



Part 7 Codes
Division 3 Constraint Codes
Chapter 13 Road Traffic Noise Management

1.0 Purpose

This code seeks to regulate development on properties adjacent to State controlled roads and designated haulage routes throughout the City. Its main purpose is to ensure that potential conflicts between noise sensitive land uses and road operations are considered when assessing development.

The code therefore seeks to ensure both that the integrity of all State-controlled roads and designated haulage routes are not affected by the development of incompatible land uses and that adjacent land uses are sufficiently protected from road traffic and road construction and maintenance noise intrusion. (From this point on, when ‘noise’ is referred to in this document, it refers to ‘road traffic noise and road construction and maintenance noise’.)

2.0 Application

2.1 The code applies to development located adjacent to all existing and proposed State controlled road corridors and designated haulage routes within the City, being any Material Change of Use or Reconfiguring a Lot, where related to a noise sensitive use, indicated as code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.

2.2 Performance Criterion PC1 applies to all development subject to this code.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions
Development that is Code Assessable or Impact Assessable	
Protection from Noise	
<p>PC1 All development must seek to achieve acceptable levels of amenity for residents and visitors, and protect the same from unacceptable noise levels.</p>	<p>AS1.1.1 All development must comply with the Design Level Noise Criteria identified in the Table to Clause 4.0 – Primary Design Level Criteria.</p> <p>AS1.1.2 The new development uses acceptable noise attenuation measures, such as earth mounds and noise barrier fences, between the noise source and the noise sensitive place.</p> <p>AND/OR</p> <p>AS1.1.3 The new development has appropriate buffer distances between the noise source and the noise sensitive place.</p> <p>AND/OR</p> <p>AS1.1.4 The building is designed, oriented and constructed to reduce the impact of noise by:</p> <ul style="list-style-type: none"> a) locating rooms most sensitive to noise (eg. bedrooms) furthestmost from the noise source; b) using construction, insulation and glazing materials with a high noise transmission loss, in accordance with Australian Standard 3671-1989 Acoustic – Road Traffic Noise Intrusion – Building Siting and Construction; c) minimising the area with openings in walls (eg. windows and doors) facing the noise source; and d) providing air-conditioning/ mechanical ventilation to rooms impacted by noise. Due consideration shall be given to the type of system in order for the internal noise criteria to be achieved.



4.0 Other Relevant Requirements

Table to Clause 4.0 – Primary Design Level Criteria

Measurement Location	Design Level Road Noise Criteria
One metre in front of the most exposed part of a proposed noise sensitive place.	Road traffic noise levels are to comply with the external noise criteria specified in Section B6 (Proposed Residential Developments) of Main Roads' Road Traffic Noise Management Code of Practice January 2000 . That is, for a residential development (temporary or permanent occupancy): <ol style="list-style-type: none"> 60 dB (A) L10 (18 hour) or less, where existing levels measured at the local government deemed-to-comply dwelling setback distance are greater than 40 dB (A) L90 (8 hour) between 10pm and 6am. (L10 (18 hour) is the arithmetic average of 18 hourly L10 levels measured in dB (A) between the hours of 6am and midnight); or 57 dB (A) L10 (18 hour) or less, where existing levels measured at the local government deemed-to-comply dwelling setback distance are less than or equal to 40 dB (A) L90 (8 hour) between 10pm and 6am; where the above criteria cannot be met, internal maximum design criterion levels specified in Table 1 AS2107-2000 apply, particularly for buildings greater than one storey high.
Balconies and formal external open space	Road traffic noise levels are to comply with the following requirements from Main Roads' Road Traffic Noise Management Code of Practice January 2000 : <ol style="list-style-type: none"> 60 dB (A) L10 (18 hour) or less, where existing levels measured at the local government deemed-to-comply dwelling setback distance are greater than 45 dB (A) L90 (18 hour); or 57 dB (A) L10 (18 hour) or less, where existing levels measured at the local government deemed-to-comply dwelling setback distance are less than or equal to 45 dB (A) L90 (18 hour).
Classrooms, meeting or habitable rooms	Road traffic noise levels are to comply with the following requirements from Main Roads' Road Traffic Noise Management Code of Practice January 2000 : <ol style="list-style-type: none"> 48 dB (A) L10 (1 hour) or less, as measured or calculated (in the centre of the room) as an indoor level between the hours of 8am and 4pm.
Parks, outdoor educational and recreational areas	Road traffic noise levels are to comply with the following requirements from Main Roads' Road Traffic Noise Management Code of Practice January 2000 : <ol style="list-style-type: none"> 63 dB (A) L10 (12 hour) or less, taking into consideration the full circumstances surrounding the provision and future use of the park or recreational area (the level is a free field level).

For the measurements above, all external levels stated are free field, and the expectation is that an additional 2.5 dB (A) increase is applied for the façade correction when the building is constructed. This will achieve a level of equal to or less than 63 dB (A) and 60 dB (A), respectively, 1 metre from the most exposed façade of a building.

The calculation and prediction of road noise levels is to be in accordance with the **Road Traffic Noise Management Code of Practice**, published by the Queensland Department of Main Roads, and measurement to be in accordance with **Australian Standard AS2702-1984: Acoustics – Methods for the Measurement Of Road Traffic Noise**. Alternative road traffic noise prediction models may be used where they can be justified as being appropriate to the circumstances of the particular situation and location and have been validated for Australian conditions.

An assessment of road traffic noise is to be based on an ultimate ten-year traffic planning horizon for the road, from the completion of construction of the development.

The determination of building construction, siting and design measures required to achieve internal noise levels shall be in accordance with **Australian Standard 2107: Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors** and **Australian Standard 3671: Acoustics – Road Traffic Noise Intrusions – Building Siting and Construction**. Alternative methods may be used where they can be justified as being appropriate to the circumstances of the particular situation and location.



All noise barriers shall be designed and constructed in accordance with the requirements of **Main Roads Standard Specification MRS11.15**. Certified (RPEQ) structural drawings shall be submitted to Main Roads for review prior to construction. The 'as constructed' noise barriers will be inspected by a Main Roads officer prior to final acceptance.

When the requirements of **AS2107** and **AS3671** need to be achieved, the developer/ owner shall engage the service of an acoustical engineer to certify (RPEQ) that the architectural measures (including air-conditioning/ mechanical ventilation system) have been incorporated into the building envelope. This will require the engineer to undertake inspections both during and at the end of construction.

Earth mounds shall be designed and constructed in accordance with **Main Roads Standard Specification MRS11.04**.