Dependent Ecosystem Policy

The State Groundwater Dependent Ecosystem Policy has the following five principles:

1. Groundwater dependent ecosystems can have important value for scientists, groundwater managers, groundwater users, ecosystem managers and the wider community. These values and how threats to them may be avoided should be identified, and action taken to ensure that the ecosystems are protected.
2. Groundwater extractions should be managed within the sustainable yield of the aquifer system, so that the ecological processes and biodiversity are maintained and/or restored. This may involve establishment of threshold levels that are critical for ecosystem health.
3. Priority should be given to ensuring that sufficient groundwater of suitable quality is available at times when it is needed:
   - For protecting ecosystems which are known to be, or are most likely to be, groundwater dependent, and
   - For ecosystems which have an immediate or high degree of threat.
4. Where scientific knowledge is lacking, the precautionary principle should be applied to protect groundwater dependent ecosystems. The development of adaptive management systems and research to improve understanding of these ecosystems is essential to their management.
5. Planning, approval, and management of developments and land use activities should aim to minimise adverse impacts on groundwater systems by:
   - Maintaining natural patterns of recharge and not disrupting groundwater levels that are critical for ecosystems
   - Not polluting or causing changes in groundwater quality; and
   - Rehabilitating degraded groundwater systems where possible

DIPNR GENERAL REQUIREMENTS – WATER ACT, 1912

The department requires that the following issues be addressed in the EIS.

SURFACE WATER MANAGEMENT

The EIS must address the following:

1. Regulatory requirements on mining through a river, as defined under the *Water Act, 1912* and extraction from a river. Embargoes currently exist under Sections 22BA and 22BB of the *Water Act, 1912*,
2. The methodology by which proposed relocation or reinstatement of watercourses will be undertaken, and whether any proposed ecological offset provisions will provide adequate protection to any instream or groundwater dependent ecosystems which exist on the site,
3. Potential for interruption of flow in Wilpinjong Creek must be explained, including the volume of water to be interrupted or accessed for use on site, and consequent impacts on downstream water users and the environment,
4. Consequences to loss of salinity buffering potential from Wilpinjong Creek, and potential long term salinisation of Wilpinjong Creek,
5. Detailed salinity budgetting for the Wilpinjong Creek catchment, including baseline assessment of salinity exports from the catchment to the Goulburn River and potential mining induced salinity for a range of scenarios; and,

6. A monitoring, contingency and remediation program must be described in the EIS for water sources affected by the mining proposal.

Water management systems on site must be adequately explained in the EIS, and a water budget developed to demonstrate how on-site water management will cope though a range of climatic conditions. Specifically, this must include:

1. projected requirements for water supply, identification of sources of water and the requirement for a licence under Parts 2 or 5 of the Water Act;
2. location and design specifications for all clean water diversions, including channel design, basin design, detention basin locations, and bywash or other re-entry structures;
3. details of internal drainage of the contaminated water circuit, including any bunding, drainage channels, dewatering pits, storages and basins;
4. details in regard to any mine water storage proposed for the development. This should include linkages to the pits and any other licensable works, design details, including the storm recurrence interval, design storm detention intervals and construction designs;
5. discussion of proposed monitoring programs and reporting procedures regarding chemical and biological parameters of water quality;
6. details of any proposed diversion of watercourses, including design objectives, criteria and layout of all diversion works, and measures to ensure long term stability of all works;
7. description of the integrated water management system, including an assessment of the water management system under a range of conditions (including 10%, 50% and 90% wet years, and severe storm events); and,
8. description of all activities to be undertaken within and adjacent to any watercourse, including any floodplain water management work, diversion or exclusion bund.

DIPNR is concerned that mining-induced changes to local hydrologic regimes, including inadequately designed and constructed diversions, may lead to destabilisation and/or long term contamination of local watercourses, impacting on bed and bank stability and water quality in Wilpinjong Creek. The EIS must address impacts to the stability of Cumbo Creek and Wilpinjong Creek, and present a process of geomorphic assessment, monitoring and contingency response for each open cut pit as it progresses.

GROUNDWATER MANAGEMENT

The EIS must explain potential changes in groundwater regime, resulting from the mining development, from pre-mining ranges of groundwater conditions to the post-mining equilibration of groundwater table levels. This must include:

- an assessment of the cone of depression under each of the open cut pits
- the linkage and cumulative drainage of affected aquifers as the depressurisation cone progresses
- any linkage to nearby aquifers
- leakage rates and volumes of groundwater intercepted in the open cut pits panels potential leakage into the proposed mine areas, and,
- pre- and post- mining changes in hydraulic properties.

Baseline groundwater investigations must be provided in the EIS, including:

1. description of different aquifers systems present in the area including their extent and inter-relationships;
2. description of physical and chemical characteristics of aquifers;
3. assessment of flow directions and rates of flow; and,
4. assessment of any connections to the surface water bodies or any dependent ecosystems.

The EIS should include details of any potential changes to the existing groundwater regime as a result of the development including, but not limited to:

1. implementation of the progressive mine plan;
2. impacts of dewatering;
3. emplacements; and
4. waste management

A ground and surface water monitoring program must be provided by the Applicant. The monitoring program is to provide:

1. details on the pre-mining and post-mining phases;
2. detailed descriptions of conceptual models and any other predictive tools used; and,
3. impacts on existing and potential groundwater users including the natural environment.

Under Part 5 of the *Water Act* (1912), all proposed groundwater works including bores for the purpose of extraction, dewatering, testing or monitoring must be licensed with DIPNR prior to their installation. Therefore the EIS should include information regarding:

1. locations and construction details of all proposed bores, including their purpose; and
2. expected annual groundwater extractions from individual dewatering bores
3. details of the proposed monitoring programs, including water levels and quality data
4. the reporting procedures for the monitoring program including mechanism for transfer of information
5. details of the projected effects of any final void on the groundwater regime;
6. contingency plans for the rehabilitation of aquifers if there is any adverse impact on the beneficial use of the aquifer system as a result of development
7. details of existing and/or potential groundwater users within the area of the development.
8. Groundwater modelling processes, assumptions and predictions must be explained, and a justification for model choice, and;
9. The location of the open cut pits, which must be assessed in terms of their potential to intercept surface or ground waters, including alluvial, colluvial and linked or connected hard rock groundwaters. A process must be provided to measure the inflow of waters from local and adjacent Permian aquifer groundwaters and connectivity to Triassic sandstone-transmitted groundwater. A detailed assessment of highwall stability, fracture initiation and propagation between the highwall and the fringe of the alluvial aquifer or Wilpinjong Creek must be undertaken, including justification for any hard rock barrier limits which are established between the proposal and Wilpinjong Creek.

Any reports or documents on groundwater studies which are referenced in the EIS should be made available to the DIPNR for review. If you require clarification of any issue raised in this letter, please contact Fergus Hancock (02) 4929 9819.

Yours faithfully

Mark Mignanelli
Resource Access Manager
Hunter Region

2 MAY 2004

NSW EPA

Notice No: 1036471

Mr David Kitto
Manager
Major Development and Assessments - Mining and Extractive Industries
Department of Infrastructure, Planning and Natural Resources
GPO Box 3927
SYDNEY NSW 2001

Dear Mr Kitto

RE: Proposed Wilpinjong Open Cut Mine

I refer to your request to the Department of Environment and Conservation (DEC) for input to the Director-General's requirements for the Environmental Impact Statement (EIS) for the above proposal. This letter combines the requirements of the former National Parks and Wildlife Service and the Environment Protection Authority.

This letter provides a consolidated response from the DEC incorporating relevant considerations under the *National Parks and Wildlife Act 1974, Threatened Species Conservation Act 1995 and the Environmental Planning and Assessment Act 1979* and the *Protection of the Environment Operations Act 1997*. The DEC has considered the details of the proposal as provided by Wilpinjong Coal Pty Ltd and has identified the information to be included in the environmental impact assessment in **Attachments "A"** and **"B"**.

In this instance, **Attachment "A"** refers to matters under the *National Parks and Wildlife Act 1974* (NPW Act), *Threatened Species Conservation Act 1995 and the Environmental Planning and Assessment Act 1979*. The DEC concerns in this instance pertain to the protection and care of native flora, native fauna and Aboriginal objects and places, and the management of NPWS estate.

Based on current knowledge, the DEC has significant concerns regarding the possible impact of the proposal on flora and fauna habitats of state and national conservation significance and on National Park estate. In view of this, the DEC requests a meeting with DIPNR and the applicants once the applicants have gathered sufficient information on the values of the site and prior to submission of the DA and EIS, to discuss conservation outcomes on the mine site. In particular:

1. retention of areas of high conservation significance (flora and fauna habitat and Aboriginal heritage) including:

a. Regent Honeyeater, threatened woodland bird and White Box-Yellow Box-Blakely's Red Gum (Box Gum) Woodland habitat plus buffers eg pit 3.

b. measures to avoid/minimise indirect impacts on adjoining DEC estate, in particular buffers around Munghorn Gap Nature Reserve.

Attachment "B" pertains to the DEC's statutory responsibilities under the *Protection of the Environment Operations Act 1997* (POEO Act). In summary, the key information requirements under the POEO Act for the proposal are:

1. the diversion of watercourses within the current proposal and the potential impacts on acid generating coal waste material;

2. the presence of pyritic material within the proposed mining areas and the acid generating potential of waste material from the proposed operations;

3. in light of (2), capping of coarse coal screenings to prevent potential impacts on the receiving waters;

4. noise and dust mitigation and monitoring at the site;

5. onsite water management including the management of high salinity waters at the premises.

Based upon the information provided to the DEC, the applicant will require an environment protection licence under the POEO Act in regard to the scheduled activity of Coal Mines. The applicant will need to make a separate application to the DEC to obtain this licence.

Furthermore, the information provided in the EIS should make it possible to comprehensively address impacts on Aboriginal cultural heritage in consultation with the relevant Aboriginal communities.

To assist the DEC in assessing the EIS, it is requested that the EIS follow the format of the Department of Infrastructure, Planning and Natural Resources EIS guidelines where in existence or the specific EIS requirements as outlined in Attachments A and B. The DEC requests that the applicant provide 4 hard copies of the DA/EIS along with an electronic copy of these documents when lodging its application. This documentation should be provided to:

The Regional Manager

Department of Environment and Conservation

PO Box 1388

Bathurst NSW 2795

If you have any queries regarding this matter please contact Phil English on (02) 63327610.

Yours sincerely

RICHARD WHYTE
Regional Manager Central West
Environment Protection and Regulation Division
Department of Environment and Conservation

CC Wilpinjong Coal Pty Ltd
PO Box H287
AUSTRALIA SQUARE NSW 1215

Enclosed: Attachment A

Attachment B

Please note:

1. **the Environment Protection Authority (EPA) is now a part of the Department of Environment and Conservation (NSW), certain statutory functions and powers continue to be exercised in the name of the EPA;**

2. **the National Parks and Wildlife Service (NPWS) is now a part of the Department of Environment and Conservation (NSW), certain statutory functions and powers continue to be exercised in the name of the NPWS.**

ATTACHMENT A

To assist you in preparation of the EIS it is recommended that the matters referred to in NPWS' "General Guidelines for Impact Assessment" be addressed in your assessment where appropriate.

Specific matters to be addressed in relation to off-park impacts on flora and fauna and Aboriginal heritage and on-park impacts on the adjoining Munghorn Gap Nature reserve and Goulburn River national Park are outlined below.

FLORA AND FAUNA

It should be noted that flora and fauna and their habitats affected by the mine proposal may not be well represented in the protected area network and therefore rely on off-park conservation initiatives. DEC flora and fauna studies indicate that:

- remnant vegetation on the site may be White Box-Yellow Box-Blakely's Red Gum (Box Gum) Woodland which is an endangered ecological community listed under the TSC Act.
- the site is expected to contain important habitat, including breeding and foraging habitat, for woodland bird species of high conservation significance, listed under the TSC Act and EPBC Act.
- The Regent Honeyeater and its nests have been recorded repeatedly on or near the site. See attached map for 1996 survey results of nesting sites. Please note that the mine site was not accessed for this survey and that there have been regular sightings since 1996 in the vicinity. It is considered that there is a high likelihood of foraging and breeding habitat occurring on the mine site.

In addition to the matters referred to in NPWS' general EIA guidelines (attached) it is therefore recommended that the following be addressed in the EIS:

- Comprehensive assessment, survey and mapping to identify any threatened flora and fauna species and endangered ecological communities (EEC) and their habitats present and their conservation significance.
- Assessment to ascertain the possible presence of White Box-Yellow Box-Blakely's Red Gum (Box Gum) Woodland. Note that regrowth and degraded areas may also have high conservation significance (refer NSW Scientific Committee listing).
- Assessment for Regent Honeyeater habitat.
- Selection of species for targeted surveys should be on the basis of the findings of initial site surveys and a habitat evaluation of the site. Targeted surveys for specific species should be conducted at the time of year when they are likely to be detected to ensure EIS findings as to the significance of impact can be justified. For example, Regent Honeyeaters have been repeatedly observed during flowering of habitat trees such as White Box. The effect of drought conditions on this species and its habitat should be considered in the

interpretation of survey results. Species such as bats should be surveyed during spring – summer. Limitations of the survey work should be explained in detail in the EIS. Any deficiencies in survey method will be noted by DEC in its review of the EIS.

- Assessment and evaluation of the fauna habitat attributes of the study area including but not limited to:
  - habitat value of remnant vegetation, regrowth areas and isolated trees for State and Commonwealth listed woodland birds;
  - hollow-bearing, nesting and roosting trees and caves/structures for bats and birds, watercourses, habitat corridors and linkages;
  - woodland/grassland margins for certain species.
- Assessment and quantification of the direct and indirect impacts of the proposal (mining and all associated infrastructure) on species, EECs and their habitats. Please note that the loss of any flora and fauna habitats may be difficult to offset in the locality given the particular geological characteristics of the mine site in comparison to surrounding areas and hence the possible lack of similar habitat. Indirect impacts may include but not be limited to:
  - fragmentation of flora and fauna habitats;
  - deterioration of water quality in watercourses both on and off-site and of fauna water sources.
- An analysis of alternatives (mine layout, technologies etc) to avoid impacts.
- An analysis of the cumulative impact of the proposal in the local, regional and State context.
- Measures to avoid or mitigate impacts in consultation with DEC and DIPNR developed at the earliest stage of project design including retention of areas of high conservation significance. The DEC requests early consultation on the possible need for a Species Impact Statement.
- Best practice rehabilitation including use of endemic species and staged regeneration of each pit tied to completion criteria for targeted species eg viable replacement habitat established on mined pits prior to commencement of clearing in next pit.

The following references may also be of assistance to you:

- *Goulburn River National Park and Munghorn Nature Reserve Vegetation Survey for Fire Management Purposes,* Volumes 1 and 2 (NPWS, June 2000) (please contact David Crust, Area Manager, Mudgee on (02) 6372 7199).
- *Vertebrate Fauna of Munghorn Gap Nature Reserve* (NPWS, NSW CPPD, July 2002).
- *The Fauna of Goulburn River National Park* (NPWS, NSW CPPD, June 2001) reports (for hard copies please contact NPWS Library Hurstville, 02 9585 6845).
- *Regent Honeyeater National Recovery Plan 1999- 2004* which incorporates the actions of the NSW Recovery Plan for this species (attached). The 2004- 2008 Plan is in draft form.
- Regent Honeyeater 1996 survey results of nesting sites in the vicinity. Please contact David Geering, the National Regent Honeyeater Coordinator for further information, 02 6883 5335.

- Excerpt from the Newsletter of the Grassy Box Woodlands Conservation Management Network on Barraba Shire's Regent Honeyeater initiative (Spring 2001).
- White Box - Yellow Box - Blakely's Red Gum Woodland Fact Sheet (attached).
- The DEC Central Conservation, Assessment and Data Unit would be pleased to provide advise on flora and fauna survey methodology if required (please contact Daniel Connolly, Coordinator Bioregional Data Group, 02 9585 6676).

To obtain flora and fauna GIS data contained in the above documents please contact NPWS Peter Bowen, Co-ordinator GIS Support Team, 02 9585 6834.

ABORIGINAL CULTURAL HERITAGE

The PFM indicates that the proposal is likely to be an IDA in relation to section 90 of the *National Parks and Wildlife Act* 1974. It is requested that:

- a comprehensive assessment, including archaeological surveys, be undertaken to identify the Aboriginal cultural heritage values within the study area in consultation with the Aboriginal community. This should identify known objects and places, potential archaeological deposits and areas of potential sensitivity/significance. The DEC IDA guidelines are attached.
- consultation be carried out with all relevant Aboriginal groups to:
  - identify areas of significance to the community,
  - provide input into the siting and design of the proposal to avoid impacts on Aboriginal cultural heritage
  - assist in development of management recommendations.

NATIONAL PARK ESTATE

The proposed mine covers a significant area of land in between the Goulburn River National Park and Munghorn Gap Nature Reserve. The National Park and Nature Reserve contain flora and fauna species and ecological communities listed under both the NSW *Threatened Species Conservation Act* 1995 (TSC Act) and the Clth *Environmental Protection and Biodiversity Act* 1999 (EPBC Act). [1]

Of particular concern is that the mine area appears to directly abut Munghorn Gap Nature Reserve in some areas (see pits 1 and 2). Recent flora and fauna surveys carried out by the DEC indicate that the margins of the Nature Reserve have habitat value for threatened woodland bird species which occur in the now largely cleared lowland areas.

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[1] See *Vertebrate Fauna of Munghorn Gap Nature Reserve* (NPWS, NSW CPPD, July 2002); and *Goulburn River National Park and Munghorn Nature Reserve Vegetation Survey for Fire Management Purposes*, Volumes 1 and 2 (NPWS, June 2000).

In addition to the matters referred to in NPWS' general EIA guidelines it is therefore recommended that the following be addressed in the EIS:

- Assessment of the indirect impacts of the proposal on National Park and Nature Reserve eg edge effects.
- Identification of adequate buffers between the mine area and Munghorn Gap Nature Reserve at the earliest stage of project design in consultation with DEC and DIPNR. Buffer width and management should be based on consideration of ecological viability of the flora and fauna potentially affected.
- Identification of adequate asset protection zones within the mine site and outside of areas required for buffers.

The following potential indirect impacts on National Park estate should also be fully assessed and measures to address be incorporated:

- Impacts on flora and fauna within the National Park estate eg severance of wildlife corridors, deterioration of water quality.
- Implications of changes to hydrological systems including surface and subsurface water sources.
- Noise, dust, visual and recreational impacts on Park visitors.
- Issues affecting future DEC management of the adjoining National Park estate including access issues and feral animal control.

ATTACHMENT B

1. Executive summary

1.1 The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.

2. The Proposal

2.1 The objectives of the proposal should be clearly stated and refer to:

- the size and type of the operation;
- the anticipated level of performance in meeting required environmental standards and cleaner production principles;
- the staging and timing of the proposal; the proposal's relationship to any other industry or facility.

2.2. A detailed description of the proposed development must be provided which includes but need not be limited to the following:

- An overall description of the proposed development including the rail and conveyor systems and coal storage, handling and loading facilities supported by detailed site layout and locality maps.
- Details of the coal handling arrangements during the initial development headings.
- A description of the operation of the proposed washery rejects emplacement facilities.
- Outline construction works including:
  - surface works including earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site);
  - actions to address any existing soil contamination;
  - construction timetable and staging; hours of construction; proposed construction methods;
  - environment protection measures, including noise mitigation, dust controls and erosion and sediment control measures.

3. AIR

3.1 General

The EIS should demonstrate that the mine will be able to operate within the EPA's air quality objectives which are to control, to the maximum extent practicable, the generation of air pollutants on-site, to contain any pollutants generated within the property, to minimize adverse effects of the operation on the amenity of local residents and sensitive land uses and to limit the effects of pollutants on regional air quality. The EIS should also include:

- A description of existing air quality and meteorology, using existing information and site representative ambient monitoring data. The use of particular meteorological monitoring data sets should be justified. This should include an analysis of site representative data on the following meteorological parameters:
  - temperature and humidity;
  - rainfall and evaporation;
  - wind speed and direction;
  - Atmospheric stability class;
  - Katabatic air drainage;
  - prevalence of temperature inversions.

- Provide a description of existing air quality, using existing information and site representative ambient monitoring data. This description should include the following parameters:
  - temperature and humidity;
  - dust deposition;
  - total suspended particulates;
  - PM_{10} particulate matter;

- Identification and location of all fixed and mobile sources of dust/air emissions from the development including rehabilitation. The location of all emission sources should be clearly marked on a plan for key years of mine development. Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source(s) and discharge point(s).

- Details of the project that are essential for predicting and assessing impacts on air quality including:
  - the quantity and physio-chemical characteristics of materials to be handled, stored or transported;
  - an outline of the procedures for coal handling, storage and transport;
  - the management of activities and areas with potential for impacts on air quality.

Note: emissions can be classed as either:

- point (eg emissions from stack or vent) or
- fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works).

- A description of the topography and surrounding land uses.

- Details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models.

3.2 Impact Assessment

- Detailed dust emission inventory calculations showing the methodology and emission factors used. Suitable emissions factors may be obtained by a review of recent EIS's and reference to the following documents: *'Air Pollution from Surface Coal Mining: Measurement Modeling and Community Perception, National Energy Research and Development Council: Project No 921'*; and *'Section 11.9 Western Surface Coal Mining, Section 11.10 Coal Cleaning and Section 13.2.4 Aggregate Handling and Storage Piles, AP-42, Volume I, Stationary Point and Area Sources, USEPA* (or updated sections as appropriate)'.

- Estimate the resulting ground level concentrations of all pollutants. Use an appropriate dispersion model to predict ambient TSP and PM_{10} dust concentrations and dust deposition levels. Reference should be made to the EPA's *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales*.

- A detailed description of the methodology used to assess the air quality impacts of the development. The use of a particular dispersion model and model parameters used should be justified and discussed. The dispersion model input/output files should be included.

- Air quality impact predictions should include plans showing projected incremental levels of 24-hour average PM_{10} concentrations, annual average dust deposition rates and annual average total suspended particulate concentrations at key years throughout the life of the mine.

- An assessment on the impact of the mine on local and regional air quality. Comparisons should be made with the *'National Environment Protection Measure for Ambient Air'* when assessing regional impacts. Local impacts should be assessed by considering background levels, the predicted project specific impacts and the cumulative impacts by comparison with the following dust deposition criteria:

Table 1: Health and Amenity Based Particulate Matter Standards/Goals/Criteria

Pollutant	Standard/Goal	Source Agency
Total Suspended Particulate (TSP) Matter	90 $\mu g/m^3$ (annual average)	NHMRC[1]
Particulate Matter Less than 10 microns in Aerodynamic Equivalent Diameter (PM_{10})	50 $\mu g/m^3$ (24 hour average) 30 $\mu g/m^3$ (annual average)	NEPC[3] NSW EPA[4]

1 National Health and Medical Research Council.

2 National Environment Protection Council. National Environment Protection Measure for Ambient Air Quality standard for reporting regional ambient air quality.

3 NSW EPA long term reporting goal for regional ambient air quality as published in Action for Air.

Table 2: NH&MRC Dust Deposition Criteria (Total Solids)

Existing Dust Level g/m^2/month (annual average)	Maximum Acceptable Increase Over Existing Dust Level g/m^2/month (annual average)	
	Residential Suburban	Other
2	2	2
3	1	2
4	0	1

- An assessment of cumulative air quality impacts and a description of the methodology used.
- An assessment of the potential impacts on air quality other than by dust, for example nitrogen oxide emissions from diesel equipment.
- Greenhouse gas emissions :
  - using the methodologies published with the National Greenhouse Gas Inventory (1994) estimate the total annual volume of all major greenhouse gases that are likely to be emitted from all aspects of the proposed development.
  - Estimate the net increase or decrease in greenhouse gas emissions from the proposed development and compare it to estimates in the 1990 National Greenhouse Gas Inventory for total Australian emissions and for the energy and transformation industry sector.
  - Specific consideration should be given to measures to minimise the emission of all major greenhouse gases from the proposed development.
  - The use of coal bed methane or renewable energy technologies such as solar and/or wind energy should be considered for on-site power generation.
- Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.
- An assessment of the impacts on air quality of dust and any other pollutants generated during construction works. In this context, particular attention should be given to:
  - The nature, extent and duration of dust generating activities, e.g. earthmoving equipment, exposed surfaces, material stockpiles, unsealed trafficked areas, spillages etc.
  - Consideration of the location of dust sources, particularly their proximity to sensitive receptors and prior to finalisation of any acquisition or similar processes.

- Details of an investigation of the propensity of coal seams to self heat and the likelihood of spontaneous combustion occurring on site.

- Potential odour from the proposed operations and the potential to cause adverse impacts at the nearest residents. An odour impact assessment should be prepared for the proposed mine.

3.3 Mitigation

- Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.

- Specific consideration should be given to measures to minimise the emission of all major greenhouse gases from the proposed development.

- Describe consideration of stockpile alignment and optimum stockpile height to minimise wind erosion.

- If spontaneous combustion is likely, details of a management program to minimize spontaneous combustion and to manage any occurrence of spontaneous combustion.

- Include details of an air quality monitoring program to determine effectiveness of mitigation and to verify predictions, including provision for investigations in response to complaints. The air monitoring program should reflect advances in technology for monitoring systems such as real time monitoring systems.

- Control measures to be implemented to minimize dust generation during construction activities.

- Details of contractual arrangements between the applicant and construction contractors aimed at attributing responsibility for controlling the generation and emission of air pollutants.

4. NOISE AND VIBRATION

4.1 General

- The EIS must assess the likelihood and implications of intrusive noise and loss of amenity due to noise. The proposal will be assessed in accordance with the EPA's *Industrial Noise Policy* (INP) (2000). The EIS should also include:

  - Identify all noise and vibration sources from the development (including both construction and operation phases). Detail all potential noise generating activities and equipment including off-site rail movements and conveyor use.
  - Specify the times of operation for the construction and operational phases of the development and for all noise producing activities.
  - Provide details of the rail and conveyor corridors and land use (particularly residential) along the proposed routes. Diagrams should be to a scale sufficient to delineate individual residential blocks.
  - Specify noise monitoring locations. Particular attention should be given to any areas likely to be affected by the operations.
  - Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals.
  - Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.

4.2 Impact Assessment

- Determine existing background noise levels at noise sensitive locations in the area in accordance with the INP.

- Determine the expected noise levels and noise characteristics (eg: tonality, impulsiveness vibration, etc) likely to be generated from noise sources during:
  - site establishment;
  - construction;
  - operational phases;
  - transport including rail and conveyor noise generated by the proposal;
  - other services.

- Determine the noise levels likely to be received at the most sensitive locations under both prevailing and adverse meteorological conditions. (These may also vary during construction and operational phases of the development).

  Note:- Computer modelling of noise impacts should be undertaken using a recognised computer model.

Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible affects on sleep. This should include the maximum noise levels due to rail traffic, the extent these maximum noise levels exceed ambient noise levels and the number of noise events from rail traffic during the night on an hourly basis for a 'typical' night.

Noise predictions for individual receptors should be provided with one or more of the L_{Amax}, L_{A1}, L_{A10}, L_{Aeq}, L_{A90} descriptors reported for noise from stationary sources. For rail traffic noise, descriptors may include $L_{eq(1hr)}$, $L_{eq(15hr)}$, $L_{eq(9hr)}$ and maximum noise levels depending on the area classification and the types of land use involved.

For the assessment of existing and future rail noise, details should be included of assumed rail movements by time of day; and details of the calculation process.

- Noise contours for both daytime (7am-6pm), evening (6pm – 10pm) and night time (10pm-7am) periods should be provided. Contours should include predicted noise levels under prevailing as well as "worst-case" scenarios during adverse meteorological conditions of wind and temperature inversions.

- Consider the influence of existing meteorological conditions such as winds and temperature inversions in the prediction model so as to provide a true representation of actual noise levels.

- Assess the effect of noise mitigation measures incorporated into the predictive modelling.

- Compare the predicted noise levels with the appropriate noise criteria for the phase of development or activity being considered (determine the appropriate noise criteria for the surrounding area using the INP. (For construction noise criteria refer to the EPA's *Environmental Noise Control Manual* (1994).

- The EIS must demonstrate that ground vibration and overpressure levels recommended by ANZECC will be achieved during blasting.

- The EIS must include a traffic noise assessment covering the expected movement of product off-site for the day, evening and night-time and proposed controls at the source and at affected received locations along the coal transportation routes. Reference should be made to the EPA's *Environmental Criteria for Road Traffic Noise* (1999).

4.3 Mitigation

- Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures.

- Where relevant noise/vibration criteria cannot be met after application of all feasible and cost effective mitigation measures the residual level of noise impact needs to be quantified by identifying:
  - locations where the noise level exceeds the criteria and extent of exceedence;
  - numbers of people (or areas) affected;
  - times when criteria will be exceeded;
  - likely impact on activities (speech, sleep, relaxation, listening, etc);
  - change on ambient conditions.

- Determine the most appropriate noise mitigation measures including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, community consultation, complaints handling/monitoring system etc.

- For rail noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects. Appropriate ameliorative measures may include:
  - use of alternative transportation modes and alternative routes;
  - control of rail traffic (eg: limiting times of access or speed limitations);
  - use of noise barriers or bunds.

- provide details of a noise and blasting (vibration) monitoring program with monitoring to be undertaken at noise sensitive locations subject to the agreement of the owners/occupiers of those properties. The noise and vibration monitoring program should reflect advances in technology for monitoring systems such as integrated blast monitoring. In addition, if noise levels for the premise are to rely on inversion conditions, and inversion monitoring program for noise assessment purposes must also be included in the monitoring program.

5. LAND SUBSIDENCE

- Provide details of all computer modelling used to predict the extent and occurrence of land subsidence that might result from the proposal. This should include discussion and justification of all assumptions used in the model;

- Mapping of the likely location, depth and width at the surface of bedrock cracking due to mining induced subsidence;

- Assessment of the likely water quality and quantity impacts of any bedrock cracking on all surface and groundwater resources;

- The design and presentation of detailed proposals to establish a free draining final landform with zero, or minimal, ponding.

6. WATER

6.1 General

- Provide details of the project relevant to any water impacts of the development such as drainage works and associated infrastructure, general earthworks, working capacity of structures, and water resource requirements of the proposal.

- Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts eg effluent ponds) and showing potential areas of modification of contours, drainage, etc.

- Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

- Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective.

- Describe existing surface and ground water quality in accordance with *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. An assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts).

- Provide historic stream flow data for the catchment where available.

- Provide site drainage details and surface runoff yield.

- Describe the condition of the local catchment, eg erosion levels, soils, vegetation cover, etc.

- Outline baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment.

6.2 Impact Assessment

- Determine any changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).

- Identify any potential impacts on quality or quantity of groundwater describing their source and significance.

- Identify potential impacts associated with geomorphologic activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.

- Detail sewage effluent treatment and disposal arrangements. Effluent should be treated and used on the site. On-site effluent disposal should conform to the EPA's draft "*Environmental Guideline for the Utilisation of Treated Effluent by Irrigation*", 1995.

- Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.

Note:- The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.

6.3 Mitigation

A water management plan and site water balance should be prepared which incorporates the following principles:

- Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls.
- Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls.
- Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements
- Outline pollution control measures relating to storage of materials, possibility of accidental spills (eg preparation of contingency plans), appropriate disposal methods, and generation of leachates.
- Describe hydrological impact mitigation measures including:
  - site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition);
  - minimising runoff;
  - minimising reductions or modifications to flow regimes;
  - avoiding modifications to groundwater;
  - preventing coal spillage entering waters at stream crossings.
- Describe groundwater impact mitigation measures including:
  - site selection;
  - retention of native vegetation and revegetation;
  - artificial recharge;
  - providing surface storages with impervious linings;
  - monitoring program.
- Describe geomorphologic impact mitigation measures including:
  - site selection;
  - erosion and sediment controls;
  - minimising instream works;
  - treating existing accelerated erosion and deposition;
  - a monitoring program.
- Describe management procedures that will be adopted to prevent pollution of waters by minewater, effluent, stormwater runoff etc. The water management plan should also include a monitoring program to assess the impacts of the operation on the quality and quantity of surface and groundwaters.

- Describe management procedures for rehabilitation of mined areas in order to prevent the potential pollution of ground and surface waters by potential acid mine drainage.

6.4 Hunter River Salinity Trading Scheme (HRSTS)

- If a wastewater discharge is proposed it must be justified and it must be demonstrated that controlled discharges can be managed in compliance with the requirements or principles of the HRSTS.

- If a discharge under the HRSTS is found to be necessary and the discharge would be via a tributary of the Hunter River, the EIS must include a tributary impact assessment that addresses the following:

  - Impacts on downstream landholders:
    - A contact list of downstream landholder/tenants including a record of permanent or seasonal activities;
    - A description and list of all crossings, culverts and other in-stream structures.

- Physical and biological impacts:

  - existing flow and stream characteristics, including current bank and bed profiles, potential flow volumes at key points of inflection within the stream course, stability of stream banks and beds and an assessment of soil types.
  - Assessment of likely impacts of proposed discharge including impacts on flow characteristics, potential for erosion of banks, bed or damage to riparian vegetation.

- Proposed measures to:

  - minimise the impacts of discharge on downstream landholders, including a discharge notification procedure;
  - reduce potential erosion hazards at vulnerable points in the stream banks, protect and maintain riparian vegetation and bank stability, and provisions for energy dissipation of discharge waters where necessary.

- In cases where more than one mine discharges to a tributary, each discharger must also address the collective impacts of discharge to that tributary.

7. WASTE AND CHEMICALS

7.1 General

- Provide details of:
  - the quantity and type of all liquid wastes and non-liquid wastes likely to be generated at the premises;
  - the method for storing and disposing of any wastes or recovered materials at the facility.
  - Details of sewage effluent treatment and disposal arrangements. Effluent should be treated and irrigated on site. The EIS should include a description of the effluent treatment and disposal system. On sit effluent disposal should conform to the EPA's draft "*Environmental Guideline for the Utilisation of Treated Effluent by Irrigation*" (1995).

7.2 Impact Assessment

- Identify potential impacts from the handling and storage of any wastes and/or chemicals.
- Measures to avoid or minimise the generation of waste and promote waste re-use and recycling.
- Identification of all wastes which cannot be re-used. Disposal options must also be identified in accordance with EPA *Environmental Guidelines, Assessment, Classification and Management of Liquid and Non-Liquid Wastes.*

7.3 Mitigation

- Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste.
- Outline measures to support any approved regional or industry waste plans.

8. SOIL CONTAMINATION AND PROFILING

8.1 General

- Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination.
- Identify any stream crossings.

8.2 Impact Assessment

- Identify any likely impacts resulting from the construction or operation of the proposal – this should include the likelihood of:
  - disturbing any existing contaminated soil;
  - contamination of soil by operation of the activity

- potential acid mine drainage;
- soil erosion or instability;
- soil dispersibility and permeability.

8.3 Mitigation

- Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including:
  - erosion and sediment control measures;
  - proposals for the management of any potential acid mine drainage;
  - clear outline of proposed stream diversions and subsequent stabilization;
  - intended rehabilitation of disturbed areas.

9. ESD

The basic principles of ESD should be addressed in the EIS.

The Precautionary Principle

- The proposal should include decision-making processes that are predictable and transparent. This should include:
  - making information available at an early stage so that major issues can emerge and be addressed during the project planning stage;
  - adopting consultative mechanisms between the proponent and the community as a means of minimising disputation at the formal environmental assessment stage;
  - establishing appropriate conflict resolution mechanisms for use during the project approval process.
- Discussion of Best Practice Environmental Management techniques including the potential use of environmental management plans and environmental audits.
- Ensuring that best practice monitoring and enforcement procedures are proposed.
- Identifying the responsibilities of the proponent and government agencies for environmental management and enforcement.

Inter and Intra Generational Equity

- Overall project management and investment in plant and equipment that minimises pollution and waste and is energy efficient.
- Ensure rehabilitation of land disturbed during construction.

Valuation and Pricing of Resources

- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for complying with ESD principles.

- The costs and benefits of all aspects of the proposal should be considered. This should include "non-market" or "unpriced" environmental resources within a defined area around the subject site using appropriate valuation methodologies.
- Consideration could be given to measuring positive environmental initiatives (e.g. energy savings) as a possible offset for other unavoidable environmental impacts.

10. CONSIDERATION OF ALTERNATIVES AND JUSTIFICATION FOR THE PROPOSAL.

- Consider the environmental consequences of adopting alternatives, including alternative:
  - sites and site layouts;
  - access modes and routes;
  - materials handling and loading processes;
  - waste and water management;
  - impact mitigation measures, particularly air quality and noise measures
  - energy sources.
- Selection of the preferred option should be justified in terms of:
  - ability to satisfy the objectives of the proposal;
  - relative environmental and other costs of each alternative;
  - acceptability of environmental impacts;
  - acceptability of any environmental risks or uncertainties;
  - reliability of proposed environmental impact mitigation measures;
  - efficient use (including minimising re-use) of land, raw materials, energy and other resources.

11. IDENTIFICATION AND PRIORITISATION OF ISSUES (SCOPING OF IMPACT ASSESSMENT)

- Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account:
  - relevant NSW government guidelines;
  - industry guidelines;
  - EISs for similar projects;
  - relevant research and reference material;
  - relevant preliminary studies or reports for the proposal;
  - consultation with stakeholders.
- Provide a summary of the outcomes of the process including:
  - all issues identified including local, regional and global impacts (eg increased/ decreased greenhouse emissions);
  - key issues which will require a full analysis (including comprehensive baseline assessment);
  - issues not needing full analysis though they may be addressed in the mitigation strategy;

- justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).

12. CUMULATIVE IMPACTS

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute.

- Assess the long-term and short-term cumulative impacts of the proposal against the relevant air, noise and water quality objectives for the area or region.

- Identify infrastructure requirements flowing from the proposal (eg water and sewerage services, transport infrastructure upgrades).

- Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (eg travel demand management strategies).

13. MANAGEMENT AND MITIGATION OF ENVIRONMENTAL IMPACTS

- Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts.

- Describe any mitigation measures and management options proposed to minimise identified environmental impacts associated with the proposal including an assessment of their effectiveness and reliability and any residual impacts after these measures are implemented.

- Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include:
  - operational procedures to manage environmental impacts;
  - monitoring procedures;
  - training programs;
  - community consultation;
  - complaint mechanisms including site contacts;
  - strategies to use monitoring information to improve performance;
  - strategies to achieve acceptable environmental impacts and to respond in event of exceedences.

14. COMPILATION OF MITIGATION MEASURES

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under an EPA licence (eg. outline of an environmental management plan).

- The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program.

15. EPA LICENSING

- Identify licensing required by the EPA under environment protection legislation including details of all new scheduled development works, scheduled activities, ancillary activities and types of discharges (to air, land, water).

NSW NATIONAL PARKS AND WILDLIFE SERVICE

GENERAL GUIDELINES FOR IMPACT ASSESSMENT

The National Parks and Wildlife Service (NPWS) has an interest in the potential impacts of proposals on the following:

- areas of native vegetation;
- areas of potential value as habitat for native fauna;
- sites and places of Aboriginal cultural heritage, including areas of archaeological potential; and
- land dedicated under the *National Parks and Wildlife Act 1974* (*NP&W Act*).

If these attributes are anticipated to be present in your study area and / or likely to be impacted, it is recommended that assessments by a suitably qualified person be undertaken to determine the extent of impact. The NPWS suggests that the following basic details be included in the assessments:

- the qualifications and experience of the person undertaking the work; and
- a detailed description of survey methodology including survey design, sampling methods, weather conditions, time and duration of surveys and location of any survey sites and transect lines.

Specific issues that are recommended to be addressed by the assessments are detailed below.

General information

- description of the proposal and the way in which the environment will be modified;
- map(s) placing the proposal in a regional and local setting;
- applicability of Local Environmental Plans, Regional Environmental Plans and State Planning Policies to the proposal;
- information on the current and past land uses of the site and that of the surrounding area; and

- appropriately scaled maps which identify the location and extent of any areas of native vegetation and fauna habitat and Aboriginal cultural heritage value in relation to the area of proposed development.

Impacts

- prediction of the likely impact of the proposal on land dedicated under the *NP&W Act*;
- prediction of the likely impacts of the proposal on areas and items of natural significance, such as native vegetation and fauna habitat, and on Aboriginal heritage sites and areas of cultural significance. This should include consideration of any off-site impacts; and
- assessment of measures available to minimise the impact of the proposal on these attributes, including potential conservation options, alternative development options and monitoring programs, if appropriate.

Native flora, fauna and threatened species

The following information is considered necessary to assess the potential impact of a proposal:

- detailed description and mapping of all vegetation communities in the study area;
- identification of any vegetation communities or plant species which are of local, regional or state conservation significance (including threatened species, populations, ecological communities or critical habitat listed under the *Threatened Species Conservation (TSC) Act*). The criteria for establishing significance should be documented;
- description of known or expected fauna assemblages within the study area;
- identification of fauna habitat likely to be of local, regional or state significance (including habitat of threatened species, populations, ecological communities or critical habitat listed under the *TSC Act*);
- identification of habitat corridors and linkages between areas of remnant native vegetation which may assist faunal movement through the area and an assessment of the conservation significance of these; and
- prediction of the likely impact of the proposal on the above attributes (quantification of the extent of impact where practical).

In addition to these general requirements, there are specific requirements relating to the assessment of a proposal and its potential impact on threatened species, populations, ecological communities, their habitats and critical habitat.

The provisions of the *TSC Act* and related provisions of the *Environmental Planning & Assessment Act* should be considered when undertaking the assessment of a proposal. In addition to the *TSC Act* itself, further information on the provisions of the *TSC Act* may be obtained from the Department of Urban Affairs and Planning Circular No. A13 (12 December 1995). The NPWS has also produced Information Circulars

on the *TSC Act* which may be obtained by contacting the NPWS Information Centre on (02) 9585 6333.

Concurrence provisions

Where a consent authority determines that a proposal is likely to have a significant effect on threatened species or their habitats, a species impact statement (SIS) must be prepared in accordance with the requirements of the Director-General of the National Parks and Wildlife Service. If, after considering the SIS, a consent authority intends to grant approval to a proposal that will have a significant effect on threatened species or their habitats then the concurrence of the NPWS is required. If the Minister for Urban Affairs and Planning is the consent authority the concurrence of the NPWS is not required, but consultation must occur with the Minister for the Environment before development consent is granted.

The process and timeframes for development applications that require concurrence are detailed in Division 2 of the *Environmental Planning and Assessment Regulation 1998*.

Aboriginal heritage

General issues

For the purposes of these guidelines Aboriginal heritage is considered to include "Aboriginal objects" and places of significance to Aboriginal communities.

Under the *NPW Act*, an 'Aboriginal object' is defined as any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains. Aboriginal objects are confined to physical evidence. Aboriginal objects are commonly referred to as Aboriginal sites.

An "Aboriginal place" is a place which has been declared so by the Minister for the Environment because he or she believes that the place is or was of special significance to Aboriginal culture. It may or may not contain physical Aboriginal objects.

It should also be noted that there are places in the landscape which have particular meaning for Aboriginal people, for example, spiritual areas or natural mythological areas. Although these areas are not protected under the *NPW Act*, unless they contain physical remains of Aboriginal occupation or have been declared an 'Aboriginal place', it is recommended that the potential impact of proposals on such places also be considered in the assessment process.

Assessment process

It is recommended that an assessment be conducted of the Aboriginal cultural values of the study area if the proposal involves disturbance to substantially unmodified ground surfaces. If the study area is considered to have archaeological potential or cultural significance then it is recommended that a survey and assessment be undertaken in accordance with NPWS guidelines. These guidelines are contained in the NPWS' publication "Aboriginal Cultural Heritage: Standards and Guidelines", which may be purchased by contacting the NPWS' Cultural Heritage Conservation Division on (02) 9585 6571.

Should any Aboriginal archaeological sites be present in the study area, you should consider the requirements of the *NP&W Act* with regard to Aboriginal objects. Under s90 of the *NP&W Act* it is an offence to knowingly damage or destroy Aboriginal objects without the prior permission of the Director-General of the NPWS.

In assessing Aboriginal heritage values, consideration should also be given to whether the study area is likely to contain places of cultural significance to the Aboriginal community. It should be noted that places of cultural significance to the Aboriginal community are not limited to archaeological sites. An assessment of cultural significance should involve consultation with community representatives and if necessary, documentary research to establish whether there are any places of traditional or historic significance to the Aboriginal community.

Integrated Development Assessment

Under recent amendments to the *EP&A Act*, a range of approvals and licences issued by various agencies have been integrated with the development approval process. Section 91 of the *Environmental Planning and Assessment Amendment Act 1997* lists the approvals of agencies which are included in the integrated development assessment (IDA) process.

This includes Section 90 approvals under the *NP&W Act* regarding consent to knowingly destroy, deface or damage or knowingly cause or permit the destruction or defacement of or damage to an Aboriginal object or Aboriginal place. Where an Aboriginal object or an Aboriginal place is known to occur on land prior to the lodgement of a development application, and the development proposal will damage, deface or destroy the Aboriginal object or Aboriginal place, thereby requiring a consent to destroy from the Director-General of the NPWS, the NPWS will become an approval body.

It should be noted that where an Aboriginal object or Aboriginal place is found to occur on land after a development application is lodged, separate NPWS approval will still be required under Section 90 of the *NP&W Act*.

The NPWS has prepared detailed guidelines to assist councils and applicants in the IDA process (copies available upon request). The guidelines outline the role of the NPWS in the IDA process and describe the information that needs to be submitted in an integrated development application. In summary, two types of information are required:

- Aboriginal cultural heritage assessment which involves consultation with the Aboriginal community groups. The NPWS is committed to working in partnership with the Aboriginal community groups in the management of Aboriginal sites and requires community assessment of any Aboriginal site management; and
- Archaeological assessment which involves the assessment of Aboriginal sites and their management based on archaeological heritage criteria.

Environmental impact statements

Where an environmental impact statement (EIS) is required to be prepared for an integrated development, the Director-General of the Department of Urban Affairs and Planning (DUAP) must request each approval body to provide their requirements in relation to the EIS. If the approval body does not provide those requirements within 14 days then the Director-General of DUAP must inform the applicant and the applicant must consult with the approval body to obtain its requirements for the EIS.

If an EIS is to be prepared for an integrated development that involves a Section 90 approval under the *NP&W Act*, the NPWS will be requested to provide its requirements for the EIS. In this situation, the NPWS requirements for the EIS are the same as for any IDA proposal that requires a Section 90 approval under the *NP&W Act*. These requirements are detailed in the attached guidelines.

Databases

The NPWS has two GIS databases which may provide information of use to you if you proceed to undertake further assessment. These are:

- Atlas listing of fauna and flora records in NSW;
- Aboriginal Heritage Information Management System.

The material from these databases is available upon written application and the receipt of the appropriate fee. If you are interested in obtaining access to the Atlas database, please contact the Data Licensing Officer, GIS Division, on (02) 9585-6684. Records from the Aboriginal Heritage Information Management System may be obtained upon written application to the Registrar, Cultural Heritage Conservation Division, on (02) 9585-6471.

Further Information

For further information please contact:

Manager, Conservation Planning Unit
Conservation Programs and Planning Division
Central Directorate
NPWS
PO Box 1967
Hurstville NSW 2220

Ph - (02) 9585 6674
Fax - (02) 9585 6442

MINERAL RESOURCES NEW SOUTH WALES

NSW DEPARTMENT OF MINERAL RESOURCES
Minerals and Energy House, 29-57 Christie Street
St Leonards NSW 2065 Australia
PO Box 536 St Leonards NSW 1590
Phone (02) 9901 8888 · Fax (02) 9901 8777
DX 3324 St Leonards
www.minerals.nsw.gov.au
ABN: 68 040 288 347

Mr David Kitto
Manager
Mining & Extractive Industries
Department Industry, Planning and Natural Resources
GPO Box 3927
SYDNEY NSW 2001

Our Reference C03/0752

Date 7 May 2004

Dear Mr Kitto,

Wilpinjong Coal Project Proposal - Planning Focus Response

I refer to the Planning Focus Meeting for the above project which was held on 20 April 2004. The presentation made by the proponents at the Planning Focus meeting was very similar to the Conceptual Project Development Plan presentation made previously to the Department of Mineral Resources and is considered a very solid starting point for preparation of the EIS. The following comments are provided in response to the call at the conclusion of the meeting for input to assist in the assembly of the Director-General's requirements for an Environmental Impact Statement (EIS) for the project.

Wilpinjong Coal Pty Ltd holds Exploration Licence 6169 over the project area, which was granted after a tender process during 2003.

Coal is a prescribed mineral under the Mining Act 1992. As a result, the proponents will need to obtain a mining title from the Department of Mineral Resources in order to mine this mineral. Any mining title granted for this proposal will be subject to standard and special conditions, with the preparation of a Mine Operations Plan and Annual Environmental Management Review being specific requirements for any lease that may be granted. Relevant health and safety issues will need to be dealt with in accordance with the requirements of the Coal Mine Health and Safety Act 2002 and the Coal Mines Regulation Act 1982.

The company is already operating a Community Consultative Committee as one of the conditions of the Exploration Licence. This and other stakeholder engagement activities should continue and be enhanced where necessary to facilitate an open and transparent relationship and exchange of information with the community.

The following comments are directed at specific areas of Departmental responsibility:

COAL RESOURCES

The Department's Tender Document for Wilpinjong provided an estimate of the coal resources of 171 Mt at less than 35% raw coal ash and within the 5:1 cumulative linear overburden ratio to the DPEBT section of the Ulan seam within the Wilpinjong area. However, the company, in its Planning Focus report, provided a significantly higher estimate of the resources and reserves within the project area. The Planning Focus report contains the following statement (which is also summarised and compared with the resources as stated in the Department's Tender Document in the table below):

"Exploration completed within EL 6169 has delineated an in-situ coal resource in the order of 523 million tonnes including an estimated total open cut reserve of 257 MT. A 21 year mine plan has been prepared that is expected to produce approximately 153 Mt of coal for sale to domestic electricity generators and approximately 37 Mt of coal for export".

	DMR	Planning Focus Report			
Seam	In Situ Indicated Resources (<35% Raw Coal Ash 5:1 cumulative linear overburden ratio to the DPEBT section) Mt	In Situ Resource Mt	Open Cut Reserve Mt	Coal for Sale to Domestic Market over 21 Years Mt	Coal for Sale to Export Market over 21 Years Mt
ULAWS	10.5				
UBICI	53.1				
DPEBT	98.6				
ULG	8.8				
Total	171	523	257	153	37

The resource statement as provided in the Planning Focus report is deficient in many aspects and should not be used in the final EIS for the following reasons:

1. The statement has not been prepared according to the "JORC Code" and the "Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves".

2. The report does not explain how the company arrived at the above estimates and the reason for such significant increase in the resource and reserve estimates despite the fact that the Company and the Department used the same data set.

In assessing the resource information supporting an Environmental Impact Statement the Department has two key concerns which must be addressed:

1. The level of geological knowledge of the deposit must be demonstrated to be sufficient to justify the project proposal, (i.e. there is a high level of confidence that the project will proceed as proposed.)

2. The Department needs to be convinced that resource recovery and utilisation have been optimised for the deposit, taking into account the sometimes-conflicting environmental and economic constraints, which may apply, to the project.

In order to satisfy the above requirements the company will need to provide two sets of data.

The first is information to be included in the EIS, and the second consists of supporting geological information to be provided to the Department of Mineral Resources on a confidential basis.

A: ENVIRONMENTAL IMPACT STATEMENT REQUIREMENTS

The following information should be incorporated into the Environmental Impact Statement.

Coal Seam Stratigraphy

Text illustrated by a table detailing the stratigraphic succession and the relationship between coal seams in the project area. Particular reference should be made to the seam(s) within which mining operations are proposed.

Resource/Reserve Statement

A statement and table quantifying the coal resources and reserves within the project area. This must be done in accordance with the "JORC Guidelines for the Estimation and Reporting of Australian Black Coal Resources and Reserves" and the "Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves" (available on the Department's website).

Accompanying this statement should be a plan showing drillhole locations (and/or sample locations) together with a statement on the confidence to be attached to resource/reserve estimates (e.g. measured, indicated, inferred, probable, proved etc.).

Plans should also be included which clearly identify all areas in the project:-

a) considered to contain economic coal resources (not just those resources covered by the mine plans)

b) where limited extraction will take place

c) where no mining will take place.

For (b) and (c), justification should be provided for either partial (and less than all potentially mineable seam sections) or nil extraction.

B: SUPPORTING INFORMATION

Supporting the information contained within the Environmental Impact Statement should be a geological report submitted to the Department of Mineral Resources (Coal & Petroleum Geology, Geological Survey) which provides full justification for the resource/reserve statement within the EIS.

The report should be submitted to the Department in digital format prior to the EIS for the proposal being completed. The report would be confidential to the Department.

Utilising this report, the Department must be able to verify the derivation of all resource and reserve figures contained within the EIS.

The detailed information required to support a resource/reserve statement is contained in the *"Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves"* and the Department's *"Guide to Preparing Resource and Reserve Statement"*.

However, particular emphasis should be given to providing:

a) Quantified reasons to explain the exclusion of any seam(s) from the mineable in situ tonnage. A plan must be provided illustrating any surface features or coal seam quality or thickness factors that sterilise or limit the potential extractability of the resource. The tonnage of coal associated with each feature or factor must be quantified.

b) Explanations should also be provided detailing differences between geological seam thickness and proposed working section thickness. A summary of impacts on coal quality or washability must be provided where the working section thickness is less than the geological thickness or where a number of alternate working sections are possible. Diagrams and tables should support this where appropriate.

c) Recoverable reserves must be based on the proposed mine plan and not on a recovery factor. A recovery factor may only be determined from the percentage of calculated recoverable reserves as a proportion of mineable in situ reserves. A copy of the proposed mine plan must be provided. Information should also be provided on any variations in recoverability associated with any restrictive zones.

d) Information must be provided on the basis (e.g. separation gravity or fixed ash) for determination of marketable or saleable reserve factors

MINING TITLES

A mining lease will be required for the area of the mining activity and associated mining purposes. Mining leases have as a standard condition the requirement to lodge a Mining Operations Plan (MOP) and this will be used to assess details of the actual mining and rehabilitation. Another condition of mining leases also requires the lodgement of an Annual Environmental Management Report (AEMR), which essentially covers detailed reporting on rehabilitation and environmental management.

The proponent should be aware that if there are any areas of Crown Land on which Native Title has not been extinguished, the provisions of the Commonwealth Native Title Act will need to be complied with before a mining lease can be granted.

MINE SAFETY

Under the provisions of the Coal Mine Health and Safety Act 2002 and the Coal Mines Regulation Act 1982, the Department of Mineral Resources has legislative responsibility for overseeing the safe operation of mining activities. In particular, the section of the EIS that deals with safety issues should incorporate the following:

- A commitment to compliance with the Coal Mine Health and Safety Act 2002 and the Coal Mines Regulation Act 1982.
- Nomination of a person (or persons) as Operator and Manager as required by the Coal Mine Health and Safety Act, 2002 and the Coal Mines Regulation Act 1982.
- Details of the procedures the proponent intends to adopt in addressing any safety issues identified by an Inspector or Mine Safety Officer or an authorised Government Official as specified in the Coal Mine Health and Safety Act 2002.

ENVIRONMENTAL ISSUES

There are a number of latent site features that will need to be taken into account in the management of this site and addressed in the EIS. These features include:

- Current mining at nearby Ulan extends to the "D" ply. Mining at Wilpinjong extends to the "G" ply. The sulphur content increases with depth.
- A water balance for this mine will be critical. Additional water will be difficult to source off site and saline discharges will be very difficult to obtain approvals for.
- The soil type and rainfall reliability are both poorer than usually found in Hunter Valley coal mines. This will increase the risk of failure of vegetation establishment on the rehabilitated areas.
- There will be ongoing issues with the management of oxidised coal that can be very dusty and will need to be suitably disposed of.
- The proposal requires 2 creek diversions over rehabilitated areas. These will need to be built to prevent the ingress of water into the overburden emplacement areas.

The EIS should address the following issues particularly relevant to the Wilpinjong project proposal:

1. The proposal identifies a resource with a very low coal to overburden ratio with a coal whose sulphur content increases with depth. During the exploration process the overburden will need to be characterised and the most suitable horizons assessed for the upper layers of the rehabilitated areas. Potential NAP (net acid producing) and saline/sodic overburden/interburden materials are to be managed including using sufficient benign material to provide a 2 metre layer, under the topsoil, to ensure rehabilitation and protect surface water quality impacts. The DMR requests that its Environmental Officers at Singleton be consulted as the projects geochemical assessment studies progress and as environmental management strategies for the project develop.

2. With the increasing sulphur content with depth it is likely the content of the tailings dams may become acidic. Preliminary studies will need to be included to cover the possibility of this and its planned ongoing management.

3. The proposal requires the construction of 2 creek diversions over rehabilitated lands. In addition to the DIPNR (ex DLWC) requirements, the EIS will need to identify how the base of these diverted creeks can be made impermeable. It is important, both during mining and after closure, that these diversions do not add to the local ground water levels within the mined area.

4. The mine plan includes a number of clean water diversions around the active mine site. Some of these have a considerable catchment area. The location of these diversions may need to be modified to provide a stable grade to ensure long-term stability. This would effect the mine footprint and therefore mineable area. The location and methods to achieve long term stability of the clean water diversions needs to be included in the EIS.

5. The EIS is particularly to address proposals for progressive rehabilitation and the final conceptual landscape: the drainage of the subdued landform, 5-year increment illustration of progressive mine development and rehabilitation, reinstatement of land capability particularly any Class 1, 2 or 3 land, final void location, configuration, hydrogeology and long term water quality impact.

6. The proponent has identified particular sensitivity of the project's water balance with the potential for a water deficit and constraints on availability for water supply. The EIS requires rigorous assessment of the water balance over the mine life, and consequently assessment of environmental impact of water supply options on downstream environmental flows during potential deficit dry years, and of environmental impact of discharge during potential excess wet years. Note the constraint of a National Park in the

receiving catchment downstream of the project area may invoke particular assessment under the EPBC Act.

Should you have any further queries on this matter please on contact me on (02) 9901 8480.

Yours sincerely

Garth Holmes
Assistant Director
Sustainable Development

NSW FISHERIES

Office of Conservation

Your Ref:
Our Ref:

10 May 2004

Dave Kitto
DIPNR Major Development Assessment

david.kitto@dipnr.nsw.gov.au

Dear Dave,

Re: Proposed Wilpinjong Open Cut Coal Mine

Thank you for your letter requesting REF requirements from NSW Fisheries for the proposal cited above. The information listed below may be of some assistance in the preparation of the REF for this proposal.

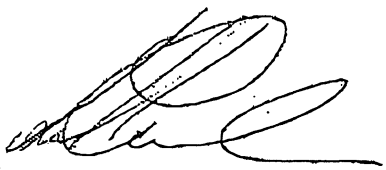
Definitions
The definitions given below are relevant to these requirements:

Fish means any part of marine, estuarine or freshwater fish or other aquatic animal life at any stage of their life history (whether alive or dead). Fish include oysters and other aquatic molluscs, crustaceans, echinoderms and beachworms and other aquatic polychaetes.

Waters refers to all waters including tidal waters below mean high water mark as well as flowing streams, irregularly flowing streams, gullies, rivers, lakes, coastal lagoons, wetlands and other forms of natural or man made water bodies on both private and public land.

Useful Information
To help you in the preparation of an REF, the publication *"Guidelines for the Assessment of Aquatic Ecology in EIA"* (Draft 1998) produced by the Department for Urban Affairs and Planning may prove useful in outlining appropriate procedures and methodologies for conducting aquatic surveys.
Should you require any further information on these requirements please contact the Office of Conservation at Port Stephens on 4916 3929.

Yours sincerely



Scott Carter
Senior Conservation Manager - Central

PORT STEPHENS RESEARCH CENTRE
Private Bag1 NELSON BAY NSW 2315 - Australia
Telephone: (02) 4916 3929 • **Facsimile:** (02) 4982 2306

Matters to be Addressed

1. General Requirements

The REF must include the information outlined below:

- A topographic map of the locality at a scale of 1:25 000 should be provided. This map should detail the location of all component parts of the proposal, any areas locally significant for threatened species (such as aquatic reserves), and areas of high human activity (such as townships, regional centres and major roads).
- A recent aerial photograph (preferably colour) of the locality (or reproduction of such a photograph) should be provided, if possible. This aerial photograph should clearly show the subject site and indicate the scale of the photograph.
- All water bodies and waterways within the proposed area of development are to be identified.
- Description of aquatic vegetation, snags, gravel beds and any other protected, threatened or dominant habitats should be presented. This assessment should include the creek to the top of the catchments and the receiving waters downstream to the confluence of the next major stream.
- Area, density and species composition should be included and mapped.
- Identification of recognised recreational and commercial fishing grounds, aquaculture farms and/or other waterways users.
- Details of the location of all component parts of the proposal, including any auxiliary infrastructure, timetable for construction of the proposal with details of various phases of construction
- Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation eg Environment Management Plans
- For each freshwater body identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: flow characteristics, including any seasonal variations, bed substrate, and bed width

DREDGING AND RECLAMATION ACTIVITIES

- Purpose of works. This includes works to realign or move natural streams.
- Method and duration of dredging to be used
- Dimension of area to be dredged
- Depth of dredging activities
- Nature of sediment to be dredged, including Acid Sulphate Soil
- Environmental safeguards to be used during and after works
- Measures for minimising harm to fish habitat under the proposal
- Measures to compensate for the loss of fish habitat.
- Spoil type and source location for reclamation activities
- Method of disposal of dredge material
- Location and duration of spoil stockpiling, if planned
- Volume of material to be extracted or placed as fill

ACTIVITIES THAT BLOCK FISH PASSAGE

- Type of activity eg works in a stream that change flow or morphological characteristics
- Length of time fish passage is to be restricted
- Timing of proposed restriction
- Remediation works

THREATENED SPECIES

- Threatened aquatic species assessment (Section 5c, EP&A Act 1979)
- Eight Part Test

2. Initial Assessment

A list of threatened species, endangered populations and endangered ecological communities must be provided. In determining these species, consideration must be given to the habitat types present within the study area, recent records of threatened species in the locality and the known distributions of these species.

In describing the locality in the vicinity of the proposal, discussion must be provided in regard to the previous land and water uses and the effect of these on the proposed site. Relevant historical events may

include land clearing, agricultural activities, water abstraction/diversion, dredging, de-snagging, reclamation, siltation, commercial and recreational activities.

A description of habitat including such components as stream morphology, in-stream and riparian vegetation, water quality and flow characteristics, bed morphology, vegetation (both aquatic and adjacent terrestrial), water quality and tide/flow characteristics must be given. The condition of the habitat within the area must be described and discussed, including the presence and prevalence of introduced species. A description of the habitat requirements of threatened species likely to occur in the study area must be provided.

In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution. The study area must extend downstream and/or upstream as far as is necessary to take all potential impacts into account.

Please Note: Persons undertaking aquatic surveys may be required to hold or obtain appropriate permits or licences under relevant legislation.
For example:

Fisheries Management Act 1994
- Permit to take fish or marine vegetation for research or other authorised purposes (Section 37)
- Licence to harm threatened (aquatic) species, and/or damage the habitat of a threatened species (Section 220ZW).

Animal Research Act 1985:
- Animal Research Authority to undertake fauna surveys.

It is recommend that, prior to any field survey activities taking place, those persons proposing to undertake those activities give consideration to their obligation to obtain appropriate permits or licences which may be required in the specific context of the proposed survey activities.

3. Assessment of Likely Impacts

The REF must:
- describe and discuss significant habitat areas within the study area;
- outline the habitat requirements of threatened species likely to occur in the study area;
- indicate the location, nature and extent of habitat removal or modification which may result from the proposed action;
- discuss the potential impact of the modification or removal of habitat;
- identify and discuss any potential for the proposal to introduce barriers to the movement of fish species; and
- describe and discuss any other potential impacts of the proposal on fish species or their habitat.

For all species likely to have their lifecycle patterns disrupted by the proposal to the extent that individuals will cease to occupy any location within the subject site, the REF must describe and discuss other locally occurring populations of such species. The relative significance of this location for these species in the general locality must be discussed in terms of the extent, security and viability of remaining habitat in the locality.

4. Ameliorative Measures

The REF must consider how the proposal has been or may be modified and managed to conserve fisheries habitat on the subject site and in the study area.

In discussing alternatives to the proposal, and the measures proposed to mitigate any effects of the proposal, consideration must be given to developing long term management strategies to protect areas within the study area which are of particular importance for fish species. This may include proposals to restore or improve habitat.

Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures must be outlined in detail, including the objectives of the monitoring program, method of monitoring, reporting framework, duration and frequency.

In the event of a request for concurrence or consultation of the Director of NSW Fisheries, one (1) copy of the REF should be provided to NSW Fisheries in order for the request to be processed.

It should be noted that NSW Fisheries has no regulatory or statutory role to review draft REFs unless they are accompanied by or are requested as part of a licence application under Part 7A of the FM Act. However, NSW Fisheries is available to provide advice to consent and determining authorities regarding Fisheries' opinion as to whether the requirements have been met if requested, pending the availability of resources and other statutory priorities.

RTA

295.5395 04/4
04/387
Mr Wagg

4 May 2004.

06 MAY 2004

Manager
Mining & Extractive Industries
Major Development Assessment
Department of Infrastructure, Planning & Natural Resources
GPO Box 3927
SYDNEY NSW 2001

Mudgee Council Area. Main Road No 208
Proposed Wilpinjong Open Cut Coal Mine

Dear Sir,

Attention Mr David Kitto

I refer to your letter dated 13 April 2004, the document titled Planning Focus, Wilpinjong Project, April 2004, and to the meeting held at Mudgee on 20 April.

The Roads and Traffic Authority will not oppose the Wilpinjong Development, however it is asked that the following matters be addressed in the Environmental Impact Statement.

- Access to the mining development will be via a new turnout from the Mudgee Wollar Road – Main Road No 208. The design of the access is to be carried out in accordance with Section 4 of the RTA's Road Design Guide, and take into account the required sweep path generated by vehicles using the Mine Access Road both during construction of the infrastructure and during operations. Sight distances appropriate to the travel speed of vehicles in the immediate vicinity of the turnout are to be achieved in the design.
- Following the issue of consent for the development, the Developer is to enter into a works Authorisation Deed – Private Financing and Construction for the carrying out of road works associated with the construction of the intersection. The Works Authorisation Deed is intended to:
    1) Satisfy the legal requirements for the RTA to authorise the implementation of Works under the Roads Act (Section 138 consent) and gives consent to the Developer and its authorised employees and contractors to carry out works within, over or across the Road, and within the road reserves applicable to the Road, and in accordance with the Act, and subject to the terms of the Works Authorisation Deed.

2) Provide the RTA with a means of managing the risks associated with the quality of works carried out by the Developer.
3) Satisfy Occupational Health and Safety and Environmental requirements during construction of the work, and
4) Provide a means of controlling road occupancies that occur with the continuing increase in development projects.

- Inclusion of a Traffic Impact Statement covering vehicle movements during the construction phase and during the operations, as well as vehicle classifications, possible loads, peak flows etc for the Wilpinjong Project.
- A contingency statement covering the transport of materials should the rail option be not available, and/or local supplies be provided.
- Inclusion of a Transport Statement covering details of train movements associated with the transport of extracted materials from Wilpinjong as well as a statement of existing rail movements.
- Liaise with the State Rail Authority re the requirements for level crossing protection at any affected level crossings.

Any works being undertaken to provide design and/or construction of access to the development, any works associated with the transport of materials, level crossing improvement works are to be carried out at no costs to the Authority.

Yours faithfully

R T Wagg
For
R Humble
Road Safety & Traffic Manager

MUDGEE SHIRE COUNCIL

Catherine Van Laeren:ko:A0420169 (Wilpinjong t of r) 7 May 2004

Mr David Kitto
Senior Environmental Planner
Major Development Assessment
DIPNR
Henry Deane Building
20 Lee Street
SYDNEY NSW 2000

Dear David

TERMS OF REFERENCE FOR EIS – WILPINJONG OPEN CUT COAL MINE

Reference is made to the planning focus meeting held on 20 April 2004. Council requests that the following matters be addressed in the Environmental Impact Assessment in addition to those raised at the meeting:

Social and Economic Aspects

- Identification of projected population growth as a consequence of the mine operation and population profile of employees (including breakdown by employment categories, income, age, sex and family profile), during the operational life of the mine.
- Identification of accommodation alternatives for employees and requirements during the construction phase.
- Identification of the likely settlement pattern of employees.
- Analysis of the potential impact on land supply in Mudgee and population projections taking into consideration the supply and demand assessment included in the Rural Residential, Industrial and Residential Strategy undertaken by Council in 2003.
- Identification of economic multiplier factor and impact on local land supply and economic impact.
- Identification of complementary industries and estimated annual monetary expenditure. Identification of potential impact on industrial land supply taking into account issues of critical mass and escape expenditure.
- Having regard to the expected life of the mine identification of potential social impact upon the closure of the mine and appropriate strategies to address potential social impacts.
- Identification of monetary expenditure within and external to the Shire in both construction and operation phases.
- Identification of sources of products and services required in both construction and operation phases to enable targeting of those suppliers and possible relocation to the Shire.

- Analysis of impact of heavy haulage traffic movement on the local road network during construction and operational phase of the development.
- Identification of emergency contingencies in the event of failure of rail transport of coal, including identification of transport routes.

Environmental

- Assessment of the impact of dust, noise and vibration on flora and fauna on the adjoining nature areas.

Heritage

- Assessment of the heritage significance and impact on the homesteads and associated buildings located within the mine lease.

Infrastructure

- Identification of Communication Infrastructure requirements during construction and operational phases.

Should you have any queries in relation to this matter please do not hesitate to contact Catherine Van Laeren of Council's Planning Section. In preparing these terms of reference Council recognises that issues regarding the impact on natural environment and operational issues have been raised by the relevant government agencies.

Yours faithfully

DARREN SCOTTI
MANAGER PLANNING & DESIGN

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