

Questions and answers – Road user benefits

Windsor Bridge replacement project

December 2016

Number of lanes

Q: How many lanes will the new Windsor Bridge have?

The new Windsor Bridge will feature three traffic lanes, one more lane than on the current bridge. There will be two southbound lanes and one northbound lane. All three lanes would be a minimum of 3.3 metres wide.

Q: How would a third lane help improve traffic flow?

The third lane will help improve traffic flow by providing more vehicle capacity between the upgraded George Street and Wilberforce Road intersections.

Q: Why build the three lane bridge after stating it was not necessary until 2026?

Although traffic modelling indicates a two lane bridge will perform well for several years, Roads and Maritime has decided to implement three lanes when the new Windsor Bridge first opens. This will result in less congestion and better traffic performance, realising additional benefits for the community earlier.

Q: Will the project area increase due to the three lane bridge configuration?

No. The bridge has always been designed to accommodate three lanes. The bridge will be line marked for three lanes on opening, instead of line marked for two lanes and changing to three lanes in the future. The three lane configuration does not increase the footprint of the new bridge.

The project will still provide a unified open space in Thompson Square increasing the usable area by more than 500 square metres with direct access to the river.

Intersection improvements

Q: How will the southern approach to the bridge change?

The new southern approach road to the bridge will run along Old Bridge Street beside the Thompson Square parkland area. The roundabout at George Street will be replaced by traffic lights to help improve traffic efficiency and provide safer access for pedestrians at this intersection.

Q: How will the northern approach to the bridge change?

A new dual lane roundabout on the northern side of the Hawkesbury River will feed traffic onto the bridge and allow motorists to use different lanes depending on their destination. This will help improve traffic flow on approach to the bridge. A roundabout was chosen instead of traffic lights due to the rural character and flooding impacts on this side of the bridge.

Vehicle access to Macquarie Park will be provided from the new roundabout.

Q. What are the traffic improvements that will occur?

The traffic modelling for this project shows a significant improvement in traffic flow through the area due to the introduction of traffic lights at the intersection of Bridge Street and George Street and the dual lane roundabout at Freemans Reach Road and Wilberforce Road.

The intersection configurations incorporate the two southbound lanes. The roundabout on the northern side of the river allows the approaches from Freemans Reach Road and Wilberforce Road to enter the roundabout and exit southbound onto the bridge without merging.

Having two southbound lanes on the bridge will allow the right lane to turn right into George Street or continue straight to turn right into Macquarie Street, while the left lane continues straight through to McGraths Hill.

Traffic modelling for 2026 indicates the three lane bridge and upgraded intersections will:

- improve southbound speeds from roughly 38km/h to 52km/h in the AM peak period and northbound speeds from 7 km/h to 41km/h in the PM peak period
- reduce southbound queue lengths by up to 730 metres in the AM peak and northbound queue lengths by up to 320 metres in the PM peak

Q. How will the new traffic light intersection help improve traffic flow?

The signal phasing at the new traffic light intersection at George Street and Bridge Street will be synchronised with the existing lights at the Macquarie Street intersection to give priority to through traffic on Bridge Street during peak periods. This will contrast with the current situation where vehicles from George Street have equal priority at the roundabout.

There will also be improvements to traffic flow at Macquarie Street as a result of reduced queuing at the intersection with Bridge Street and Windsor Road, particularly in the PM peak.

Q: Why does the southbound route have two lanes rather than the north?

The southbound traffic flow across the bridge is fed by two separate movements, Freemans Reach Road and Wilberforce Road. The two southbound lanes across the bridge will provide a continuous flow of two lanes through to the intersections at Bridge Street and Macquarie Street.

Traffic modelling for this project indicates an additional northbound lane would provide limited benefit for traffic. The new design of the George Street and Bridge Street intersection will only have one through lane for northbound traffic. The provision of two lanes across the short length of the new bridge before the roundabout and the single lane Freemans Reach Road and Wilberforce Road would provide limited benefit to travel times.

Q. Will heavy vehicle speed limit restrictions remain?

No. The safety improvements from the new bridge will allow two-way heavy vehicle flow, without 40km/h speed limit restrictions.

Q: Are there any other local traffic impacts as a result of the project?

Right turns into George Street towards Governor Philip Park will be banned for motorists travelling north. This will allow traffic to flow freely onto the bridge.

Q: How will the three lane bridge operate if there is a breakdown on the bridge?

If a breakdown occurs in one of the southbound lanes, traffic would be able to pass the vehicle by using the other lane. In the event of a breakdown in the northbound lane, northbound traffic would be able to use a southbound lane for a short time to keep traffic flowing until the vehicle is removed.

Pedestrian and cyclist benefits

Q. How will pedestrians and cyclists benefit from the new bridge?

The new bridge will improve access for pedestrians and cyclists by including a three metre wide shared pedestrian and cycle path, to provide safe, efficient connections to Thompson Square and surrounds, including Macquarie Park.

Removing the road that currently divides Thompson Square, will enable direct pedestrian access to the Hawkesbury River from the retail outlets on George Street.

The new traffic light intersection at Bridge and George Streets will also increase pedestrian safety.

Future demand

Q: Would the new bridge be widened in future to provide more lanes?

The new bridge would not be widened in future due to a number of constraints. Widening the bridge would have significant impacts on Thompson Square and surrounding heritage sites and would also require significant network improvements and upgrades to the approach roads to increase traffic capacity.

Q: What will happen when traffic demand increases in the future?

Roads and Maritime will monitor traffic volumes over the new bridge once completed and will assess options for meeting future traffic growth, including improvements to the local and regional road network.

Q: What is the design life of the new bridge?

The new bridge has improved flood immunity and a design life of one hundred years.

More information

Q: How can I find out more information?

Information on the design and traffic configuration can be viewed in the November Community Update and in the traffic animation. These can be found on our website at www.rms.nsw.gov.au/windsorbridge

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