

Bald Hills Road Interchange

Noise Assessment Fact Sheet, April 2015



Project background

The Australian and State Governments and the District Council of Mount Barker have allocated \$27 million to construct a new interchange at Bald Hills Road on the South Eastern Freeway. The project is being delivered by the Department of Planning, Transport and Infrastructure (DPTI).

The new interchange will improve travel time for drivers travelling to the eastern sector of Mount Barker and reduce the volume of traffic travelling through Littlehampton and the centre of Mount Barker.

Road traffic noise assessment

The construction of entry and exit ramps will bring road traffic closer to residents in the vicinity of the interchange.

As with any DPTI infrastructure projects involving new roads or major upgrades, noise modelling was undertaken to predict future noise impacts of the project. AECOM was engaged to collect data on existing noise levels at several locations and model noise levels for all properties near the proposed interchange. The noise modelling was undertaken in accordance with an internationally recognised road traffic noise prediction method.

The noise modelling considered:

- properties within the project site
- distance of properties and location compared to road level
- current and predicted traffic volumes
- percentage of cars and heavy vehicles during day and night periods
- road geometry and surrounding topography of the existing and new interchange
- slope of the road and traffic speed
- deflection of sound against hard surfaces
- type of road surfacing used, and
- weather conditions at the time of monitoring

What are the noise limits?

The DPTI *Road Traffic Noise Guidelines* are used to determine the outdoor noise level criteria for noise sensitive properties, including residential dwellings. The existing freeway is the predominant noise source at the project location, and therefore the noise contribution from the freeway controls the current noise levels which are used to set the noise criteria. The freeway will also be the predominant noise source above the contribution of the proposed interchange in 2031.



Existing noise levels are taken into consideration when setting the noise level criteria, and outdoor noise criteria are generally:

- 65 decibels during day time (7am – 10pm)
- 60 decibels during night time (10pm – 7am).

Where noise modelling shows that these noise criteria will be exceeded, reasonable and practical noise mitigation treatments must be considered.

Noise modelling results

The noise modelling results show that the noise from the interchange is not expected to exceed the noise level criteria when the interchange opens to traffic.

Noise assessment conclusion

Future road traffic noise levels (at 2031) are predicted to satisfy the relevant noise criteria at the majority of residences adjacent the project area. While two dwellings at isolated locations near the project area are likely to experience a noise level increase that exceeds the criteria by 1 decibel it is not considered likely to be noticeable. (The human ear generally only detects a minimum change of 3 decibels for a varying source such as traffic noise.)

It is therefore unreasonable to undertake noise mitigation at these locations given the costs involved for a minor change in noise level that would most likely not be noticeable.

After considering reasonable and practical noise management options, noise mitigation is not required in order to satisfy the requirements of the Road Traffic Noise Guidelines.

Please visit the website for the full report.
www.infrastructure.sa.gov.au

For more information:

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