

Gateway UPGRADE NORTH

Noise Barriers

FACT SHEET

December 2016

As part of the Gateway Upgrade North project, a detailed road traffic noise assessment has been completed to ensure noise is managed appropriately into the future.

The assessment was carried out in accordance with the Department of Transport and Main Roads' (TMR) *Transport Noise Management: Code of Practice – November 2013*^{*}.

The Code of Practice establishes a standard process for dealing with the effects of road traffic noise. It provides guidelines for assessing and managing road traffic noise and provides considerations for possible noise-reducing treatments, such as the installation of noise barriers.

How has road traffic noise been assessed?

On existing state-controlled roads across Queensland, including the Gateway Motorway, a road traffic noise assessment must be completed prior to any major upgrades taking place.

The noise assessment requires noise monitoring to be carried out at various properties across the project alignment that are considered to be 'noise-sensitive receptors', including:

- residential buildings (eg. private home)
- educational buildings (eg. school, university campus)
- community buildings (eg. library, church)
- health buildings (eg. hospital, surgery).

During the assessment period, noise levels are measured continuously from the exterior of the selected buildings (the most exposed façade) over a minimum two day period (48 hours). The overall noise level outputs from the assessment are measured in decibels (dB).

As per the Australian Standard, LA10 is a common noise descriptor used for reporting road and traffic noise. LA10 represents the level of noise exceeded for 10% of any period measured. The project team used two LA10 indices in reporting dB levels:

- LA10 (1hr) – the road traffic noise level exceeded for 6 minutes in every hour
- LA10 (18hr) – the average of 18 hourly LA10 (1hr) levels between 6am and 12 midnight.

The Code of Practice outlines the decibel levels at which noise treatments must be considered, including:

- residential buildings – 68dB LA10 (18hr).
- educational, community or health buildings – 65dB LA10 (1hr).



Above: Example of a noise monitoring device placed near the most exposed façade of a residential building.

What was the road traffic noise assessment used for?

Information obtained from the road traffic noise assessment was used to develop an electronic noise model.

This model predicts future road traffic noise levels and compares it to the guidelines outlined in the Code of Practice. The noise model considers and incorporates:

- current and future traffic volumes
- vehicle speeds
- vehicle types
- individual vehicle factors
- road gradient
- road surface material type
- height and location of 'noise sensitive receptors' such as residential and other buildings
- topography of the land
- noise reducing effects of both natural and constructed noise attenuation.

The completed noise model has determined several locations along the project alignment where road traffic noise levels exceed or are predicted to exceed the criteria outlined in the Code of Practice.

^{*}To view this publication, please visit www.tmr.qld.gov.au and search: *Transport Noise Management Code of Practice*.



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What were the outcomes of the project's noise model?

The noise model has determined that new or upgraded noise barriers are required in the following locations as part of the Gateway Upgrade North project (refer to the map, right):

- upgrade of existing barrier at Depot Road, Deagon
- upgrade of existing barrier at The Evergreen Taoist Church of Australia, Deagon
- upgrade of existing barrier at Barrett Street, Bracken Ridge
- upgrade of existing barrier at Woodcroft Street, Cloverbrook Place, Greening Place and Schoolside Place, Bracken Ridge
- construction of new barrier at St John Fisher College, Bracken Ridge.
- upgrade of existing barrier at Bracken Ridge Road, Bracken Ridge

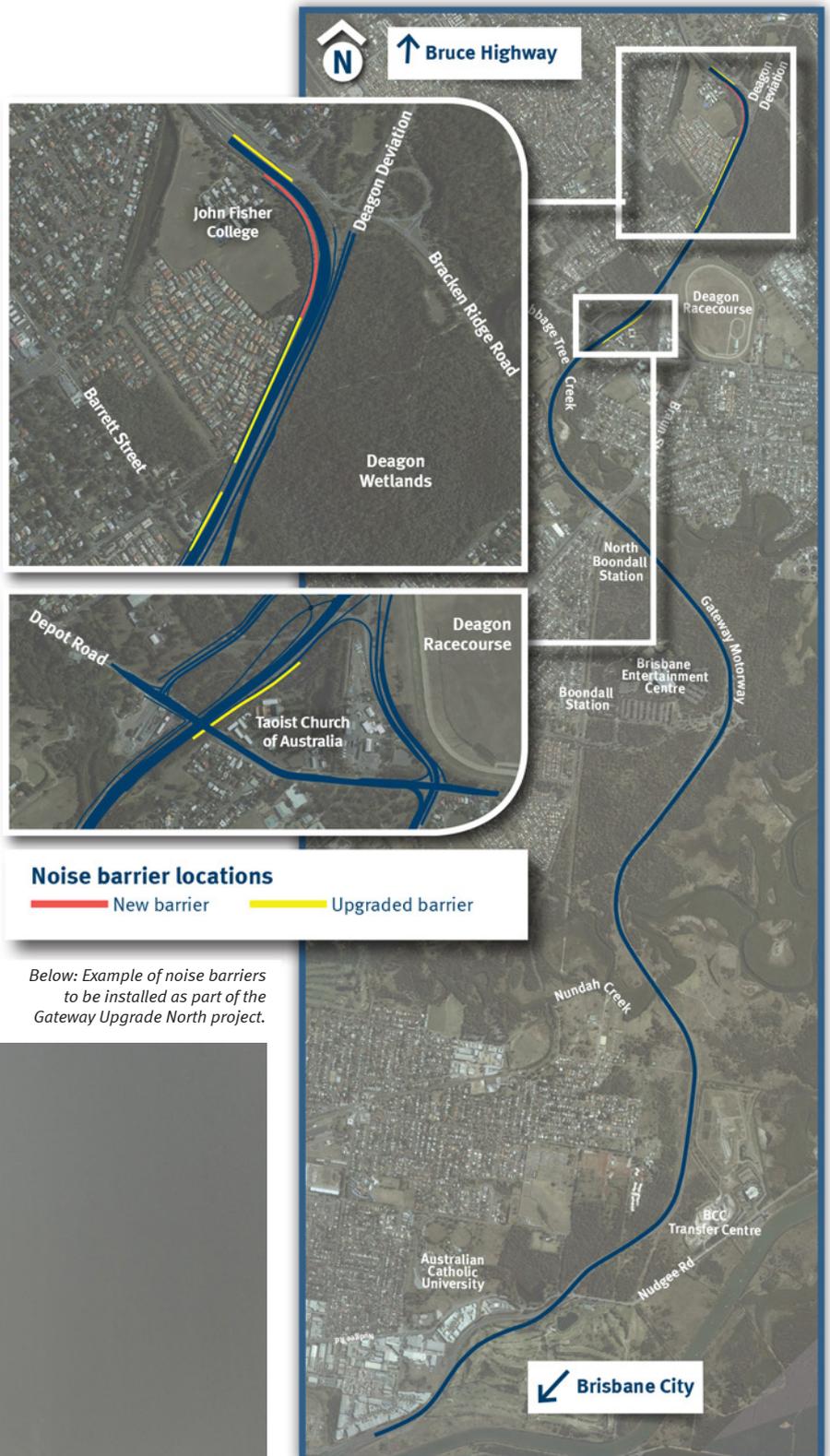
Where noise barriers are required in close proximity to private properties, the project team will contact land owners in advance to discuss the works.

What will the noise barriers look like?

Noise barriers installed as part of the Gateway Upgrade North project will generally consist of steel posts and concrete-type panels.

The height of the noise barriers will vary according to their location, land topography and predicted noise levels resulting from the road traffic noise assessment.

The minimum height of noise barriers installed as part of the project will be 1.8 metres. Generally, noise barriers will not exceed 6.0 metres in height.



Contact details

The project team is committed to working with the community to better understand your views and ensure the successful delivery of the Gateway Upgrade North project.

You can contact the project team via:

- ✉ contactus@gatewayupgradenorth.com.au
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