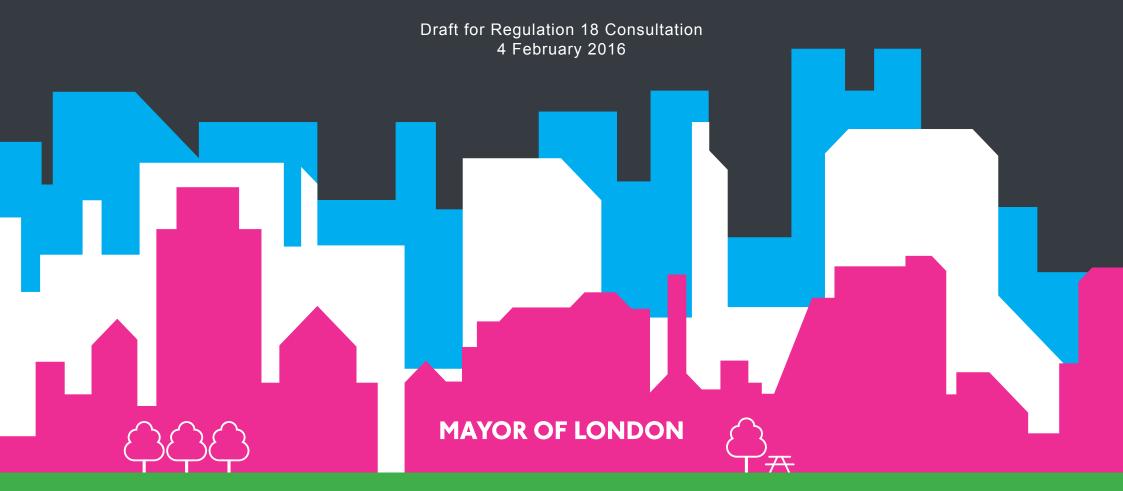


# Park Royal Transport Strategy Appendix A

LOCAL PLAN SUPPORTING STUDY



### **Role of this study**

This study has been produced to inform the draft Local Plan and should be read alongside other relevant studies, the draft Local Plan and the London Plan.

### **Study overview**

Document title	Park Royal Transport Strategy
Lead author	SDG
Purpose of the study	Strategic assessment of the existing transport provision in Park Royal, the impact of the planned future growth and identification of the transport interventions required to mitigate those impacts.
Stage of production	Draft completed to inform Regulation 18 version of the Local Plan
Key outputs	<ul> <li>A review of the existing performance of transport modes in Park Royal</li> <li>Analysis of future demand in Park Royal and its impact on the transport modes</li> <li>Identification of six packages of interventions required to improve existing performance and to mitigate the impact of future demand on transport modes.</li> </ul>
Key recommendations	<ul> <li>Emerging recommendations include:</li> <li>providing transport networks that enhance the communities they serve and help local business to operate and grow sustainably, both now and in the future.</li> <li>interventions for a variety of "Planning", "Demand Management", "Highway Interventions" and "Public Transport Improvements".</li> </ul>
Relations to other studies	Interfaces with the Old Oak Strategic Transport study, Public Realm, Walking and Cycling Strategy, North Acton study and the Smart Strategy Interim Report.
Next steps	The Strategy is in draft and is available for comment. Necessary revisions will be made following public consultation before the document is finalised to sit alongside the Regulation 19 consultation on the Local Plan. A shortlist of interventions will be defined and developed. This will include detailed costings of each intervention and potential funding sources.

### **Consultation questions**

- 1. Do you agree with the recommendations of this supporting study? If not, please explain why.
- 2. Do you agree with the methods used in delivering the recommendations? If not, please set out alternative approaches and why these should be used.
- 3. Are there any other elements which the supporting study should address? If yes, please define these.

You can provide comments directly through:

opdc.commonplace.is



## Park Royal Transport Strategy Intervention Options Long List

For Consultation

OPDC and Transport for London

27 January 2016

## Park Royal Transport Strategy – focus of interventions



### Planning (PL)

Area-wide overarching planning controls for new developments and enforcement for existing developments to limit and discourage the use of the car as a main mode of transport and support sustainable travel choices

### **Highway Improvements** (HI)

Physical interventions to the highway, junctions and walking and cycling infrastructure to increase total transport capacity and interoperability

### **Demand Management** (DM)

Multi – stakeholder/framework agreements and programmes to reduce car dependency, improve efficiency, reduce costs and lower emissions

### **Public Transport** Improvements (PT)

Physical interventions to improve the connectivity, accessibility and inclusivity of the public transport network

- Respond to the challenges and opportunities of the existing and future strategic transport network and the Old Oak Common site
- Deliver against the objectives and help accomplish the vision set for Park Royal
- Create opportunities for long lasting physical improvements and behavioural change

### Long list of options

Modified bus services in the Park Royal area PT1 Shuttle bus services PT2 Improved station facilities PT3

HI1 Abbey Road junction improvements

HI2 Park Royal Rd / Coronation Rd junction improvements

> HI2a **Basic intervention**

HI2b Intermediate intervention

Extensive intervention HI2c

HI3 Acton Lane/North Acton junction improvements

Cycle improvements HI4

HI5 Pedestrian improvements

Road resurfacing/repairs HI6

Decluttering of streets HI7

New strategic road connections HI8

Development control strategy DM1

Travel plans DM2

Delivery and service plans DM3

Freight consolidation DM4

Parking and loading controls DM5

Waterborne freight movements DM6

Mode share targets DM7

Rail freight DM8

**Transport Panel** PL1

Smart management of the transport network PL2

Improved workplace cycle facilities PL3

Greening of corridors and placemaking PL4

Enhance personal security to encourage walking PL5

**HGV** corridors PL6

Low emissions zone PL7

Incentives for electric vehicles PL8

Car club/car sharing strategy PL9

### Agreed assessment matrix

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		ility	
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Very Low	Very Low	Short Term
PL2	0	44	44	√√	11	✓	✓	0	44	✓	Low	Medium	Medium Terr
PL3	✓	✓	✓	✓	0	<b>√</b> √	√√	✓	44	0	Very Low	Low	Short Term
PL4	<b>4 4</b>	✓	✓	√√	0	✓	✓	<b>444</b>	√√	√√	Low	Medium	Medium Ter
PL5	✓	✓	√√	✓	0	✓	✓	√√	√√	<b>444</b>	Very Low	Low	Short Term
PL6	✓	√√	✓	√√	✓	0	44	0	0	✓	Medium	Medium	Medium Ter
PL7	0	√√	0	0	√√	✓	0	√√	√√	0	Medium	High	Medium Ter
PL8	0	✓	0	✓	<b>444</b>	✓	0	✓	√√	0	High	Medium	Medium Ter
PL9	0	√√	0	✓	√√	✓	✓	✓	√√	0	Very Low	Low	Medium Teri
DM1	<b>√ √</b>	44	0	√√	0	√√	44	✓	✓	✓	Low	Very Low	Short Term
DM2	✓	√√	✓	✓	✓	✓	✓	0	√√	✓	Very Low	Low	Short Term
DM3	✓	44	✓	√√	✓	✓	44	0	0	✓	Very Low	Low	Short Term
DM4	0	44	✓	<b>√</b> √	✓	✓	44	0	0	✓	Medium	Medium	Short Term
DM5	0	44	<b>44</b>	√√	0	✓	✓	11	44	✓	Very Low	Medium	Short Term
DM6	44	44	√√	√√	<b>4</b>	✓	44	✓	0	44	Medium	High	Long Term
DM7	✓	444	√√	0	✓	✓	✓	✓	44	✓	Very Low	Medium	Long Term
DM8	44	44	✓	√√	0	✓	<b>44</b>	✓	0	✓	Medium	Medium	Long Term
HI1	44	44	44	✓	0	✓	✓	✓	✓	44	Low	Low	Medium Ter
HI2a	✓	✓	44	✓	0	✓	✓	0	0	✓	Very Low	Very Low	Short Term
HI2b	44	✓	44	44	0	✓	✓	✓	✓	✓	Low	Low	Medium Ter
HI2c	44	44	44	44	0	✓	✓	11	✓	44	High	High	Long Term
HI3	✓	✓	44	✓	0	✓	✓	0	0	✓	Very Low	Very Low	Short Term
HI4	44	44	44	✓	0	✓	✓	✓	44	✓	Low	Medium	Short Term
HI5	44	✓	44	✓	0	✓	✓	11	44	44	Low	Low	Short Term
HI6	✓	✓	111	√√	0	✓	✓	11	✓	✓	Very Low	Very Low	Short Term
HI7	44	✓	✓	✓	0	✓	✓	11	✓	✓	Very Low	Very Low	Short Term
HI8	111	44	✓	√√	0	44	11	0	0	0	Very High	Very High	Long Term
PT1	<b>444</b>	11	<b>4</b>	✓	0	<b>4</b> 4	11	0	<b>4</b> 4	0	Low	Medium	Medium Ter
PT2	11	✓	✓	0	✓	✓	✓	0	<b>4</b>	0	Low	Medium	Medium Ter
PT3	44	11	<b>4</b>	✓	0	11	11	✓	✓	✓	High	Medium	Long Term

- Provides direct linkage between the objectives and the assessment framework
- Retains links to TfL's Roads Task Force (RTF) street functions
- Considers separately the deliverability of each option in terms of cost, difficulty and timescale

	KEY
0	Does not meet objective
✓	Partially meets objective
<b>√</b> √	Meets objective
<b>/ / /</b>	Meets objective across multiple criteria

Note: Further details in the main report under the Intervention Assessment section.

### Highway improvement options – long list for consultation

HI1 Abbey Road junction improvements

HI2 Park Royal Rd / Coronation Rd junction improvements

> Basic intervention HI2a

Intermediate intervention HI2b

Extensive intervention HI2c

HI3 Acton Lane/North Acton junction improvements

Cycle improvements HI4

HI5 Pedestrian improvements

Road resurfacing/repairs HI6

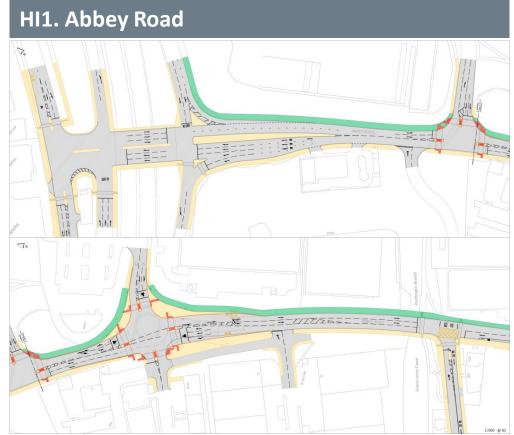
Decluttering of streets HI7

New strategic road connections HI8

### HI1: Abbey Road junction improvements – Description

### Abbey Road (North Circular to Twyford Abbey Road)

- 1. Identified as a key bottleneck in the Park Royal road network during site visits with stakeholders
- 2. Issues associated with high volumes of traffic gaining access to and from the North Circular
- 3. Capacity issues at Hanger Lane are a major contributor, but the following localised junction improvements would potentially provide benefit:
  - Conversion of roundabout to signals and coordination of traffic signal timings along Abbey Road. Existing signals do not operate under Urban Traffic Control (UTC) which means they cannot be timed to provide progression in response to variable traffic flows. The existing roundabout also results in queues blocking through the junctions which could be better managed if replaced by signals.
  - Reallocation of lanes to provide additional right turn capacity onto the North Circular eastbound. Demand for this movement is approximately 50% higher than the ahead movement but this traffic can only use 1 of 3 existing available lanes.
- 4. Junction modelling is needed to quantify potential benefits and optimise designs





### HI1: Abbey Road junction improvements – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverability		
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE	
HI1	√√	<b>√ √</b>	<b>√</b> √	✓	0	✓	✓	✓	✓	√√	Low	Low	Medium Term	

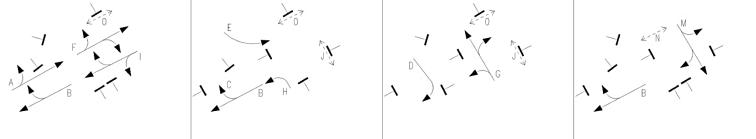
- 1. Reduction in congestion would benefit general traffic, freight movements and buses
- 2. Cyclist safety would benefit from reduced level of traffic congestion on key corridor and removal of an existing roundabout
- 3. Replacement of roundabout with signals provides new pedestrian and cycle crossing facilities
- 4. Upgrades do not deliver a step change in capacity or improve urban realm outcomes
- 5. Some small benefit to servicing and access due to improved traffic flows
- 6. Some small benefit to air quality resulting from reduced congestion, although does not improve major arterial roads which are major generators of emissions
- 7. Junction improvements would support growth in travel on internal roads, but without additional capacity at Hanger Lane there will be limited benefit to journeys to and from the strategic road network
- 8. Cost and risk relatively low and would fall under "business as usual" type junction upgrades

## HI2(a) Park Royal Road/Coronation Road Junction improvements (Basic intervention) – Description

### **Option A Low Cost Junction improvement**

- 1. Existing staggered crossroads arrangement means that current signal operation is inefficient and a source of significant delay to all modes
- 2. Lowest cost and timescale option would be to review and optimise existing signal timings. It is possible that a review of the signal staging and timings could identify a more efficient operation that better meets current demand, with no change to existing geometry
- 3. Junction modelling is needed to quantify potential benefits and optimise designs

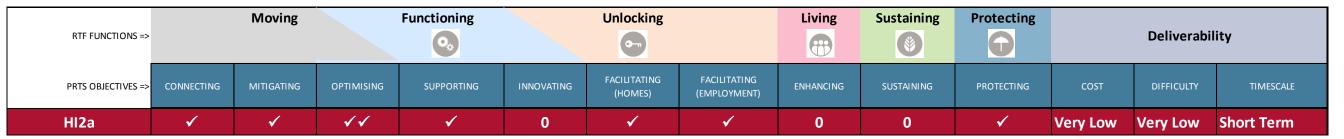




Source: TfL



## HI2(a) Park Royal Road/Coronation Road junction improvements (Basic intervention) – Assessment



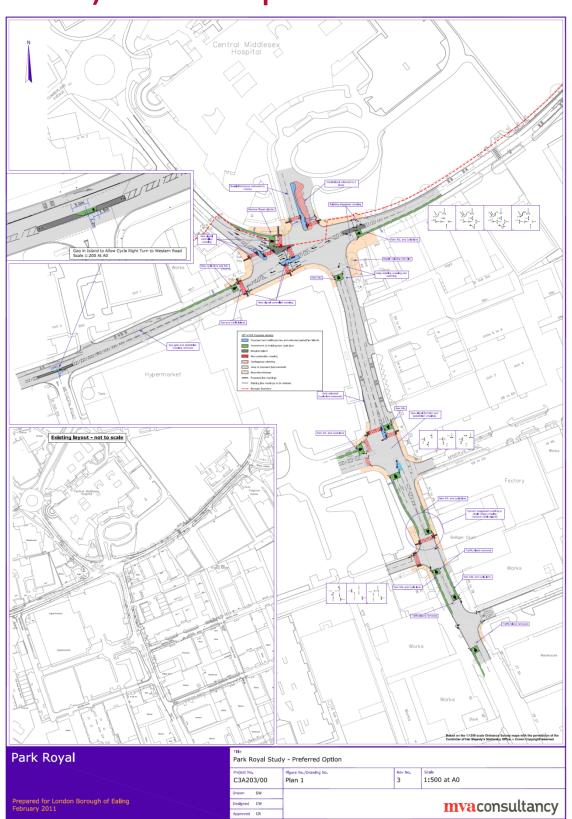
#### **Option A Low Cost Junction improvement**

- Reduction in congestion would benefit general traffic, freight movements and buses
- Cyclists would benefit from reduced level of traffic congestion on key cycle corridors
- 3. Traffic signal timing changes do not deliver a step change in capacity or improve urban realm outcomes
- 4. Some small benefit to servicing and access due to improved traffic flows
- Some small benefit to air quality resulting from reduced congestion
- Does not address existing issue of pedestrian crossing facilities only being on limited arms and not meeting desire lines
- 7. Cost and risk very low and could be undertaken as part of TfL's Timing Review programme
- 8. Any timing review would also need to consider operation and signal timings at signalised junctions to the south (the ASDA access junction and Standard Road)

## HI2(b) Park Royal Road/Coronation Road junction improvements (Intermediate intervention) – Description

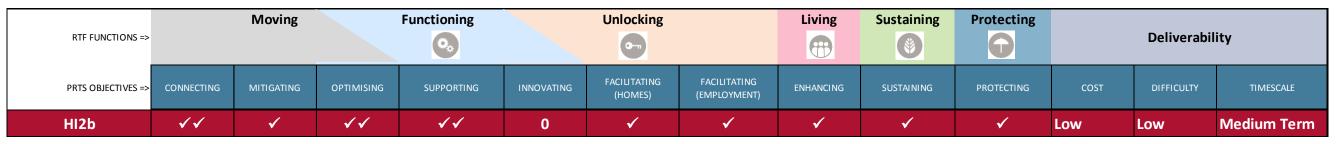
### **Option B Medium Cost Junction Improvement**

- 1. Existing staggered crossroads arrangement means that current signal operation is inefficient and a source of significant delay to all modes
- 2. Medium cost and timescale option would be to adopt the preferred design option identified by MVA in 2011 as part of a study commissioned by LB Ealing
- 3. This option aims to limit changes to junction geometry so as not to require costly utilities diversions
- 4. This option provides additional pedestrian crossing facilities on desire lines
- 5. Includes some short sections of new cycle lanes
- 6. Includes improvements to the signalised junctions to the south, including installation of SCOOT control at the junctions to provide coordination
- 7. This option was identified after consultation with various stakeholder groups and assessment of four alternatives
- 8. Design needs reviewing to ensure pedestrian refuge islands are of sufficient width and to confirm impact to kerb lines





## HI2(b) Park Royal Road/Coronation Road junction improvements (Intermediate intervention) – Description

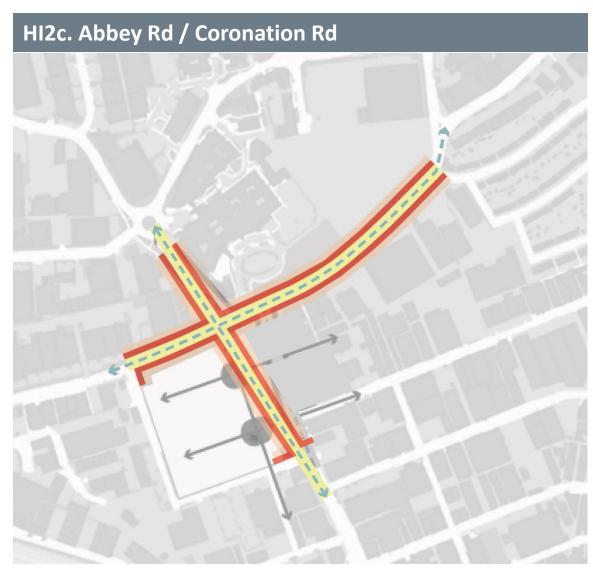


- 1. This design was found by MVA to reduce delays and congestion in the area with the average travel time for each vehicle in the network being reduced by 17% (AM peak) and 9% (PM peak). Average speed per vehicle also improves with a 9% increase in the AM peak and 5% in the PM peak
- 2. Cyclists would benefit from reduced level of traffic congestion on key cycle corridors and short sections of cycle lane on approach to the junctions
- 3. Some small benefit to servicing and access due to improved traffic flows
- 4. Some small benefit to air quality resulting from reduced congestion
- 5. Upgrades do not deliver a step change in capacity or improve urban realm outcomes
- 6. Junction improvements would support growth in travel on internal roads, but do not address arterial journey times
- 7. Additional crossing facilities and simplified traffic movements at junctions would benefit pedestrians encouraging further walking and cycling
- 8. Cost and risk could be relatively low and would fall under "business as usual" type junction improvement works although a design review is required to confirm if there is a costly impact to utilities

## HI2(c) Park Royal Road/Coronation Road junction improvements (Extensive intervention) - Description

### **Option C High Cost Junction improvement**

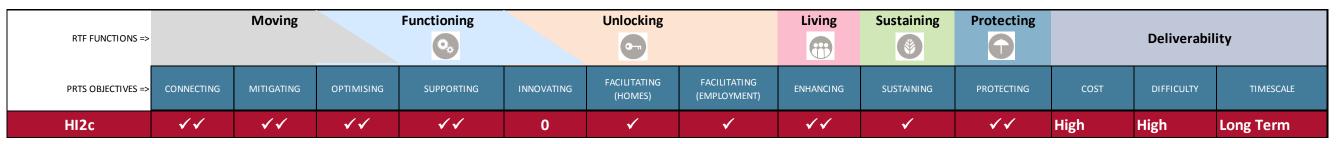
- 1. Existing staggered crossroads arrangement means that current signal operation is inefficient and a source of significant delay to all modes
- 2. High Cost Option would be to realign Park Royal Road at the Abbey Road / Coronation Road junction to remove stagger. This would allow for more efficient junction operation and simplify junction movements for all users
- 3. This also presents an opportunity to create a "Heart of Park Royal" with the potential for new public space on the south eastern corner of the junction
- 4. This option would require significant land acquisition from the existing ASDA car park and most likely replacement of lost parking in the form of a multi-storey parking structure
- 5. Earlier studies by LB Ealing identified significant amounts of utilities under footways, relocation of which would be required, further increasing costs
- 6. Junction modelling is needed to quantify potential benefits and optimise designs



Source: Old Oak and Park Royal Opportunity Area Planning Framework (GLA, 2015)



## HI2(c) Park Royal Road/Coronation Road junction improvements (Extensive intervention) – Assessment



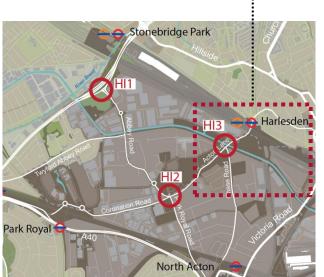
- 1. Reduction in congestion would benefit general traffic, freight movements and buses
- 2. Cyclists would benefit from reduced level of traffic congestion on key cycle corridors and new cycle facilities could be provided
- 3. Potential step change in junction capacity
- 4. Potential to improve urban realm outcomes with new public space
- 5. Could help support wider objectives of mode shift to sustainable modes by facilitating a retail/leisure "Heart of Park Royal"
- 6. Some small benefit to servicing and access due to improved traffic flows
- 7. Some small benefit to air quality resulting from reduced congestion, although does not improve major arterial roads which are major generators of emissions
- 8. Additional crossing facilities and simplified traffic movements at junctions would benefit vulnerable road users (VRUs)

HI3: Acton Lane/North Acton Road junction improvements - Description

### **Acton Lane / North Acton Road Junction**

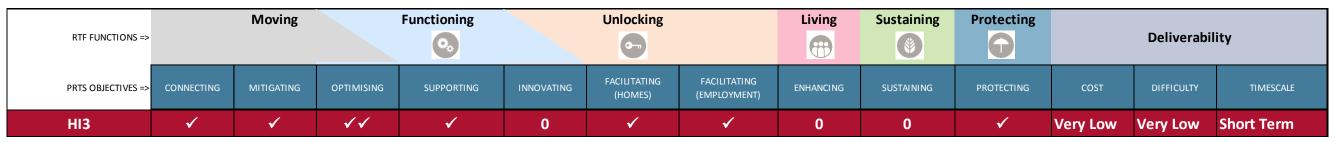
- 1. This junction experiences high demand as an alternative route between the A40, the North Circular and destinations to the north-east of Park Royal
- 2. It is unlikely any significant changes to junction geometry could be made due to local constraints such as the canal bridge and alignment of Barretts Green Road
- 3. Possible measures would be:
  - a) Review and optimisation of traffic signals.
  - Extend parking restrictions along Barretts Green Road to provide wider effective lane widths and increase capacity.
  - c) Review right turning movements with view to banning some to increase junction capacity. This would be subject to alternative routes being available, particularly for HGVs.
- 4. Junction modelling is needed to quantify potential benefits and optimise designs







### HI3:Acton Lane/North Acton Road junction improvements -Assessment



- 1. Reduction in congestion would benefit general traffic, freight movements and buses
- Cyclists would benefit from reduced level of traffic congestion on key cycle corridors
- Upgrades do not deliver a step change in capacity or improve urban realm outcomes
- 4. Some small benefit to servicing and access due to improved traffic flows
- 5. Some small benefit to air quality resulting from reduced congestion, although does not improve major arterial roads which are major generators of emissions
- 6. Junction improvements would support growth in travel on internal roads, but do not address arterial journey times
- 7. Potential to investigate introduction of pedestrian crossing facilities that are currently omitted from the junction
- 8. Cost and risk relatively low and would fall under "business as usual" type works

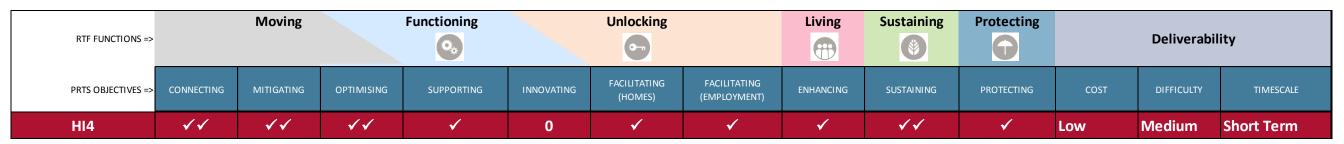
### HI4: Cycle improvements – Description

- 1. Cycle infrastructure improvements to encourage increased cycle use focused on existing signed routes and connections to the west and based on OPDC design guide and strategy
- 2. Analysis of Journey to Work Data shows vast majority of employees live within 8km of Park Royal with a significant concentration within 5km or nearer i.e. well within typical cycling distances in London
- 3. Segregation likely to be challenging due to parking and narrow carriageway widths. Improvements to focus around:
  - 1. Improved connections to National Cycle Route 6 (following the Grand Union Canal) which could act as key arterial cycle route into Park Royal. There are currently only four points at which cycle friendly routes connect with the 2.6km of NCR 6 that runs through Park Royal.
  - 2. Improved connections to rail stations with introduction of cycle hire facilities, such as Brompton Cycle Hire, to allow rail travellers to complete their journeys by cycle.
  - 3. Improved wayfinding.
  - 4. Enhanced cycle crossing facilities where required.
- 4. Area-wide improvements should also be supported by investments in "end-of-journey" cycle facilities in the form of cycle parking, lockers, showers etc. More details of these are described in intervention PL3





### HI4: Cycle improvements – Assessment



- 1. Increased cycle usage will reduce congestion, benefiting general traffic, freight movements and buses
- 2. Cyclists would benefit from enhanced infrastructure and improved wayfinding
- 3. Pedestrians potentially benefit from lower traffic volumes and ability to utilise new cycle connections
- 4. Upgrades do not deliver a step change in capacity or improve urban realm outcomes
- 5. New connections help reduce severance effects within Park Royal consideration needs to be given to improving connections to National Cycle Route 6
- 6. Some small benefit to air quality resulting from increased cycle usage, although does not improve major arterial roads which are major generators of emissions
- 7. Increased cycle usage would improve health of new cyclists and promote more active lifestyles
- 8. Would support growth in travel on internal roads, by encouraging mode shift to a sustainable mode
- Additional crossing facilities and raising driver awareness of cyclists through road markings would improve safety
- 10. Cost and risk relatively low although potentially challenging to identify appropriate measures/connections

### HI5: Pedestrian improvements – Description

- 1. A design guide and strategy will be developed for the Old Oak and Park Royal area to ensure consistent, high-quality urban realm that increases the attractiveness of walking as a mode. Local Borough guidance such as the Brent Placemaking Guide, Ealing Urban Realm Strategy or Hammersmith and Fulham StreetSmart streetscape design guide would be used as a basis for the guide
- 2. Expand on existing Legible London signage and wayfinding that is currently restricted to the Grand Union Canal. Likely to require tailoring to suit the locations of interest within Park Royal
- 3. Effective use of surface treatments, materials and lighting together with environmental interventions such as public art combining to create pathways, landmarks and destinations. Other measures could include removal of graffiti and introduction of new pedestrian links
- 4. Prioritised upgrades to pedestrian connections from the Park Royal estate to stations
- 5. Improved crossing facilities to reduce severance effect of road traffic
- 6. Improved footways in terms of quality of surface and removal of clutter
- 7. Improved connections focusing on facilitating direct and safe walking and cycling routes from the stations to places of work



Legible London sign along the Grand Union Canal



Pedestrian connection to North Acton Station





Kings Cross Urban realm Strategy and localised parameter plans ensured a consistent high quality urban environment

### HI5: Pedestrian improvements – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		lity	
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
HI5	√√	✓	<b>√ √</b>	✓	0	✓	✓	<b>√ √</b>	√√	√√	Low	Low	Short Term

- 1. Benefits of reduced dependency on car travel likely to be offset by reduction in traffic capacity to provide an improved pedestrian environment
- 2. Improved connections to stations likely to encourage wider use of rail as a mode of transport
- 3. Cyclists would also benefit from shared pedestrian/cycle connections and upgrades to urban realm
- 4. New connections could help reduce severance and increase the permeability especially to/from residential areas to the proposed retail core
- 5. Some small benefits to air quality are expected from increased walking/public transport usage
- 6. Increased walking would improve health and promote more active lifestyles
- 7. Additional crossing facilities especially at junctions and along the main corridors such as Park Royal Road and Coronation Road would improve safety
- 8. Cost and risk of interventions is relatively low although they are dependent upon the extent of urban realm upgrades and land ownership
- 9. Rail and underground passengers would benefit from improved station environment and onward connections
- 10. Servicing and freight movements could occur more freely due to fewer cars on the local road network
- 11. Should be delivered in the shorter term, but with focus on connections to areas of increased development

### HI6: Road resurfacing/repairs - Description

- 1. Road surface and footway quality varies quite significantly throughout Park Royal, with some sections showing need of repair
- 2. The area would benefit from a conditions assessment to identify and prioritise areas for maintenance
- 3. Measures could include surface dressing, resurfacing, pot hole repair, road markings, etc
- 4. The DfT sponsored Highways Maintenance Efficiency Programme (HMEP) identified that intervening at the right time reduces the amount of potholes forming and prevents bigger problems later
- 5. Making repairs improves safety and reduces running costs for vehicles that use the roads regularly
- 6. Boroughs would need to work together and develop a coordinated approach to asset management best achieved by setting up of a Transport Working Group (see PL1)



On-site evidence of poor condition of the road surface near Harlesden Station

## HI6: Road resurfacing/repairs – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabil	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
HI6	✓	✓	<b>///</b>	<b>√ √</b>	0	✓	✓	√√	✓	✓	Very Low	Very Low	Short Term

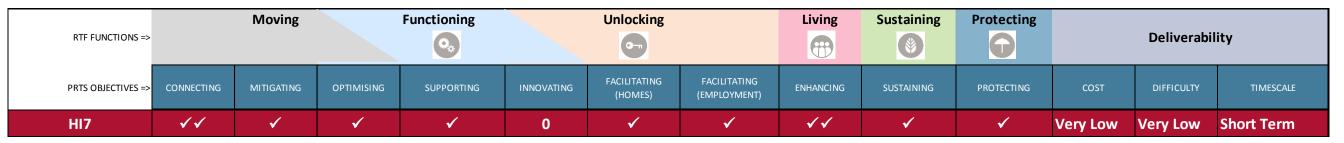
- 1. Improved road surface will create more comfortable journeys for road users
- 2. Pot holes and other road surface defects are a hazard to cyclists and lead to slow journeys
- 3. Improved carriageway surfaces /treatments will provide an improvement to the look and feel of the area
- 4. Servicing trips and freight movements will benefit from reduced wear and tear to fleet vehicles and less risk of damage to goods being transported
- 5. Road safety benefits for all road users from well maintained and clearly marked road surfaces
- 6. Numerous types and levels of maintenance can be undertaken at relatively low cost and allow a tailored solution to be delivered in stages
- 7. "Business as usual" operation with only minor risk of short-term delays/road closures during works

### HI7: Decluttering of streets – Description

- 1. Unnecessary street clutter reduces the attractiveness of an area and can cause obstructions to pedestrian movement
- 2. Street clutter can be of particular concern for vulnerable pedestrians such as older people, disabled people and parents with pushchairs
- 3. Decluttering can reduce associated maintenance costs
- 4. Key elements that could be improved:
  - 1. Removal of unnecessary signs or combining use with signal poles at junctions.
  - Removal of unused phone boxes.
  - 3. Guardrail is unsightly and detracts from local character and visual amenity and there is evidence that it can increase traffic speeds and present an increased risk to cyclists who can be crushed against it by vehicles (Source: DfT Manual for Streets).
- 5. A good level of guidance already exists and should be applied through the proposed design guide for Old Oak and Park Royal
- 6. Decluttering can have a positive impact on pedestrian safety due to improved visibility and lower speeds:
  - 1. Decluttering Kensington and Chelsea's High Street saw a 40% reduction in road traffic accidents and a 60% reduction in pedestrian accidents (Source: Department for Communities and Local Government).



### HI7: Decluttering of streets – Assessment



- 1. Improved street environment for pedestrians with more space for use on the footways
- 2. Removal of guard railing, particularly around junctions would improve the environment and reduce the feeling of constraint for cyclists
- 3. Decluttered street environment with fewer barriers to movement along pedestrian desire lines
- 4. Evidence that decluttering can improve safety through improved visibility and reduced vehicle speeds owing to perceived segregation
- 5. Low cost and will reduce long-term maintenance costs
- Can be delivered in short timeframe under "business as usual" activities

### HI8: New strategic road connections

Improved strategic road connections could include:

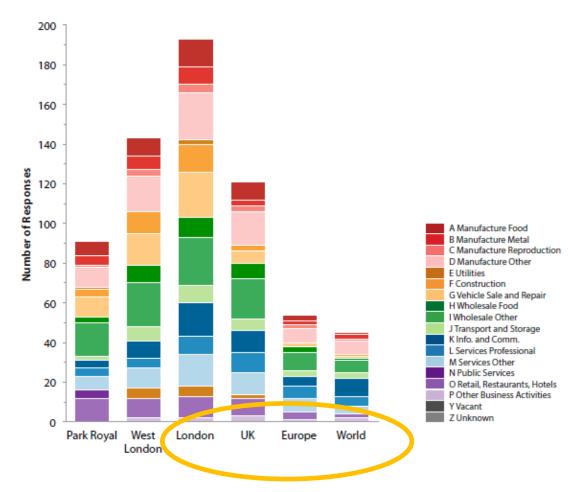
#### 1. Improved access to the A40

- a) The A40 is the main arterial route for Park Royal into central London and out to the M40. With a large proportion of Park Royal business customers being located outside west London (see chart) a significant proportion of trips use the corridor.
- b) TfL is in the process of commissioning a targeted study looking at potential improvements for this section of the A40. Any options for improved connections to the corridor will therefore fall under this project.

#### 2. New connections through Park Royal

- a) New links through the site and to the strategic network will be needed to open up potential development sites and improve connections for existing users.
- b) Both east-west and north-south connectivity should be encouraged and aim to accommodate all modes safely.

fig. 53 Customer Locations Interviewed workplaces only (14%)



Source: The Park Royal Atlas (May, 2014)

### HI8: New strategic road connections – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking					Deliverabi	erability	
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
HI8	<b>444</b>	√√	✓	√√	0	<b>√ √</b>	√√	0	0	0	Very High	Very High	Long Term

- 1. Major new road connections would provide additional highway capacity through Park Royal to support growth in travel demand
- 2. New links also likely to induce traffic demand and so may require usage restrictions to prevent congestion returning to exist levels e.g. bus, HGV and high occupancy vehicle lanes
- 3. Highly expensive requiring land acquisition and loss of space for employment or residential use unless built in tunnels which would further increase costs
- 4. At-grade roads would present further severance challenges for walking and cycling
- 5. Previous schemes have been considered and will be bought forward for consideration by TfL

## Public transport improvements options – long list for consultation

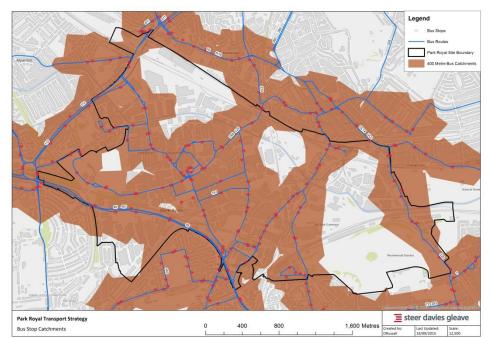
PT1 Modified bus services in the Park Royal area

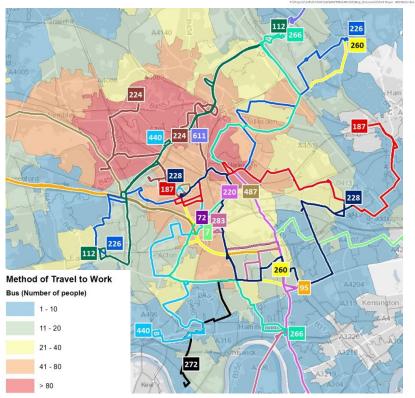
PT2 Shuttle bus services

PT3 Improved station facilities

### PT1: Modified bus services in the Park Royal area – Description

- 1. Bus travel currently accounts for 14% of journey-to-work trips in the Park Royal area
- 2. Route and stop coverage within Park Royal is quite good although extending services into all areas is not feasible due to road widths
- 3. Bus service improvements would need to focus on providing improved service to residential areas with high car mode share for journey-to-work trips to Park Royal, provided changes are financially viable
- 4. Connections to Old Oak also need to be given priority to take advantage of new Crossrail services, provided changes are financially viable
- 5. Potential to improve bus services to provide larger vehicles and / or increased frequencies. New routes and physical bus priority measures are also possible (although some of these may require parking to better managed to release road space – see DM5)
- 6. Bus priority on key corridors could be reviewed should DM5 (Parking Controls) identify an oversupply of on-street parking
- 7. Bus stop locations should be reviewed to improve catchment areas and to improve junction operations





## PT1: Modified bus services in the Park Royal area – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverability		
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE	
PT1	<b>√√</b> √	<b>√</b> √	<b>√</b> √	✓	0	<b>√</b> √	√√	0	√√	0	Low	Medium	Medium Term	

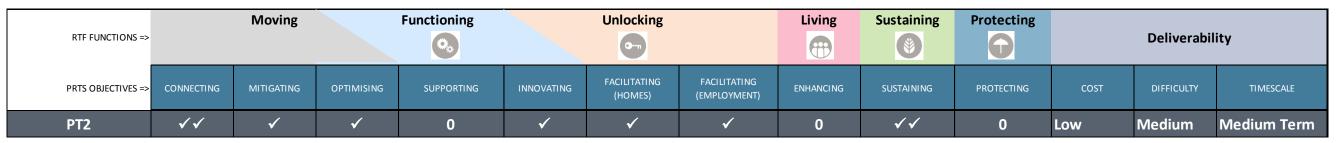
- 1. Bus passengers would benefit from improved connections to and from Park Royal
- 2. Rail and underground passengers would benefit from improved onward connections
- 3. Increased bus mode share would reduce congestion levels, although an increase in bus numbers may offset this slightly
- 4. Servicing and freight movements could occur more freely due to fewer cars on the local road network
- 5. Fewer cars on the road network would lower levels of air pollution
- 6. Continued improvement and modernisation of the bus fleet will reduce pollution over the next few years
- 7. Increased bus mode share would free up road capacity to permit growth
- 8. Potential to link new communities/suburbs to Park Royal would help create a more diverse workforce and customer base
- 9. Implementation is likely to be of medium cost with minimal additional infrastructure requirements (although dependent upon number of additional services and their frequency)
- 10. No significant risks to delivery, but risks associated with potential poor take up of new services and ongoing fleet maintenance costs
- 11. Should be delivered as and when employment growth in Park Royal or Old Oak occurs

### PT2: Shuttle bus services – Description

- 1. Shuttle buses to operate between stations and centres of work within Park Royal
- 2. Funded by local businesses / transport group
- 3. Provide regular and secure connections to the stations to encourage greater rail mode share
- 4. Could reduce the need for additional TfL services (PT1)
- 5. Would require provision of sufficient bus stopping capacity in vicinity of stations
- 6. Could be targeted at stations that have highest footfall and rolled out further should they prove popular
- 7. Study required to identify final destinations for passengers within Park Royal to ensure shuttle services are routed appropriately
- 8. Note: TfL used to run shuttle buses in Park Royal (PR and PR2) but services with more links proved more popular and the shuttles were withdrawn in 2007 and 2011



### PT2: Shuttle bus services – Assessment

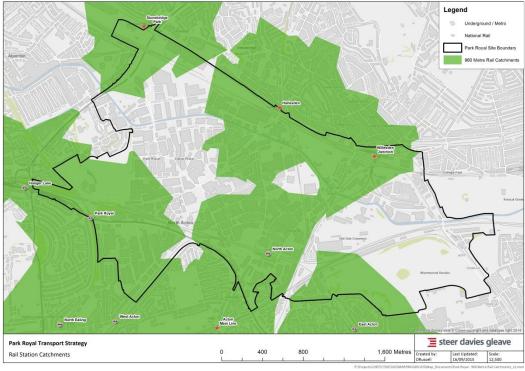


- 1. Shuttle services could complement TfL bus services and reduce the need for TfL to provide additional capacity
- 2. Rail and underground passengers would benefit from improved onward connections
- 3. Increased bus mode share would reduce congestion levels
- 4. Servicing and freight movements could occur more freely due to fewer cars on the local road network
- 5. Increased bus mode share would free up road capacity to permit growth
- Potential to provide an innovative on-demand type service similar to Uber
- Service could be offered as an employee benefit that would make the area more attractive to workers – particularly vulnerable/mobility impaired groups
- 8. Implementation is likely to be of medium cost with minimal additional infrastructure requirements, although dependent upon number of additional services and their frequency
- 9. No significant risks to delivery, but would require coordination of multiple businesses to fund services
- 10. Workforce would be given a safe and dedicated service
- 11. Should be delivered as and when employment growth in Park Royal or Old Oak occurs although study to understand employee needs could be implemented sooner

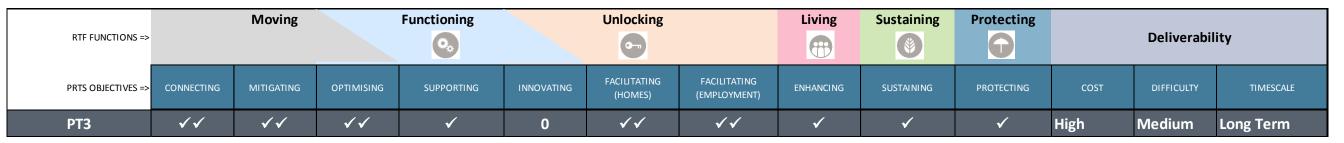
### PT3: Improved station facilities – Description

- 1. Rail and Underground travel currently accounts for 25% of journey-to-work trips in Park Royal
- 2. Existing station facilities are of a poor standard with lack of stepfree access
- 3. Increased rail mode share could be achieved by improving the station environment and linking these with enhanced onward connections into the heart of Park Royal (see also PT1, PT2, PT6)
- 4. Improved urban realm around the stations would act as an enhanced gateway to Park Royal and also create an environment more conducive to sustainable travel modes
- 5. Opportunities to focus investment on one or two key gateway stations may provide greatest benefit





### PT3: Improved station facilities – Assessment



- 1. Rail and underground passengers would benefit from improved station environment and access for mobility impaired passengers
- 2. Increased rail mode share would reduce traffic congestion levels
- 3. Servicing and freight movements could occur more freely due to fewer cars on the local road network
- 4. Reduced cars on the road network would lower levels of air pollution
- 5. Increased rail mode share would free up road capacity to support growth
- 6. Improvement of the urban realm around stations could act as a catalyst for further growth and development
- 7. Likely to be of high cost with none of the stations in the vicinity of Park Royal on TfL's station improvements programme
- 8. No significant risks to delivery, but risks associated with short-term issues of maintaining access and capacity during construction
- 9. Should be delivered as and when employment growth in Park Royal or Old Oak occurs

#### Planning options – long list for consultation

- Transport Panel PL1
- Smart management of the transport network PL2
- Improved workplace cycle facilities PL3
- Greening of corridors and placemaking PL4
- Enhance personal security to encourage walking PL5
- **HGV** corridors PL6
- Low emissions zone PL7
- Incentives for electric vehicles PL8
- Car club/car sharing strategy PL9

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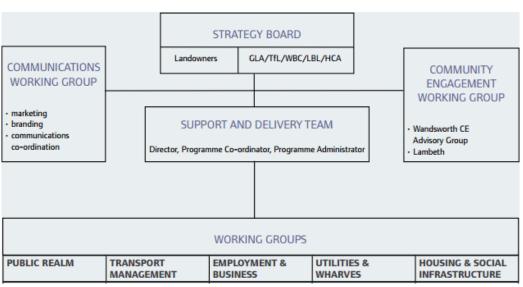
#### PL1: Transport Panel – Description

- 1. Setting up a governance structure for the delivery of the Opportunity Area Planning Framework (OAPF) has been implemented successfully in other areas such as the Vauxhall Nine Elms Battersea (VNEB) Opportunity Area (OA)
- 2. The governance structure should include specific working groups and panels with the role of ensuring the implementation of the main objectives and interventions
- 3. In the case of Park Royal it is important that a specific Transport Panel is implemented
- 4. A Transport Panel for Park Royal should be coordinated by the OPDC and should include the London Boroughs of Brent, Ealing and Hammersmith and Fulham, Business and Local Community Groups, TfL, GLA, LUL, Network Rail and London Overground

#### **Case Study:**

#### **VNEB Governance Structure**

- The Strategy Board has been set up to provide strategic leadership for the implementation of the framework.
- The Board is alternately chaired by the Leaders of Lambeth and Wandsworth Councils and is attended by officers of the public authorities and major landowners.
- The governance structure comprises the Strategy Board and a series of subject-specific working groups and subgroups.



Example of VNEB governance structure

#### PL1: Transport Panel – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabil	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Very Low	Very Low	Short Term

- 1. The implementation of a Transport Panel would be a cost-effective management structure fundamental to the joined-up delivery of transport improvements throughout Park Royal
- 2. The existence of the Transport Panel and a framework agreement between the main stakeholders and planning authorities is also likely to give more confidence and credibility to potential funders of schemes
- 3. The panel could be set up in a relatively short period of time and Terms of Reference have recently been circulated between potential members
- 4. The Transport Panel should work towards the aims and objectives set out in the Park Royal Transport Strategy and ensure decisions and measures are swiftly implemented to facilitate growth
- 5. The panel would facilitate delivery of all transport measures
- 6. Without this group cross-borough interventions would be challenging to deliver

## PL2: Smart management of the transport network—Description

- 1. Smart management of the transport network to maximise the efficiency of its use. Transport networks servicing Park Royal should adopt existing and future technologies that result in:
  - Fewer servicing and freight trips;
  - A growth in the mode share of sustainable modes;
  - Effective management and distribution of demand across the available transport modes:
  - d) A behavioural change in travellers;
  - Improved protection for vulnerable road users;
  - Prioritisation of high-value trips.
- 2. Smart management could be implemented by taking advantage of already available tools and case studies such as the FORS scheme developed by TfL (see Case Study). Also could engage local businesses and stakeholders in adopting or developing specific tools with replication and scaling potential
- 3. Potential to design for Automated Vehicles to streamline their integration and take advantage of capacity and efficiency benefits they provide
- 4. Potential to become a test bed for emerging technologies to ensure they are implemented at the earliest opportunity – for example as part of TfL's Surface Intelligent Transport System (SITS) programme

#### **Case Study:**

- The Fleet Operator Recognition Scheme (FORS) is an industry-led accreditation scheme
- Participants are expected to demonstrate they have the mechanisms to monitor and collect data and initiate actions to minimize the impacts of:
  - Fuel Use
  - **Penalty Charge Notices**
  - Vehicle Incidents
  - Other Infringements



## PL2: Smart management of the transport network – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabil	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL2	0	<b>√</b> √	<b>√</b> √	√√	<b>√</b> √	✓	<b>√</b>	0	<b>√</b> √	✓	Low	Medium	Medium Term

- 1. Collection and dissemination of data on the main modes of transport and how users travel across the area can help distribute demand across the available capacity
- 2. Awareness of conditions on the network at any given time can improve resilience and mitigate any planned or unplanned incidents on the network
- 3. This approach can foster innovation and create value if developed solutions are scalable and marketable outside of the study area
- 4. Planning now for future technologies will ensure they can be implemented when available
- 5. More advanced elements can be challenging to implement on a Park Royal scale due to cost and need to link in with London-wide systems
- 6. As some of the technologies available are relatively new and their capabilities are less known it might become difficult to prove their benefit

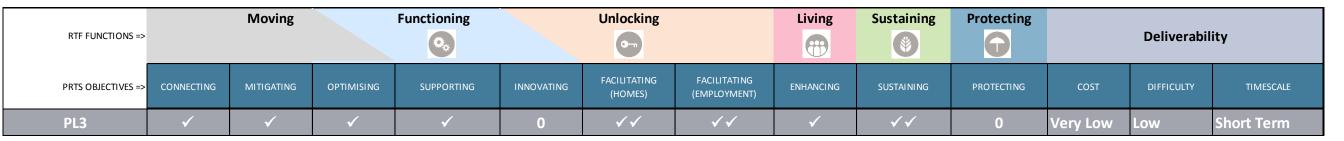
### PL3: Improved workplace cycle facilities – Description

- 1. The provision of end-of-journey cycle facilities such as bike stands, lockers, showers as well as training and maintenance support and assistance encourage cycling uptake
- 2. This can be achieved through planning and development control in the case of new developments and can be encouraged through demand management strategies such as travel plans
- 3. These facilities would be easier to provide for larger employers and are likely to have a wider impact if associated with events and internal promotion
- 4. A strategy for smaller employers for providing shared facilities is also important due to the great diversity of small-size employers in Park Royal
- 5. Greater London Authority (GLA) research has shown that the quality of cycle parking provision and fear of cycle theft both play a significant part in a person's decision whether or not to cycle. Around 40 per cent of respondents said they would cycle more regularly if better parking was available
- 6. Current journey to work cycle mode share is 3%. Mayor's cycle vision aims for a 5-6% mode share consistent with potential targets for Park Royal

#### **Case study:**

- GlaxoSmithKline (GSK) chose to reduce the car parking at its worldwide headquarters in Brentford which was supplied at an annual cost of £2,000 per space and redirected the funding to improve cycle facilities for a cost of £400 a year.
- The number of staff cycling to work has increased from 50 to 450 (out of 3,600).

### PL3: Improved workplace cycle facilities – Assessment



- 1. Cater for short work trips and more sustainable end of trip alternatives
- 2. Have a positive contribution to the environment and physical health of employees
- 3. Relatively low implementation costs
- 4. For new developments they can be implemented through PL1 and will support cycling and mode shift targets set through DM2 and DM7
- 5. Reductions in off-site car parking could bring down overheads and reductions in on-site car parking can free up space for more profitable uses
- 6. Help deliver carbon emissions targets for organisations

### PL4: Greening of corridors and placemaking – Description

- 1. The creation of green routes and corridors across the study area would provide more opportunities for walking and cycling
- 2. The implementation of green corridors can help to:
  - a) Make it easier for people to access work opportunities and other facilities and services
  - b) Enhance the quality of life by providing access for people of all ages and abilities to green and open space
  - c) Provide safe and secure walking and cycling routes, bringing 'dead' areas back to life
  - d) Shifting some short trips from motorised modes to walking and cycling, offering alternative transport networks
  - e) Provide vital links that are quiet, safe and accessible for those making local journeys
- 3. Use art or landmark features to ease navigation around area



Blackhorse Lane Industrial Estates
Wayfinding



Blackhorse Lane Upgraded Shop fronts

#### **Case Study:**

- Blackhorse Lane in Waltham Forest
- The area is receiving £1.1m from the Outer London Fund, matched by £321,000 from the Council to support the rich local economy of manufacturing industries and high street businesses.
- Two important interventions are :
  - Upgrade of signage and frontages along Blackhorse Lane's industrial estates to develop an area-wide graphic identity to consolidate its local character
  - Create a directory of local businesses and designers and makers in the Blackhorse Lane area



## PL4: Greening of corridors and placemaking – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	lity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL4	√ √	✓	✓	<b>√</b> √	0	✓	<b>√</b>	<b>V V V</b>	<b>√</b> √	√√	Low	Medium	Medium Term

- 1. The implementation of a series of green corridors across the area Park Royal is expected to provide more opportunities for walking and cycling as well as a better access to public transport services
- 2. Servicing and freight movements could be improved through improved wayfinding and reduced number of car users
- 3. It is expected that the quality of the environment will increase
- 4. Additional activity on the street and in public spaces is likely to have a positive impact on people's perception of personal security and through better design improve road safety for vulnerable users
- 5. Green corridors will also offer the opportunity to better integrate the Grand Union Canal with the Park Royal area and connect it to public transport stops

# PL5: Enhance personal security to encourage walking – Description

- 1. Due to the nature of the development in the area footpaths are not generally overlooked and very few have active frontages to provide passive surveillance for pedestrians
- 2. Perceived personal security is further degraded by the poorly maintained urban environment and low quality connections
- 3. Measures to encourage personal security could be focused on physical interventions and specific design measures such as:
  - 1. Enhancement of lighting across the sites
  - 2. Additional security
  - 3. CCTV installation at locations of particular concern
- 4. Other measures that could contribute to increasing personal security and encouraging walking are related to other planning and demand management options such as PL3 and DM1



# PL5: Enhance personal security to encourage walking – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL5	✓	✓	<b>√</b> √	✓	0	✓	✓	<b>√</b> √	√√	<b>√√√</b>	Very Low	Low	Short Term

- 1. Quick and relatively inexpensive to implement
- 2. Contributes to improving the perception of walking and supports the implementation of other planning and demand management measures such as PL3 and DM1
- 3. Relatively low risk measure with wider benefits that can include reduced levels of crime and anti-social behaviour, improving the perception of the area and subsequently increasing its attractiveness and potential for growth
- 4. Would benefit from a collaborative approach across major businesses

#### PL6: HGV corridors - Description

- 1. Identifying a HGV corridor helps to focus movements on specific routes and free up important road space on the remaining part of the network
- 2. The identified corridors can be later targeted for specific safety and design improvements
- 3. Freight can also be prioritised on specific corridors through design interventions or traffic signals
- 4. Likely to be challenging to implement in Park Royal in isolation. Likely to require sub-regional coverage as a minimum
- 5. Opportunity to provide priority lanes (bus and HGV) during times of the day could be considered, but only with parking and loading controls (DM5) to free up carriageway space

#### Case Studies

A. A priority HGV and bus lane has been implemented in the VNEB OA to provide access to developments along Nine Elms Lane. It is under 100m long and is provided in the southbound direction only.

B. Another scheme has been implemented in Leeds on Pontefract Lane. This is combined with a high-occupancy vehicle lane and bus lane and it links the M1 with Leeds town centre.





#### PL6: HGV corridors – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	lity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL6	✓	<b>√</b> √	✓	<b>√</b> √	✓	0	<b>√</b> ✓	0	0	✓	Medium	Medium	Medium Term

- 1. Dedicated corridors for HGV traffic could contribute to reducing congestion across the area and support the implementation of other measures such as DM2, DM3, PL6
- 2. Offers an opportunity for standardisation of the area-wide signage, markings and information along the identified corridors
- 3. Frees up road space on the remaining part of the network, opening up opportunities for improving walking, cycling and public transport
- 4. The approach can also have a positive impact on freight movements and servicing as traffic can be monitored more closely and schedules managed better

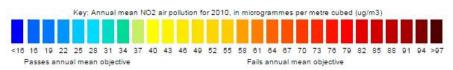
#### PL7: Low emissions zone – Description

- 1. The Low Emission Zone (LEZ) operates to encourage the most polluting heavy diesel vehicles driving in London to become cleaner
- 2. The LEZ covers most of Greater London and is in operation 24 hours a day, 365 days of the year
- 3. The Transport for London Road Network inside the Park Royal area are subject to LEZ charges but the remaining local roads are the responsibility of each council and they would need to agree the implementation of a LEZ in Park Royal
- 4. Especially for fleets and businesses operating large numbers of vehicles, such a measure will encourages fleet reorganisation to bring vehicles up to the required standards
- 5. The Ultra Low Emission Zone (ULEZ) in central London will encourage further improvements to HGV fleets by placing an additional charge on the more polluting vehicles – see TfL's Ultra Low Emission Vehicle Delivery Plan on the TfL website
- 6. Park Royal may indirectly benefit from the ULEZ through better air quality, as many products produced are shipped into the ULEZ
- 7. Potential issues with cost of compliance for smaller businesses that could not afford to upgrade their vehicles





Modelled annual mean NO2 air pollution, based on measurements made during 2010.



Source: London Air Quality Network, Annual Pollution Maps, 2010

#### PL7: Low emissions zone – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	lity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL7	0	<b>√</b> √	0	0	<b>√</b> √	✓	0	<b>√</b> √	<b>√</b> √	0	Medium	High	Medium Term

- 1. The introduction and enforcement of low emission zone(s) would especially benefit the residential areas and would support the implementation of other measures such as PL8, PL3, DM2 and DM3
- 2. Would be a quick and relatively inexpensive measure to implement
- 3. Could impact businesses through increased operating costs
- Would require the implementation of coordinated signage and road markings across the study area
- 5. Would encourage an area-wide commitment to reducing emissions and improving the quality of the environment

### PL8: Incentives for electric vehicles – Description

- 1. Owners of electric vehicles benefit from much lower fuel costs compared to conventional vehicles
- 2. The UK Government offers a Plug-in Car Grant of 25% off the cost of a car (up to £5,000) and a Plug-in Van Grant of up to 20% off the cost of a van (up to £8,000)
- 3. Currently there is no VED (vehicle tax) to pay on electric vehicles. There is a range of tax incentives for business users
- 4. Electric vehicles and plug-in hybrid electric vehicles (PHEVs) which meet the criteria are eligible for a 100% discount on the Congestion Charge
- 5. Some London boroughs offer free or reduced-charge parking for electric vehicles



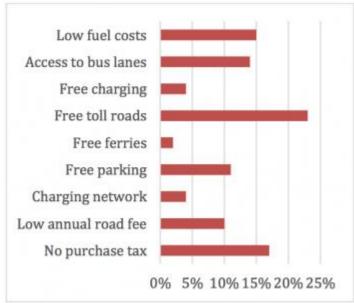


Fig 13. What are the three most important EV incentives?

Source: Clean Technica

#### PL8: Incentives for electric vehicles – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL8	0	✓	0	✓	<b>V V V</b>	✓	0	✓	√√	0	High	Medium	Medium Term

- 1. Electric vehicles have a positive impact on the local environment and are a relatively low-risk option
- 2. Reduced dependency on petrol-driven vehicles would protect against future increases in fuel costs
- 3. Where fleets can be upgraded they can also facilitate growth and innovation
- 4. Free or discounted parking could be provided in Park Royal for electric vehicles

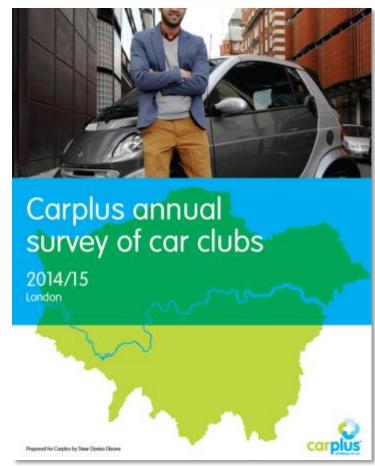
## PL9: Car club/car sharing strategy – Description

#### **Car Clubs**

- 1. Provide access to a car, without the need to own a car
- 2. Cars are available to the public and businesses, booked by the hour online and accessed using a smartcard or mobile phone app
- 3. Cars are provided by private companies, and are typically parked in dedicated bays
- 4. Costs to the Local Authority/developer are limited to providing on-street bays and signage
- 5. Currently 155,000 Londoners use car clubs
- 6. 50% of Londoners now live within a five minute walk of a car club car
- 7. The 2015 car club strategy (developed by a car club coalition in partnership with TfL) sets out targets to grow the membership of car clubs to 1,000,000 members by 2020

#### **Car Sharing**

- 1. Provides efficient use of cars for specific trips, such as commuting
- 2. Individuals share their journeys with others, often facilitated by their employer
- 3. Car sharing would be encouraged by employers by providing preferred parking provision or similar





# PL9: Car club/car sharing strategy – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
PL9	0	<b>√</b> √	0	✓	<b>√</b> √	✓	✓	✓	<b>√</b> √	0	Very Low	Low	Medium Term

Through the Transport Working Group a combination of car clubs and car sharing schemes would be developed to increase uptake and harness the potential of both Car Club and Car Sharing schemes.

#### **Car Clubs**

- 1. Car club members use public transport more than average, as use of a car club vehicle encourages mode choice on a trip-by-trip basis
- 2. Benefits to the local neighbourhood include:
  - 1. Lower levels of car ownership and associated parking issues. Only 20% of long-term members now own a car, compared to almost half owning a car before joining a car club
  - 2. Lower levels of local road congestion. Car club members on average drive less after joining a car club
  - Lower levels of air pollution. Car club cars are cleaner and have lower emissions than the national fleet
  - Car club cars are used by more people with an average occupancy of 2.3 people compared to 1.6 people for private cars

#### **Car Sharing**

- 3. Car sharing car reduce levels of congestion and vehicle emissions, particular during peak commuting hours
- 4. Car sharing can reduce levels of parking required at workplaces and can be incentivised through priority parking bays



### Demand management options – long list for consultation

Development control strategy DM1

Travel plans DM2

Delivery and service plans DM3

Freight consolidation DM4

Parking and loading controls DM5

Waterborne freight movements DM6

Mode share targets DM7

Rail freight DM8



### DM1: Development control strategy – Description

- 1. Development control is an efficient way to manage travel demand for future developments
- 2. It includes measures such as:
  - a) parking standards
  - servicing and delivery requirements
  - provision for cycle and walking including investment in good connections with the public transport network
- 3. Due to the various development policies across the area there is the opportunity to integrate the planning and development control strategy under the umbrella of the OPDC, with the local authorities as major stakeholders and enforcement authorities
- 4. The OAPF provides this integrated strategy to allow area-wide development to occur more swiftly and ensure clear policies and standards are applied across the area
- 5. The OAPF was adopted by the Mayor of London on 4 November 2015



### DM1: Development control strategy – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	ity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
DM1	√√	<b>√ √</b>	0	√ √	0	√√	√√	✓	✓	✓	Low	Very Low	Short Term

- 1. Strategic document ensuring the prioritisation and investment in infrastructure to support sustainable modes of transport
- 2. Delivers change through influencing or incentivising third parties to undertake specific activities rather than delivering infrastructure directly
- 3. Promotes investment and provision of public realm improvements
- 4. Requires consideration of servicing needs from the onset and (depending on the size and type of development) requires demand management measures to be binding commitments through the planning process
- 5. Through the promotion of environmental and human-scale design, strategies can provide for improvements to the environment and indirectly support healthier travel and lifestyle choices
- 6. Safety and personal security can also be promoted at the planning stage by encouraging designs and uses that activate the streets, provide natural surveillance and traffic calming
- 7. The costs and timescale of adopting an overarching development control strategy are medium considering that the local authorities already have a planning framework
- 8. The risks are relatively low whilst a dedicated development control strategy for the area would bring substantial benefits and further facilitate development

#### DM2: Travel plans – Description

#### 1. Characteristics of travel plans:

- a) Long-term management strategy to encourage sustainable travel for new and existing developments
- b) Normally funded by employer, with surveys and update required every 2-3 years
- c) Sets out transport impacts, establishes targets and identifies a package of measures to encourage sustainable travel.
- d) Requires ownership, monitoring and enforcement together with selected/selfappointed champions
- e) Tools such as iTRACE (development and monitoring) and ATTrBuTE (assessment) are available online and support implementation
- f) Can be developed individually or as a framework for an entire estate or area

#### 2. Benefits of travel planning:

- a) Less congestion and therefore improved safety on local roads by promoting alternatives to the car
- b) Reduced highway capacity problems by promoting sustainable travel choices
- c) Local environmental improvements from reduced congestion, carbon emissions, pollution and noise
- d) Make the site more attractive to potential occupiers/users
- e) Increased opportunities for active healthy travel, such as walking and cycling
- f) Reduced demand for parking spaces enabling land to be put to more cost-effective or commercially beneficial use and freeing space for active travel initiatives
- g) Increased opportunities for employers to feed into corporate social responsibility or sustainability initiatives

#### **Case Study:**

- Golden Mile Transport Group (GMTG)
- Initiatives developed and promoted under the GMTG umbrella:
  - Golden Mile Transport Forum
  - Golden Mile Website
  - Real-time travel map
  - Business Engagement
  - Awareness Events
  - Golden Mile Pool Bike Scheme



#### DM2: Travel plans – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	lity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
DM2	✓	<b>√ √</b>	✓	✓	✓	✓	✓	0	√√	✓	Very Low	Low	Short Term

#### 1. Travel Plans:

- Are a cost-effective tool to encourage and deliver change in mode share and travel behaviour
- Represent a tool for enhancing stakeholder collaboration
- Distribute and enhance ownership of travel demand management for an area
- Champion small-scale initiatives and allow for scaling up
- Increase the exchange of information, ideas and good practice reducing costs and improving business efficiency
- Achieve greater economies of scale by integrating services and pooling resources
- Enable smaller organisations to benefit from the support and expertise of larger ones

### DM3: Delivery and service plans – Description

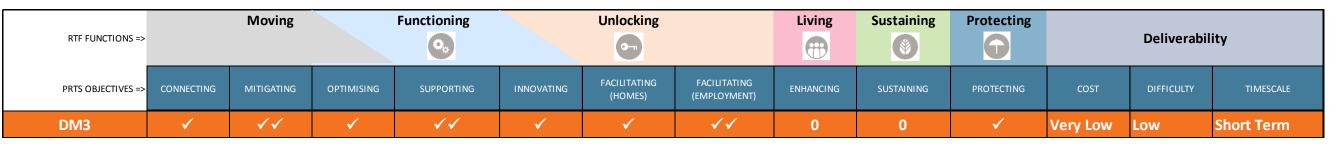
- 1. A Delivery and Servicing Plan (DSP) establishes a framework for the effective management of freight vehicle activity and is usually agreed by groups of businesses rather than being imposed by local authorities
- 2. It includes measures such as:
  - a) Implementing a delivery booking system
  - b) Moving deliveries outside of peak, or normal working hours
  - c) Reducing the time spent on-site by suppliers
  - d) Reducing delivery, servicing and collection frequencies
  - e) Establishing a centralised ordering system
  - f) Reducing or consolidate the number of suppliers
- 3. As well as benefiting participating organisations, a DSP has advantages for suppliers and the local community by:
  - a) Saving time and money by reducing the number of illegal and unsafe loading and unloading activities
  - b) Reducing the environmental impact
  - c) Improving the safety of delivery and servicing activity
  - d) Cutting congestion in the local area
  - e) Ensuring business continuity in case of disruptions or planned events
  - f) Reducing trips, particularly during peak hours,
  - g) Improving customer service and delivery times,
  - h) Adhering to best practices (Fleet Operator Recognition Scheme (FORS))

#### **Case Study:**

- <u>Inmidtown Business</u>
   Improvement District (BID)
- More than 220 companies located in the Holborn area are using a free waste collection service operated by inmidtown BID. This has led to one electric vehicle replacing 85 waste collection vehicles



### DM3: Delivery and service plans – Assessment



- 1. DSPs are a cost-effective tool to manage servicing and delivery with real potential for trip reduction especially during peak hours
- 2. A DSP can:
  - contribute to reducing CO2 emissions, congestion and collisions
  - Save time and money for both local businesses and their customers
  - Reduce the environmental impact of the organisations involved
  - Improve the safety of delivery and servicing activity across the site by adhering to standards and schemes such as **FORS**

### DM4: Freight consolidation – Description

- 1. There are various forms of freight consolidation usually agreed by groups of businesses rather than being imposed by local authorities:
  - a) Use of one or more satellite consolidation sites to provide a central point for deliveries for a single business or group of businesses in a given area. The number of trips to the site itself is reduced, as deliveries are consolidated and made by one or two vehicles throughout the day.
  - b) Use of a supplier that offers a consolidated service means that servicing trips required for a business can be reduced if a supplier can pick-up multiple types of waste and recycling items from a single business / businesses at the same time.
  - c) Consolidation of deliveries to a single business through better management of vehicle capacity (ensuring vehicles are fully loaded) or use of larger vehicles.
- 2. Benefits of freight consolidation include:
  - a) A reduction in freight / delivery and servicing vehicle trips, particularly during peak hours
  - b) A reduction in CO2 emissions and improvement in local air quality
  - c) A reduction in congestion and collisions
  - d) More cost effective operations through:
    - i. use of off-site storage capacity (allows more productive use of on-site space)
    - ii. time and money savings associated with managing a single supplier (e.g. if a supplier offering a consolidation service is used)
    - iii. potential cost savings if a consolidation service is negotiated by an area-wide partnership instead of on a business-by-business basis.

#### Case Study(s):

- Regent Street Consolidation and collaboration
- Inmidtown (central London Business Improvement District)
  - daily essentials consolidation (pilot)
  - waste and recycling consolidation.

#### Transport for London

### Regent Street – Consolidation and collaboration





### DM4: Freight consolidation – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	lity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
DM4	0	√√	✓	<b>√</b> √	✓	✓	√√	0	0	✓	Medium	Medium	Short Term

- 1. The implementation of a freight consolidation strategy would have direct positive impacts servicing and freight movements across the area
- 2. Consolidation is also expected to have a positive impact on reducing congestion by reducing the number of servicing and delivery vehicles on the road network
- 3. Fewer freight movements are also expected to have a positive impact on the quality of the environment
- 4. The costs and risk of implementation are considered relatively low although, due to the diversity of businesses and their specific requirements, consolidation might be achievable only for limited services
- 5. The diversity of business uses also offers an opportunity for innovative methods to be tested
- 6. Will require identification of a suitable holding area for vehicles

### DM5: Parking and loading controls – Description

- Parking and Loading controls are usually managed and enforced by local councils
- 2. Differences between neighbouring authorities in the area can result in confusion and enforcement issues along the boundary
- 3. Unmanaged loading and delivery activity can create congestion, harm road network performance and reduce the effectiveness of traffic engineering schemes (e.g. bus priority measures)
- 4. Integrated, cross-borough signage, parking and loading restrictions and Controlled Parking Zones (CPZ) can reduce confusion and facilitate enforcement
- 5. Facilitating kerbside loading smooths traffic flows and benefits the local economy by reducing the need for informal activities in inappropriate locations
- 6. Managing parking and loading/unloading activities can also improve walking and cycling routes by clearing important kerbside and road space and limiting user conflict
- 7. A detailed parking assessment needs to be undertaken across the area to record the levels of usage and needs of businesses

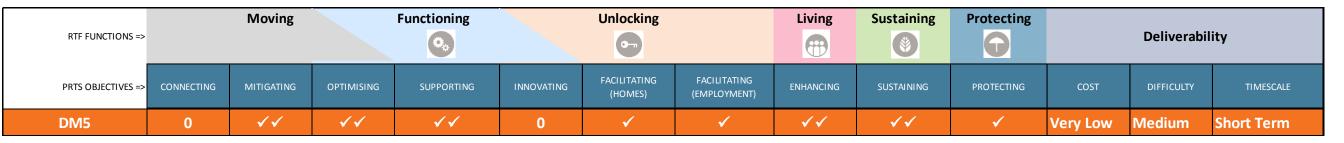




On-site evidence of parking limiting footway space and dominating the street environment



### DM5: Parking and loading controls – Assessment



- 1. In the case of Park Royal there are three London Borough boundaries meeting in the area and, as a consequence, the parking and loading controls tend to be more difficult to enforce
- 2. Improved formalised parking and loading could be designed to better protect cyclists
- 3. There is already controlled parking in the LB Ealing's area but no permits are required and there is only a fixed daily charge
- 4. The road capacity is often reduced by delivery vehicles and parked cars
- 5. Site visit and interviews with local businesses reveal the need for more parking and loading controls and enforcement to ensure efficient functioning of the area
- 6. This may impact some businesses e.g. car repair garages, that park vehicles on the highway requiring close consultation during the development of a scheme

### DM6: Waterborne freight movements – Description

- 1. Movement of freight by water can be more efficient and environmentally sustainable than road freight
- 2. Major development sites across London have used the River Thames and other waterways to transport materials and waste e.g. Northern Line Extension
- 3. According to the Port of London Authority over five million tonnes of freight were transported on the Thames in 2013 which reduced road traffic in the city by 265,000 lorry movements a year
- 4. TfL included in its post-Games strategy the aim of developing a water freight planning tool to help increase understanding of London's waterways as a viable mode for freight
- 5. The Grand Union Canal runs through the area on a straight alignment with few locks. This provides potential for a waterborne freight route. Powerday have an operational freight wharf facility nearby.





On-site evidence of low utilisation of the canal.

Increased freight activity could create opportunities for wider improvements on the canal and support investments in walking and cycling

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#### **Case Study:**

- **Grand Union Canal Aggregates**
- A case study by the Commercial Boat Operators Association (CBOA) shows how 450,000 tonnes of aggregate was moved via the Grand Union Canal from a gravel pit to a canalside concrete-making plant near West Drayton.
- The use of the canal has avoided approximately 6,000 road lorry movements each year.

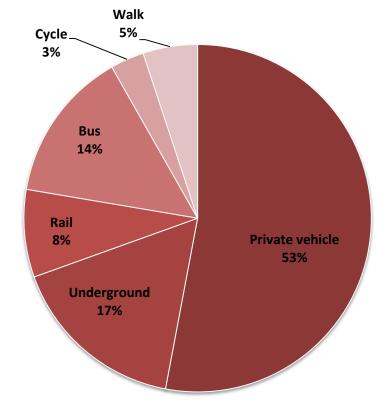
## DM6: Waterborne freight movements – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting		Deliverabi	lity
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
DM6	<b>√ √</b>	<b>√</b> √	√√	<b>√</b> ✓	√√	✓	<b>√</b> ✓	✓	0	<b>√</b> ✓	Medium	High	Long Term

- 1. The Grand Union Canal cuts right through the middle of Park Royal and it is a generally on underutilised piece of infrastructure
- 2. The canal has great potential to reduce freight movements by road and associated externalities such as road congestion, pollution and limited road capacity, especially as part of a wider delivery and servicing strategy for the area
- 3. The canal has the potential to provide links to other sites along the Grand Union Canal, such as to regeneration areas and transport hubs in central and east London opening up new connections for the businesses that operate within this geographic area
- 4. This is in line with strategic aspirations to further utilise the waterways for transportation and movement in London
- 5. Requires investment in wharf facilities, appropriate vessels and recruitment/training of operators and represents a long-term solution that will need to follow the London-wide/national lead
- 6. Challenges are associated with constructing sufficient wharf facilities with adequate onward connections, whilst keeping costs of transport comparable to road/rail

### DM7: Mode share targets – Description

- 1. The current mode share of journeys to work is heavily dominated by private vehicle (53%)
- 2. Although accessible by three Underground stations and also Overground services, only 25% of the trips are made by Underground and rail
- 3. This low public transport mode share is also a consequence of the poor walking and cycling conditions across the area and the limited enforcement of parking restrictions
- 4. With the expected future growth in both employment and residential uses it will be important to manage travel demand in order to achieve a reduction in the car mode split
- 5. The mode share targets can be delivered through framework agreements and strategies agreed between employers and the planning authority (e.g. travel plans)
- 6. Potential targets are provided and the level of change will depend on the package of interventions that is implemented. The suggested 8% reduction in the mode split for private vehicles is consistent with maintaining the same approximate total number of car trips into the Park Royal area even with the predicted growth in employment and population i.e. the reduction in car trips due to existing employees moving to more sustainable modes is balanced by new employees, some of whom will travel by car.



Existing Travel to Work Mode Split Source: Census 2011

Mode	Existing	Target	Expected Change				
Private Vehicle	53%	45%	-8%				
Walk	5%	6%	1%				
Underground	17%	19%	2%				
Rail	8%	9%	1%				
Bus	14%	16%	2%				
Cycle	3%	5%	2%				
TOTAL	100%	100%	0%				

### DM7: Mode share targets – Assessment

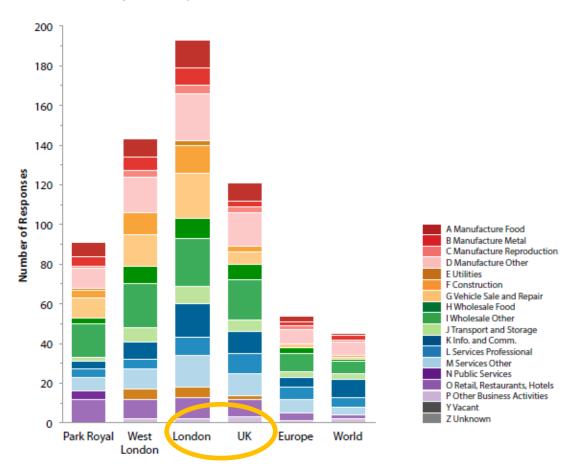
RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting	Deliverability		
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
DM7	✓	<b>√√√</b>	√√	0	✓	✓	✓	✓	<b>√ √</b>	✓	Very Low	Medium	Long Term

- 1. With the local road junctions already congested at peak times, the future employment and residential developments in Park Royal will put additional pressure on the road network
- 2. The current mode share for private car use is unsustainable and a reduction in vehicle traffic is required
- 3. The targets will ensure all stakeholders engage towards achieving the same goals and look for common solutions of addressing the problems
- 4. Demand management, enforcement and also improvements to the walking and cycling infrastructure are all feasible measures that could contribute to achieving a more balanced and sustainable mode share
- 5. The current mode share also shows that the existing public transport connections are not being used to their full potential

### DM8: Rail freight – Description

- 1. The latest London Freight Data Update (TfL, 2014) shows that in 2012 rail was the third most used mode for freight after road and water, carrying 6.7 million tonnes of freight within London
- 2. The greatest inward flows to London in 2012 by weight came from the South West and East Midlands (together accounting for 68 % of goods transported by rail and unloaded at terminals in London)
- 3. For goods loaded onto rail in London, approximately 40% was moved to the South East and a further 35% was intra-London traffic
- 4. Park Royal is located in close proximity to the North and West London Lines and Dudding Hill Line with established freight facilities at Willesden Junction. The proposed future investments will create opportunities for more capacity and freight links to be created at the Old Oak Common site
- 5. Further assessment of the impact on rail capacity is required

fig. 53 Customer Locations Interviewed workplaces only (14%)



Source: The Park Royal Atlas (May, 2014)

### DM8: Rail freight – Assessment

RTF FUNCTIONS =>		Moving		Functioning		Unlocking		Living	Sustaining	Protecting	Deliverability		
PRTS OBJECTIVES =>	CONNECTING	MITIGATING	OPTIMISING	SUPPORTING	INNOVATING	FACILITATING (HOMES)	FACILITATING (EMPLOYMENT)	ENHANCING	SUSTAINING	PROTECTING	COST	DIFFICULTY	TIMESCALE
DM8	√√	√√	✓	<b>√</b> ✓	0	✓	√√	✓	0	✓	Medium	Medium	Long Term

- 1. With a high proportion of their customers located in London and the UK, improved freight rail connections to and from Park Royal could help businesses reach their customers within the wider London and UK markets
- 2. Rail freight connections have great potential to reduce road freight movements and associated externalities such as road congestion and pollution, especially as part of a wider delivery and servicing strategy for the area
- 3. Rail freight has the potential to provide links to other sites such as regeneration areas and transport hubs in central and east London opening up new connections for the businesses that operate within this geographic area
- 4. Requires investment in rail connection and facilities but could fall under the umbrella of the already proposed connections at Old Oak

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