

## Noise and Vibration No.7

**To** All suppliers

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**Subject** Noise mitigation costs

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### Introduction

Indicative costs for noise mitigation are provided in NZS 6806:2010 and for noise barriers they are repeated in the *State highway noise barrier design guide*. The costs are used in the process of evaluating road-traffic noise mitigation options in accordance with NZS 6806. This is a relative assessment between options so the accuracy of the cost data is generally not critical. However, the Transport Agency has become aware that some of the indicative costs are substantially lower than actual current costs for noise mitigation.

The Transport Agency commissioned Bond Construction Management to provide updated noise mitigation costs in December 2015, based on data from recent projects. These updated costs are provided in this technical memorandum and should be used for all road-traffic noise mitigation evaluations conducted for the Transport Agency in place of the data in NZS 6806. The updated costs remain as indicative values that should only be used for assessing mitigation options and should not be used for detailed project budgeting.

### Low-noise road surfaces

The following cost is the additional cost of a porous asphalt surface relative to a two-coat chipseal surface.

Surface	Indicative cost
Porous asphalt (PA-10)	\$25/m <sup>2</sup>

### Noise walls

The following costs for noise walls are per linear metre of a wall. Ground and wind conditions can make a significant difference to these costs.

Height	Engineered timber with steel posts	Concrete	Acrylic
TL4/TL5	-	\$600/m	-
2 m	\$1100/m	\$1000/m	\$2800/m
3 m	\$1300/m	\$1400/m	\$3400/m
4 m	-	\$2300/m	\$3700/m
5 m	-	\$3000/m	\$4900/m

The data for noise walls does not include cheaper timber structures as they will not comply with the 50 year design life requirement in specification NZTA P40:2014. However, if timber noise walls are considered the costs in any evaluation should generally be doubled when comparing mitigation options as the timber walls would be likely to need replacement within a 50 year period.

### Noise bunds

The following costs for noise bunds are per cubic metre of material. The *State highway noise barrier design guide* shows how to convert this material cost to the total cost per linear metre of bund. The costs include topsoil and hydroseeding.

Material	Indicative cost
Non-structural – recycled	\$20/m <sup>3</sup>
Non-structural – imported	\$35/m <sup>3</sup>
Structural – recycled	\$40/m <sup>3</sup>
Structural – imported	\$50/m <sup>3</sup>

### Building treatment

The following costs relate to the Transport Agency retrofitting treatment to existing buildings.

Material	Indicative cost
Sound insulating glazing, floor, ceiling and wall cladding/fill/lining, door seals, etc.	\$35,000/unit
Ventilation system	\$15,000/unit
Survey, design, and installation management of sound insulation and ventilation	\$10,000/unit
Teacher voice amplification system	\$2,000/classroom