Tunnelling - Northcote Street tunnel and civil site, Haberfield

In March 2019 the M4-M5 Link Tunnels team began tunnelling from the Northcote Street tunnel and civil site. The roadheader has now progressed over 140 metres and is currently excavating down to the mainline M4-M5 Link Tunnels. During May and June 2019, the machine will make its way towards Wattle Street and Walker Avenue, Haberfield (see map overleaf).

What we’re doing
Tunnelling will continue from the Northcote Street tunnel and civil site throughout May and into June with tunnelling under properties near Walker Avenue expected to occur in July 2019. The tunnel is being excavated in several stages.

- Stage 1 - excavating the top of the tunnel, called the heading, and the installation of support including large steel bolts into the rock and sprayed on concrete
- Stage 2 - excavation of the lower half of the tunnel, called benching
- Stage 3 - excavation of drainage channels, and small passages between the two tunnels called cross passages.

The Stage 1 excavation is expected to progress at a rate of about 25 to 30 metres each week depending on the rock conditions. The time between each stage may vary. Support activities such as concrete, equipment and site deliveries, as well as stockpiling and removal of materials will occur within the acoustic shed at the Northcote Street tunnel and civil site. A map showing the approximate location and progress of tunnelling is provided overleaf.

The excavated dirt and rock, called spoil, will be removed using trucks with trailers from the Northcote Street tunnel and civil site. Trucks will enter the site from Parramatta Road and exit via Wattle Street where they will use Ramsey Street until the G-loop is operational.

Tunnelling, including the removal of spoil will be carried out 24-hours a day, up to seven days per week. Residents will be provided with further notification prior to tunnelling taking place near their property.

Cross passages
Cross passage tunnels which connect the mainline tunnels are designed to house mechanical and electrical equipment for the tunnel operation and to permit the motoring public to cross to the other carriageway in the event of an emergency.
Cross passages are located throughout the tunnel around 120 metres apart and will typically be excavated after the main tunnels in that area are complete. The time taken to construct a cross passage will depend on ground conditions and the type and length of the cross passage being constructed. A typical cross passage may take around one week to excavate.

How this affects you
Each individual’s experience of tunnelling may vary due to a range of local conditions and variables. Vibration and noise levels experienced depend on ground conditions, building types, existing background noise levels and the materials used to build your property. It also depends on how far away you are from the tunnel. In some instances, you may experience the following:

- Ground borne noise – this is created when vibration from tunnel excavation travels through the ground and causes a building’s flat surface to vibrate, occasionally creating an audible ‘rumbling’ noise.
- Vibration – at times you may feel some vibration, however, the predicted levels are not high enough to cause damage to the property.

Once the tunnel is complete, you are unlikely to hear or feel any vibration from vehicles using the motorway. To understand the location of the M4-M5 Link Tunnels, or for further information regarding the sequence / process, please visit the interactive tunnelling tool at https://stage3a.anzego.com/ or refer to our tunnelling fact sheet, available in the document library on the WestConnex website.

If you have an enquiry about this work, please contact the M4-M5 Link Tunnels team on toll free 1800 660 248 or email info@m4-m5linktunnels.com.au

Location and progress of tunnelling activities