

This section discusses the compatibility of the Ellensfield Coal Mine Project (ECMP) with the Standard Criteria as defined in the *Environmental Protection Act 1994* (EP Act), and demonstrates how the ECMP conforms to each principle of Environmental Sustainable Development (ESD), as listed in *The National Strategy for Ecologically Sustainable Development*¹.

E.1 Standard Criteria

Schedule 3 of the EP Act² lists the Standard Criteria as:

- a) the principles of the ecological sustainable development as set out in the *National Strategy for Ecologically Sustainable Development*¹;
- 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-
 - an environmental authority
 - a transitional environmental program
 - an environmental protection order
 - a disposal permit
 - a development approval;
- 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; and
- l) any other matter prescribed under a regulation.

The ECMP Environmental Impact Statement (EIS) has been developed to address the following points:

- Environmental legislation- Applicable legislative requirements are discussed within the EIS for each of the various components, as are relevant Commonwealth, State and Local Government plans, standards and agreements.

¹ Commonwealth Government (1992) *The National Strategy for Ecologically Sustainable Development*

² Queensland Government (1994) *Environmental Protection Act*

- Receiving environment- the EIS documents the baseline, or receiving environment, and then assesses the impact the ECMP will have on that environment. This is discussed for each component within the EIS.
- Environmental Management Plans- an Environmental Management Plan has been developed that addresses the impacts identified for each of the environmental components.
- Community/stakeholder concerns- a Consultation Program has been developed and implemented to inform the public about the ECMP, and to obtain feedback on community concerns and interests relevant to the Project. Feedback on the proposed mine has been considered in the preparation and presentation of the EIS.

By addressing the above points in the EIS and modifying elements of the ECMP where required, the ECMP is compatible with the standard criteria.

The following section specifically addresses criterion a) of the standard criteria, the principles of ESD.

E.2 Principles of Ecologically Sustainable Development

The key objectives and guiding principles for ecological sustainable development, as outlined in the *National Strategy for Ecologically Sustainable Development*, are:

- Key Objectives:
 - to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;
 - to provide for equity within and between generations; and
 - to protect biological diversity and maintain essential ecological processes and life-support systems.
- Guiding Principles:
 - decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations;
 - 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;
 - the global dimension of environmental impacts of actions and policies should be recognised and considered;
 - the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised;
 - the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised;
 - cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms; and
 - decisions and actions should provide for broad community involvement on issues which affect them.

E.2.1 Project Achievement of Key Objectives of ESD

As listed above, the Commonwealth Government has developed objectives and guidelines that encourage development in Australia to be ecologically sustainable. Vale is committed to ensuring the ECMP is ecologically sustainable as discussed in the following sections.

Vale's legacy statement is as follows:

In all locations where we operate, we seek to contribute to a long-term positive legacy promoting the quality of life among local residents as well as the conservation of ecosystems, even after terminating our operations. We strive to conduct our business in such a way that the economic, social and environmental dimensions are in balance, thus contributing towards sustainability. We work towards the integration with local cultures, respecting the differences and unique characteristics of each territory and each population. To pursue sustainability represents both a challenge and a journey that engages our employees and partners in all our activities.³

Enhance individual and community well-being and welfare

Vale is committed to enhancing the well-being and welfare of the local community within which the ECMP will operate. Vale will provide employment opportunities to members of the community, and has committed to supporting a TAFE program to upskill sections of the workforce into the future. Vale is also conscious of social issues that exist within the community, and has modified its original plan for workforce housing to support the Local Councils efforts in addressing those issues.

The ECMP will result in the establishment of additional infrastructure and more effective use of the existing infrastructure, and commits to help maintain community facilities and social services.

Provide for equity within and between generations

The ECMP will monitor potential impacts on the local environment and implement management strategies where required to ensure the project does not significantly reduce, or fail to maintain, the health, diversity and productivity of the surrounding environment or affect future generations.

The mine will be rehabilitated with pastures to support cattle grazing on non-spoil areas, and native bushland on spoil areas to enhance conservation values in the area.

Mine water will be managed through a water management system such that no mine water will be discharged into creeks, thereby protecting downstream water quality.

Protection of biological diversity and essential ecological processes

The proposal will directly affect approximately 317 ha out of the total ECMP application area of 3,388 ha. The area proposed to be disturbed equates to 9.36% of the project lease area, the majority of which is restricted to the northern part of ML 70393.

The ECMP area has been significantly altered due to grazing. Much of the woodland on the site has been cleared, and pasture improvement has led to the dominance of buffel grass in the ground layer. A range of other exotic plants contribute to a reduction of habitat value overall. Of the vegetation communities present on the site, each will be subjected to less than 1% loss of their overall area as a result of the proposal.

Clearing is to preferably avoid vegetation communities identified as 'Endangered' or 'Of Concern'. Areas of vegetation to be cleared will be restricted to the minimum area required. The use of tape, pegs or other markers will be employed to clearly delineate areas to be cleared, prior to commencement. Particular attention will be paid when delineating clearing areas in proximity to any 'Endangered' or 'Of Concern' vegetation communities that will not be disturbed.

Where clearing of vegetation is within or in close proximity to riparian communities, adequate erosion and sedimentation mitigation measures will be utilised to ensure waterways are not impacted and riparian vegetation is not unduly affected.

Any clearing involving the removal of expansive stands of woodland vegetation will be undertaken in stages to reduce disruption for fauna dispersal, thereby retaining habitat connectivity. That is, clearing should be undertaken towards the direction of any adjacent contiguous vegetation that is not to be cleared to ensure isolated stands of vegetation are not created.

³ Vale (2008) *Sustainability Report 2007*

The retention of aquatic habitat and fluvial processes on the site is essential for continued ecological functionality at all levels on the site. Therefore, areas beyond the intensive zone of development must be protected from impacts. To ensure this occurs, all riparian areas and streams outside of the intensive development zone are to be protected through early identification and maintenance of buffer zones.

A program to implement offsetting of cleared vegetation communities will be undertaken in accordance with current Commonwealth and State legislative criteria for the offsetting of significant vegetation communities. A biodiversity offset strategy and management plan, if required, will be developed. Criteria for offset suitability will be in accordance with EPA and DEWHA guidelines and best practice.

E.2.2 Project Conformance with Principles of ESD

This section explains how the ECMP conforms to the principles of ESD above.

Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations

The EIS process, and results of specific environmental studies undertaken within that process, has enabled Vale to identify and incorporate in their decision making long and short-term economic, environmental, social and equity considerations. Examples of this include:

- redesigning parts of the mine layout to avoid impacts on endangered flora and fauna following ecological surveys identifying their presence;
- committing to employ and train local residents where practical, and align the training program with those offered by the local government;
- supporting the local government in their town planning endeavours by altering the original plan to house workers in camps, to housing workers within the proposed new development; and
- committing to remediate the land following cessation of operations.

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

Through this EIS, the impacts the ECMP will likely have on the environment has been assessed and an Environmental Management Plan developed, providing measures to mitigate the potential impacts identified. While potential impacts causing serious or irreversible environmental damage were not predicted to result from the development of the mine, the ECMP has the technical experience and financial support to establish, implement, and maintain controls needed to protect the environment, as identified in the EM Plan.

The global dimension of environmental impacts of actions and policies should be recognised and considered

Greenhouse gas emissions constitute the only potential environmental impact with a global dimension that may result from the ECMP. A Greenhouse Gas Assessment was undertaken as part of the EIS, and determined the following points:

- The Queensland Government has proposed to reduce greenhouse gas emissions by 60% by 2050 based on 2000 levels in line with the national target.⁴ This equates to a reduction of approximately 98 MtCO₂-e.

⁴ Queensland Government (2007), ClimateSmart 2050. Queensland climate change strategy 2007: a low carbon future.

- In the years of peak greenhouse gas emissions, Scope 1 and 2 emissions from the mine will be 0.35 MtCO₂-e. The Scope 1 and 2 emissions in peak years will be equal to 0.19% of the State inventory. ECMP emissions are therefore unlikely to have a significant impact on Queensland and Commonwealth Government emissions targets.

The Proponent of the ECMP has committed to greenhouse gas emission reduction measures to minimise its impact on the global environment, including the installation of a power plant and/or flaring of all coal seam gas captured which significantly reduces the greenhouse gas equivalent emissions.

After mining commences, the Proponent will estimate and annually report emissions of substances listed under the National Pollutant Inventory (NPI) National Environmental Protection Measure⁵. All NPI information is publicly available on the NPI website www.npi.gov.au.

It is considered that the ECMP will not have a significant impact on the global environment.

The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised

The ECMP is economically significant at a local, regional and State level. The construction phase of the ECMP is estimated to result in an increase of between 884 and 1,448 jobs in Queensland, including 160 jobs created directly by the construction of the mine. Operation of the mine is anticipated to result in between 1,313 and 2,041 new jobs in Queensland, including up to 340 jobs created directly.

The project will also expand the existing coal mining industry in the region, and create new opportunities for small and medium-sized businesses in the local and regional economy, especially for business providing services to the mining industry.

Specifically, the ECMP will enhance the capacity for environmental protection with a program to implement offsetting of cleared vegetation communities. The program will acquire a remnant/regrowth community that is greater in area than that which will be impacted by the Project.

The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised

The ECMP is designed to produce 5 million tonnes per annum (Mtpa) of run of mine (ROM) combined thermal and coking coal, in an environmentally sound manner. The availability of the product will create export opportunities that will enhance Australia's international competitiveness.

Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms

Vale supports the Commonwealth, Queensland and Local Governments in the adoption of cost effective and flexible policy instruments governing valuation, pricing and incentive mechanisms.

Decisions and actions should provide for broad community involvement on issues which affect them

Vale has developed and implemented a Community Consultation Plan that has been designed to inform the public about the ECMP and facilitate community and Local Government feedback on the project throughout the EIS process. Consultation with Local Government, community members and other relevant stakeholders will continue throughout the construction, operation and decommissioning stages of the project.

⁵ Commonwealth Government (1998) *National Environment Protection (National Pollutant Inventory) Measure*