



Transport for NSW

# Beaches Link and Gore Hill Freeway Connection

## Air quality

We recognise that air quality is important. Our commitment is that the tunnels will be built and operated to meet strict air quality standards using modern ventilation and tunnel design. All ventilation systems will be built and operated to strictly comply with any conditions specified in Department of Planning, Industry and Environment's (DPIE) Conditions of Approval, and the Environment Protection Licence (EPL) to be issued by the NSW Environment Protection Authority (EPA).

You may be interested to know the independent NSW Chief Scientist and Engineer has released a report in relation to road tunnel air quality. The report found that using ventilation outlets and avoiding portal emissions are the most effective methods of mitigating the air quality impacts of road tunnels. These methods result in a negligible change to surrounding air quality and as such, there is little to no health benefit for surrounding communities in installing filtration and air treatment systems in such tunnels. You can learn more about ventilation systems, filtration and air treatment systems by visiting [www.chiefscientist.nsw.gov.au](http://www.chiefscientist.nsw.gov.au) or [nswroads.work/airquality](http://nswroads.work/airquality).

Despite there being more cars and trucks on the road, vehicle emissions have fallen over the past 20 years, as a result of improved fuel quality and engine designs, such as hybrid and electric vehicles.

### Assessing air quality

We have carried out a detailed assessment of air quality in consultation with independent specialist agencies including the EPA, Office of the NSW Chief Scientist and Engineer, Ministry of Health and the Advisory Committee on Tunnel Air Quality (ACTAQ) to ensure compliance with regulatory requirements and manage the potential impacts on

air quality. Our air quality assessment was subject to an independent review by international technical experts, coordinated by the NSW Chief Scientist and Engineer. It is now published on DPIE's major projects planning portal: [planningportal.nsw.gov.au/major-projects/project/10456](http://planningportal.nsw.gov.au/major-projects/project/10456)

### How we regulate air quality from tunnels

In NSW, DPIE monitors, analyses and publishes information about air quality. The EPA regulates air quality and implements measures for managing and reporting air pollution.

We understand community concerns about air quality, which is why in 2018, the NSW Government announced stronger measures on emissions from motorway tunnels.

These measures include the EPA regulating the ventilation outlets for all current and future operating motorway tunnels to ensure they meet air quality limits. As part of these measures additional checks are required as part of the environmental assessment process. Before the EIS can go on public display the:

- ACTAQ coordinates a scientific review of the project's air emissions from ventilation outlets
- NSW Chief Health Officer releases a statement on the potential health impact of emissions from tunnel ventilation outlets.

Both documents for the Beaches Link and Gore Hill Freeway Connection are available to view on DPIE's major projects planning portal: [planningportal.nsw.gov.au/major-projects/project/10456](http://planningportal.nsw.gov.au/major-projects/project/10456)

### Air quality portal

Visit our air quality portal to see how Sydney's air quality compares with the world and how the ventilation systems work [nswroads.work/airquality](http://nswroads.work/airquality)

## When we are building

We know how important it is to manage air quality during construction for your health, and the health of everyone working on site. Managing dust is a priority so we are implementing a series of measures to suppress dust and monitor air quality every day.

Like with any building work, a certain level of dust generation is unavoidable. However, dust management is stringently regulated as part of construction licences and conditions. Construction activity at each site is carried out under an Environmental Protection Licence (EPL), issued by the EPA, which will include requirements relating to air quality and dust.

We will have an experienced construction team who will work to minimise dust. They will use dust suppression methods, including stabilising loose material, watering the site and washing truck wheels when required. These measures, in addition to management of potential odours, will be detailed in construction management documentation and implemented during construction.

Most of the material we excavate will be clean, crushed sandstone. This will be removed in covered trucks to minimise dust falling from trucks.

When we are building, we will be monitoring dust around the sites to ensure our methods are allowing us to meet the terms of our EPL and Conditions of Approval and inform us if we need to make changes to our construction methodology.

## When we are open to traffic

### Surface air quality

You will experience an improvement in air quality along Military Road, Spit Road, Manly Road and Warringah Road as a result of vehicles using Beaches Link, reducing traffic on these roads.

Our studies have shown there will be a small impact on the local air quality along some of the surface roads we are building and upgrading, as well as some existing roads due to increased local traffic.

Overall, traffic emissions in Sydney are predicted to be reduced by up to 50 per cent by 2027 and up to 65 per cent by 2037, when compared to 2016.

Our human health study also shows the change in incidence of the relevant health effects associated with exposure to PM2.5 in the community is very small and would not be measurable within the community or at a local government area or suburb level.

Our motorway facilities use elevated ventilation outlets to eject tunnel emissions high into the atmosphere where they mix with the surrounding air, dispersing and being diluted hundreds of times, quickly becoming indistinguishable from background levels.

Our assessments have shown emissions from the ventilation outlets for the project will have a negligible contribution to surrounding air quality and will be generally undetectable. The ventilation outlets will be continuously monitored. The EPA will regulate the ventilation outlets to ensure they meet air quality limits.

### You will see our motorway outlets at the following locations:

- within the Warringah Freeway at Cammeray (the structure will be built as part of the Western Harbour Tunnel and Warringah Freeway Upgrade project)
- the industrial area adjacent to the Gore Hill freeway at Artarmon
- next to Burnt Bridge Creek Deviation at Balgowlah
- within Wakehurst Parkway at Killarney Heights.

Our ventilation system is designed to ensure there are zero emissions from the tunnel portals.

## In-tunnel air quality

Modern tunnel ventilation systems are designed to ensure in-tunnel air quality is maintained to meet strict air quality requirements, avoid emissions from the portals, and manage smoke during fire incidents.

We have carried out modelling on in-tunnel air quality based on:

- expected traffic volumes
- maximum traffic volumes
- breakdown or major incidents in the tunnels.

The results of our modelling show the ventilation system for the tunnel will be able to manage the tunnel air to meet the air quality criteria in all of these situations.

Air quality in Sydney has improved over the last few decades due to initiatives which have reduced emissions from industry, motor vehicles, businesses and residences. Motor vehicle emissions are predicted to decrease significantly as a result of improvements in emission control and vehicle engine technology.

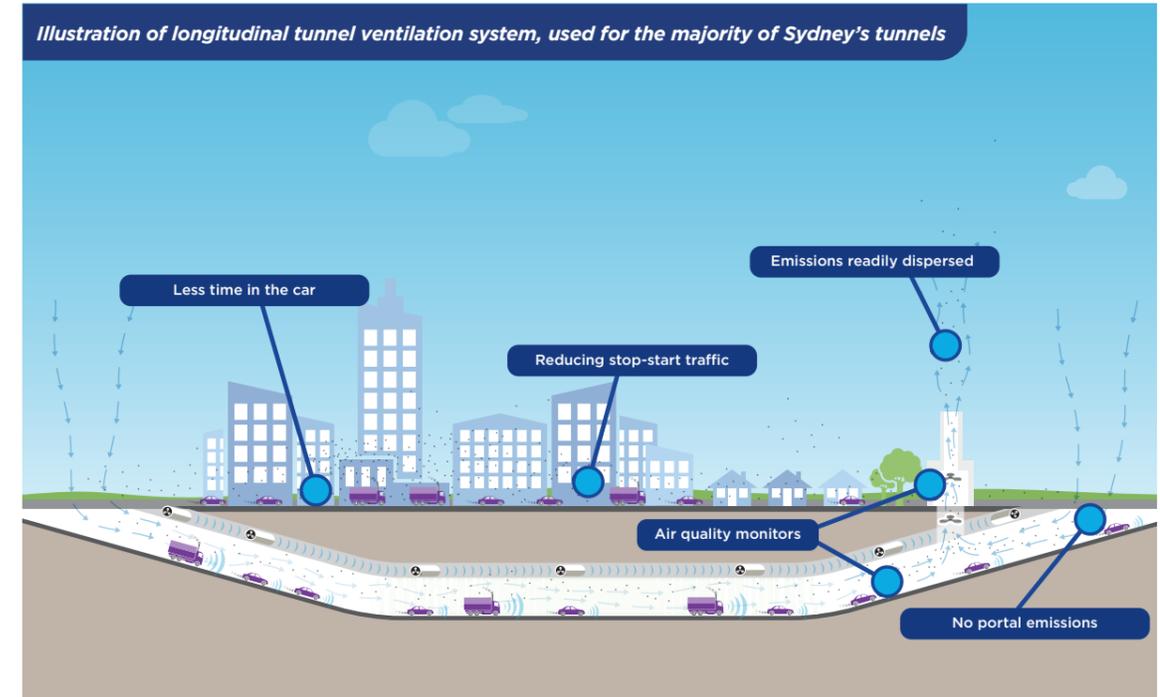
## Future air quality monitoring

We will continuously monitor air quality within the ventilation outlets and tunnel 24 hours a day during operation, and use real-time data to ensure we are meeting strict air quality criteria. Air quality data will be available to the public to view on a dedicated webpage showing the tunnels are achieving the required levels of air quality.

In addition, ambient air quality monitoring will also be carried out for 12 months before, and a set period of time, likely at least 24 months, after the tunnel opens to verify everything is performing as expected and confirm we are meeting air quality standards.

The location of these monitoring stations and duration of monitoring will be determined by the Beaches Link Air Quality Community Consultative Committee (AQCCC), which will be comprised of representatives from the local council, local community and tunnel operator. The Beaches Link AQCCC will be independently chaired by a chairperson appointed in consultation with DPIE. We expect the AQCCC will be a Conditions of Approval requirement for Beaches Link, based on other recently approved projects that had this requirement, including M6 and M4-M5 Link.

For more information please refer to Chapter 12: Air quality in the EIS.



## Contact us



[nswroads.work/blportal](https://nswroads.work/blportal)



[1800 931 189](tel:1800931189)



[whtbl@transport.nsw.gov.au](mailto:whtbl@transport.nsw.gov.au)



Customer feedback  
Transport for NSW, Locked Bag 928  
North Sydney NSW 2059

Visit our interactive web portal  
Read the EIS, find out more or ask our  
team a question.



[nswroads.work/blportal](https://nswroads.work/blportal)

Our phone line is monitored 24 hours  
when work is taking place.



## Translating and Interpreting Service

If you need an interpreter, please call the Translating and Interpreting Service (TIS National) on [131 450](tel:131450) and ask them to telephone Transport for NSW on [1800 931 189](tel:1800931189).

### Chinese (simplified)

若您需要口译员，请拨打 [131 450](tel:131450) 致电翻译与口译服务处 (TIS National)，并要求他们转拨 [1800 931 189](tel:1800931189) 致电 Transport for NSW。

### Italian

Se avete bisogno di un interprete, chiamate il servizio traduttori e interpreti (TIS National) al numero [131 450](tel:131450) e chiedete di telefonare a Transport for NSW al numero [1800 931 189](tel:1800931189).

### Portuguese

Se necessitar de um(a) Intérprete, por favor, ligue para o Serviço de Tradução e Interpretação (TIS National), através de [131 450](tel:131450) e peça o telefone do Transport for NSW, através de [1800 931 189](tel:1800931189).

Privacy Transport for NSW is collecting your personal information in connection with Beaches Link and Gore Hill Freeway Connection ("the Project"). In addition to collecting your name and contact details we may collect other information such as your submissions and other communications with us. We will retain and use this information for consultation purposes, including communications and analysis in connection with the Project. We will not disclose your personal information to third parties unless authorised by law and if we include your submissions in any public report we will not identify you. Providing your personal information is voluntary but if you do not provide it we may not include you on our stakeholder database and you might miss further consultation opportunities. Your personal information will be held by us and you can contact us to access or correct it. Please write to us at either [whtbl@transport.nsw.gov.au](mailto:whtbl@transport.nsw.gov.au) or Transport for NSW, Locked Bag 928, North Sydney NSW 2059.