



The Waterloo station area turns blue as the waterproofing membrane is installed.

Waterloo integrated station development January 2021

True blue effort to waterproof the station

Major work to build the new Waterloo metro station started in October 2020 and already the construction area has been transformed. The bare concrete walls and floor turned bright blue as they were covered with a waterproof membrane.

Elevated work platforms were used to slowly roll out the strips of blue plastic down the 25-metre high walls – just like a massive wallpapering job.

A piling rig was used to bore out 99 holes in three lines down the entire length of the 200-metre long box, before the waterproof lining was installed. About 200 tonnes of steel reinforcement rods and 875 tonnes of concrete were used to construct the piles. The piling rig completed the massive job in mid-November before being lifted to the surface with a crane.

Another significant activity was installing steel reinforcement progressively along the bottom before pouring 1.4-metre thick slabs of concrete in

18- by 23-metre sections to gradually form the floor of the station structure. This task involved shaping 200 tonnes of steel and pouring 1550 tonnes of concrete (about half an Olympic swimming pool) for each section.

A triple-stack office building has been constructed on the site, near the corner of Botany Road and Wellington Street, for the workforce working on the station. A project office was also set up nearby for staff who are managing project delivery.

John Holland has been contracted to design and build Waterloo Station, so it is ready for the City & Southwest metro services when they start in 2024.

Sydney Metro is Australia's biggest public transport project. It will transform Sydney, delivering more trains and faster services for customers across the network.

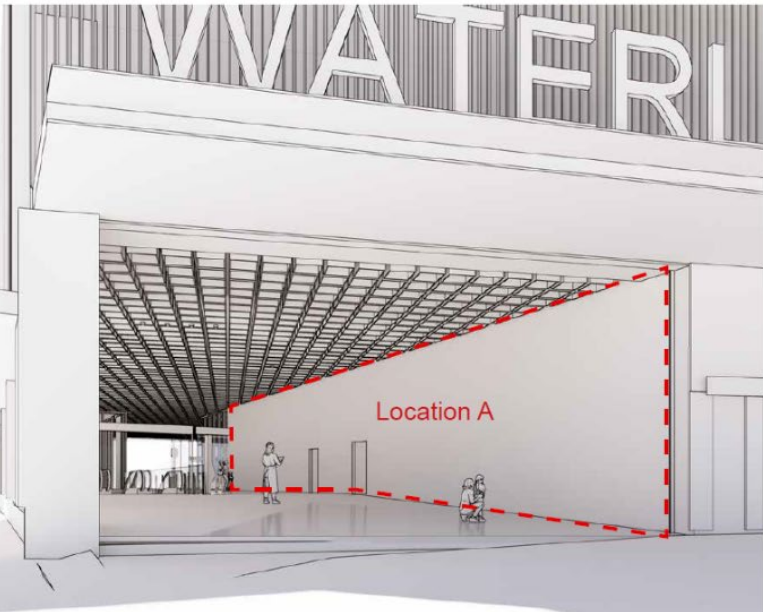


Bird's-eye view of the Waterloo construction site from the time-lapse camera on the Marton Building.

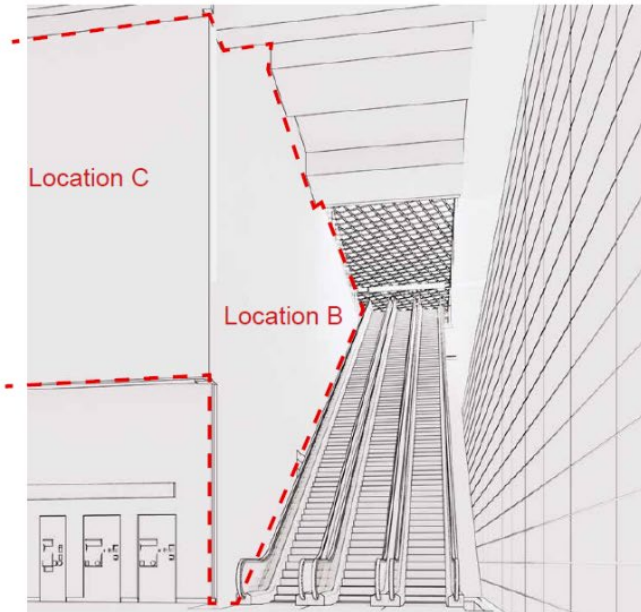
Bird's eye view

A time-lapse camera has been set up on top of the Marton Building in Cope Street to record construction progress on the Waterloo site until 2024. The camera will capture progress of the metro station buildings rising up out of the excavated area through to the staged development of the four buildings, the Cope Street plaza and upgrades to the public domain.

The community should be aware that the cameras may also capture activity on the streets around the site perimeter. Every effort will be made to ensure time-lapse videos do not contain images that identify people.



Public art will be displayed in three places within the station concourse.



Art destination at metro station

Future customers at the new Waterloo Station will be greeted with public art giving the destination its own distinctive identity that reflects the local community.

Sydney Metro ran a two-stage process to find artists for all seven City & Southwest metro stations. First there was a public expression of interest so that three shortlisted artists could be selected for each station. These artists were invited to enter their artwork concept into a

competition with one artist chosen to design the artwork, which will be seen by thousands of people every day as they use the station.

Station builder John Holland is now working closely with the successful artist for Waterloo to finalise details about the public art and how it will be integrated into the metro station. The winning artist will be revealed to the community in the coming months.

Station perimeter walls

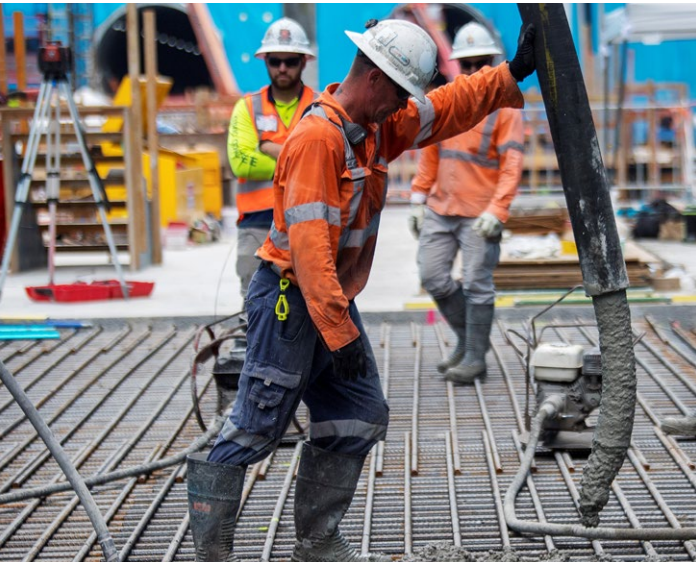
The next stage of construction in the first half of 2021 will be to build up the station's internal perimeter walls until they are 10 metres high within the excavated station area. This will be the first section and later the walls will be built all the way up to the ground level, which is a height of 25 metres. This involves installing formwork, which is made of steel 'A' frames, against the walls of the excavated station area. Concrete is pumped inside the formwork, which acts like a giant mould to create the new walls.

Precast concrete beams and platforms will be made offsite and then delivered on oversized trucks. Two tower cranes and one crawler crane will be used to lift these large concrete sections into place to form the different levels of the station buildings. These will include the platform and concourse areas, and the rooms that will house the equipment and services needed to run the future station.

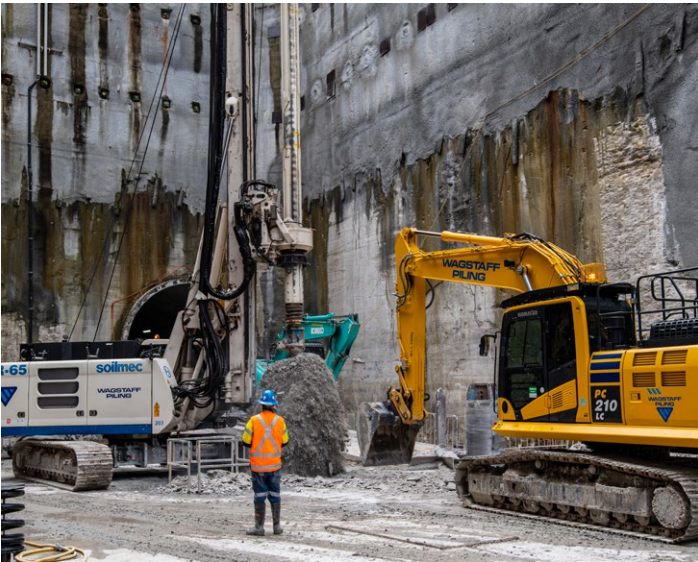
The construction team will minimise impacts, wherever possible. The community will be kept informed about upcoming activities throughout all stages of the project, so they know what to expect.



A worker drills bolts to secure the top of the pile.



Concrete is poured into the steel formwork to form the station floor.



A piling rig digs a hole in the station floor.

Six-month look ahead

Activity	February	March	April	May	June	July
Building a transformer on the site	○					
Building the station's basement floor	○					
Installing two tower cranes	○					
Building a 10-metre high concrete wall around the internal walls of the station area	○	○				
Receiving deliveries of precast platforms and installing them in the station area		○	○			
Relocating utilities including tree and vegetation removal or trimming		○	○	○	○	○
Relocating the hoarding on Cope Street and putting in new access gates		○	○	○	○	○
Receiving deliveries of precast beams and slabs and installing them in the station area		○	○	○	○	○



The site traffic controller ensures trucks enter and exit the site safely.

Look out, trucks about

Construction of the metro station will require a higher number of heavy vehicles than the tunnelling works to deliver the required building materials such as steel, precast structures and concrete, and later fixtures and finishes. Some oversized trucks will need more room to enter and exit the site.

The station team has done a lot of planning to maximise safety while at the same time reducing the impacts of heavy vehicles on the community where possible. Some of the changes you should be aware of include:

- different approved haulage routes to allow heavy vehicles to use roads on all sides of the site
- oversized vehicles to enter gates on either Botany Road or Wellington Street
- temporary traffic delays at times to give truck drivers enough room for a wide sweep path as they drive or reverse oversized vehicles into the site.

Traffic and pedestrian changes will be needed during various stages of the project including:

- removal of parking along the western side of Cope Street, northern side of Wellington Street and southern side of Raglan Street to allow for construction activities
- partial and full closures of Cope Street to allow for services relocations with a possible detour via Cooper Street
- closure of the western footpath on Cope Street, between Raglan and Wellington streets, to allow for construction works
- one-way traffic on Cope Street (in a northerly direction) when hoarding is moved onto the road lane closest to site
- utility work on the opposite side of the roads around the site.

The community is encouraged to be alert for trucks when walking, cycling or driving near the site and to follow instructions from the traffic controller who has the job of keeping people safe.

Help us name the crane

Machines are extremely important when you are building infrastructure like the Waterloo metro station. It is customary to name large equipment just like the tunnel boring machines used to build the twin tunnels for the City & Southwest project.

Two tower cranes at the Waterloo site will be doing their fair share of heavy lifting as the station gets built. They will need to get materials down 25 metres below ground level, where the station platforms will be and then gradually at different levels as the station buildings rise up to 20 metres above the ground.

The community is invited to help us name one of these hardworking cranes. Please email your suggested name to waterloometro@transport.nsw.gov.au by 5pm on 12 February 2021. The winner will receive a \$100 gift card. The winning crane's name will be announced at the upcoming community event in March.



An artist's impression of Raglan Walk which will be a pedestrian connection between Raglan Street and the new plaza.

Waterloo Metro Quarter exhibition

The community had an opportunity to have its say on the Waterloo Metro Quarter (WMQ) after the development applications went on public exhibition in late 2020. The John Holland and Mirvac joint venture, which will build the over station development, submitted five development applications for planning approval, including a:

- modification to the concept approved in late 2019
- commercial office building
- residential building with affordable housing
- social housing and student accommodation buildings and a plaza along Cope Street
- basement underneath the office and residential buildings.

The WMQ will be a revitalised precinct for people who live and work in the surrounding area. There will be open spaces, including a new public plaza on Cope Street and Raglan Walk, which is a covered pedestrian laneway, leading to new community facilities and a range of retail, services and cafes.

The Department of Planning, Industry and Environment (DPIE) put the documents and environmental impact statements on public exhibition for 28 days between 5 November and 2 December.

John Holland and Mirvac will prepare a report to address comments made in the submissions that DPIE received from the community and stakeholders. DPIE is expected to make a decision on the planning approval later this year.

A Waterloo Station Design and Precinct Plan has also been prepared to outline how the metro station, which was approved in early 2012, will integrate with the WMQ. Early community feedback on the station design and precinct is included in this plan. The plan will be submitted to DPIE for review early this year.



An artist's impression of the residential building and plaza looking west from Cope Street.

Rail steel delivered, welded and distributed from Waterloo

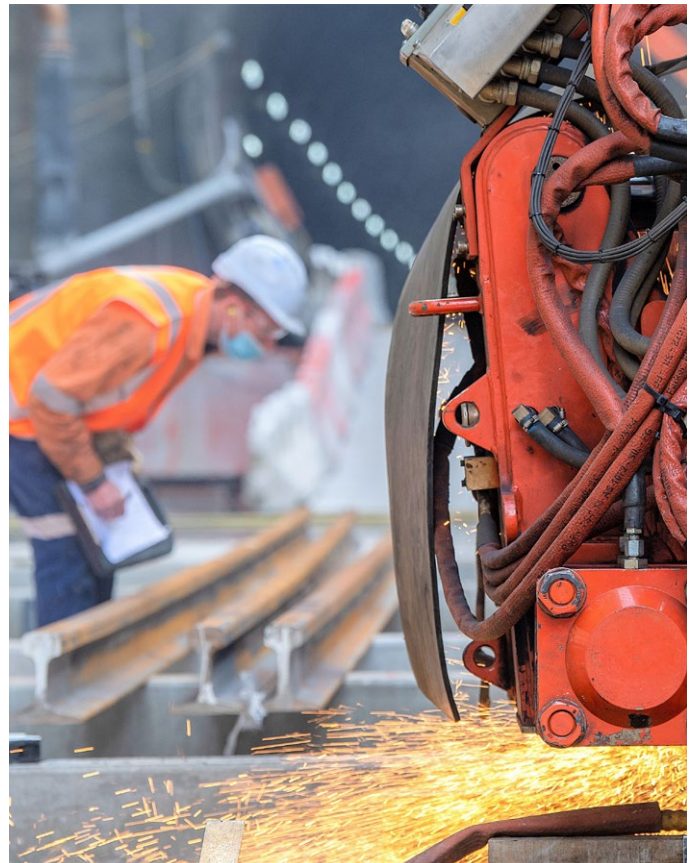
Systems Connect, an unincorporated joint venture between CPB Contractors and UGL, is delivering the Line-wide work package for Sydney Metro City & Southwest. This work includes fitting out the 31 kilometres of twin tunnels between Chatswood and Sydenham with tracks, power and services to run the metro trains.

Over the last few months, more than 4000 tonnes of Australian railway steel was delivered and welded together into 120-metre strings and then moved into place. The work was carried out via the tunnel entrances at the Marrickville dive and the Waterloo and Crows Nest station sites.

Flash butt welding for tunnel work was completed at the end of 2020. Six 20-metre long pieces of steel were welded into a single 120-metre long section, weighing seven tonnes. These were then moved within the challenging confines of the tunnels by custom-designed excavators – used for the first time in Australia.

The excavator was designed so it could turn 360 degrees within the tunnel and has road wheels that can be converted to ride on rail tracks when required later in the project.

The excavators have now moved all 62 kilometres of steel rail strings into the tunnels and placed them down for the next stage of work, which will be track laying on sleepers.



The Systems Connect team carried out welding work at Waterloo.

Community invite to see the site

The community is invited to visit the Waterloo site in March to see first hand how work is progressing on the metro station. It is an opportunity to meet members of the station and development teams and ask any questions you have about either station construction or the WMQ. A free sausage sizzle and coffee cart will be available onsite.

If you are interested in dropping by for a visit, you must register via email to waterloometro@transport.nsw.gov.au. This is necessary to help manage numbers and keep everyone safe in a COVID-19 environment. More information about the community site visit will be provided soon.

Want to stay up to date?

Register today for community email updates at waterloometro@transport.nsw.gov.au

Contact us



1800 171 386 Community information line open 24 hours



www.facebook.com/SydneyMetro



waterloometro@transport.nsw.gov.au



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If you need an interpreter, contact TIS National on **131 450** and ask them to call **1800 171 386**