

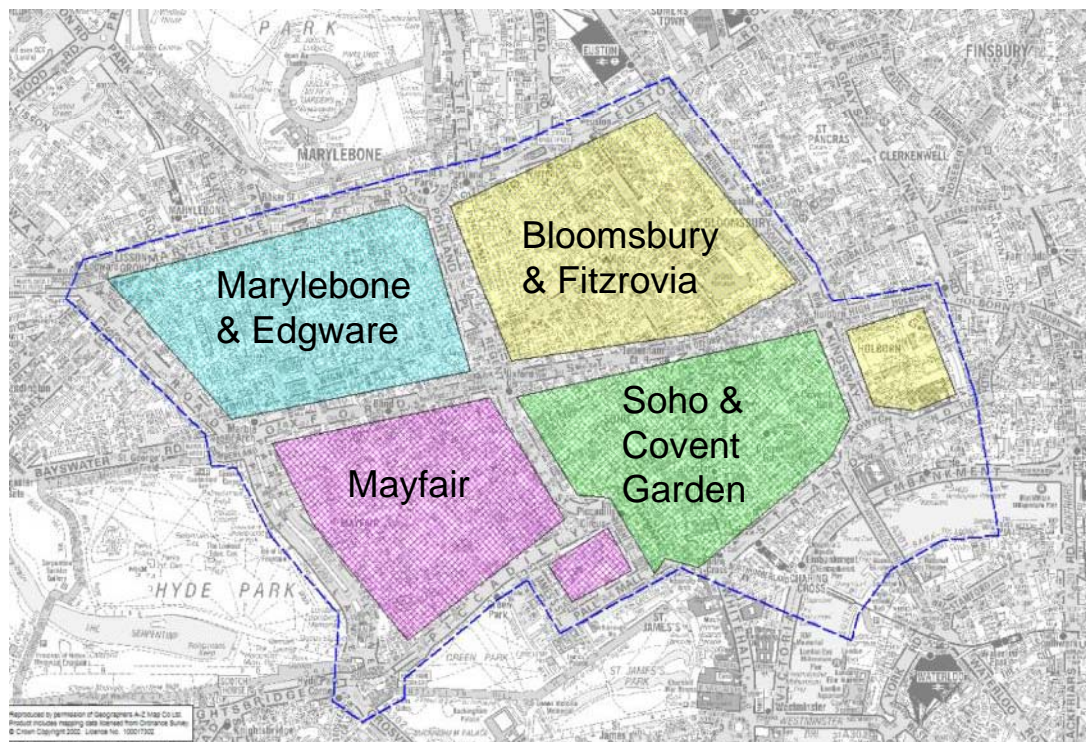


West End Partnership Transport Sub-group

11th December 2014

The West End Study Area

- The West End is mainly located within the City of Westminster and Camden boroughs
- Comprised of 4 'villages':
 1. Marylebone & Edgware
 2. Mayfair
 3. Bloomsbury & Fitzrovia
 4. Soho & Covent Garden
- Key corridors surrounding villages also part of their urban form but have own challenges
- It incorporates a number of Business Improvement Districts:
 - New West End Company (represents 600 businesses) covering Oxford, Regent and Bond Streets
 - Heart of London (500 businesses) covers St James's, Piccadilly and Leicester Square
 - In Midtown (560 businesses) covering Bloomsbury
 - Baker Street (newly formed) covers Baker Street and surrounds



Strategic challenges in the West End

- There are multi-layered, but closely linked challenges facing the West End study area:
 - High demand for public transport
 - High numbers of pedestrians
 - High demand for parking and servicing
 - High demand for enhanced cycle opportunities
 - Conflicting demand for limited road space amongst West End users
 - Poor air quality and noise generated by road transport
- Meeting these challenges will allow the West End to:
 - Retain its status as a world-class destination people want to visit
 - Remain a retail, commercial, employment and entertainment hub
 - Meet the needs of all users including residents, businesses, landowners, shoppers and leisure visitor

The contribution of Crossrail to the West End

- Crossrail will clearly be of crucial importance to the West End, providing a 24 trains an hour peak service with each train able to carry 1,500 passengers.
- TfL are updating their latest strategic forecasts – taking into account population, jobs and details of the public transport and highway networks.
- Following the opening of Crossrail there will be increased demand, but this is offset by substantial additional capacity from Crossrail and the surrounding Underground lines.
- As in previous analyses, the pedestrian impact will be especially significant in the vicinity of Bond Street and Tottenham Court Road Crossrail stations.
- TfL's latest forecasts are indicating that numbers of passengers entering and exiting Crossrail Stations in the West End are in line with the numbers released by Crossrail in 2010.

Strategic scenarios for further transport enhancements in the West End

- In September we presented a number of strategic scenarios covering the whole West End area:
 1. Dispersing demand
 2. Open Up Grid
 3. Bus Focused Improvements
 4. Cycle Focused Improvements
 5. Pedestrian Focused Improvements
 6. Freight
 7. Environment
- We also looked at more targeted options for Oxford Street concerning:
 8. Buses and Taxis
 9. Pedestrians
- These have been analysed in detail with a view to sifting options and packaging them for implementation.

Strategic Options

The West End is an international, national and regional hub for retail, finance, leisure and entertainment. Strategic interventions are required to maintain its world-class status.



1. Dispersing Demand

2. Open Up Grid

3. Bus Improvements

4. Cycle Improvements

5. Pedestrian Improvements

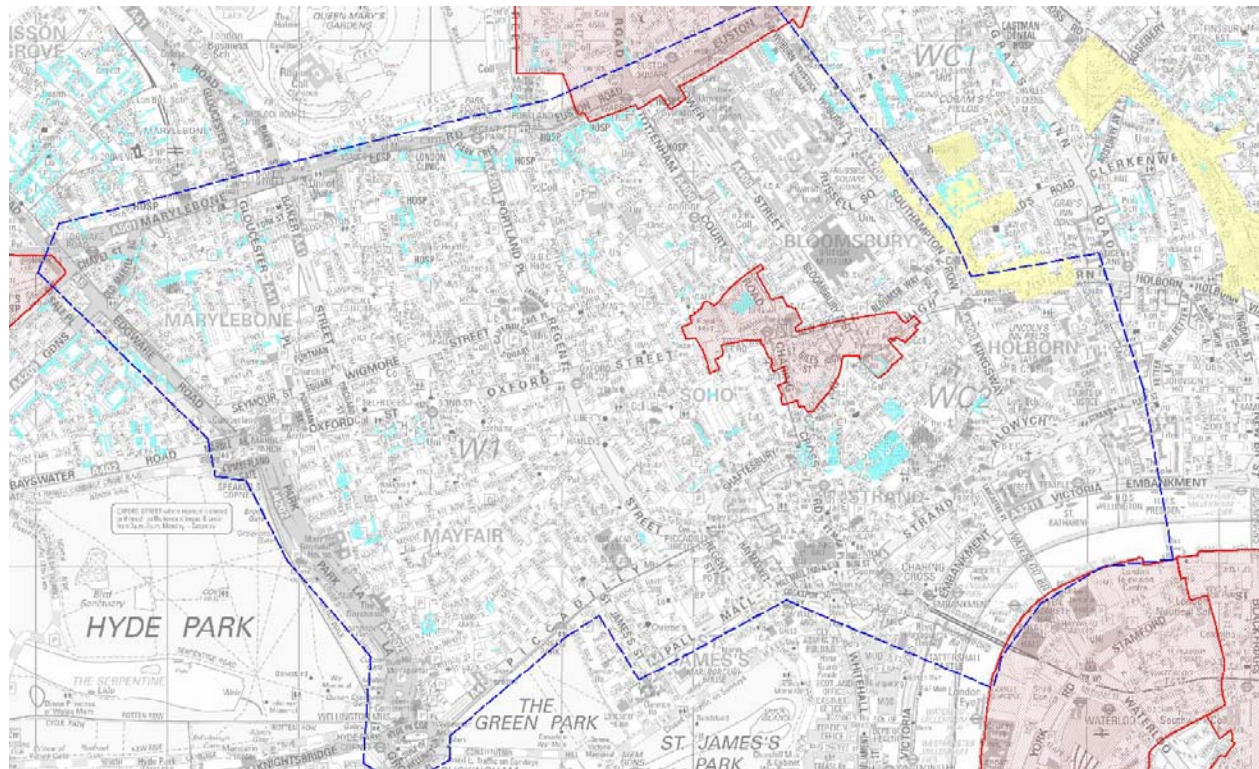
6. Freight

7. Environment

8. Taxis and Buses

9. Pedestrian Capacity on Oxford St

1.1 Proactively move the Centre of Gravity to Oxford St East

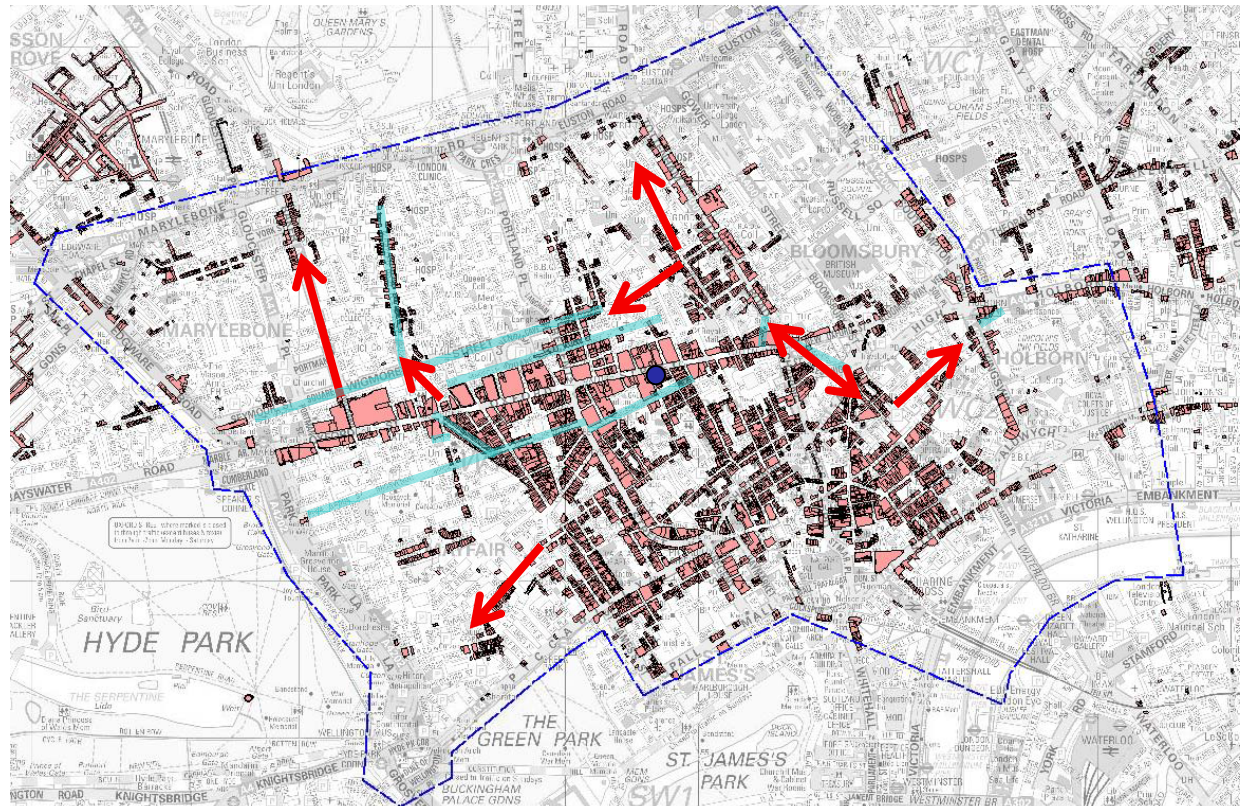


- Sites with Capacity 2009
- Areas for Intensification
- Opportunity Areas

Recommendation:
Do not progress

- Limited sites with additional capacity were identified in 2009. Most of these are now built or have consent.
- Several other sites have come forward with new redevelopment (eg: Pot Office on Rathbone Place), although further opportunity is limited.
- Current growth to 2021 is therefore concentrated around Euston Square, Tottenham Court Road and Holborn.
- With current planning policy no significant additional growth is envisaged beyond that described above, meaning there is insufficient potential to warrant progressing this option.

1.2 Additional public realm improvements to support growth in the West End



- Existing Retail
- Potential Retail Growth
- Improve Pedestrian Environment

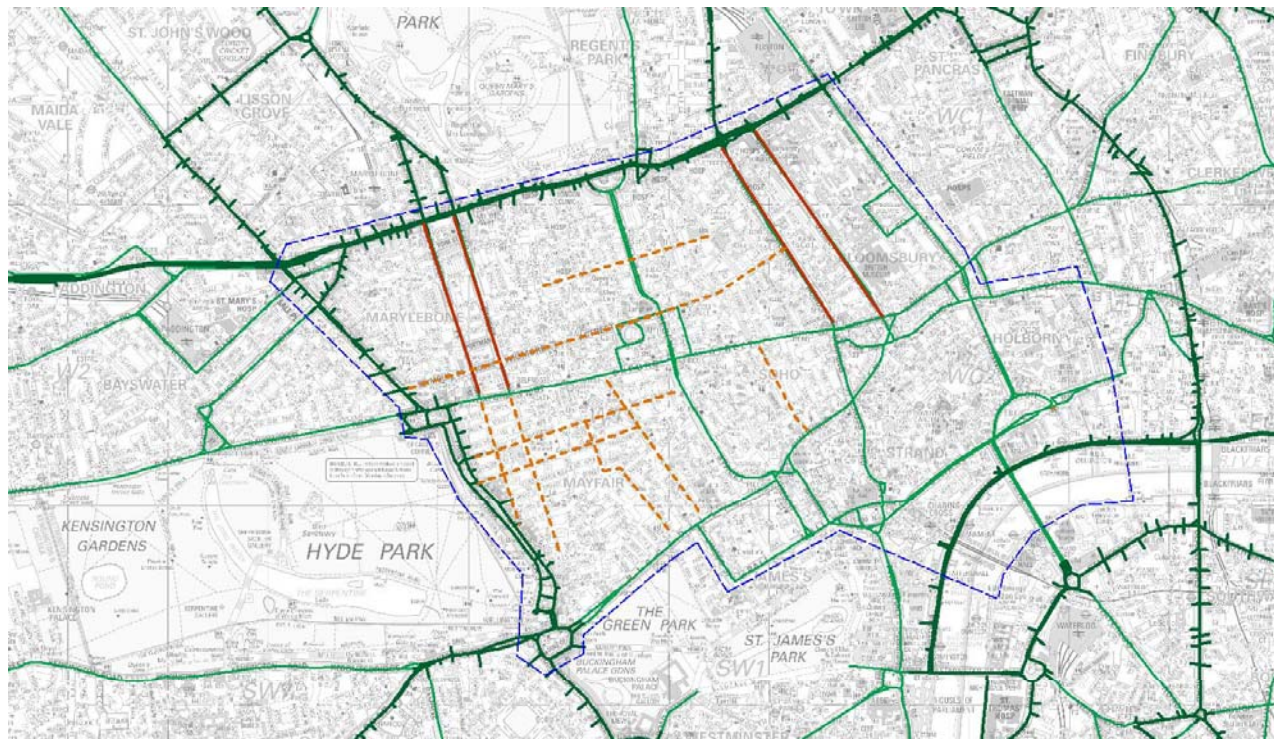
Recommendation:
Further study

- Organic retail growth along Baker Street, Bond St / SW Mayfair, Oxford St East and Tottenham Court Road and Charlotte St, supported by street improvements
- Covent Garden links to Tottenham Court Road and Holborn are possible
- Suggested further place improvements to facilitate retail growth and better walking routes:
 - Henrietta Place/Cavendish Sq
 - Enhanced public realm on Bryanston St and Great Castle Street/ East Castle Street.
 - Pedestrianise top end of Davies Street – back exits to West One shopping centre
 - Improvements to Hills Place, Ramilles Place and Isabella Street to provide oases
- This could be helped by rear shop entrances and in-store information, decluttering and wayfinding

1. Dispersing Demand
- 2. Open Up Grid**
3. Bus Improvements
4. Cycle Improvements
5. Pedestrian Improvements
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7. Environment

8. Taxis and Buses
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2. Sharing the Load – Key routes returned to two-way working



- TLRN
- SRN
- Committed Two Way Schemes
- Potential Additional Schemes

Recommendation:
Do not progress

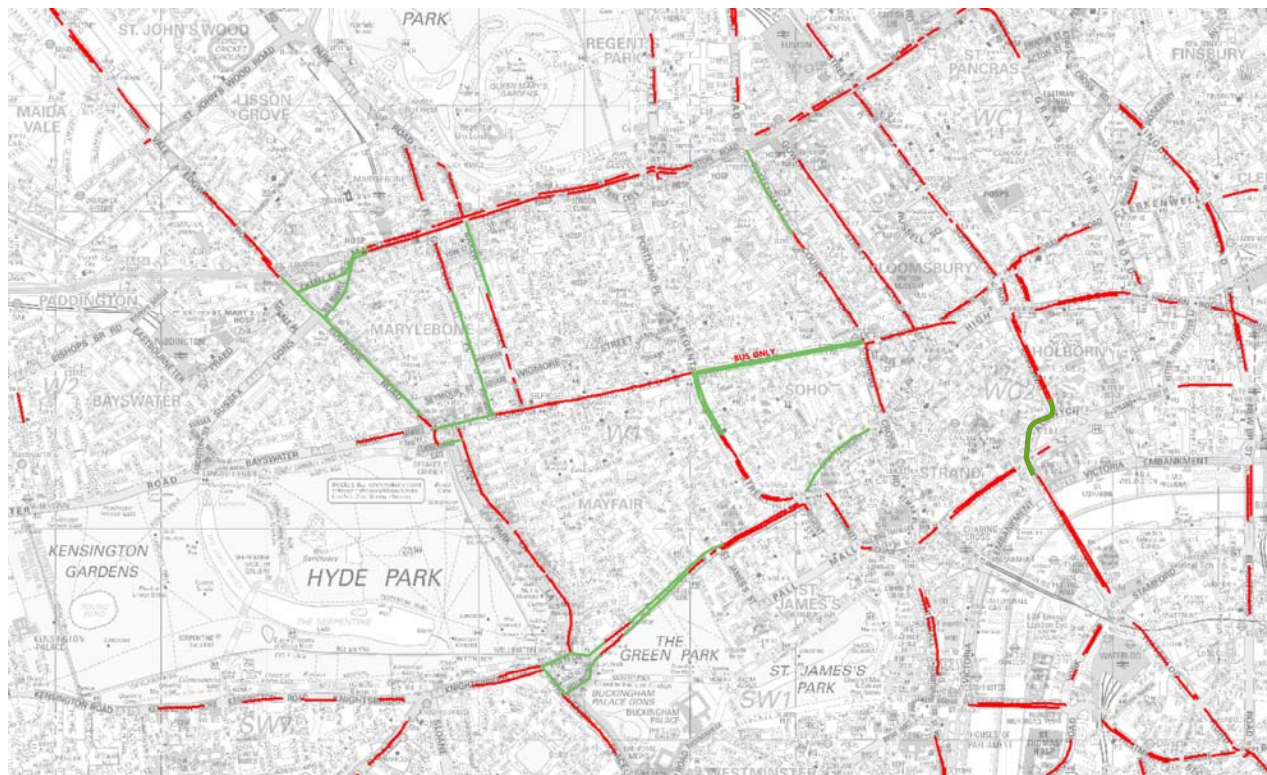
- The West End traffic network is composed of traffic bearing roads which skirt local neighbourhoods
- The neighbourhoods of Mayfair and SoHo are characterised by one-way systems
- Proposed Baker St / Gloucester Place, Tottenham Court Road / Gower Street Two Way Schemes have the potential to deliver benefits
- Converting additional one-way systems to two-way could improve permeability for particular highway movements, but at the expense of junction delays at some locations
- Conversion to two-way should be considered on a case by case basis for priority locations, rather than being pursued wholesale

1. Dispersing Demand
2. Open Up Grid
- 3. Bus Improvements**
4. Cycle Improvements
5. Pedestrian Improvements
6. Freight
7. Environment

8. Taxis and Buses
9. Pedestrian Capacity on Oxford St

3.1a Complete the network of bus lanes in the West End

3.1b Targeted bus priority in the West End



Existing Bus Lanes

Potential Bus Lanes

Recommendation:
Do not progress 3.1a

Further study
3.1b

Option 3.1a

- Bus lane network in West End could be enhanced
- There are significant delays to buses in key parts of the network, eg: Piccadilly Circus/Street, Baker Street, Edgware Road
- Bus lanes may alleviate some congestion, but in general would not get the balance right, reducing the availability of lane and kerbside space for other users e.g. freight and servicing, and the Central London Cycle Grid

Option 3.1b

- Targeted bus priority, eg at the west end of Oxford Street and at Aldwych, would be effective and is worth pursuing

3.2 Spread bus routes through the West End to provide wider coverage



— Existing Bus Routes

- - - Potential Bus Routes

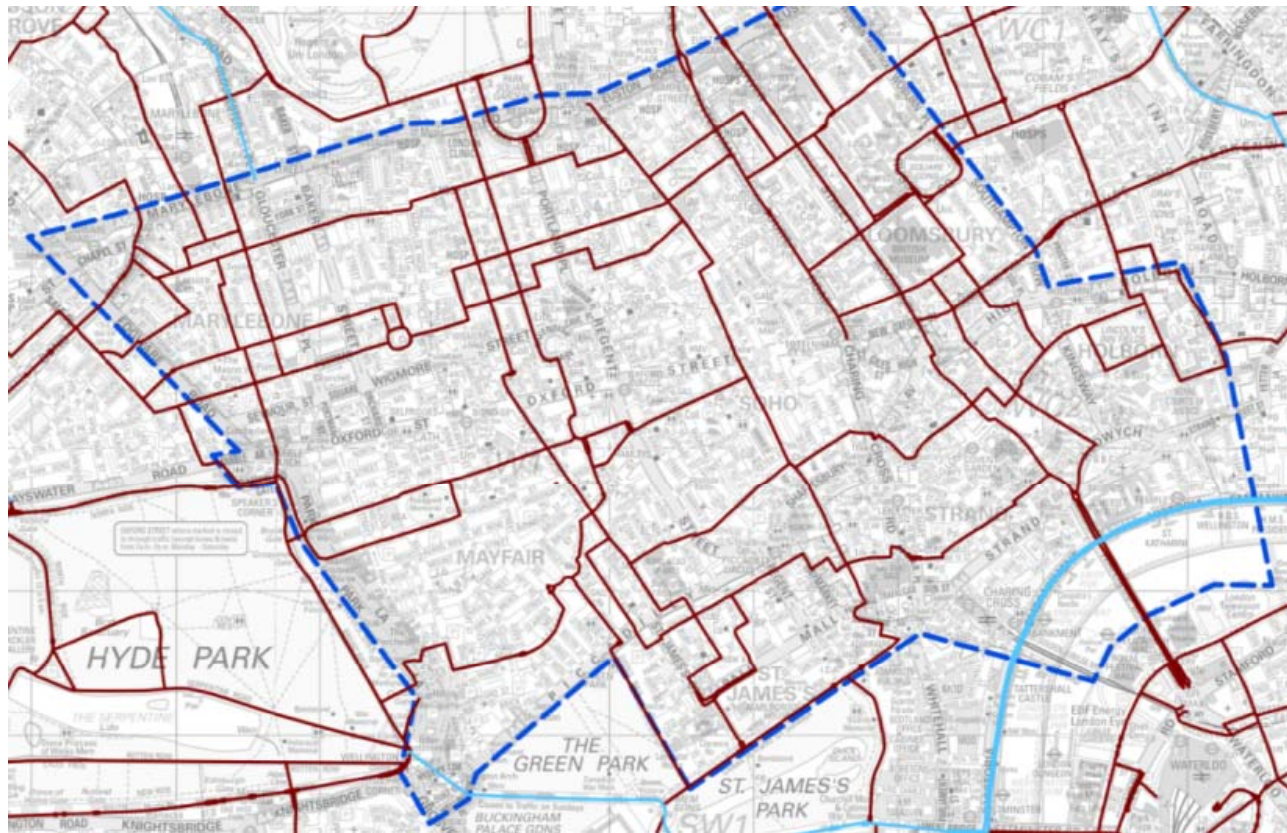
**Recommendation:
Do not progress**

- Coverage is generally very good: buses serve major routes in the West End, though there is relatively low service provision within neighbourhoods
- Potential to reroute or add routes along New Cavendish, Wigmore, Brook, Grosvenor (W-E) and Park, Audley, Berwick & Wardour Sts (N-S)
- Routes are designed to serve the areas with highest passenger demand. Provision of additional bus routes in to neighbourhoods would not mean significant reductions in buses on main routes
- Introducing bus routes on currently un-served roads would create new noise and visual impacts without necessarily serving sufficient volumes of bus passengers to be worthwhile

1. Dispersing Demand
2. Open Up Grid
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4. Complete the network of quietways through the West End



- Quietway Options - Central London Cycle Grid
- Proposed and Existing Cycle Superhighways

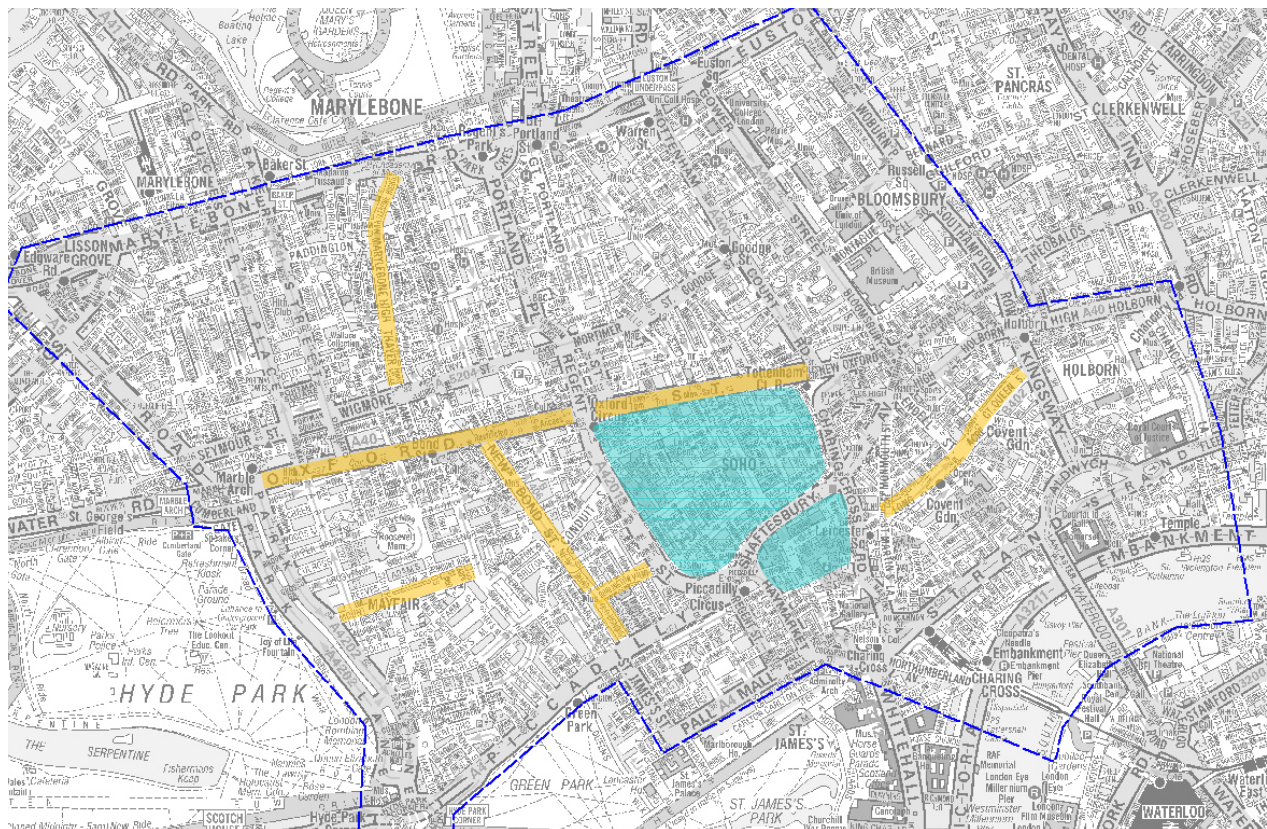
Recommendation:
Further study

- Central London Cycle Grid proposed by TfL (as revised in 2014)
- Quietways provide more local routes, and cycle superhighways provide cross-London connectivity
- Full implementation of the grid would provide a ubiquitous cycle network through the West End and encourage mode-shift
- Adjustments may need to be made following stakeholder consultation

1. Dispersing Demand
2. Open Up Grid
3. Bus Improvements
4. Cycle Improvements
- 5. Pedestrian Improvements**
6. Freight
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5. Improving pedestrian comfort levels



- Examples of potential pedestrian-priority streets
- Examples of potential pedestrian-priority areas

Recommendation:
Further study

- High levels of pedestrian activity, for example in Soho, Chinatown and Oxford St, Mount St Burlington Gardens / Bond Street, Marylebone High St Long Acre & Gt. Queen St
- Several areas have benefited from pedestrian-focused improvements
- Potential for pedestrian-priority projects extending to other areas (eg. Soho).
- Potential for temporary closures or permanent changes to streets

1. Dispersing Demand
2. Open Up Grid
3. Bus – Focused Improvements
4. Cycle – Focused Improvements
5. Pedestrian – Focused Improvements
- 6. Freight**
7. Environment

8. Taxis and Buses
9. Pedestrian Capacity on Oxford St

6. Freight retiming or consolidation



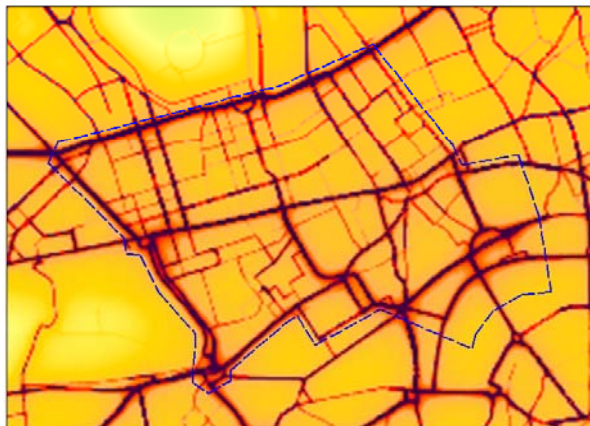
Recommendation:
Further study

- Voluntary measures to alter freight behaviour are unlikely to achieve measurable changes to traffic volume
- Current consolidation schemes have a proven ability to reduce local traffic
- Preliminary analysis indicates that a regulatory scheme could lead to around a 5% decrease in LGV and HGV traffic volume in the congestion charging zone, with a ~8% decrease in delay
- Rationalising freight is likely to reduce overall number of vehicle movements, reducing journey times for other essential vehicles
- Change in business attitudes required, and certain categories of freight will prove more difficult to consolidate than others

1. Dispersing Demand
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4. Cycle – Focused Improvements
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7.1

ULEZ and ULEZ+



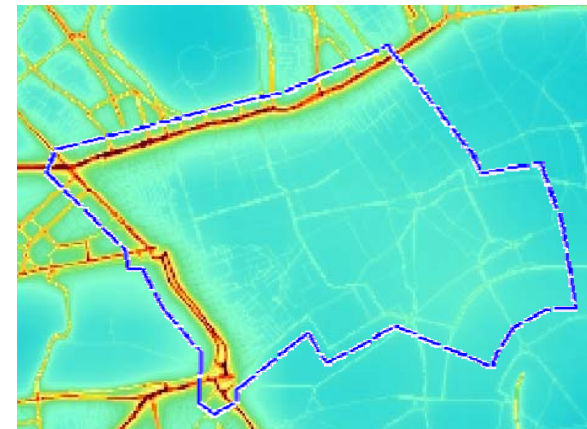
NO2 concentrations in 2010



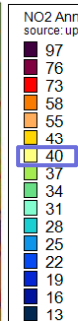
NO2 concentrations in 2020 without ULEZ



NO2 concentrations in 2020 with ULEZ



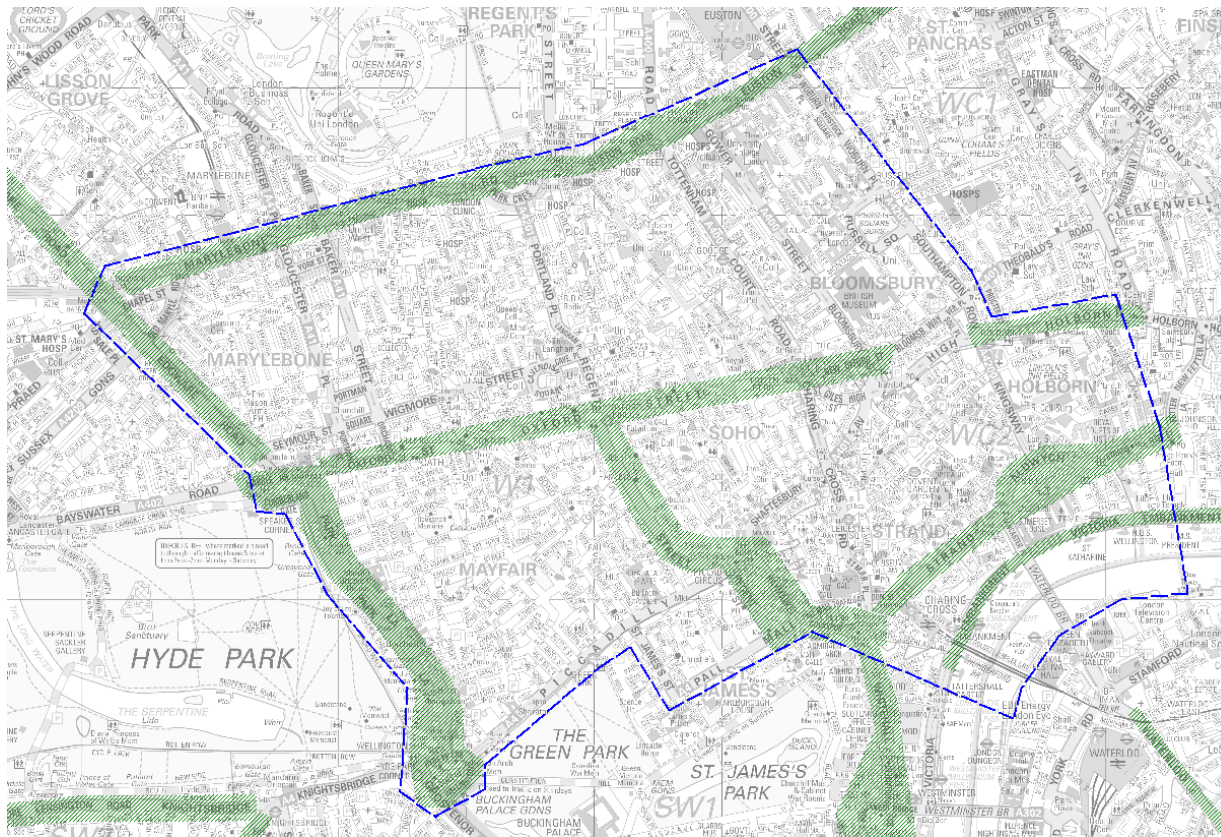
7.1.1 ULEZ+ NO2 concentrations
(with zero tailpipe emission requirement)



- ULEZ brings significant Air Quality benefits to the West End, but more can be done
- Reduce human exposure to NOx and PM10 (particulates)
- Further improvements to ULEZ, such as road user charging and a zero tailpipe emissions requirement could also deliver:
 - less noise for residents and office workers
 - near zero-emission fleets and
 - a shift to walking and cycling
- However, road user charging could affect BAME road users who own a high proportion of small businesses, disperse traffic onto residential streets and increase vehicle and compliance costs

Recommendation:
Further study

7.2 Enhanced environmental quality Geofencing areas



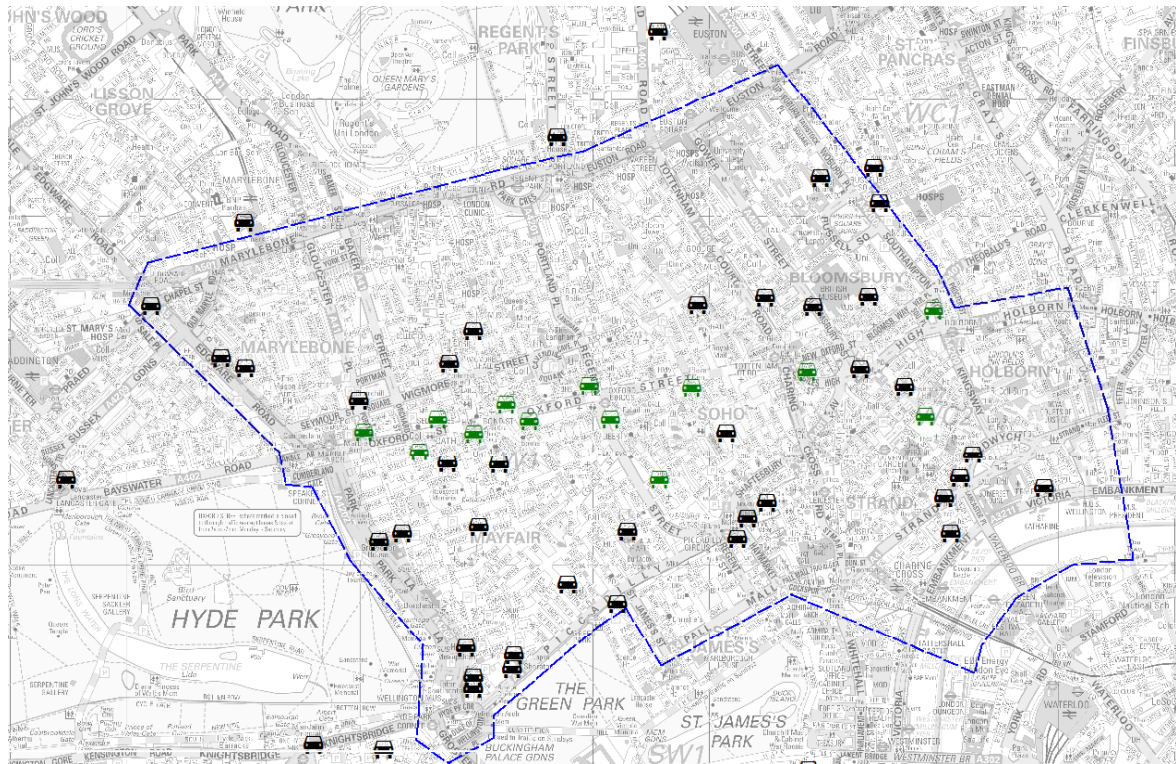
 Potential areas for Geofencing technology to be employed


Recommendation:
Further study

- Geofencing could be used to turn to switch buses to zero emission in the focus areas
- Reduces human exposure to NOx and PM10 where pedestrian movements are most frequent
- Not all vehicles will have zero emission capability and overall engine efficiency may be reduced
- Technical feasibility still needs exploration

7.3 Enhanced environmental quality

Taxi emissions measures



 Existing Taxi Ranks

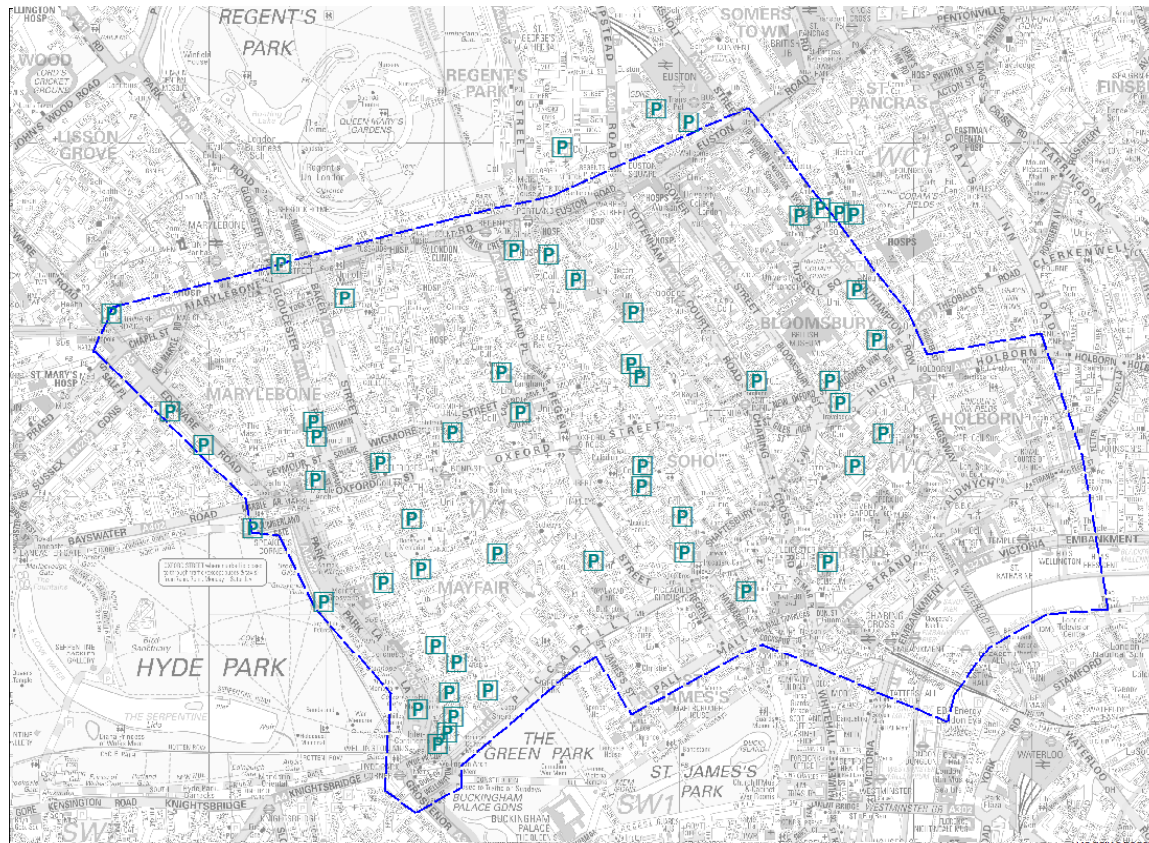
 Potential Taxi Ranks


Recommendation:
Further study

- Taxi pollution in the West End could be addressed by reducing their emissions and km driven, for example Oxford Street could be restricted to new Zero Emission Capable taxis only
- Introduce well signposted and marshalled Taxi ranks to reduce need to ply for hire in West End
- Provide rapid charging facilities for new electric taxis at new taxi ranks
- Reduced mileage and traffic should reduce costs for taxi drivers and traffic on Oxford Street
- Cost of taxi infrastructure and kerb-space, along with accessibility disbenefits to restrict taxi movements and need for additional kerbside space

7.4 Enhanced environmental quality

Making better use of existing space

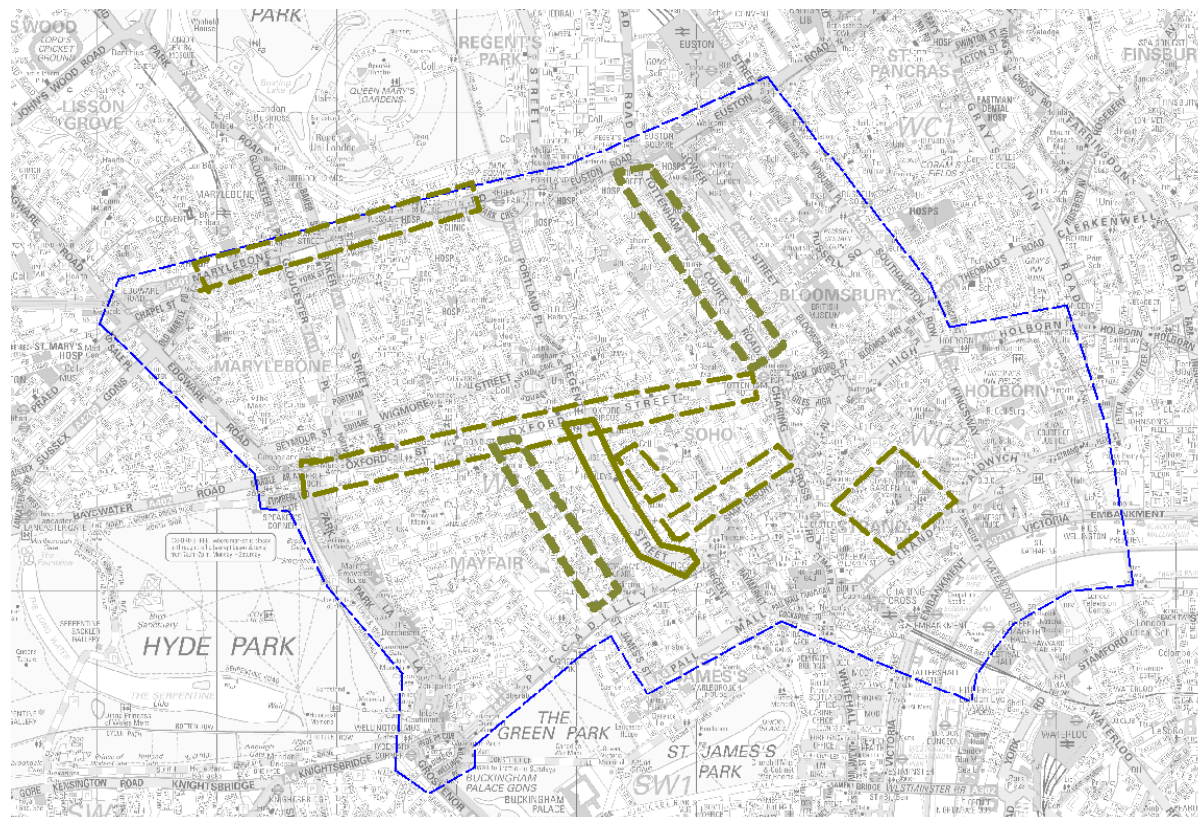


 Off street car park

Recommendation:
Further study

- Reduce on-street visitor and residential parking and use spare capacity at off street car parks
- Use new on street capacity for additional cycle parking, taxi ranks, footway widening or cycle hire
- Emissions related charging at car parks, based on NO2 emissions as well as CO2
- Gives increased road-space to other modes and reduces traffic on Regent Street and Oxford Street. Incentivises zero emission modes improving air quality.
- Likely opposition from residents and loss of parking revenue. Capacity issues on off-street car-parks.

7.5 Enhanced environmental Quality Freight measures



■ Existing Freight Consolidation Partnership on Regent St

■ Potential retail areas suitable for similar scheme

Recommendation:
Further study

- Building on success of Regent Street freight consolidation, by encouraging other retailers to employ similar scheme
- Rationalise loading bays with priority for electric delivery vehicles
- Reduction in traffic from goods vehicles
- Reduction in emissions
- Increased kerbside space for other uses
- Requires co-operation of several retailers and landowners
- Potentially increased costs for retailers

Strategic Interventions for the West End

The strategic options recommended to be taken forward are:




| STRATEGIC OPTIONS | | PROGRESS |
|---------------------------|--|----------|
| 1 Dispersing Demand | 1.1 Proactively shift centre of gravity to Oxford St East | |
| | 1.2 Additional public realm improvements to support growth | |
| 2 Open Up Grid | Key routes returned to two-way working | |
| 3 Bus Improvements | 3.1a Additional bus lanes | |
| | 3.1b Targeted bus priority in the West End | |
| | 3.2 Spread bus routes through West End | |
| 4 Cycle Improvements | Complete the network of quietways through the West End | |
| 5 Pedestrian Improvements | Target projects at improving pedestrian comfort levels | |
| 6 Freight | Freight retiming, or freight consolidation | |
| 7 Environment | 7.1 ULEZ and ULEZ+ | |
| | 7.2 Geofencing | |
| | 7.3 Taxi Emissions Measures | |
| | 7.4 Making better use of space | |
| | 7.5 Freight Measures | |

- We believe these options can all be taken forward together.

Targeted Options

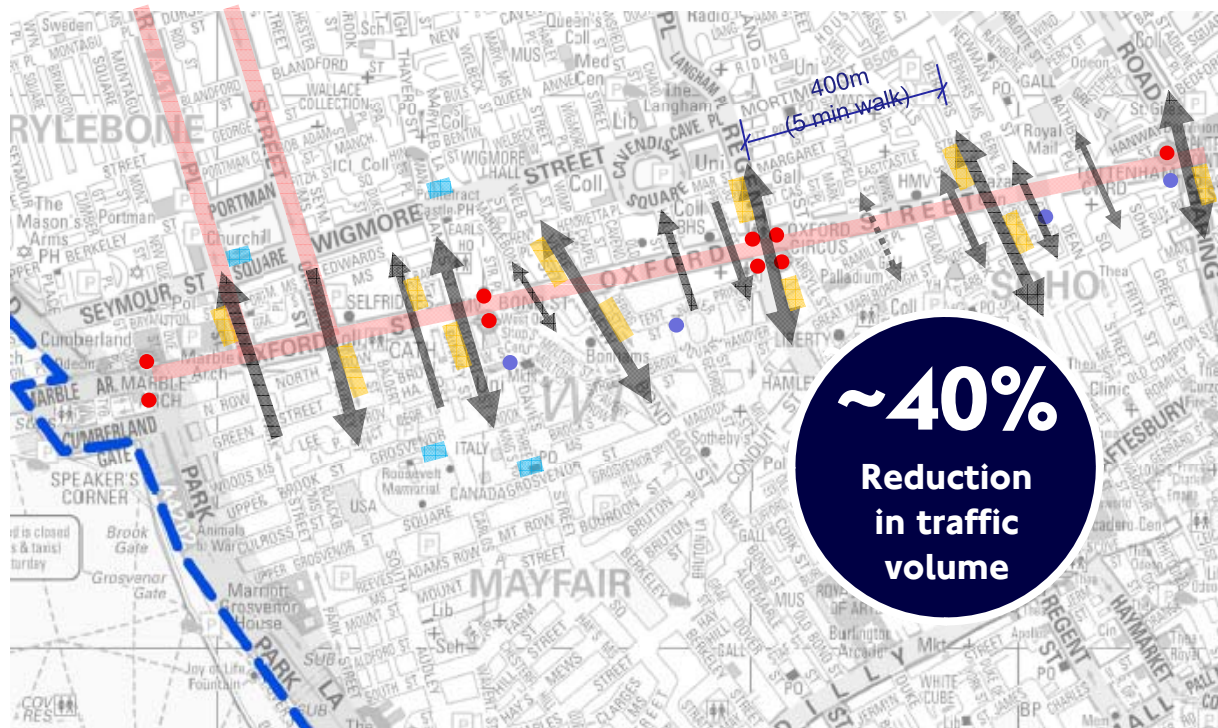
Oxford Street

Synergy with strategic options

-  Consistent
-  Neutral
-  Inconsistent

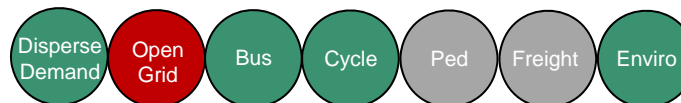
1. Dispersing Demand
2. Open Up Grid
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4. Cycle Improvements
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6. Freight
7. Environment
- 8. Taxis and Buses**
9. Pedestrian Capacity on Oxford St

8.1.1 Taxis Rerouted off Oxford Street with new Taxi Ranks on side roads



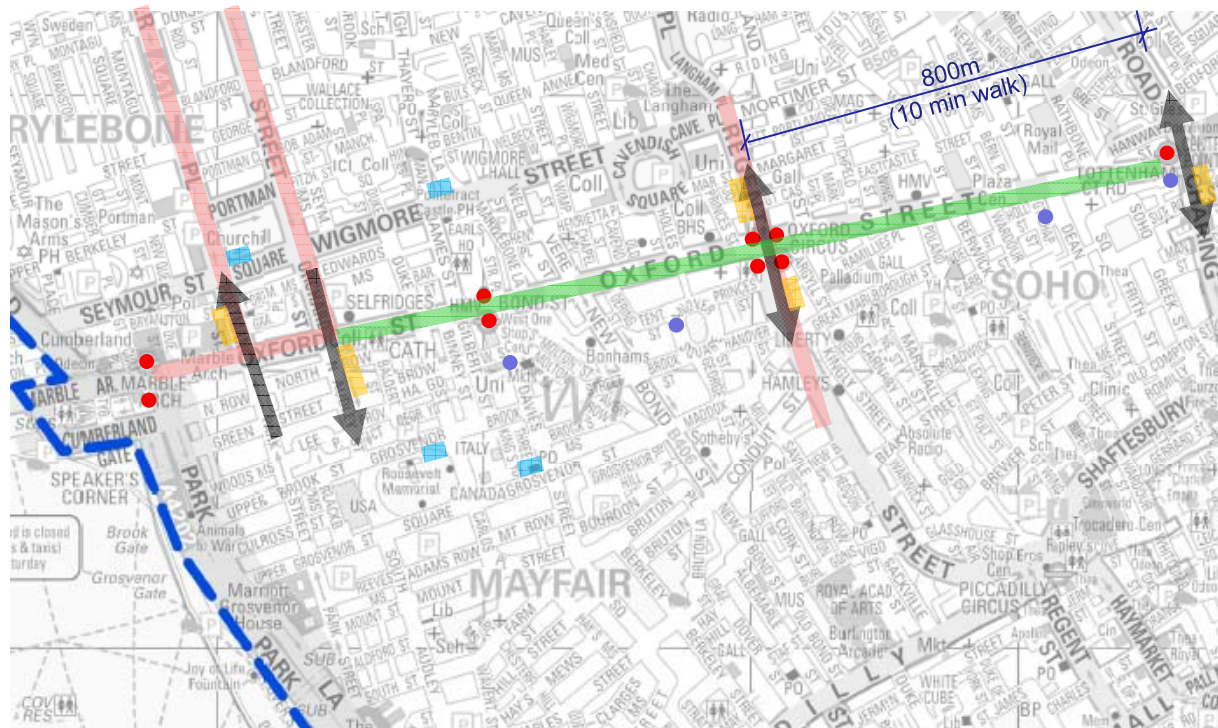
- London Underground Station Entrance
- Crossrail Station Entrance
- Existing Taxi Rank
- Potential Taxi Rank

Recommendation:
Further study



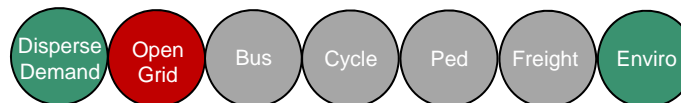
- Taxi re-routing frees up circa 40% of the road space on Oxford Street, enabling improved bus journey times
- Less traffic on Oxford St should lead to fewer road vehicle collisions and improve air quality
- Some footway widening may be possible
- Taxi Ranks reduce plying-for-hire, less mileage
- Mobility impaired may have greater difficulty getting door-to-door

8.1.2 Taxis Curtailed with new Taxi Ranks on side roads



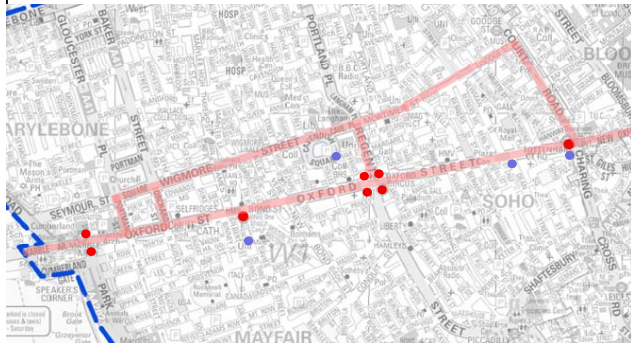
- London Underground Station Entrance
- Crossrail Station Entrance
- Existing Taxi Rank
- Potential Taxi Rank

Recommendation:
Further study

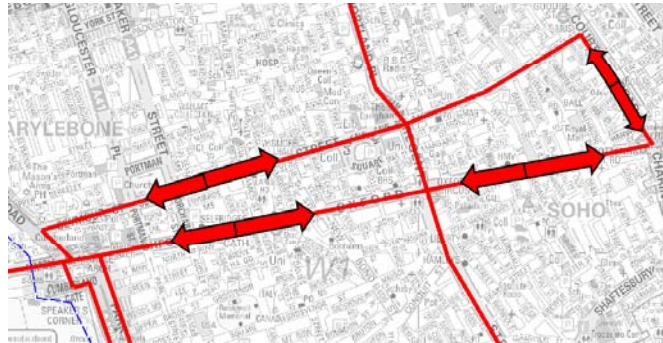


- Banning taxis from Oxford Street and limiting the crossing points to Regent, Portman, Orchard Streets and Tottenham Court Road
- Pedestrianisation of Oxford St possible with this option
- Some footway widening may be possible
- Taxi Ranks reduce plying-for-hire, less mileage
- Mobility impaired may have even greater difficulty getting door-to-door, with 10 minutes walk between crossings – more reliant on parallel routes

8.2 Reducing bus services on Oxford St



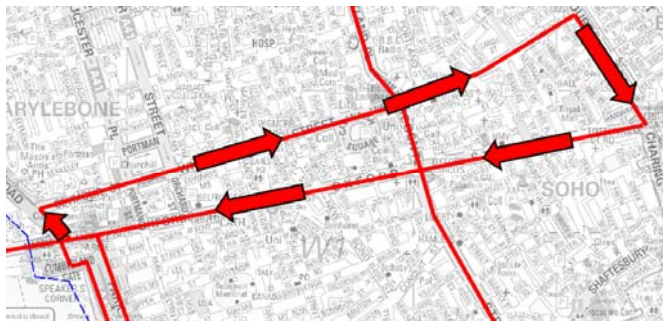
Concept – relocate some bus routes



8.2.1 Relocate Some Bus Routes - refined



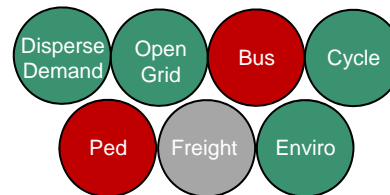
Concept – one way bus loop



8.2.2 Bus Loop - refined

Recommendation:
Further study 8.2.1

Do not
progress 8.2.2

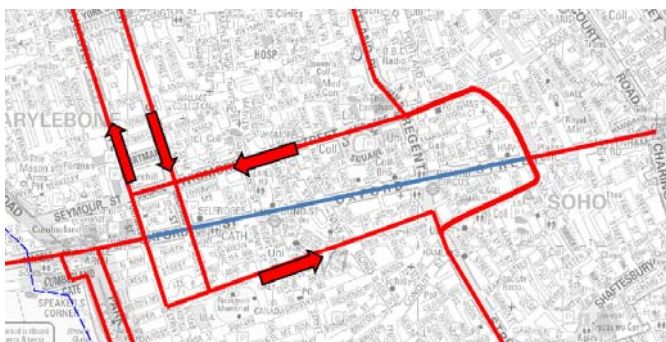


- 8.2.1 Relocation of some bus routes to Wigmore Street to reduce impact of buses on Oxford Street
- This could disadvantage passengers by splitting services with common destinations
- Could expand retail catchment of West End only if combined with land use changes
- 8.2.2 One way bus loop refined to reverse flow – easier (left) turns and extension to Edgware Road to balance traffic reduction
- Not a simple network, confusing for passengers, many of whom are visitors as well as greater walk & bus journey times

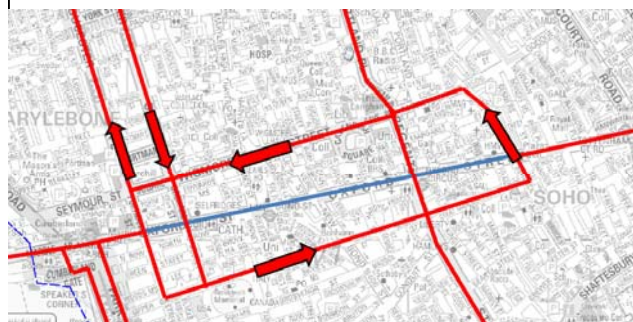
8.3 Pedestrianisation of Oxford St with Bus Loop



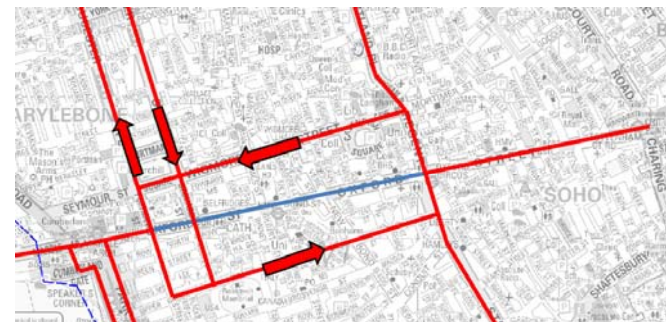
Concept



8.3.1 Reverse Bus Loop



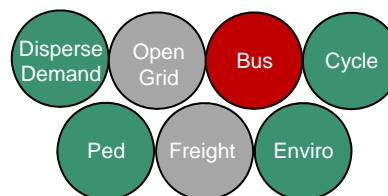
8.3.2 Regent St Open



8.3.3 Shortened Loop

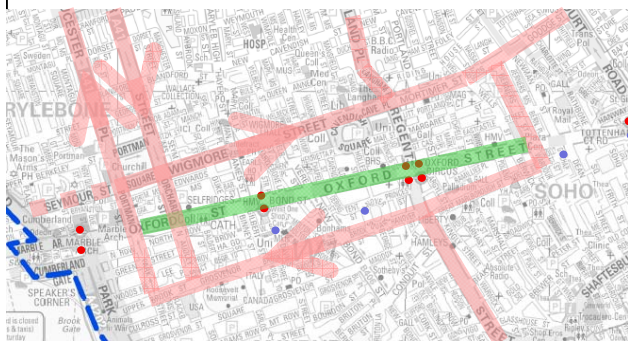
Recommendation:
Further study 8.3.3

**Do not
progress others**



- Original concept of bus loop running west along Wigmore Street and east along Brook Street
- 8.3.1 – Reverse bus loop to facilitate better (left) turns
- 8.3.2 Retain Regent St full working to avoid severe traffic disruption to West End network
- 8.3.3 Avoid chicane on Regent St and narrow streets in Soho which may not be suitable for buses – bus loop ends at Regent St
- Spreads buses over two routes to reduce impact on Wigmore / Brook Streets and pedestrianises a key section of Oxford St

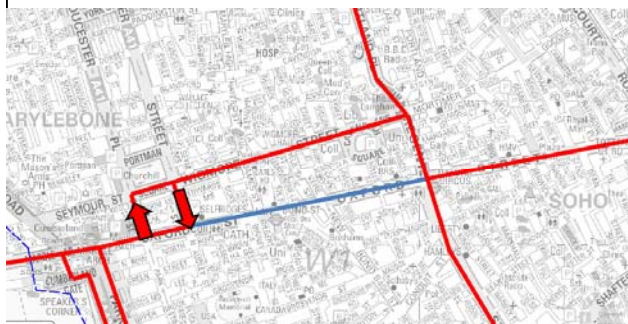
8.4 Pedestrianisation of Oxford St with diversions or truncation of routes



Concept



8.4.1 Buses Two Way via Wigmore St



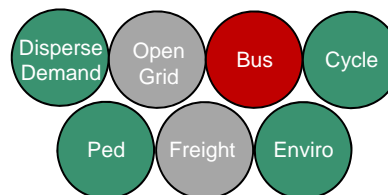
8.4.2 Buses Two Way via Wigmore St, curtailed



8.4.3 Buses curtailed at both ends

Recommendation:
Further study 8.4.2

Do not
progress others



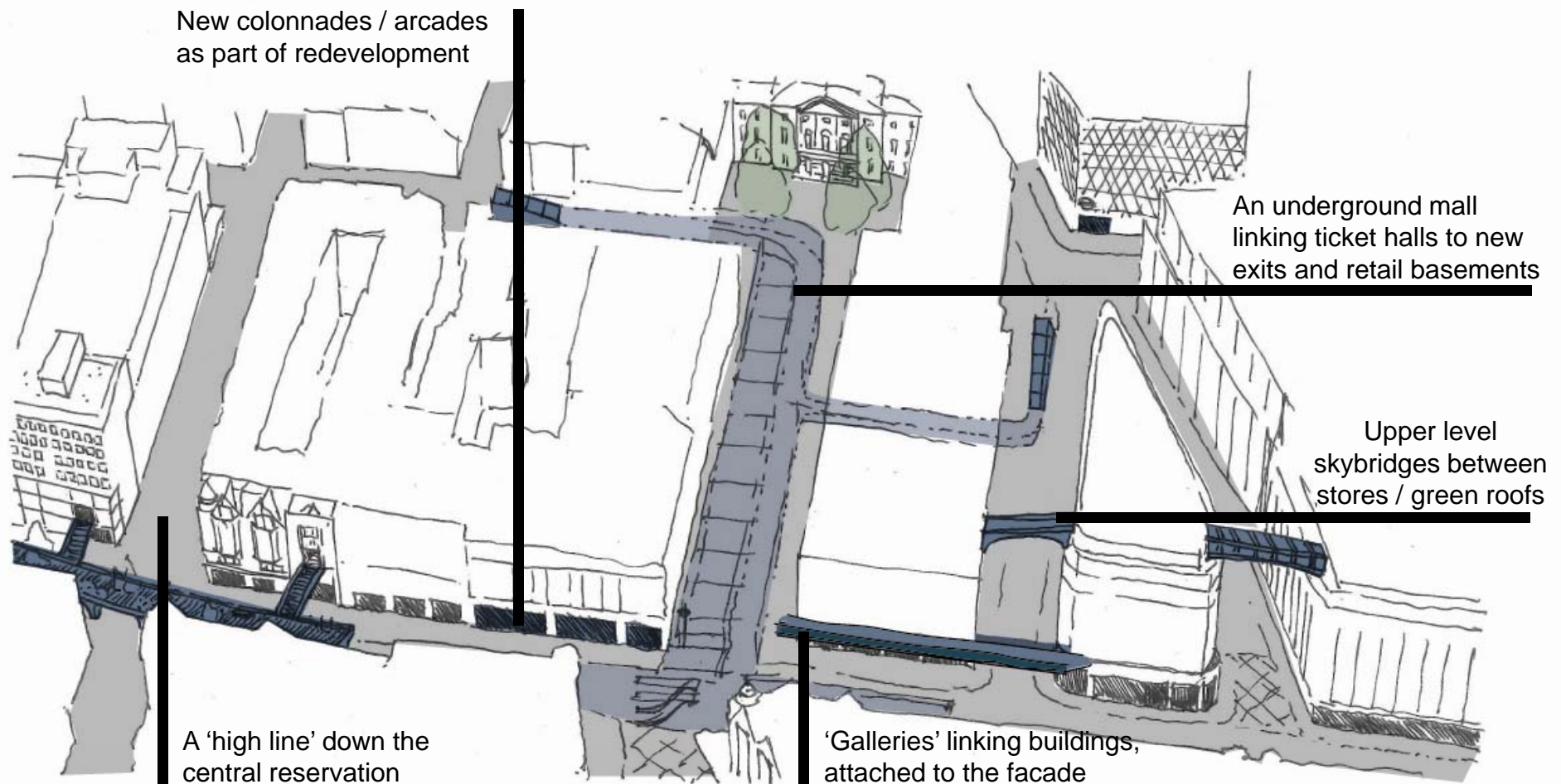
- Alternatively, combining 8.2.1 (Simple Bus Network) and 8.3 (Pedestrianisation), there are three options to improve Oxford Street, at the expense of either Wigmore Street congestion or bus network coverage

- 8.4.1 Diverts all buses via Wigmore Street and Tottenham Court Road – this is likely to impact residents and cause junction traffic delays
- 8.4.2 Minimises the impact on residents by reducing the diversion from the most congested section
- 8.4.3 has unacceptable impacts on the bus network area connectivity

1. Dispersing Demand
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6. Freight
7. Environment
8. Taxis and Buses
- 9. Pedestrian Capacity on Oxford St**

9. If no additional pedestrian space can be found within current street layout, innovative solutions may be required

There are several layering options for increasing pedestrian permeability:

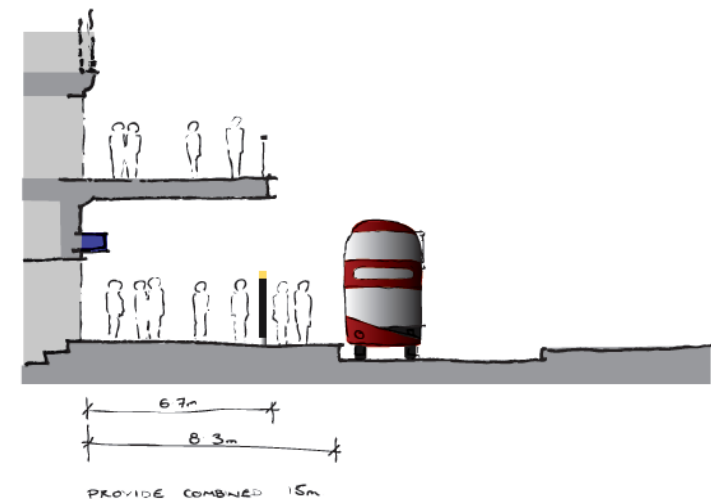
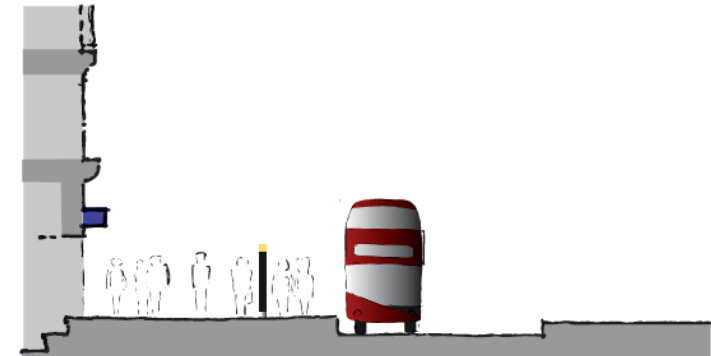


9. To achieve a high level of pedestrian comfort, innovative solutions are required

- In most areas, significantly more pedestrian space is required for pedestrian comfort

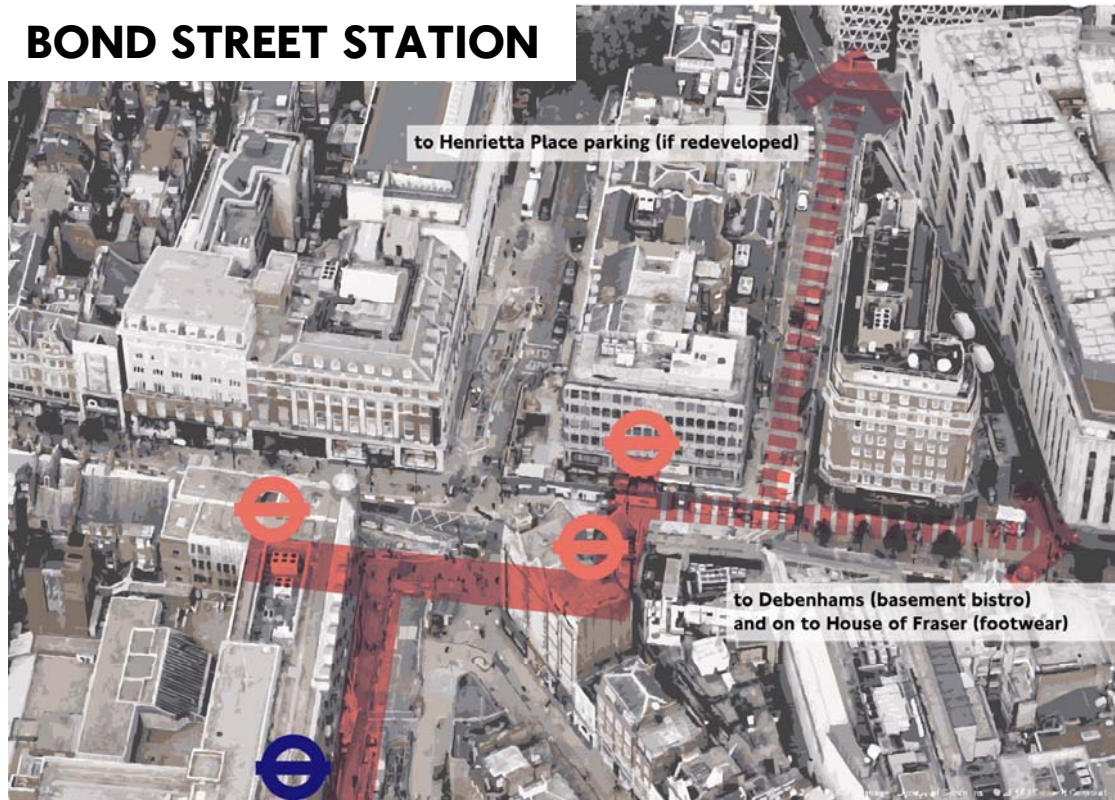
eg. Outside Bond St station requires 15m footway – nearly the whole carriageway

- Additional space can be delivered at grade (pedestrianisation, parallel routes), potentially at the cost of other modes
- High footfall below ground (Tube stations) and above ground (department stores) may support a multi-level approach
- However, footfall is fickle – pedestrian behaviour may deviate from expectations



9.1 Underground Mall – Additional pedestrian capacity no changes at street level

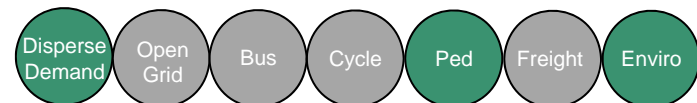
BOND STREET STATION



- Direct access from ticket hall level for pedestrians with little to no impact at street level
- Construction likely to be extremely disruptive, and have very high complexity given need to reconfigure STATs and ticket halls bearing in mind position of the Central Line
- Limited opportunities along Oxford Street – likely to be confined to Bond Street
- Given implementation issues it is likely to have a very high cost (over £100m)

Recommendation:
Further study for Bond St

Do not
progress otherwise

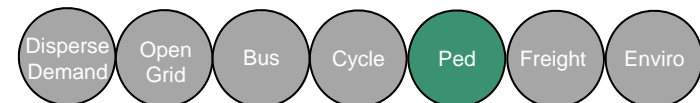


9.2 Colonnades/Arcades – Additional at grade pedestrian capacity, between Oxford Circus and New Bond Street



- Additional pedestrian space provided at grade
- Construction likely to be disruptive and long-term. Negotiations required with landlords to increase floor-space likely to be arduous, or long-term changes required
- It is likely to be seen as an opportunity cost to developers as their retail frontage will be further from the kerb and ground floor footprint reduced
- This is only possible in large block redevelopment – although some sites (eg Fashion School) are particularly suitable to such a requirement

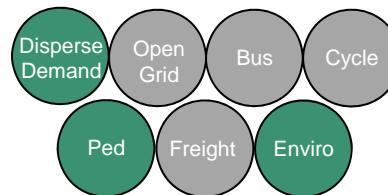
Recommendation:
Further study for new development



9.3 Sky Bridges – pedestrian linkages between buildings at an elevated level



**Recommendation:
Do not progress**



Bridge of Aspiration, Covent Garden

- Possible to connect existing and new rooftop gardens
- Construction likely to be complex and issues surrounding ownership, control and capital costs likely to be challenging. Risk of discontinuities depending on uptake
- Individual cost moderate (£10-15m per bridge, average length) but high network cost (>£100m)
- Risk of becoming a white elephant if insufficient connections achieved

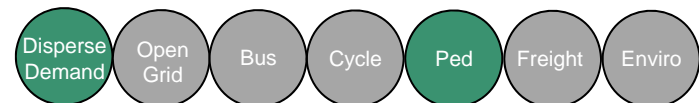


9.4 Galleries – new sculptural element connected to existing structures



- Major sculptural feature for Oxford Street with impact on brand from positive, innovative statement
- Continuous walkway provides strong pedestrian route catering to east-west desire lines
- Size and high quality means it is likely to have a substantial cost. (c.£100m+)
- Radical option with the potential to transform Oxford Street

Recommendation:
Further study

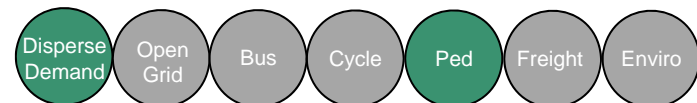


9.5 High Line – Free Standing Potential Attractor



- Signature feature/attractor (if done well), with progressive interaction with surrounding plots that spreads pedestrian demand from footway
- Likely to be visually dominant in a high quality pedestrian environment
- Land take and impact of surrounding supports/structures likely to be considerable
- Likely very high cost (£100m+) and considerable construction impact
- West End Brand impacts unproven

Recommendation:
Do not progress



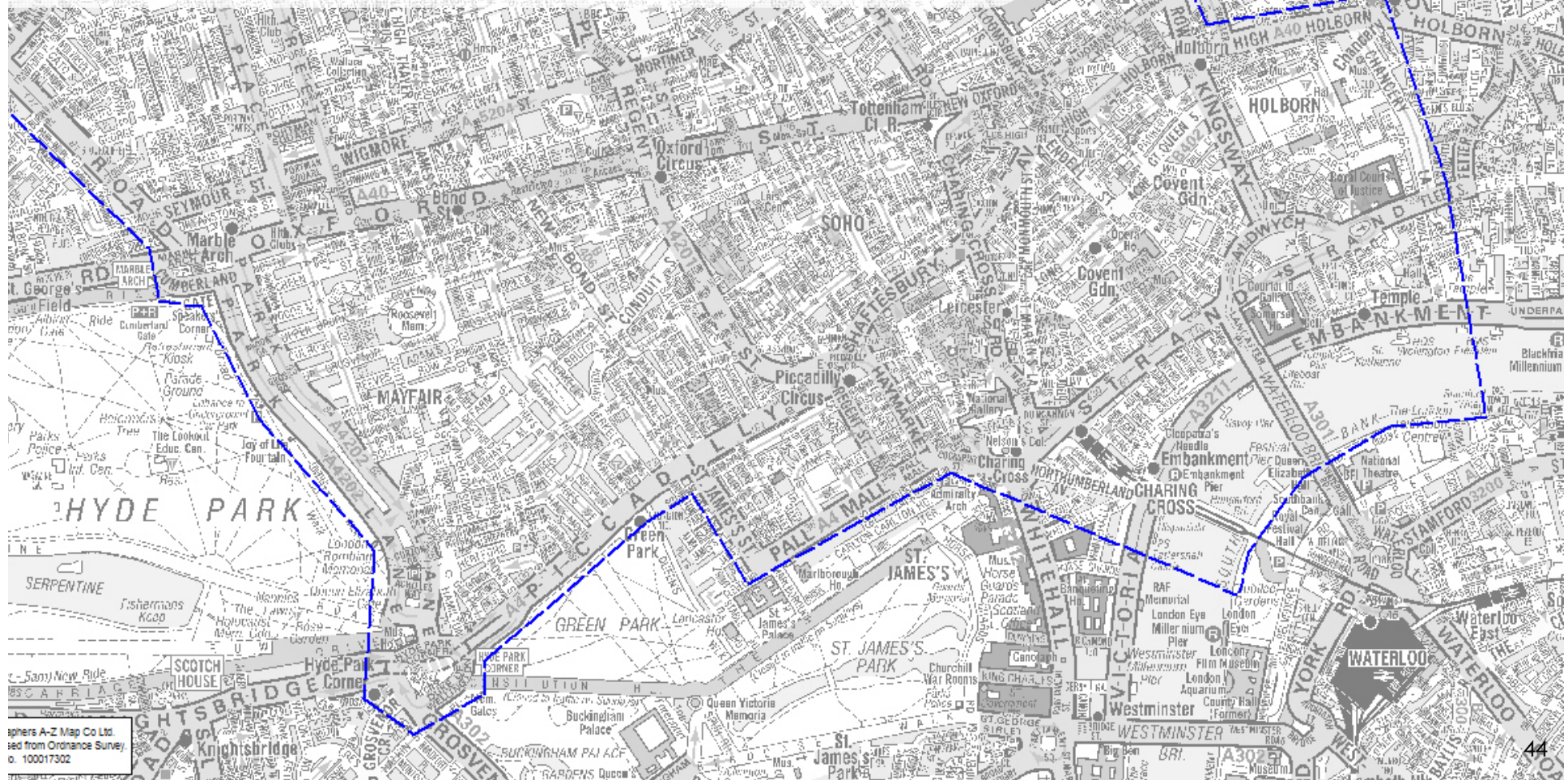
Targeted Options – Oxford Street

The targeted options recommended to be taken forward are:

| TARGETED OPTIONS | | PROGRESS | |
|--|--|----------|--|
| 8 Bus and Taxis | 8.1.1 Taxi Rerouted with new taxi ranks on side roads | | |
| | 8.1.2 Taxis Curtailed, with new taxi ranks on side roads | | |
| | 8.2.1 Relocate some bus routes | | |
| | 8.2.2 Bus Loop – refined (clockwise) | | |
| | 8.3.1 Reverse Bus Loop using Brook/Wigmore Sts (anti-clockwise) | | |
| | 8.3.2 Reverse Bus Loop using Brook/Wigmore Sts, Regent St Open | | |
| | 8.3.3 Shortened Bus Loop (curtailed to Regent Street) | | |
| | 8.4.1 Full pedestrianisation – Buses two-way on Wigmore Street | | |
| | 8.4.2 West Oxford Street Pedestrianised – Buses via Wigmore St | | |
| | 8.4.3 Buses curtailed at both TCR and Marble Arch – Routes Split | | |
| 9 Pedestrian Capacity on Oxford Street | 9.1 Underground Mall | Bond St | |
| | 9.2 Colonnades / Arcades | New Devt | |
| | 9.3 Sky Bridges | | |
| | 9.4 Galleries | | |
| | 9.5 High Line | | |

- We believe that some options can be taken forward together

Strategic direction and next steps



Strategic direction for the West End

- All strategic options recommended for further study could be taken forward together
- Any additional options for further study should be identified now

Next Steps

- Endorse options proposed for further study for approval by West End Partnership Board Meeting 14 January 2015
- Allocate proposed options for further study to responsible entities, (boroughs, TfL, NWECC) – WEP Transport Working Group, Spring 2015
- Generate work programme for implementation – Spring/Summer 2015