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8.0 PROJECT JUSTIFICATION

Key points

- The mine represents a major investment in both the local community and the national economy. The economic benefits are considerable, and have already been highlighted in previous chapters;
- The social benefits, principally the securing of long-term jobs in a region already suffering from higher-than-average unemployment, are significant in the Upper Hunter;
- Predicted environmental impacts have been minimised through careful mine planning;
- Where impacts have been identified, effective management strategies have been established; and
- Overall, approving the proposal has many social, environmental and economic positives, while the environmental impacts are manageable.

8.1 Methodology

The Environmental Planning and Assessment Regulation, 2000 requires that an EIS include:

> "*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 principles of ecologically sustainable development*."

The objectives of the development of the Ashton Coal Project are based upon the following principles:

- Development of a safe and economically viable mining operation;
- Operation of the mine in a cost-effective manner;
- Maximisation of resource extraction; and
- Minimisation of impact on the environment.

While the environmental impacts of the project will be minimised, any impacts that do occur are exceeded by the socio-economic benefits from the project. This section draws together a brief summary of both the impacts and the benefits of the project and justifies the development of the Ashton Coal Project.

8.2 Project Findings

8.2.1 Biophysical Environment

Relevant components of the biological and physical environment were investigated during the course of the project development. The findings of these are summarised below:

Air Quality

An assessment was conducted on the existing air quality in within Camberwell village. This assessment determined the capacity of the area to accept additional emissions. Modelling under a worst case scenario was undertaken and assumed that no air quality controls were in place in the surrounding mines. Controls were applied to the Ashton operations.

This modelling showed that the operation of the Ashton Coal Project has the potential to impact on the village of Camberwell during adverse weather conditions when considered in conjunction with other emissions from nearby mines. The assessment has concluded that air quality criteria within Camberwell will not be exceeded with the implementation of operational controls.

Noise and Vibration

The acoustical environment was characterised following three separate rounds of noise monitoring at three locations within and around Camberwell. The lowest values obtained from the noise monitoring were used to develop the noise criteria for the Ashton Coal Project.

Noise modelling was undertaken for a range of operational scenarios. Predicted noise levels were assessed against the criterion. For neutral conditions, no exceedences were predicted. There were some exceedences predicted for construction and operational scenarios during an inversion or windy conditions from the north west.

To avoid the predicted exceedences, a number of operational control measures will be implemented. It was concluded that with these specific controls adopted, the project will not exceed the EPA criteria within Camberwell village.

There are no predicted exceedences due to vibration.

Subsidence

Impacts of subsidence, as predicted by modelling can be controlled, as longwall panels are generally located under grazing land. Measures, such as compensation, amelioration and repair can protect the interests of the owners of freehold land and infrastructure such as power transmission lines.

Total subsidence will range from zero to less than 6m over the underground mine area, occurring progressively over the 18 year mine life of the underground as each of the 4 seams are extracted. Multiple seam extraction will cause ground cracking although the impact on the land surface is predicted to be low, and damage capable of ready repair. It is probable that some dams and associated

erosion control structures will suffer damage that would require replacement water supplies to be provided, until the drainage is repaired and the dams refilled.

Overall the subsidence impacts are capable of mitigation and control through ongoing monitoring, coupled with land management practices that assist minimisation of impact.

Flora and Fauna

Existing vegetation communities in the open cut area will be significantly disturbed as a result of the project. Woodlands in this area are in a modified state due to past agricultural practices, and do not contain any plant species that are threatened or regionally significant.

Riparian vegetation along the banks of Bowmans Creek will be affected once the creek is diverted around the underground mine area.

The impact on flora will be compensated through a comprehensive rehabilitation plan. Rehabilitation will be conducted progressively, and may present opportunities to introduce more locally significant species than which are currently present.

No significant impacts on fauna were predicted. The rehabilitation of the site may benefit the local fauna populations through improvement of the existing habitat.

No “significant effect” on threatened species, endangered populations and endangered ecological communities under the New South Wales Threatened Species Conservation Act, 1995 will occur as a result of the proposal.

Aquatic

Bowmans Creek is located along the western boundary of EL 4918. An inspection of the creek revealed that the stream had sections of good to very good riparian cover and in-stream conditions ranged from good to excellent. However, the water quality in Bowmans Creek in comparison to both Glennies Creek and the Hunter River shows a marked difference as shown in **Figure 3.13**. Common carp was the only fish species observed during the field inspection.

It was concluded that fish and invertebrate species which were likely to occur in Bowmans Creek were not listed under the Threatened Species provisions of the Fisheries Management Act 1994.

The stream diversion has been designed with specific attention to the provision of aquatic habitat. The stream will mimic a natural system by providing adequate pool and riffle sequences and the establishment of riparian vegetation. The diversion will be constructed and operational prior to the progression of longwall mining (longwall panel 4) below Bowmans Creek. Compensatory habitat will also be provided in localised pools to enhance aquatic habitat in the project area for the long term.

8.2.2 Human and Community Environment

Relevant components of the human and community related environments were investigated during the course of the project development. The findings of these are summarised below:-

Indigenous and Non Indigenous Heritage

An archaeological survey conducted over the project area identified 24 archaeological sites. Sites were identified as being impacted by either subsidence, the location of the western emplacement area or the Bowmans Creek diversion works. Other sites were identified as being located in the vicinity of the open cut mine eastern emplacement, or surface facilities area. For those sites, which have been identified as being impacted by the proposal, Section 90 Consents to Destroy (under the National Parks and Wildlife Act) will be obtained.

The assessment of european heritage did not conclude there would be any significant impacts.

Socio-Economic

The Ashton Coal Project will employ approximately 200 personnel during construction and approximately 140 personnel during the mining operation. The project will provide much needed employment in the mining industry, which has seen a drop in employment of approximately 25% since 1997.

The mine will have no adverse impacts on the provision of services as it will not result in an increased population. Likewise, the proposal has no effect on housing provision during either the construction or operational phases of the development.

It is anticipated that the majority of coal produced by the Ashton Coal Project will be exported. The proposed mine will assist in Australia's balance of payments.

The mine will be a significant provider of revenue to the Federal and NSW governments through taxation, royalties and rail and port facility contributions.

Visual

The existing visual amenity applying to the development site has been described as moderate. Views to the proposed activities occur from the New England Highway in particular, and to a lesser extent from the village of Camberwell. Other rural dwellings in the locality will have views to the development.

To mitigate any potential visual impacts to both motorists and residents, environmental bunds are proposed around emplacement areas and the pit. These will be supplemented with screen planting.

Transport

It was concluded that there would be no impact on traffic due to the proposal. It was also concluded that there would be sufficient capacity on the new England Highway to accommodate the predicted

additional of traffic generated by the project.

The estimated additional number of light vehicle movements is within the capacity of Glennies Creek Road. A mine access intersection will be provided on Glennies Creek Road as well as improvements to the turn onto the highway, resurfacing and line markings. These upgrades will improve the safety for travel on these roads and will be provided at nil cost to the community.

Saleable coal will be transported by rail for the life of the project with the exception of early tonnages sold during the initial construction period.

8.3 Ecological Sustainable Development

8.3.1 General

This section describes Ecologically Sustainable Development (ESD) and how it relates to the proposal. The *NSW Environmental Planning and Assessment Regulation, 2000* lists four principles of ESD that must be considered in the environmental impact assessment process for the proposal. These principles are similar to those set down in the *Protection of the Environment Operations Act 1997*. They are:

- The precautionary principle;
- Social equity, including inter-generational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

8.3.2 The Precautionary Principle

The Intergovernmental Agreement on the Environment 1992 defines the precautionary principle as:

> "*Where 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*".

Application of the precautionary principle to the Ashton Project proposal needs to ensure that there has been:

- Careful evaluation of the proposal to avoid serious or irreversible damage;
- Predictable and transparent decision making for the proposal; and

- An assessment of consequences of various options undertaken.

The environmental consequences of the proposal have been documented in **Section 5** and associated Appendices. Scientific and engineering analysis of the environment and likely impact of the proposal has been thorough and has involved, field surveys, computer modelling and indicative impact. This has allowed a reasonable degree of certainty as to the overall impact of the operation and feasible mitigation measures to be developed. These measures are presented in **Section 6**.

At all stages of project development there has been an open and transparent decision making process. All relevant government authorities and known landholders potentially affected by the proposal were consulted during the preparation of the EIS (refer **Section 2**). This process enabled potential issues of concern to be identified and included in the preparation of this EIS.

The proposal was developed from a number of options which looked at:

- Alternative methods and layouts in the mining of the resource;

- Options for rejects and overburden emplacement including location, methodology and construction criteria; and

- Coal transportation options.

The final proposal was selected on the basis that it achieved local community and company needs in an environmentally acceptable manner whilst ensuring economic viability. Descriptions of the alternatives considered are described in **Section 7.**

8.3.3 Social Equity including Intergenerational Equity

Social equity involves value concepts of justice and fairness so that the basic needs of all sectors of society are met and there is a fairer distribution of costs and benefits to improve the well-being and welfare of the community, population or society (DUAP, 1995). Social equity also includes concerns for intergenerational equity which requires 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.

The design of the proposal combined with the mitigation and rehabilitation measures will minimise the impact not only upon the current generation but also upon the future generations. Whilst the depletion of the resource will remove this opportunity for future generations, the expected economic benefits generated by the proposal will benefit both. The construction and operation of the mine will deliver significant economic benefits to the local community, the region and both state and federal governments.

A key objective in both the project construction and operational phases will be the management and

investment in plant and equipment that minimises pollution and wastes whilst maximising economic benefits through energy efficiency. The implementation of this objective will help to ensure that the current standard of environmental amenity is maintained or improved for current and future generations.

8.3.4 Conservation of Biodiversity and Ecological Integrity

Biodiversity (short for biological diversity) is the variety of all life forms – the plants, the animals and micro-organisms, the genes they contain and the ecosystems of which they are a part. Off-reserve conservation is that outside of reserves, national parks etc and has been considered in the preparation of this statement. Current laws that cover off-reserve lands include issues such as:

- The prevention of land degradation, particularly soil erosion and land salinisation;
- Nature conservation, including the protection of habitat;
- The conservation of native vegetation;
- Landscape conservation;
- Preservation of amenity; and
- The destruction of exotic pests, both plant and animal.

A description of the existing environment, likely environmental impacts and the measures proposed to minimise the impacts are described in **Sections 3, 5** and **6** respectively. All environmental characteristics, habitats and impacts that could be affected by the proposal are described in this document.

8.3.5 Improved Valuation and Pricing of Resources

This principle is a component of intergenerational equity and addresses the concept that environmental factors should be included in the valuation of assets and services. Such valuations for this proposal include the concepts of:

- "Polluter pays" - that is those who generate pollution and waste should bear the cost of containment, avoidance or abatement;
- The cost of proposed mitigation methods and final landform rehabilitation costs being factored into the economic analyses to demonstrate the project is economically and environmentally viable;
- The cost of monitoring and reporting the environmental performance and management of the

operation;

- Maximisation of re-use and re-cycling of all wastes and waste products; and
- Maximising the use of existing infrastructure and currently disturbed areas.

These concepts are considered at various points within the EIS, especially **Sections 5** and **7**.

8.4 Project Benefits

The proposed Ashton Coal project will result in significant benefits for Australia, NSW, Hunter Valley and the Singleton LGA by:-

- Employing up to 200 employees during construction and 140 permanent employees during operation;
- Flow-on effects of the operation into the local community for supply of infrastructure and services;
- Significant capital expenditure outlays to develop the project;
- Ongoing capital expenditure during the life of the mine; and
- Significant tonnages of coal directed to domestic and export markets.

8.4.1 Economic Benefit

The main benefit of the Ashton Coal Project in socio-economic terms is the employment of up to 200 employees and contractors during construction and up to 140 employees and additional service contractors during the 20 year operation. The potential for employment in the mining industry for the region is highly significant, considering the decline in employment in recent years in the industry. The boost in local employment will assist in counteracting the social and economic decline currently being experienced by many rural and regional communities.

The annual payments estimated to be paid in wages flow-on income largely remain in the local economy. It is likely that most of the mine workforce will reside in and around the Singleton LGA. This will provide significant, ongoing income for businesses within these centres as well as other localities in the Region.

It is anticipated that each year of Ashton's operations significant contributions in tax to the Federal Government, as well as royalties and port/rail charges to the NSW government will be made.

8.5 Project Justification

The Ashton Coal Project is justified on the basis of its strong economic and social benefits to the upper Hunter Valley beyond, and the proposed 'state of the art' environmental management practices. Based on the current economic climate the Ashton Coal Project represents the potential for local employment in the coal industry, which has experienced a significant decline in previous years.

Predicted environmental impacts as discussed in **Section 8.2.1** and **8.2.2** will be managed through a comprehensive environmental management system. The mine operation has also been designed to minimise any impacts on air quality, noise and vibration on the village of Camberwell during adverse climatic conditions.

The aspects of the proposal for which monitoring of impacts (both potential and predicted) is recommended are:

- Subsidence;
- Air quality;
- Meteorological conditions;
- Noise and vibration;
- Groundwater and surface water quality;
- Archaeological sites subjected to subsidence; and
- Erosion control measures.

The proposal will contribute significantly to the region both socially and economically. The proposal will operate for 20 years, therefore providing long term positive impacts, both directly and indirectly to the local and regional economies.

The consequences of not proceeding with the Ashton Coal project include;

- The loss of 140 full time jobs for the local community;
- A significant loss of income to the local area from both mine expenditure and flow on effects;
- A loss of revenue to the government stemming from potential taxes and royalties; and
- The potential to enhance the site from its current state to an area of ecological significance as a result of post mining rehabilitation.