

6.9 Air quality

6.9.1 Existing environment

The study area for the air quality assessment is defined as the area within 500 metres of the proposal.

In 2010/11 air quality exceedances for the city of Wagga Wagga were recorded for eight days (Wagga Wagga City Council 2011b). Exceedances are defined as days when particle matter in the air exceeds the National Environment Protection Measure of 50 micrograms per cubic metre (Wagga Wagga City Council 2011b).

The proposal is located in a rural area comprised of woodland and agriculture, with the residential area of the Kapooka Military Area (see Figure 1.2). Three additional residences are located in the study area (see Figure 1.2). The main sources of air pollution in the study area are likely to include:

- Emissions from vehicles on the Olympic Highway and Camp Access Road.
- Dust from vehicles travelling on unsealed roads, including the quarry access road at the southern end of the proposal and the unsealed road west of Camp Access Road.
- Dust from agricultural activities.
- Smoke from paddock stubble burn-off in agricultural areas, as well as from wood fires.
- Dust from quarrying activities at three gravel quarries located within one kilometre of the proposal.

Search results from the national pollutant inventory managed by DoE (2012; Appendix C) indicate that 11 industrial facilities in the local area (postcodes 2650 and 2652) emit the following substances:

- Total volatile organic compounds
- Sulfur dioxide
- Lead and lead compounds
- Carbon monoxide
- Oxides of nitrogen
- Polycyclic aromatic hydrocarbons
- Particulate matter 10 micrometres or less in diameter.

These facilities are located at least five kilometres from the proposal and are unlikely to affect the proposal or its environment.

No specific information for the study area was available from the OEH online air quality database (OEH 2012a).

6.9.2 Potential impacts

Construction

During construction the following activities would potentially result in air quality impacts:

- Clearing of vegetation.
- Stripping and stockpiling topsoil.
- Bulk earthworks.
- Road construction.

- Transport and handling of soils and materials.
- Use of construction vehicles, generating exhaust fumes.

Potential air quality impacts during construction would predominantly be from the generation of dust. Dust generation could result in health impacts to nearby receivers.

Receivers most likely to be affected by these impacts are residences 1 and 3. The impacts of dust generation are considered to be minor as they would be short-term, during the construction phase only and would be controlled using the safeguards detailed in Section 6.9.3.

Machinery and other construction vehicles would emit exhaust fumes. The impact of these emissions would be temporary in nature and limited to the construction phase. Odour may be generated during the application of asphalt and line marking. These impacts would be localised and limited only to particular activities. Impacts at identified receivers would be minor due to their distance from the works.

Overall, potential air quality impacts during construction would be low and short-term in nature.

Operation

Changes in air quality as a result of the proposal would be considered low. The proposal is not expected to generate a significant quantity of additional traffic. The proposal would result in a small increase in higher mass limit vehicles by removing the restriction to these vehicles posed by the existing bridge at Kapooka.

During operation of the proposal, a small quantity of vehicle emissions would be generated during maintenance activities (which would be frequency and intensity dependent). The impacts on local air quality would be considered very low overall.

6.9.3 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
Air quality - general air quality impacts	<ul style="list-style-type: none"> • Construction activities will be managed to minimise the emission of dust, smoke, and other substances. 	Project manager and contractor	Pre-construction
Air quality - dust	<ul style="list-style-type: none"> • Exposed surfaces will be watered regularly to minimise dust emissions. • Clearing of natural vegetation will be minimised where possible. • During periods of high winds, dust generating activities will cease. • Stabilisation of disturbed surfaces will take place as soon as practicable. • Stockpiles or areas that may generate dust will be managed to suppress dust emissions in accordance with Roads and Maritime Stockpile Site Management Guideline (RTA 2011a). 	Project manager and contractor	Construction
Air quality -	<ul style="list-style-type: none"> • Plant and machinery will be turned off when 	Project	Construction

Impact	Environmental safeguards	Responsibility	Timing
other emissions	<p>not in use as much as possible and will be fitted with emission control devices complying with Australian Design Standards where practicable.</p> <ul style="list-style-type: none"> • Construction plant and equipment will be maintained in a good working condition in order to limit impacts on air quality. • No burning of any materials will occur. • During transportation on the Olympic Highway, Camp Access Road and the quarry road, loads will be adequately covered. 	manager and contractor	