

July 2014

## NOISE MANAGEMENT PROGRAM

Transurban Queensland is committed to providing its customers with high quality motorways and infrastructure.

We are committed to the ongoing maintenance of our go via network and to minimising its impacts and operations on the community and environment.



### What is road traffic noise?

Noise is produced by pressure fluctuations in the air, which are detected by the human ear. The overall level of a sound is usually measured in decibels (dBA).

Different sounds having the same dBA can sound equally as loud, although perceived loudness can be affected by the character of the sound. For example, human speech and a distant motorbike might be perceived differently although they are the same dBA level.

A number of activities contribute to noise in the vicinity of the Gateway and Logan motorways – motorway traffic, local road traffic, light industry, aircraft noise, local schools and sporting fields.

The generation of road traffic noise is dependent on a series of variables including traffic volume, traffic speed, number of commercial vehicles and the road surface. Other factors, such as the distance from a noise source and the topography of the land, also affect road traffic noise levels at individual residential dwellings.

### How do we assess road traffic noise?

In Queensland, road traffic noise is regulated by the Environmental Protection Act 1994 and the Environment Protection (Noise) Policy 1997.

Road traffic noise criteria for Transurban Queensland's go via network are taken from the Queensland Department of Main Roads' (DTMR) Road Traffic Noise Management: Code of Practice, available on the DTMR website.

This Code of Practice provides guidance and instruction for the assessment, design and management of road traffic noise impacts.

The Code of Practice sets a threshold noise level of 68dBA at the most exposed facade of a residential building before needing to implement measures to mitigate noise levels.

### How do you measure noise levels?

Transurban Queensland regularly monitors road traffic noise impacts for compliance with the DTMR's Code of Practice.

In 2013, we commenced a Noise Management Program which involved updating our noise studies to check how current and predicted noise levels compared with the criteria set in DTMR's Code of Practice.

Road traffic noise was measured over two consecutive 24 hour periods and assessed over 18 hours at more than 30 locations along the Gateway Extension and Logan Motorway corridor. Known as an LA10 (18 hour) reading, the measurements provided an average of hourly noise levels between 6.00am and midnight.



This information was used to calibrate a new 'noise model' which was projected to the year 2021 and compared with the 68dBA threshold. This model identified any sites along the network which required further noise reduction measures to ensure compliance with the Code of Practice through until 2021.

The model considers and incorporates existing and future traffic volumes and speed, road gradient and road surface, height and location of residential dwellings and other buildings, and the noise reducing effects of natural and constructed noise barriers.

### **What is being done to minimise the impacts of road traffic noise?**

Where road traffic noise is predicted to exceed the 68dBA criteria before 2021, Transurban Queensland will be constructing new noise barriers or altering existing barriers over the next five years to ensure compliance with the Code of Practice.

Noise barriers work by interrupting the path of sound waves. Effective noise barriers typically reduce noise levels by up to 12dBA depending on the location of the property and the barrier, in some cases reducing the perceived loudness of traffic noise by as much as one half.

The choice of noise barriers depends on many factors, including acoustic and visual considerations, safety requirements, public amenity and maintenance requirements.

An open-graded asphalt road surface is also being used to upgrade the Logan and Gateway Extension Motorways over the next eight years, providing an overall 2dBA reduction in road traffic noise compared with standard asphalt road surfaces. This reduction will benefit all properties through the motorway corridor, irrespective of the property location in regard to the motorway or noise barriers.

### **Contact us**

Transurban Queensland encourages community and stakeholder feedback. For more information about the Noise Management Program or other Transurban Queensland projects, please contact:

**T** 0437 056 773

**E** [community@govianetwork.com.au](mailto:community@govianetwork.com.au)

**W** [govianetwork.com.au](http://govianetwork.com.au)

**T** @govianetwork