



MORDIALLOC FREEWAY
OCTOBER 2018

ENVIRONMENT EFFECTS STATEMENT



Air Quality and Greenhouse Gas

The 9km Mordialloc Freeway will improve access to Melbourne's south-eastern suburbs, completing the missing link from Frankston to Clayton.

We've now undertaken 13 key investigations to fulfil our requirements as part of the Environment Effects Statement (EES).

We engaged a team of technical experts to undertake detailed investigations for the project. Both field assessments and modelling were carried out to understand how the construction and operation of the freeway could impact upon the air quality of the area. The investigations will help inform how we manage the potential impacts of the project.

The full report of this study is available in Chapter 13: Air Quality and Greenhouse Gas of the EES Main Report.

What our studies found

Managing the past

The freeway will cross an old landfill site just south of the Dingley Bypass. A number of investigations were undertaken to understand the quality of the soil and any existing landfill gases at this location. These investigations will help us determine the most appropriate construction methods to minimise soil disturbance at this site.

A review of survey data undertaken by our technical experts found that the risk to the community during pre-construction activities, such as piling, would be minimal due to the:

- Low emission rate of hydrogen sulphide
- Low odorous gas concentrations recorded on site
- Large buffer of 300 metres to sensitive locations

We have provided more detail on construction methods in *Chapter 18: Soils and Contaminated Land* of the *EES Main Report*.

Maintaining our air quality

Our technical experts undertook vehicle emissions modelling to provide a better understanding of the potential air quality impacts when the freeway is operational.

The model included nitrogen dioxide, carbon monoxide, and particulate matter. The modelling found that:

- Nitrogen dioxide concentrations would be elevated within the project boundary.
- Carbon monoxide and particulate matter are expected to have minor to negligible air quality impacts.
- Air contaminants from vehicles would be within State Environment Protection (SEP) and Air Quality Management (AQM) design levels outside the project boundary.
- No residential or commercial monitoring locations will be adversely affected.

Minimising our impact on the environment

During construction and operation of the freeway, we expect the release of some greenhouse gases from:

- Construction traffic and equipment
- The manufacturing and transportation of construction materials
- Vehicles using the new freeway upon completion

The modelling that our technical experts have undertaken shows that there would be 0.96 kilotonnes of CO₂ emissions per year. Most of these emissions are attributed to electricity consumption used to light the road and bridges.

The model also highlights that once operational the freeway will contribute to savings of up to 13 kilotonnes of CO₂ emissions per year. This is because there will be an increase in the average speed of traffic on the road network and reduced congestion, helping to improve the efficiency of fuel consumption of vehicles.

Keeping our site clean

We're committed to ensuring that the community won't be negatively impacted during construction of the freeway. We expect dust from our construction activities to be generated during the formation of the freeway and embankments from:

- clearing and stockpiling of topsoil
- filling and compaction of the base of the road
- pavement and landscaping.

The studies carried out by our technical experts show that there will be higher concentrations of dust during filling and compaction activities. This is because more material will be transported, handled, and compacted during this phase of the project.

So that we don't adversely affect the community during construction, the contractor will be required to create a dust suppressant management plan.

Being accountable for what we do

We have established Environmental Performance Requirements (EPRs), which define the environmental outcomes we will achieve during the design, construction and operation of the Mordialloc Freeway.

Our EPRs will ensure the construction and operation of the freeway will minimise air quality and greenhouse gas impacts.

A full list of our EPRs can be found in Chapter 13: Air Quality and Greenhouse Gas of the EES Main Report.

EES Documentation

You can view the full EES documentation

Online: roadprojects.vic.gov.au/projects/mordialloc-freeway

In person at:

- Mordialloc Freeway Info Hub
- City of Kingston offices
- City of Greater Dandenong offices
- Chelsea Library
- Springvale Library
- State Library of Victoria
- Department of Environment, Land, Water and Planning (Melbourne offices)



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