



# Torrens to Darlington (T2D)

Tunnelling and Tunnel Boring Machines | December 2021

## Building the missing link

Set to unlock Adelaide's traffic network, the Torrens to Darlington (T2D) Project is the final 10.5 km section of the North-South Corridor.

Using a combination of tunnels, a lowered and surface-level motorway, as well as overpasses and underpasses at key intersections, the T2D Project will create 78 km of non-stop traffic light-free motorway between Gawler and Old Noarlunga.

By moving thousands of vehicles into tunnels, and bypassing 21 sets of lights, the T2D Project will connect communities across Greater Adelaide. It will ensure people, produce and products arrive where they need to be, sooner and safer, making the T2D Project a positive contribution to businesses, employment, education and the lives of South Australian families.



Traditionally, TBMs are given a female name in honour of Saint Barbara, the patron saint of miners and tunnellers

## Working below the surface

Both the Southern Tunnel and Northern Tunnel will be constructed using tunnel boring machines (TBMs). A TBM excavates tunnels and can bore through a variety of ground conditions. This enables the community and businesses to continue undisturbed above ground while construction happens below ground.

The machines will operate continuously, progressing about 8-10 metres per day. This means they will be tunnelling under most properties for only two-to-three days. During tunnelling, a series of conveyors move excavated dirt and rock (spoil) from the front of the TBM to the rear and eventually out of the tunnel itself.

The TBMs will progressively line the tunnel with concrete segments as excavation occurs. They are equipped with navigation systems to ensure that tunnel construction occurs in the correct location.

As part of the T2D Project, we will establish laydown areas for each tunnel, primarily to support operations. These tunnel laydown areas will be used to:

- build the re-purposed motorway
- minimise land impact
- launch and support the machine's ongoing operation
- enable the removal of underground material obtained through tunnel-boring
- store equipment and materials
- provide facilities for construction workers.

## When will you start work on the T2D Southern Tunnel work area?

The laydown area for the Southern Tunnel will be established first, and will be located near Tonsley Boulevard. Initial construction will include demolishing existing buildings to clear the area ready for the construction of the work area facilities. Work to prepare the site will start in 2022, with construction estimated to begin in 2023. This will include the construction of a power substation to power the TBMs and the operations of the tunnels once construction is completed.

We will work closely with our construction partners to reduce disruption to the neighbouring community. This will include:

- establishing site buildings, access roads, equipment storage and stockpiles away from businesses and residents where possible
- handling soil and rock from the TBMs in an enclosed acoustic shed
- implementing noise-reduction measures on machinery, in line with South Australian Environment Protection Authority requirements
- using covered conveyors, sheds and trucks to reduce dust
- giving our neighbours advanced notice about what to expect during construction.

## Why tunnels?

When complete, about 60 per cent of the T2D motorway will be tunnels.

The benefits of using tunnels include:

- saving up to 480 properties and more than 50 heritage sites
- traffic is moved away from homes
- trucks and traffic noise on local streets is reduced
- unobstructed freight passages
- less disruption during construction as much of the work occurs below ground
- land, properties and green spaces are protected.

## Contact us

 1300 951 145

 [T2D@sa.gov.au](mailto:T2D@sa.gov.au)

Connect with us on social media for updates



## Why does the North Tunnel not extend under the River Torrens?

A range of factors have been considered when developing the Reference Design for the Northern Tunnels, including the location of the tunnel entry and exit and whether the tunnel should extend under the River Torrens.

Extending the tunnels under the River Torrens would create safety issues for motorists as connecting safely back up to Grange Road would be difficult.

It is also estimated to cost hundreds of millions of dollars more to have the tunnel go underneath the River Torrens, which was not considered an effective use of funds.

## Keeping you informed

The T2D Project is being delivered by the Department for Infrastructure and Transport and we're committed to keeping everyone informed. We will provide regular updates through direct mail, email notifications, social media and face-to-face community activities.

If you would like to learn more about the T2D Project, please sign up to receive our electronic updates or download one of our fact sheets at: [dit.sa.gov.au/torrenstodarlington](http://dit.sa.gov.au/torrenstodarlington)



### We speak your language

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#### Madarin

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#### Italian

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