Frequently Asked Questions

M1 Pacific Motorway widening between Tuggerah and Doyalson interchanges – Noise treatment

October 2016

The NSW and Australian Governments are funding an upgrade of the M1 Pacific Motorway between the Tuggerah and Doyalson interchanges. The upgrade involves widening the motorway to provide three lanes in each direction to improve traffic flow and safety.

This document provides more information about road noise on this project.

Roads and Maritime Services has completed the detailed design for the project, with construction expected to start in 2017.

During the detailed design we investigated various solutions to reduce traffic noise from the upgraded motorway. The most effective of these was the installation of a low-noise asphalt road surface across the 12 kilometre length of the upgrade, combined with architectural acoustic treatments to eligible residences.

Architectural acoustic treatments

What are architectural acoustic treatments?
Architectural acoustic treatments are modifications made to a residence with the aim to improve external sound resistance. Architectural acoustic treatments can include:

- Improvements to doors and windows facing the road
- Replacement or installation of windows and door seals if required
- Installation of mechanical fresh air ventilation
- Installation of courtyard walls.

The treatment offered depends on the target noise criteria, the predicted level of noise and the structure or shape of each residence.

How much will noise increase/decrease at my residence?
Detailed information on forecast noise levels for individual residences is available in the May 2016 supplementary review of environmental factors, which can be viewed at **www.rms.nsw.gov.au**.

Which residences are eligible for architectural acoustic treatments?
Roads and Maritime provides architectural acoustic treatments for residences where traffic noise is forecast to exceed certain criteria.

The criteria is guided by three key documents:

- NSW Environmental Protection Authority's Road Noise Policy (2011)
- Roads and Maritime Noise Criteria Guideline (December 2014)
- Road and Maritime Noise Mitigation Guideline (December 2014).

These documents provide noise guidelines we use when managing road traffic noise in NSW. They are available online at **epa.nsw.gov.au/noise** and **rms.nsw.gov.au**

During design and planning for upgrades of existing motorways and main roads we aim to achieve noise levels at residences no higher than 60 decibels during the day or 55 decibels at night, when measured in accordance with the Roads and Maritime Environmental Noise Management Manual.

Residences are eligible where:

- Noise assessment predicts these criteria will be exceeded and there will be an increase of more than 2.0 decibels 10 years after completion of the project, and
- Noise assessment predicts noise levels will be acute (65 decibels during the day or 60 decibels at night) 10 years after completion of the project.

Can I get temporary treatment during construction?
We do not offer temporary architectural acoustic treatments for individual residences during construction. We will work with residents and property owners affected by construction noise to help mitigate and limit construction noise wherever possible.

Other noise treatments

Will noise walls be built as part of the upgrade?
During detailed design we investigated various measures to reduce traffic noise from the upgraded motorway, including noise walls. The assessment considered factors such as cost, visual impacts and the amount of noise reduction each treatment type could provide.

The assessment found noise walls are not a viable noise mitigation treatment for this upgrade.

The most effective noise mitigation treatment is the installation of a low-noise asphalt road surface across the 12 kilometre length of the upgrade, combined with architectural acoustic treatments to eligible residences.

Changes to the road surface

Which types of road surfaces were originally proposed?
In the 2014 concept design a 'like-for-like' approach to road surface replacement was proposed. This involved:

- Replacing the section of concrete road surface between Wyong River and the Doyalson interchange with a new concrete road surface
- Replacing the section of open grade asphalt road surface between the Tuggerah interchange and the Wyong River with a new open grade asphalt road surface.

In the 2014 review of environmental factors and subsequent submissions report, Roads and Maritime indicated low-noise road surface options would be considered to reduce road noise from the upgraded motorway.

What is the proposed 'low-noise' surface?
During detailed design a low-noise road surface called stone mastic asphalt (SMA) was selected for the entire length of the upgrade. Unlike open grade asphalt, SMA is a structural road surface.

The benefits of SMA include:

- Low surface noise
- High durability, especially when compared to open grade asphalt
- Reduced need for repair and ongoing maintenance.

SMA is often used in residential areas and roads subject to high volumes and heavy traffic.

Why is SMA being used south of Wyong River if it will result in increased noise at my residence?
Unlike the originally proposed open grade asphalt, SMA is a structural road surface which is required for the forecast increase in traffic.

SMA across the entire 12 kilometre length of the upgrade will provide a smooth and consistent journey for road users. It will also reduce the frequency of maintenance, compared with the originally proposed open grade asphalt.

To mitigate this increase in noise, architectural acoustic treatments are being offered to eligible property owners.

More information

Information on the most recent noise investigations and other design refinements is available in the May 2016 supplementary review of environmental factors, which can be viewed at **www.rms.nsw.gov.au**.

Contact

If you have any questions, please call our Project Manager Brett Hoad on 1800 745 286 during business hours or email brett.hoad@rms.nsw.gov.au

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