

## 6.14 Hazard and risk

### 6.14.1 Existing environment

The study area for the hazard and risk assessment is defined as the area within 500 metres of the proposal.

The 90 degree corners of the approaches to the existing bridge at Kapooka present safety risks to motorists, particularly for heavy vehicles. A number of crashes have occurred, including collisions with the bridge and/or guard rails and heavy vehicle rollovers. Safety risks associated with the existing bridge are detailed in Section 2.1.3.

### 6.14.2 Potential impacts

#### **Construction**

Hard rock-blasting would occur in the section of cut between chainages 68850 and 69270. Blasting would be conducted using pre-drilled sequential explosive charges to break up the hard rock in the deepest part of the cut.

Risks associated with blasting include:

- Unauthorised access to blast area and safety risks.
- Damage to structures.
- Rock fly (uncontrolled airborne rock projectiles generated by blasting).

Members of the public could be exposed to hazards and risks relating to unauthorised access to the construction site.

The noise and vibration assessment considered the potential for vibration from the proposed blasting to affect structures in the study area; including a gas pipeline located 100 metres west of the proposed blasting site (see Section 6.2). Impacts resulting from vibration are not considered likely as the blasting would be beyond the safe working distances for structural damage.

The proposal could potentially generate a bushfire through the operation of machinery and equipment in areas of long flammable grass. This could affect construction activities for the proposal. Bushfire could cause danger to workers and motorists, damage to property and damage to construction equipment and plant.

Other hazards and risks likely to be associated with construction include:

- Impacts on native flora or fauna due to inadvertent clearing, accidental injury or death.
- Spills or leakage of contaminants such as fuels, chemicals and hazardous substances entering surface and groundwater or contaminating soils.
- Discharge of turbid runoff, resulting in pollution of waterways and vegetation.
- Noise and air pollution.
- Biosecurity risks from the spread of disease, weeds or other pathogens through materials brought on-site or by the movement of material around the site.
- Changed traffic conditions leading to accidents.

The extent of the potential impacts listed above has been discussed in Sections 6.1,

6.2, 6.3 and 6.6.

## Operation

This includes hazards and risks associated with the use of the proposal, and with the maintenance and management of the assets.

General hazards and risks associated with the operation of the existing road network in the study area include:

- Vehicle accidents due to substandard road design and consequent safety impacts.
- Damage to public and private property adjacent to the proposal (fences, woodland conservation areas) in the event of an accident.

These hazards and risks for vehicles would be minimised primarily by constructing the proposal to meet current network safety and design standards, which would improve road safety. The development of the proposal has considered operational hazards and risks that have been assessed (and safeguards and management measures provided) in earlier sections of this REF including:

- Disturbance to vegetation and fauna habitats (Section 6.1).
- Noise from operational traffic (Section 6.2).
- Contamination of local soils and surface water due to fuel and oil spills during operation and maintenance activities (Section 6.3).

### 6.14.3 Safeguards and management measures

In addition to the safeguards and management measures detailed in Sections 6.1, 6.2, 6.3 and 6.6, the safeguards and management measures detailed below would be implemented.

Impact	Environmental safeguards	Responsibility	Timing
Hazard and risk - bushfire	<ul style="list-style-type: none"> <li>• The Construction Environmental Management Plan will include provisions to minimise the potential for ignition or spread of fire. This will include the preparation of a Bushfire Management Plan. Consultation with the local Rural Fire Service would be undertaken during the preparation of the Bushfire Management Plan.</li> </ul>	Project manager	Pre-construction
Hazard and risk - safety	<ul style="list-style-type: none"> <li>• A safety audit of the design will be undertaken before construction.</li> </ul>	Project manager	Pre-construction
Hazard and risk - blasting	<ul style="list-style-type: none"> <li>• The Construction Environmental Management Plan will contain a blast management plan. The plan will detail the objectives of blasting, hazards and risks, site-specific requirements, the blast process, safety measures and the review process.</li> </ul>	Project manager and contractor	Pre-construction
Hazard and risk - safety	<ul style="list-style-type: none"> <li>• All occupational Health and Safety requirements will be fulfilled during the works.</li> </ul>	Project manager and contractor	Construction

Impact	Environmental safeguards	Responsibility	Timing
	<ul style="list-style-type: none"> <li>Public access to the work site will be prohibited and access barriers would be erected.</li> </ul>		
Hazard and risk - blasting	<ul style="list-style-type: none"> <li>Blasting will be conducted by licensed blasting technicians.</li> <li>Security arrangements will be put in place for the blast site. The blast site will be secured with staffed barricades and only authorised persons would have access to the site.</li> <li>Exclusion zones will be established and maintained before blasting.</li> <li>Blast mats will be used to minimise rock fly where necessary.</li> </ul>	Project manager and contractor	Construction