

## 18.1 Description of Environmental Values

This section of the EIS identifies health and safety issues associated with the construction and operation of the ECMP and describes measures to manage these potential issues.

### 18.1.1 Community Values

The impacts on the health and safety of the community, workforce and other stakeholders due to project-related activities are considered in detail in the sections of this EIS relating to air and water quality, land use, soil contamination, as well as planning for the rehabilitation and closure of the mine. It should be noted however, that the ECMP is relatively isolated from the surrounding community, greatly reducing the potential for negative impacts from the mining activities on community health and/or safety. The existing community values for health and safety are typical of what would be expected in an agricultural/mining. Within the community there is an expectation of a safe and healthy living environment in accordance with accepted health guideline values, albeit with the recognition in the community that they are living in a coal mining dominated area with potential for air, noise and water emissions which exceed levels in the absence of that land use.

The nearest residential receptors to the ECMP is the Ellensfield homestead (not occupied), located approximately 5 km to the north-east of the MIA, and Redhill homestead, located approximately 12 km to the north-west of the MIA. The nearest towns to the ECMP are Moranbah and Coppabella, located approximately 24 km and 22 km respectively from the MIA. As detailed in Section 16.1.1.1, the population of these two towns are approximately 10,000 and 2,000 respectively and comprises of a range of age groups including children and the elderly. However, as is typical with the demographics of these predominantly mining towns, there are a large proportion of residents (permanent or temporary) aged between 18 and 30 years.

## 18.2 Potential Impacts and Mitigation Measures

### 18.2.1 Potential Impacts – Community

The location of the ECMP infrastructure in relation to the nearest sensitive community receptors is presented in Figure 1.3.2. Due to the distance of these receptors from the mine, the community services such as hospitals, schools, child care centres etc have not been individually identified within the respective town footprints. The services that are available at the two closest town centres (Moranbah and Coppabella) are described in Section 16.1.

The potential impacts on the local community, which includes homesteads such as Redhill and towns such as Moranbah and Coppabella, include noise and vibration, dust, reduced surface water quality and traffic congestion. The potential for these particular aspects to impact on the community are addressed in their respective EIS sections (Section 12.2.3, Section 11.1.6, Section 9.3 and Section 8.2). In addition, a qualitative risk assessment of some of these potential impacts is presented in Section 20.2.

In general, due to the relatively isolated positioning of the ECMP and the fact that it is predominantly an underground operation, there is anticipated to be little discernable impact on the general community in terms of health, safety or quality of life. Potential impacts on the project workforce are addressed in Section 18.2.2.

The ECMP is not expected to produce any odour that may be detrimental to the health and safety of employees, visitors or the general public.

The potential for disease vectors is addressed in Section 20.2.4. Using a qualitative risk assessment technique, the project activities are considered to have a low risk rating for disease vectors.

The ECMP will utilise recycled water to reduce the need to import raw water onto site and release impacted water off-site. The water recycling strategy is presented in Section 9.3.2 and subject to water quality guidelines being met involves the recycling/reuse of water (possibly treated) from the CHPP and MIA and mine dewatering activities back to the mine process areas. The water will not be used for non-

mining activities or able to be accessed by the community or livestock without prior consultation and assessment. The potential impact of recycled water use on the project workforce is described in Section 18.2.2.

## 18.2.2 Potential Impacts – Project Workforce

The nature, and associated occupational health and safety risks, of underground and open cut coal mining in the Bowen Basin are well known and documented. The ECMP has the potential to expose the workforce to dust, gas emissions, chemicals, noise, vibration, biological agents and possibly odour. In line with sound management practice, legislative requirements and duty of care, potential impacts on the workforce will be controlled to acceptable levels using either engineered controls or management practises. These engineered controls and management practises are presented in those specific EIS sections and also in Section 20.2.5 and Section 22. Implementation of mitigation measures and continued monitoring of the workplace environment will maintain the health, safety and quality of life of project employees, contractors and visitors. The project Safety and Health Management System is outlined in Section 18.2.4. This system will be continuously improved and will evolve with the ECMP.

It is not expected that the project area will be exposed to an elevated risk of disease vectors such as mosquitos as discussed in Section 20.2.4. The use of recycled water on site will be subject to a monitoring and treatment program to control the potential for exposure of the workforce to biological or pathogenic agents.

## 18.2.3 Mitigation Measures for Protecting Community Values

The ECMP aims to minimise or eliminate any negative impacts on community health, safety and well being, while enhancing any possible benefits. Details of procedural practices to monitor, audit and manage potential impacts on the community are presented in Section 22. The practical measures that are more permanent in nature, for instance engineered into the project design, are presented in the relevant EIS sections (For example, the placement of the ROM stockpiles in the box cut to reduce potential dust emissions is addressed in Section 11.1.3.1).

The results of air, noise and transport modelling demonstrate that as a consequence of the distance from the community receptors, the ECMP is likely to have a negligible impact on community values.

## 18.2.4 Mitigation Measures for Protecting the Project Workforce

### 18.2.4.1 The Safety Management System

The Proponent has developed and documented a Safety Management System (SMS) that will be implemented during the construction, operation and decommissioning of the ECMP. The SMS formalises the systems, standards, methods and procedures that will be applied to ensure the mitigation of risks relevant to construction, mining activities and decommissioning, and to ensure legislative compliance within the Proponents operations.

The SMS is based on Australian Standard AS/NZS4801 Occupational Health and Safety Management Systems and reflects the Proponent's belief that all injuries and environmental exposures are preventable through demonstrated leadership and the application of the SMS through their policy and operating philosophy. All project personnel are expected to comply with the requirements of the SMS.

The SMS model comprises five elements and twenty standards as illustrated in Figure 18.2.1 and Table 18.2.1.

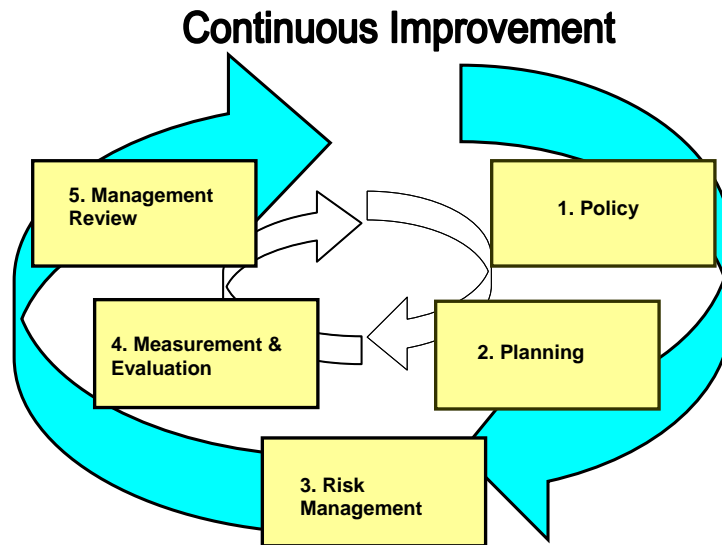


Figure 18.2.1 SMS Model

Table 18.2.1 Safety and Health Elements and Standards

Safety and Health Elements	Safety and Health Standards
1. Policy	1.1 Safety & Health Policy
	1.2 Operating Philosophy
2. Planning	2.1 Leadership & Responsibility
	2.2 Structure – Organisational & Compliance
	2.3 Legal Compliance Register
	2.4 Annual Plans – Objectives and Targets
	2.5 Training & Competency
3. Risk Management	3.1 Risk Register
	3.2 Risk Management Framework
	3.3 Document Management & Control
	3.4 Change Management
	3.5 Contractor Management
	3.6 Emergency Preparedness and Response Plans
4. Measurement & Evaluation	4.1 Health Surveillance Program
	4.2 OH&S Audit & Review
	4.3 Incident Analysis & Reporting
	4.4 Corrective, Preventative Action Requirements
	4.5 Data Management & Reporting
5. Management Review	5.1 Management System Review
	5.2 Communication & Stakeholder Involvement

The Safety and Health Management System Overview Plan document provides details of the SMS, including the strategies, systems and procedures that apply to ECMP. The Safety and Health Management System Overview Plan document specifically addresses the following issues:

- identification of clear safety targets/objectives;
- roles and responsibilities of members of the organisation, relative to the SMS;
- the compliance structure and systems;
- methods for hazard identification and control;
- the audit and review process;
- document control system; and
- the training to be provided to support the Plans.

As part of the SMS, a number of procedures have been developed with additional procedures to be developed where required in order to safeguard the workers' health, safety and quality of life. These include procedures for maintaining a hygienic work environment and participating in the required health surveillance program for site employees.