

PC 5E - DISTRICT PLAN TEXT CLEAN VERSION

6.1.7.2.1 – Sensitive activities near roads and railways outside the central city

- i. Any part of an addition of a whole room to an existing building, or any part of a new **building**, intended for a **Sensitive Activity**; or the conversion of an existing building so that it may be used for a sensitive activity within the distances specified from a **road** or a railway network, shall be designed and constructed so that noise from **road** or railway sources will not exceed internal sound design levels specified in Table 1. below, except where:
- The space is non-habitable and only able to be occupied in a transient manner such as – plant rooms, lift shafts, stairwells, bathrooms, laundry rooms, toilets, pantries, walk-in wardrobes, corridors, clothes drying rooms, or entrance areas; or
 - The nearest façade of the **building** is at least 50 metres from all state highways and railway tracks, and there is a solid **building**, or landform that blocks the line-of-sight from all parts of all **windows** and doors to all parts of any state highway **road** surface or all points 3.8 metres above railway tracks.

Table 1: Internal sound design levels near **roads** and railways

Measurement point for road or railway	Distance (metres)	Internal design sound levels (i)	
		Bedrooms	Other habitable spaces and spaces used for other Sensitive activities :
Centre of the nearest railway track	100	35dB $L_{Aeq}(1h)$	40dB $L_{Aeq}(1h)$
Nearest-edge of the nearest marked traffic lane of any State Highway. Or the nearest sealed edge of the road where there is no marking.	100	40dB $L_{Aeq}(24h)$	
Nearest edge of the nearest marked traffic lane of any Major or Minor Arterial road. Or the nearest sealed edge of the road where there is no marking.	40		

Nearest edge of the nearest marked traffic lane of any Collector Road . Or the nearest sealed edge of the road when there is no marking.	20	
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- ii. Compliance with this rule shall be demonstrated by either:
- a. providing the **Council** with a design report at the same time as the building consent application, which is prepared by a suitably qualified acoustics specialist, stating that the design proposed is capable of meeting the required internal noise levels; or
 - b. Providing Council with a report at the same time as the building consent application, which is prepared by a suitably qualified acoustics specialist, stating that the sound incident on the most exposed part of the proposed façade of the affected space is less than 55 dB LAeq(1h) for rail noise or 57 dB LAeq(24h) for road traffic noise.
- except that a design report is not required if the exceptions in 6.1.7.2.1 i a. or b. apply.
- iii. Determination of the internal design sound levels, including any calculations, shall be in accordance with the following requirements:
- a. Rail noise shall be deemed:
 - A. to be 70dB LAeq(1h) at a distance of 12 metres from the edge of the nearest railway track; and
 - B. to reduce at a rate of 3 dB per doubling of distance up to 40 metres and 6 dB per doubling of distance beyond 40 metres;
 - b. **Road** noise is to be either: measured or predicted noise levels plus 3 dB added to predicted sound levels; or calculated from forecast traffic in 20 years' time.
 - c. Any external noise levels shall be assessed at the location of the most exposed part of each proposed façade of the affected space(s).
 - d. Any calculations of noise for the purpose of determining internal noise levels shall take into account all of the relevant external elements of a **habitable space** at the same time, including roof areas and walls.
 - e. Internal design sound levels shall be achieved in conjunction with the ventilation requirements of the **New Zealand Building Code**, or an amendment to or replacement of the Building Code. If **windows** are required to be closed to achieve the internal design sound levels, then a mechanical ventilation system and an air conditioning unit are required.
- iv. Mechanical ventilation systems shall meet the following specifications when running:
- a. Satisfy clause G4 of the New Zealand Building Code, or an amendment to or replacement of the Building Code, as if the windows and external doors cannot be opened; and
 - b. 35 dB LAeq(30s) at night time in bedrooms when measured 1 metre away from any grille or diffuser; and
 - c. 40 dB LAeq(30s) in any other space when measured 1 metre away from any grille or diffuser.
- v. Air conditioning units shall meet the following specifications when running:
- a. 35 dB LAeq(30s) at night time in bedrooms when measured 1 metre away from any grille or diffuser; and
 - b. 40 dB LAeq(30s) in any other space when measured 1 metre away from any grille or diffuser.

6.1.8 Rules – Matters of discretion

(...)

xii. The extent to which achieving the standard may give rise to adverse effects on the heritage values associated with a building listed in Appendix 9.3.7.2 (Schedule of Significant Historic Heritage) that outweigh the benefits of noise insulation.

Advice note: Specialist heritage advice may help determine the appropriateness of any building solutions to manage the adverse effects of noise from roads and railways.

6.1.7.2.3 Sensitive activities near roads in the Central City

- a. The following activity standards apply to new **buildings**, or alterations or additions to existing **buildings**, intended for a sensitive activity:
- i. External sound insulation - Any new **building** intended for a **sensitive activity**, and any alteration or addition to an existing **building** intended for a **sensitive activity**, located within 40 metres of the edge of the nearest marked traffic lane of a Main Distributor, Local Distributor or arterial road shall either:
 - A. be designed and constructed to achieve a minimum external to internal noise reduction of 30 dB $D_{tr,2m,nT,w} + C_{tr}$ to any **habitable space**; or
 - B. be designed and constructed to meet with the following indoor design sound levels:
 - I. Road traffic noise inside all **habitable spaces** – 40 dB L_{Aeq} (24hr); and

except where the sound incident on the most exposed part of the outside of the **building** is less than 55 dB L_{Aeq} (1h) for rail noise or 57 dB L_{Aeq} (24h) for **road** traffic noise.
 - ii. Compliance with Rule 6.1.7.2.3 can be achieved by either:
 - A. providing the **Council** with a design report (prior to construction) and a design certificate (prior to occupation) prepared by a suitably qualified acoustics specialist stating the design proposed is capable of meeting activity standard a.i.; and/or
 - B. conforming to the acceptable solutions listed in [Appendix 6.11.4 Noise Attenuation Construction Requirements](#).
 - iii. For the purposes of ventilation systems, compliance with [Rule 6.1.7.2.3](#) shall be confirmed by providing the product specifications; or a design certificate (prior to occupation) prepared by a suitably qualified acoustics specialist, stating the design proposed is capable of meeting the activity standards.
 - iv. Compliance with Rule 6.1.7.2.3 a.i.B. shall be confirmed by providing the **Council** with a design report prepared by a qualified acoustic engineer demonstrating compliance, prior to any **sensitive activity** or alteration occurring.
 - v. The indoor design sound levels in Rule 6.1.7.2.3 a.i.B shall be achieved at the same time as the ventilation requirements of the [New Zealand Building Code](#). If **windows** are required to be closed to achieve the indoor design sound levels then an alternative means of ventilation shall be required within bedrooms.

- vi. Where no traffic lane is marked, the distances stated shall be measured from 2 metres on the roadward side of the formed kerb. The classification of roads is shown in [Appendix 7.5.12 Road Classification System](#).
- vii. Ventilation systems where installed shall:
 - A. generate sound levels not exceeding
 - I. 35 dB $L_{Aeq}(30s)$ at night time in bedrooms; and
 - II. 40 dB $L_{Aeq}(30s)$ in any other habitable space (excluding bedrooms) when measured 1 metre away from any grille or diffuser; and
 - B. provide an adjustable airflow rate of up to at least 6 air changes per hour.