

Key considerations in developing the approaches

Assessing the road network

The Western Harbour is a key gateway into the city and the route to Bristol Airport from the M5 Motorway. The main highways in the area can carry over 2,000 vehicles an hour during the AM and PM peaks.

To realise the full potential of this area we need to look at ways to create a simpler, less intrusive road network. In 2018, Bristol City Council commissioned an initial feasibility study to consider approaches for reconfiguring traffic movements across the Western Harbour.

A number of approaches were considered with regard to their ability to provide transformative growth and regeneration opportunities, whilst also considering the impact on the local environment and heritage features, and on traffic flow, including walking, cycling and public transport opportunities.

From this initial assessment, three road network approaches have been looked at in more detail. It is still early days and more detailed technical studies and design proposals will be required on any approach progressed.

Each of the three proposed approaches aims to prioritise improvements to walking, cycling and bus networks in the Western Harbour area. This would result in a slightly reduced capacity on the road network compared to its existing layout. Improved public transport, walking and cycling facilities would help reduce the need to travel by car.

There also remains the option of investment to extend the life of the existing road and bridge infrastructure. In addition interim or partial approaches could be considered, involving retention of some existing highway sections but removal of other sections. These are less-transformative but worthy of further consideration as part of future technical studies if the transformative approach is not progressed.

Key considerations

For each of the future road network approaches we have assessed its ability to provide suitable road capacity as well as growth and regeneration opportunities.

Traffic flows

We have looked at the amount of traffic forecast to be using this area in 2036. This takes into account where people currently travel to and from, local trends in how much they use cars and other vehicles for these journeys, and new journeys expected from more jobs, housing and other developments which already have planning consent.

Future traffic demands have been classified as either 'strategic' or 'local' in nature. Strategic movements are those movements that cannot easily switch to sustainable transport. An example is between the A4 at Avonmouth and the A370 towards Long Ashton. Local movements have more options for sustainable travel. Local movements include those between the city centre, Spike Island and Southville.

Wider transport interventions, such as improvement of the route between the M5 and the South Bristol Link Road would reduce traffic demand in the area but were not considered as part of the study. Such interventions will be considered as part of a transport study for the area being commissioned by West of England Combined Authority (WECA).

Harbour movements

The Maritime Act ensures that should a vessel wish to pass through the locks at Cumberland Basin during the high-tide period, it must be allowed to do so. There can be over 60 bridge opening events a month in the summer, down to less than 10 a month in the winter. Sunday is generally the busiest day.

Potential for a Tunnel

Each approach requires new crossings of the River Avon and a tunnel has been considered. Construction of a tunnel would be technically challenging due to the characteristics of the rocks and soils and underground water in the area.

Initial estimates suggest a tunnel could cost six times as much as an equivalent bridge, while the tunnel would also result in considerably more construction traffic movements.

While a tunnel could avoid traffic impacting on the view down the Avon Gorge and the setting of the Clifton Suspension Bridge, the tunnel's northern entrance (with the A4 Portway) would be difficult to fit into the available space and landscape. Longer tunnels connecting to the A4 Portway north of the suspension bridge could therefore be considered as the least impactful option on the gorge, but the additional tunnel length would make this significantly more expensive.

Connected projects in the area

This engagement on the highways approaches is not taking place in isolation. There are several other engagement exercises taking place across the Bristol City Council area in 2019, which in combination will enable these approaches to be assessed in greater detail and a holistic and comprehensive masterplan for the area to be developed.

These include Air Quality and a Traffic Clean Air Zone, a Harbour Review, Tidal Flood Risk Strategy and the Local Plan Review.