

## **Lambeth Bridge north and south - Traffic impacts and data table**

### **Buses**

Our proposals would have an impact on the operation of the bus network and passenger journeys around Lambeth Bridge. The removal of the roundabouts on both sides of the river would result in reductions in journey times on some routes, such as the route 3 westbound, which would likely experience journey time improvements of up to two minutes. Whereas other routes would experience journey time increases, such as those travelling northbound on Albert Embankment in the evening peak, which are predicted to experience delays of up to four minutes.

### **Cycles**

Our proposals aim to protect cyclists from traffic movements where possible. This would be achieved through a combination of cycle bypasses at footway level for left turning cyclists, physical segregation on approach to the junctions, two stage right turn facilities and dedicated cycle signals where possible at both junctions.

The majority of journey times for cyclists would increase by no more than two minutes. However, cyclists using the two stage right turn facilities would see increases in journey times. The two stage right turn facilities would provide a safer alternative to turning right with general traffic in the centre of the junction. Movements using multiple two stage right turns for example from Lambeth Palace Road to Millbank north would see an increase in journey time of up to eight minutes. This is a low frequency movement.

### **Pedestrians**

Our proposals include changes to pedestrian crossing facilities on both sides of Lambeth Bridge. At the northern roundabout, the existing zebra crossings will be converted into signalised straight across crossings, allowing pedestrians to cross the road in one movement; whereas on the southern roundabout, crossings would be staggered. New traffic signals and turning restrictions would maximise the time pedestrians receive to cross the road and new countdown technology will be installed, to show how many seconds there are to cross the road.

## **General traffic**

The proposals may result in changes to general traffic journey times. In the morning peak, our modelling predicts delays to vehicles travelling northbound from Millbank towards Lambeth Palace Road of up to six minutes. Conversely, there would be journey time savings to a number of routes both north and south of the river. In particular, vehicles travelling to all destinations from Lambeth Road are predicted to see journey times decrease by up to eight minutes. In the evening peak, journey times for general traffic travelling south from Lambeth Palace Road are predicted to increase by up to eight minutes, whereas journeys from Horseferry Road would benefit by up to two minutes of journey time savings.

The general traffic modelling includes taxis, which would continue to have access to bus lanes. The exception would be the new bus and cycle-only slip from Millbank north onto Lambeth Bridge.

## **Traffic reassignment**

Changes to the road layout are likely to cause some vehicles to change their routes to use other local roads in both the morning and evening peak.

In the morning, we predict reductions in flow on Millbank in both directions and Lambeth Bridge heading east. Similarly, fewer vehicles are predicted on Horseferry Road heading towards Lambeth Bridge and Great Peter Street, due to the reallocation of road space, and the introduction of some banned traffic movements.

Traffic flows would likely increase to a small extent on Vauxhall Bridge and Westminster Bridge. It is also predicted that traffic flows would increase on Kennington Road and Victoria Street, as well as on smaller borough roads such as John Islip Street and Marsham Street.

Evening peak flow reassignment is similar to the morning peak; however neighbouring bridges are unlikely to see the increases in demand predicted in the morning. John Islip Street may be used by a number of additional vehicles. This is a result of the right turn ban from Millbank onto Lambeth Palace Road. This ban would only be imposed in the evening peak to retain capacity on key north-south movements.

### **Explanatory note on accompanying traffic modelling data table**

We have used traffic modelling techniques to calculate the expected average journey time changes at the busiest hour in both the morning and evening peak. This data table outlines the expected average journey times for the following two situations;

- Base model - current situation on street – Journey times for general traffic and cyclists are taken from VISSIM traffic modelling software
- Future modelled journey times with scheme – Expected on street conditions if the Lambeth Bridge schemes are built. These average journey times take account of real time traffic management, which will control signal phasing to more effectively regulate the flow of traffic at certain locations to keep central London moving

The data table includes information on routes for general traffic (including taxis), buses, cyclists and pedestrians through the area.

Our proposals would fundamentally change the operation of the road network in the Lambeth Bridge area, which in some locations would be expected to result in longer journey times. The changes to patterns in traffic movement in the coming years mean that the general traffic demand in the area is expected to reduce as a result of the Lambeth Bridge proposals. This lower traffic demand is dependent on a number of transformative schemes within central London being built and the resultant change in capacity of certain routes.

If you have any further questions concerning the traffic modelling for this scheme email your requirements and contact details to [trafficmodelling@tfl.gov.uk](mailto:trafficmodelling@tfl.gov.uk)

### **Complementary measures**

The impacts calculated through the traffic models do not take account of a range of additional complementary measures that would have beneficial impacts on journey times for buses and general traffic:

- Where there are negative impacts on journey times for bus routes shown in the table, a programme of work is being developed to save time elsewhere along the affected routes by addressing delays and giving priority to buses at certain pinch-points
- Road users can expect comprehensive and specific travel advice to help them to make informed journey choices to avoid busy times and locations
- As well as asking them for their views on this consultation, we are working with the delivery and servicing industry so they can plan their activity and avoid making deliveries

at the busiest times and locations. This is part of a wider programme to ensure deliveries can be made safely, cleanly and efficiently

Through the creation of the new Roads and Transport Policing Command, we will target enforcement at the busiest locations and known hot spots to reduce hold-ups and delays and keep traffic moving.

**Lambeth Bridge North and South Better Junctions - Summary of Modelling Results**

Correct as of 25 May 2017		Base model - current situation Journey time in minutes				Future modelled journey times with scheme Journey time in minutes				Difference between future and current (Minutes)	
User	Current Journeys	AM	PM		Journeys Modelled	AM	PM		AM	PM	
Traffic entering from Lambeth North Average journey times (Minutes)	Millbank North to Millbank South	Southbound	2 to 3	3 to 4	Millbank North to Millbank South	Southbound	2 to 3	3 to 4	No Change	0 to -1	
	Millbank North to Horseferry Road	Westbound	2 to 3	3 to 4	Millbank North to Horseferry Road	Westbound	2 to 3	3 to 4	No Change	No Change	
	Millbank South to Millbank North	Northbound	4 to 5	3 to 4	Millbank South to Millbank North	Northbound	8 to 10	3 to 4	3 to 4	0 to 1	
	Millbank South to Lambeth Palace Road	Northbound	4 to 5	5 to 6	Millbank South to Lambeth Palace Road	Northbound	10 to 15	Banned Turn	5 to 6	Banned Turn	
	Millbank South to Lambeth Road	Eastbound	5 to 6	5 to 6	Millbank South to Lambeth Road	Eastbound	10 to 15	Banned Turn	4 to 5	Banned Turn	
	Millbank South to Albert Embankment	Southbound	5 to 6	6 to 8	Millbank South to Albert Embankment	Southbound	10 to 15	Banned Turn	5 to 6	Banned Turn	
	Horseferry Road to Millbank North	Northbound	4 to 5	3 to 4	Horseferry Road to Millbank North	Northbound	2 to 3	2 to 3	-1 to -2	0 to -1	
	Horseferry Road to Lambeth Palace Road	Northbound	4 to 5	5 to 6	Horseferry Road to Lambeth Palace Road	Northbound	4 to 5	3 to 4	0 to 1	-1 to -2	
	Horseferry Road to Lambeth Road	Eastbound	4 to 5	5 to 6	Horseferry Road to Lambeth Road	Eastbound	4 to 5	3 to 4	No Change	-1 to -2	
	Horseferry Road to Albert Embankment	Southbound	5 to 6	6 to 8	Horseferry Road to Albert Embankment	Southbound	4 to 5	4 to 5	-1 to -2	-1 to -2	
Traffic entering from Lambeth South Average journey times (Minutes)	Lambeth Palace Road to Albert Embankment	Southbound	4 to 5	4 to 5	Lambeth Palace Road to Albert Embankment	Southbound	8 to 10	10 to 15	3 to 4	6 to 8	
	Lambeth Palace Road to Millbank North	Northbound	8 to 10	6 to 8	Lambeth Palace Road to Millbank North	Northbound	8 to 10	6 to 8	No Change	No Change	
	Lambeth Palace Road to Millbank South	Southbound	6 to 8	6 to 8	Lambeth Palace Road to Millbank South	Southbound	10 to 15	10 to 15	3 to 4	6 to 8	
	Lambeth Palace Road to Horseferry Road	Westbound	6 to 8	6 to 8	Lambeth Palace Road to Horseferry Road	Westbound	8 to 10	8 to 10	1 to 2	3 to 4	
	Lambeth Road to Millbank North	Northbound	8 to 10	3 to 4	Lambeth Road to Millbank North	Northbound	3 to 4	4 to 5	-5 to -6	0 to 1	
	Lambeth Road to Albert Embankment	Southbound	10 to 15	5 to 6	Lambeth Road to Albert Embankment	Southbound	6 to 8	5 to 6	-6 to -8	No Change	
	Lambeth Road to Millbank South	Southbound	10 to 15	4 to 5	Lambeth Road to Millbank South	Southbound	4 to 5	4 to 5	-6 to -8	No Change	
	Lambeth Road to Horseferry Road	Westbound	10 to 15	4 to 5	Lambeth Road to Horseferry Road	Westbound	4 to 5	4 to 5	-6 to -8	No Change	
	Albert Embankment to Lambeth Palace Road	Northbound	6 to 8	3 to 4	Albert Embankment to Lambeth Palace Road	Northbound	8 to 10	6 to 8	3 to 4	4 to 5	
	Albert Embankment to Lambeth Road	Eastbound	6 to 8	3 to 4	Albert Embankment to Lambeth Road	Eastbound	8 to 10	8 to 10	3 to 4	5 to 6	
Buses Average journey times (Minutes)	Millbank North to Lambeth Road	Route 3 Eastbound	4 to 5	5 to 6	Millbank North to Lambeth Road	Route 3 Eastbound	5 to 6	5 to 6	0 to 1	0 to -1	
	Lambeth Road to Millbank North	Route 3 Westbound	6 to 8	5 to 6	Lambeth Road to Millbank North	Route 3 Westbound	5 to 6	5 to 6	-1 to -2	0 to 1	
	Marsham Street to Lambeth Palace Road	Route C10 Northbound	6 to 8	6 to 8	Marsham Street to Lambeth Palace Road	Route C10 Northbound	6 to 8	6 to 8	No Change	0 to -1	
	Lambeth Palace Road to Marsham Street	Route C10 Southbound	8 to 10	6 to 8	Lambeth Palace Road to Marsham Street	Route C10 Southbound	6 to 8	6 to 8	0 to -1	0 to 1	
	Albert Embankment to Lambeth Palace Road	Route 77 Northbound	5 to 6	3 to 4	Albert Embankment to Lambeth Palace Road	Route 77 Northbound	6 to 8	6 to 8	1 to 2	3 to 4	
	Lambeth Palace Road to Albert Embankment	Route 77 Southbound	4 to 5	5 to 6	Lambeth Palace Road to Albert Embankment	Route 77 Southbound	5 to 6	5 to 6	0 to 1	0 to 1	
	Millbank South to Millbank North	Route87 Northbound	4 to 5	3 to 4	Millbank South to Millbank North	Route87 Northbound	6 to 8	4 to 5	2 to 3	0 to 1	
	Millbank North to Millbank South	Route87 Southbound	3 to 4	3 to 4	Millbank North to Millbank South	Route87 Southbound	4 to 5	5 to 6	1 to 2	1 to 2	
	Albert Embankment to Lambeth Road	Route 344 Northbound	5 to 6	4 to 5	Albert Embankment to Lambeth Road	Route 344 Northbound	6 to 8	6 to 8	1 to 2	3 to 4	
	Lambeth Road to Albert Embankment	Route 344 Southbound	3 to 4	3 to 4	Lambeth Road to Albert Embankment	Route 344 Southbound	3 to 4	3 to 4	0 to 1	No Change	
Cyclists entering from Lambeth North Average journey times (Minutes)	Millbank North to Millbank South	Southbound	3 to 4	3 to 4	Millbank North to Millbank South	Southbound	3 to 4	4 to 5	0 to 1	1 to 2	
	Millbank North to Lambeth Road	Eastbound	4 to 5	4 to 5	Millbank North to Lambeth Road	Eastbound	4 to 5	4 to 5	No Change	0 to 1	
	Millbank North to Albert Embankment	Southbound	4 to 5	5 to 6	Millbank North to Albert Embankment	Southbound	5 to 6	5 to 6	0 to 1	0 to 1	
	Millbank South to Millbank North	Northbound	3 to 4	3 to 4	Millbank South to Millbank North	Northbound	4 to 5	4 to 5	1 to 2	1 to 2	
	Millbank South to Horseferry Road	Westbound	2 to 3	0 to 1	Millbank South to Horseferry Road	Westbound	2 to 3	2 to 3	0 to 1	1 to 2	
	Millbank South to Lambeth Road	Eastbound	4 to 5	4 to 5	Millbank South to Lambeth Road	Eastbound	5 to 6	4 to 5	0 to 1	0 to 1	
	Millbank South to Albert Embankment	Southbound	4 to 5	5 to 6	Millbank South to Albert Embankment	Southbound	6 to 8	5 to 6	1 to 2	0 to 1	
	Horseferry Road to Millbank North	Northbound	1 to 2	2 to 3	Horseferry Road to Millbank North	Northbound	2 to 3	2 to 3	0 to 1	0 to 1	
	Horseferry Road to Lambeth Road	Eastbound	3 to 4	3 to 4	Horseferry Road to Lambeth Road	Eastbound	3 to 4	3 to 4	0 to -1	0 to 1	
	Horseferry Road to Albert Embankment	Southbound	3 to 4	4 to 5	Horseferry Road to Albert Embankment	Southbound	4 to 5	4 to 5	0 to 1	0 to 1	
Cyclists entering from Lambeth South Average journey times (Minutes)	Lambeth Palace Road to Millbank North	Northbound	4 to 5	3 to 4	Lambeth Palace Road to Millbank North	Northbound	8 to 10	8 to 10	4 to 5	6 to 8	
	Lambeth Palace Road to Millbank South	Southbound	1 to 2	4 to 5	Lambeth Palace Road to Millbank South	Southbound	5 to 6	5 to 6	4 to 5	1 to 2	
	Lambeth Palace Road to Horseferry Road	Westbound	3 to 4	3 to 4	Lambeth Palace Road to Horseferry Road	Westbound	6 to 8	5 to 6	3 to 4	1 to 2	
	Lambeth Road to Millbank North	Northbound	4 to 5	3 to 4	Lambeth Road to Millbank North	Northbound	6 to 8	6 to 8	1 to 2	3 to 4	
	Lambeth Road to Millbank South	Southbound	4 to 5	3 to 4	Lambeth Road to Millbank South	Southbound	3 to 4	3 to 4	0 to -1	No Change	
	Lambeth Road to Horseferry Road	Westbound	4 to 5	3 to 4	Lambeth Road to Horseferry Road	Westbound	3 to 4	4 to 5	No Change	0 to 1	
	Albert Embankment to Lambeth Road	Eastbound	3 to 4	1 to 2	Albert Embankment to Lambeth Road	Eastbound	5 to 6	4 to 5	1 to 2	2 to 3	
	Albert Embankment to Millbank North	Northbound	5 to 6	2 to 3	Albert Embankment to Millbank North	Northbound	8 to 10	6 to 8	3 to 4	4 to 5	
	Albert Embankment to Millbank South	Southbound	4 to 5	4 to 5	Albert Embankment to Millbank South	Southbound	5 to 6	4 to 5	1 to 2	0 to 1	
	Albert Embankment to Horseferry Road	Westbound	4 to 5	3 to 4	Albert Embankment to Horseferry Road	Westbound	6 to 8	4 to 5	1 to 2	0 to 1	
Pedestrians crossing at Lambeth North Average journey times (Minutes)	Across Lambeth Palace Road	Eastbound	1 to 2	1 to 2	Across Lambeth Palace Road	Eastbound	1 to 2	1 to 2	0 to 1	No Change	
	Across Lambeth Palace Road	Westbound	1 to 2	1 to 2	Across Lambeth Palace Road	Westbound	1 to 2	1 to 2	0 to 1	0 to 1	
	Across Lambeth Road	Southbound	1 to 2	1 to 2	Across Lambeth Road	Southbound	1 to 2	2 to 3	No Change	0 to 1	
	Across Lambeth Road	Northbound	1 to 2	1 to 2	Across Lambeth Road	Northbound	1 to 2	1 to 2	No Change	No Change	
	Across Albert Embankment	Westbound	1 to 2	1 to 2	Across Albert Embankment	Westbound	1 to 2	1 to 2	No Change	0 to 1	
	Across Albert Embankment	Eastbound	1 to 2	1 to 2	Across Albert Embankment	Eastbound	1 to 2	2 to 3	0 to 1	0 to 1	
	Across Millbank North	Eastbound	0 to 1	0 to 1	Across Millbank North	Eastbound	1 to 2	1 to 2	1 to 2	1 to 2	
	Across Millbank North	Westbound	0 to 1	0 to 1	Across Millbank North	Westbound	1 to 2	1 to 2	1 to 2	1 to 2	
Pedestrians crossing at Lambeth South Average journey times (Minutes)	Across Horseferry Road	Northbound	0 to 1	0 to 1	Across Horseferry Road	Northbound	1 to 2	1 to 2	1 to 2	0 to 1	
	Across Horseferry Road	Southbound	0 to 1	0 to 1	Across Horseferry Road	Southbound	1 to 2	1 to 2	1 to 2	0 to 1	
	Across Millbank South	Westbound	0 to 1	0 to 1	Across Millbank South	Westbound	1 to 2	1 to 2	1 to 2	1 to 2	
	Across Millbank South	Eastbound	0 to 1	0 to 1	Across Millbank South	Eastbound	1 to 2	1 to 2	1 to 2	0 to 1	
	Across Lambeth Bridge	Northbound	0 to 1	0 to 1	Across Lambeth Bridge	Northbound	1 to 2	1 to 2	1 to 2	0 to 1	
	Across Lambeth Bridge	Southbound	0 to 1	0 to 1	Across Lambeth Bridge	Southbound	1 to 2	1 to 2	1 to 2	0 to 1	

No Change indicates a predicted journey time change of under ten seconds

Some turning movements are proposed to be banned as part of the Lambeth Bridge scheme, and are not shown in the table above. These movements are:

**North**

- The left turn from Millbank South to Horseferry Road
- The right turn from Millbank South to Lambeth Bridge in the PM peak only
- The left turn from Horseferry Road to Millbank North
- The right turn from Horseferry Road to Millbank South
- The left turn from Millbank North to Lambeth Bridge
- The right turn from Millbank North to Horseferry Road

**South**

- The left turn from Lambeth Palace Road onto Lambeth Road
- The right turn from Lambeth Road to Lambeth Palace Road

TfL has used traffic modelling techniques to calculate the expected average journey time changes at the busiest hour in both the morning and evening peak. This data table outlines the expected average journey times for the following two situations:

Base model - current situation on street – Journey times for general traffic and cyclists are taken from VISSIM traffic modelling software

Future modelled journey times with scheme – Expected on street conditions if the Lambeth Bridge schemes are built. These average journey times take account of real time traffic management, which will control signal phasing to more effectively regulate the flow of traffic at certain locations to keep central London moving