

22 | Health and Safety





Section 22 Health and Safety

22.1 Introduction

This section of the Environmental Impact Statement (EIS) assesses the health and safety issues relevant to the development of the Kevin's Corner Coal Mine Project (the Project). The health and safety of mine employees, mine visitors, and the public were assessed and mitigation measures outlined, where appropriate.

22.1.1 Health and Safety Management System

The Proponent is committed to providing a safe and healthy working environment to its employees, contractors, and visitors, and completing the Project with minimal negative impacts to the surrounding environment and communities. The health, safety, environment, community and heritage (HSECH) risks associated with the development and operation of the proposed mine are to be managed under the company's safety system. All site and Project personnel must comply with the requirements of this safety system.

The company's safety system is consistent with the principles of ISO 14001 Environmental Management System and AS/NZS 4801 Occupational Health and Safety Management Systems. It provides a framework for implementation and monitoring of plans, procedures and work practices in accordance with the Proponent's HSECH Management Standards. Implementation of the HSECH Management Standards enables identified risks to be appropriately managed and to ensure legislative compliance with approvals and licences.

The legislative and regulatory requirements relevant to the mine are described in Table 22-1.

Table 22-1: Relevant legislation, guidelines and Australian Standards

Relevant Legislation	Requirements	Compliance
<i>Coal Mining Safety and Health Act 1999</i>	Sets out obligations relevant to the design, construction and operation of a coal mine.	Due diligence and reasonable precautions to be applied in carrying out the obligations of the Act, Regulation and relevant standards.
<i>Coal Mining Safety and Health Regulation 2001</i>	Prescribes ways of achieving acceptable levels of risk at a coal mine.	Adopt health and safety management system that provides for risk identification and assessment; hazard analysis, management and control; and reporting.
<i>Dangerous Goods and Safety Management Act 2001</i>	Sets substance-specific standards for the transport and storage of dangerous goods.	Coal mines are exempt from this Act, but are regulated under the <i>Coal Mining Safety and Health Act 1999</i> and Regulations.
<i>Radiation Safety Act 1999</i>	Sets the requirements for handling radioactive substances and the monitoring of persons exposed to the hazard.	Radiation monitoring and screening to be carried out as required by the Act.
<i>Explosives Act 1999</i> and Australian Standard (AS) 2187 Explosives – Storage, transport and use.	Specifies requirements for handling, storage, transport and manufacture of explosives. AS 2187 is called up by the <i>Coal Mining Safety and Health Regulation 2001</i> .	Storage and handling of explosive materials to comply with requirements of the Act and AS 2187.
<i>Workplace Health and Safety Act 1995</i>	Sets out the laws about health and safety requirements affecting most workplaces, work activities and the use of plant and substances in Queensland. Seeks to protect the health and safety of everyone at a workplace, while undertaking work activities or using plant and substances.	Adopt health and safety management system that provides for risk identification and assessment; hazard analysis, management and control; and, reporting. Abide by Queensland Regulations and Codes of Practise outlined within legislation.
<i>Worker Compensation and Rehabilitation Act 2003</i>	Establishes a workers' compensation scheme for Queensland, providing benefits relating to workplace injuries or fatalities, and insurance for all Queensland-based employers	Compensate any HGPL employed workers injured on site per the Act. Ensure all contractors are registered for worker compensation.
AS 1678.5.1.002-1998 Emergency procedure guide – Transport Ammonia-nitrate.	Outlines the requirements for transporting ammonium-nitrate.	All contractors responsible for transport of ammonium-nitrate must comply with AS 1678.
AS 1940:2004 Storage and handling of flammable and combustible liquids.	Sets out requirements for separation and other considerations for storing flammable and combustible liquids.	Storage and handling of flammable and combustible liquids to comply with AS 1940:2004.
AS 2436:1981 Guide to noise control on construction, maintenance and demolition sites.	Details measures to be implemented to manage noise on construction sites.	Noise mitigation measures identified for Project development must comply with AS 2436.

The safety system sets the foundation for the risk-based approach to management and mitigation of potential health and safety impacts through design, construction, operation and management of the Project, presented in Section 22.3 below.



22.2 Description of Public Health and Safety Community Values

22.2.1 Overview

The Kevin's Corner Coal Mine Project involves the development of a combined open-cut and underground longwall coal mine with a capacity of up to 30 million tonnes per annum (Mtpa) of product coal and anticipated Project life of at least 30 years. The public health and safety community values that may potentially be impacted as a result of the mine are described in the following sections.

22.2.2 Community Values

The Project is to be developed approximately 65 km north-west of the Alpha Township in the Barcaldine Regional Council area. The land use immediately surrounding the Project site is predominantly rural.

The nearest current sensitive receptor is a private residence approximately 4 km from the Mining Lease Application (MLA) 70245 boundary (refer to Figure 22-1). In addition to Alpha, the nearest sensitive community receptors are located in Forrester (5 km north), Eulimbie (5 km north-east) and Surbiton South (10 km south-east). Alpha also represents the nearest sensitive populations of children and elderly people, although school buses will operate on local roads.

The township of Alpha has a population of approximately 350, with one-half of this population being children under 14 or persons older than 55, and approximately 7% being indigenous persons (Australian Bureau of Statistics [ABS], 2006). The region is predominantly rural in character, being reliant on the beef cattle industry, which supports the highest percentage of the labour force.

Based on the outcome of the Social Impact Assessment (SIA) (Volume 1, Section 20), the existing community values for public health and safety are considered to be typical of an agricultural community, and are as follows:

- Safe and healthy living environment;
- Availability of clean water supplies;
- Housing availability and affordability;
- Access to labour for local business;
- Access to health and community services;
- Community health and well being; and
- Quality of life.

Due to the distance of the Project from the Alpha Township (approximately 65 km), the potential impacts from air emissions, odours, noise, vibrations, or light from the Project on the local community will be negligible. The potential impacts and mitigation measures to protect public health safety values are described in Section 22.3 below.



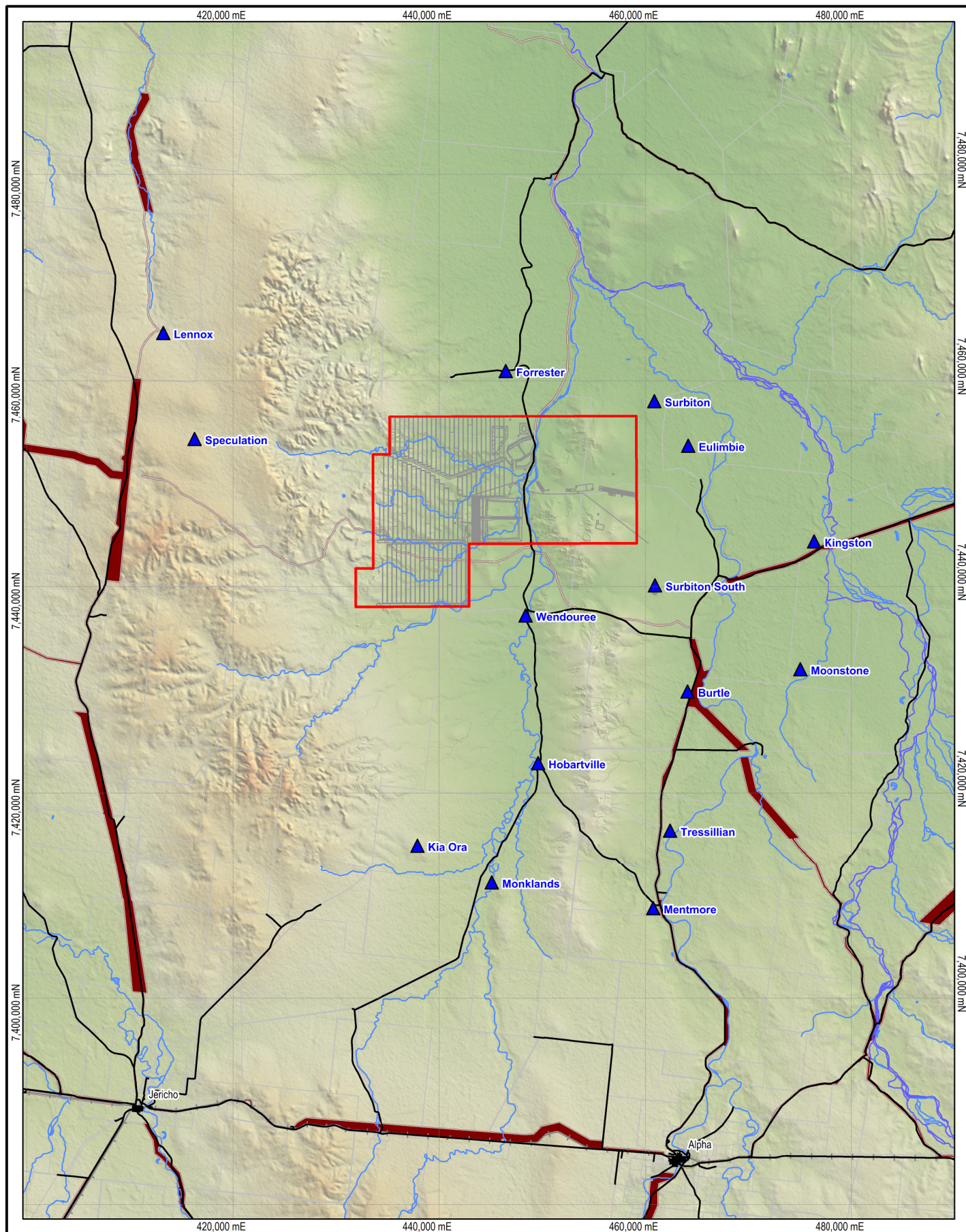
22.2.3 Project Workforce

The Project workforce will comprise a total of approximately 2,500 personnel during peak construction, reducing to a maximum of 2,000 personnel during operation, depending on the final selection of mining equipment.

The majority of the construction workforce will be accommodated on-site. The proposed construction accommodation village site will be southeast of the proposed primary mine infrastructure area (MIA) located near the site access road. The temporary construction accommodation village will be removed once sufficient units of the more permanent accommodation village are available. The operational accommodation village will gradually replace the construction accommodation village.

Fly-in-fly-out (FIFO) and bus-in-bus-out (BIBO) arrangements will be used to transfer the majority of the Project workforce to the site. However, a small percentage of the Project workforce may elect to commute independently (i.e. Drive-In-Drive-Out [DIDO]), subject to management approval.

The primary concern for the Project workforce will be that the work environment and living conditions provided by the Proponent are safe, clean and sanitary. The potential impacts and mitigation measures to protect health and safety of the Project workforce are described in Section 22.3.2 below.



- | | | | |
|--|--|---|----------|
|  | Mining Lease Application (MLA70425) Boundary |  | Road |
|  | Sensitive Receptor |  | Railway |
|  | Stockroute |  | Drainage |

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0 3.75 7.5km
Scale: 1:400,000 (A4)



SENSITIVE RECEPTOR LOCATIONS

Job Number 4262 6660
Revision B
Date 12-09-2011

Figure: 22-1

Datum: GDA94, MGA Zone55

File No: 42626660-g-1067.wor

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22.3 Potential Impacts and Mitigation Measures

This section highlights the potential impacts and mitigation measures relevant to health and safety of the local community and the Project workforce. Detailed assessments of the Project-related impacts on the health and safety of the local community, workforce and other stakeholders are presented throughout this Environmental Impact Statement (EIS) relating to biophysical and social issues, including air, water quality, noise, land use, surface water, groundwater, and planning for the long-term rehabilitation and closure of the mine.

22.3.1 Community

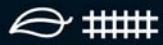
The Project aims to minimise or eliminate adverse impacts on local community health, safety and well being, while boosting envisaged benefits for the local community, Alpha Township, and the surrounding Barcaldine region.

The results of air, noise, and transport modelling presented in the relevant sections of this EIS demonstrate that as a consequence of the distance from Alpha Township and other surrounding residential receptors, the Project is likely to have negligible adverse impact on members of the local communities and any associated community values.

Effective planning, responsive design and practical management measures will be adopted so that residual effects are minimised or eliminated. These practical measures, whether engineered into Project design or implemented as part of routine environmental management, are outlined in the relevant sections of this EIS. The potential impacts on community values and appropriate mitigation responses are summarised in Table 22-2.

Table 22-2: Community Values: Potential impacts and mitigation measures

Issue	Mitigation Measures	EIS Reference
Dust	<ul style="list-style-type: none">Dust impacts were assessed for compliance with the <i>Queensland Environmental Protection Policy (EPP) (Air) 2008</i> and relevant guidelines published by Queensland Department of Environment and Resource Management (DERM) and are detailed in Volume 1, Section 13.Due to the distance separating the Project from community receptors (e.g. schools, hospitals, childcare centres and retirement homes), it is unlikely that the health of sensitive groups such as children and the elderly will be adversely affected by residual air emissions.As the majority of the proposed mining operations will be underground, dust emissions will be limited.Residual dust levels at adjacent residential receptors will be minimised by adopting appropriate equipment, correct handling (e.g. drop heights) and storage, road sealing and maintenance, and haul road treatments and watering to suppress dust during construction and operation of the Project.Accommodation, airport and mine services have been predominantly located upwind of the mining activities to minimise potential dust impacts.The Proponent will monitor air quality at nearby sensitive receptors in accordance with Australian Standards and limit "trigger level" events to acceptable numbers.The Proponent will maintain a complaints register and assess options for dust mitigation at nearby residential dwellings.	Volume 1, Section 13



Issue	Mitigation Measures	EIS Reference
Odour	<ul style="list-style-type: none">Due to the distance separating the Project from sensitive receptors and prevailing winds, it is unlikely that odours generated from coal seam gas, waste disposal or sewage treatment will reach levels detrimental to the health and safety of the general public.	Volume 1, Section 13
Noise and Vibration	<ul style="list-style-type: none">Noise levels were assessed for compliance with <i>Queensland Environmental Protection Policy (EPP) (Noise) 2008</i> and are discussed in detail in Volume 1, Section 15.As far as practical, noise emissions from the Project site will be mitigated through site layout, engineering design, equipment selection, operational procedures and management practices adopted on-site.Due to the distance separating the Project from community and residential receptors, it is unlikely that noise or vibration levels will adversely impact on the attractiveness and liveability of the community. However, where noise levels are elevated, the Proponent is committed to ongoing consultation and negotiation with landholders.The Proponent will monitor noise and vibration levels at nearby sensitive receptors in accordance with Australian Standards and limit "trigger level" events to acceptable numbers.The Proponent will maintain a complaints register and assess options for noise mitigation at nearby residential dwellings.	Volume 1, Section 15
Visual Appearance	<ul style="list-style-type: none">Visually, the Project will have a very low impact on the majority of people residing in areas surrounding the Project and travelling on roads within the immediate area, as discussed in Volume 1, Section 7.22.	Volume 1, Section 7
Water Supplies	<ul style="list-style-type: none">The Project will source raw water through water supplier SunWater. Dewatering the D-Seam coal will occur with the water-supplementing water needs over a period of 12 months,Surface water and sediment controls will be implemented to segregate clean and dirty water. Preference will be given to on-site reuse of water to reduce the need to import raw water on-site and reduce the potential for release off-site.Sufficient on-site storage will be provided through the application of the relevant guidelines for mine water storage capacity to give an acceptable level of risk for uncontrolled discharge of dirty water during significant rainfall events.Sewerage will be treated to appropriate levels at an on-site treatment plant before reuse for industrial applications on-site.Appropriate spill containment and bunded storage will be provided for dangerous goods, per the applicable Australian Standard and relevant guidelines.Water supply monitoring and annual reporting to government agencies will validate on-site water management.	Volume 1, Section 11
Disease Vectors	<ul style="list-style-type: none">On-site water management will limit the potential for increase in disease vectors such as mosquitoes and biting midge breeds.Control measures to prevent increase in local populations and spread of biting insect species and feral animals, of pest and health significance will be contained within a Pest Management Plan, to be implemented on an as-needs basis.	Volume 1, Section 28
Traffic	<ul style="list-style-type: none">Transport infrastructure improvements, including roads, road markings and signage, form part of the Proponent's commitment to minimise impact on local traffic conditions and improve road safety.FIFO, BIBO and on-site accommodation arrangements will be provided to reduce the risk of traffic accidents caused by driver fatigue during the commute to and from the Project site.DIDO will be allowed by application only to further limit the effects of driver fatigue.	Volume 1, Section 17



Issue	Mitigation Measures	EIS Reference
Unplanned population growth	<ul style="list-style-type: none">Detailed assessment of impacts of unplanned growth on community values is provided in Volume 1, Section 20.To limit impacts on local housing availability and affordability in the region, the Project workforce will primarily be accommodated on-site and transferred via FIFO or BIBO arrangements from the surrounding metropolitan and regional areas.Investment in road and airport infrastructure will assist in improving and maintaining the transport infrastructure quality and level of service for the region, providing a long-term community benefit.Work scheduling will aim to make reasonable time available for employees to participate in social and family activities. The Proponent is committed to working with the local support services to monitor and review trends and identify opportunities to improve social cohesion and quality of life.The Proponent is committed to effective, transparent and open communication, consultation and feedback with local communities and stakeholders via the Social Impact Management Plan (SIMP), including the Consultation Plan presented in Volume 1, Sections 21 and 29.	Volume 1, Section 20 Volume 1, Section 21 Volume 1, Section 29
Inflation (wages, labour and housing)	<ul style="list-style-type: none">The Project will generate significant positive economic impacts in the form of coal exports and demand for local and regional production. Mine-related expenditure will stimulate labour demand throughout Queensland. The demand for labour will not be exclusively limited to mine construction or operation.A significant number of additional jobs will be created for local and state suppliers and contractors in combination with increased employment opportunities for local communities in the Alpha community and Barcaldine region.Project planning has adopted significant integration and planning to develop one of the largest supply chain systems in Australia. The diversified and dynamic local economy will generate increased training and employment opportunities.It is expected that local communities would benefit from a flow-on effect generated by upgraded transport infrastructure, enhanced social infrastructure and the establishment of support service industries required by the Project.Growing competition for labour markets as local and regional economies grow in the future will be addressed by the SIMP provided in Volume 1, Section 29.	Volume 1, Section 29

Due to the remote location of the Project, it is anticipated that there would be little discernable negative impact and the potential of positive impact on the Alpha community health and well being. A SIMP (Volume 1, Section 29) has been prepared to define and integrate consultation and management strategies for protecting community values. It will be further developed to incorporate details of procedural practices to monitor and review the performance of measures, and ongoing consultation and negotiation with adjacent landholders, the local and regional community, to mitigate residual impacts on the community.

22.3.2 Project Workforce

Open-cut and underground coal mining presents a number of well known and documented occupational health and safety risks to the Project workforce. These include the potential to expose the workforce to dust, gas (coal seam gas and hydrogen sulphide) emissions, noise, vibration,



chemical hazards, biological agents, fire/explosion, suffocation, geotechnical instability, rotating equipment, heavy machinery, flooding, working at heights and in confined spaces, and possibly odour (such as hydrogen sulfide), etc.

The Proponent will develop a site-specific Safety Management Plan for controlling the potential risks to the health and safety of the Project workforce to acceptable levels via validated engineered controls and well known and documented occupational health and safety management practices in accordance with relevant legislation and standards.

At a minimum the Proponent is committed to adequate competency level and training for site personnel that include:

- Appropriate licences as required;
- Appropriate level of training for their role, e.g. Industry recognised coal surface and underground inductions, Bachelors Degree in Geology, Mining Engineer, Field Assistant Technical and Further Education (TAFE) course, cadetships, etc.;
- On-site competency testing as required;
- Successful completion of the pre-employment (coal) medical and regular health checks;
- Comprehensive site induction; and
- Current certification/permit/licence for their tasks (e.g. forklift driver, crane driver, equipment operator, electrician, plumber, underground escape, confined space work, etc.).

Health and safety of the Project workforce will also be managed using the following tools:

- Safety management plans;
- Safety inspections;
- Job safety and environment analysis (JSEA) tools;
- Safety audits; and
- Hazard/safety observations.

The potential impacts on the Project workforce and measures for mitigation are summarised in Table 22-3. Implementation of mitigation measures and continued monitoring of the workplace environment will help to protect the health, safety and quality of life of Project employees, contractors and visitors.

Table 22-3: Project Workforce: Potential impacts and mitigation measures

Issue	Mitigation Measures	EIS Reference
Food Hygiene	<ul style="list-style-type: none"> Areas involved in the provision, supply or consumption of food, such as meal rooms, will operate in compliance with current food and hygiene legislation. Any catering contractors used by the Project will hold the relevant licence under the <i>Food Act 2006</i>. Safety posters regarding personal hygiene will be used throughout the accommodation village and mess areas. 	
Dust and Particulates	<ul style="list-style-type: none"> A dust control and monitoring program will be developed and implemented at and around the Project site to monitor and protect employees and contractors from potential adverse health effects from particulates or gas/vapours, either used or generated by the Project. Through this dust control program, the Project will continue to assess particulate and gas/vapour exposure against site specific safety standards and procedures that apply to dust, fibres, mist and fume (i.e. particulates) and gas and vapour exposures in the workplace (with emphasis on inhalation as the primary route of exposure). Dust generated from earthmoving machinery will generally be controlled by haul road watering. Where required, engineering dust controls will be incorporated into conveyors and at the coal transfer points in the Coal Handling and Preparation Plant (CHPP). Train wagons transporting coal will be designed to limit employee and contractor exposure to coal dust during transport. Activities above ground will be limited during high winds in an effort to minimise the impacts of dust on employees and contractors whilst working on and around Project site. A topsoil management plan will be implemented on and around the Project site to minimise the creation of dust from topsoil. The use of respiratory protection devices (e.g. dust masks) will be required as part of the mandatory personal protective equipment (PPE) for Project workforce, contractors or visitors while in certain areas on the mine site or when performing certain functions such as grinding or cutting wood, or where fine coal and stone dust is airborne. Where large areas of vegetation are disturbed resulting in exposed soil, stabilising techniques will be used to minimise generation of dust emissions. This will be undertaken in accordance with the mining operations plan. Potential impacts of dust from the mine operations and Tailings Storage Facility (TSF) on the Project accommodation will be minimised by: adopting appropriate equipment, correct handling (e.g. drop heights) and storage, road sealing and maintenance and road watering to suppress dust during construction and operation of the mine. Providing appropriate air conditioning and air purification at the accommodation village. Additionally, the accommodation village has been positioned up wind of the prevailing direction of the site dust sources to assist in minimising the potential air quality impacts at the residence. Environment and health surveillance monitoring programs for targeted site personnel will monitor performance of dust impact mitigation measures. 	Volume 1, Section 13

Issue	Mitigation Measures	EIS Reference
Odour	<ul style="list-style-type: none"> • Odours generated from the Project are not expected to be detrimental to the health and safety of employees, visitors or the general public. However, some limited odours may be generated from very low levels of coal seam gas during mining. Additionally, localised odour may be generated from waste disposal and sewage treatment. • In general, the prevailing wind direction is away from the accommodation village such that odour impacts are only likely to occur on rare occasion that calm or adverse winds dominate. • To minimise generation of odours from the landfill, waste receptacles at the accommodation village will be collected and cleaned regularly and waste disposed to landfill will be covered or compacted on a regular basis with soil sourced from landfill excavation. In the event that significant odours occur, suppressants may be used. • Sewage sludge will be removed to the Barcaldine Regional Council or registered off-site facility on a regular basis to reduce the potential for odour generation on site. Disposal to Emerald is also a suitable option; however, it will depend on the final composition / moisture content of the biosolids and the landfills capacity to accept the waste 	Volume 1, Section 13
Noise and Vibration	<ul style="list-style-type: none"> • The accommodation village is located to the east of the primary MIA to aid in minimising the level of disturbance to off shift personnel from vibration, noise and light. Once out of pit dumps are established, these will alleviate the noise levels from operations. • The accommodation will be designed to include mitigation measures such as air-conditioning and adequate sound-proofing where required to minimise the impact of noise on sleep patterns and quality of life. • Intermittent blasting will be conducted only during daylight hours. 	Volume 1, Section 15
Waste	<ul style="list-style-type: none"> • Detailed waste management strategies are outlined in Volume 1, Section 16 and include objectives for minimisation, segregation, storage, handling, transport and treatment of waste materials to avoid direct or indirect impacts on the environment or health of people working on-site and the community. • Procedures developed will rely on safe work method statements and Materials Safety Data Sheets (MSDS) to inform any workers of the appropriate Health and Safety practices associated with each material used. • Hazardous waste tracking will occur per legislative requirements. • Waste receptacles at the accommodation village will be collected and cleaned regularly. • Where necessary, residual waste will be disposed of to an engineered landfill on-site where waste and long-term impacts will be contained effectively – e.g. regular cover, capping, leachate and landfill gas collection and treatment. • Where necessary, sewage will be treated on-site to appropriate levels before reuse for industrial applications on-site. Sewage sludge will be removed to a Barcaldine Regional Council or Emerald facility for treatment and disposal. • Coal rejects material generated by the Project consists of rock (dilution) and coal fines. The latter has the potential for spontaneous combustion. The characteristics of the coarse rejects and uneconomic waste seams on site will be investigated in an ongoing assessment as the Project commences, to determine the best management measures - typically this will involve burying these materials, within the mining areas. 	Volume 1, Section 16

Issue	Mitigation Measures	EIS Reference
Chemical Hazard	<ul style="list-style-type: none"> All dangerous goods will be managed in accordance with requirements of relevant legislation and standards. Only appropriately trained and qualified personnel will be allowed to handle and maintain dangerous goods storage areas. To minimise the hazards during fuel transfer, equipment will be well maintained and operators trained in safe operation and emergency procedures and approved spill containment and fire-fighting equipment will be available. Transfers will be done in areas where spills can be contained, should one occur (AS 1940:2004). Leaks of fuel oil from storage tanks will be controlled by appropriate tank design (AS 1692:2006) and bunded areas to contain spills (AS 1940:2004), tank level indicators to monitor levels, and appropriate maintenance to ensure safe and effective operation. Spill kits will be available at appropriate locations. Licensed operators will handle, store and transport explosives in accordance with a safe work plan that complies with relevant standards. 	<p>Volume 1, Section 16</p> <p>Volume 1, Section 24</p>
Groundwater	<ul style="list-style-type: none"> It is not expected that groundwater will be extracted and treated for potable water purposes; however, nuisance groundwater that occurs during mining will be captured and recycled for use in the mine. 	Volume 1, Section 12
Surface Water	<ul style="list-style-type: none"> Adequate safety systems and equipment will be incorporated at mine water containment areas and raw water dams to ensure the safety of workers. The TSF will have restricted access with additional Health and Safety procedures in place to account for the heightened risk associated with the area, Where possible, raw water and mine water will be captured and recycled for use in the mine. 	Volume 1, Section 11
Disease Vectors	<ul style="list-style-type: none"> It is not expected that the Project area will be exposed to an elevated risk of disease vectors such as mosquitoes, rodents or water-borne or sexually transmitted disease due to its climate, but monitoring will occur for these possibilities. All site personnel will wear appropriate PPE in the field and where appropriate use insect repellent, and ensure first aid kits (including snake bite kits) are available. Awareness of appropriate hygiene will be developed through staff induction and training. Awareness of local dangerous snakes, spiders etc. will be communicated through staff induction and training. 	Volume 1, Section 24



Issue	Mitigation Measures	EIS Reference
Traffic Accident	<ul style="list-style-type: none">• Access to the mining lease is from Degulla Road from the Clermont-Alpha Road north off the Capricorn Highway at Alpha. To minimise potential for traffic accidents during commute, the Project workforce will have to predominantly adopt on-site accommodation via BIBO or FIFO arrangements. This strategy is designed to avoid driver fatigue for workers travelling to/from regional and metropolitan centres. The Project workforce permitted to DIDO to the site will be made aware of driver fatigue and road safety issues, and will be by application only, requiring a travel plan to be provided by the mine.• Construction workers operating vehicles on site will be trained and licensed such that vehicles are driven in a safe and appropriate manner. Zero tolerance for drug and alcohol use will be enforced.• Speed control (signage), driving to conditions and prescribed driving procedures will be used to control risk. Access and haul road closures will be enforced during and after severe rainfall events until assessed and deemed safe for operation.• All site vehicles travelling in restricted areas where heavy vehicle interaction may occur, will be fitted with radios for two-way communication, flashing lights and flags, or escorted for vehicles travelling in the restricted mining operation.• All Project vehicles and plant will be properly maintained and operated.• Haul roads will be designed to comply with regulatory requirements and roads will be graded to an adequate and safe level of operation for heavy and light vehicles, depending on the use of the road.• Watering or treatment of unsealed access roads will suppress dust to improve visibility.• Adequate night light will be provided in high risk or high traffic areas to ensure night operating and driving conditions are safe.• A traffic management plan will be developed to address a minimum level of operator training, light and heavy vehicle operations, road design, road maintenance, traffic rules and movements and parking.• Licensed transporters transporting dangerous goods will operate in compliance with Australian Standards.	Volume 1, Section 17
Security	<ul style="list-style-type: none">• A security management plan will be in place to prevent unauthorised access to hazardous areas and/or use of equipment.• Public access to the site will be limited to MIA and CHPP areas for meetings by prior arrangement. Generally, however, such meetings will be held at the administration centre building.• Prior to being given access to the site, visitors will complete mandatory registration and an environmental, health and safety induction. The scope of the induction will reflect the areas that the visitor will be permitted to access. Induction training will include emergency response techniques.	Volume 1, Section 24
Underground Gas Monitoring	<ul style="list-style-type: none">• Gas will be continuously monitored at work faces using electronic monitoring and handheld monitoring devices.• Outbye and Goafed areas will be actively monitored using a tube bundle gas chromatograph system, or equivalent.• All relevant diesel equipment will be fitted with gas lock out systems.	

Issue	Mitigation Measures	EIS Reference
Fire/Explosion	<ul style="list-style-type: none"> • Appropriate fire fighting equipment will be installed. Project workforce will attend fire training and complete fire and evacuation drills. • Bushfire emergency procedures will be prepared. • Potential risks of blasting, including dust, noise, vibration, fly-rock and air blast effects, will be controlled by minimising access to appropriately trained and qualified personnel wearing suitable personal protective equipment and evacuating to a safe distance during blast activities. • All personnel will be notified in advance of blasting activities being carried out. • Storage of flammable and explosive materials will be in restricted areas to Australian Standards, with appropriate emergency equipment nearby. • Each underground mining area will have first response fire fighting equipment with (larger) equipment from the Light Industrial Area (LIA) facilities being ready to respond to an emergency at any of the mines or Project infrastructure. 	Volume 1, Section 24



22.3.2.1 Emergency Planning

The Proponent liaised with State Emergency Services, Queensland Fire Rescue Services (QFRS) and local ambulance and hospital services to plan emergency response procedures discussed in Volume 1, Section 24.

22.3.3 Cumulative Impacts

The Project represents one of the first large-scale coal mine developments in the Galilee Basin. A series of large coal mine projects under study or in development for the area may increase the negative and/or beneficial effects on the local and regional community. The Project was designed with consideration of the potential cumulative impacts.

Cumulative impacts of the mine and railway components of the Kevin's Corner Coal Mine Project are discussed in Volume 2, Appendix X. However, the following comments can be made about the cumulative impacts on health and safety values of the community and Project workforce.

Overall, the potential impacts from the development of the Kevin's Corner Coal Mine Project will be reduced by the distance from sensitive receptors and are likely to cause very limited discernable impact on the Alpha community health and well being.

The Project will provide on-site accommodation and BIBO and FIFO transfer arrangements for the regional and metropolitan Project workforce to negate potential inflationary impacts on housing availability and affordability, and to reduce transportation safety risks.

Investment in road and aerodrome infrastructure will aid in maintaining the quality and level of service despite a population influx. The community will benefit from investment in infrastructure and services.

It is expected that local communities will benefit from a flow-on effect generated by improved social infrastructure, transport corridors and the establishment of support service industries required by the Kevin's Corner Coal Mine Project. The Project will generate significant positive economic impacts in the form of additional exports, increased employment and demand for local and regional production. The demand for labour will not be exclusively limited to mine construction or operation. Mine-related expenditure will stimulate significant labour demand throughout Queensland. In effect, the Project will deliver more diverse employment opportunities resulting in skills development opportunities and greater income for the local labour market.

In the future, agriculture will face growing competition for labour from mining and, as the local and regional economies grow, agriculture will also face competition from the services sectors but also benefit from the more diverse and improved services available. The Proponent is committed to ongoing consultation and monitoring and review of trends and identifying opportunities for improvement.