sydneymetro.info



Large concrete beams have been installed in the first of two bridges being built as part of the surface and civil alignment works. This is for the bridge that intersects with the M12 Motorway.

Laying the foundation for the future

Sydney Metro is Australia's biggest public transport project, transforming Sydney with a world-class metro. Sydney Metro–Western Sydney Airport is the new metro railway line that will service Greater Western Sydney, connecting the Western Sydney Aerotropolis and the new Western Sydney International (Nancy-Bird Walton) Airport with St Marys and the existing Sydney Trains suburban T1 Western Line.

The six new metro stations at St Marys, Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis will become the transport spine for the region, supporting its growth for generations to come. Sydney Metro – Western Sydney Airport will connect Western Sydney to greater job opportunities, health and education services and leisure activities. With fast, frequent services and driverless trains like the rest of the Sydney Metro system, customers won't need a timetable – they can just turn up and go. Customers will be able to travel between St Marys and the Airport Terminal in 15 minutes and from St Marys to Aerotropolis in 20 minutes.

The Australian and NSW Governments have a shared objective of having Sydney Metro–Western Sydney Airport operational when the airport opens for passenger services.



Australian Government





CPB Contractors and United Infrastructure Joint Venture (CPBUI) was awarded the Surface and Civil Alignment Works (SCAW) contract for Sydney Metro–Western Sydney Airport in March 2022. The major works include:

- about 10.6 kilometres of embankments, cuttings, viaducts, and bridges for the above ground section of the project
- 6.9 kilometres of earthworks to prepare the base for track formation
- 3.5 kilometres of elevated viaduct between Orchard Hills and Luddenham
- 205 metres of bridges, including a bridge over the new M12 Motorway
- Earthworks for the Stabling and Maintenance Facility at Orchard Hills.

Work has started ramping up including laying the foundation for the future Stabling and Maintenance Facility (SMF). The foundation of the SMF requires approximately 1 million cubic metres of sandstone which equates to the volume of 20 football fields, 5 metres high each. Additional to the SMF and the track alignment, CPBUI is constructing a topsoil stockpile north of the SMF which will be handed over after completion to Sydney Metro for their use.

The SMF is located south of Blaxland Creek and east of the Sydney Metro alignment. Access during construction and operation will be from Patons Lane off Luddenham Road in Orchard Hills. The new metro railway and trains will be controlled from the SMF, 24 hours a day, seven days a week.

The delivery and placement of sandstone to the SMF will be undertaken during standard construction hours: Monday to Friday 7am to 6pm Saturday, 8am to 1pm until 31 August 2023 to decrease the surrounding traffic impact for the local area during the day.



An artist's impression of Warragamba Pipeline Viaduct.

Viaduct segment production underway at Buchanan

The Buchanan Precast Facility has been re-established at George Booth Drive, north of Newcastle, close to the M1. Approximately 3.5 kilometres of viaduct segments will be casted and then transported to the Metro's construction sites. In total, the facility will produce approximately 1,101 concrete segments.

CPBUI reached a key milestone recently with the first precast segment poured in late March 2023.

Approximately 120-140 staff members are working at the facility which will be in use for around two years from November 2022 until December 2024. Once the works are completed, the facility will cease operations.

Did you know

As of April 2023, more than 30% of the sandstone foundation had been laid along with more than 70% of the soil for the topsoil stockpile.

The sandstone has come from both the M6 Stage 1 and Rozelle Interchange projects, enabling reuse of materials across projects within the Greater Sydney area and demonstrating great collaboration and sustainability between projects.



Aerial of the Precast Facility.



Inside the Precast Facility.



An ecologist consultant relocating an eel found in one of the dams along the project alignment.

Looking after the local environment

CPBUI are implementing several environmental initiatives on the project.

In consultation with an ecologist, the environment team has installed 53 nest boxes around the Stabling and Maintenance Facility, in Orchard Hills. CPBUI are currently in discussions with an ecologist to determine how many more nest boxes are needed and where along the alignment will best promote habitat restoration. The provision of refuge habitats for hollow-dependent fauna during clearing operations is essential for the protection of native fauna along the project alignment.

Additionally, dam dewatering work has been undertaken alongside an ecologist to relocate fauna, such as turtles, frogs, and eels. Such work includes a pre-clearance survey to identify and map the presence of threatened biota and inspect farm dams for the presence of aquatic fauna prior to dewatering. Tree protection zones are important controls put in place by the environment team to protect vegetation that needs to be retained or is subject to a biodiversity offset. A biodiversity offset is defined as a measurable conservation outcome whereby the project's impact on flora and fauna is reduced by gains in biodiversity elsewhere on the project. The zones allow for the clearing of trees within the SMF under ecologist supervision. During this work, the team has relocated several birds and frogs that were found during the clearing process, to a nearby suitable habitat.

Since project commencement, the environment team has not found any historical items along the project alignment. However, Sydney Metro has identified Scar Trees and a direction tree at Cosgroves Creek during site inspections with Indigenous heritage experts. These trees are sacred for our Indigenous peoples and will be managed accordingly. Should CPBUI find any potential historical items, the unexpected finds procedure is activated, in line with the Heritage Management Plan.

What's happening in the next six months?

CPBUI are planning to carry out the following activities:

- earthworks to level the ground and prepare for the base of the track between Lansdowne Road and Blaxland Creek
- Installing drainage and piling pads for the Blaxland Creek and Patons Lane viaducts
- completing earthworks for the Stabling and Maintenance Facility
- construction of a roundabout on Luddenham Road enabling a future access road to Luddenham Station
- piling and construction of the viaduct piers from the Warragamba Pipelines to Cosgroves Creek
- construction of the M12 bridge
- completion of the above ground alignment south of Elizabeth Drive to the tunnel entry on airport land.



A tunnel boring machine at Marrickville.

Tunnelling starts mid-2023

What is a Tunnel Boring Machine?

A Tunnel Boring Machine (TBM) is like an underground factory. The machines excavate a 1.7 metre section of ground and at the same time install six concrete segments to form a ring around the tunnel.

This cycle takes on average about an hour, depending on the hardness of the rock. The TBM then moves forward and repeats this process for the length of the tunnel leaving behind a waterproof structure. The finished tunnels will have a diameter of about seven metres.

The project will use four machines designed especially for the Western Sydney ground conditions:

- two earth pressure balalnce (EPB) TBMs will excavate through shale and clay to build the 4.3-kilometre northern tunnels between Orchard Hills and St Marys, via an access shaft at Claremont Meadows
- two double-shield hard rock TBMs will tunnel through shale to construct the 5.5-kilometre southern tunnels from Airport Business Park and Airport Terminal Station, via an access shaft at Bringelly, to Aerotropolis.

Stacks of segments

A precast facility in Brisbane is making the 69,780 concrete segments needed to fully line the Sydney Metro –Western Sydney Airport tunnels.

The precast facility has a carousel production line which makes one segment every eight minutes. Each segment is designed for a specific place within the tunnels.

Segments are made from a sustainable concrete mix which includes a waste by-product of the steel-making industry called slag. This is a great way to re-purpose waste materials into a useful product while building the metro tunnels.

Roadheader to dig mini tunnels

A roadheader will be used to build two small tunnels, known as stub tunnels, at each end of the alignment.

A roadheader is a tunnelling machine that has a rotating cutterhead mounted on a boom to create underground structures. The machine travels on bulldozer-style tracks and uses a conveyor to load material into dump trucks.

The stub tunnels at the eastern end of the St Marys site and the southern end of the Aerotropolis site, will enable the Western Sydney Airport tunnels to connect with future extensions of the metro rail system.



Tunnel segments at the precast facility in Brisbane.



A roadheader will be used to carve out small stub tunnels at both ends of the alignment.

Northern tunnel alignment



Southern tunnel alignment



Northern and southern tunnel alignment showing stub tunnel locations.

Giving back to the community

The CPB Contractors and Ghella Joint Venture (CPBG) team has run two charity drives for the WASH House organisation in Mount Druitt. Hundreds of items were donated in December 2022, such as nappies, children's shoes and toiletries, and delivered just before the holiday break.

The WASH House team used the donated goods to make up more than 100 hampers for families in need. Chocolate eggs and other treats were delivered just in time for Easter in April 2023. The charity is a communitybased resource centre that aims to reduce the impact of poverty, social disadvantage and violence on the lives of women and children.

On behalf of The WASH House I would sincerely like to thank you and your organisation for the generous donation for our clients.

The thought that was put into the variety of the products was amazing! Not just basics and not just personal needs, very thoughtful mix.

Our clients certainly have real needs especially this year after Covid, lockdowns, increased incidence of domestic violence plus the variable economic impact on low-income families.

Please pass on our thanks and the appreciation of our clients and their families to management and everyone in your organisation.

Gail Westacott, former Executive Officer, WASH House Inc – December 2022

Community events calendar

Our Sydney Metro–Western Sydney Airport Community and Engagement Team will be attending the following events:

Saturday, 17 June 2023

Western Sydney Airport Community Open Day

Experience Centre grounds

100 Eaton Road, Luddenham

Sunday, 18 June 2023

Luddenham Country Markets

Sunday, 2 July 2023

Mamre Markets

Friday, 7 to Sunday, 9 July 2023

Winterfest Camden

Wednesday, 31 July 2023

Community pop-up at Nepean Village.

To learn more about our project or ask questions be sure to come visit us at one of the community locations.



Interfacing projects in Greater Western Sydney

There are a number of major infrastructure projects underway and planned in Greater Western Sydney. These projects will support growth and underpin the development of key precincts in the Western Parkland City.

We are coordinating how we communicate with the local community to ensure residents and businesses understand who is carrying out the work and who to contact with any enquiries or complaints. If you have any questions or need to contact a particular project, use the reference below for the right project contact details.

Western Sydney Airport

T: 1800 972 972 E: info@wsaco.com.au W: westernsydney.com.au

Transport for NSW – M12 Motorway

T: 1800 517 155 E: m12motorway@transport.nsw.gov.au W: nswroads.work/m12 **Sydney Water**

T:1800 238 881 E: uppersouthcreek@sydneywater.com.au

Department of Planning and Environment

T: 1300 420 596 (between 9am-5pm, Monday-Friday) and ask for the Western Sydney Aerotropolis team E: aerotropolis@dpie.nsw.gov.au W: planning.nsw.gov.au

Western Parkland City Authority-Aerotropolis

T: 1800 321 999 E: hello@wpca.sydney W: wpca.sydney

Transport for NSW-roads and cark park projects

T: 1800 684 490 1800 775 465 (emergency 24/7) E: projects@transport.nsw.gov.au W: transport.nsw.gov.au/projects

Glascott-Gipps Street Recreational Precinct

- T: Scott Collis 0477 202 444
- E: scottc@glascott.com.au

Contact us

If you have any questions or would like more information please contact our project team:

1800 717 703 Community infoline open 24 hours

sydneymetrowsa@transport.nsw.gov.au

Sydney Metro – Western Sydney Airport PO Box K659, Haymarket NSW 1240



How to find out more





Translating and interpreting service

If you need help understanding this information, please contact the Translating and Interpreting Service on **131 450** and ask them to call us on **1800 717 703**.