

Air quality

Fact sheet

Air quality assessment

The Environmental Impact Statement includes a comprehensive air quality assessment in accordance with the *Approved Methods for Modelling and Assessment of Air Pollutants* (Approved Methods) (DEC, 2005a) and the *National Environment Protection Measure for Ambient Air Quality* (Air NEPM) (NEPC, 2003).

The air quality assessment considered emissions from vehicles transporting material to the site and from dust generated on site. A worst case scenario would have a negligible impact on the surrounding air quality.

Particulate matter

Particulate matter (PM) in the air can come directly from natural sources such as bushfires and dust storms, and also from human activities such as wood burning, quarrying and mining, motor vehicle use and industrial processes. PM₁₀ are any particulates smaller than 10 microns and PM_{2.5} are any particulates smaller than 2.5 microns.

For particulate concentrations PM₁₀ and PM_{2.5} the maximum contributions from the project are below the applicable air quality criteria and advisory standards.

However, background air quality monitoring data indicates that there are some occasions when background concentrations of PM₁₀ and PM_{2.5} are already high. On these occasions, there is potential for cumulative exceedances (project contribution plus background) of the applicable criteria and advisory reporting standards.

The project only contributes small quantities of PM₁₀ and PM_{2.5} to the predicted exceedances. The assessment of combustion emissions from haulage trucks travelling from the NorthConnex Project to the Hornsby Quarry site concluded that impacts on receptors adjacent to haulage routes would be negligible.



James Park air quality monitoring station

Health

The EIS includes a human health risk assessment prepared in accordance with the *Guidelines for assessing human risks from environmental hazards*. The health risk assessment was based on the outcomes of the air quality assessment and noise assessment. The project includes best practice mitigation measures ensuring that there will not be significant health impacts in the local community.

Managing dust

The proposed work would generate dust during spoil stockpiling and emplacement activities. Dust generating activities include handling of material from spoil haulage trucks dumping spoil, transfer of spoil from temporary stockpiles to the conveyor and the distribution of spoil within the quarry void. Best practice measures for managing dust would include:

- Sealing haul roads and internal site roads
- Regularly watering down roads with water carts
- Spraying water on spoil stockpiles and conveyor transfer points
- Stabilising exposed surfaces
- Installing wind barriers, such as shade cloth on site perimeter fencing
- Managing speed limits on internal site roads
- Implementing a formal dust observation program including daily reviews of weather forecasts, meteorological conditions and on site dust generation.

Managing vehicle emissions

The air quality assessment carried out for the project concluded that emissions generated by vehicles and construction machinery would be well below the applicable criteria. To manage potential impacts all construction machinery used would comply with the emissions concentration limits outlined in the *Protection of the Environment Operations (Clean Air) Regulation 2010*. This would include the implementation of standard measures like:

- Switching engines off when not in use
- Maintaining vehicles in accordance with manufacturers' specifications
- Using fuel efficient vehicles
- Efficient planning and scheduling of deliveries to Hornsby Quarry.

A comprehensive dust management plan would be implemented, and include:

- A reactive management strategy with site procedures for targeting the visual observation of dust leaving the site or temporary limiting of high dust generating activities on site
- Contingency measures such as additional watering, covering stockpiles, temporary modifications to dust generating activities and temporary reductions in materials handling intensity.

Contact us

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