Selecting the concept design

The Western Harbour Tunnel has been identified as a priority transport infrastructure project for New South Wales.

Future Transport, released by the NSW Government in October 2017 includes Western Harbour Tunnel and Beaches Link.

Previously, the 2012 NSW Long Term Transport Master Plan and the 2014 State Infrastructure Strategy Update referenced the need for a new crossing of Sydney Harbour.

In 2015, Roads and Maritime Services started assessment work on this new harbour crossing.

The concept of a new bridge across western Sydney Harbour was discontinued early because of the high visual, tourist and heritage values of the Sydney Harbour Bridge.

A tunnel under western Sydney Harbour provides similar connectivity, capacity and design outcomes as a new bridge.

It also avoids the impacts of a bridge including environmental, property and visual amenity issues.

Initial corridor options assessment

Four corridors were evaluated (see map) to identify the most acceptable corridor.

Key factors were:
- Likely geology, geotechnical stability and suitability for tunnel construction
- Tunnel depths, geometry and ability to achieve acceptable road gradients
- Connectivity with the broader road network
- Constructability
- Minimise property disturbance
- Minimise environmental impacts

Red option

Tunnels between Balmain, Goat Island and McMahons Point.

Disadvantages include:
- Steep gradients with adverse outcomes for traffic flow and tunnel air quality
- North Sydney connections required long, circular access ramps with adverse impacts on traffic performance
- Potential impacts on Goat Island
- Potential impacts to Sydney Harbour’s main shipping channel

Orange option

Similar to the red option, it connected with the Gore Hill Freeway near Artarmon and not the Warringah Freeway at North Sydney.

Disadvantages included:
- The need for a relatively long tunnel
- Poor road connection compared with other options

Brown option

Crossing of Sydney Harbour further west – broadly under Victoria Road and the Gladesville Bridge.

This option was discounted during initial assessment as it did not provide viable network connectivity.
Selected option – Blue corridor

The blue option was selected as the concept design option to be tested further, due to:

- Good connectivity to North Sydney, Beaches Link and the Gore Hill Freeway
- Flatter tunnel gradients
- Avoids the Sydney Harbour National Park
- Constructability
- Minimising property impacts of the project
- Reduces interface with Sydney Metro tunnels

Benefits:

- Cut travel times
- Improve bus transport
- Form a western bypass of the Sydney CBD
- Support growth and economic development
- Take pressure off the Sydney Harbour Bridge and Sydney Harbour Tunnel
- Streamline Australia’s busiest and most complex road – the Warringah Freeway

Indicative map of options assessed

You can have your say at any time

To find out more about the project, or to have your say:

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- whtbl@rms.nsw.gov.au

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