

6.15 Hazard and risk

6.15.1 Existing environment

Existing hazards and risks in the vicinity of the proposal are generally associated with the operation of the existing road network and the Main North rail line and flooding hazards arising from the Hunter River.

6.15.2 Potential impacts

Construction

Hazards and risks relating to the construction of the proposal would include:

- Spills or leakage of contaminants such as fuels, chemicals and hazardous substances entering surface and groundwater or contaminating soils
- Discharge of turbid run-off, resulting in pollution of waterways
- Encountering unexpected utilities or contaminated material during earthworks
- Spread of noxious weeds
- Flooding during extreme rain events
- Fire from offsite or caused as a result of construction activities such as hot works
- Changed traffic conditions leading to incidents.

These potential impacts have been addressed in other sections of this REF, including:

- Biodiversity (refer to Section 6.1)
- Surface water, hydrology and flooding (refer to Section 6.2)
- Groundwater (refer to Section 0)
- Soils and contamination (refer to Section 6.4)
- Traffic and transport (refer to Section 0)
- Resource use and waste management (refer to Section 6.13).

In relation to fires during construction these would be managed by a ban on fire being lit as part of the construction works or offsite fire risk managed by adjoining landowners and the Rural Fire Service.

Construction risks would be temporary and managed with the relevant safeguards and management measures outlined in the sections referenced above.

Operation

Operational hazards and risks relating to the proposal could include:

- Fuel and oil spills during maintenance activities or vehicle incidents polluting the natural environment
- Vehicle incidents
- Flooding. Despite the design of the proposal providing flood immunity for the 1 in 100 year flood event for bridges structures and 1 in 20 year flood event for approach roads access to the proposal may be impacted during flooding. For example inundation of Putty Road near the Putty Road connection access ramps.

Fuel and oil spills during operation are discussed in Section 6.2. Vehicle crashes are an inherent aspect of the operation of any road. During the design of the proposal, Roads and Maritime has applied the requirements of all relevant standards as listed in Section 3.2.1.

6.15.3 Safeguards and management measures

Mitigation measures provided in Table 6-70 would be implemented to ensure potential hazards and risks are minimised.

Table 6-70: Summary of mitigation measures to manage hazards and risk

Impact	Environmental Safeguard	Responsibility	Timing
Hazard and risk	Emergency response plans will be incorporated into the construction environmental management plan.	Construction contractor	Pre-construction and construction
Hazard and risk	<p>A Hazard and Risk Management Plan will be prepared and implemented as part of the CEMP. The Plan will identify:</p> <ul style="list-style-type: none"> • Details of hazards and risks associated with the activity • Measures to be implemented during construction to minimise these risks • Record keeping arrangements, including information on the materials present on the site, material safety data sheets, and personnel trained and authorised to use such materials • A monitoring program to assess performance in managing the identified risks, including "equipment checking and maintenance requirements • Contingency measures to be implemented in the event of unexpected hazards or risks arising, including emergency situations." 	Construction contractor	Pre-construction and construction