

# Vauxhall Cross Traffic Modelling

Explanatory note

## Overview

The proposed improvements at Vauxhall would simplify movements for vehicles, pedestrians and cyclists travelling through the area. The scheme looks to reduce the dominance of traffic whilst ensuring reliable journey times for the high number of bus and freight movements in Vauxhall.

All existing routes through Vauxhall would be permitted, but vehicles may change their current behaviour and choose a new route which is now allowed under the two-way arrangement. Our proposals would mean changes to journey times for road users. In the local area these changes would see some bus and road journeys getting shorter and some getting longer. This note explains the impacts we expect our proposals to have and is accompanied by a [data table](#) showing expected impacts for all bus journeys and a range of journeys for general traffic, cyclists and pedestrians. The traffic modelling analysis looks at average journey time changes at the busiest hours in the morning and evening peaks.

All data is based on fixed signal timings, however if the scheme were built it would utilise SCOOT technology. This technology uses sensors buried in the carriageway to detect real-time traffic conditions and optimise traffic light timings to reduce delays.

The journey times predicted from the modelling take account of all committed schemes and the impact they have on the network. To accommodate these changes it also includes the effect of an Active Traffic Management strategy, which will change signal phasing to more effectively regulate the flow of traffic at certain locations to keep central London moving.

### General Traffic (excluding buses)

Some journeys for motor vehicles would get longer at the busiest times of day and some would get shorter when comparing the road network in 2018 without the scheme, and the road network in 2018 with the scheme.

In the morning peak there would be a 2 to 3 minute reduction in journey times in both directions on the Inner Ring Road between Kennington Cross and Vauxhall Bridge. There would also be a slight journey time reduction of up to a minute in both directions during the evening peak.

Traffic travelling northbound on Wandsworth Road between Nine Elms Lane and Albert Embankment would see an increase in journey times in the morning of 0 to 1 minutes and in the evening peak of 2 to 3 minutes. There would be a small reduction in southbound journey times in the morning peak of up to a minute and a small increase in the evening peak of up to a minute.

Journey times between South Lambeth Road and Vauxhall Bridge would be up to a minute longer in the morning peak. During the evening peak journey times would increase by 2 to 3 minutes in the northeast direction and 1 to 2 minutes in the southwest direction.

The changes at Vauxhall may lead to traffic seeking alternative routes. Lambeth Council and TfL are committed to monitoring traffic levels on local roads and would consider mitigating measures if there were a significant increase in traffic flows.

## **Buses**

In the proposed scheme the layout of the bus station would change to work with the two-way road layout. This would affect the routes that buses would take through Vauxhall. Traffic modelling has been undertaken to understand the impact of the scheme on these bus journeys. The journey time impacts below relate to the section of the bus journeys through the Vauxhall interchange and not to the whole bus route.

In the westbound direction routes 185, 36 and 436, running through Kennington to Victoria, would experience a reduction in journey time of 3 to 5 minutes in the morning peak and an increase of 1 to 2 minutes in the evening peak. In the eastbound direction there would be a slight increase of up to a minute in journey time in the morning peak and a 1 to 2 minute reduction in the evening peak.

Route 156 which starts and ends at Vauxhall would experience a journey time increase of 3 to 5 minutes in both the morning and evening peaks. It should be noted that this journey time increase includes time taken for the terminated route to return to its starting bus stop, so passengers would not experience the whole of this increased journey time.

Heading northbound between Nine Elms Lane and Albert Embankment, route 344 would experience an increase in journey time of up to a minute in the morning peak and 1 to 2 minutes in the evening peak. In the southbound direction the route would experience a 2 to 3 minute journey time reduction in the morning peak and a 0 to 1 minute increase in the evening peak.

There would be a reduction in journey times for Route 2 in the eastbound direction of up to a minute during the morning peak and 3 to 5 minutes in the evening peak. There would be a slight increase of up to a minute in the westbound direction in both time periods.

## **Cyclists**

Our proposals look to provide a continuous and joined up cycle network on roads surrounding the transport interchange. Due to road width restrictions imposed by the railway viaduct, no acceptable provision can be provided on Parry Street. Instead cyclists would be directed to use Miles Street, which is a lightly trafficked road which runs parallel to Parry Street. Dedicated traffic signals are proposed for cyclists to separate them from other traffic. In some situations this would mean that cyclists would have to wait at a red signal while traffic receives a green signal, increasing some journey times for cyclists, but allowing them to move through junctions separately to other vehicles.

Journey times for a selection of cycle routes that travel through Vauxhall are shown in the [data table](#). On some routes the number of cyclists is too low to calculate meaningful journey time information. N/A has been applied in the cells where this has occurred.

On the existing Cycle Superhighway 5 (CS5) route between Oval and Drummond Gate, cyclists in the westbound direction would experience a slight reduction in journey times of up to a minute. There would be a journey time increase of up to a minute in the eastbound direction in both the morning and evening peak.

Northbound cyclists travelling between Wandsworth Road and Drummond Gate (Wandsworth Road joining CS5 at Bridgefoot junction) would experience a reduction of up to a minute in the AM peak. Cyclists travelling southbound in the evening peak would experience a 1 to 2 minute reduction in journey times.

Cyclists travelling northbound between South Lambeth Road and Albert Embankment in the morning peak would experience a slight journey time reduction of up to a minute. Southbound journeys in the evening peak would increase by 1 to 2 minutes.

## **Pedestrians**

The scheme proposes improvements to pedestrian provision at junctions, including the realignment and simplification of existing crossings and a number of new crossings. Included in the data table are the impacts of proposed changes on pedestrian wait times at four of the junctions in the scheme. The wait times shown for each junction are calculated by adding together the average time it would take to cross each of the arms at that junction.

At the Vauxhall Bridge Road junction there will be an increase in the average wait time of 17 seconds in the morning peak and 15 seconds in the evening peak.

There will be a slight reduction in average wait time at the Wandsworth Road junction with Nine Elms Lane of 5 seconds in the morning peak and 6 seconds in the evening peak.

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

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 three situations;

- **Base Model - Situation on street as of November 2013** – Provides journey times before CS5 was built for context.
- **Future Base Model - Situation on street in 2018 without the proposed scheme at Vauxhall** – Model includes CS5 and all other pre-2018 major highway projects.
- **Future modelled journey times with scheme** – Expected on street conditions in 2018 if the Vauxhall Cross scheme is built as well as the other major highway projects. These average journey times take account of the advanced traffic signal management programme, which will change signal phasing to more effectively regulate the flow of traffic at certain locations to keep central London moving

The data table includes information for all bus routes and a sample of routes for general traffic, cyclists and pedestrians through the area.

If you have any further questions concerning the traffic modelling for this scheme please contact our traffic modelling team at [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 route 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 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