



26 OCTOBER 2018

# Cycle Superhighway 10 Reassignment Analysis

Operational Modelling & Visualisation

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EVERY JOURNEY MATTERS

# Modelling Notes

This briefing pack will outline the expected pattern of traffic flow and rerouting in the CSH10 impact area for 2021. The ONE (Operational Network Evaluator) model has been used to assess the following scenarios:

**Base:** Representing the current situation on the network, before any work is carried out.

**Future Base:** Represents the predicted 2021 network, including all strategically significant schemes planned for implementation, including a London-wide Active Traffic Management (ATM) mitigation strategy, but excluding CSH10 itself.

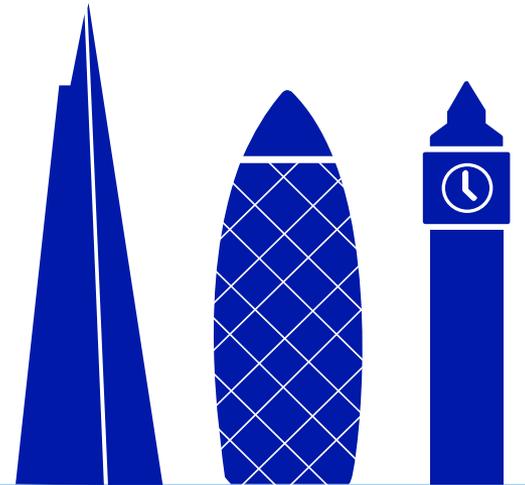
**Do Something:** Represents the predicted 2021 network, as in the Future Base, but also including the CSH10 scheme.

The CSH10 designs were coded into the ONE Model and iterated with junction models to obtain the most efficient network operation for 2021 model flows.

Following iteration between ONE and junction models, flow and routing information was extracted from ONE and input into VISSIM for a more detailed journey time assessment.

This pack compares the ONE Do Something and Future Base scenarios for the AM and PM peaks, to better understand where traffic is expected to reroute to as a result of the implementation of CSH10.

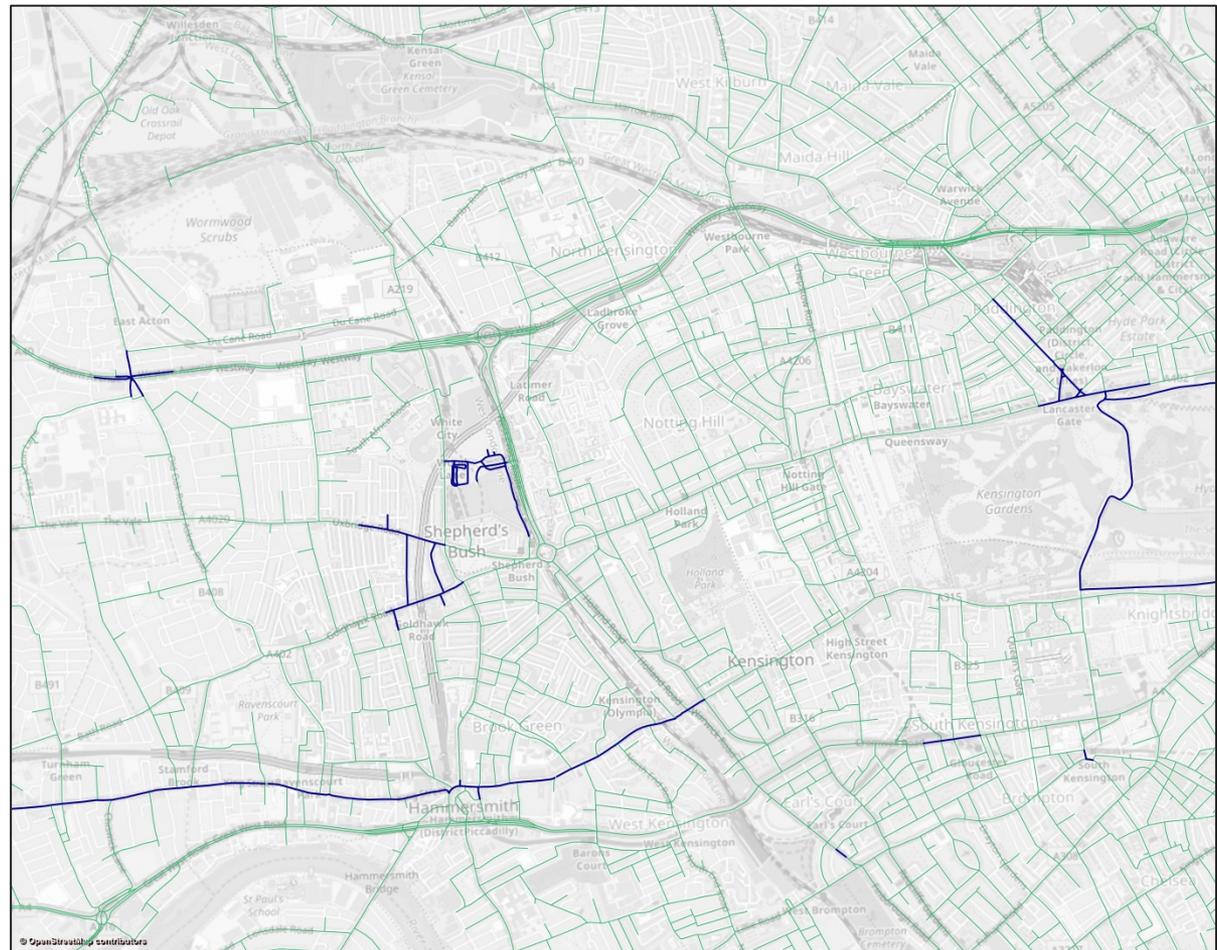
# Traffic Reassignment Analysis for 2021



# Schemes included in the Future Base 2021 ONE Model range from road closures and cycle superhighways to two-way conversions.

## Schemes in the local vicinity:

- Shepherds Bush Town Centre West
- Savoy Circus
- Westfield White City
- Cycle Superhighway 9
- East – West Cycle Superhighway



# AM Peak – Flow Difference between 2021 Do Something and Future Base

Predicted increases eastbound on Ladbroke Rd, southbound on Pembridge Rd and southbound on Clarendon Rd of up to 200veh/hr, with traffic rerouting following the southbound closure of Ladbroke Terrace.

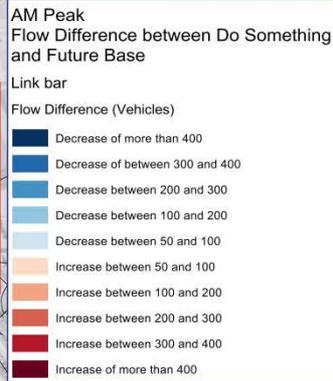
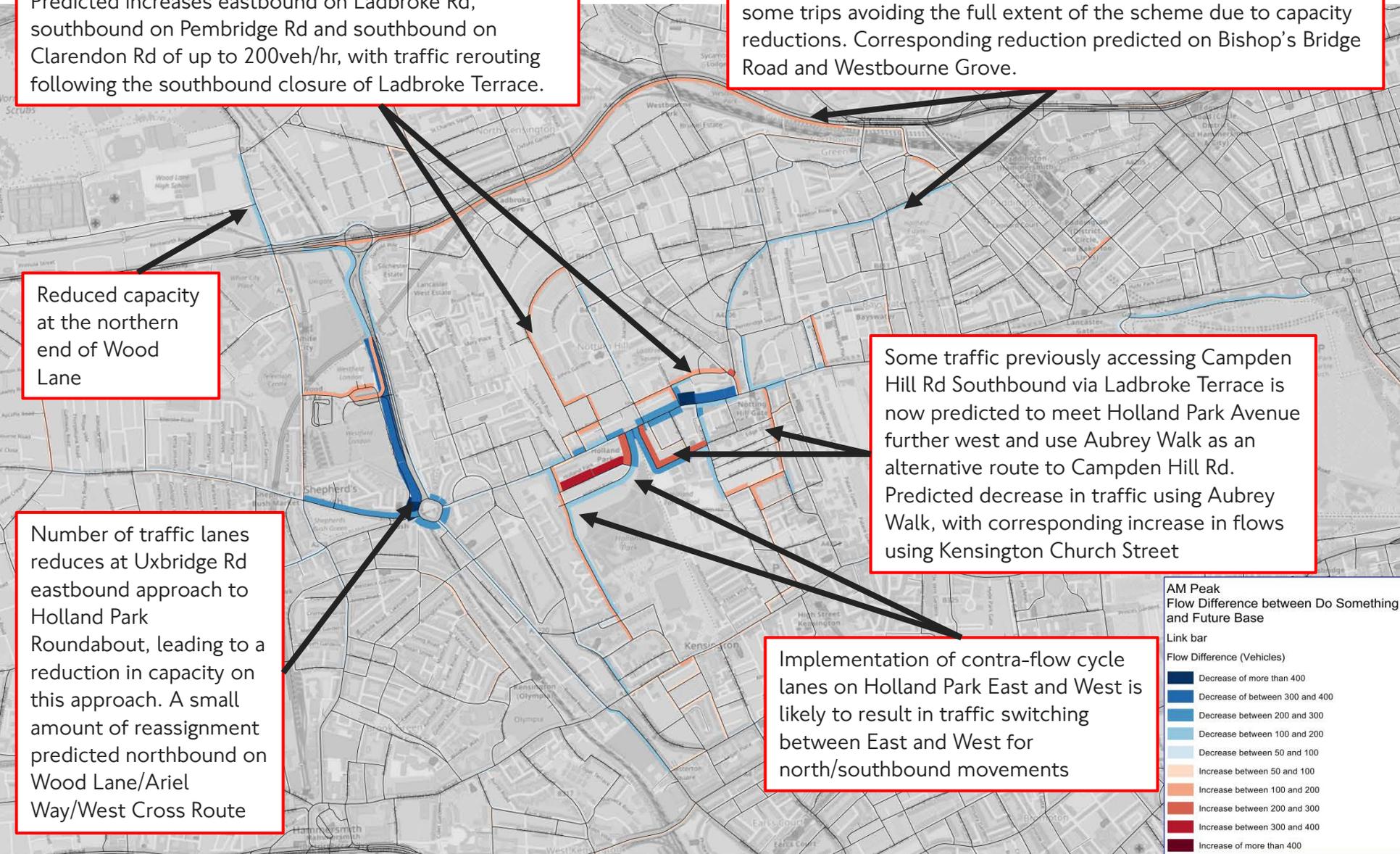
Predicted increase of up to 200 veh/hr on A40 Westbound, with some trips avoiding the full extent of the scheme due to capacity reductions. Corresponding reduction predicted on Bishop's Bridge Road and Westbourne Grove.

Reduced capacity at the northern end of Wood Lane

Some traffic previously accessing Campden Hill Rd Southbound via Ladbroke Terrace is now predicted to meet Holland Park Avenue further west and use Aubrey Walk as an alternative route to Campden Hill Rd. Predicted decrease in traffic using Aubrey Walk, with corresponding increase in flows using Kensington Church Street

Number of traffic lanes reduces at Uxbridge Rd eastbound approach to Holland Park Roundabout, leading to a reduction in capacity on this approach. A small amount of reassignment predicted northbound on Wood Lane/Ariel Way/West Cross Route

Implementation of contra-flow cycle lanes on Holland Park East and West is likely to result in traffic switching between East and West for north/southbound movements



# PM Peak – Flow Difference between 2021 Do Something and Future Base

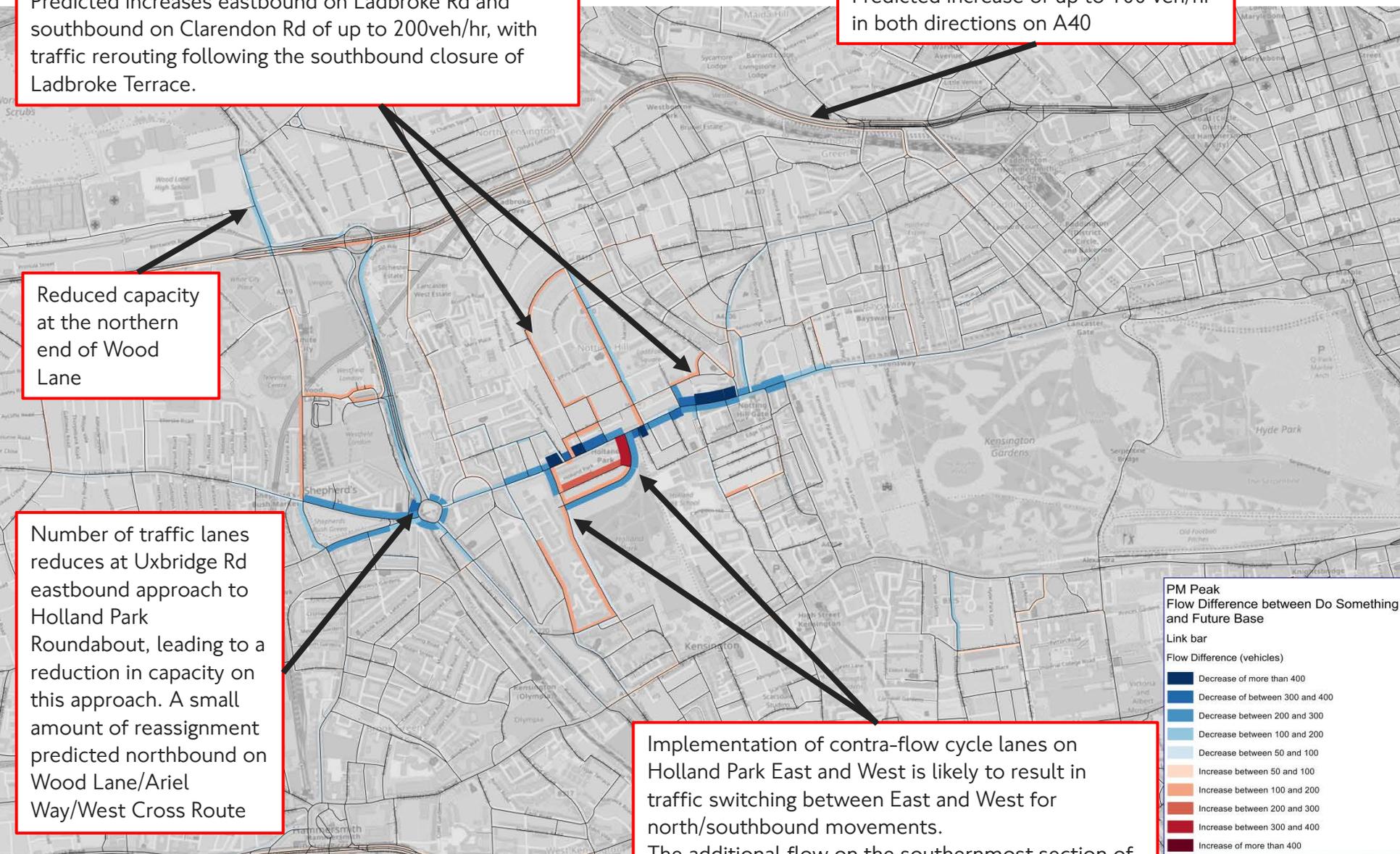
Predicted increases eastbound on Ladbroke Rd and southbound on Clarendon Rd of up to 200veh/hr, with traffic rerouting following the southbound closure of Ladbroke Terrace.

Predicted increase of up to 100 veh/hr in both directions on A40

Reduced capacity at the northern end of Wood Lane

Number of traffic lanes reduces at Uxbridge Rd eastbound approach to Holland Park Roundabout, leading to a reduction in capacity on this approach. A small amount of reassignment predicted northbound on Wood Lane/Ariel Way/West Cross Route

Implementation of contra-flow cycle lanes on Holland Park East and West is likely to result in traffic switching between East and West for north/southbound movements. The additional flow on the southernmost section of Holland Park is predicted to proceed north via Ladbroke Grove.



**PM Peak Flow Difference between Do Something and Future Base**

Link bar

Flow Difference (vehicles)

Dark Blue	Decrease of more than 400
Blue	Decrease of between 300 and 400
Light Blue	Decrease between 200 and 300
Very Light Blue	Decrease between 100 and 200
White	Decrease between 50 and 100
Light Orange	Increase between 50 and 100
Orange	Increase between 100 and 200
Dark Orange	Increase between 200 and 300
Red	Increase between 300 and 400
Dark Red	Increase of more than 400

# Flow Bundle Analysis

The following plots show Flow Bundle Comparisons for different locations.

Flow bundles show the paths traversed by vehicles which go through a selected link. It should be noted that flow bundles may not only show traffic using the highlighted link, but also all the traffic from and to zones which may potentially use the link.

This means that one plot shows all vehicles potentially using a link in one scenario and another plot shows where these vehicles go instead

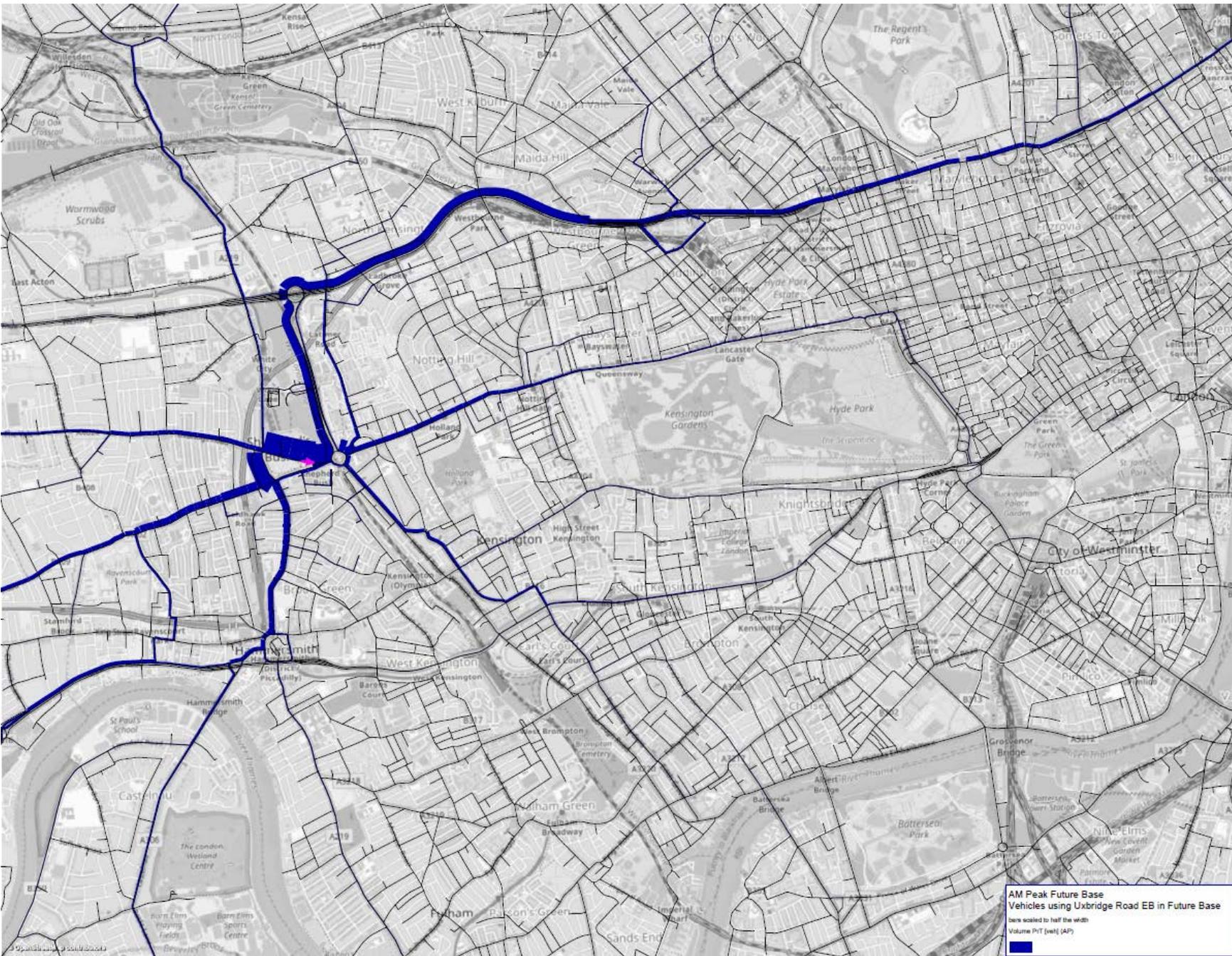
The following scenario were produced for different locations

- Vehicles in the Future Base potentially using a link vs. Where do these vehicles go in the Do Something

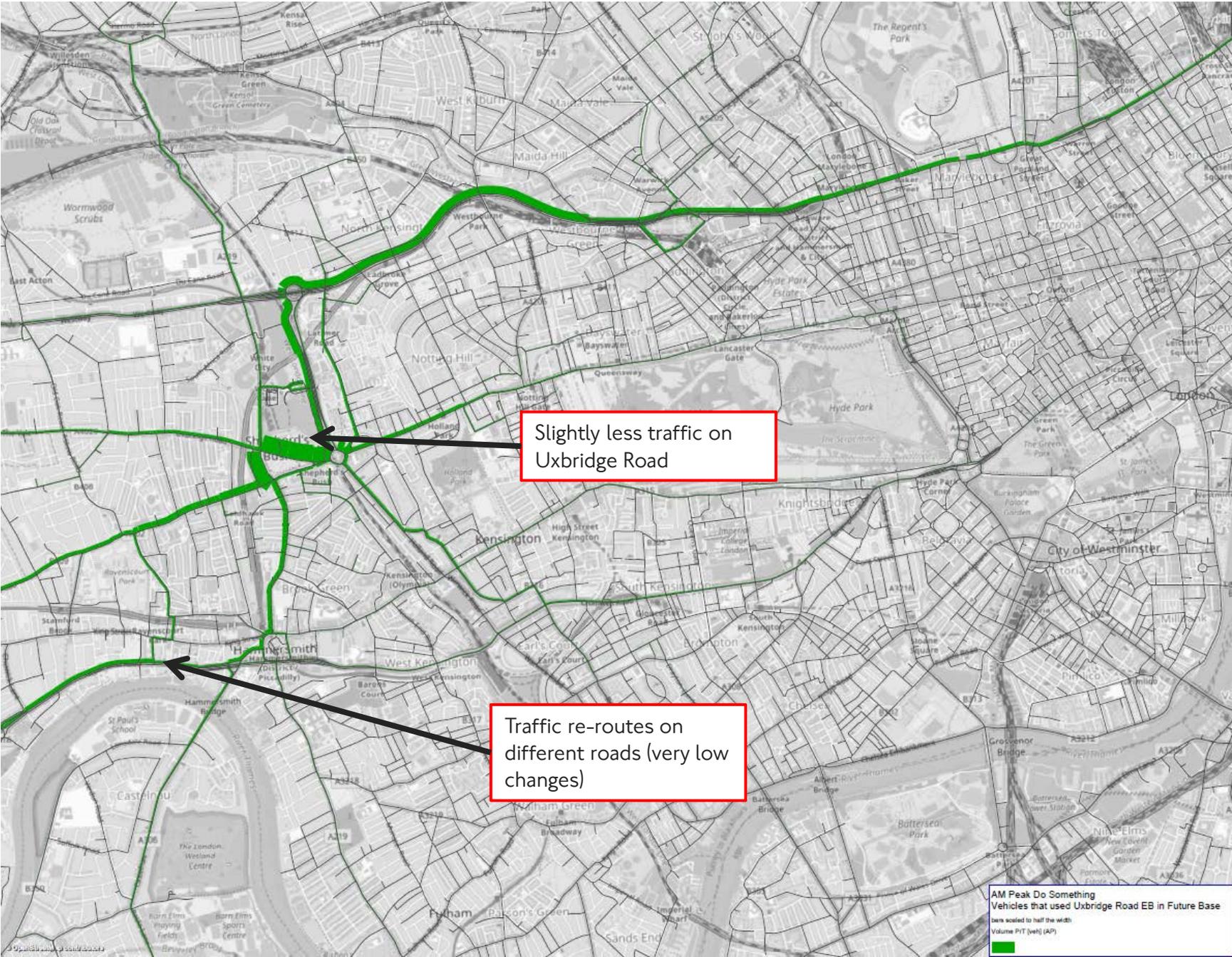
The link in question is highlighted in pink



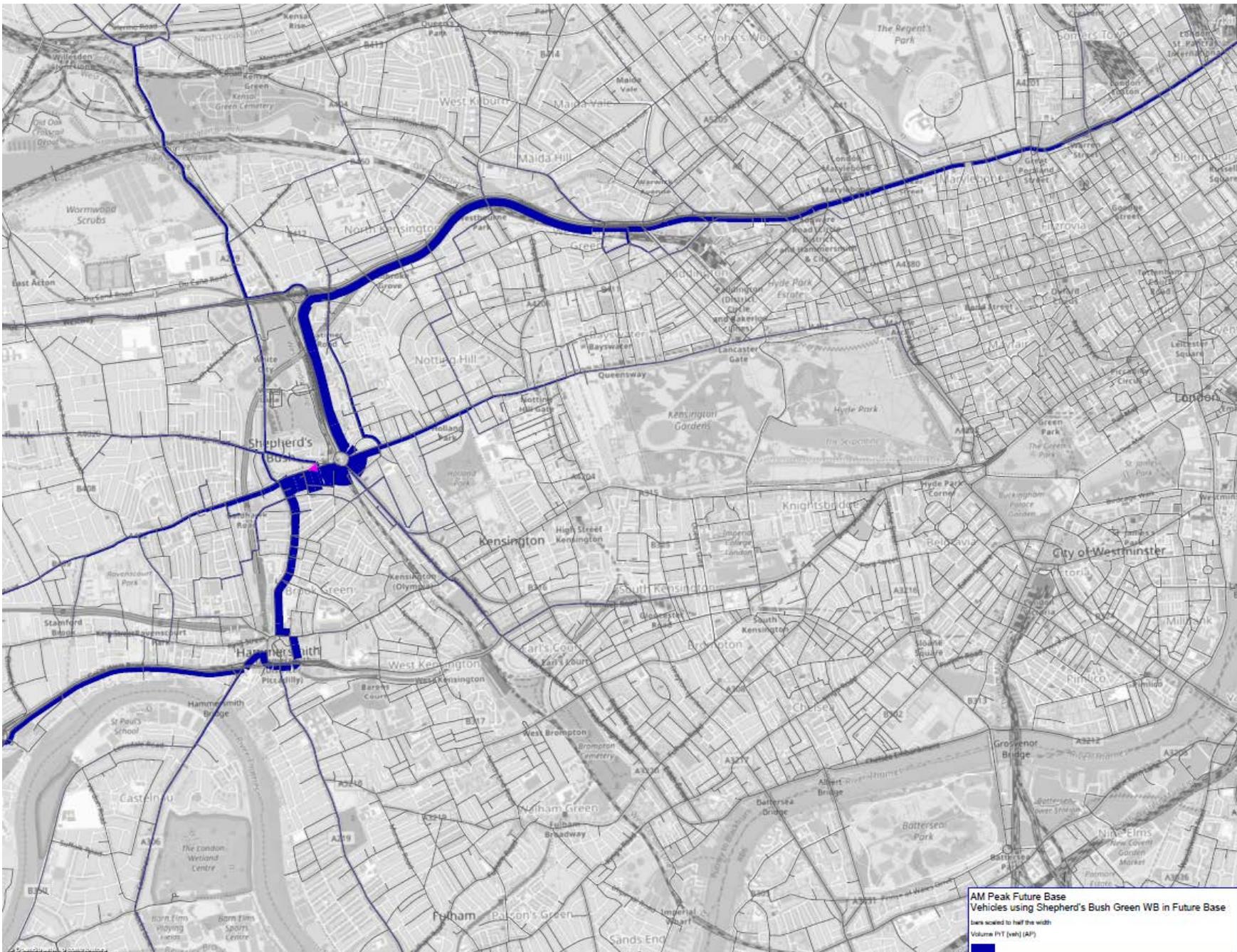
# AM Peak – Vehicles using Uxbridge Road EB in the Future Base



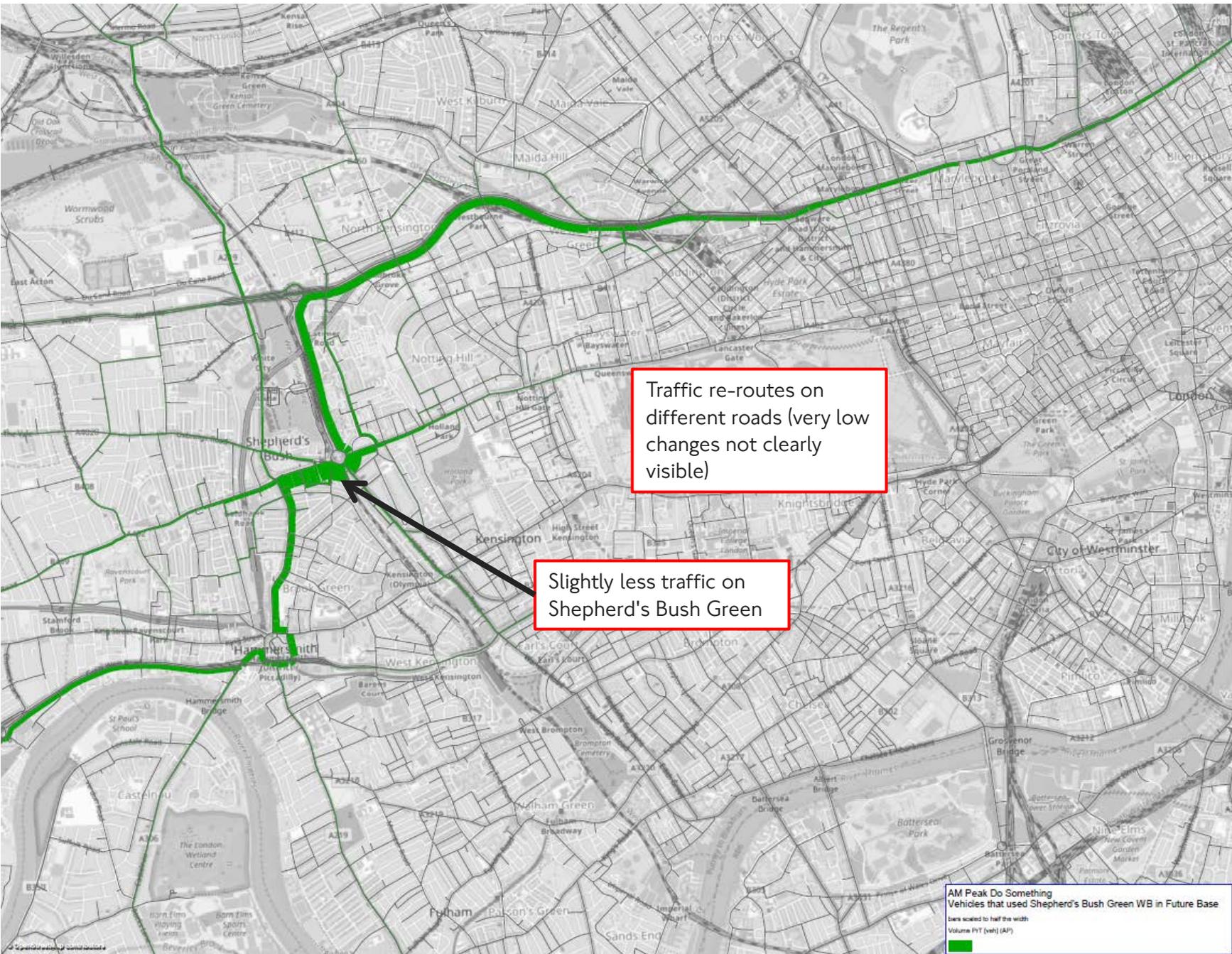
# AM Peak – Vehicles that used Uxbridge Road EB in the Future Base



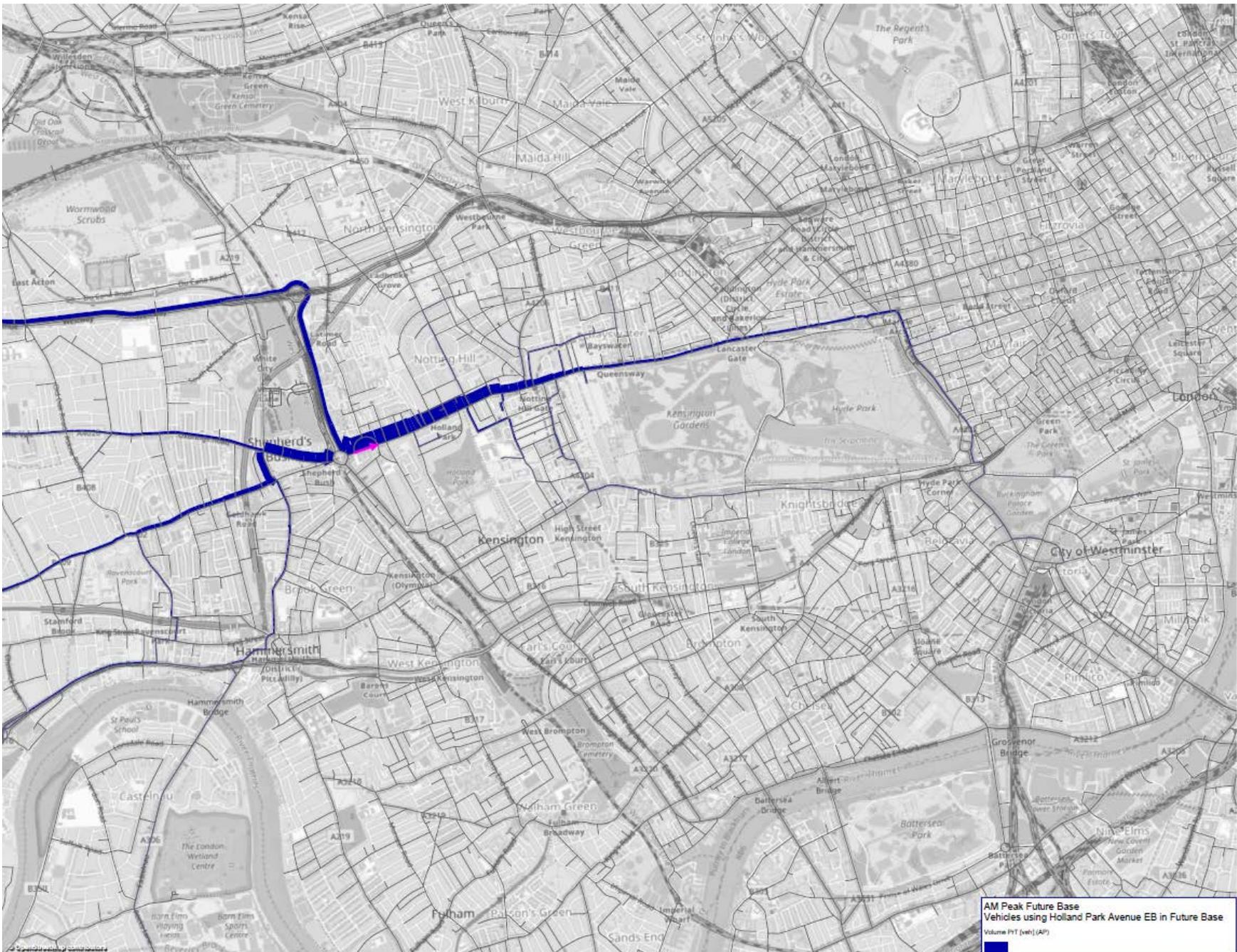
# AM Peak – Vehicles using Shepherd's Bush Green WB in the Future Base



# AM Peak – Vehicles that used Shepherd's Bush Green WB in the Future Base

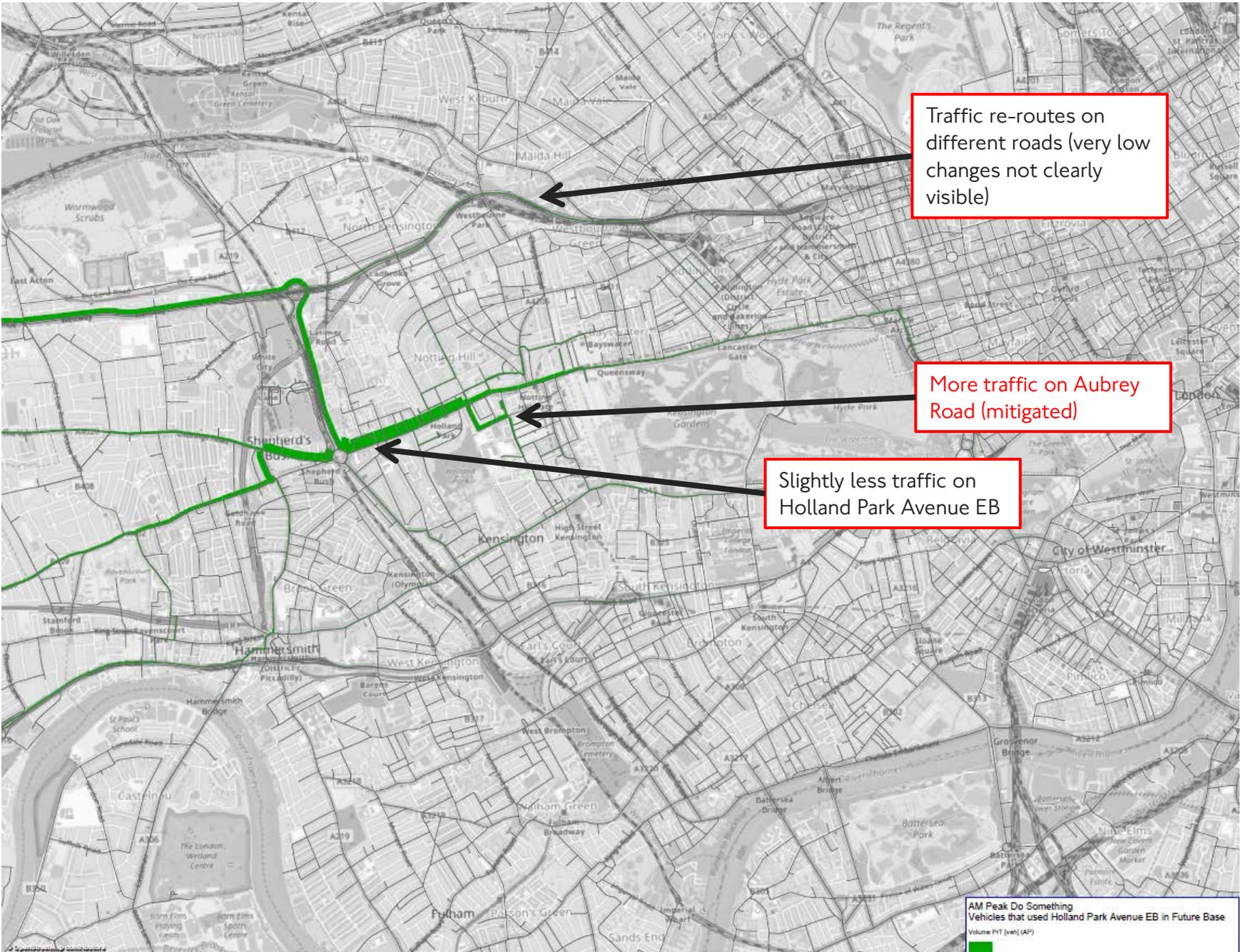


# AM Peak – Vehicles using Holland Park Avenue EB in the Future Base



AM Peak Future Base  
Vehicles using Holland Park Avenue EB in Future Base  
Volume PVT (veh) (AP)

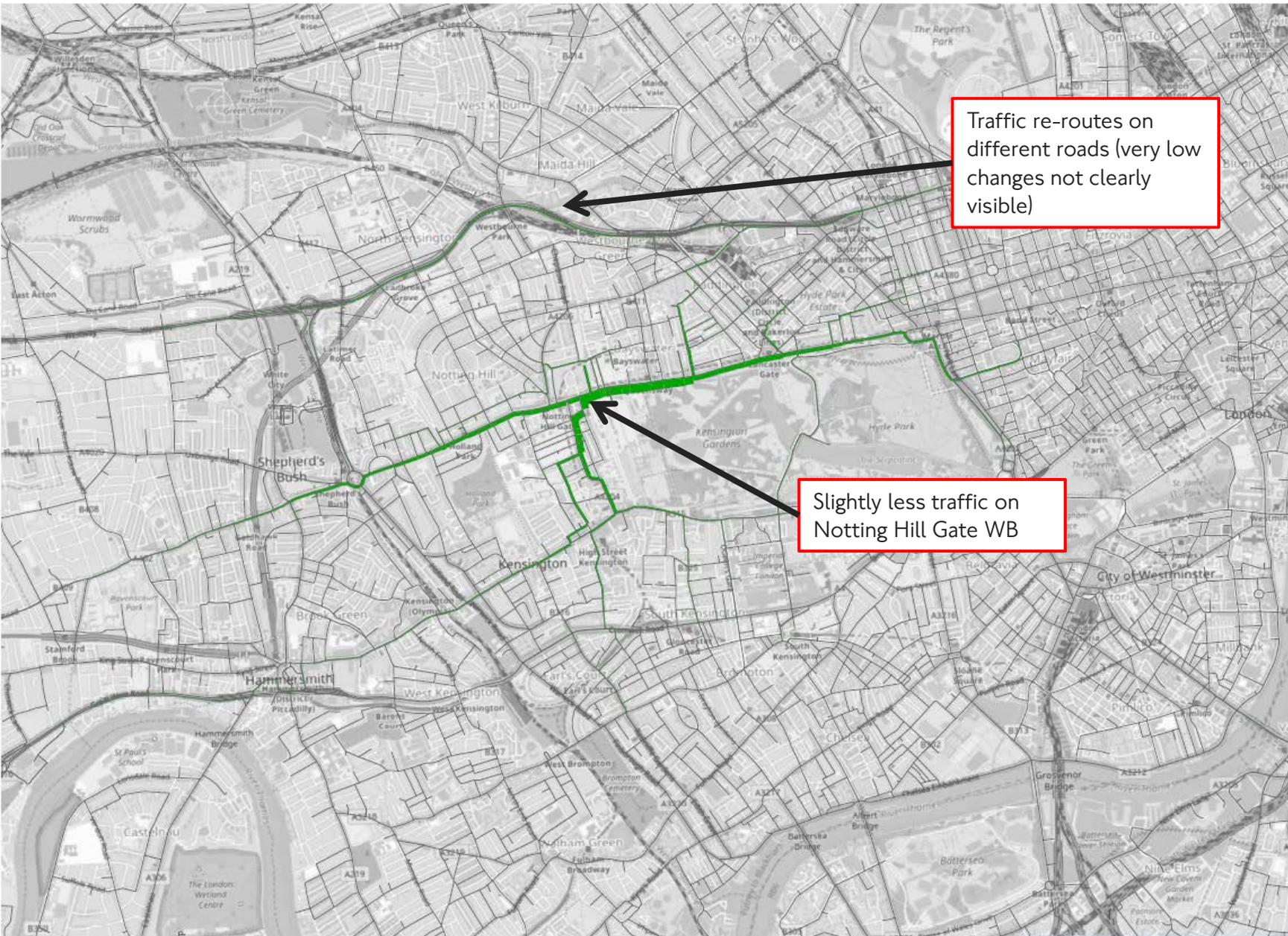
# AM Peak – Vehicles that used Holland Park Avenue EB in the Future Base



# AM Peak – Vehicles using Notting Hill Gate WB in the Future Base



# AM Peak – Vehicles that used Notting Hill Gate WB in the Future Base

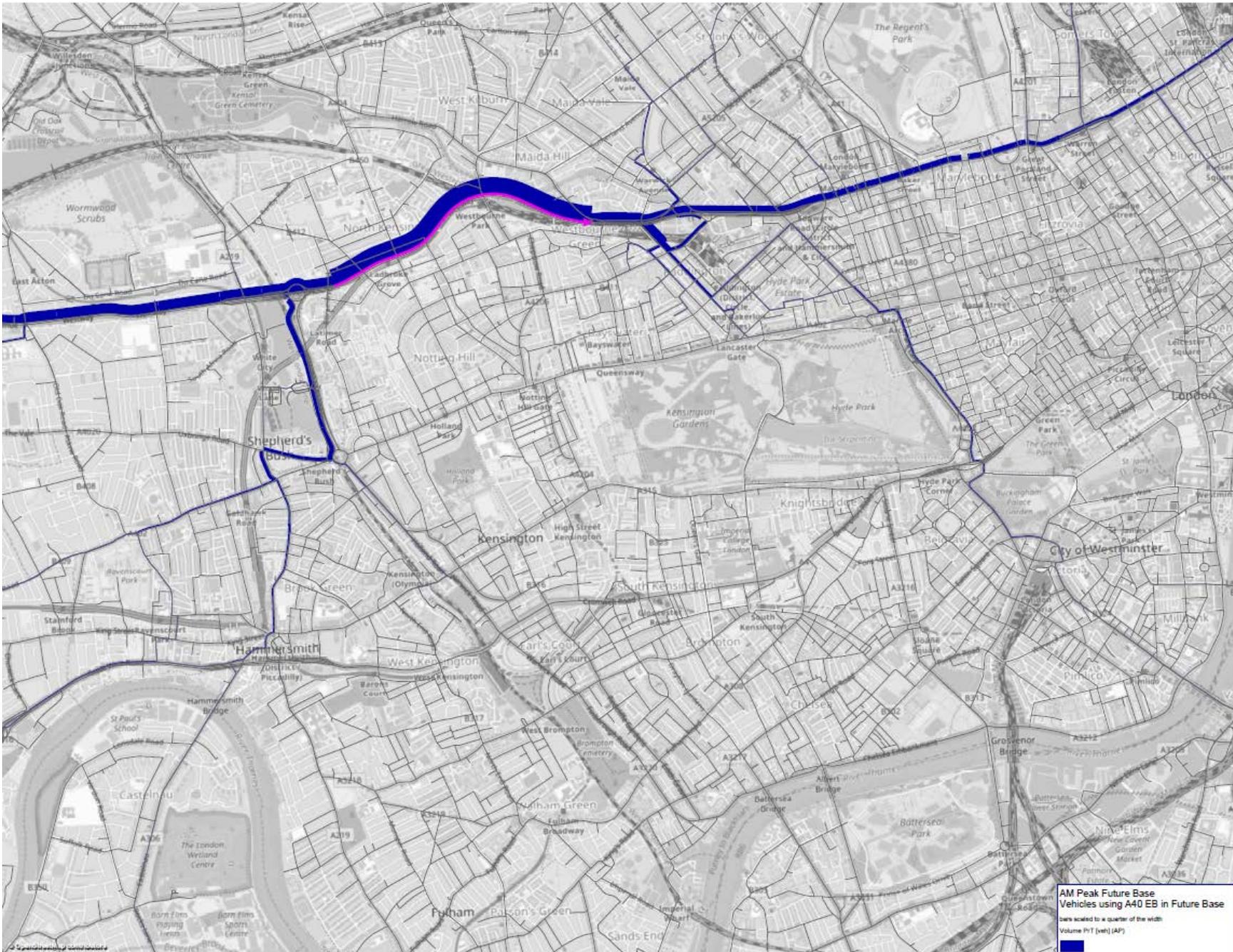


Traffic re-routes on different roads (very low changes not clearly visible)

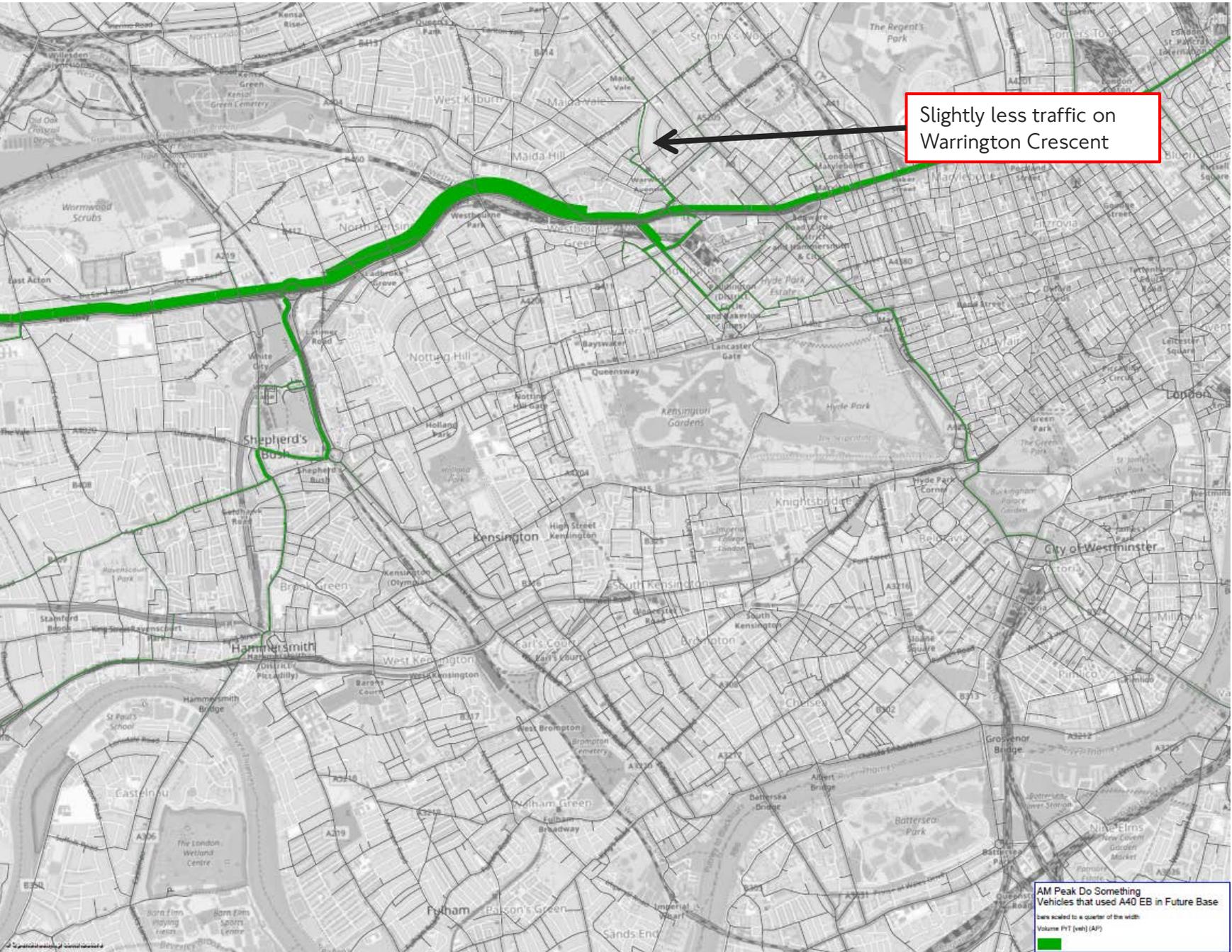
Slightly less traffic on Notting Hill Gate WB

AM Peak Do Something  
Vehicles that used Notting Hill Gate WB in Future Base  
Volume PVT (veh) (AP)

# AM Peak – Vehicles using A40 EB in the Future Base

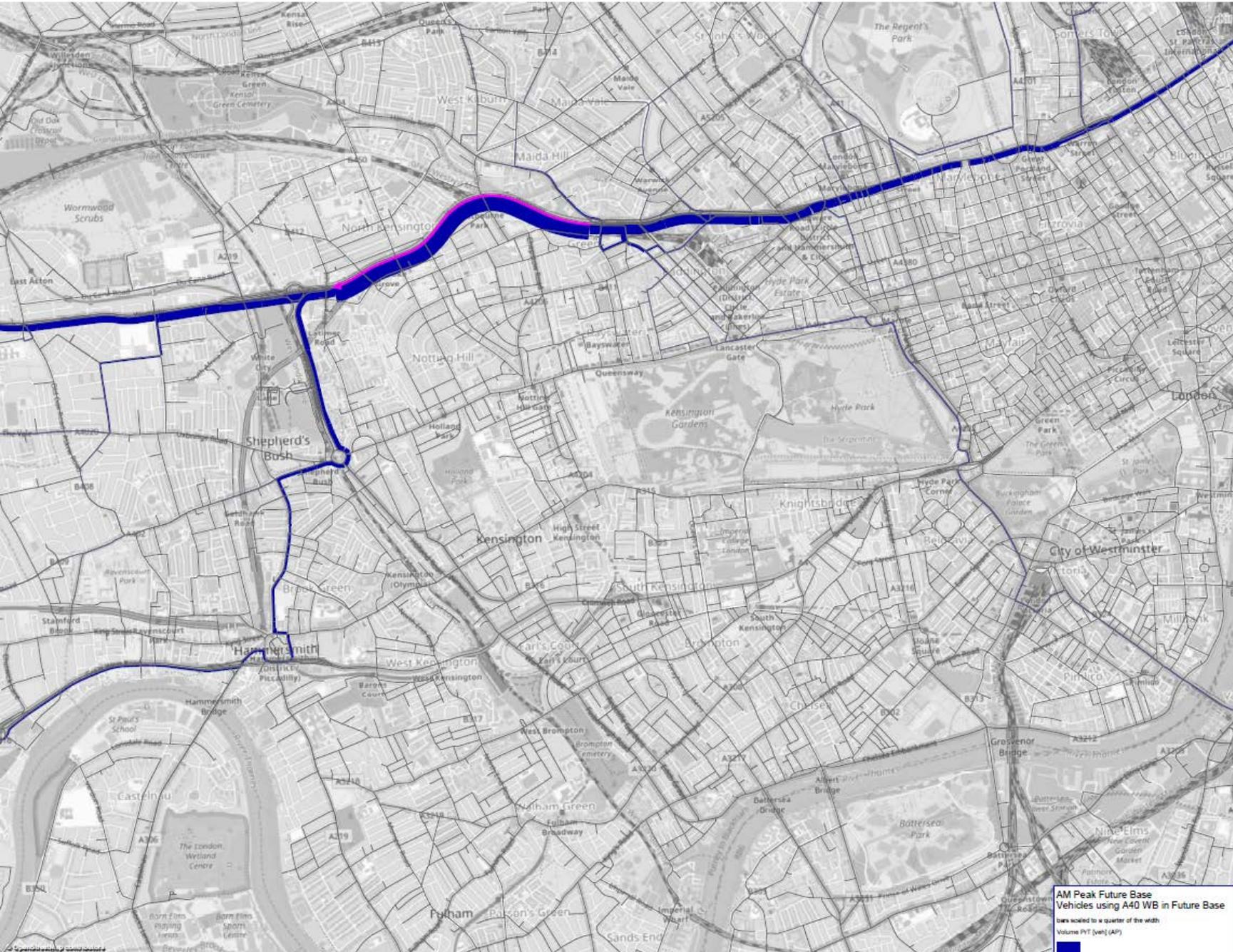


# AM Peak – Vehicles that used A40 EB in the Future Base

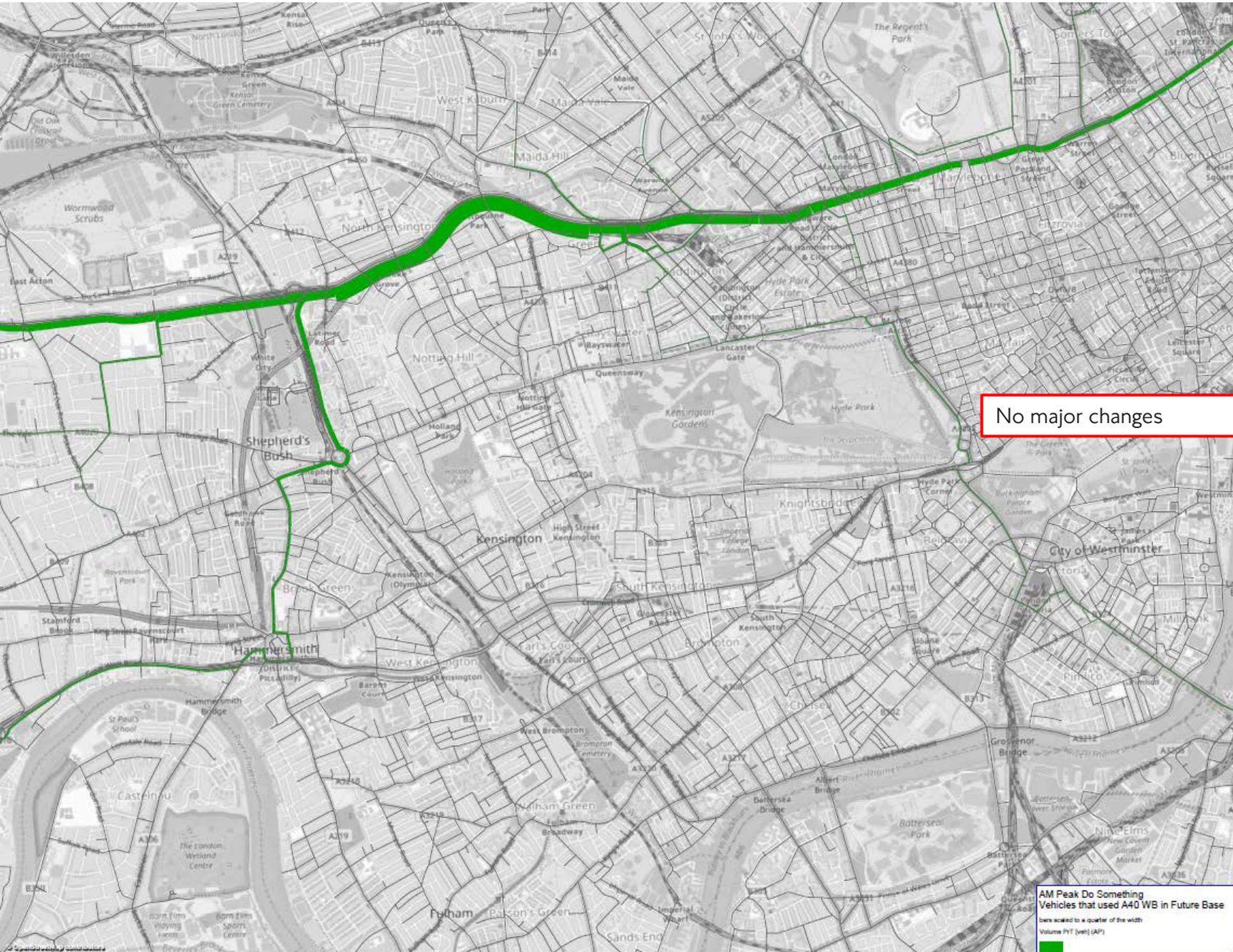


AM Peak Do Something  
Vehicles that used A40 EB in Future Base  
Here scaled to a quarter of the width:  
Volume FVT (veh) (AP)  
[Green line]

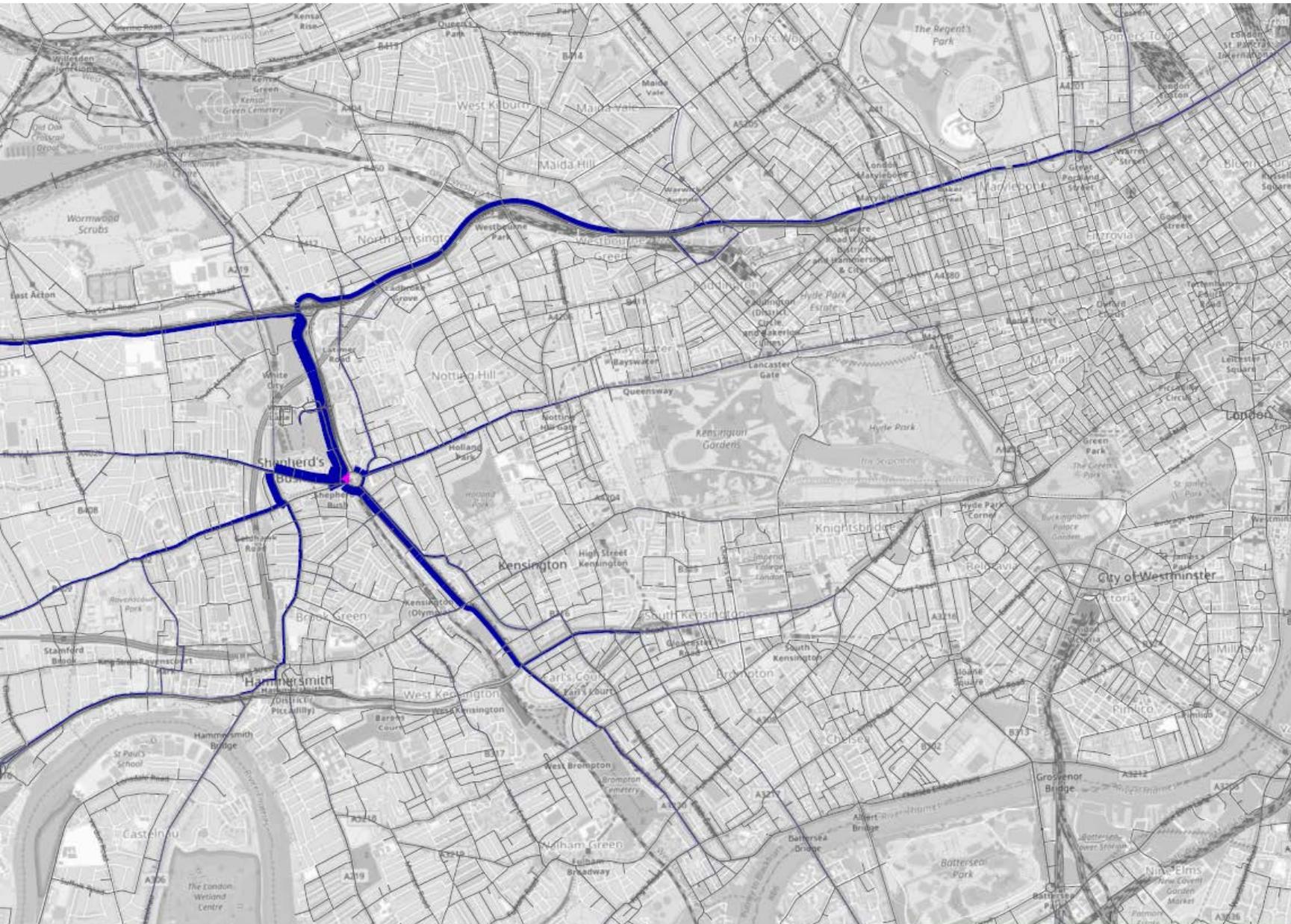
# AM Peak – Vehicles using A40 WB in the Future Base



# AM Peak – Vehicles that used A40 WB in the Future Base

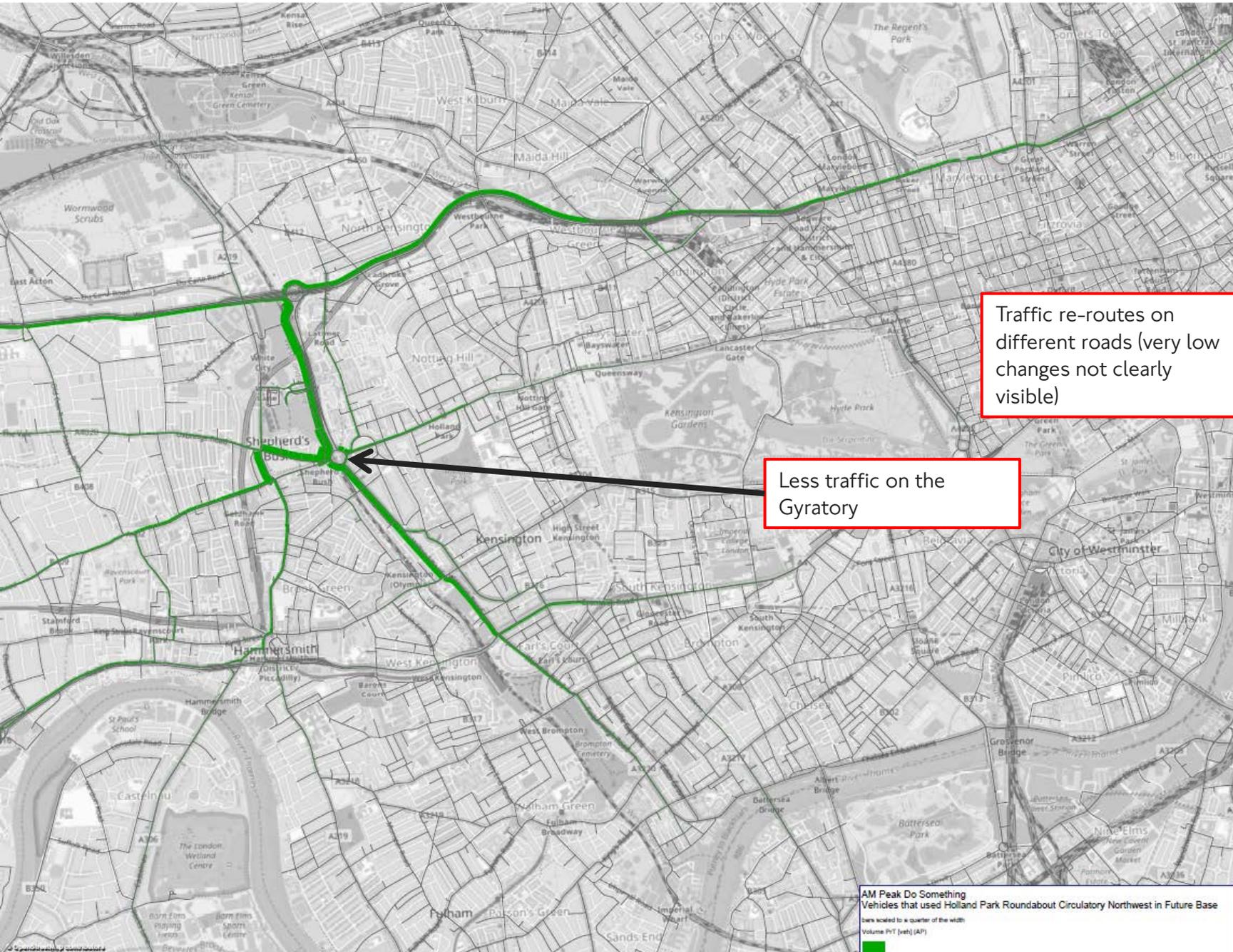


# AM Peak – Vehicles using Holland Park Roundabout Gytratory Northwest in the Future Base

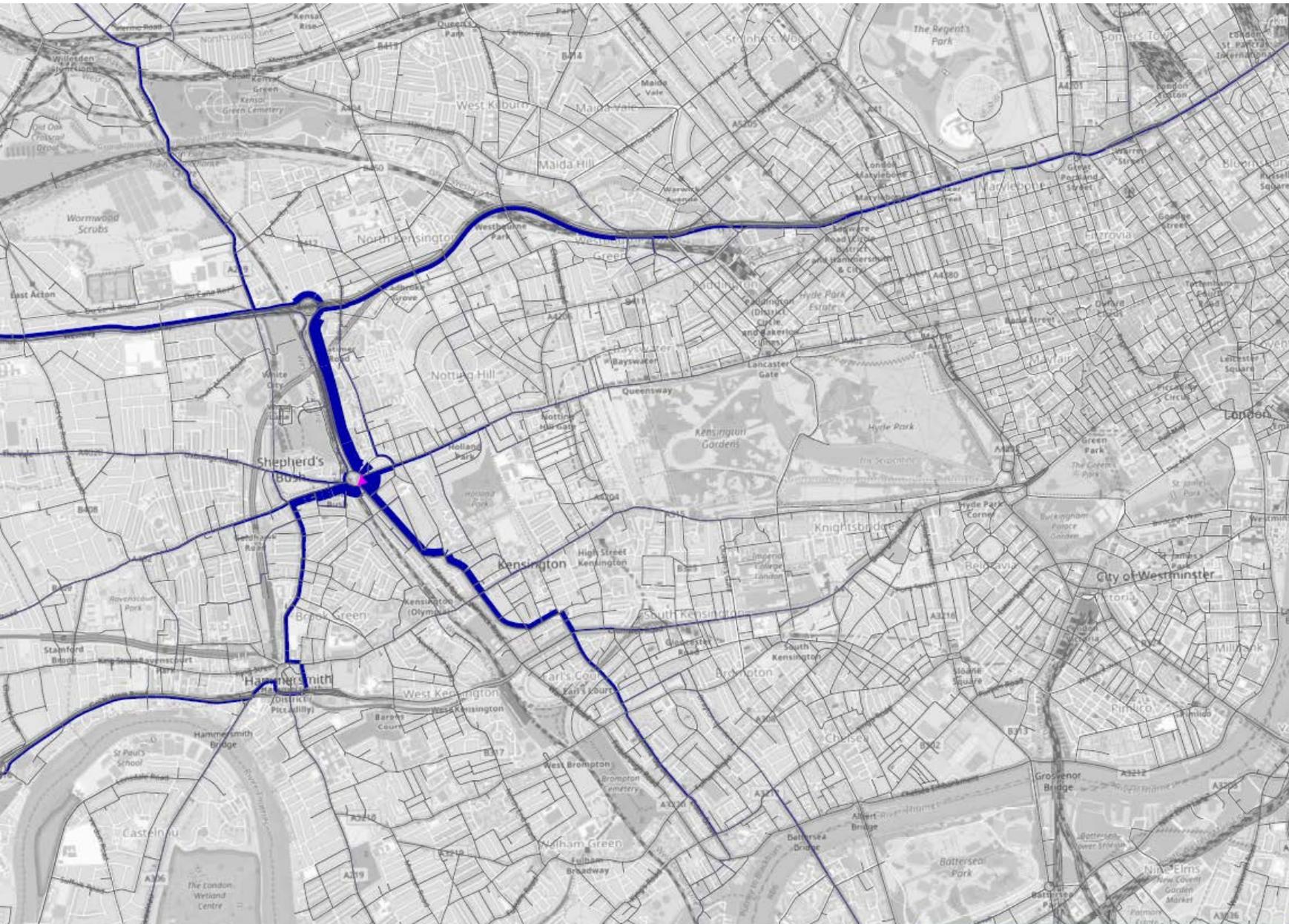


AM Peak Future Base  
Vehicles using Holland Park Roundabout Circulatory Northwest in Future Base  
bars scaled to a quarter of the width  
Volume (Vt) (veh/h) (AP)

# AM Peak – Vehicles that used Holland Park Roundabout Gyrotory Northwest in the Future Base

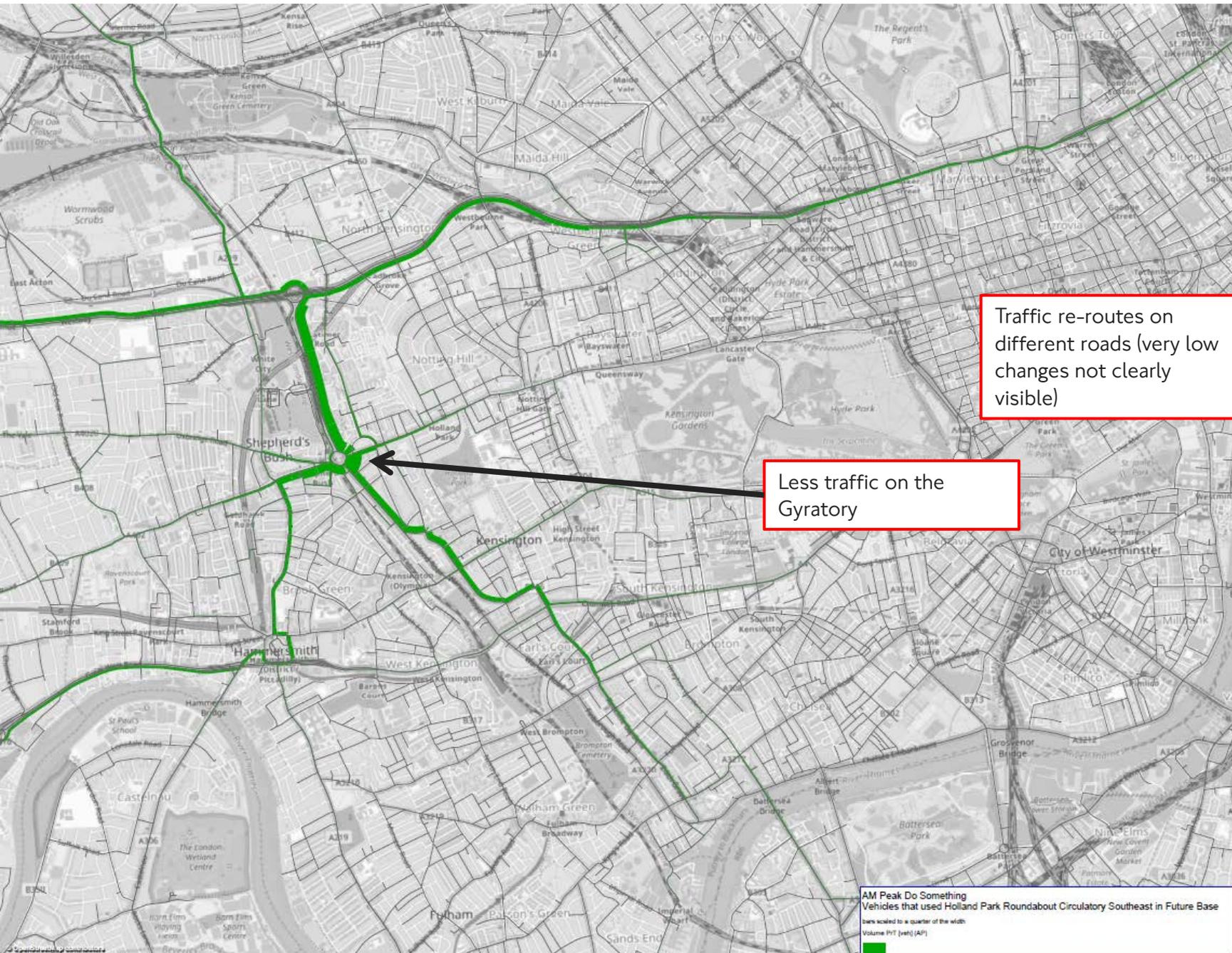


# AM Peak – Vehicles using Holland Park Roundabout Gytratory Southeast in the Future Base

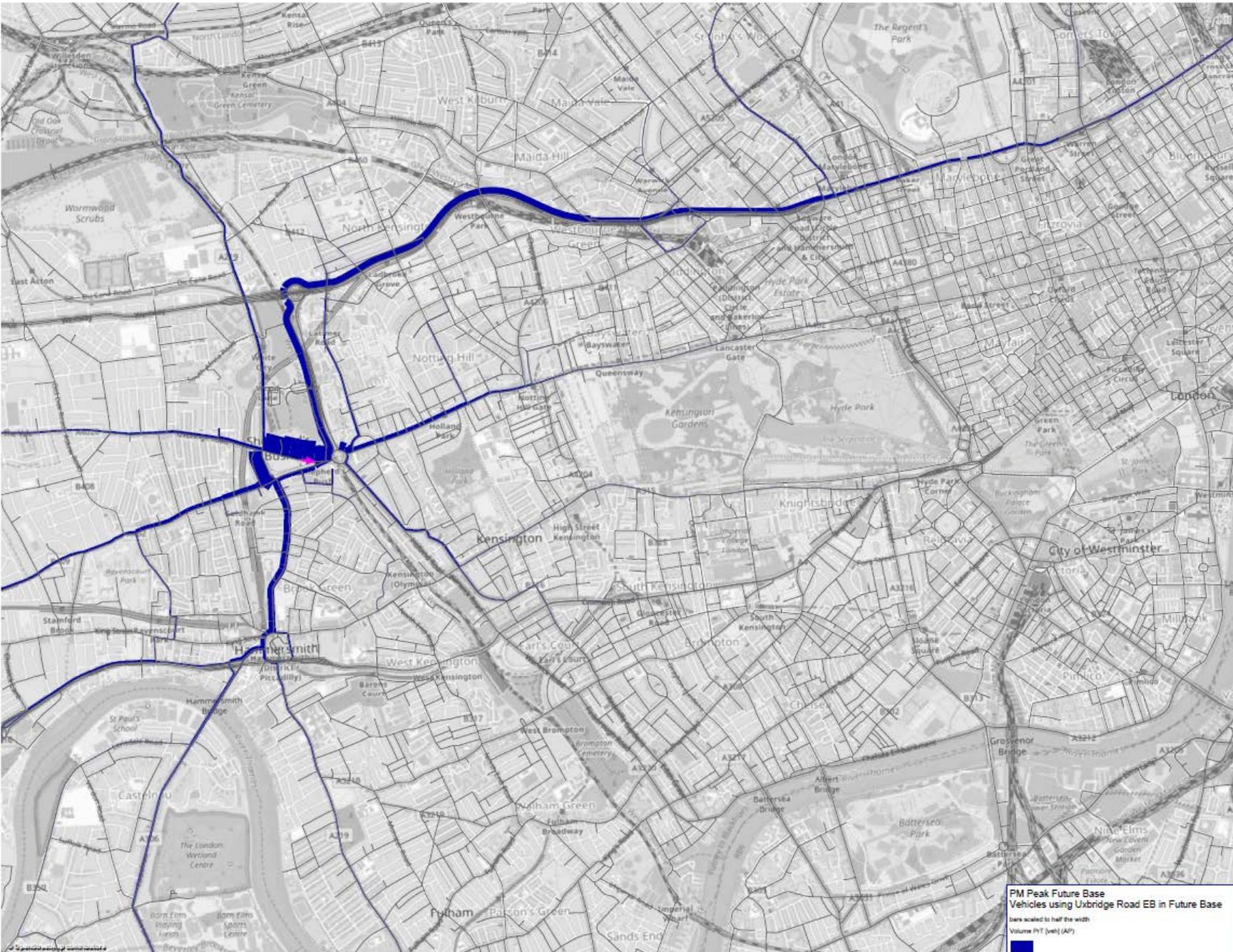


AM Peak Future Base  
Vehicles using Holland Park Roundabout Circulatory Southeast in Future Base  
Lines scaled to a quarter of the width  
Volume PHT (veh) (AP)

# AM Peak – Vehicles that used Holland Park Roundabout Gyratory Southeast in the Future Base

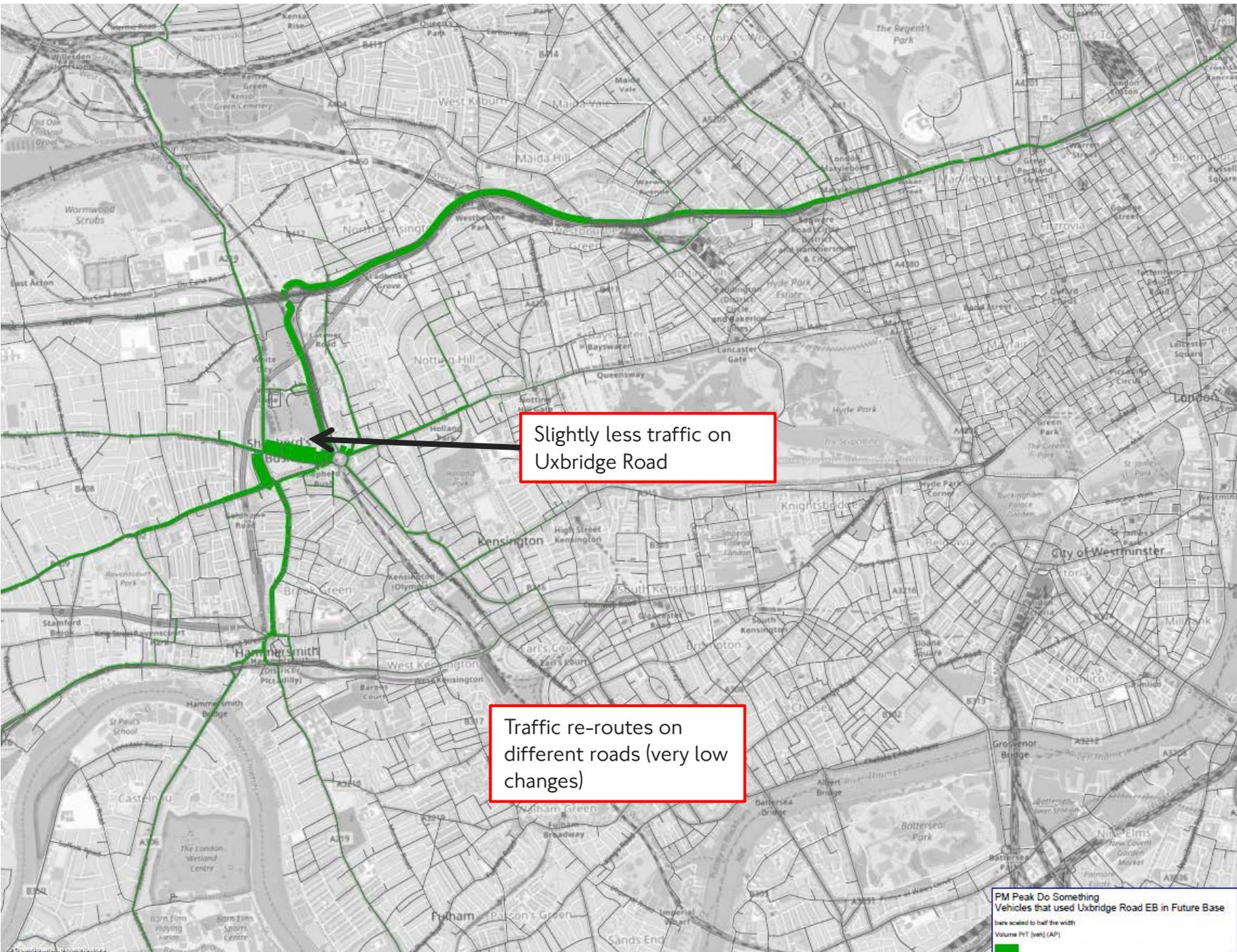


# PM Peak – Vehicles using Uxbridge Road EB in the Future Base



**PM Peak Future Base**  
Vehicles using Uxbridge Road EB in Future Base  
bars scaled to half the width  
Volume PVT (veh) (AP)

# PM Peak – Vehicles that used Uxbridge Road EB in the Future Base

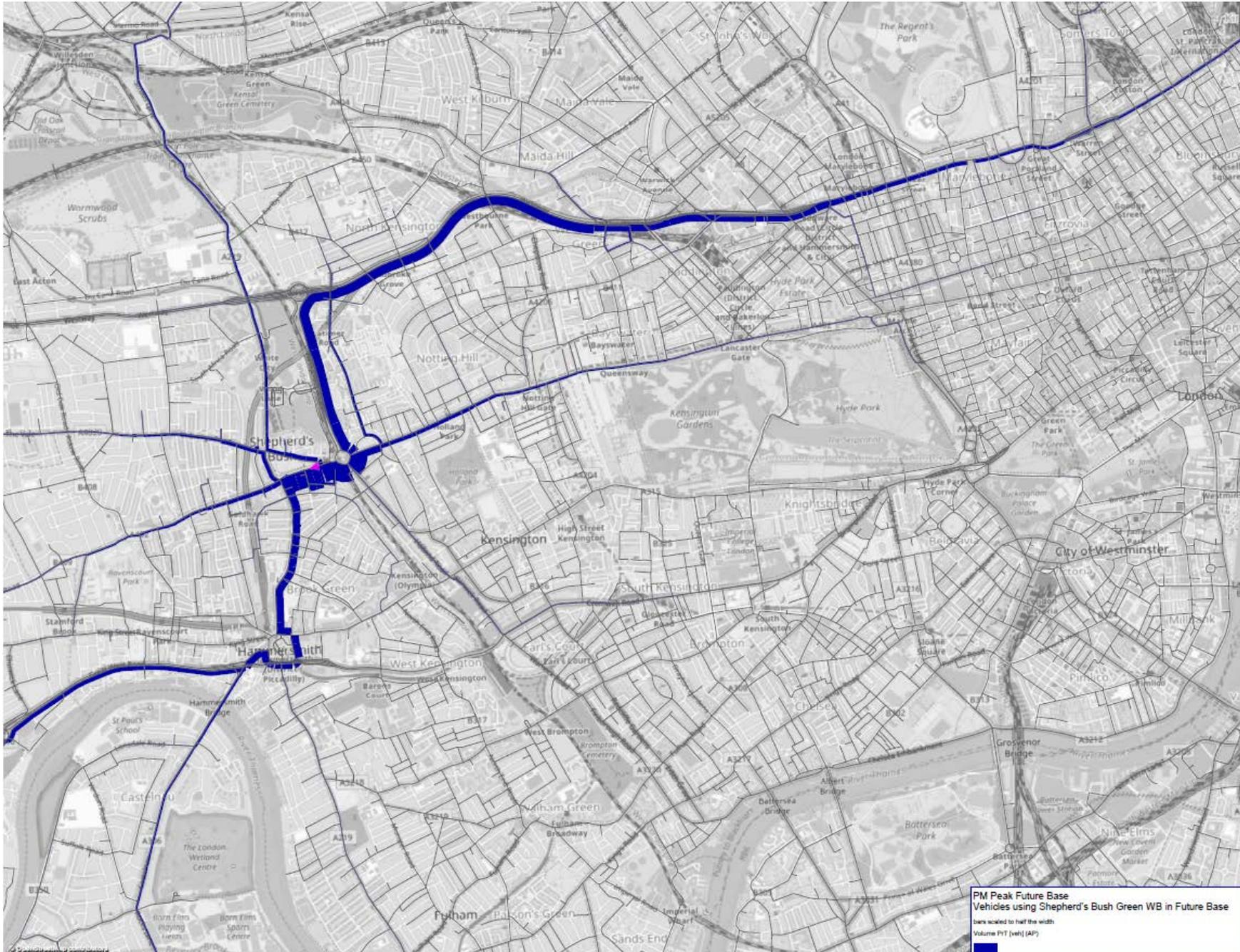


Slightly less traffic on Uxbridge Road

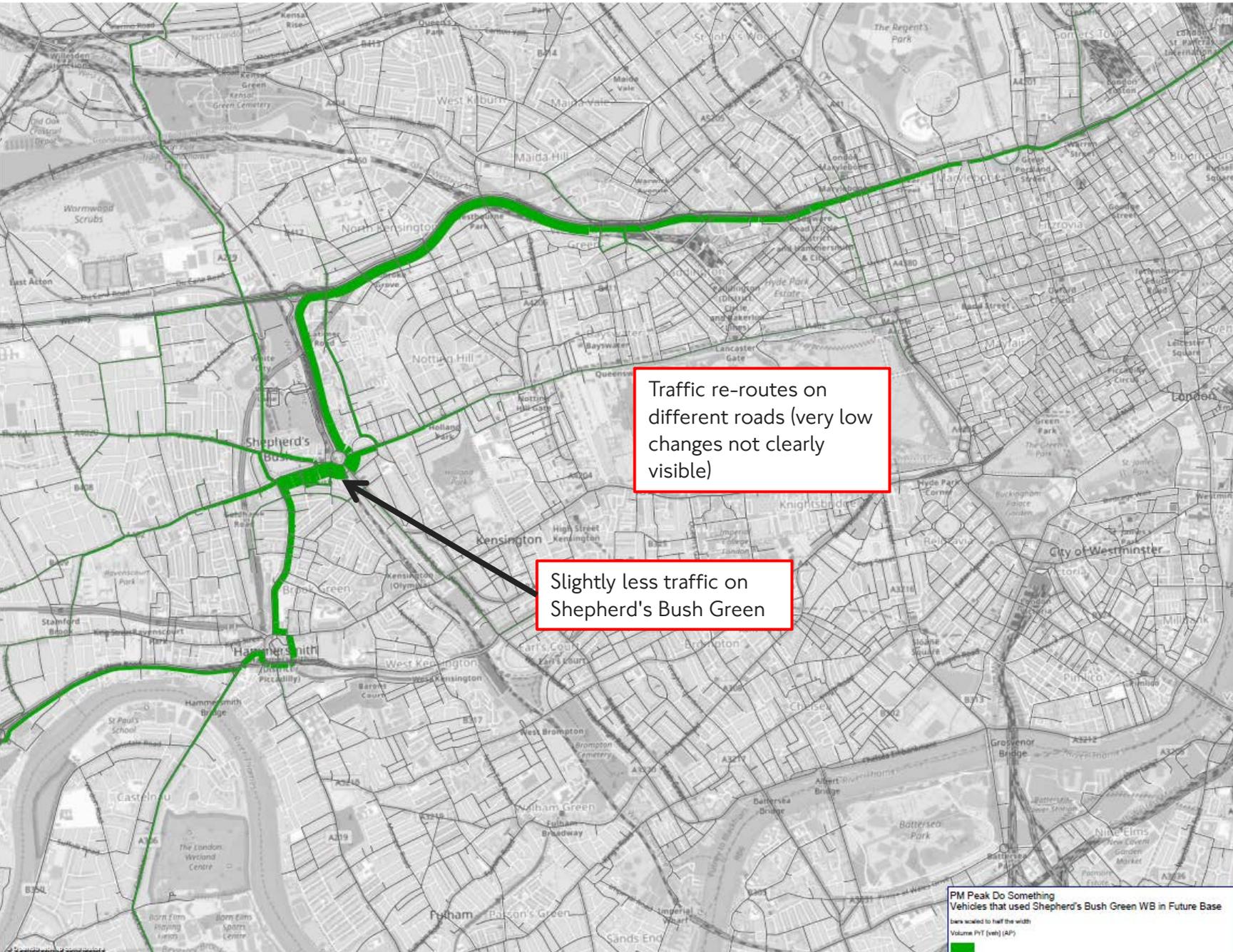
Traffic re-routes on different roads (very low changes)

PM Peak Do Something  
Vehicles that used Uxbridge Road EB in Future Base  
bars scaled to half the width  
Volume (V/T) (veh) (AP)

# PM Peak – Vehicles using Shepherd's Bush Green WB in the Future Base



# PM Peak – Vehicles that used Shepherd's Bush Green WB in the Future Base

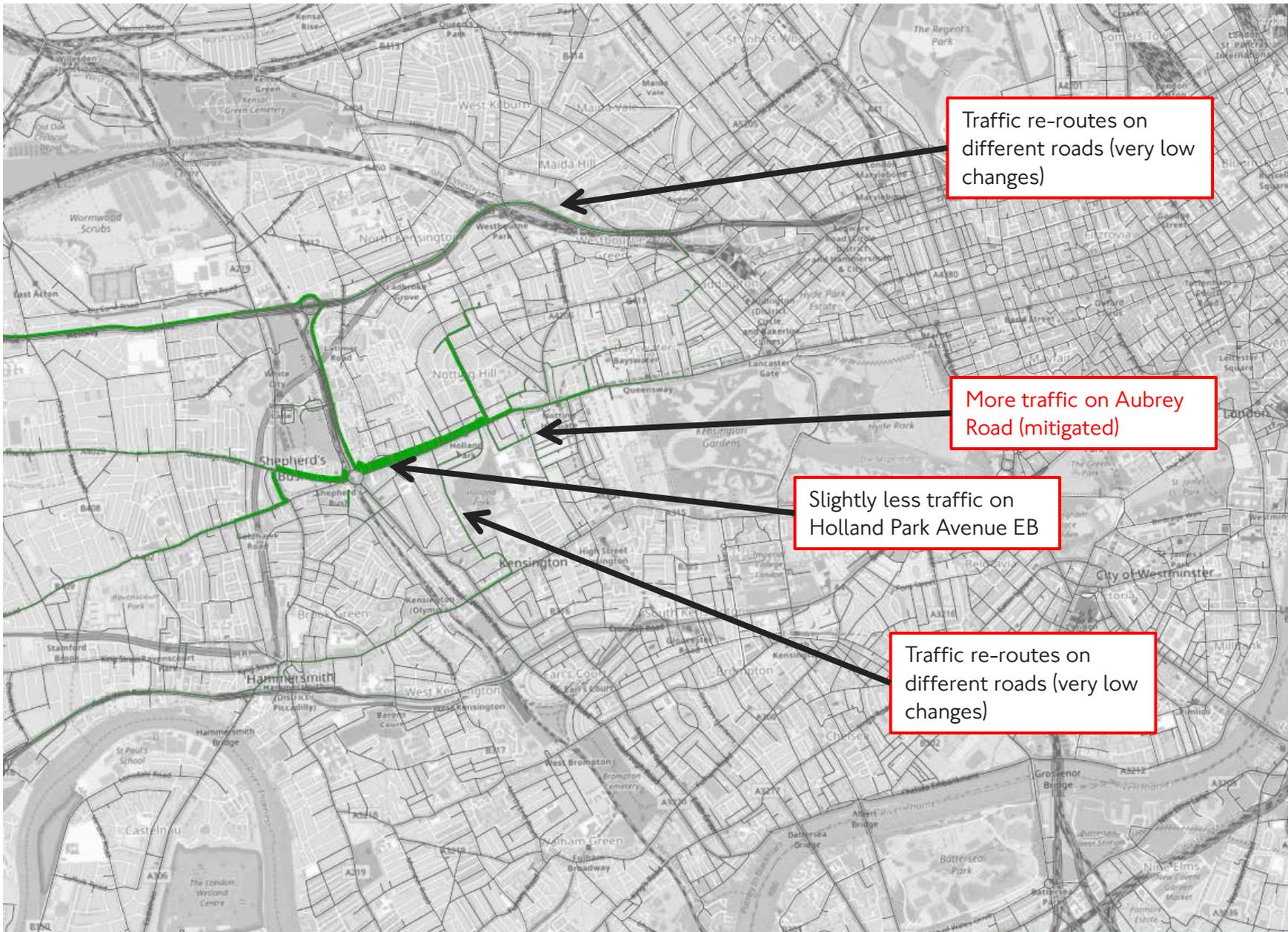


# PM Peak – Vehicles using Holland Park Avenue EB in the Future Base



PM Peak Future Base  
Vehicles using Holland Park Avenue EB in Future Base  
Volume PHT [veh] (AP)

# PM Peak – Vehicles that used Holland Park Avenue EB in the Future Base



Traffic re-routes on different roads (very low changes)

More traffic on Aubrey Road (mitigated)

Slightly less traffic on Holland Park Avenue EB

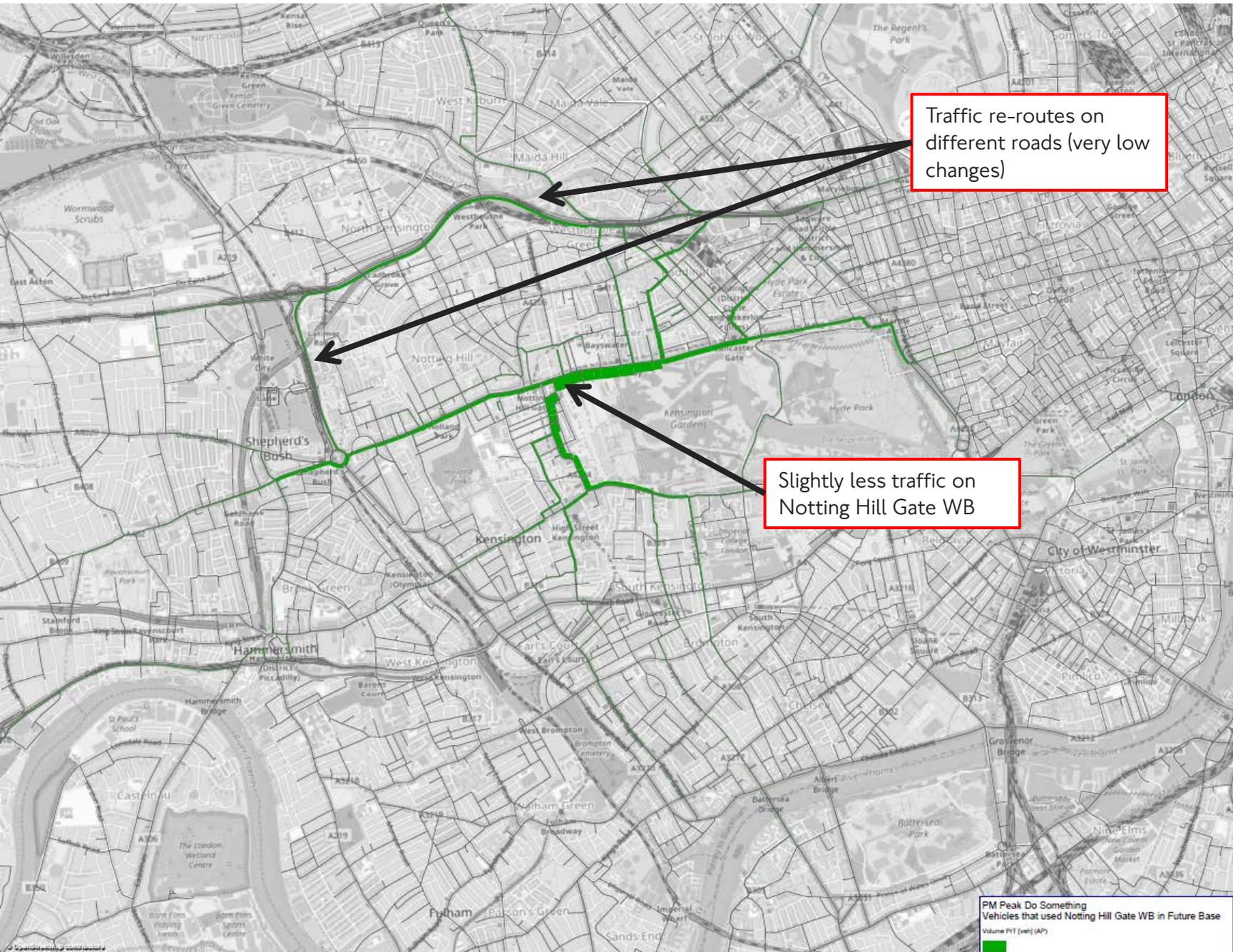
Traffic re-routes on different roads (very low changes)

# PM Peak – Vehicles using Notting Hill Gate WB in the Future Base

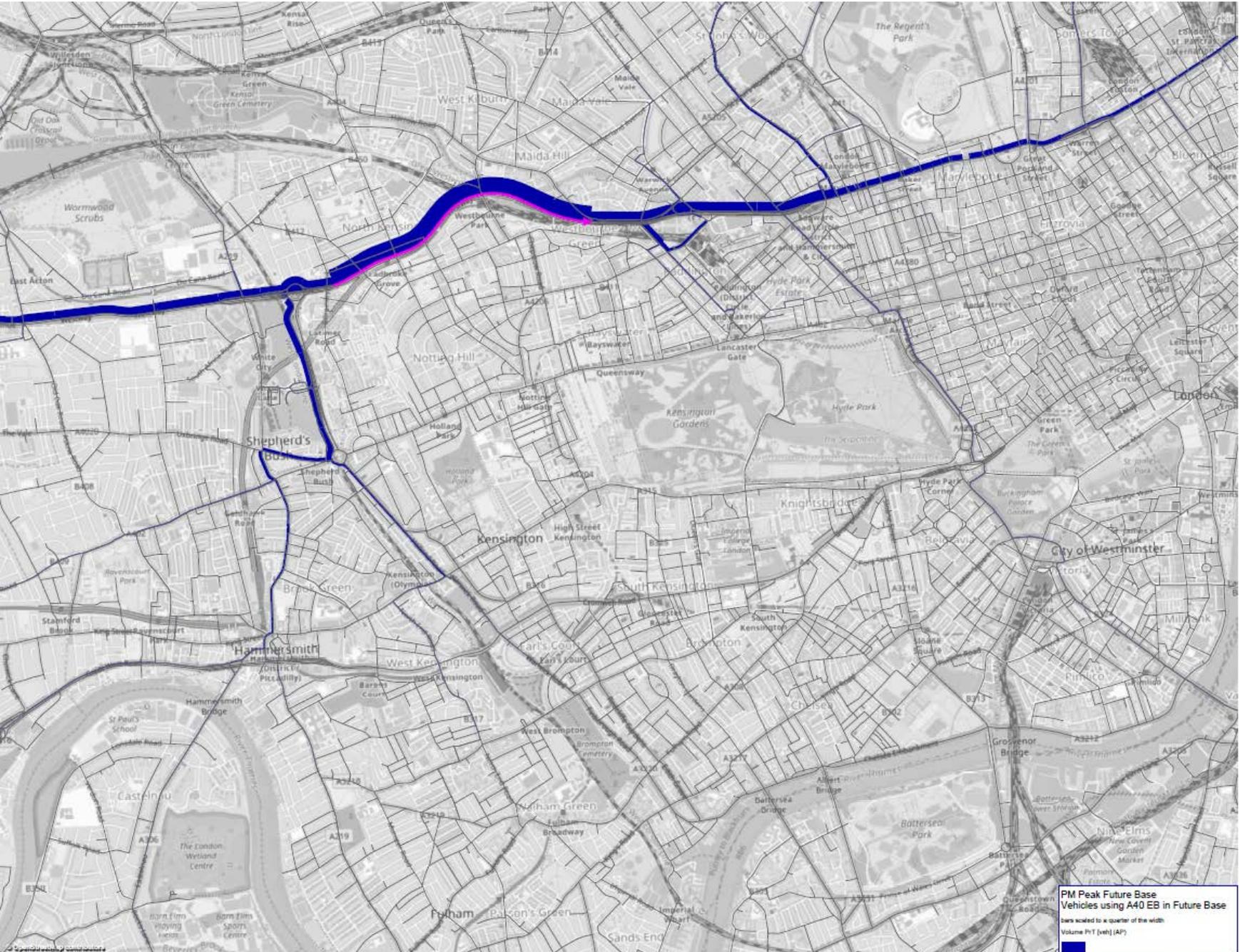


PM Peak Future Base  
Vehicles using Notting Hill Gate WB in Future Base  
Volume FY (veh) (AP)

# PM Peak – Vehicles that used Notting Hill Gate WB in the Future Base

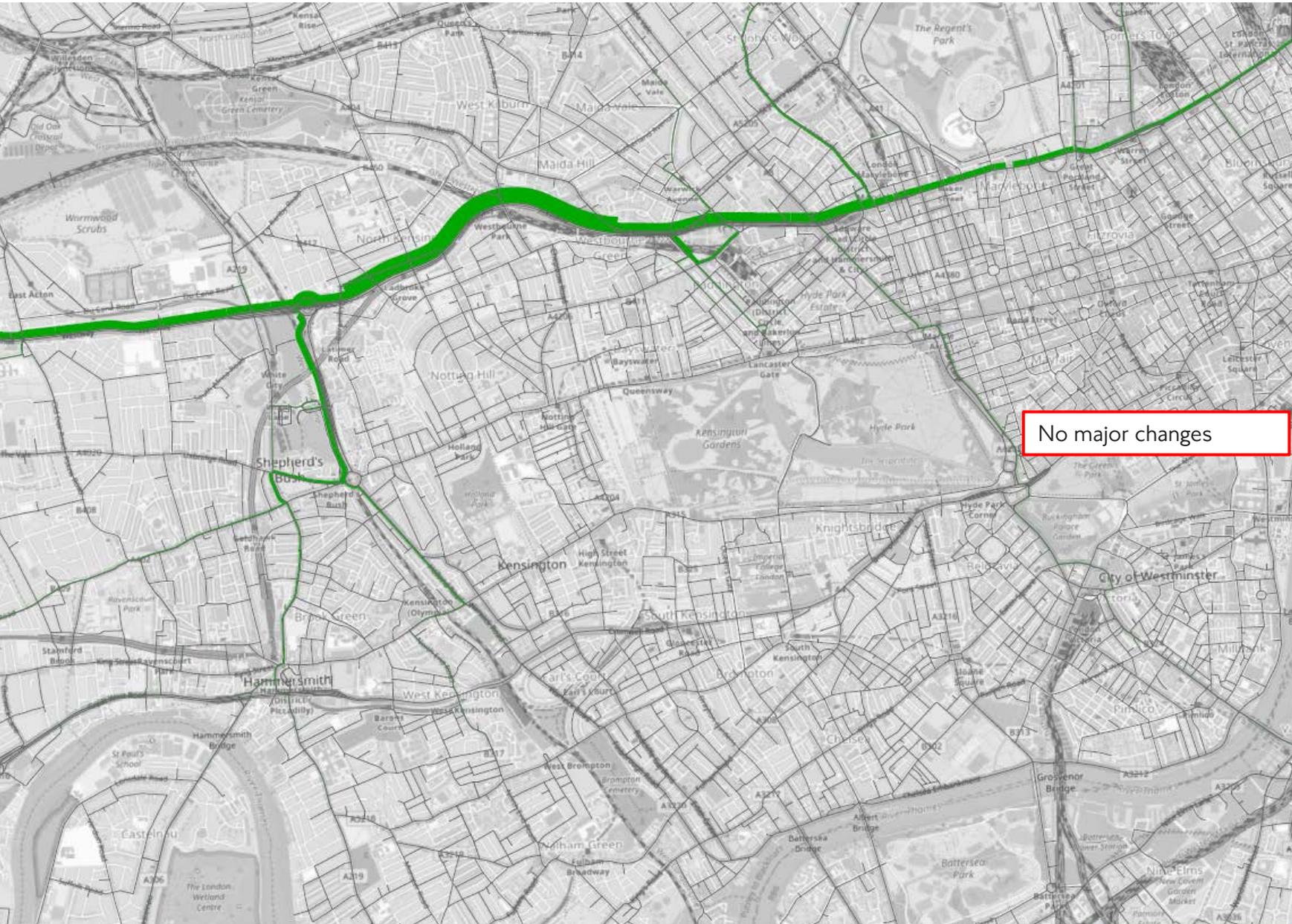


# PM Peak – Vehicles using A40 EB in the Future Base



PM Peak Future Base  
Vehicles using A40 EB in Future Base  
bars scaled to a quarter of the width  
Volume PkT [veh] (AP)

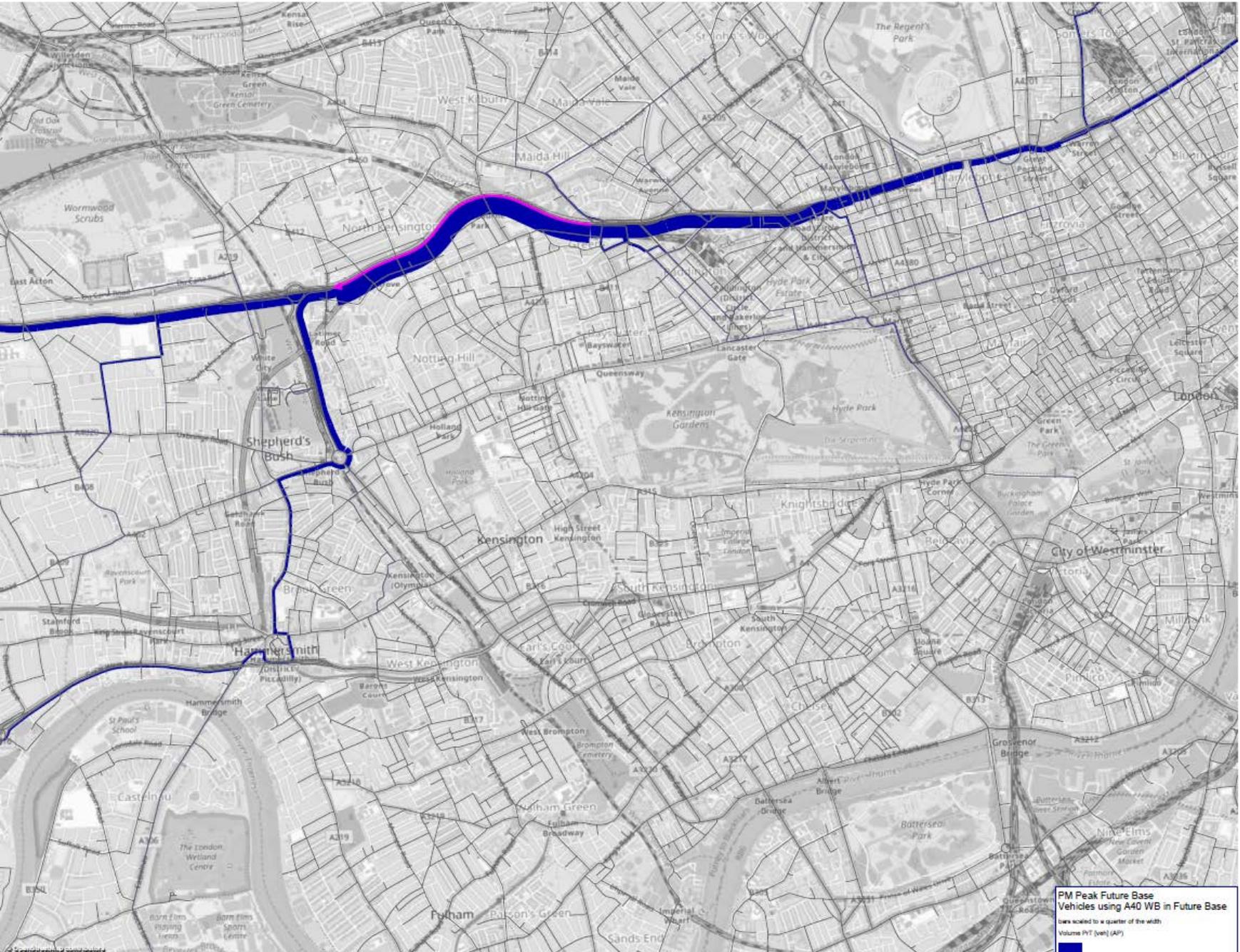
# PM Peak – Vehicles that used A40 EB in the Future Base



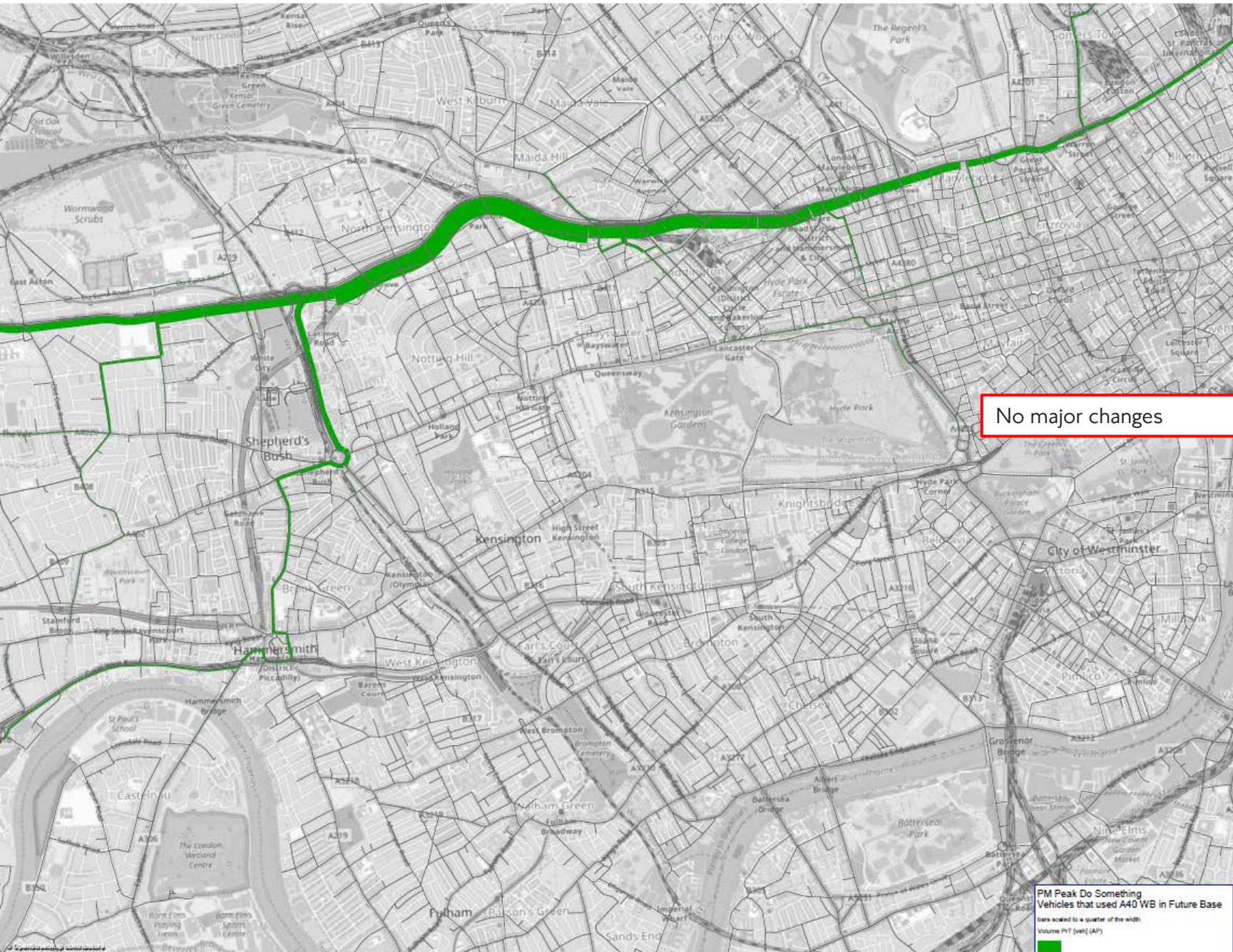
No major changes

PM Peak Do Something  
Vehicles that used A40 EB in Future Base  
Scale scaled to a quarter of the width:  
Volume FYT (veh) (AP)

# PM Peak – Vehicles using A40 WB in the Future Base



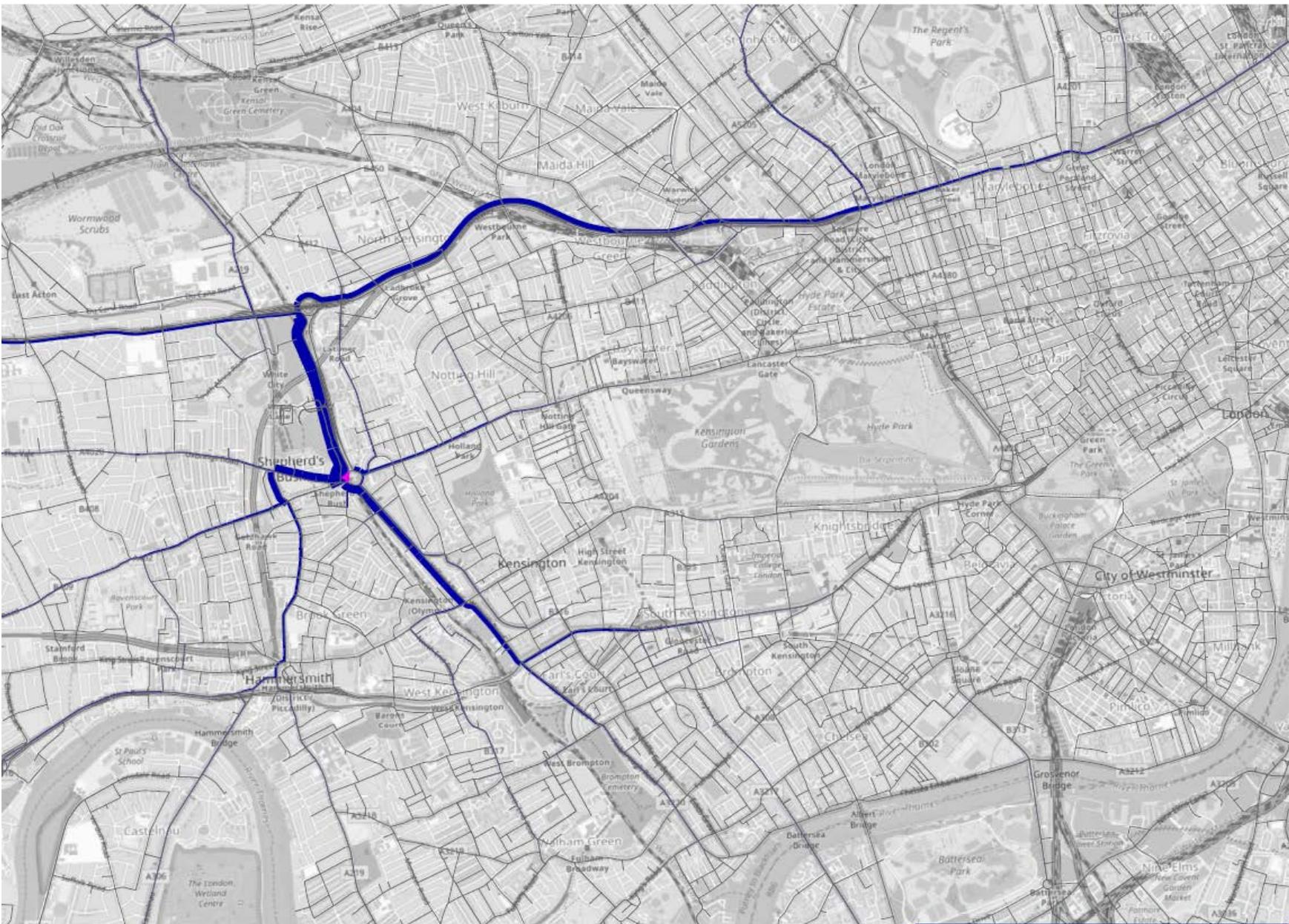
# PM Peak – Vehicles that used A40 WB in the Future Base



No major changes

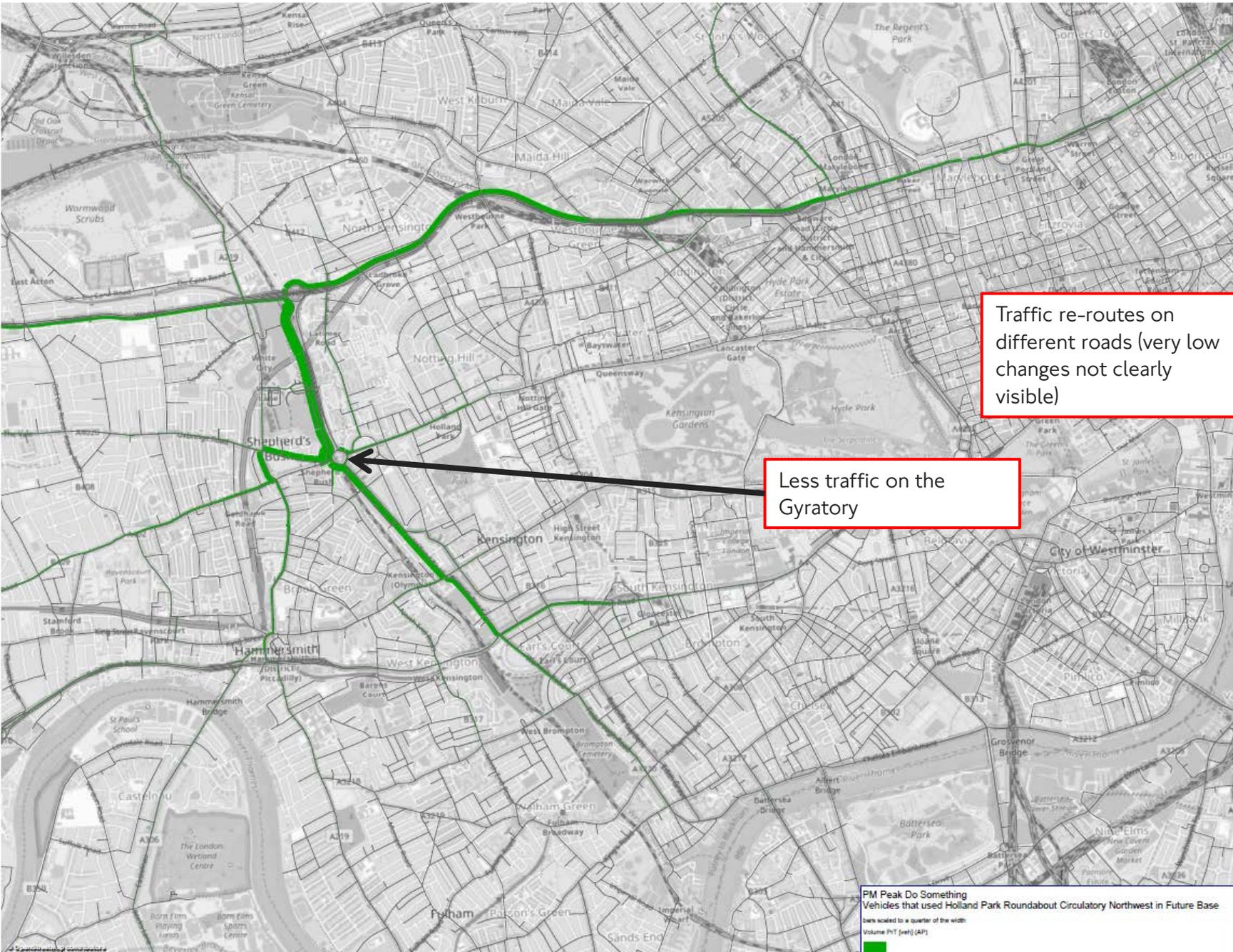
PM Peak Do Something  
Vehicles that used A40 WB in Future Base  
bars scaled to a quarter of the width  
Volume PVT (veh) (AP)

# PM Peak – Vehicles using Holland Park Roundabout Gytratory Northwest in the Future Base

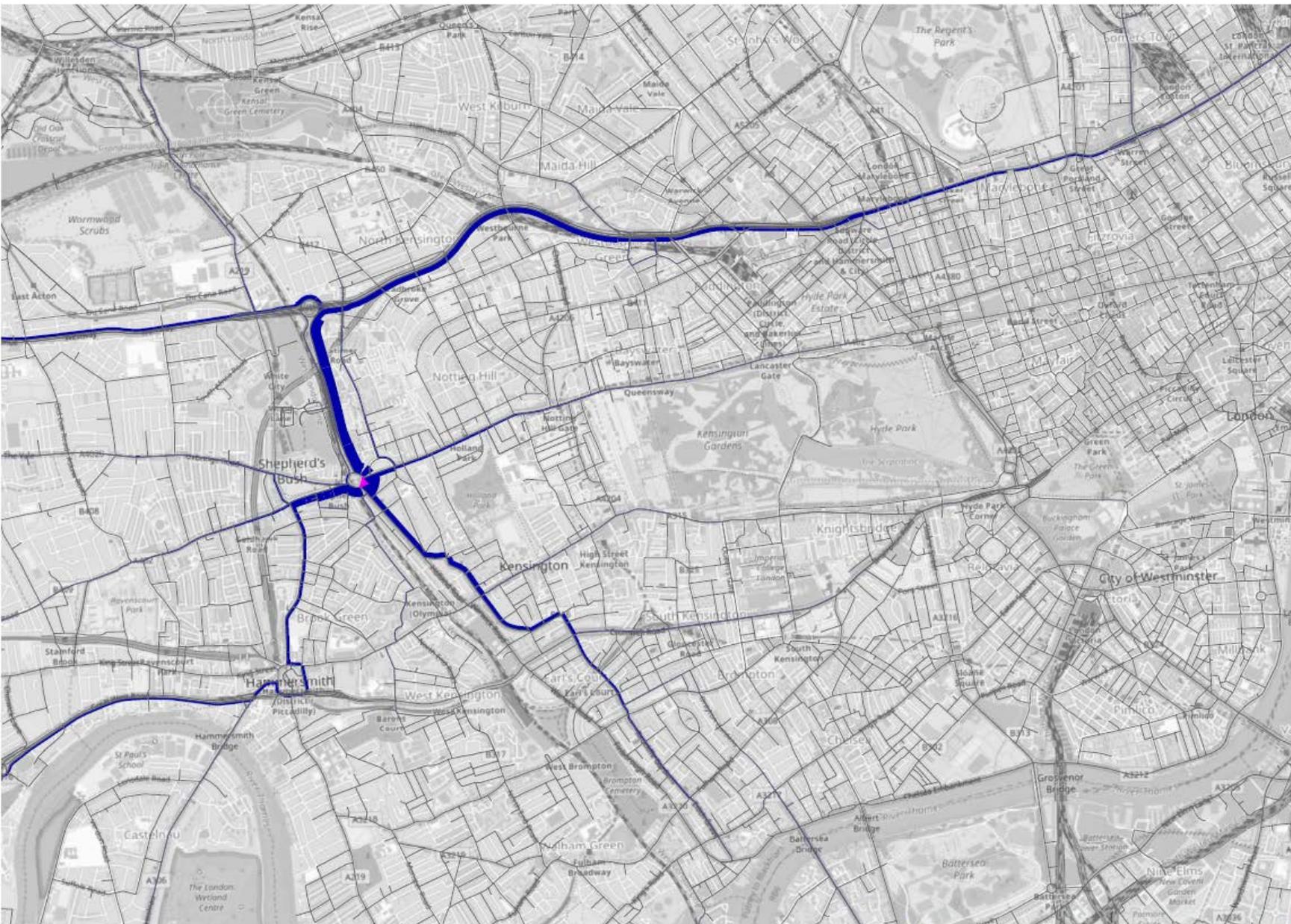


PM Peak Future Base  
Vehicles using Holland Park Roundabout Circulatory Northwest in Future Base  
Here scaled to a quarter of the width  
Volume PIV (veh) (API)

# PM Peak – Vehicles that used Holland Park Roundabout Gyratory Northwest in the Future Base

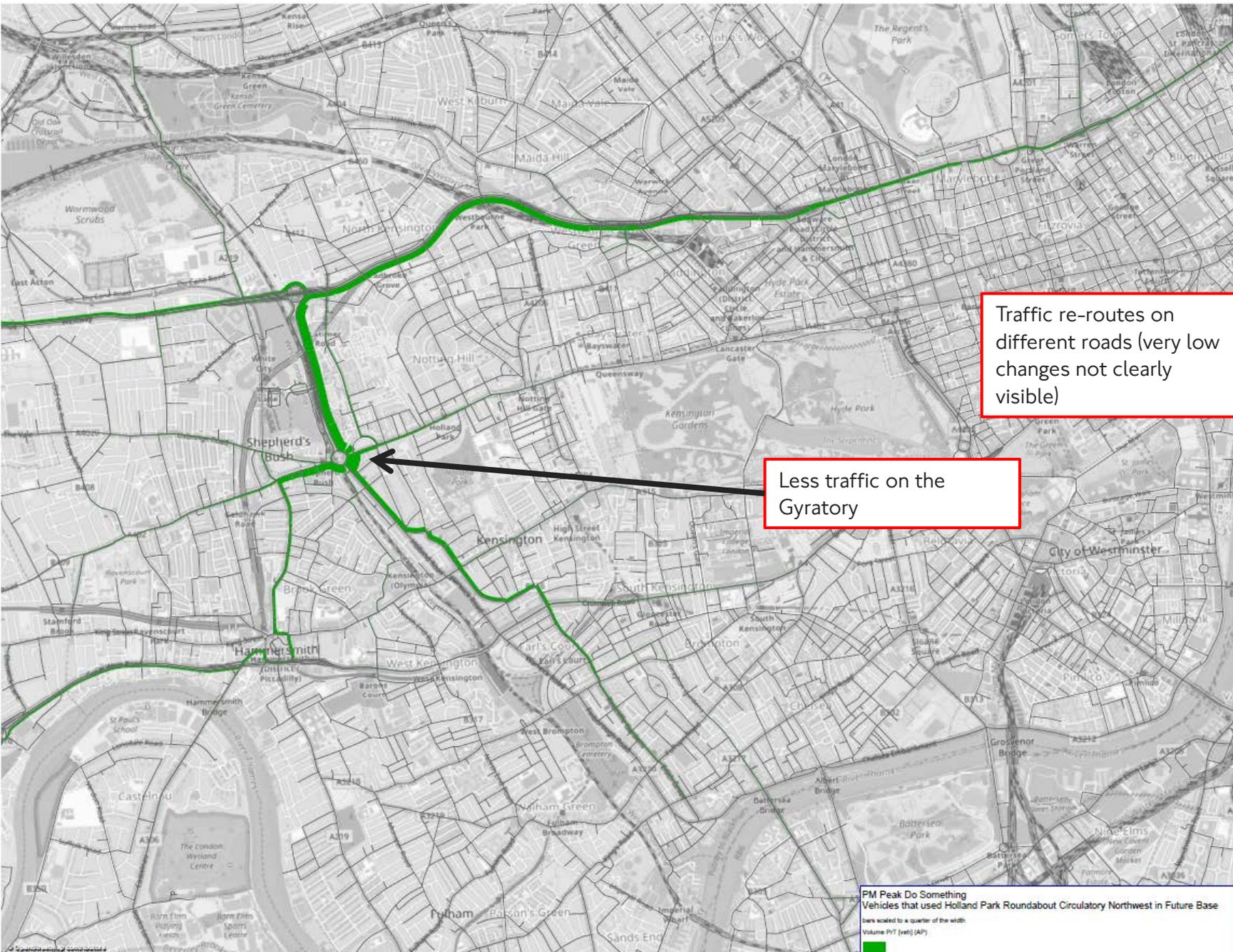


# PM Peak – Vehicles using Holland Park Roundabout Gytratory Southeast in the Future Base



**PM Peak Future Base**  
Vehicles using Holland Park Roundabout Circulatory Southeast in Future Base  
Data scaled to a quarter of the width  
Volume P/T [veh] (AP)

# PM Peak – Vehicles that used Holland Park Roundabout Gyratory Southeast in the Future Base



## The ONE Reassignment stage of modelling has indicated the following key observations:

- The proposed scheme involves numerous capacity reductions on Holland Park Avenue and Notting Hill Gate, leading to a reduction in traffic throughput in both directions, but particularly eastbound.
- Proposed traffic calming measures for side roads along the route are leading to predicted changes in north/south movements, with some routes becoming less attractive whilst others become more so.
- Proposed capacity reductions at Holland Park Roundabout are predicted to result in flow reductions on West Cross Route, with a small amount of traffic choosing to reroute via Wood Lane / Ariel Way, and others via Pembridge Gardens.
- Proposed capacity reductions at the top of Wood Lane are predicted to result in reduced traffic throughput in this section.

