

Albion Park Rail bypass

Fact sheet: managing dust during construction

Reducing dust during construction

To build the bypass, about five million tonnes of earth, hard rock and road building material needs to be moved using heavy earthmoving equipment. This amount of loose material can create significant dust in surrounding areas during windy conditions if not mitigated. Some of the main techniques used on the project to reduce our contribution to dust in the area include:

- Minimising exposed surfaces through site planning and programming, and delaying clearing vegetation until necessary to reduce the area of potential dust sources.
- Compacting the earth and road base using heavy equipment such as rollers; compacted materials are less likely to become airborne during windy conditions.
- Managing stockpiles and loose materials; exposed stockpiles are sealed with either grass seed, spray on soil binding products or fabric covers.
- Suppressing dust on active areas such as unsealed road surfaces or haul roads using mulch or water carts to dampen dust.

In periods of hot and dry conditions we sometimes add polymers to the water carts which help bind fine dust particles, making them heavier and less likely to become airborne during windy weather.

Other methods used include restricting heavy vehicle traffic to designated roadways, covering loads when transporting materials to and from the site, covering haul roads and modifying or rescheduling activities that are likely to generate excessive dust during windy weather.



Progressive stabilisation and revegetation

Major contributors of construction-related dust are truck movements on unsealed surfaces and wind erosion of open areas. Minimising the potential for dust generation by reducing or eliminating these sources of dust is usually the most effective measure.

We do this by temporarily stabilising exposed areas using compactors and soil binding products and establishing permanent landscaping as early as possible, which “locks down” sources of potential dust.

Revegetation is done by using local topsoil and spray-on seed mixes (commonly called spray grass or hydromulch). These mixes contain soil binding products which help to reduce potential dust that could come from newly constructed road embankments or excavated areas.

In 2019, we stabilised more than 330,000 square meters of completed earthworks and 180,000 square meters of temporary earthworks across the project.

Using water to manage dust

Water carts are one of the most visible methods used to suppress dust on the Albion Park Rail bypass. However they are not the only mitigation measure. Planning, progressive stabilisation and early landscaping all play an important role in managing dust during construction.

When required, water used for dust suppression on active areas of construction is sourced from site runoff collected in sediment basins that have been specifically constructed to protect local waterways during construction. Water is also sourced from the tidal section (the area influenced by ocean tides) of the Macquarie Rivulet.

When these water sources are unavailable, the Sydney Water supply is also used to reduce dust impacts from construction. However, we try to avoid using potable water as much as possible, especially during water restrictions.



Water carts are used to suppress dust on active construction areas and unsealed roads.

More information

If you have any questions or would like to learn more about how we manage dust during construction, please call, email or visit our community display centre.

Independent, real-time information on regional air quality monitoring data can be found at: www.environment.nsw.gov.au/topics/air/current-air-quality-data

Background information about air quality trends in the Illawarra region can also be found here: www.environment.nsw.gov.au/topics/air/research/previous-research/air-quality-trends-in-the-illawarra



Hydromulching is used to quickly vegetate areas and suppress dust from exposed areas on the project.

Hydromulching

Hydromulching is a common erosion control and dust suppression method involving a mixture of water, seed, fertiliser, mulch, tracking dye and a binding agent which is sprayed directly onto areas of exposed earth.

The use of hydromulching on a large scale infrastructure project helps to vegetate large areas of land quickly. The additives in the seed mix act as a barrier and moisture reservoir for the seeds as they germinate, while the binding agent and mulch allow the mixture to stick to the ground to stop wind from picking up dust and displacing the seed.

In 2019, 25,000 square meters of temporary hydromulch was used on the project to help suppress dust.

Contact us



1800 708 727



APRbypass@fultonhogan.com.au



rms.nsw.gov.au/aprb



Albion Park Rail bypass team
PO Box 1014
Albion Park Rail NSW



If you need help understanding this information, please contact the Translating and Interpreting Service on 131 450 and ask them to call us on 1800 708 727.