

JULY 2022

New intercity platforms 13-14 at Central Station

Intercity Platforms are taking shape

With construction of the metro box structure at Central Station now complete, work has begun to reinstate the platforms, canopies and the track area that were removed three years ago.

Most of the structural steelwork for the canopy was prefabricated off-site in Kurri-Kurri, NSW and then delivered to site in 19-metre-long and 6-metre-wide sections. By fabricating the sections off-site, the team has been able to better utilise space in tight construction areas, and has improved scheduling and minimised construction impacts. The canopy installation is complete with a total roof area of about 3,400 square metres.

Platform 12 has been operational throughout the build, while Platforms 13 and 14 will be fully reinstated to support intercity train services. Platform 15, which was only used for maintenance, will not be reinstated.

The platform upgrades involve the removal of 400 tonnes of concrete (temporary infills) and the installation of 288 glass floor panels with 48 steel supporting frames. All part of a raft of architectural elements, including skylights, escalators and lifts for Platform 12-13-14. Construction crews working below ground in the new North South Concourse area have

been the first to enjoy the benefits of the new skylights, which are consolidated with the lift shafts to maximise natural light and enhance future customer experience.

The triple laminate and slip resistant opaque glass flooring is also visible to the passengers using the Suburban Platforms 16-23.

Sydney Metro is Australia's biggest public transport project. Services started in May 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown.

By 2030, Sydney will have four metro lines, with 46 stations and a 113 kilometre standalone metro railway system. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre.

Laing O'Rourke is delivering the new Sydney Metro platforms under Central Station as well as the landmark Central Walk - a new underground pedestrian concourse to help customers get around Sydney's busiest railway station.



The 300km of services includes over 51km of communications cabling for Sydney Trains, over 190km of low and high voltage power cables and 35km of piping for the critical fire water supplies to the sprinkler systems, hydrants and hose reels and the station cooling systems.

Let's shed some light on services installation

In advance of energisation of the main power sources in both the metro station box and the ghost platforms, a considerable amount of works was required over the last four years.

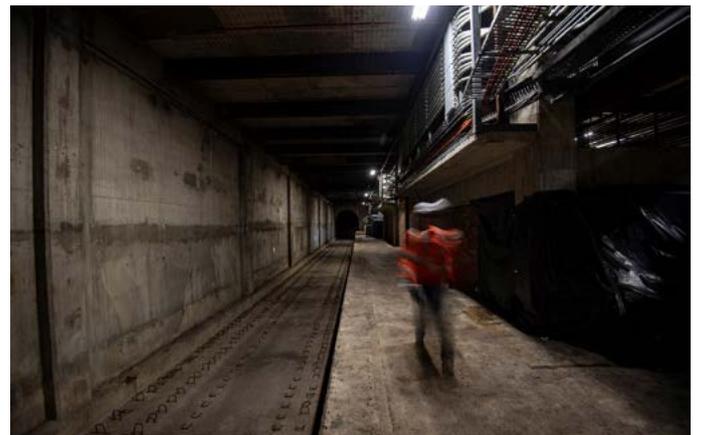
Over 300km of new cables, piping and containments have been installed throughout the site to supply power to the new substations which will service areas including the new Chalmers Street entrance, Central Walk, the North South Concourse, and existing areas in the Eastern Suburb Railway (ESR) Concourse. The site is about 500m-long x 260-wide - meaning if you decided to lay them in a straight line rather than going around the station - you'd end up in Canberra.

In the metro box, the basements host four electrical switchrooms that will power the metro platform area and the metro train.

Sydney Metro has repurposed the ghost platforms to house two communications rooms and four high and low voltage substations. Doing this allows Sydney Metro to

bring new life to an otherwise unused area and save space in the confines of Central Station. For the record, since work started in this area, no paranormal activity has been recorded!

Installation of services is nearing completion, and the focus is now on exhaustive testing and commissioning program.



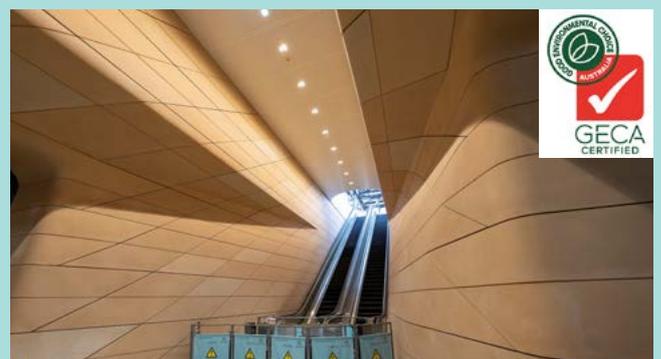
Built in the late 1970s, two unused underground platforms at Central Station have gained notoriety as ghost platforms. (Photo from 2019)

Ecolabel for the Glass-Fibre Reinforced Concrete (GRC) panels

Sustainability was a key consideration in the procurement of Glass-Fibre Reinforced Concrete (GRC) panels, and the Central Station Metro Sustainability team worked with Stone Alliance to achieve Good Environmental Choice Australia (GECA) lifecycle ecolabel certification to 'cement' a best-in-class outcome. The GRC has met GECA's rigorous Cement, Concrete & Concrete Products Ecolabel Standard, which follows internationally recognised ISO 14024 principles for global best practice. GECA's standards are assessed independently by third-party assurance providers.

Over 3,000 bespoke GRC panels are being installed at

Central Station. They have been chosen to reinterpret the texture, layering and craft of the historic sandstone facades, which have made Central Station one of Sydney's distinctive landmarks.



Ecolabel certification granted of Central Station's GRC panels



Three-month lookahead

Activity (subject to change)	July	August	September
1 Installing services within the metro box	●	●	●
2 Tiling in North-South Concourse (New concourse between the metro box and Intercity platforms)	●	●	●
3 Reinstating platforms and area for tracks 13-14	●	●	●
4 Finishes to the ventilation buildings above the metro box	●		
5 Northern escalators installation in Central Walk			●
6 Services installation in Chalmers Street	●	●	
7 Façade installation at the 20-28 Chalmers Street site			●
8 On Platforms 16-23, excavation and concrete work within hoardings for Central Walk, and platform releveling works (during rail possession weekends)	●	●	●
9 Working on the façade of heritage building in the lower Northern Concourse	●	●	



The Central Station metro projects has recycled 98% of construction and demolition waste.



More than 8,500 new lights will be installed as part of Sydney Metro's Central Station works.



Concrete pour in progress.

New milestone achieved at the new Chalmers Street entrance site

The new Chalmers Street entrance has reached a new milestone with concrete work for the new roof now complete. At 10 metres above street level and access constraints only allowing one pump to be used, the pour took around 11 hours, with an additional five and a half hours for finishing work. The pour required 278 cubic metres of concrete, which was supplied by 45 trucks.

The team will now turn its focus to fit out and finishes to achieve the next round of milestones including installation

of the escalator trusses, lift steel works, and removal of the tower crane.

The new Chalmers Street entry point will provide access to the landmark Central Walk, a new underground pedestrian concourse that will help customers find their way around Sydney's busiest railway station. Central Walk includes a 19-metre-wide, 80-metre-long tunnel from Chalmers Street to the new Sydney Metro platforms under Central Station.



The new walls in the Sydney Metro platform area makes reference to the heritage masonry fabric. The cladding adopts a diamond-shaped geometry in contrast to the traditional stonework. The wall panelling functions as a wayfinding element where the sandstone-coloured panels literally point upwards in the direction of the journey towards the upper level concourses and conceptually towards the clock tower.

Want to stay in touch?

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