



# Environmental Impact Statement (EIS) Assessment Report

## Moorvale Coal Project

2 July 2002

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## 1. Introduction

This Environmental Impact Statement (EIS) Assessment Report completes the EIS process under Chapter 3 of the *Environmental Protection Act 1994*. All requirements of Chapter 3 have been met.

The EIS process was initiated by an application by Australian Premium Coals to prepare a voluntary EIS for the project under section 70 of the Act.

### 1.1 Project details

The proponent and manager of the Moorvale Coal Project is Australian Premium Coals Pty Ltd (APC). The general project objective is to mine and export a high grade pulverised coal injection (PCI) product at a rate of two million tonnes per year for a period of up to 14 years.

Exploration has identified a coal resource in excess of 32.7Mt on the Moorvale property. The coal seam has an average thickness of 9 metres. The project area is contained within the area of three mining lease applications (MLA70290, MLA70291, MLA70292).

The total capital cost of the mine development is approximately \$50 million. Mining infrastructure will include mine pit and out-of-pit spoil, rail loop, run-of-mine stockpiles, coal preparation plant, product stockpiles, water management dams, workshop and administration facilities.

The project site is located approximately 10 km southwest of the Coppabella township, 50 km southeast of Moranbah, 50 km southwest of Nebo and 160 km southwest of Mackay. The project land is zoned rural under the current Nebo Shire Planning Scheme. The mining pit will be constructed on the eastern portion of the Moorvale property (3600ha) and extending on to the neighbouring Oben Park property (500ha).

Construction is expected to commence in September 2002 with the first coal on rail by July 2003. The mining method to be utilised is a combination of drill and blast, dozer push and load and haul. The coal will be mined in three separate working sections and placed in three separate ROM stockpiles. In-pit dumping of overburden will be maximised.

The international demand for the coal products to be produced at Moorvale is currently strong. It is estimated that over the life of the mine, the export of the product coal has the potential to generate approximately \$1.48 billion in export income.

## 1.2 Approvals

The following approvals are required for this project:

Environmental Authority (mining activities)	<i>Environmental Protection Act 1994</i>
Mining Leases	<i>Mineral Resources Act 1989</i>
Water allocation	<i>Water Act 2000</i>
Water Licence	<i>Water Act 2000</i>
Waterway Barrier Works Approval	<i>Fisheries Act 1994</i>

## 1.3 Impact assessment process

### 1.3.1 The EIS process

The EIS process under Chapter three of the *Environmental Protection Act 1994* was followed for the Moorvale Coal Project.

APC applied on 16 May 2001 to undertake a voluntary EIS under section 70 of the *Environmental Protection Act 1994*. The application was approved and terms of reference drafted by APC were advertised for public comment on 7 July 2001. APC were required to address comments received on the terms of reference. The terms of reference were finalised by the Environmental Protection Agency (EPA) on 8 October 2001.

APC submitted the EIS for the project on 4 February 2002. It was assessed against the terms of reference by the EPA and further information was requested. The Notice of decision to proceed with the EIS was issued on 12 March 2002 after the additional information was provided. The EIS was advertised for public submissions on 16 March 2002. The public submission period was 21 business days and closed on 17 April 2002. A total of 17 submissions were received as listed below.

State government departments	12 submissions
Local governments	one submission
Affected landholders	two submissions
Interest groups	two submissions

APC addressed issues raised in received submissions in the Response Supplement to the EIS submitted to the EPA on 27 May 2002.

This EIS Assessment Report completes the EIS process under the *Environmental Protection Act 1994*. In accordance with section 58 of the Act, it considers the final terms of reference for the project, the submitted EIS, all submissions received, the Response Supplement and the standard criteria of the *Environmental Protection Act 1994*.

### **1.3.2 Consultation program**

#### ***Public consultation***

In addition to the statutory requirements for public notification of the terms of reference and EIS, APC undertook a public consultation program that commenced in July 2001 and included the following groups:

- local landholders adjacent to and neighbouring the proposed project area;
- directly impacted residents in Moranbah, Coppabella, and Nebo townships;
- representatives of state agencies and the Nebo and Belyando Shire Councils; and
- local community groups.

Further information is provided in Appendix A4 of the EIS.

#### ***Advisory bodies***

The EPA invited the following organisations to assist in the assessment of the terms of reference and EIS by participating as members of the Advisory Body for the project:

- Mackay Conservation Council;
- Nebo/Broadsound Landcare Group;
- Central Queensland Aboriginal Land Council;
- Department of Education;
- Department of Families;
- Department of Primary Industries;
- Department of State Development;
- Emergency Services;
- Environmental Protection Agency;
- Department of Local Government and Planning;
- Department of Main Roads;
- Department of Natural Resources and Mines;
- Department of Aboriginal and Torres Strait Islander Policy;
- Queensland Health;
- Queensland Police;
- Queensland Rail;
- Queensland Transport;
- Queensland Treasury (Office of Energy); and
- Nebo Shire Council.

#### ***Public notification***

In accordance with the statutory requirements, advertisements were placed in the Brisbane Courier Mail and the Mackay Daily Mercury to notify the availability of the draft terms of reference and EIS for review and public comment. In addition, notices advising of the availability of the draft terms of reference and the EIS for public comment were displayed on the EPA website.

The draft terms of reference were on public display in Brisbane at the Naturally Queensland Information Centre and the offices of APC; at the EPA offices in Emerald and Mackay; and the Nebo Shire Library. However, no public comments were received. Finalised terms of reference will be available on the EPA website, together with the EIS Assessment Report, until June 2003.

The submitted EIS was placed on public display at the following locations:

- The Queensland State Library – Brisbane
- Mackay City Library – Mackay
- Nebo Shire Council Office – Nebo
- Belyando Shire Council Office – Moranbah
- Naturally Queensland Information Centre – Brisbane

Copies of the EIS could also be downloaded from the proponent's website or purchased from the proponent. Three submissions were received by members of the public in addition to comments from the members of the Advisory Body.

### **Site visit**

A site visit was undertaken for Advisory Bodies and "affected persons" on 25 March 2002, during the public display period for the EIS. It was attended by a number of representatives from the Advisory Body and landowners from surrounding properties.

### **1.3.3 Environment Protection and Biodiversity Conservation Act 1999**

The proponent does not consider the project to have the potential to impact on any matters of national environmental significance and therefore has not referred the project to the Commonwealth for determination under the *Environment Protection and Biodiversity Conservation Act 1999*.

## **1.4 Project issues**

### **1.4.1 Air**

#### **Dust management**

Dust will be the most relevant air pollutant generated by the project activities including blasting, excavation, haulage, conveyors and stockpiles. The wind direction is predominately easterly. The nearest sensitive locations are as follows:

- Farley Homestead – 100m from Peak Downs Railway, 2km from proposed rail loop, 4km west of nearest pit boundary.
- Mavis Downs Homestead – 2.6km southwest of nearest pit boundary, 6km from rail loop.
- Moorvale Homestead – 4km from Peak Downs Railway line, 7km from proposed rail loop, 9km west of pit boundary.

The impact of dust on environmental values is considered to be minimal due to the significant buffer distances to sensitive locations. Management

strategies that will be implemented to minimise dust impact are revegetation of overburden stockpiles, and regular watering of disturbed areas that have the potential to generate dust.

### ***Greenhouse gas emissions***

The total estimated greenhouse gas emission at two million tonnes product coal will be 88,025 tonnes CO<sub>2</sub>-equivalent from sources such as electricity use, diesel fuel oil use, explosive use, and fugitive emissions.

### ***Air issues and recommendation***

The EPA requested additional information on the particulate matter sampling equipment used and this was provided in the Response Supplement.

The EPA also requested an estimate of the likely particulate emission load from the project site in order to assess the likely impact on sensitive receptors. Two submissions by neighbouring landholders also highlighted the potential for dust nuisance. However, this additional information was not provided as the proponent considers it is not relevant as best practice dust minimisation methods are to be implemented. In response to similar comments from Queensland Health, the proponent commits to maintaining close contact with neighbours during operations.

**It is recommended that a condition be included in the environmental authority to require corrective action should complaints of dust nuisance be received.**

## **1.4.2 Water**

### ***Water values of the site***

The project area has four catchments which drain in different directions – the largest, 2500ha, drains to the south through an unnamed channel; two small catchments of equal area drain southeast and southwest; and a smaller area drains to the north into Harrybrandt Creek.

Approximately four kilometres to the west of the mine is North Creek which flows south and joins the Isaac River 40km south of the project area. The riparian vegetation on North Creek is classed as fringing woodland of *Eucalyptus tereticornis* and *E. crebra*, with an *Allocasuarina cunninghamiana* understorey, the status of which is “no concern at present”. The riparian and in-stream habitats of North Creek are in good condition and are representative of ephemeral stream habitats in the region. The environmental dam is proposed to be located on the unnamed channel that joins North Creek approximately 10km south of the mine. The riparian and in-stream habitats of this channel are highly degraded by current land uses.

Surface water in the project area is used for stock watering and the water quality of the unnamed channel, North Creek and a creek on the eastern boundary of the site were assessed in the EIS.

### **Water management strategy**

The major components of the water management system for the project are the environmental dam and the sedimentation dam. All clean water runoff is to be diverted to the environmental dam for use in the raw water circuit or discharged during high runoff events. The catchment area is approximately 9.6km<sup>2</sup>. The total capacity of the environmental dam and excavated storage is 500ML. The sedimentation dam is located downstream of the disturbed areas to catch the silt laden runoff from the site. Residence time in the sedimentation dam is designed to be at least 10 days. Water from the sedimentation dam may be used for dust suppression or alternatively discharged to surface waters. Water recycling will occur at the environmental dam and sedimentation dam in preference to discharge. “Dirty” runoff from the mine industrial area and the product stockpiles will be directed to the co-disposal return water dam for recycling through the coal handling and preparation plant.

### **Water supply issues**

The raw water demand for this project is approximately 800 ML per year. The water supply strategy proposed has been refined as a result of significant comments in a number of submissions on the EIS. The revised hierarchy for water supply to the project is:

- highest priority water will be sourced from the Teviot Dam via the Burton Downs Mine water management system and a new pipeline to Moorvale Coal Mine (500ML/yr);
- water flood harvested via a new weir constructed on North Creek (350ML/yr); and
- water captured in the environmental dam (200ML/yr).

The modelling presented in the EIS was performed using Waman (version E) which calculates the catchment yield based on the Australian Water Balance Model (AWBM) and predicts the storage behaviour and characteristics of the storage.

The Department of Natural Resources and Mines (NR&M) raised significant concerns with the proposed water management strategy of the weir on North Creek outlined in the EIS. They advised licensing matters, to be addressed under the *Water Act 2000*, would include the weir, gravity diversion, pumps and water allocation. Also to be considered is a passflow requirement and flood harvesting. NR&M did not agree to sourcing water supply from the Braeside pipeline for this project.

Relevant changes to the original proposal in the EIS after discussions between APC and NR&M include the elimination of the connected off-stream storage (to be replaced by a turkey’s nest dam in a cleared area on the mining lease); reduction by 1.5m of the height of the weir; maintenance of a passflow over the weir of at least one cumec when extraction is in progress on North Creek; and provision of a 250ML post-winter flow (each season) over the weir. NR&M advise their requirements will be met with these provisions. However, appropriate licensing under the *Water Act 2000* is a necessity.



### ***Surface water issues and recommendations***

Other concerns raised in submissions on the EIS included the inundation of large trees (*Eucalyptus tereticornis*) along North Creek, interruption of flow in creeks and channels affected by storages and dams, supply of water from onsite storages, nomination of agricultural and industrial values for water quality objectives (rather than ecological values), and water quality data collection. It is considered that the changes in the weir design, provisions of the environmental management overview strategy (EMOS) and the environmental authority issued for this project will adequately address these concerns. **It is recommended that the environmental authority include a requirement for further background surface water quality data to be collected over the next three years.** This would verify site-specific conditions and allow the water quality limits set in the environmental authority to be amended if necessary.

One of the main objectives of the environmental management of the project should be to maintain the ability of the downstream water users to use the water for stock watering. Therefore, **it is recommended that monitoring (including chemical and aquatic biology) is implemented to ensure early detection of any problems in water quality and quantity.**

### ***Ground water issues and recommendation***

The standing groundwater levels on the project site are approximately 45m below the surface and associated with the coal seams. Geotechnical evaluations presented in the EIS conclude that there would be little impediment to mining from groundwater ingress. Groundwater that accumulates in the pit will be collected in sumps and transferred to the co-disposal return water dam. Groundwater quality is presented in the EIS and indicates it is saline with relatively high levels of sodium, calcium, magnesium, and chloride ions. The depth of the bores used for stock watering on Mavis Downs are reportedly half that of the bores drilled on the Moorvale project site. The Response Supplement reported that these bores are associated with a better quality perched aquifer which is unlikely to be impacted by the project activities.

However, **it is recommended that the environmental authority include a requirement for bores on Mavis Downs accessing the shallow aquifer be monitored during operations** to ensure no adverse impacts are caused.

The potential for contamination of surface and ground water by acid mine drainage has been assessed to be very low to negligible.

## **1.4.3 Land and flora and fauna**

### ***Existing land suitability and capability***

The topography of the project area is flat to gently undulating.

The current land use of the project site is breeding and fattening beef cattle. Carrying capacity is approximately one beast per five hectares in an average season. The pre-mining land suitability for beef cattle grazing is Class 2 (land with minor limitations) with minor areas of Class 3 (moderate limitations to

sustaining the use), based on the five class system adopted in the soils and land suitability survey in the EIS. The land has been cleared for pasture improvement and cattle grazing.

### ***Soils and subsurface materials***

Impact on land based environmental values will be caused by disturbance from mining activities. A soils and land suitability survey was conducted over an area of approximately 4000ha. It reported that the project area land was in good condition and recommended topsoil be retrieved for future rehabilitation. Most of the samples of sub-surface material tested demonstrated moderate to high dispersivity. The proposed management strategy to minimise the risk of erosion is to ensure reuse of topsoil and prevent exposure of sub-soils during operational and rehabilitation phases of the project. The proponent has also committed to producing an erosion and sediment control program. None of the samples tested, showed any potential for acid generation.

The majority of comments on the soils and land suitability assessment came from NR&M. On the whole, NR&M agreed the assessment in the EIS was a realistic approach, subject to a number of comments, all of which the proponent has agreed to.

### ***Land contamination***

The EIS identified a number of potential sources of land contamination and also proposed strategies to be implemented that will minimise this potential. The project site will be registered on the Contaminated Land Register during operations. However, it is planned that investigations and remediation will be undertaken as necessary to remove the site from the Register at the end of the project.

### ***Resource sterilisation***

The geological model predicts there will be no sterilisation of coal resources due to the location of the proposed rail loop, mining infrastructure and onsite water storages. The NR&M submission on the EIS raised the possibility that the drilling program may not have eliminated shallow occurrences of coal and other minerals. However, NR&M concluded that the sterilisation considerations have been satisfactorily dealt with by the proponent.

### ***Flora and fauna survey***

A field assessment of terrestrial flora of the project site was undertaken by the proponent in 2001. Of the 4203ha total project area, 2991ha (71%) have been cleared, leaving 531ha (13%) remnant vegetation (Poplar Box Woodland and Dawson Gum – Brigalow Woodlands), and 681ha (16%) regeneration of young Brigalow. There is a narrow remnant strip of Regional Ecosystem 11.11.16 (*Eucalyptus cambageana*, *Acacia harpophylla* woodland on old sedimentary rocks and folding lowlands), which is listed in the *Vegetation Management Regulation 2000* as “of concern”. This remnant is considered too small and isolated to have regional significance. However, it would provide habitat of significance on a local level. Due to the recent habitat clearing and cattle grazing over the majority of the project site, it is considered that the

habitat value of the environment is diminished and would not be further significantly impacted by the proposed mining operation.

The results of the vegetation surveys presented in the EIS may be of use for updating the regional ecosystem mapping produced by the Queensland Herbarium. The EPA has requested that the proponent forward the results to the Herbarium for assessment. This is a standard procedure for such projects and is being complied with by the proponent.

A number of weed species were recorded as present on the project site including the following declared weeds:

- *Parthenium (Parthenium hysterophorus)*
- *Harrisia Cactus (Eriocereus martini)*
- *Velvety Tree Pear (Opuntia tomentosa)*
- *Spiny Pest Pear (Opuntia stricta)*

The proponent has committed to implementing a weed management plan.

#### ***Recommended rehabilitation strategy***

The rehabilitated landforms will be assigned post-mining land suitabilities of Class 4 (marginal land requiring major inputs to sustain the use) and Class 5 (unsuitable due to extreme limitations). The post-mine landforms will be suitable for the proposed final land uses of grazing and enhancing conservation values. The proposed post-mining carrying capacity of the land is one beast per 12ha, a decrease from one beast per five hectares.

The submission by the Mackay Conservation Group suggests grazing should not be an allowable post-mining land use. However, since pre-mining land use is grazing and land use of surrounding properties is grazing, it appears that this is the most practical objective. The success of the rehabilitation will be critical to ensure minimum environmental harm from the proposed land use. That is, the post-mining rehabilitated areas will be fragile and appropriate management will be required. Exclusion of cattle from the mining lease area during mining operations will allow regeneration of natural habitat in areas not directly disturbed by mining activities, improving the conservation value of those areas. To that end, **it is recommended that the progressive rehabilitation strategy includes the exclusion of cattle from regenerating brigalow areas.**

**In addition, the rehabilitation strategy must include a combination of grazing and native ecosystem objectives for final land use and rehabilitation success criteria.** Further information regarding the rehabilitation strategy will be required in the EMOS.

#### **1.4.4 Cultural heritage**

The two cultural heritage surveys that have been undertaken on the Moorvale Coal Project site have identified a number of sites consisting of low density artefact scatters, isolated stone artefacts and approximately 20 scarred trees.

A draft Cultural Heritage Management Plan (CHMP) has been prepared and is currently being reviewed by the EPA, Department of Aboriginal and Torres Strait Islander Policy, the Barada Barna Kabalbara Yetimarla people and the Coppabella South Aboriginal Group within the Wiri Aboriginal Corporation.

The management strategies outlined in the CHMP include:

- actions to be taken regarding items located within the area of disturbance;
- actions to be taken regarding items located outside the area of disturbance;
- actions to be taken regarding new items not identified in the CHMP;
- training and education;
- protocols; and
- dispute resolution.

The Department of Aboriginal and Torres Strait Islander Policy (DATSIP) identified a number of references that needed correcting in the EIS and these were addressed in the proponent's EIS Response Supplement. In addition, DATSIP requested involvement in the review of the CHMP and this was arranged by the EPA.

Clarification was given in the EIS Response Supplement regarding the assessment of non-aboriginal cultural heritage issues.

**The CHMP implemented for the project must be acceptable to the EPA and the relevant Traditional Owner representatives.**

Issues relating to Native Title were raised in a public submission on the EIS. However, these issues are addressed by NR&M as part of the mining lease application and a copy of the submission has been forwarded to the Mining Registrar.

#### **1.4.5 Noise and vibration**

Baseline ambient noise measurements were conducted and range from 26 to 32 dB(A). This is typical of a rural environment. The EIS makes noise level predictions on the worse case environmental conditions scenario for the rock drill, wash plant and rail loadout facility.

Mining generally involves use of equipment and activities that generate significant noise. However, the impact on surrounding residences and other sensitive places has been adequately identified in the EIS. **Specific management strategies, developed to minimise noise impacts, are outlined in the EIS and must be implemented through the Plan of Operations for the site. It is recommended that the environmental authority for the project include a requirement for a complaints management system.**

A number of technical queries by the EPA have been addressed in the Response Supplement. **It is recommended that the conditions of the environmental authority, prepared by the EPA, address any outstanding issues regarding nuisance from noise.**

Baseline vibration measurements were carried out, indicating minimal background vibration present. Management of blasting is identified in the EIS as the major method of reducing vibration impacts from the mining operations. As is the case for noise impacts, **it is recommended that the identified management strategies for minimising vibration impacts be implemented through the Plan of Operations.**

Submissions on the EIS from two neighbouring landholders expressed concern over blasting vibration and fly-rock with regard to nuisance to residences and impact on cattle. The EPA is satisfied that blasting practices will minimise the affect of blasting on cattle. **It is a recommendation of this report that the proponent notify local landholders of blasting times and locations.** Noise nuisance was also raised in the submissions, however these issues are addressed above.

#### **1.4.6 Waste**

The EIS classifies waste into domestic, industrial and mining categories. The proponent has committed to implementing the waste management hierarchy that promotes avoidance, recycling and reuse over disposal. There will be no disposal of industrial or domestic wastes on the Moorvale project site. Wastes that cannot be reused or recycled will be disposed of at a licensed disposal site.

Approximately 160 million bank cubic metres of overburden and interburden will be moved during mining operations. Initially this material will be placed in an out-of-pit box cut spoil dump. As mining progresses it will be placed in mined-out pits so that the box cut spoil dump and in-pit dumps will be formed and contoured into a single elevated landform.

Approximately six million cubic metres of washery rejects and tailings will be produced during the life of the mine. This material will be pumped to the co-disposal area and deposited and drained. The co-disposal cells will have a total footprint area of less than one square kilometre with a vertical height of 20m. Decanted water will be directed to the co-disposal return water dam from where it will be pumped back to the coal preparation plant. The EIS describes the method of operation of the co-disposal system, which will be similar to the existing Coppabella Coal Mine system.

Appropriate management of wastes will minimise the project's impact on water and land values. **The proponent has committed to preparing and implementing a waste management plan, and it is recommended that this plan be incorporated into the Plan of Operations for the project.**

### 1.4.7 Social

A construction access road and a permanent mine access road will be required for the project. The EIS describes the design criteria for both roads. Traffic studies presented in the EIS predict a four percent increase of total traffic movements on the Peak Downs Highway as a result of the Moorvale Coal Project. Queensland Rail has factored the coal production from this project into their forecasts of coal freight loads.

The Moorvale project site is located 10km south of Coppabella township and approximately 50km from both Moranbah and Nebo. The Coppabella township is essentially a Queensland Rail operations accommodation centre. It is located in Nebo Shire which has a total population of 2,200 residents. Facilities and services are limited in Nebo Shire, although Moranbah, in Belyando Shire, offers a wide variety of services. The community surrounding the project site is comprised of local graziers residing on pastoral properties.

The operations workforce for the project will be approximately 70. The proponent expects that the construction and operation contractors will employ local people, accommodated across Nebo, Coppabella and Moranbah, and predicts that the influx of people and requirements for industrial service providers will have minimal impact on services, facilities and traffic. However, the Nebo Shire Council has concerns about the local impact from a workforce of this size. The Council's submission highlighted issues regarding the upgrading of facilities at Coppabella to make it suitable for accommodating the new construction and operational workforce. APC has not adequately addressed these concerns and **it is recommended that discussions and agreement between APC and Nebo Shire Council be formalised in writing before construction commences.**

Concerns raised in the EIS submissions by neighbouring land holders regarding potential financial losses should be addressed through the compensation provisions of the *Mineral Resources Act 1989*. A copy of the submissions will be forwarded to the Mining Registrar.

**It is recommended that the proponent consider the establishment of a community reference group or stakeholder panel that meets periodically over the life of the mine.** Potential members of the reference group could include:

- local environmental groups;
- catchment groups;
- land holders;
- native title holders or claimants;
- cultural bodies;
- local chamber or commerce;
- local government;
- government land managers; or
- Environmental Protection Agency.

### 1.4.8 Hazard and risk

The environmental risk assessment provided in the EIS is comprehensive and will provide a good basis for annual reviews and updates. The information should be incorporated into an onsite environmental management system. As committed to in the EIS, **it is recommended that the environmental risk assessment be an ongoing exercise and reviewed and updated annually.**

### 1.4.9 Standard criteria

Section 58 of the *Environmental Protection Act 1994* requires that the standard criteria be considered when preparing the EIS Assessment Report. The standard criteria are:

- (a) *the principles of ecologically sustainable development as set out in the National Strategy for Ecologically Sustainable Development;*
- (b) *any applicable environmental protection policy;*
- (c) *any applicable Commonwealth, State or local government plans, standards, agreements or requirements;*
- (d) *any applicable environmental impact study, assessment or report;*
- (e) *the character, resilience and values of the receiving environment;*
- (f) *all submissions made by the applicant and submitters;*
- (g) *the best practice environmental management for activities under any relevant instrument, or proposed instrument, as follows—*
  - (i) *an environmental authority;*
  - (ii) *an environmental management program;*
  - (iii) *an environmental protection order;*
  - (iv) *a disposal permit;*
- (h) *the financial implications of the requirements under an instrument, or proposed instrument, mentioned in paragraph (g) as they would relate to the type of activity or industry carried out, or proposed to be carried out, under the instrument;*
- (i) *the public interest;*
- (j) *any applicable site management plan;*
- (k) *any relevant integrated environmental management system or proposed integrated environmental management system;*
- (l) *any other matter prescribed under a regulation.*

Appendix A3 of the Moorvale Coal Project EIS presents a consideration of the standard criteria by the proponent. Although, the standard criteria listed in the EIS are worded slightly differently, the conclusions are generally adequate.

The EPA has undertaken an independent assessment and considers that the project adequately addresses the standard criteria, provided the recommendations made in this report are implemented.

## 2. Adequacy of the EIS in addressing the terms of reference

The Moorvale Coal Project EIS and Response Supplement together adequately address the terms of reference finalised by the EPA in October 2001.

## 3. Adequacy of the EMOS for the project

The EPA has reviewed the amended EMOS and considers it to be adequate to prepare the draft environmental authority for the project. An EMOS Assessment Report will be prepared separately.

## 4. Suitability of the project

The EPA has considered the final terms of reference, the EIS, all submissions on the EIS, the Response Supplement, and the standard criteria and has determined that the Moorvale Coal Project as described is suitable to proceed, provided the recommendations of this report are adopted.

Project issues were individually discussed in Section 1.4.

## 5. Recommendations

Recommendations of this EIS Assessment Report are presented below. The entity responsible for each recommendation is indicated in brackets.

Environmental authority

1. Include a requirement in the environmental authority to require a complaints management system (including corrective actions). *(EPA)*
2. Surface water quality limits will be set in the environmental authority. *(EPA)* Further background water quality data must be collected over the next three years to verify site-specific conditions. *(Proponent)*
3. Include a requirement in the environmental authority to monitor during operation of the project, the bores on Mavis Downs accessing the shallow aquifer. *(EPA)*
4. Address any outstanding issues regarding noise and vibration as conditions of the environmental authority. *(EPA)*



## EMOS and Plan of Operations

5. Implement monitoring, including chemical and aquatic biology, of affected surface waters downstream from the project site to ensure early detection of any problems in water quality and quantity. A remedial action plan should be formulated. *(Proponent)*
6. Include the exclusion of cattle from regenerating brigalow areas in the progressive rehabilitation strategy. This information should be detailed in the EMOS. *(Proponent)*
7. Include in the rehabilitation strategy, a combination of grazing and native ecosystem objectives for final land use and rehabilitation success criteria. This information should be detailed in the EMOS. *(Proponent)*
8. The Cultural Heritage Management Plan implemented for the project must be acceptable to the EPA and the relevant Traditional Owner representatives. *(Proponent)*
9. Implement the specific noise management strategies outlined in the EIS through the Plan of Operations for the site. *(Proponent)*
10. Implement the identified management strategies for minimising vibration impacts through the Plan of Operations. *(Proponent)*
11. Notify local landholders of blasting times and locations. *(Proponent)*
12. Incorporate the waste management plan, to be prepared and implemented by the proponent, into the Plan of Operations for the project. *(Proponent)*
13. Annually review and update the environmental risk assessment for the project. *(Proponent)*

## General

14. Formalise in writing before construction commences, the discussions and agreement between APC and Nebo Shire Council regarding upgrades of Coppabella social facilities and services. *(Proponent)*
15. Consider the establishment of a community reference group or stakeholder panel that meets periodically over the life of the mine. *(Proponent)*
16. Implement all commitments to management/mitigation strategies made in the EIS and Response Supplement. *(Proponent)*