

NZS 6806:2010



New Zealand Standard

# Acoustics – Road-traffic noise – New and altered roads

NZS 6806:2010

**COMMITTEE REPRESENTATION**

This Standard was prepared under the supervision of the P 6806 Committee, the Standards Council established under the Standards Act 1988.

The committee consisted of representatives of the following nominating organisations:

- Department of Building and Housing
- INGENIUM
- Local Government New Zealand
- Ministry of Health
- Ministry of Transport
- New Zealand Acoustical Society
- New Zealand Institute of Environmental Health Inc.
- New Zealand Transport Agency
- Road Controlling Authorities New Zealand Inc.
- Roading New Zealand

**ACKNOWLEDGEMENT**

Standards New Zealand gratefully acknowledges the contribution of time and expertise from all those involved in developing this Standard.

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*AMENDMENTS*

<i>No.</i>	<i>Date of issue</i>	<i>Description</i>	<i>Entered by, and date</i>

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**NZS 6806:2010**

New Zealand Standard

**Acoustics – Road-traffic  
noise – New and altered  
roads**

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## NOTES

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Reference is made in this document to the following:

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NZS 6801:2008	Acoustics – Measurement of environmental sound
NZS 6802:2008	Acoustics – Environmental noise
NZS 6803:1999	Acoustics – Construction noise

### JOINT AUSTRALIAN/NEW ZEALAND STANDARD

AS/NZ 2107:2000	Acoustics – Recommended design sound levels and reverberation times for building interiors
-----------------	--------------------------------------------------------------------------------------------

### ISO STANDARDS

ISO 140: - - - -	Acoustics – Measurement of sound insulation in buildings and of building elements
Part 5:1998	Field measurements of airborne sound insulation of façade elements and façades
ISO 717: - - - -	Acoustics – Rating of sound insulation in buildings and of building elements
Part 1:1996	Airborne sound insulation

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## NEW ZEALAND LEGISLATION

Building Act 2004 and Building Regulations 1992 (Schedule 1 New Zealand Building Code)  
Education (Early Childhood Services) Regulations 2008  
Government Rooding Powers Act 1989  
Land Transport Act 1998  
Land Transport Management Act 2003  
Land Transport (Road User) Rule 2004  
Land Transport Rule: Setting of Speed Limits 2003  
Land Transport Rule: Vehicle Equipment 2004  
Local Government Act 2002  
Resource Management Act 1991  
Sentencing Act 2002  
Standards Act 1988  
Traffic Regulations 1976  
Transport (Vehicle and Driver Registration and Licensing) Act 1986

## RELATED DOCUMENTS

When interpreting this Standard it may be helpful to refer to other documents, including but not limited to:

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Dormer, A. 'Reverse sensitivity.' *Resource Management Bulletin* (2001): 29 – 32.

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## WEBSITES

<http://www.acoustics.nzta.govt.nz>

<http://www.consumerbuild.org.nz>

<http://www.epd.gov.hk/epd/>

<http://www.legislation.govt.nz>

<http://www.minedu.govt.nz>

<http://www.mfe.govt.nz>

<http://www.nzta.govt.nz>

<http://www.pce.govt.nz>

<http://www.qualityplanning.org.nz>

[http://www.reinz.org.nz/reinz/public/market-information/market-information\\_home.cfm](http://www.reinz.org.nz/reinz/public/market-information/market-information_home.cfm)

<http://www.rta.nsw.govt.nz>

<http://www.standardsforhighways.co.uk/dmrb/vol11/section3/ha21308.pdf>

<http://www.trl.co.uk/>

<http://www.whqlibdoc.who.int/hq/1999/a68672.pdf>

## LATEST REVISIONS

The users of this Standard should ensure that their copies of the above-mentioned New Zealand Standards are the latest revisions. Amendments to referenced New Zealand and Joint Australian/New Zealand Standards can be found on <http://www.standards.co.nz>.

The Standards Act 1988 states that a reference made to a Standard in any Act, regulation, or bylaw refers to the latest edition of that Standard. However section 23 of the Act also makes an exception where the context otherwise requires. Under the Resource Management Act 1991:

- (a) Where a New Zealand Standard is incorporated by reference into a national environmental standard or national policy statement, such as the New Zealand Coastal Policy Statement, and that Standard is amended or replaced, the amended or replacement Standard has legal effect as part of the national environmental standard, or policy statement only if the Minister for the Environment publishes a notice in the New Zealand Gazette giving it legal effect; and
- (b) Where a New Zealand Standard is incorporated into an operative or proposed regional or district plan by reference and that Standard is amended or replaced, the amended or replacement Standard only has legal effect as part of the plan if a variation or change to that plan is made which states that the amended or replacement Standard has legal effect.

Further, the Environment Court has held that where a New Zealand Standard has been cited in a condition of resource consent, the relevant version of that Standard, and the relevant version of any other Standards referred to in that Standard, are the versions current at the time the consent was granted.

### **Commentary**

*If this were not the case, Resource Management Act documents could be altered, not by the appropriate planning authority and processes provided by the Resource Management Act, but by the Standards Council and its processes under the Standards Act.*

## REVIEW OF STANDARDS

Suggestions for improvement of this Standard will be welcomed. They should be sent to the Chief Executive, Standards New Zealand, Private Bag 2439, Wellington 6140.

## FOREWORD

This Standard covers the management of noise for new or altered roads. It is intended to be:

- (a) A relevant matter to take into account when exercising functions and powers under the Resource Management Act, including when making decisions or recommendations in relation to resource consents, outline plans, and designations; and
- (b) A Standard which could be incorporated by reference into national environmental standards, national policy statements such as the New Zealand Coastal Policy Statement, and plans prepared under the Resource Management Act.

This Standard has been developed to fulfil an identified need for formal guidance on methods and criteria for the measurement, prediction, assessment, and mitigation of noise from new or altered roads.

This Standard includes recommended noise criteria to be applied to noise from new or altered roads received at the assessment positions of protected premises and facilities.

The Standard provides guidance on the methods and criteria for the measurement, assessment, prediction, and mitigation of road-traffic noise from new or altered roads, including in appropriate circumstances noise received indoors.

The  $L_{Aeq(24h)}$  unit is established as the preferred metric for the assessment of road-traffic noise in New Zealand.  $L_{Amax}$  criteria are not included in this Standard because road controlling authorities do not have direct control over individual vehicle noise.

This Standard does not cover noise from:

- (a) Individual (noisy) vehicles – other laws and regulations control these vehicles; and
- (b) Existing roads that are not being altered.

## OUTCOME STATEMENT

This Standard will assist road controlling authorities, developers, and consent authorities to manage the effects of road-traffic noise from new and altered roads through the provision of consistent procedures and requirements for the measurement, prediction, assessment, and mitigation of such noise.

This will help to achieve quicker and consistent decision-making nationally.

## NEW ZEALAND STANDARD

# Acoustics – Road-traffic noise – New and altered roads

## 1 SCOPE

### 1.1 GENERAL

- 1.1.1** This Standard recommends noise criteria to be applied to road-traffic noise from new or altered roads received at the assessment position(s) of protected premises and facilities (PPFs). This Standard does not apply to existing roads.

The noise criteria are intended to address the adverse effects of road-traffic noise on people. Land-use planning is the preferred method of avoiding these effects. Where this is impracticable the Standard sets out procedures and methods for the prediction, measurement and assessment, and guidelines for mitigation of road-traffic noise in accordance with the duty to adopt the best practicable option.

- 1.1.2** This Standard is intended to be used primarily by local authorities, and road controlling authorities, as well as developers who are constructing or altering roads as part of a subdivision or land-use development. The Environment Court and Boards of Inquiry may also take the Standard into account when considering applications and notices or requirement for major transport projects. The Standard seeks to promote consistent decision-making on road-traffic noise in the design of new and altered roads.

- 1.1.3** This Standard is intended to be suitable for citing in planning and policy documents prepared under the Resource Management Act (RMA) as the basis for measurement, prediction, assessment, and mitigation of noise from new and altered roads and for the guidelines within the Standard to be applied in the formulation of RMA plan content, and conditions of designations and resource consents.

- 1.1.4** The criteria in this Standard are intended to aid in the design of new and altered roads by setting reasonable criteria for the road-traffic noise from new or altered roads taking into account health issues associated with noise, the effects of relative changes in noise levels on people and communities, and the potential benefits of new and altered roads to people and communities.

### 1.2 APPLICATION

- 1.2.1** Subject to the limitations set out in 1.3, this Standard applies to all new and altered roads as defined in 2.2, and assessed in accordance with section 7.

- 1.2.2** This Standard establishes the following principles:
- (a) New and altered roads shall be designed and constructed so that noise effects are mitigated to a reasonable level in accordance with the provisions of this Standard and in particular the criteria in section 6;
  - (b) Planning and designing new and altered roads should be undertaken so that external levels of road noise are kept at reasonable levels at as many PPFs as is consistent with the adoption of the best practicable option for noise mitigation; and