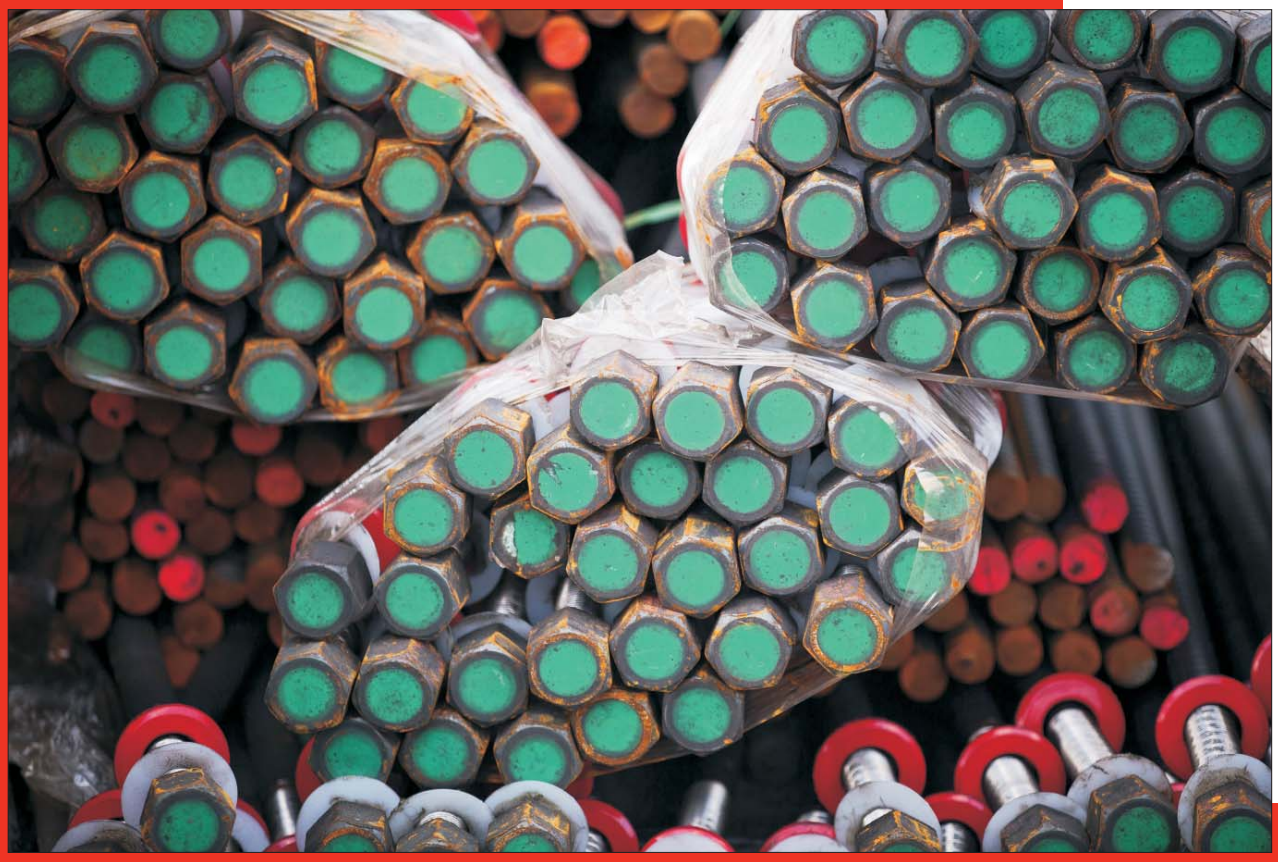

Tasman Extension Project

Environmental Impact Statement

APPENDIX N

PRELIMINARY HAZARD ANALYSIS

Resource Strategies

DONALDSON COAL

Part of Gloucester Coal

TASMAN EXTENSION PROJECT

PRELIMINARY HAZARD ANALYSIS

DONALDSON COAL

Part of Gloucester Coal

FEBRUARY 2012
Project No. DCL-09-01
Document No. PHA-C
ID: 00455013

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1 INTRODUCTION

Donaldson Coal Pty Limited (Donaldson Coal), a wholly owned subsidiary of Gloucester Coal Ltd, (GCL) owns and operates the Tasman Underground Mine, a bord and pillar underground mine with pillar extraction which commenced mining operations in March 2004. The Tasman Underground Mine is located approximately 20 kilometres west of the Port of Newcastle in New South Wales (NSW) (Figure 1).

The Tasman Extension Project (the Project) would involve the continuation and extension of mining operations at the Tasman Underground Mine in the Fassifern Seam and West Borehole Seam. The Tasman Extension Project would extend the operational life by approximately 15 years. A description of the Project is provided in Section 2 of the Main Report of the Environmental Impact Statement (EIS).

Donaldson Coal is seeking approval for the Project from the NSW Minister for Planning and Infrastructure in accordance with Division 4.1, Part 4 of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act).

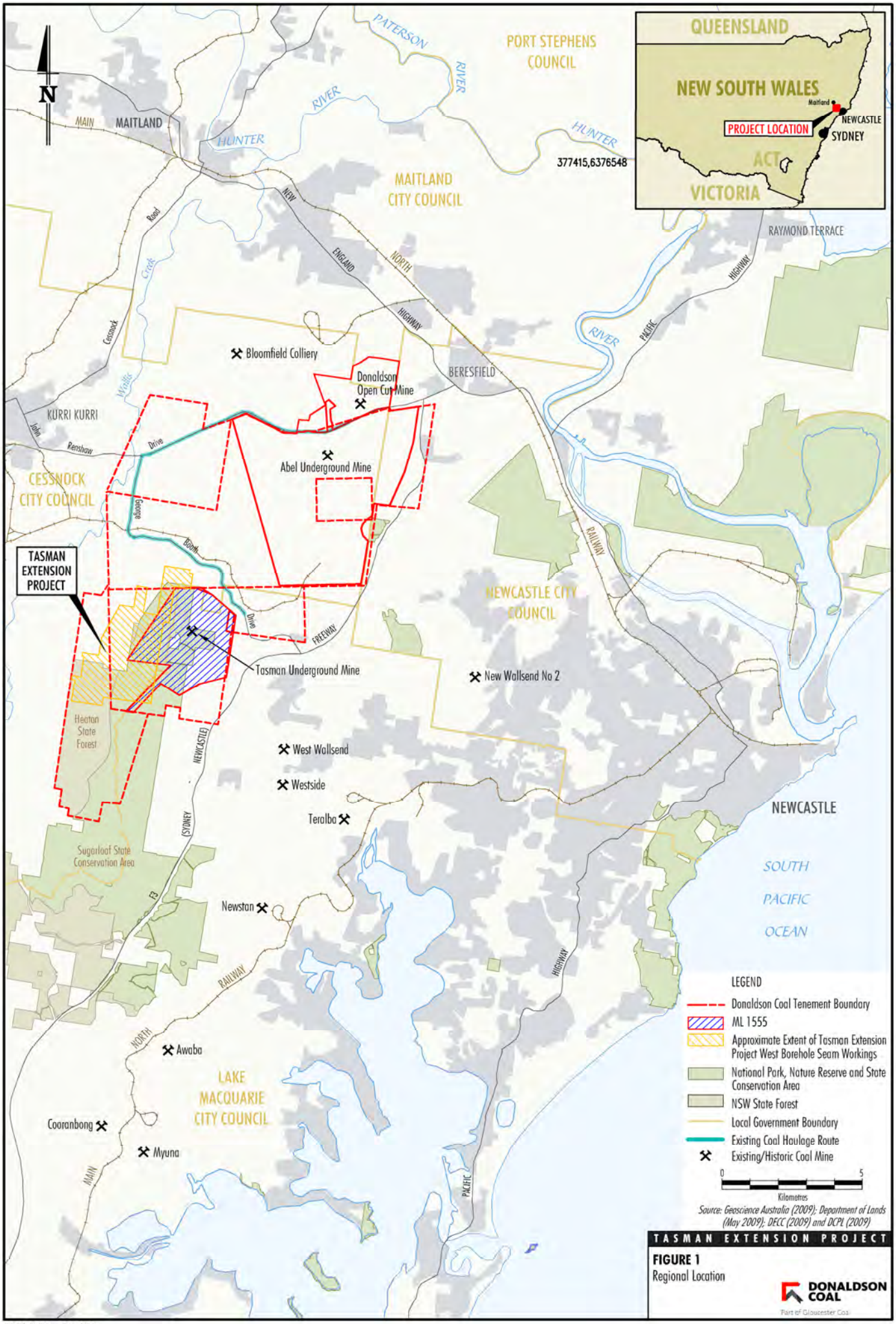
This Preliminary Hazard Analysis (PHA) has been conducted as part of the EIS to evaluate the potential hazards associated with the Project in accordance with the general principles of risk evaluation and assessment outlined in the NSW Department of Planning and Infrastructure (DP&I) *Multi-Level Risk Assessment* (DP&I, 2011). This PHA also addresses the requirements of *State Environmental Planning Policy No. 33 - Hazardous and Offensive Development* (SEPP 33) and has been documented in general accordance with *Hazardous Industry Planning Advisory Paper (HIPAP) No. 6*: *Guidelines for Hazard Analysis* (NSW Department of Planning [DoP], 2011a).

Assessed risks are compared to qualitative risk assessment criteria developed in accordance with Australian Standard/New Zealand Standard International Organization for Standardization (AS/NZS ISO) 31000:2009 *Risk Management – Principles and Guidelines*. Further, this PHA considers the qualitative criteria provided in *HIPAP No. 4: Risk Criteria for Land Use Safety Planning* (DoP, 2011b).

The risks associated with potential hazards at the existing Tasman Underground Mine have been previously assessed in a PHA prepared by McCracken Consulting Services in June 2002 (McCracken Consulting Services, 2002). The PHA was produced during the assessment of the Tasman Underground Mine and concluded that there was no significant risks associated with the storage or use of hazardous substances at the existing Tasman Underground Mine (including the existing pit top) (McCracken Consulting Services, 2002).

1.1 OBJECTIVE AND SCOPE

The objective of this PHA is to identify the risks posed by the Project to people, property and the environment and assess the identified risks using applicable qualitative criteria. In accordance with *Multi-level Risk Assessment* (DP&I, 2011), this assessment specifically covers risks from fixed installations and does not encompass transportation by pipeline, road, rail or sea. This PHA therefore considers off-site risks to people, property and the environment (in the presence of controls) arising from atypical and abnormal hazardous events and conditions (i.e. equipment failure, operator error and external events), with a specific focus on fixed installations on-site. This assessment does not consider risks to Donaldson Coal employees or property or risks that are not atypical or abnormal (e.g. long-term effects of typical dust emissions).



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This report should be read in conjunction with the following studies conducted for the EIS:

- Subsidence Assessment (Appendix A).
- Groundwater Assessment (Appendix B).
- Surface Water Assessment (Appendix C).
- Geomorphology Assessment (Appendix D).
- Aquatic Ecology Assessment (Appendix E).
- Flora Assessment (Appendix F).
- Terrestrial Fauna Assessment (Appendix G).
- Road Transport Assessment (Appendix H).
- Noise and Vibration Impact Assessment (Appendix I).
- Air Quality and Greenhouse Gas Assessment (Appendix J).
- Aboriginal Cultural Heritage Assessment (Appendix K).
- Non-Aboriginal Heritage Assessment (Appendix L).
- Socio-Economic Assessment (Appendix M).
- Environmental Risk Assessment (Appendix O).
- Land Contamination Assessment (Appendix P).
- Private Driveway/George Booth Drive Review (Appendix Q).

1.2 PRELIMINARY SCREENING PROCESS

Preliminary screening to determine the requirement for a PHA was undertaken for the Project, taking into account broad estimates of the possible off-site effects or consequences from hazardous materials present on-site and their locations. In accordance with *Multi-level Risk Assessment* (DP&I, 2011) it was determined that the Project is potentially hazardous and should be assessed as part of a Level 1 assessment (Qualitative analysis).

According to *Multi-level Risk Assessment* (DP&I, 2011), a Level 1 assessment can be justified if the analysis of the facility demonstrates a societal risk in the negligible zone and there are no potential scenarios with significant off-site consequences (Section 4).

1.3 STUDY METHODOLOGY

The methodology employed during the preparation of this PHA was as follows:

(i) Identification of the hazards associated with the Project.

(ii) Analyse the consequence of identified hazardous events.

(iii) Qualitatively estimate the likelihood of hazardous events.

(iv) Proposal of risk treatment measures.

(v) Qualitatively assess risks to the environment, members of the public and their property arising from atypical and abnormal events and compare these to the risk criteria outlines in *HIPAP No. 4: Risk Criteria for Land Use Safety Planning*.

(vi) Recommend further risk treatment measures, if necessary.

(vii) Qualitatively determine the residual risk assuming the implementation of the risk treatment measures.

1.3.1 Preliminary Hazard Analysis Workshop

The above methodology was implemented during a PHA workshop in September 2011. The workshop participants included technical advisors from Donaldson Coal including:

- Donaldson Coal – Technical Services Manager – Underground Operations; and
- Donaldson Coal – Environment Manager.

1.3.2 Risk Management Process

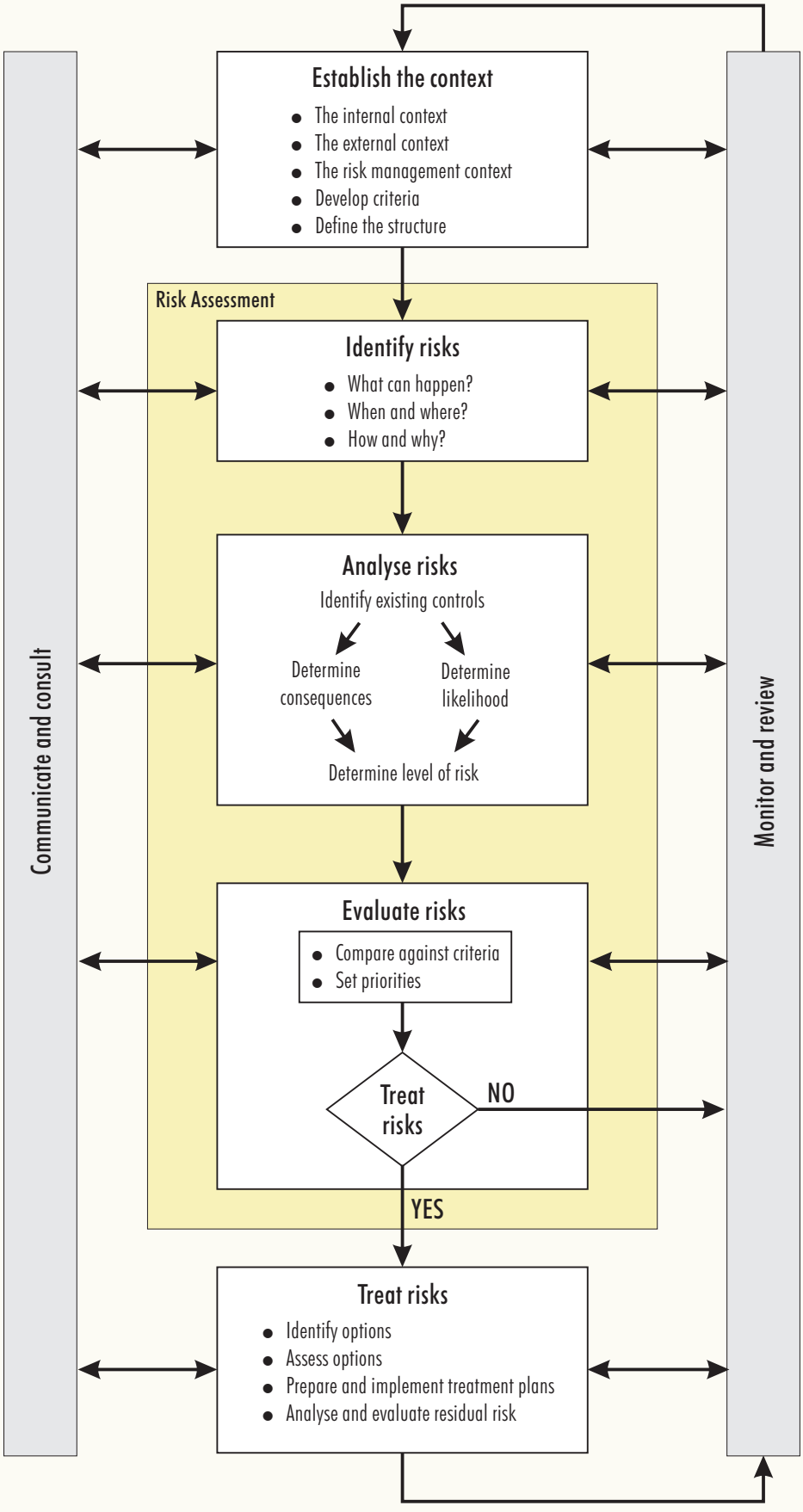
This PHA has been undertaken with regard to the risk management process described in AS/NZS ISO 31000:2009 *Risk Management – Principles and Guidelines*. The risk management process is shown schematically on Figure 2 and includes the following components:

- Establishing the context – Section 1 and Section 2.
- Risk identification – Section 3.2 and Attachment A.
- Risk analysis – Section 4 and Attachment A.
- Risk evaluation – Section 4 and Attachment A.
- Risk treatment – Section 3.2.3 and Attachment A.

1.3.3 Risk Criteria

This PHA considered the following qualitative criteria (DoP, 2011b):

> *(a) All 'avoidable' risks should be avoided. This necessitates investigation of alternative locations and technologies, wherever applicable, to ensure that risks are not introduced in an area where feasible alternatives are possible and justified.*
>
> *(b) The risks from a major hazard should be reduced wherever practicable, irrespective of the value of the cumulative risk level from the whole installation. In all cases, if the consequences (effects) of an identified hazardous incident are significant to people and the environment, then all feasible measures (including alternative locations) should be adopted so that the likelihood of such an incident occurring is made very low. This necessitates the identification of all contributors to the resultant risk and the consequences of each potentially hazardous incident. The assessment process should address the adequacy and relevance of safeguards (both technical and locational) as they relate to each risk contributor.*
>
> *(c) The consequences (effects) of the more likely hazardous events (i.e. those of high probability of occurrence) should, wherever possible, be contained within the boundaries of the installation.*
>
> *(d) Where there is an existing high risk from a hazardous installation, additional hazardous developments should not be allowed if they add significantly to that existing risk.*



Source: AS/NZS ISO 31000:2009 Risk Management - Principles and Guidelines

PRELIMINARY HAZARD ANALYSIS

FIGURE 2
Risk Management Process

DONALDSON COAL

1.3.4 Qualitative Measures of Consequence, Likelihood and Risk Ranking Table

To undertake a qualitative risk assessment it is useful to define (in a descriptive sense) the various levels of consequence of a particular event, and the likelihood (or probability) of such an event occurring. Risk assessment criteria were developed in accordance with AS/NZS ISO 31000:2009 during the 'Establishing the Context' phase of the risk management process (Section 1.3.2).

In accordance with AS/NZS ISO 31000:2009, Tables 1, 2 and 3 were reviewed by Donaldson Coal as part of the 'Establishing the Context' phase and were considered to be consistent with the specific objectives and context of the PHA.

Table 1
Qualitative Measures of Probability (Likelihood)

Probability	Likelihood	Description
A	Almost Certain	Happens often
B	Likely	Could easily happen
C	Possible	Could happen and has occurred elsewhere
D	Unlikely	Hasn't happened yet but could
E	Rare	Conceivable, but only in extreme circumstances

Source: Safe Production Solutions (2011).

Table 2
Qualitative Measures of Maximum Reasonable Consequence

	People	Environment	Asset/Production
1	Multiple fatalities	Extreme environmental harm (e.g. widespread catastrophic impact on environmental values of an area)	More than $1 billion (B) loss or production delay
2	Permanent total disabilities, single fatality	Major environmental harm (e.g. widespread substantial impact on environmental values of an area)	$100 million (M) to $1B loss or production delay
3	Major injury or health effects (e.g. major lost workday case/permanent disability)	Serious environmental harm (e.g. widespread and considerable impact on environmental values of an area)	$5M to $100M loss or production delay
4	Minor injury or health effects (e.g. restricted work or minor lost workday case)	Material environmental harm (e.g. localised and considerable impact on environmental values of an area)	$250 thousand (k) to $5M loss or production delay
5	Slight injury or health effects (e.g. first aid/minor medical treatment level)	Minimal environmental harm (e.g. minor impact on environmental values of an area)	Less than $250k loss or production delay

Source: Safe Production Solutions (2011).

Combining the probability and consequence, Table 3 provides a qualitative risk analysis to assess risk levels.

Table 3
Risk Ranking Table

		Probability				
		A	**B**	**C**	**D**	**E**
Consequence	**1**	1 (H)	2 (H)	4 (H)	7 (M)	11 (M)
	2	3 (H)	5 (H)	8 (M)	12 (M)	16 (L)
	3	6 (H)	9 (M)	13 (M)	17 (L)	20 (L)
	4	10 (M)	14 (M)	18 (L)	21 (L)	23 (L)
	5	15 (M)	19 (L)	22 (L)	24 (L)	25 (L)

Notes: L – Low, M – Moderate, H – High
Rank numbering: 1 – highest risk; 25 – lowest risk

Legend – Risk Levels:

	Tolerable
	ALARP – As low as reasonably practicable
	Intolerable

Source: Safe Production Solutions (2011).

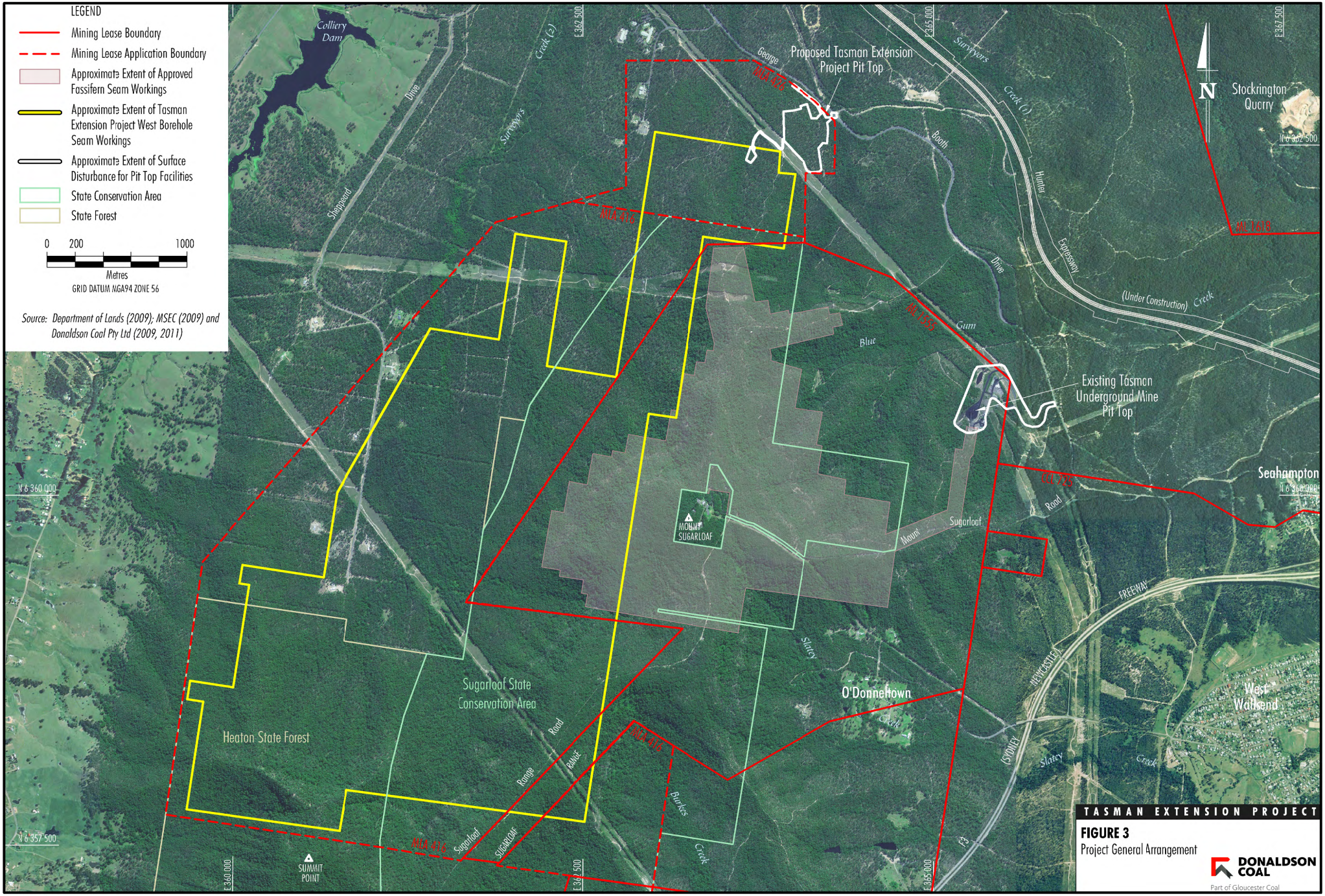
The hazard identification table (Attachment A) illustrates the systematic application of the above criteria for the Project.

2 PROJECT OVERVIEW

The main activities associated with the development of the Project would include:

- continued underground mining of the Fassifern Seam using a combination of total and partial pillar extraction methods within Mining Lease 1555;
- underground mining of the West Borehole Seam using a combination of total and partial pillar extraction methods;
- production of run-of-mine (ROM) coal up to 1.5 million tonnes per annum;
- development of a new pit top and associated ROM coal handling infrastructure and intersection with George Booth Drive;
- development of ventilation surface infrastructure;
- continued transport of Fassifern Seam ROM coal from the existing Tasman Underground Mine pit top to the Bloomfield Coal Handling and Processing Plant (CHPP) via truck on public and private roads to approximately 2015 (inclusive);
- transport of West Borehole Seam ROM coal from the new pit top to the Bloomfield CHPP via truck on public and private roads;
- progressive development of sumps, pumps, pipelines, water storages and other water management equipment and structures;
- ongoing exploration activities;
- ongoing surface monitoring, rehabilitation and remediation of subsidence effects; and
- other associated minor infrastructure, plant, equipment and activities.

Figure 3 illustrates the general arrangement of the Project. A description of the Project is provided in Section 2 of the Main Report of the EIS.



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3 HAZARD IDENTIFICATION

3.1 DESCRIPTION OF HAZARDOUS MATERIALS

The major potentially hazardous materials required for the Project include hydrocarbons and explosives. A brief description of these materials is presented below.

3.1.1 Hydrocarbons

Hydrocarbons used at the Tasman Underground Mine include fuels (diesel and petrol), oils, greases, degreaser and kerosene. These hydrocarbons will continue to be used at the Project and are described below.

Diesel

Diesel is classified as a combustible liquid by Australian Standard (AS) 1940:2004 *The Storage and Handling of Flammable and Combustible Liquids* (AS 1940:2004) (Class C1) for the purpose of storage and handling but is not classified as a dangerous good by the criteria of the Australian Dangerous Goods Code (ADG Code) (National Transport Commission, 2007). In the event of a spill, diesel is damaging to soils and aquatic ecosystems and fires can occur if ignited (flash point 61 to 150 degrees Celsius).

The risks associated with the Project include diesel storage and usage. On-site maximum annual average diesel usage at the Project would be approximately 360,000 Litres during operations. The use of diesel at the Project, and the construction and operation of all fuel storages would be undertaken in accordance with the requirements of AS 1940:2004.

Petrol

Petrol is classified as a flammable liquid (Class 3) by AS 1940:2004 and as such is classified as a dangerous good by the criteria of the ADG Code. On-site petrol usage would be minor and petrol engine vehicles would be fuelled off-site at local service stations.

Oils, Greases, Degreaser and Kerosene

Oil is classified as a combustible liquid (Class C2) by AS 1940:2004. Procedures developed at the Tasman Underground Mine for the handling, storage, containment and disposal of workshop hydrocarbons (i.e. oils, greases, degreaser and kerosene) in accordance with AS 1940:2004 will continue to be implemented at the Project. Waste oil would be stored in drums within a bunded area and would be collected by a licensed contractor.

3.1.2 Explosives

Explosives are expected to be used for a short period during the construction of the new pit top area and drift to the West Borehole Seam and during operations as required. Explosives would only be stored on-site temporarily during blasting activities in accordance with AS 2187.2:2006, and excess explosives would be returned to the supplier.

Storage and usage of explosives (including accessories and primers) will continue to be in accordance with AS 2187.2:2006 *Explosives – Storage and Use – Use of Explosives.*

3.2 HAZARD IDENTIFICATION PROCESS

The Project hazard identification table (Attachment A) provides a summary of the potential on-site hazards identified for the Project and a qualitative assessment of the risks posed.

3.2.1 Project Components

As this assessment specifically covers risks from fixed installations (in accordance with DP&I [2011] [Section 1.1]), the main focus of this assessment was on on-site storage.

3.2.2 Incident Classes

The following generic classes of incident were identified:

- leak/spill;
- fire;
- explosion; and
- theft.

These incident classes were applied to the Project component areas to identify scenarios for which control/mitigation measures were developed.

3.2.3 Project Risk Treatment Measures

Donaldson Coal implements a Health and Safety Management System at the Tasman Underground Mine for the management of hazards and associated risks of all activities that have the potential to cause harm to people or damage property (Donaldson Coal, 2009).

The Health and Safety Management System includes the following components (Donaldson Coal, 2009):

- System Elements (e.g. Health and Management System Overview, Occupational Health and Safety Policy, Drug & Alcohol Policy, Fatigue Management Policy).
- Major Hazard Management Plans (e.g. Underground Transport Management Plan, Strata Failure Management Plan, Inrush Management Plan, Fire and Explosion Management Plan, Dust Explosion Management Plan, Explosives Management Plan, Spontaneous Combustion Management Plan, Outburst Management Plan).
- Management Structure.
- Contractor Management Plan.
- Electrical Engineering Management Plan.
- Mechanical Engineering Management Plan.
- Emergency Management System (including Withdrawal Conditions and Bushfire Management Plan).
- Other Components (e.g. Inspection Program, Supervision Arrangements, Monitoring Arrangements, Gas Monitoring Arrangements, Ventilation Arrangements).

In addition, hazard control and mitigation measures are also described in the following existing Tasman Underground Mine management documents and systems:

- Site Water Management Plan.
- Surface and Groundwater Response Plan.
- RFS Fire Management Plan.

A number of hazard control and mitigation measures would be incorporated into existing management plans or new management plans where required for the Project. In addition, the following hazard treatment measures would be adopted for the Project:

- **Engineering Structures** – Mining and civil engineering structures would be constructed in accordance with applicable codes, guidelines and Australian Standards. Where applicable, Donaldson Coal would obtain the necessary licences and permits for engineering structures.
- **Contractor Management** – All contractors employed by Donaldson Coal would be required to operate in accordance with the relevant Australian Standards, NSW and Commonwealth legislation, Health and Safety Management System and the Contractor Management Plan.
- **Storage Facilities** – Storage and usage procedures for potentially hazardous materials (i.e. fuels and lubricants) would be developed in accordance with Australian Standards and relevant legislation.
- **Emergency Response** – Emergency response procedures manuals and systems would continue to be implemented, including the Emergency Management System.

4 RISK MANAGEMENT AND EVALUATION

Attachment A presents a qualitative assessment of risks associated with the operation of the Project. As described in Section 1.1, the assessment evaluates the off-site risks of fixed installations at the Project impacting on the people, property and the environment arising from atypical and abnormal hazardous events and conditions.

Hazard treatment measures have been proposed, where required, to produce a 'low' level of risk in accordance with the risk acceptance criteria described in Section 1.3.3. Proposed control measures are identified in Section 3.2.3.

The Level 1 assessment conducted is justified as this PHA demonstrates a societal risk in the negligible zone and there are no potential scenarios with significant off-site consequences in accordance with *Multi-level Risk Assessment* (DP&I, 2011) (Section 1.2).

5 REFERENCES

Department of Environment and Conservation (2004) *Environmental Guideline: Use of Effluent by Irrigation.*

Department of Planning (2011a) *Hazardous Industry Planning Advisory Paper No. 6: Hazard Analysis.* January 2011.

Department of Planning (2011b) *Hazardous Industry Planning Advisory Paper No. 4: Risk Criteria for Land Use Safety Planning.* January 2011.

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McCracken Consulting Services (2002) *Review of SEPP 33 Hazard Issues for Tasman Coal Project*. Prepared for Newcastle Coal Pty Limited, June 2002.

National Transport Commission (2007) *Australian Code for the Transport of Dangerous Goods by Road and Rail*. 7th Edition. Commonwealth of Australia.

Safe Production Solutions (2011) *Donaldson Coal: Tasman Extension Project Environmental Risk Assessment.*

ATTACHMENT A

PROJECT HAZARD IDENTIFICATION TABLE

Hazard Identification Table

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
On-Site Storage Hydrocarbons, LPG, Explosives and General Goods	Leak/Spill	Poor maintenance, poor design, collision, human error, failed tank or pipe or operator error leading to off-site impacts.	• Design of structures, tanks and pipes to relevant Australian Standards and legislation. • Storage tanks located to minimise potential impacts of leak/spill. • Bunds designed to divert spills to containment structures. • Surface water runoff from refuelling area, oil and fuel storage and wash down bay directed to oil separator. • Loss detection systems. • High level alarms/overfill protection. • Fire fighting equipment and spill kits located in on-site vehicles and infrastructure (where appropriate). • Spill management procedures and training. • Operator induction and ongoing training. • HAZMAT training. • Regular inspections and maintenance. • Dangerous goods register and MSDSs kept on-site. • Health and Safety Management System. • Emergency Management System. • Fire and Explosion Management Plan. • Contractor Management Plan. • Site Water Management Plan. • Surface and Groundwater Response Plan. • Explosives Management Plan.	C	4	18(L)

Hazard Identification Table (Continued)

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
On-Site Storage (Cont'd.) Hydrocarbons, LPG, Explosives and General Goods	Fire	Poor maintenance, poor design, collision or human error leading to off-site fire-related impacts.	• Maintenance of fire breaks to slow the progress of bushfires. • Housekeeping activities - site would be kept clean and tidy and fire hazards removed where practicable. • Appropriate storage of all explosives, chemicals, fuel, gas and dangerous substances in accordance with relevant Australian Standards and legislation. • Fire fighting equipment and spill kits located in on-site vehicles and infrastructure (where appropriate). • Regular inspections and maintenance of fire fighting equipment and storage areas where required. • Operator induction, awareness of explosives and ongoing training. • Bushfire Management Plan. • RFS Fire Management Plan. • Health and Safety Management System. • Emergency Management System. • Contractor Management Plan. • Fire and Explosion Management Plan. • Explosives Management Plan.	D	3	17(L)

Hazard Identification Table (Continued)

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
On-Site Storage (Cont'd.) Hydrocarbons, LPG, Explosives and General Goods	Explosion	Explosives, fuel or gas detonates by lightning strike or human error leading to off-site explosion/fume emissions-related impacts.	• Appropriate storage of all explosives, chemicals, fuel, gas and dangerous substances in accordance with relevant Australian Standards and legislation. • Design of structures, tanks and pipes to relevant Australian Standards and legislation. • Authorised personnel with appropriate licence only to handle explosives. • Fire fighting equipment and spill kits located in on-site vehicles and infrastructure (where appropriate). • Regular inspections and maintenance of fire fighting equipment and storage areas where required. • Operator induction, awareness of explosives and ongoing training. • Bushfire Management Plan. • RFS Fire Management Plan. • Health and Safety Management System. • Emergency Management System. • Contractor Management Plan. • Fire and Explosion Management Plan. • Explosives Management Plan.	D	3	17(L)

Hazard Identification Table (Continued)

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
On-Site Storage (Cont'd.) Hydrocarbons, LPG, Explosives and General Goods	Theft	Theft or malicious act/sabotage resulting in off-site impacts.	• Installation of a perimeter fence to reduce ease of access to the pit tops. • Restricting access to storage areas. • Unauthorised entry warning and information signs. • 24 hour security surveillance. • Regular inspections and maintenance of security measures. • Installation of adequate lighting around storage facilities. • Police would be informed ASAP. • Health and Safety Management System. • Emergency Management System.	D	4	21(L)
Other Infrastructure and Supporting Systems	Leak/spill	Uncontrolled spill of water from water management system leading to off-site impacts.	• Regular inspections of water containment structures for structural integrity, effectiveness and for maintenance to maintain their function. • Regular inspections of erosion and sediment control structures for structural integrity, effectiveness and for maintenance to maintain their function. • Operator induction and ongoing training. • Site Water Management Plan. • Surface and Groundwater Response Plan.	C	4	18(L)

Hazard Identification Table (Continued)

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
Other Infrastructure and Supporting Systems (Cont'd.)	Leak/spill	Spill of waste oil, sewage wastes or domestic wastes leading to off-site impacts.	• Waste oils stored in accordance with Australian Standards and legislation. • Storage tanks located to minimise potential impacts of leak/spill. • Surface water runoff from refuelling area, oil and fuel storage and wash down bay directed to oil separator. • Licensed contractor to remove sewage and waste oil from site for disposal. • On-site wastewater management system to treat effluent designed in accordance with *Environmental Guideline: Use of Effluent by Irrigation* (Department of Environment and Conservation, 2004) and AS/NZS 1547:2000 *On-site domestic wastewater management*. • Regular inspections of erosion and sediment control structures for structural integrity, effectiveness and for maintenance to maintain their function. • Spill management procedures and training. • Fire fighting equipment and spill kits located in on-site vehicles and infrastructure (where appropriate). • Operator induction and ongoing training. • HAZMAT training. • Induction on recycling and disposal methods used at the site. • Dangerous goods register and MSDSs kept on-site. • Health and Safety Management System. • Emergency Management System. • Site Water Management Plan. • Surface and Groundwater Response Plan. • Contractor Management Plan.	C	4	18(L)

Hazard Identification Table (Continued)

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
Other Infrastructure and Supporting Systems (Cont'd.)	Fire	Malfunction of on-site power reticulation resulting in off-site fire.	• Power reticulation designed to Australian Standards and legislation – including security measures. • Maintenance of fire breaks to slow the progress of bushfires. • Housekeeping activities - site would be kept clean and tidy and fire hazards removed where practicable. • Power usage monitoring and alarms. • Fire fighting equipment and spill kits located in on-site vehicles and infrastructure (where appropriate). • Regular inspections and maintenance of fire fighting equipment and storage areas where required. • Operator induction and ongoing training. • RFS Fire Management Plan. • Health and Safety Management System. • Bushfire Management Plan. • Emergency Management System. • Electrical Engineering Management Plan.	D	3	17(L)

Hazard Identification Table (Continued)

Project Component	Incident Type	Scenario	Existing and Proposed Preventative Measures	Likelihood[1]	Consequence[2]	Risk[3]
Other Infrastructure and Supporting Systems (Cont'd.)	Fire	Spontaneous combustion/ dust explosion at ROM coal stockpile or coal handling infrastructure leading to off-site fire-related impacts.	• No long-term storage of coal at pit top (i.e. only temporary storage). • West Borehole Seam coal has a low to medium potential for spontaneous combustion. • Maintenance of fire breaks to slow the progress of bushfires. • Housekeeping activities - site would be kept clean and tidy and fire hazards removed where practicable. • Fire fighting equipment and spill kits located in on-site vehicles and infrastructure (where appropriate). • Regular inspections and maintenance of fire fighting equipment and storage areas where required. • Operator induction, awareness of explosives and ongoing training. • RFS Fire Management Plan. • Health and Safety Management System. • Bushfire Management Plan. • Emergency Management System. • Spontaneous Combustion Management Plan. • Dust Explosion Management Plan. • Fire and Explosion Management Plan.	E	3	20(L)

[1] Refer to Table 1.

[2] Refer to Table 2.

[3] Refer to Table 3.