Major works are underway to support construction of the new State Library Station. The new station at the northern end of Swanston Street will improve access to some of Melbourne’s most popular destinations including the State Library of Victoria, RMIT, and the Queen Victoria Market, and cater for the area’s growing student population.

What we are doing

To construct the new State Library Station, we will be undertaking excavation at five sites in the north of the CBD (Franklin Street East, Franklin Street West, A’Beckett Street, La Trobe Street, and Little La Trobe Street). Before excavation commences, over 500 piles will be installed across the sites to a maximum depth of approximately 50 metres. These new foundations will enable excavation and station construction works to be safely carried out underground.

We will excavate to a maximum depth of approximately 50 metres using ‘top down’ and ‘bottom up’ construction methods.

The ‘bottom up’ method involves excavating the box down to its maximum depth before starting the construction and fit out of the station. The ‘top down’ method involves construction of each level during excavation before fit out of the station starts.

Surfaces will then be reinstated above the station.

Facts at a glance

- About 500 piles will be installed across the five State Library Station sites
- Piles will be bored to a depth of approximately 50m across the five sites

Sign up for Metro Tunnel project updates

metrotunnel.vic.gov.au
As the piles are constructed, there will be some instances where the top of the pile may need to be removed. Where possible to avoid hammering, we use a more innovative method to cut the piles. The method involves the use of an expanding mortar to create pressure and generate a horizontal cut, so the top layer of concrete can be easily removed by a crane. This helps minimise the need to use jack hammers and excavators in the process, reducing noise, dust and vibration impacts on the surrounding community.

Following the removal of the top layer of concrete, a temporary concrete capping beam is cast on top of completed piles to prevent any displacement during subsequent excavation works.
Managing noise and vibration

The use of heavy machinery such as piling rigs, cranes and excavators can generate medium to high levels of noise and some vibration at various stages of construction.

While every effort is made to minimise impacts from construction, a project of the size and scale of the Metro Tunnel can have an impact on the comfort of people living, working or studying near construction sites. We recognise there are some sensitive buildings and stakeholders located close to the State Library Station worksite.

Prior to works commencing, qualified consultants have and will continue to undertake extensive modelling of the predicted noise and vibration impacts.

This will allow us to determine appropriate mitigation strategies, and ongoing discussions with key stakeholders to allow us to identify any additional mitigation measures that may be required.

Mitigation measures may include (but are not limited to) offering periods of respite, selecting less noisy equipment, shielding noise sources, and installing acoustic timber hoarding around the site.

Noise and vibration monitoring will continue throughout the project to inform the construction process, validate the modelling, and demonstrate compliance with the Metro Tunnel Environmental Performance Requirements (EPRs).

How long will it take?

Piling works are complete at the Franklin Street East and A’Beckett Street sites. Piling works will start at the Franklin Street West and La Trobe Street sites in late 2018. It is expected that piling will start at the Little La Trobe Street sites in mid-2019.

At the completion of piling, shaft excavation will commence across all sites and continue until the end of 2021.

State Library Station construction will take around five years.

The Metro Tunnel is on track to be completed by 2025.

More information

To find out more about the Metro Tunnel Project and register for future email updates:

metrotunnel.vic.gov.au

1800 105 105 (24 hours a day, 7 days a week)
Press 2 and follow the prompts

facebook.com/metrotunnel

Subscribe to eNews or construction notification emails: metrotunnel.vic.gov.au/subscribe

It should be noted that this information is current at the time of printing, however due to unforeseen circumstances, changes may occur. Please visit metrotunnel.vic.gov.au for the latest updates.