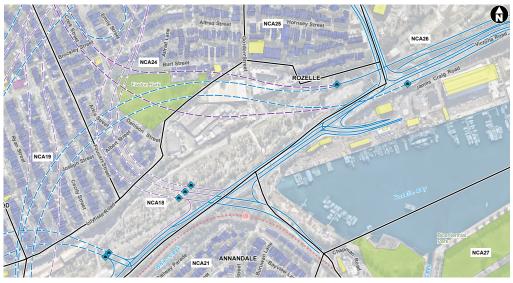
# WestConnex

## M4-M5 Link

### Noise and Vibration factsheet | 2017

WestConnex is part of the Australian and NSW governments' vision for supporting Sydney's growing population and keeping our economy strong. The M4-M5 Link is the third stage of WestConnex. It will link the New M4 Motorway at Haberfield to the New M5 Motorway at St Peters, with additional connections to the Iron Cove Bridge and Rozelle Interchange.



Example of noise catchment area assessment

We are committed to minimising the impact of construction activities on our local communities.

As part of the Environmental Impact Statement (EIS), a detailed noise and vibration assessment was carried out to evaluate and predict the potential impact of the construction and operation of the M4-M5 Link. This was done in the context of the existing noise environment which is generally dominated by relatively high levels of existing road traffic noise. The assessment of noise throughout the project considers the ambient conditions, landscape shape and features, buildings and structures, different times of day, construction noise and vibration sources (plant, equipment, traffic) as well as operational noise sources.

The noise environment and predicted impacts are summarised for 56 individual noise catchment areas across the project corridor.



Australian Government

**BUILDING OUR FUTURE** 



#### Keeping you informed

We are committed to keeping you informed and will provide regular information on the M4-M5 Link through direct mail and email notifications, community updates, local papers and face-to-face activities.

You can also contact the WestConnex info line on **1800 660 248**, email **info@westconnex.com.au** or visit **westconnex.com.au/ m4-m5link** for more information.

## We speak your language



Need an interpreter? Call the Translating and Interpreting Service on **131 450**.

#### ARABIC

بحاجة إلى مترجم؟ اتصل بخدمة الترجمة الكتابية والترجمة الشفوية على الرقم 131450.

**CHINESE** 如需 翻译,请拨打翻译与口 译热线**131 450**。

#### GREEK

Χρειάζεστε διερμηνέα; Καλέστε την Υπηρεσία Μεταφραστών και Διερμηνέων στο **131 450**.

#### VIETNAMESE

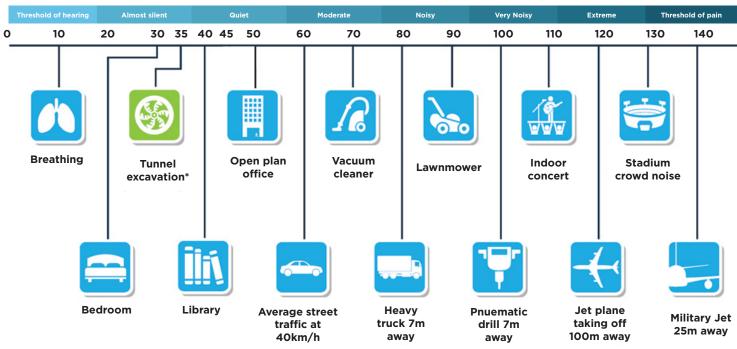
Cần thông dịch viên? Hãy điện thoại cho Dịch vụ Thông Phiên Dịch ở số  $131\ 450$  .

#### ITALIAN

Hai bisogno di un interprete? Chiama il servizio al numero **131 450**. d'interpretazione e traduzione

1800 660 248

info@westconnex.com.au



\*Ground-borne noise based on a roadheader at an approximate depth of 30m Figure 1. Sound levels in decibels

# **Tunnelling noise**

Properties located above or near the tunnels may experience some short-term ground-borne noise and vibration impacts while tunnelling takes place nearby, although in most cases, this would be less than 35 decibels. We would regularly monitor noise levels to determine their impact on surrounding residences. Feasible and reasonable work practices would be investigated to minimise noise emissions.

# **Operation noise**

We have undertaken modelling to predict noise levels after the project opens to traffic. The depth of the tunnels means it is highly unlikely that residents located above the tunnels would be able to hear or feel any vibration from the motorway once it is operational.

Changes in traffic on surface roads due to the operation of the WestConnex project may result in increased road traffic noise in certain locations. Mitigation measures, such as the installation of noise walls, would be investigated to reduce the impact of surface-traffic noise. When this approach is not feasible or reasonable, properties may be eligible for at-property acoustic treatments to mitigate noise impacts (for example, window glazing). Our teams would discuss this option directly with relevant property owners.

While the noise modelling is generally conservative to cater for worst-case scenarios, additional noise monitoring would be carried out at nearby residences within 12 months of the M4-M5 Link opening. If actual noise levels are above predicted levels, additional feasible and reasonable noise mitigation measures will be considered in consultation with property owners.

## Surface work noise

Building and tunnelling often require the use of noisy, heavy machinery and sometimes there is limited opportunity to mitigate sound levels. During construction, there may be some elevated noise levels around construction and tunnelling sites.

Temporary buildings and structures, such as offices and amenities, would be situated so they provide a noise barrier between the work sites and neighbouring areas, and we would construct noise barriers and acoustic sheds to house tunnelling activities, where possible.

All equipment would be shut down when not in use and non-tonal reversing beepers would be used on vehicles.

Generally, surface work would take place during standard construction hours.

## Vibration

There are guidelines that limit the level of vibration that can be generated to minimise the risk of cosmetic damage to buildings. These consider the type and use of the building, for example residential, commercial or industrial. Heritage buildings are considered on a case-by-case basis to determine the sensitivity to vibration and other tunnelling activities.

Pre-condition building surveys would be carried out on properties and structures within 50 metres of the outer-edge of the tunnels and within 50 metres of all surface work.