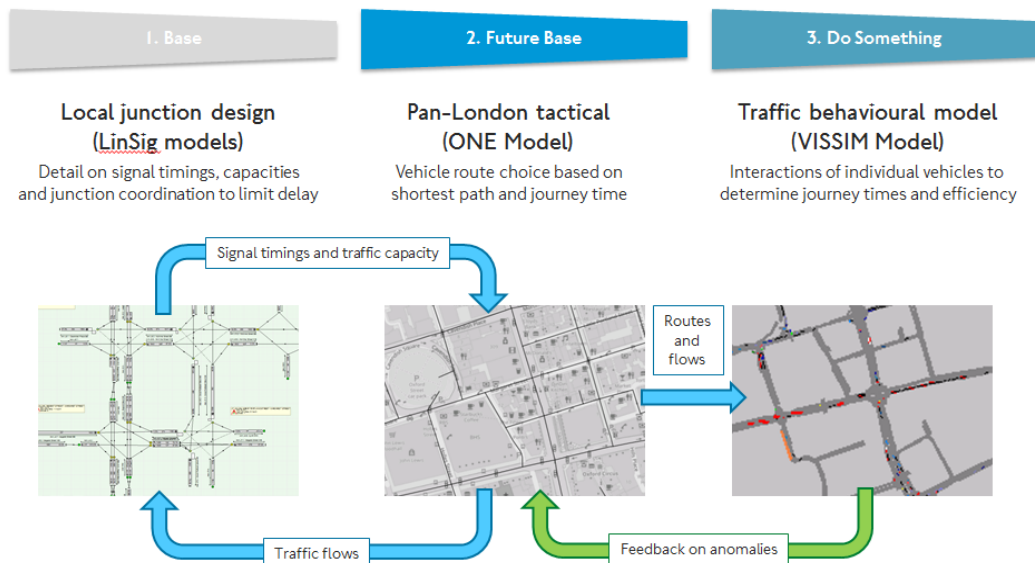


# Improvement to Holland Park Avenue- Traffic modelling approach



# Modelling Approach

- Our proposals have been comprehensively modelled through a three step modelling process that aligns with the Department for Transport's Transport Analysis Guidance.



Base model – A model built to reflect the current road network situation. Uses data sources such as traffic counts, signal timings, and bus and traffic journey time to confirm the model matches reality

Future Base – A future year model (2021) which take into account growth assumptions and network changes to forecast the number and distribution of vehicle trips.

Do Something – Applies the scheme proposal to the future year scenario.

- The 3 stage process produces distinct outputs:
  - Optimised designs to meet scheme brief
  - Information on how traffic flow will reassign following scheme implementation
  - The difference scheme makes to journey time through the modelled network





# Predicted Impact – Morning Peak

- AM Peak: Eastbound journey times on Holland Park Avenue are predicted to be reduced due to a predicted reduction in traffic flow on Holland Park Avenue as well as the optimised design with the retention of two eastbound traffic lanes at Royal Crescent and Ladbroke Grove (key AM eastbound pinchpoints).
- Westbound journey times on Holland Park Avenue are forecasted to increase by 3-4 minutes.
- AM Peak: Journey times increase slightly in both directions through Notting Hill Gate

Correct as at 07/03/19			2015 journey times (minutes)	2021 journey times (minutes)	2021 journey time with Wood Lane to Notting Hill Gate Scheme (minutes)	Difference between 2021 and Wood Lane to Notting Hill Gate Scheme scenario (minutes)
	Journeys modelled		AM	AM	AM	AM
Traffic Average journey times (minutes)	Notting Hill Gate	Westbound	2-3	2-3	4-5	1-2
	Notting Hill Gate	Eastbound	1-2	1-2	2-3	0-1
	Holland Park Avenue	Westbound	4-5	4-5	7-8	3-4
	Holland Park Avenue	Eastbound	5-6	6-7	4-5	-(2-3)





## Predicted Impact – Evening Peak

- PM Peak: Westbound journey times on Holland Park Avenue increase by 0-1 minutes due to the predicted reassignment of traffic to the A40 peak as well as the optimised design with the retention of two Westbound traffic lanes at Ladbroke Grove and Holland Park Roundabout (key PM westbound pinchpoints).
- Eastbound journey times on Holland Park Avenue are forecasted to increase by 2-3 minutes.
- PM Peak: Journey times increase slightly in both directions through Notting Hill Gate

Correct as at 07/03/19			2015 journey times (minutes)	2021 journey times (minutes)	2021 journey time with Wood Lane to Notting Hill Gate Scheme (minutes)	Difference between 2021 and Wood Lane to Notting Hill Gate Scheme scenario (minutes)
	Journeys modelled		PM	PM	PM	PM
<b>Traffic</b> Average journey times (minutes)	Notting Hill Gate	Westbound	2-3	2-3	3-4	0-1
	Notting Hill Gate	Eastbound	1-2	1-2	2-3	0-1
	Holland Park Avenue	Westbound	5-6	7-8	7-8	0-1
	Holland Park Avenue	Eastbound	3-4	3-4	5-6	2-3





# Traffic impacts explanation overview

- There is a concern that a reduction in traffic lanes will cause major delays – similar to what happened at Lancaster Gate
- Unlike Lancaster Gate, where Bayswater Road was reduced to a single lane in both directions, we have retained two westbound lanes at the following critical locations:
  1. Holland Park Roundabout westbound approach (Holland Park Avenue)
  2. Holland Park (west) junction (one ahead, one left turn)
  3. Ladbroke Grove junction (one ahead, one right turn) – similar to existing arrangement
- To mitigate the impact of the scheme, we have also proposed making Holland Park (west) entry only and Holland Park (east) exit only – simplifying the junctions creating additional capacity for bus and traffic movements
- As a result of the scheme, we do forecast some changes to traffic, primarily:
  1. Some longer distance traffic using A40 for East-West trips instead of Holland Park Avenue.
  2. A reduction in traffic using Holland Park Roundabout and Shepherds Bush Green as a result of the capacity reduction between Shepherds Bush Green and Holland Park Roundabout (reduced from three lanes to two in both directions). This traffic is forecasted to use the A40, A4 and Hammersmith Road
- Traffic capacity on a signalised network is related to both the space (number of lane) and the time (amount of green for traffic)





## Changes in traffic green time westbound – Evening Peak

		Green time future base model (seconds)	Green time proposed model (seconds)
A	Holland Park Avenue at Holland Park Roundabout Westbound	19	22
B	Holland Park Avenue at Abbotsbury Road Westbound	34	52
C	Holland Park Avenue at Holland Park Westbound	N/A	60
D	Holland Park Avenue at Ladbroke Grove Westbound	51	50





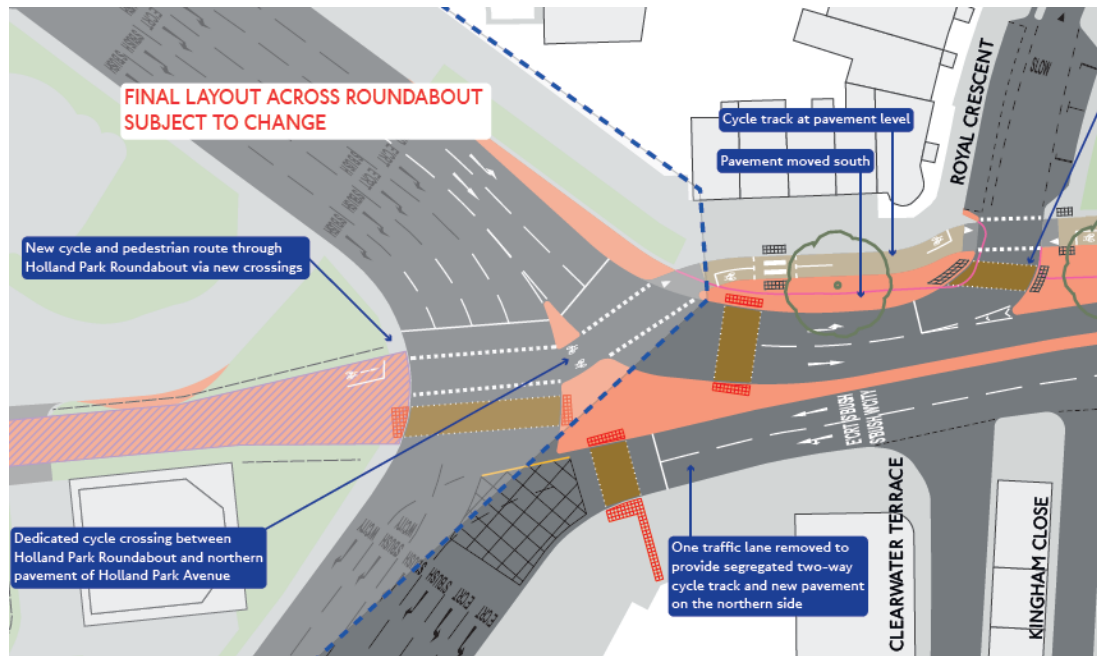


# Changes in traffic green time eastbound – Evening Peak

		Green time future base (seconds)	Green time proposed (seconds)
A	Holland Park Avenue at Abbotsbury Road eastbound	37	66
B	Holland Park Avenue at Holland Park eastbound	N/A	43
C	Holland Park Avenue at Ladbrooke Grove eastbound	45	41



# Holland Park Roundabout



- Holland Park Avenue with Holland Park Roundabout is the key pinch point in the network particularly during the evening peak.
- Junction has lost one flared lane that can hold approximately 6 cars, which is often not fully utilised
- As a result of the scheme this approach will receive 15% increased green time per cycle
- Also, as a result of changes at Shepherd Bush, we are expecting some traffic assignment away from the area which will slightly reduce the severity of the exiting blocking of Holland Park roundabout which frequently impacts Holland Park Avenue westbound in the evening peak

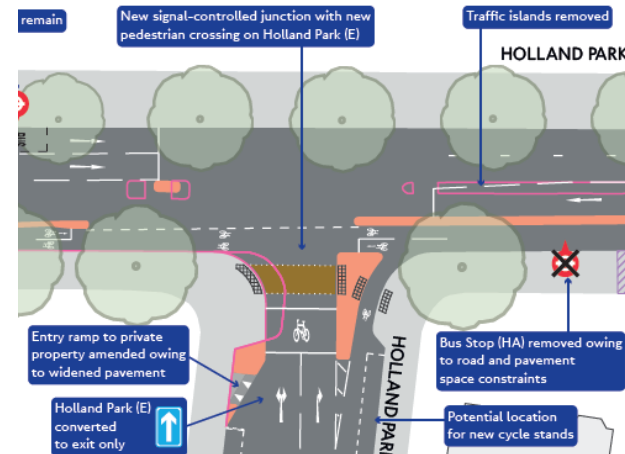
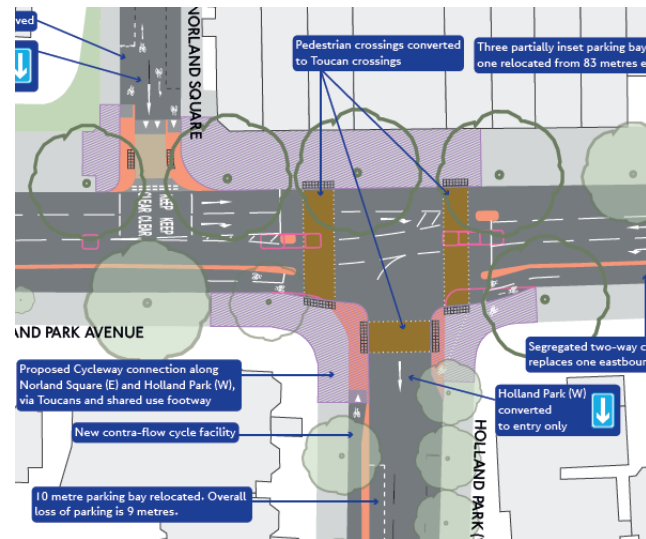




# Holland Park East and West



- Making Holland Park East exit only and Holland Park West entry only simplifies junction design and lost time moving between conflicting traffic movements
- This allows additional green time to be given to Holland Park Avenue to mitigate the loss of a ahead lane
- Holland Park East has 2 lane to prevent significant queuing on residential roads.
- Where we required additional capacity at Holland Park West, the design includes an extra left turn lane.
- Traffic flows on Holland Park East and West roads are forecasted to remain broadly similar

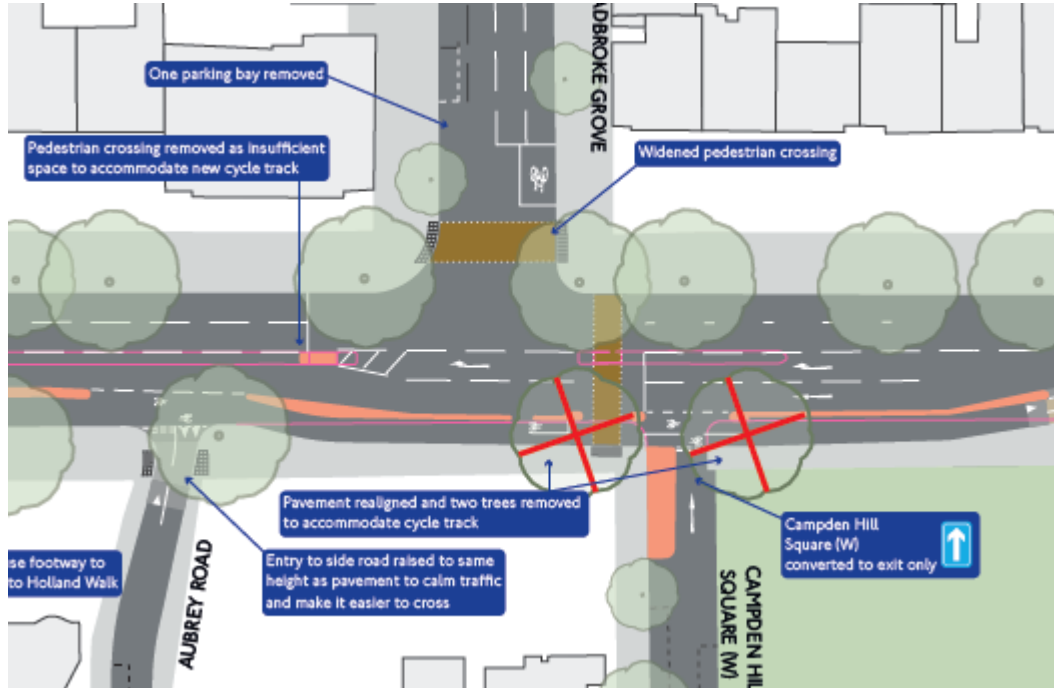


- This is a design decision between increased congestion or unrestrictive access to Holland Park.





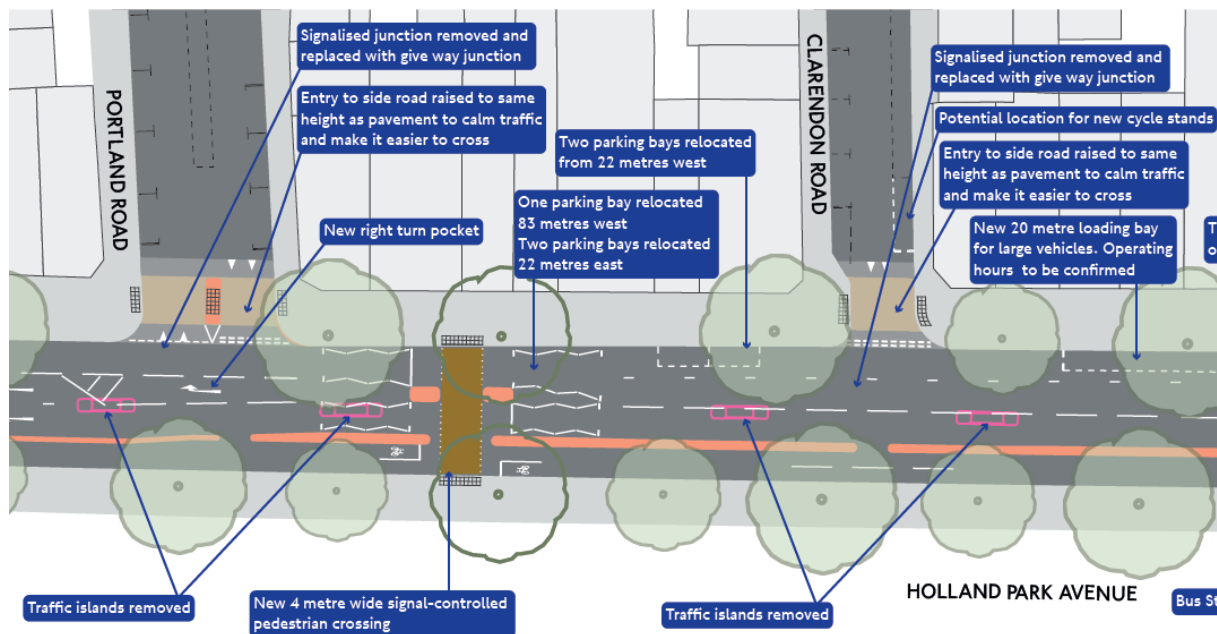
# Ladbroke Grove



- The junction design formalises the existing operation where westbound right turning traffic blocks any ahead traffic using the offside lane.
- This design also retains two Eastbound traffic lanes – this is a critical pinchpoint for Eastbound traffic throughout the day – but especially in the AM peak.
- This is a design decision between the retention of the right turn lane, the lost of two mature trees or being unable to deliver safe space for cycling.



# New Pedestrian crossing



- This crossing provides an additional protected facility across Holland Park Avenue
- The signalised junctions at Portland Road and Clarendon Road are converted to give way junctions to reduce unnecessary delay on Holland Park Avenue
- Our traffic counts show the Portland Road and Clarendon Road have around 100 vehicles per hour during the peak periods.
- This is a design decision between a new pedestrian crossing, loading facilities and minimising any impact on Holland Park Avenue.

