



Traffic on Parramatta Road

WestConnex's M4 East will extend the M4 Motorway with two new 5.5 kilometre tunnels from Homebush to Haberfield, providing a bypass of Parramatta Road and connection to the City West Link. WestConnex is part of Tomorrow's Sydney.

WestConnex is committed to minimising the impact of construction on communities. A comprehensive noise assessment of the M4 East construction and operation includes measures to reduce or mitigate potential noise impacts. Ongoing noise and vibration monitoring would be carried out to assist with further design development and manage impacts. Noise monitoring would occur during and post-construction.

Noise levels now

The existing noise environment is generally dominated by relatively high levels of existing road traffic noise. This is largely due to the presence of major roads such as the existing M4 Motorway, Parramatta Road, Concord Road and Wattle Street. Background noise levels have been measured across 21 individual Noise Catchment Areas in and around the project area. The data collected was used to inform the noise impact assessment.

Noise impact assessment

The noise impact assessment considered the current noise conditions, the ground topography, buildings and structures, times of day, and types of noise generated during construction from machinery, vehicles etc.

Changes to the noise environment associated with the completion and operation of the M4 East were also considered as part of the assessment. Noise levels predicted for the years 2021 and 2031 were considered and included in the Environmental Impact Statement.

Tomorrow's Sydney

In the next ten years, another million people will call Sydney home. The Australian and NSW governments are building the infrastructure to support Tomorrow's Sydney, which will deliver an integrated transport solution including public transport and critical road infrastructure.

WestConnex is one of the flagship projects in delivering Tomorrow's Sydney. WestConnex will widen and extend the M4 and M5 and join them together to form a continuous, free-flowing motorway with connections to the city, airport and port. WestConnex will provide relief to the hundreds of thousands of road users struggling in traffic every day and help return local streets to local residents.



**Easing
congestion**



**Creating
jobs**



**Connecting
communities**

Tunnelling noise

The average period of time that tunnelling would occur under individual properties would be a couple of days. Properties located above the tunnels may experience some short-term, minor ground-borne noise while tunnelling is taking place nearby.

Ground-borne noise level criteria for residences set by the Environment Protection Authority to minimise impact on amenity and sleep for 15 minute peak periods of construction is 40 dBA LAeq (Equivalent Continuous Level) for the evening and 35 dBA LAeq at night.

In most cases the tunnel work would be less than 35 dBA or equivalent to a 'quiet' environment (a library is generally around 40dBA). At some locations the tunnel depth is less than 40 metres and there may be potential ground-borne noise impacts. The worst case scenarios for 15 minute peak periods of construction are:

- In the vicinity of Concord Road levels are predicted to be up to 45 dB LAeq.
- Just east of Burwood Road levels are predicted to be up to 37 dB LAeq.
- East of Great North Road to the south of Parramatta Road levels are predicted to be up to 43 dB LAeq.
- In the vicinity of the Wattle Street portals levels are predicted to be up to 53 dB LAeq.

Vibration

There are guidelines that limit the level of vibration that can be produced to minimise the risk of cosmetic damage to buildings. These consider the type and use of the building e.g. 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 from the outer edge of the tunnels and within 50 metres of all surface work.

Air blasting

Air blasting is proposed to be used on the project for part of the construction of the mainline tunnels. This is a common technique used in tunnelling. Blasting has been considered as an excavation method for the tunnels because vibration caused by a single blast (air blast) is much shorter than continuous vibration and ground-borne noise from tunnelling. There are

guidelines in place for blasting that relate to sensitive sites, including houses and low rise residential buildings, theatres, schools and other similar buildings.

Minimising noise

WestConnex would monitor noise during the construction of the M4 East where required and work directly with affected residents to mitigate noise. If actual noise levels are above predicted levels, WestConnex would consider additional noise mitigation measures.

During construction there may be some elevated noise levels around construction and tunnelling sites, near demolition and temporary road and intersection modifications, which could result in construction noise management levels being exceeded for some residents.

To reduce the potential for an increase in noise, WestConnex would, where required:

- Provide noise barriers and acoustic sheds to house tunnelling activity at Underwood Road tunnel site, Concord Road tunnel site, Cintra Park construction site and Northcote Street tunnel site.
- Undertake noisy work during core work hours, where possible.
- Ensure all equipment is shut down when not in use and non-tonal reversing beepers are used.
- Ensure there are periods where construction work is not scheduled to give residents respite from the works.

Operational noise

To address operational noise impact, the project includes constructing noise walls and providing low noise road pavement for new and modified sections of the existing M4 Motorway and tunnel on-ramps and off-ramps. Permanent noise barriers would be scheduled for completion as early as possible, in order to further reduce the noise from construction.

Keeping the community informed

We are committed to keeping you informed and will provide regular information on the M4 East through direct mail and email notifications, community updates, advertising and other consultations.

You can also contact the WestConnex info line on 1300 660 248, email: info@westconnex.com.au or visit westconnex.com.au for more information.

