

25 | Sustainability



Section 25 Sustainability

25.1 Introduction

This section of the Kevin's Corner Coal Mine Project (the Project) Environmental Impact Statement (EIS) provides an assessment of the planning for the Project to demonstrate that it reflects the objectives and principles defined in the National Strategy for Ecological Sustainable Development (Commonwealth Government, 1992).

25.1.1 Ecologically Sustainable Development

Ecologically sustainable development (ESD) means using, conserving and enhancing the community's resources so that ecological processes on which life depends are maintained and quality of life for both present and future generations is preserved or increased (Commonwealth Government, 1992). Simply, it is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nations World Commission on Environment and Development, 1987). An ecologically sustainable approach to project development takes an integrated and long-term view in considering the wider economic, social and environmental implications of decisions and actions for the community and environment, locally and nationally.

25.1.2 Legislative Context

25.1.2.1 Sustainable Planning Act 2009

The Queensland *Sustainable Planning Act 2009* defines ecological sustainability as a balance that integrates protection of ecological processes and natural systems, economic development, and maintenance of cultural, economic, physical and social wellbeing of people and communities.

The *Sustainable Planning Act 2009* provides a legislative framework for managing the development process and assessing effects on the environment by integration of the principles of ESD and coordination of local, regional and state planning. The key principles of ESD are described under Part 1 of the Act.

25.1.2.2 Environmental Protection Act 1994

The objective of the *Environmental Protection Act 1994* is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends – that is, ecologically sustainable development.

25.2 National Strategy for Ecologically Sustainable Development

The National Strategy for Ecologically Sustainable Development (Commonwealth Government, 1992) set the following core objectives for achieving ESD:

- To enhance individual and community well-being 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.

These core objectives should be considered in balance with the following guiding principles to pursue the goal of ESD:

- Decision-making processes should effectively integrate both long-term 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 that 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 that affect them.

The National Strategy for Ecologically Sustainable Development (Commonwealth Government, 1992) provides the broad strategic framework for industry sectors that rely on natural resources as their productive base, including the mining sector. The following objectives were identified to develop the mining sector in a way that manages resources efficiently and is consistent with the principles of ESD:

- To ensure mine sites are rehabilitated to sound environmental and safety standards, and to a level at least consistent with the condition of the surrounding land;
- To provide appropriate community returns for using mineral resources and achieve better environmental management and protection in the mining sector; and
- To improve community consultation and information, improve performance in occupational health and safety and achieve social equity objectives.

ESD is a fundamental consideration in the development and design of the Project. Sustainability principles adopted during the planning of the Project reflect the following guiding principles for achieving ESD. The application of each of the core objectives and guiding principles of ESD to the development of the Project is analysed in Table 25-1.

Table 25-1 Application of key objectives and principles of Ecologically Sustainable Development

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
Core Objectives			
<p>To enhance individual and community well-being by following a path of economic development that safeguards the welfare of future generations.</p>	<p>Yes</p>	<p>The Project will result in significant social and economic benefits for the local and regional community through:</p> <ul style="list-style-type: none"> • Economic stimulus throughout the life of the Project, which is estimated to be \$47 billion. • Increased employment, training and economic business development opportunities. • New or improved support service industries established in the region. • Upgrades to road and additional airport infrastructure. • Introduction of significant supply infrastructure into the region, including water and power. <p>These benefits are likely to result in flow-on effects for individual and community well-being and quality of life.</p> <p>The Proponent is committed to ongoing consultation in accordance with a detailed Community and Stakeholder Engagement Plan to ensure local communities and stakeholders are engaged in a way that encourages active participation and helps safeguard the welfare of current and future generations. This process has already commenced and will continue according to the Social Impact Management Plan (Volume 1, Section 29).</p> <p>In addition, the Proponent has developed the Hancock Community Support Program to develop long-term partnerships that assist the communities to achieve independent growth and promote future economic and community development.</p>	<p>Volume 1, Section 20 Social</p> <p>Volume 1, Section 22 Health and Safety</p> <p>Volume 1, Section 23 Economics</p> <p>Volume 1, Section 29 Social Impact Management Plan</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>To provide for equity within and between generations.</p> <p>Inter-generational equity requires that the present generation ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.</p> <p>Intra-generational equity considers equity within the present generation – i.e. the people within the present generation having equal rights to benefit from the use of natural resources and from the enjoyment of a clean and healthy environment.</p>	<p>Yes</p>	<p>The Project is being developed with consideration given to environmental and socioeconomic protection for future generations. This EIS identifies management and mitigation measures to ensure that the development of the Project will not reduce or degrade the health, diversity and productivity of the environment or adversely affect current and future generations.</p> <p>The planning process has provided for broad community involvement on issues that affect them, and has resulted in feedback about the environment which the Project proposes to operate in. This feedback included a comprehensive assessment of potential impacts and appropriate avoidance, mitigation and management measures to be implemented during design, construction, operation and decommissioning of the Project.</p> <p>In addition to protecting the existing environment from potential adverse impacts, the following Project initiatives will provide other benefits to current and future generations.</p> <ul style="list-style-type: none"> • Increased economic growth over 30-year project life. • New infrastructure through upgrades and additions to roads, aerodrome, water supply and power. • Increased employment and training opportunities. • Business development opportunities. <p>Specific environmental management plans, monitoring and auditing and community consultation will assist in integrating the principles of inter- and intra-generational equity values at all stages of the Project life cycle.</p> <p>Development of the Galilee Basin will lead to benefits for the region extending beyond the scheduled 30-year life of the Project.</p>	<p>All EIS</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>To protect biological diversity and maintain essential ecological processes and life-support systems.</p>	<p>Yes</p>	<p>The conservation of biological diversity and ecological integrity was a fundamental consideration in development of the Project as required by legislative obligations under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and the <i>Sustainable Planning Act 2009</i>.</p> <p>The results from the ecological studies provided input into Project planning and development, including nature conservation and rehabilitation strategies. As a result, the following design and management measures were considered and where possible adopted to protect the biological diversity and ecological integrity of the Project site.</p> <ul style="list-style-type: none"> • Location of the mining and infrastructure areas to minimise local-scale impacts (e.g. vegetation clearing) and maintain habitat connectivity. • Staff induction to raise awareness of nature conservation values, native species identification and management. • Erosion control to prevent sedimentation of existing habitat. • Progressive revegetation with seed from native species to ensure long-term stability and rehabilitation success. • Use of underground mining techniques for most of the mine, which minimise the open-cut mine footprint, reducing the impact on the local vegetation communities. • Rehabilitation strategy to assist in the recovery of the area's biological diversity and ecological integrity. • Control pest and weed species through implementation of management plans. • Engagement of ecologist/fauna spotter prior to clearing of vegetation to ensure adequate protection of local fauna in areas identified as sensitive. <p>A detailed Environmental Management Plan (EMP) has been developed (refer to Volume 2, Appendix W) that identifies management and mitigation measures to protect biological diversity during the construction and operation of the Project.</p>	<p>Volume 1, Section 9 Terrestrial Ecology</p> <p>Volume 1, Section 10 Aquatic Ecology and Stygofauna</p> <p>Volume 2, Appendix W Environmental Management Plan</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>Decision making processes should effectively integrate both long-term and short-term economic, environmental, social and equity considerations.</p>	<p>Yes</p>	<p>The principle of integration requires mutual consideration of the components of sustainable development – that is, environmental protection and social values are considered in making economic development decisions.</p> <p>This EIS demonstrates that an iterative planning approach to the design and development of the Project will be adopted to effectively integrate both environmental and social considerations into decision making. The Project aims to positively influence and benefit the Alpha, Clermont and Emerald communities and the surrounding Barcaldine Region.</p> <p>Potential environmental and social effects over the Project life were identified on the basis of a detailed understanding of the existing environment and community context, past experience with similar projects and input from community consultation.</p> <p>Leading experts were engaged to carry out comprehensive specialist studies to assess the potential environmental and social impacts that may occur as a result of the Project development (Volume 1, Section 29). Where potential impacts could not be avoided, mitigation measures have been proposed.</p> <p>The outcomes of each of these studies demonstrate how the Project accounted for the cost to the environment and the influence on social development, supporting the objectives of ESD.</p> <p>The Project will work with state and local governments to develop a Hancock Consultative Committee (HCC) focussed on assistance, collaboration and facilitating connections between key stakeholders. The HCC will consider the following potential participants.</p> <ul style="list-style-type: none"> • A chair to facilitate the committee; • Representatives from the Project, and potentially neighbouring projects; • Representatives from the local council (as required); • Representatives for the State Government (as required); and • Key stakeholders (likely on a need be basis). 	<p>All EIS</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>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.</p>	<p>Yes</p>	<p>This EIS indicates that the risk of serious or irreversible environmental damage is likely to be low due to the nature of the Project, the existing environment, and the avoidance, mitigation and management measures identified.</p> <p>To fulfil the requirements of the precautionary principle, the Project has included the following measures.</p> <ul style="list-style-type: none"> • Detailed research, planning and investigative studies will be used to increase scientific certainty about the threat of serious or irreversible environmental damage. Outcomes have been and will continue to be fed back into the Project design by incorporating an appropriate margin for error and avoidance, mitigation and management measures. • Management plans will be prepared and implemented to assist in the avoidance, mitigation and management of potentially serious or irreversible damage to the environment and social development. • Monitoring programs will assess the implementation and effectiveness of measures and demonstrate compliance with evaluation objectives and performance criteria. Compliance will verify if the residual risks associated with the Project are low and manageable. If further risks are identified or tolerances are exceeded, the Project will implement further risk management and impact mitigation strategies. • Extensive consultation opportunities have been provided to local communities and stakeholders since 2008. 	<p>All EIS</p> <p>Volume 1, Section 28 Environmental Management Plan</p> <p>Volume 2, Appendix W Environmental Management Plan</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>The global dimension of environmental impacts of actions and policies should be recognised and considered.</p>	<p>Yes</p>	<p>Climate Change: The potential impacts and vulnerabilities to climate change are assessed in Volume 1, Section 14 Greenhouse Gas Emissions and Climate Change. This assessment presents an analysis of the potential greenhouse gas emissions produced as a result of the construction and operation phases of the Project and highlights mitigation options to reduce the quantity of greenhouse gas emissions and the global impact of climate change.</p> <p>The Project aims to be a low emitter of greenhouse gases by utilising the most efficient mining strategies possible. Additional effort is evident by the proposed energy-efficient accommodation village to be used for the housing of employees. Finally, by sharing rail and port facilities with the Alpha Coal Project, the combined total footprint is minimised.</p> <p>World Heritage: There are no world heritage properties directly affected by the Project. The Burdekin catchment flows into the Great Barrier Reef World Heritage Area and Bowling Green Bay Ramsar Wetland (over 400 km from the Project site). Mitigation and management measures proposed to protect world heritage and wetland areas, including migratory species, from any indirect impacts are detailed in Volume 1, Section 9 Terrestrial Ecology.</p>	<p>Volume 1 Section 9 Terrestrial Ecology</p> <p>Volume 1, Section 14 Greenhouse Gas Emissions and Climate Change</p> <p>Volume 1, Section 11 Surface Water</p> <p>Volume 2, Appendix W Environmental Management Plan</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>The need to develop a strong, growing and diversified economy that can enhance the capacity for environmental protection should be recognised.</p>	<p>Yes</p>	<p>The Project represents a significant development within the local, regional and state context facilitating the export of up to 30 Mtpa of product coal. Both construction and operation will result in a major stimulus to the Queensland economy across a range of industry and service sectors.</p> <p>The Project will result in significant social and economic benefits for the local and regional community through the development of business and employment opportunities and investment in infrastructure, which includes the following.</p> <ul style="list-style-type: none"> • Economic stimulus throughout the life of the Project, which is estimated to be \$47 billion. • Increased employment, training and economic business development opportunities. • New or improved support service industries established in the region. • Upgrades to road and additional airport infrastructure. • Introduction of significant supply infrastructure into the region, including water and power. 	<p>Volume 1, Section 23 Economics</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised.</p>	<p>Yes</p>	<p>Once fully operational, the Project will produce approximately 30 Mtpa of coal valued at \$2.9 billion per annum. Economic studies and investor interest indicate that the Project and product are viable and internationally competitive. Conformance with the Terms of Reference (TOR) and EIS process will ensure the Project is conducted in an environmentally sound and sustainable manner.</p> <p>The Project meets Queensland Government objectives in realising the timely development of the Galilee Basin whilst ensuring that community benefits and environmental objectives are supported through the EIS process and the implementation of management plans, including the EMP.</p> <p>Queensland will benefit from the development of the mine through long-term contributions of royalties to the state economy, employment, improvement to local and regional infrastructure, and small and medium business opportunities in surrounding areas.</p> <p>The development of the Project in accordance with the design and management measures identified in the EIS will ensure that international competitiveness is enhanced in an environmentally sound manner.</p>	<p>Volume 1, Section 23 Economics</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
<p>Cost-effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms.</p>	<p>Yes</p>	<p>The EIS planning process identifies the short- and long-term external environmental costs of the Project over the full project life cycle. Environmental and social values and potential impacts are assessed in relevant sections of this EIS. This planning process has accounted for both the discrete and cumulative impacts, both beneficial and adverse, over the Project life to achieve a net positive outcome.</p> <p>Project development takes into account the full life cycle of costs of development through to decommissioning and rehabilitation, including ongoing environmental monitoring and ultimate disposal or recycling or reuse of any waste, in estimating the total Project cost. From the earliest stages of project planning, the Project has acknowledged and accounted for the cost of a progressive and final rehabilitation program to be implemented to achieve the desired landscape performance goals and ensure the post-mining landscape is safe, stable and suitable for the designated future use. Financial assurance is to be put aside to demonstrate commitment to these outcomes.</p> <p>Community and stakeholder engagement will remain an integral component of the Project – e.g. accurate and timely environmental, social and economic information will be provided to surrounding communities and stakeholders to demonstrate compliance.</p>	<p>All EIS, specifically:</p> <p>Volume 1, Section 23 Economics</p> <p>Volume 1, Section 29 Social Impact Management Plan</p> <p>Volume 2, Appendix V Economics</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
Decisions and actions should provide for broad community involvement on issues that affect them.	Yes	<p>The planning process to date has provided for broad community involvement on issues that affect them. The Project's community consultation program provided a comprehensive assessment of potential impacts and appropriate avoidance, mitigation and management measures to be implemented during the Project life.</p> <p>The Proponent is committed to ongoing consultation, in accordance with a detailed Community and Stakeholder Engagement Plan, to ensure local communities and stakeholders are engaged in a way that encourages participation and feedback. This process has already commenced. The development and implementation of the Social Impact Management Plan (refer to Volume 1, Section 29) will actively promote community participation at all stages.</p> <p>In addition, the Proponent developed the Hancock Community Support Program to develop long-term partnerships that assist the communities in achieving independent growth and promote future economic development of the community.</p>	<p>Volume 1, Section 20 Social</p> <p>Volume 1, Section 29 Social Impact Management Plan</p>
Mining Sector Objectives			
To ensure mine sites are rehabilitated to sound environmental and safety standards, and to a level at least consistent with the condition of the surrounding land.	Yes	<p>The Project design and sequencing will enable progressive rehabilitation of the environment disturbed by the Project to comply with rehabilitation goals and objectives of the Department of Environment and Resource Management (DERM) Guideline 18: Rehabilitation Requirements for Mining Projects in Relation to Intergenerational Equity, Polluter Pays Principle, Protection of Biodiversity and Maintenance of Essential Ecological Processes (2007).</p> <p>The strategies for mine rehabilitation will involve progressive landform reparation and revegetation to create a stable post-mining landform and use consistent with the surrounding environment (refer to Volume 1, Section 26). A financial assurance will be put aside to provide guarantee for long-term land use outcomes.</p>	<p>Volume 1, Section 26 Decommissioning and Rehabilitation</p> <p>Volume 2, Appendix W Environmental Management Plan</p>

ESD Objective/Principle	Conformance	Application	Relevant EIS Section
To provide appropriate community returns for using mineral resources and achieve better environmental management and protection in the mining sector.	Yes	<p>Through the EIS planning process and community consultation, the Proponent has committed to provide appropriate community returns to the advantage of both current and future generations, including the following.</p> <ul style="list-style-type: none"> • Economic stimulus throughout the life of the Project, which is estimated to be \$47 billion. • Increased employment, training and economic business development opportunities. • New or improved support service industries established in the region. • Upgrades to road and additional airport infrastructure. • Introduction of significant supply infrastructure into the region, including water and power. • Adoption of best practice technology and management to improve the efficiency and sustainability of the Project. • Financial assurance to be put aside to guarantee appropriate decommissioning and rehabilitation of the Project site. <p>Active community participation and feedback will be encouraged during all stages of Project development.</p>	<p>Volume 1, Section 23 Economics</p> <p>Volume 2, Appendix V Economics</p> <p>Volume 1, Section 29 Social Impact Management Plan</p>
To improve community consultation and information, improve performance in occupational health and safety and achieve social equity objectives.	Yes	<p>The Proponent is committed to ongoing consultation in accordance with a detailed Community and Stakeholder Engagement Plan to ensure local communities and stakeholders are engaged in a way that encourages participation and feedback. This process has already commenced.</p> <p>Active community participation at all stages of the Project life cycle will be facilitated according to the development and implementation of the Social Impact Management Plan (refer Volume 1, Section 29).</p> <p>In addition, the Proponent developed the Hancock Community Support Program to develop long-term partnerships that assist the communities in achieving independent growth and promote future sustainable economic development of the community.</p>	<p>Volume 1, Section 29 Social Impact Management Plan</p>



25.3 Conclusions

The analysis of the core objectives and principles of ESD in Table 25-1 demonstrates the Proponent's commitment to incorporate sustainability considerations throughout design, construction, operation and decommissioning of the Project. This EIS demonstrates an iterative planning approach to the design and development of the Project, effectively integrating both environmental and social considerations into decision making and supporting the objectives of ESD.