M5 corridor expansion – noise and vibration
The M5 transport corridor is the main road freight, commercial and commuter route between Port Botany and Sydney Airport, and south west Sydney. In recent years traffic levels and the number of heavy vehicles on this route means the corridor is operating at or near capacity during peak periods. This impacts on Sydney's economic productivity and competitiveness.

This fact sheet provides preliminary information on potential noise and vibration impacts during construction and operation of the roadway.

Would the project increase the existing traffic noise levels?
While noise levels vary across the study area, they are largely characterised by proximity to busy roads, rail lines and aircraft flying overhead.

A preliminary noise assessment for the feasibility study was undertaken. Likely noise impacts are outlined below, however noise modelling and assessment would be undertaken during the environmental assessments.

M5 South West and East
It is possible (but by no means certain) that the road proposals would result in some noise impact to the adjacent residential areas due to increased average traffic speed and traffic volumes.

M5 East Tunnel
Noise would not be heard from the surface from the new tunnel. An increase in noise levels may occur at the tunnel portals (ie the roads leading into the tunnels).

How would traffic noise be minimised?
Measures to minimise traffic noise include the following:

• Architectural treatments can include the provision of a fresh air ventilation system (to allow existing windows and doors to be kept shut), upgraded window and door seals, upgraded glazing and solid core doors, and outdoor screening.

• Noise walls are already in use along parts of the M5 Motorway. The noise studies may indicate that the height of existing noise walls may need to be increased, however factors such as wind loads, urban design and overshadowing would need to be considered. In terms of installing new noise walls, consideration would be given to how they would look, the potential loss of outlook, shadowing, community preferences, the geography of the surrounding land and driver visibility near intersections or merging traffic.

• Road surface treatments may result in noise reductions of up to 3 dBA, depending on traffic mix and speed and would be considered as part of the approach to noise management.
Will noise walls be constructed?

Noise walls would be considered as part of the approach to noise management. See previous page one of this fact sheet for more information.

Will the RTA conduct any studies into reducing operational noise or the noise from the motorway?

The noise studies will include:

- Defining the existing noise environment through monitoring at various locations to help develop noise contours of all neighbouring areas.
- Establishing the criteria for allowable noise in accordance with the Department of Environment and Climate Change’s (DECC) Environmental Criteria for Road Traffic Noise (1999).
- Predicting likely noise levels for neighbouring areas using traffic predictions on project opening and ten years after project opening.
- An outline of noise reduction strategies for consideration during design development.

Would there be noise during construction?

Construction noise impacts are most likely in areas around the major tunnelling sites, such as tunnel portals, construction compounds and where surface works including roadworks are proposed.

The level of these construction noise impacts will be investigated during the environmental assessment and measures to reduce these impacts would be included. Prior to the commencement of construction the RTA and contractors would develop the measures to reduce or manage construction noise in consultation with surrounding communities.

How does the RTA propose to minimise noise during construction?

The RTA would work to its Environmental Noise Management Manual, the Department of Environment, Climate Change and Water’s Interim Noise Guideline. If the project were approved, this would include reducing and managing noise. The RTA would engage a noise specialist to help develop these mitigation measures to ensure that noise from the construction works is minimised wherever possible.

Noise impacts could be mitigated or reduced by:

- Low noise pavements.
- Noise barriers and walls.
- Architectural treatments to individual buildings.
- Fitting noise reduction systems to construction equipment.

Would the vibration from the tunnel construction cause any structural damage to my property?

During the environmental assessment studies will be undertaken of the potential vibration that may occur as a result of the construction work. The assessment will identify possible mitigation measures to minimise any effect on surrounding residents and businesses.

More information

For more information on the project and the planning and approvals process, please contact the M5 corridor expansion free call number on 1800 633 332, email m5expansion@rta.nsw.gov.au or visit the website at www.m5corridorexpansion.com.au.