

The vent buildings seen from Platform 16

## Artwork for Central Station Metro

Eagle-eyed observers may have noticed the newly constructed ventilation buildings at Central Station, particularly if using Platform 16. The two buildings - one at the northern end and the other to the south - have taken shape on the new Platform 14. They contain the equipment and vents required to circulate fresh air through the station box, and in the case of a fire, remove smoke from the metro tunnels.

The buildings feature bricks with multi coloured sections revealing an artwork designed by renowned Bundjalung Artist Dr Bronwyn Bancroft. This design was chosen for its contemporary representation of Connection to Country and its large-scale applicability.

This piece is a visual connection between the past and the present on an important site used as a Gadigal meeting place for thousands of years. The DNA and serpent-like imagery is visually emblematic of one of the many creation stories that have been handed down over time, through oral history for over 60,000 years. The electric imagery and eclectic patterning will assist passengers on their journey, whether that be purely physical or spiritual.

A brick inlay system was used to install bricks within each precast panel, involving the use of bespoke

prefabricated rubber/plastic moulds holding each brick (placed individually) in place. It creates the look and feel of a traditional brick facade with all the efficiencies and durability of precast concrete.

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. There will be new CBD metro stations at Martin Place, Pitt Street and Barangaroo and new metro platforms at Central.

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 lower Northern Concourse keeps getting better

Central Station Metro works include remodeling the lower Northern Concourse. This has involved improving access under the century-old Central Electric Building - the entrance to Central Station from the Eddy Avenue forecourt. To achieve this, a structural wall and several columns were removed, and a new concrete encased steel beam was installed to take their place.

To ensure the beam complemented the aesthetic of the building above, sandstone has been used to clad it. Installing the sandstone was a complex project, with several considerations.

To start the process, architectural and as-built drawings of the structure were supplied to the stone masons.

From these, detailed shop drawings of the scope were created, including a 3D model of each individual stone and a structural fixing design. The stone was then sourced from a quarry in NSW's Southern Highlands.

Using a combination of a wire saw and a Computer Numerical Controlled (CNC) robot-operated water jet tool, the stone blocks were shaped and profiled offsite. Depending on its location in the archway, each stone was fixed in place with stainless steel or epoxy anchors. Specialised lifting equipment was used to reduce manual handling of the stones, which typically weigh 45 to 60 kilograms, but can weigh up to 400 kilograms in the case of capping stones.

The new stone will oxidise over the coming years to match the tone of the existing stones.



The archway under the Central Electric Building



The archway showing the concrete beam before sandstone cladding is installed

## CSM volunteers 'seas' the day

Volunteers from Central Station Metro (CSM) project recently supported Tribal Warrior's operations by doing minor refurbishments on their boats. The Central Station Metro team were joined by volunteers from the Redfern Station Upgrade, civil works contractor **Redhill Construction and Civil**, and paint provider **Dulux**, and completed minor refurbishments to both vessels. In addition to delivering the scope, the day triggered conversations and knowledge-sharing between all of the participants.

The founders of Tribal Warrior were driven to revitalise Aboriginal culture through economic and social stability, began maritime training as a way of offering their community members the dual opportunity of engaging in culture and finding employment via maritime training.

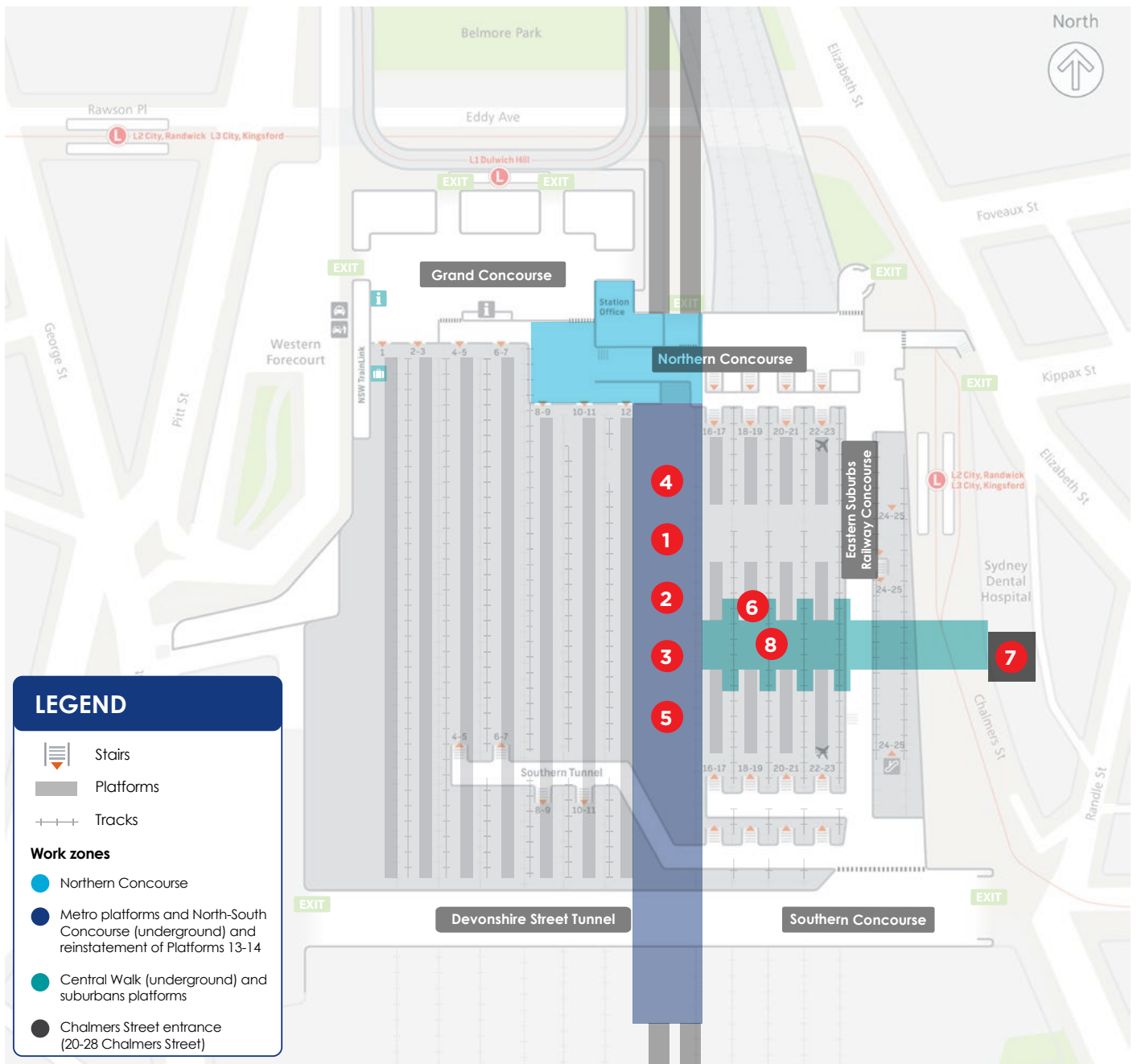
Tribal Warrior currently operates two boats as a training platform - the Mari-Nawi (big canoe) which is used as a primary income generator (used for harbour cruises and cultural tours), and their original vessel

- the Tribal Warrior, which is one of Australia's oldest wooden maritime vessels built in 1898.

Tribal Warrior also provides services such as corporate consulting and training, mentoring programs, and Never Going Back - a program designed to successfully transition inmates back into the community and never reoffend.



Volunteers aboard one of Tribal Warrior's vessels

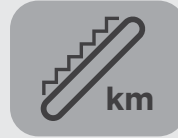


### Three-month lookahead

Activity (subject to change)	October	November	December
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 (at the surface level)	●		
4 Installing services to Platforms 13-14	●	●	●
5 Finishes to the ventilation buildings above the metro box	●	●	
6 Northern escalators installation in Central Walk	●	●	
7 Façade installation, fit-out and services installation at the 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)	●	●	●



*The deepest parts of the metro box are the stormwater sumps (tanks below the metro platforms) - about 35 metres below ground level.*



*If all the new 42 escalators at Central were placed in a line, it would measure nearly a kilometre.*



### Did you know?

Central Precinct is the NSW Government's vision to renew up to 24 hectares of land in and around Sydney's Central Station into an exciting new place for business and the community. To find out more about the project click on the QR code to the left.

## Installing a labyrinth of cables and equipment

With trackwork at Central Station now complete, workers have been turning their attention to installing the thousands of brackets, trays, ducts, pipes, cables, wires, and hundreds of items of equipment needed for the driverless metro train system.

Akin to the beating heart and arteries distributing power to the trains, the high voltage power supplies 26 metro equipment rooms within the metro box and are also required to energise and ventilate the station platforms and twin tunnels.

By the time the mechanical and electrical fit-out of Central Station is completed early next year, some 68 kilometres of cables, conduits and trays will have been installed, together with over 350 major pieces of equipment, including six large transformers and four giant station ventilation fans, each the size of a truck.

Down beside the platforms, workers are using specially equipped rail



Workers installing high voltage control panels in one of the 26 equipment rooms within Central Station.

vehicles designed to safely move personnel, componentry, and equipment along the trackways to install everything needed to turn the twin tunnels into a working railway - such as fire mains, walkways and brackets supporting cable trays containing high and low voltage cabling, signalling and communication systems, and the overhead wire used to power the trains.

Construction of the Sydney Metro City & Southwest Line-wide Works, including work in the tunnels, is being delivered by a joint venture of two CIMIC Group companies, CPB Contractors and UGL Limited.

For more information on the tunnel fit-out work, email [linewidemetro@transport.nsw.gov.au](mailto:linewidemetro@transport.nsw.gov.au)

## Want to stay in touch?

 **1800 171 386** Community information line open 24 hours

 [centralstationmetro@transport.nsw.gov.au](mailto:centralstationmetro@transport.nsw.gov.au)

 **Sydney Metro City & Southwest**, PO Box K659, Haymarket NSW 1240

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