



Fact sheet – TBM launch and receival chambers

Western Harbour Tunnel

February 2025



We acknowledge the Traditional Custodians of the Country on which Western Harbour Tunnel is being constructed, including the Gadigal, Cammeraygal, and Wangal peoples, as well as the Aboriginal peoples of Emu Plains, and we pay respect to Elders past and present.

This fact sheet provides information about the underground launch and receival chambers for our tunnel boring machines (TBMs) in Birchgrove and Waverton.

These chambers will support the assembly, launch, operation and decommissioning of our TBMs.

Birchgrove – TBM launch chambers

We will excavate two launch chambers below Birchgrove to facilitate the launch of our TBMs from the southern side of Sydney Harbour to tunnel north towards Waverton.

The launch chambers will be excavated with roadheaders and standard tunnel construction techniques, such as rock bolting.

Excavation of the launch chambers will be expected to take between six and nine months. When excavation of the launch chambers is complete, the TBMs will be brought underground in sections via the Western Harbour Tunnel entry off City West Link in Rozelle.

From there, the TBM segments will be assembled in the underground launch chambers without the need for any additional construction support sites in Birchgrove.

We will partially backfill the launch chambers after we have completed our TBM excavation and they will become part of the permanent road tunnels.

Waverton – TBM receival chambers

We will excavate two underground TBM receival chambers under Carradah Park in Waverton several months before the TBMs break through to the Waverton section of Western Harbour Tunnel.

The TBM cutting heads will be detached in the receival chambers and entombed in concrete. The remainder of the TBM will be dismantled and reused or recycled.

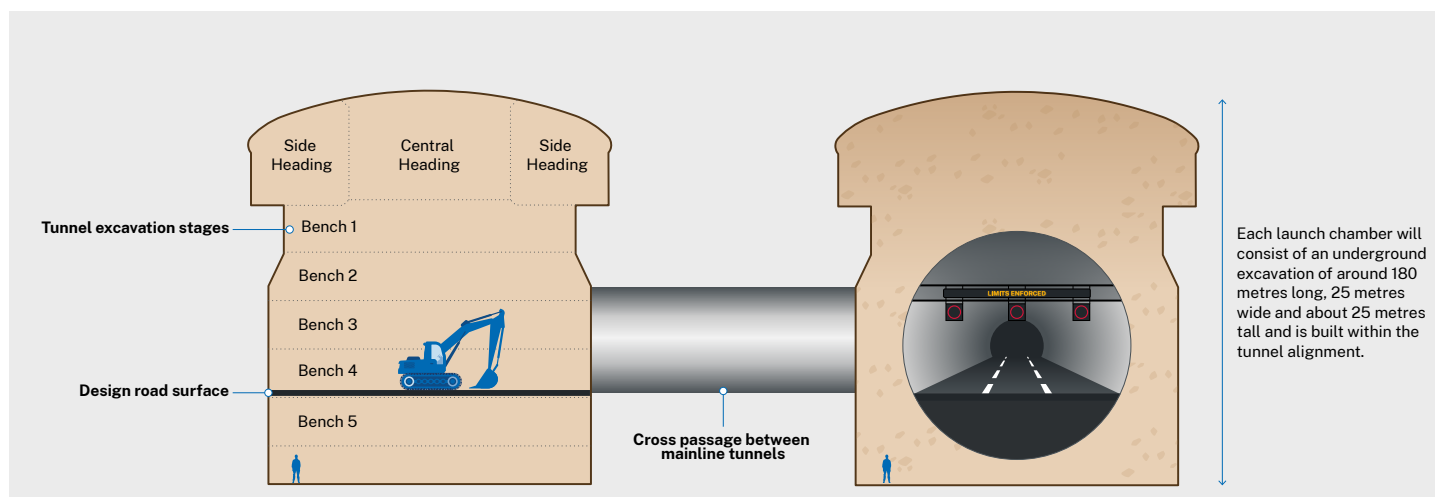
Work to excavate the receival chambers is planned to commence at the end of 2025 and is expected to take around three months to complete.

Construction timeline

Construction of launch chambers start: Early 2025

Construction of launch chambers completed: Early 2026

TBM work starts: Early 2026



About tunnel boring machines (TBMs)

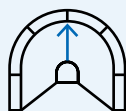
TBMs are specialised machines designed to create tunnels by excavating through hard rock, wet or dry soil, or sand. They are fitted with a large rotating head that makes a hole in the ground by using a motor with a hydraulic or electric system.

TBMs are used worldwide and across Australia as a safe and effective tunnelling solution. The TBMs will tunnel deep under the seabed and will not require any dredging activities in Sydney Harbour. Please refer to the “Fact Sheet – Tunnel Boring Machine” – available on the WHT website for more information.



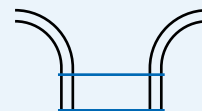
Receival chambers

Once tunnelling is complete, we will salvage as much of the TBM as possible and remove the pieces through the entrance to the tunnel at Rozelle.



Transitioning from Stage 1 to Stage 2

We will transition into the Stage 2 launch chamber area by additional floor excavation (benching) from the Stage 1 tunnels. We will then continue benching down until we reach the final level of the launch caverns.



Cross passages

Enables link between launch chambers for construction vehicles to move below ground and are used for emergency access once WHT is operational



Spoil removal

Spoil trucks will travel from the excavation site underground through existing WHT Stage 1 and WestConnex tunnels



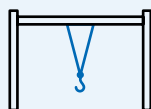
Excavation volume

150,000 BCM (bank cubic metres) to be excavated from tunnels/cabins, including cross passages
3,000 BCM excavated per week



Launch chamber size

Height: 25 metres
Width: 21 metres
Length: 210 metres



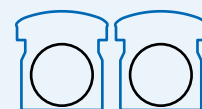
Gantry cranes inside chamber

1 x 500 Tonne crane
1 x 60 Tonne crane



Rock type

Mostly Sydney sandstone with some mixed clay



Launch chambers

2 launch chambers to be constructed

More information about tunneling activities can be found on the WHT website:
nswroads.work/whtportal

Contact us



Project Infoline **1800 931 189**



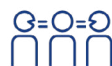
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Visit our website at
nswroads.work/whtportal



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