

# Southern Links

## ROAD NOISE

Traffic noise from the proposed network has been modelled to illustrate how the noise levels change at various distances back from the road. The noise model has been developed using 2041 predicted land use and its associated peak traffic generation. The model takes into account things like the traffic mix, speeds, the proposed road alignment, the shape of the existing ground and road surfacing. In total about 600 houses and other buildings within a few hundred metres of the proposed network were included in the road-traffic noise model. Calculations of road-traffic noise levels at the houses and over the surrounding land have been made and are shown as noise contours.

The contours have been simplified into 3 bands: less than 57dBA uncoloured; 57-64dBA green, 64-67dBA yellow; and greater than 67dBA dark orange. 57dBA or less marks the preferred noise level in the New Zealand Standard for Road Traffic Noise NZS6806 where no mitigation is required. The 57-64dBA band is the noise level of NZS6806 in which mitigation is required if practical.

Road noise can be mitigated in a number of ways and can be as simple as changing the road surfacing. For example, asphalt surfaces provide 3 to 4 decibels less noise than chip-seal.

Other mitigation measures include noise bunding (ie earth mounds) and acoustic

walls. These types of measures have been used effectively in the Hamilton Ring Road design, and on various sections of the Waikato Expressway (eg Te Rapa Bypass).

In accordance with Council policies, the Southern Links routes within the city boundary will use an asphalt surface. This on its own will ensure that noise from the network will meet required levels in most places within the Peacocke Structure Plan area.

Areas identified within Hamilton City where additional noise mitigation will be required are in the existing residential areas adjoining the connections to Cobham Drive.

Noise modelling for the state highway parts of the network has been undertaken on the basis of a chip-seal (worst case) surface. The use of asphalt surfacing remains a realistic option for the Southern Links routes that the NZTA will be responsible for (ie the state highways). The NZTA will consider the wider use of asphalt surfacing at the time of detailed design of the network in the future.

Areas identified where noise mitigation will be required for the state highway parts of the network are around the central interchange, and areas adjacent to the Waikato River. Noise mitigation treatment in areas where it is required will be determined as part of the ongoing consultation process with directly affected landowners and in preparation of the Assessment of Environmental Effects.



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