

APPENDIX 1

DESIGNING FOR HEALTHY STREETS

Design guidance for the area, to ensure that proposals coming forward in the IoDSP are in keeping with the Mayor's Healthy Streets approach. This guidance applies to all publicly accessible routes to ensure that the treatment of new and upgraded connections is consistent across the area.

BS

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BETTER STREETS

We have used the Street Types as a tool to understand the hierarchy of movement and place across the street network and guide designs for the future treatment of these streets.

BS.1 DEFINING STREET TYPES

BS.1.1 DEFINING STREET TYPES

Street Types are classified according to three hierarchical tiers for both 'movement' and 'place'.

'Movement' is loosely defined in terms of people (and goods) and therefore accounts for levels of bus occupancy, cyclists and freight as well as general traffic.

'Place' captures activities which attract people to dwell or spend time on the street or in areas adjacent to the street.

Streets are mapped against both axes, creating separate layers illustrating movement and place. These layers are then combined into a Street Types map, to reflect the combination of local and strategic perspective in terms of the movement of people and goods and importantly where the most significant places are within an area.

Existing Street Types

The existing Street Types illustrated opposite have been classified for every road in the OA through a series of facilitated workshops between TfL and LBTH. These agreed types set a common context across the OA to support design decisions, highlight where similar schemes have been successful and illustrate where aspiration and current performance are creating a challenge for future delivery.

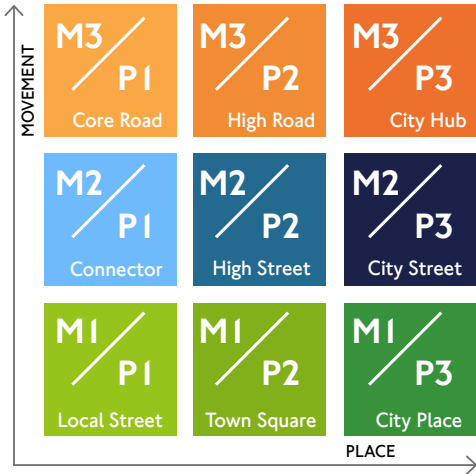
Future Street Types

In areas of planned growth these types may change over time to reflect changes in land use or movement characteristics. We have identified several potential Future Street Types for the IoDSP on the diagram opposite and over the following pages.

REF

This section should be read alongside:

1. Roads Task Force - The Vision and Direction for London's Streets, 2013



Street Types for London - Matrix

Isle of Dogs and South Poplar - existing Street Types

- M3/P1 Core Road
- M2/P1 Connector
- M2/P2 High Street
- M1/P1 Local Street
- M1/P2 Town Square
- M1/P3 City Place

Potential future Street Types*

M3/P2 High Roads

- Preston's Road (north)/Cotton Street

M2/P2 High Streets

- 2 East India Dock Road
- 3 East Ferry Road
- 4 Westferry Road
- 5 Poplar High Street

M2/P3 City Streets

- 6 Marsh Wall (extended east-west)

* Subject to future development and land use changes



BS.1.2 STRATEGIC MOVEMENT

M3/P1 Core Roads

Core Roads in the OA:

- West India Dock Road
- Aspen Way
- Cotton Street
- East India Dock Road (eastern section)

M3/P2 High Roads

There are currently no **High Roads** in the OA. We have identified Preston's Road /Cotton Street (north of Preston's roundabout) as having the potential to become a future High Road, subject to land use changes brought about by planned development.

M3/P3 City Hubs

There are no **City Hubs** in the OA.



STRATEGIC MOVEMENT



I Preston's Road /Cotton Street (north of Preston's roundabout)

BS.1.3 DISTRIBUTOR MOVEMENT

M2/P1 Connectors

Connectors in the OA:

- East India Dock Road
- East Ferry Road
- Poplar High Street
- Preston's Road
- Manchester Road
- Westferry Road

M2/P2 High Streets

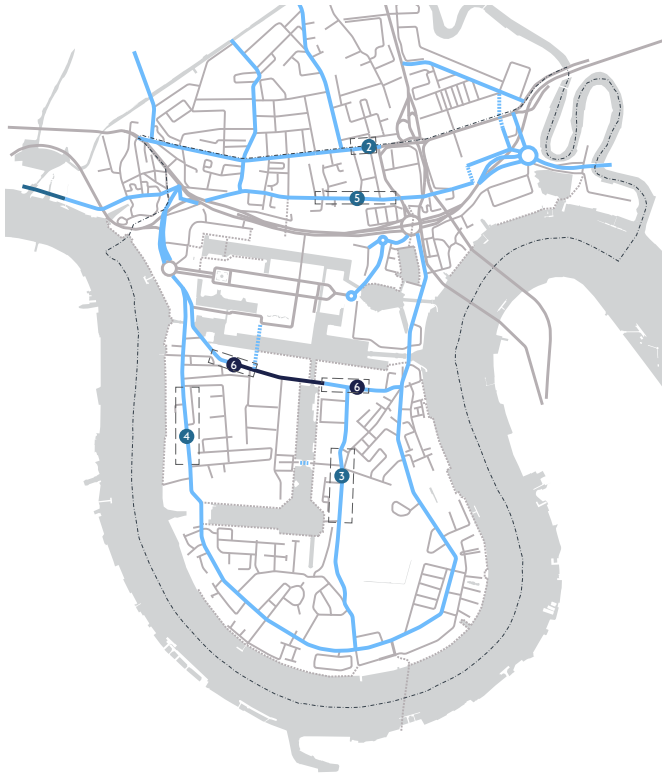
There are currently no **High Streets** within the Opportunity Area, however sections of the following roads may have the potential to become future High Streets through a localised uplift in place function:

- East India Dock Road (Kerbey St - Cotton St jn)
- East Ferry Road (Crossharbour District Centre)
- Westferry Road (Tiller Road to Byng St)
- Poplar High Street

M2/P3 City Streets

City Streets in the Isle of Dogs and South Poplar Opportunity Area include:

- Marsh Wall
- Westferry Circus



BS.1.3 LOCAL MOVEMENT

M1/P1 Local Streets

Most of the streets in the Isle of Dogs and South Poplar Opportunity Area are **Local Streets**.

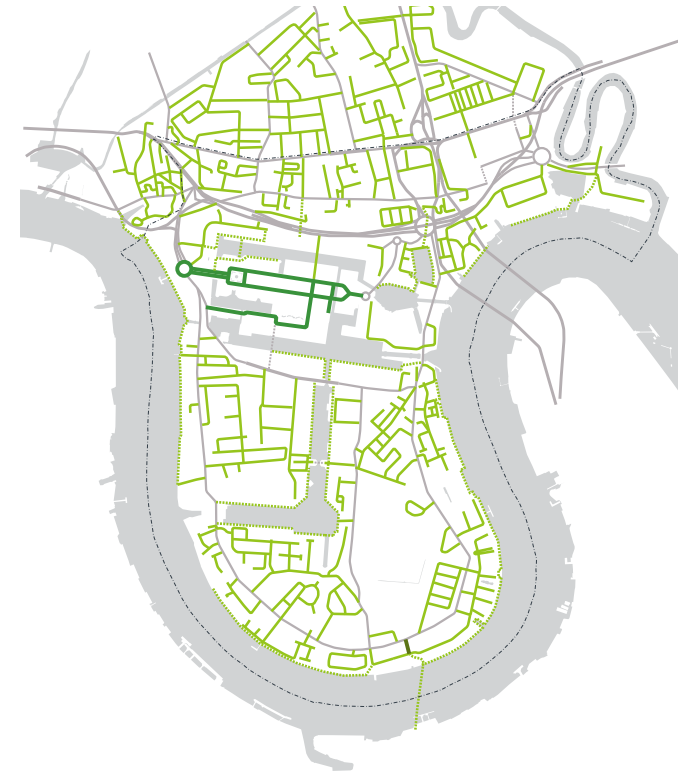
M1/P2 Town Squares

Ferry Street is the only **Town Square** in the OA.

M1/P3 City Places

City Places in the Isle of Dogs and South Poplar include:

- Heron Quays
- West India Avenue
- North and South Colonnade
- Upper Bank Street



DISTRIBUTOR



- 2 East India Dock Road
- 3 East Ferry Road
- 4 Westferry Road
- 5 Poplar High Street
- 6 Marsh Wall eastern and western extents

LOCAL MOVEMENT



BS.2 M3/P1 CORE ROAD

Core Roads in the Isle of Dogs and South Poplar should provide reliable routes for strategic movement. These routes carry people and goods and are critical to the city's functionality.

We traditionally associate Core Roads in the OA with wide corridors carrying multiple lanes of traffic, which can be intimidating for pedestrians and cyclists unless appropriate mitigation is put in place.



BS.2.1 OBJECTIVES

1. Ensure reliable journey times for strategic movement
2. Reduce severance by providing opportunities to cross on desire lines
3. Improve the appearance of these routes through tree planting and urban greening as well as public art and lighting
4. Improve environmental conditions along these routes, particularly in relation to air quality and noise, while ensuring that less heavily trafficked alternative routes are available for local movement.

BS.2.2 M3/P1 CORE ROAD - DESIGN PRINCIPLES

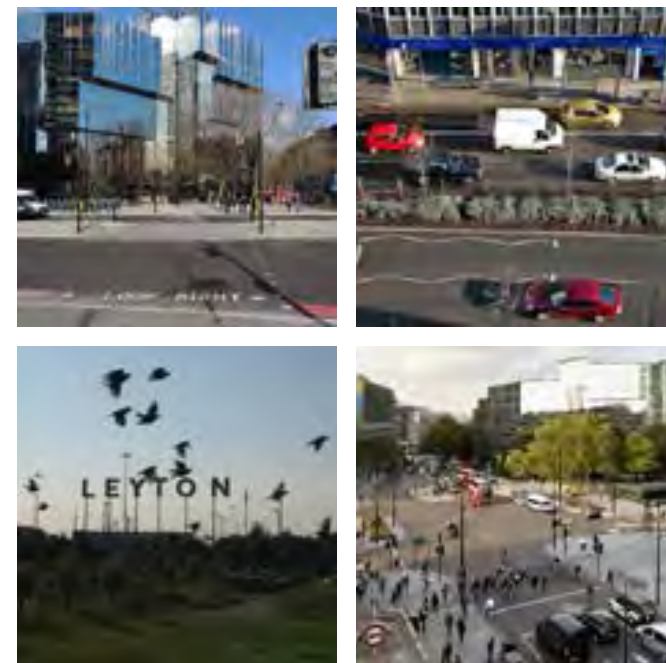
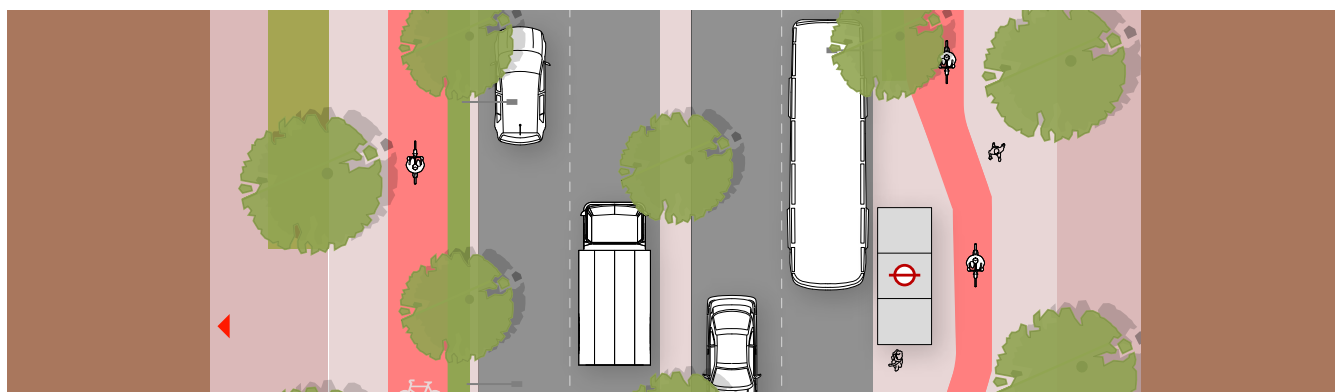
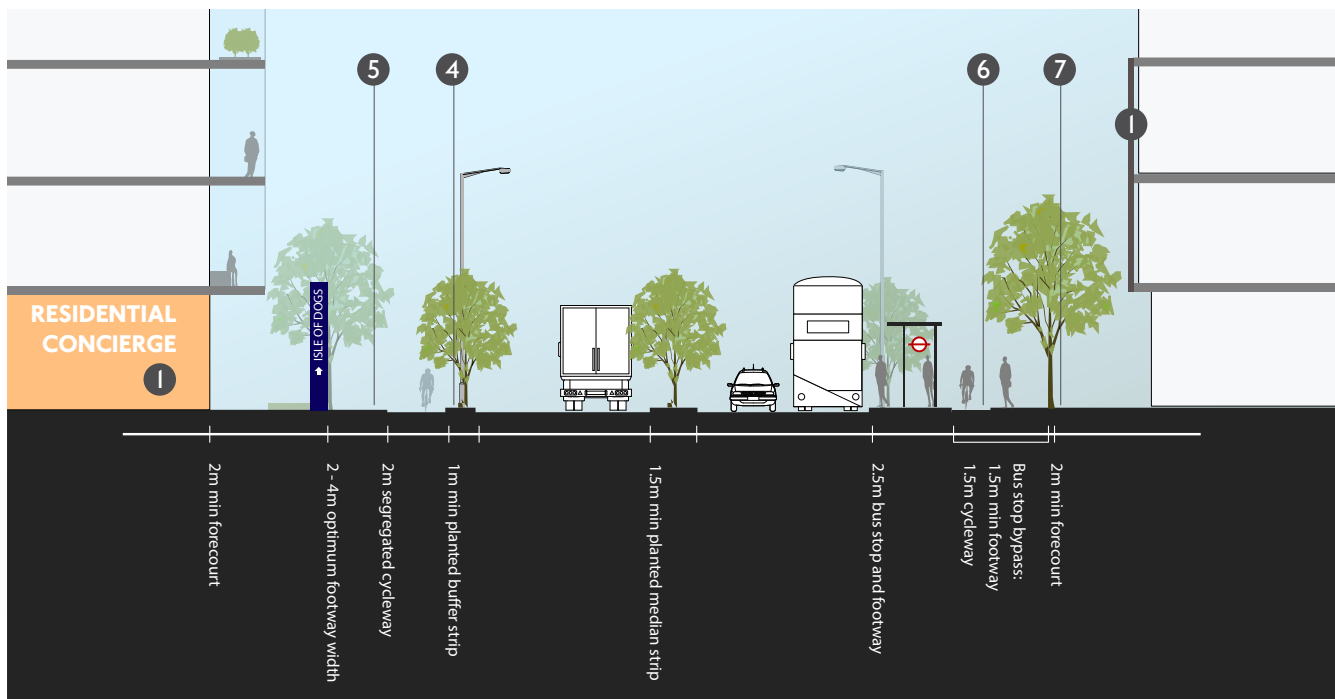
1	Where new development faces onto a Core Road, some active frontage should be provided as a means to encourage on-street activity and 'normalise' these arterial corridors. The use of digital displays and art along these corridors can also help to animate these connections
2	Crossings, whether at-grade or grade-separated, must feel safe and appealing to use. Footbridges should be wide and well lit with good passive surveillance from the street below or overlooking from surrounding buildings. Underpasses should be avoided where possible
3	Clear and legible thresholds should be created where connecting routes join Core Roads, to encourage all road users to be more vigilant when entering a more highly trafficked environment and to reduce speed when turning into side streets
4	Guard-railing should be avoided unless absolutely needed and removed where possible (subject to investigation on a case by case basis) with planting or street furniture such as cycle stands used to create separation between pedestrians and the carriageway if necessary
5	Wide footways will provide a good degree of separation between pedestrians and vehicles. Optimum footway width would be 4 metres
6	Where cycling is accommodated on these routes it should be fully segregated from motor vehicles. Wherever possible there should be separation between cyclists and pedestrians as well
7	Planting of large shrubs and mature trees is encouraged to help to improve the quality of the environment

BS.2.3 HEALTHY STREETS PRIORITIES

Aspen Way: Reduce north-south severance by providing new grade-separated crossings at regular intervals. Upgrade the quality of the environment to make this a more attractive place to be and feel like less of a barrier

East India Dock Road (east of Cotton St jn): Public realm improvements and new crossings to improve north-south connections

West India Dock Road: Upgrade the environment for pedestrians and cyclists and improve the place function as the western gateway to the Isle of Dogs



Precedents - clockwise from top left:

- Simple, direct crossing facilities at Euston Circus
- Breaking down the impact of multiple lanes of traffic through planted median strip, Maid Marian Way, Nottingham
- Simplified junction arrangement, Euston Circus - looking south from Tottenham Court Road
- Public art, Leyton

Illustrative cross section based on the A13 (East India Dock Road - eastern section) showing how the design principles can be applied to an existing Core Road in the Isle of Dogs and South Poplar Opportunity Area

BS.3 M3/P2 HIGH ROAD

High Roads should be reliable corridors for high levels of movement while performing some important functions for local daily life. These journeys can be both local and strategic.

They support a range of uses including retail, residential, employment and civic functions by encouraging on-street activity while allowing for a high movement function.



BS.3.1 OBJECTIVES

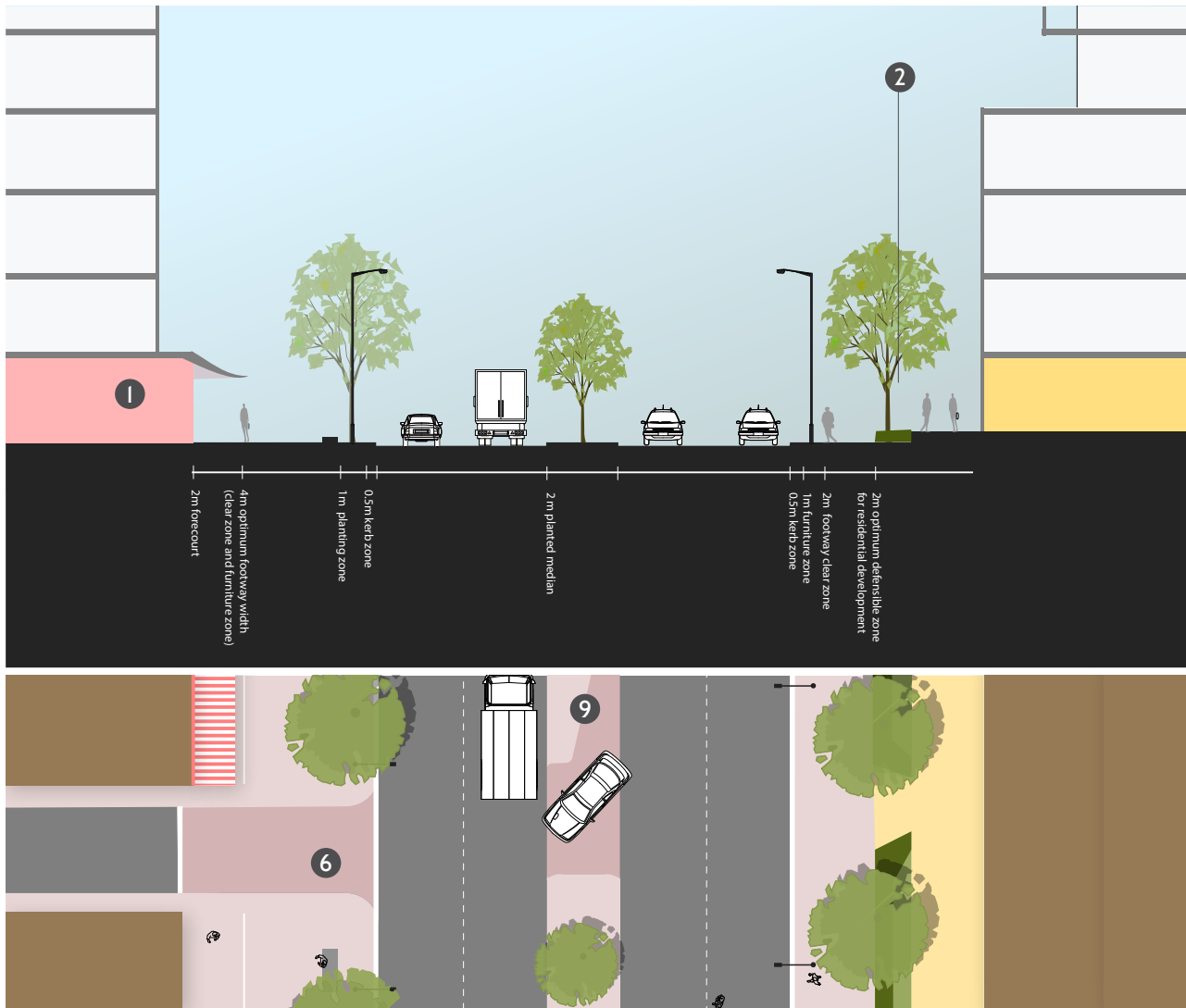
1. Ensure areas of high footfall are served by generous crossing facilities at surface level
2. On cycle routes, provide generous cycleways, fully or partially segregated, which are well integrated into the wider network to make cycling a more attractive option for more strategic travel as well as local journeys
3. Implement bus priority measures where appropriate
4. Invest in improvements to the public realm to ensure High Roads are high quality, active places.

BS.3.2 M3/P2 HIGH ROAD - DESIGN PRINCIPLES

1	High Roads should be vibrant local destinations. New development should address the street with active frontage, creating opportunities for public life to thrive. High levels of passive surveillance will contribute to perception of safety and comfort.
2	Generous tree planting should be used to frame and enhance the street corridor and provide shade and shelter for pedestrians. Where possible SuDS features should be incorporated into the streetscape
3	Street clutter should be rationalised including removal of excess or redundant highways signage and guard-railing (subject to investigation on a case by case basis) to create a more pleasant environment for pedestrians. Regular opportunities for seating, shade and shelter should be provided
4	Cycleways should be integrated with the wider cycle network, with cycle parking provided at regular intervals. Cycle hire docking stations may be considered on wide footways provided there is ample space for them to be serviced, they are connected into a wider network of cycle routes and they are clearly visible from areas of high footfall or activity generators
5	Opportunities should be explored to reallocate carriageway space to prioritise walking, cycling and public transport
6	Junctions should be designed to balance the needs of all users, ensuring safe and direct surface-level crossings for pedestrians and cyclists on desire lines
7	Median strips can be used to break up the impact of wide expanses of carriageway and provide opportunities for additional greening or tree planting

BS.3.3 HEALTHY STREETS PRIORITIES

Preston's Road North/Cotton Street: The Blackwall Reach masterplan will steer a change in land use at the northern end of Preston's Road from warehousing to a range of active commercial units with residential above, set around an urban plaza. With potential future development around Poplar High Street and Cotton Street, this may be sufficient to change the place function in this area from P1 to P2.



Precedents - clockwise from top left:

- Cardiff City Centre improvements
- St John's Hill, Clapham Junction
- Euston Circus

Illustrative cross section based on Cotton Street showing how the design principles can be applied to a future High Road in the Isle of Dogs and South Poplar Opportunity Area

BS.4 M2/P1 CONNECTOR

Connectors within the study area should provide reliable routes for medium distance and local road journeys, comfortable routes for cyclists and safe and secure routes for pedestrians.

Land uses along Connectors may vary from no active frontage to small parades of shops and workplaces, however the priority is on passing through these places rather than being destinations in themselves.



BS.4.1 OBJECTIVES

1. Enhance their movement role as efficient all mode corridors connecting neighbourhoods along clear, de-cluttered streets and avoiding issues of congestion at peak hours
2. Deliver comfortable pedestrian routes with clear and legible wayfinding to points of interest and destinations in the wider area
3. Ensure that public transport hubs are visible and legible from Connectors to allow ease of interchange between walking, cycling and public transport.

BS.4.2 M2/P1 CONNECTOR - DESIGN PRINCIPLES

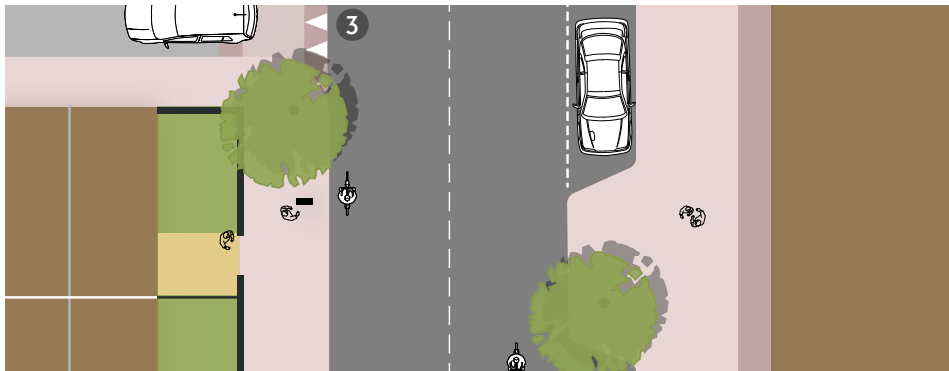
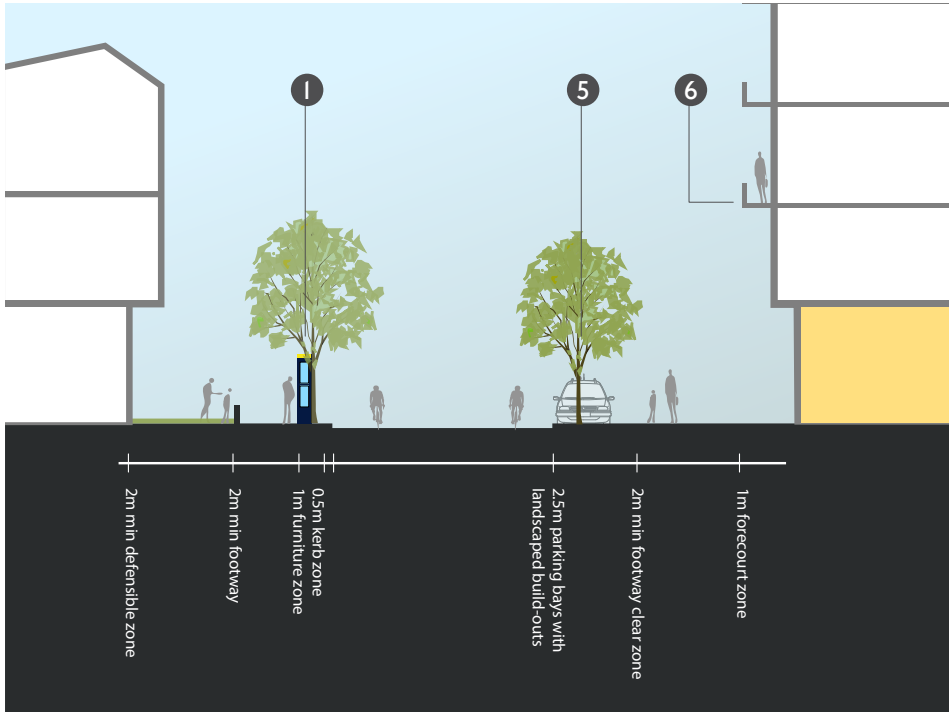
1	Connectors should provide a clear and direct linking function between destinations and areas of activity, with a signage system such as Legible London implemented to improve wayfinding
2	Direct cycleways should be provided which are appealing to cyclists for local and longer distance journeys. These can be shared facilities on carriageway or segregated facilities as appropriate to the location
3	Raised side road entry treatments should be used to give priority to pedestrian movement at junctions with Local Streets
4	Seamless transition to High Streets should be achieved, with intensity of on-street activity building along the corridor through the provision of some active frontage when new development comes forward, or creation of pocket spaces to animate the street
5	Street trees will help to mitigate the environmental impact of the traffic and create a high-quality 'avenue' feel to these routes, enhancing their role as the approach routes to more intense destinations. Species of tree chosen will be informed by the width and scale of the street
6	Lighting should be used to improve actual and perceived safety in areas where activity on-street is limited and passive surveillance from residential uses should be maximised

BS.4.3 HEALTHY STREETS PRIORITIES

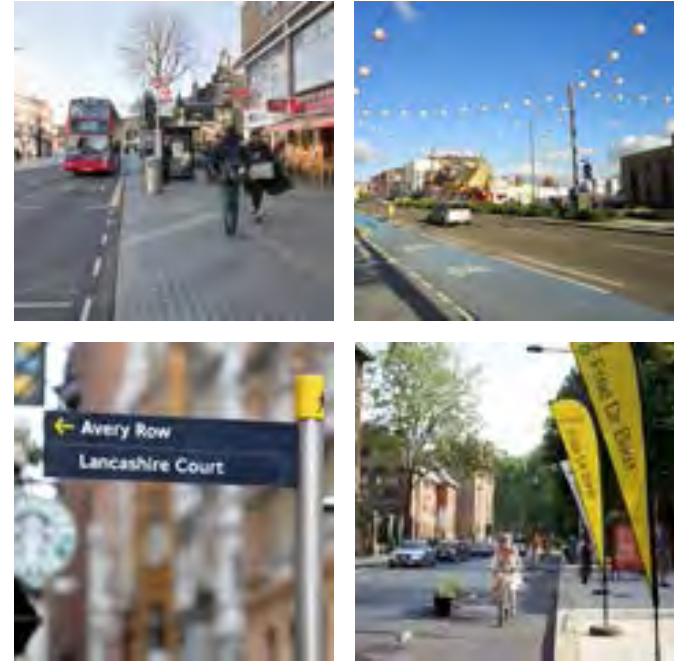
Isle of Dogs Loop Road (Preston's Road/Manchester Road / Westferry Road):

Balance the needs of all users more effectively by improving pedestrian comfort, providing dedicated cycle facilities, greening and resurfacing. Locations with a higher place function should be identified and strengthened to create a network of small local centres. There should be consistency in the quality of streetscape treatment as this route passes through established areas to the south and emerging development areas to the north. Precedent can be drawn from the recent upgrade works carried out by LBTH on Manchester Road around Island Gardens

East Ferry Road: Traffic calming and improvements to the pedestrian environment will be important given the high frequency of bus movements in the area. The redevelopment of Crossharbour District Centre creates the opportunity to increase the place function of the northern section of East Ferry Road.



Illustrative cross section based on a section of Westferry Road showing how the design principles can be applied to an existing Connector in the Isle of Dogs and South Poplar Opportunity Area



Precedents - clockwise from top left:

- Streetscape improvements, Harrow
- Stratford High Street - streetscape improvements
- Walking and cycle improvements, Royal College Street Camden
- Legible London finger post

BS.5 M2/P2 HIGH STREET

High Streets provide the setting for daily life, accommodating a range of activities including local retail, services and social infrastructure while still playing an important role for the movement of people and goods within or around the borough.

High Streets in the Isle of Dogs and South Poplar may be focused around new development or enhanced local centres, where there is a higher place function.



BS.5.1 OBJECTIVES

1. Restore some of the historic high streets in the area and enhance their place function as the focus for community life
2. Introduce measures to calm vehicular movement to create a safer and more pleasant environment for people to spend time in.
3. Attract people to visit the area and encourage them to stay through a combination of high quality public realm and active uses that serve the day to day needs of the local community.

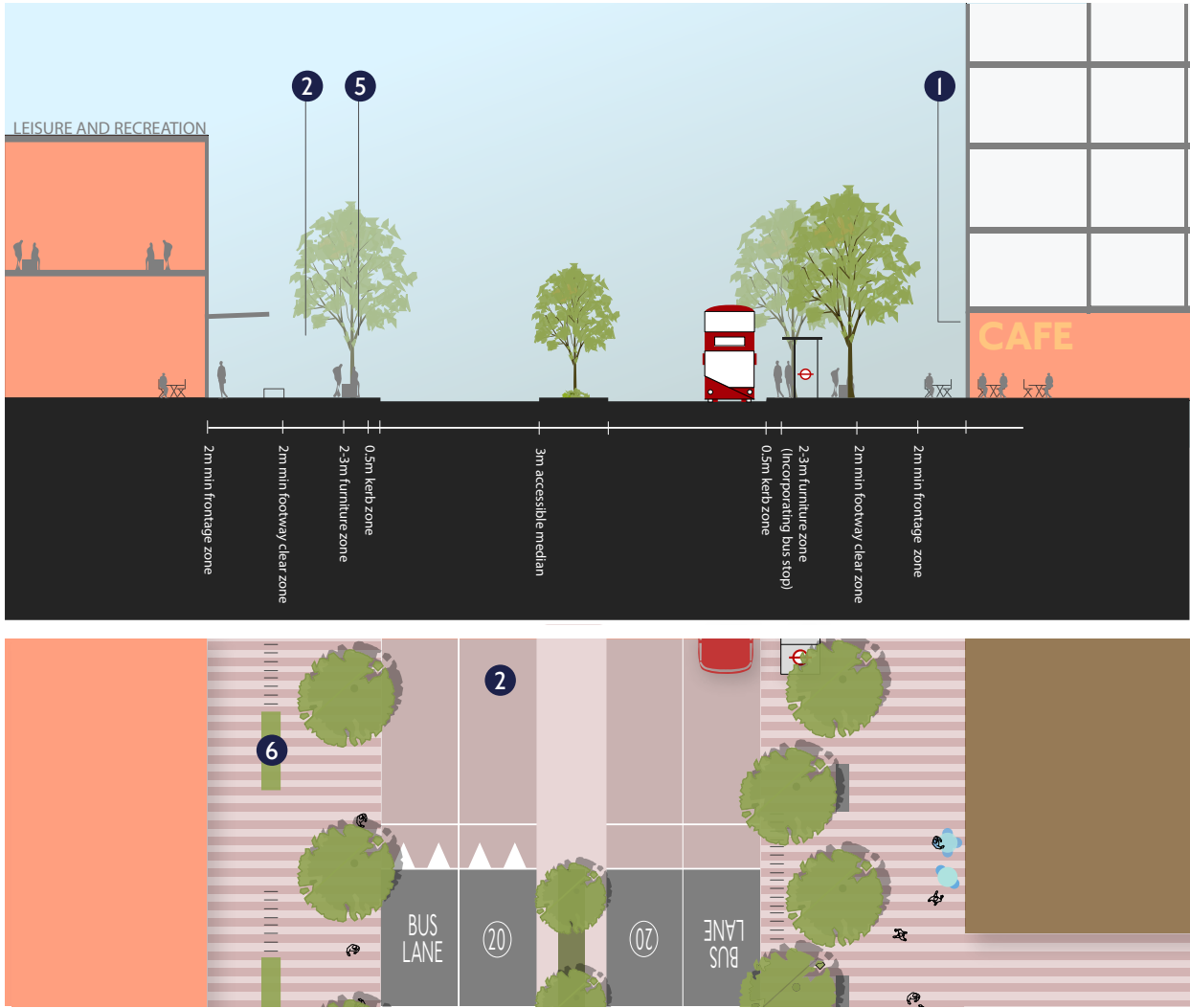
BS.5.2 M2/P2 HIGH STREET - DESIGN PRINCIPLES

1	Active and engaging uses should front the street and provision should be made for outdoor seating where this can enhance the character and experience of the street
2	Wide footways will cater for high volumes of pedestrian footfall. Regular crossing opportunities and the use of traffic calming features such as raised tables will help to signal places where pedestrians have priority
3	High Streets should be well served by high quality cycle infrastructure to encourage more people to cycle, especially for short local trips. Facilities for cyclists, including cycle parking should be located in close proximity to public transport hubs and commercial centres. In some locations cycle parking can be accommodated within median strips to reduce clutter on the footway
4	Where parking or service bays are located on-street, these should be provided at footway level and treated with complementary materials to enable flexible use when not occupied. Servicing should be located off-street where possible
5	Generous landscape and street furniture zones should be provided, with seating and tree planting to provide shade, shelter and places to rest
6	Sustainable urban drainage (SuDS) features should be integrated into the design of landscaping within the public realm
7	The Borough's 20mph speed limit will create a calmer environment for all road users. There may be opportunities to explore reduction / removal of surface markings such as centre lines as part of a low speed environment

BS.5.3 HEALTHY STREETS PRIORITIES

East India Dock Road: The potential redevelopment of Chrisp Street District Centre would increase the place function of this section of East India Dock Road. Investment in the pedestrian environment around Chrisp Street District Centre through better crossings, a clearer less cluttered environment and traffic calming will be important

East Ferry Road: The potential redevelopment of Crossharbour District Centre could potentially increase the place function of this part of East Ferry Road. Traffic calming, enhanced crossing facilities and works to Crossharbour DLR station will improve connections east to west across the District Centre.



Precedents - clockwise from top left:

- Kensington High Street
- The Cut, Southwark
- The Pavement, Clapham Common
- Bexleyheath streetscape improvements

Illustrative cross section based on East India Dock Road (Chrisp Street District Centre) showing how the design principles can be applied to a future High Street in the Isle of Dogs and South Poplar Opportunity Area

BS.6 M2/P3 CITY STREET

Our ambition for City Streets in the OA is that they provide world-class, pedestrian friendly environments with excellent connections to the wider transport network.

They will be widely known for their concentration of commercial on-street activity. They will link major destinations and public transport hubs and become focal points for visitor activity in the area as well as providing places that encourage the local community to come together.

BS.6.1 OBJECTIVES

1. Provide a world class public realm which supports the free movement of people along major desire lines and attracts people to visit and spend time in
2. Create a lasting memory of the Isle of Dogs and South Poplar as a place to live, visit and do business in.

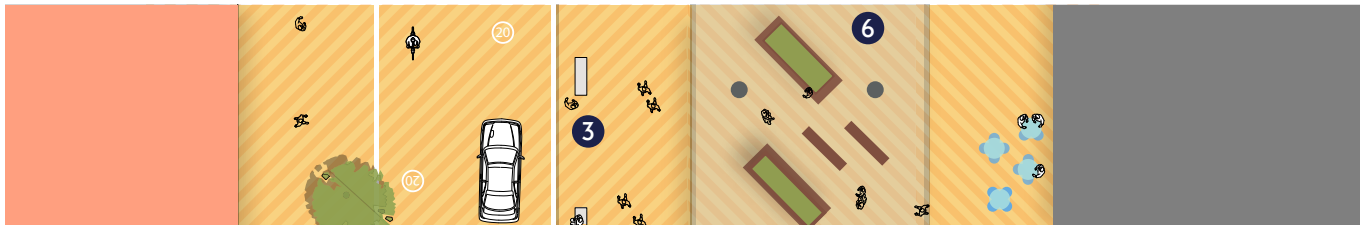
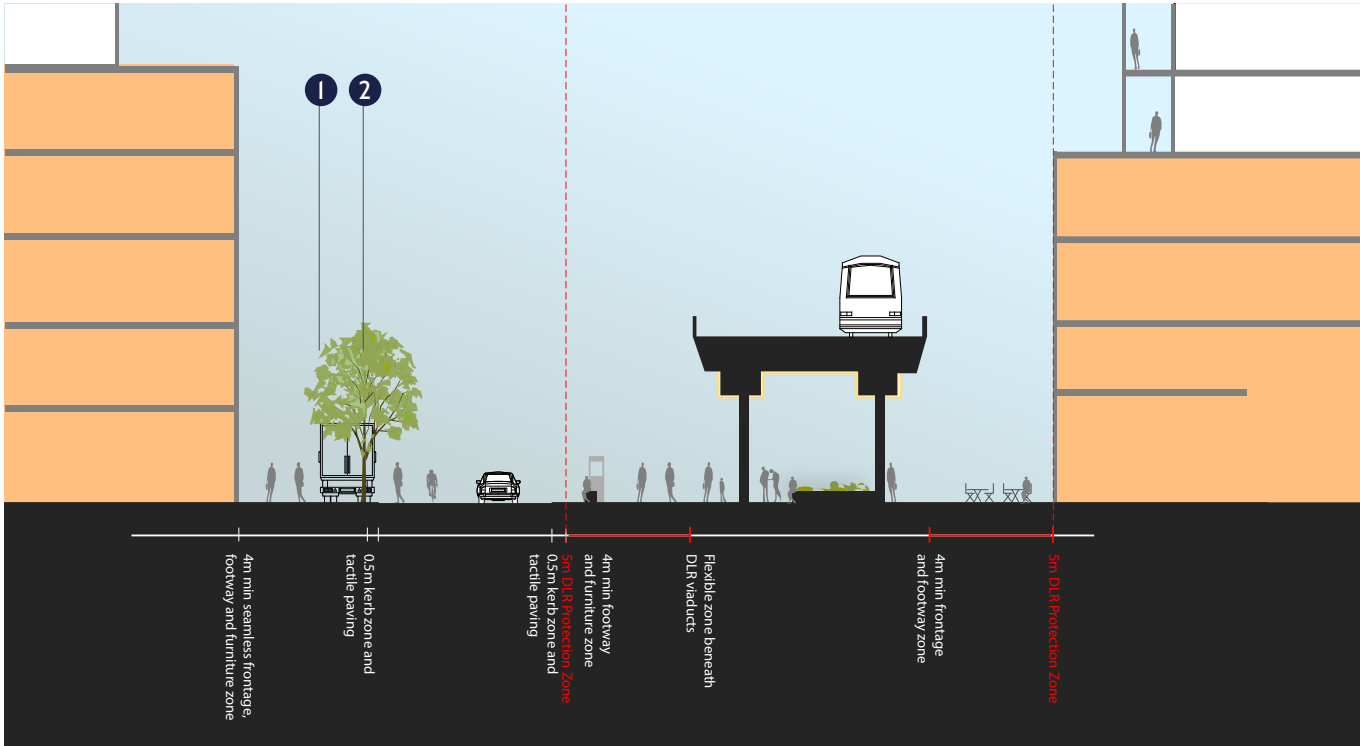
BS.6.2 M2/P3 CITY STREET - DESIGN PRINCIPLES

1	Generous footways and pedestrian areas will need to accommodate high volumes of footfall yet ensure high levels of pedestrian comfort
2	Design of the street should allow for flexibility in terms of use at different times of day. Servicing and deliveries should occur outside of peak hours
3	Seating should be provided at regular intervals to allow people to rest and experience the street
4	Traffic calming should be used to ensure that pedestrians and cycles have priority. Pedestrian priority should be clearly defined, especially at junctions with adjoining streets where crossings should be surfaced as a continuation of the footway treatment
5	High-quality cycle provision should be ensured, with well signed alternative routes in pedestrianised areas where cycling may be discouraged
6	City Streets should have a clear identity which may be distinct from their surroundings to highlight their higher place function. Opportunities for planting, outdoor trading and activity within the public realm should be optimised.

BS.6.3 HEALTHY STREETS PRIORITIES

Marsh Wall: Streetscape interventions along Marsh Wall to help to manage the impact of proposed development on the street as a whole. Proposals will include changes to both movement and place function along this corridor to ensure that it is achieving its full potential as a destination and focal point for this area.





Illustrative cross section based on Marsh Wall showing how the design principles can be applied to a City Street in the Isle of Dogs and South Poplar Opportunity Area



Precedents - clockwise from top left:

- More London
- Pitt Street Mall, Sydney
- Southwark Street, London
- Jubilee Street, Brighton

BS.7 MI/P1 LOCAL STREET

Local Streets in the OA should give priority to pedestrian and cycle movement with slow-moving vehicles accessing homes or local amenities. They provide a finer grain of permeability, stitching together neighbourhoods and providing access to the river and dock edges.



BS.7.1 OBJECTIVES

1. Local Streets should provide a calm environment where vehicles move at a leisurely pace, cars moving at the speed of cyclists and all giving way to pedestrians. This will ensure an accessible and safe pedestrian environment for people of all ages and abilities
2. Provide places for the community to congregate and interact through informal play or the creation of pocket spaces
3. Provide well signposted links to local destinations including the river and dock edges
4. Design local streets to cater for local traffic yet deter through-traffic and rat-running.

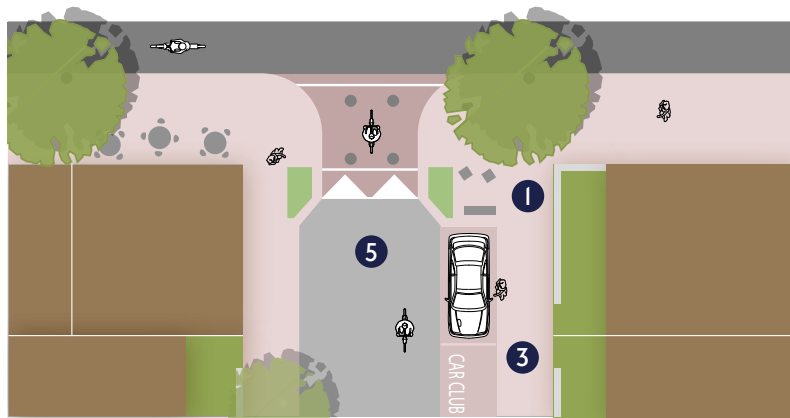
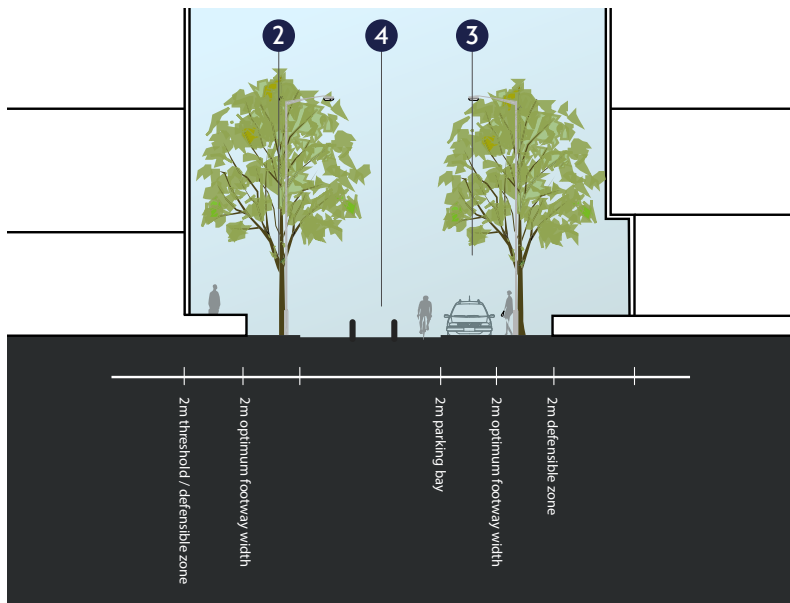
BS.7.2 MI/P1 LOCAL STREET - DESIGN PRINCIPLES

1	Opportunities to enhance local identity and foster a greater sense of community ownership should be encouraged
2	Tree planting and soft landscaping (including SuDS) should be incorporated into the design of the streetscape where possible
3	Opportunities to provide car club spaces should be identified and public transport should be easily accessible with connections well signposted to reduce the need for local residents to own a car
4	Filtered permeability, where bollards or other elements are installed to allow pedestrians and cyclists through but not motor vehicles, should be explored on some Local Streets. This should be prioritised on streets that form part of the cycle network in the area or places where 'rat running' is a problem. This will give road space back to pedestrians and cyclists and create opportunities for on-street play for children in the neighbourhood
5	Carriageways should be narrow with two-way movement and no centre line to increase vigilance and awareness of all other road users
6	Threshold treatments such as raised side road entry treatments will mark the transition to local streets

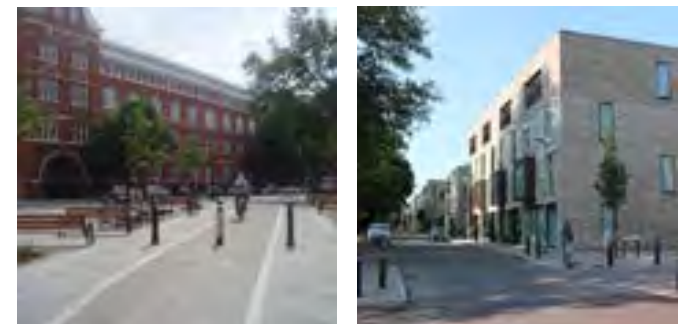
BS.7.3 HEALTHY STREETS PRIORITIES

Spindrift Avenue: signage and wayfinding improvements to encourage active travel, with people walking and cycling to the DLR at Mudchute as the first part of longer journeys

Pepper Street /Tiller Road: upgrades to provide a stronger lateral connection across the peninsula for active travel, providing access to the DLR spine and Crossharbour District Centre.



Illustrative cross section showing how the design principles can be applied to a Local Street in the Isle of Dogs and South Poplar Opportunity Area



- Precedents - clockwise from top left:
- Ormond Street, Dublin
 - Accordia, Cambridge
 - Filtered permeability, London Bankside

BS.8 M1/P2 TOWN SQUARE

Town Squares in the Isle of Dogs and South Poplar should provide a neighbourhood and community focus. These are attractive places for people to visit or come together, supported by local retail, services and leisure facilities.

Largely situated along the river and dock edges, they create an attractive backdrop to daily life and should provide continuous walking and cycle routes which link neighbourhoods and places of interest.



BS.8.1 OBJECTIVES

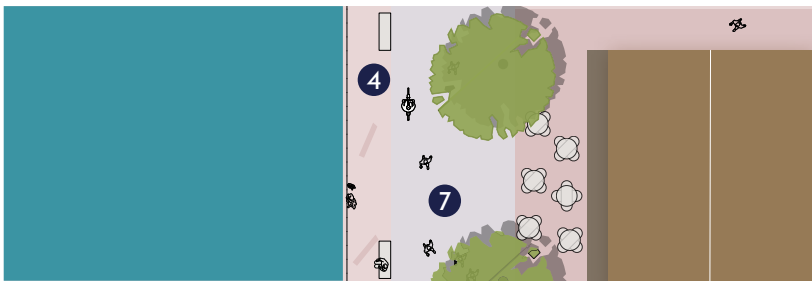
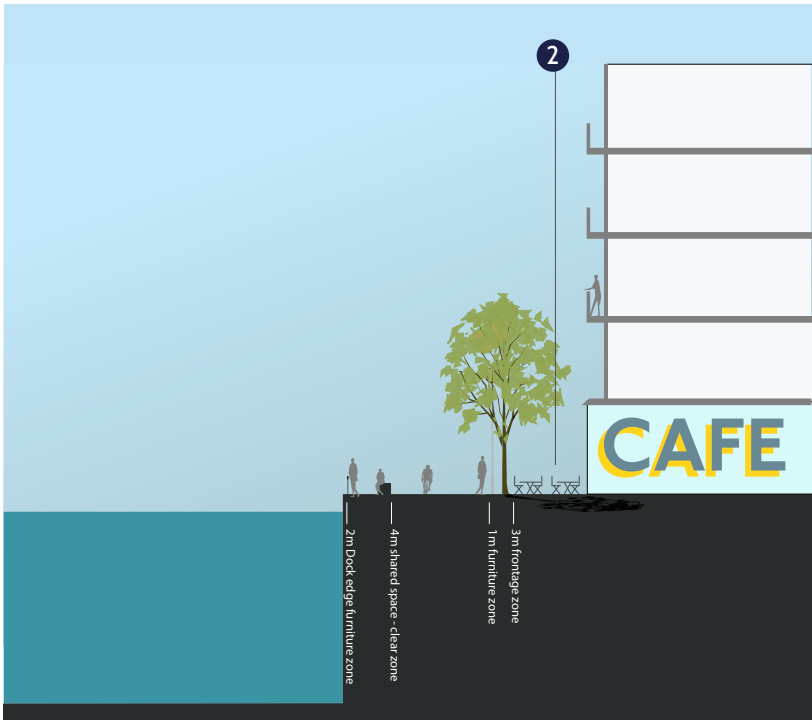
1. Ensure good connections to the wider movement network, in particular walking and cycle routes and public transport infrastructure
2. Enhance the relationship to important public space assets such as the waterways
3. Create moments of activity through provision of pocket spaces at key locations
4. Reinforce local character and identity through the design of the public realm.

BS.8.2 M1/P2 TOWN SQUARE - DESIGN PRINCIPLES

1	Where new development fronts onto a Town Square there should be a clear definition between private and public space with a threshold treatment to the street
2	Pockets of activity from retail, food and beverage uses should be encouraged to provide outdoor seating as a means to animate the street
3	Cycle parking should be provided at regular intervals, located close to attractors and destinations
4	Seating, located at regular intervals, will provide opportunities to rest and spend time in these areas. Tree planting will help to provide shade and shelter
5	High quality materials should be used to unify these connections and reference the history or enhance the character of the area
6	High quality lighting should be provided for safety of users of the space and to provide an attractive feature
7	Smooth surfacing should be used for all cyclable surfaces to ensure maximum comfort for cyclists
8	Where cycle flows are high, cyclists and pedestrians should have clearly separated facilities.

BS.8.3 HEALTHY STREETS PRIORITIES

Saunders Ness Road: Consider removing vehicular traffic from the western section of Saunders Ness Road to create a high quality, green connection for pedestrians and cyclists along the northern side of Island Gardens.



Illustrative cross section showing how the design principles can be applied to a Town Square in the Isle of Dogs and South Poplar Opportunity Area



Precedents - clockwise from top left:

- Mini Hollands, Walthamstow Village
- Surfacing of cycleways in smooth materials, Hafencity, Hamburg (Image: GLA)
- Paddington Basin

BS.9 M1/P3 CITY PLACE

City Places within the study area are places of major significance, with world class pedestrian friendly environments encouraging high levels of street activity and vibrancy. These are areas with a high concentration of commercial activity, entertainment venues and cultural landmarks attracting visitors on an international scale.

BS.9.1 OBJECTIVES

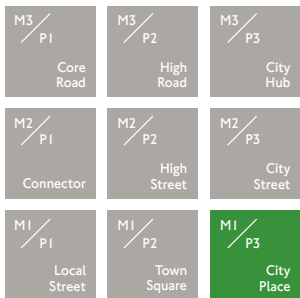
1. Provide an almost entirely pedestrian environment with a high concentration of on-street activity
2. These should be high quality, safe and secure pedestrian areas with materials, street furniture and lighting that enhance their character as major destinations and increase dwell time in the area.

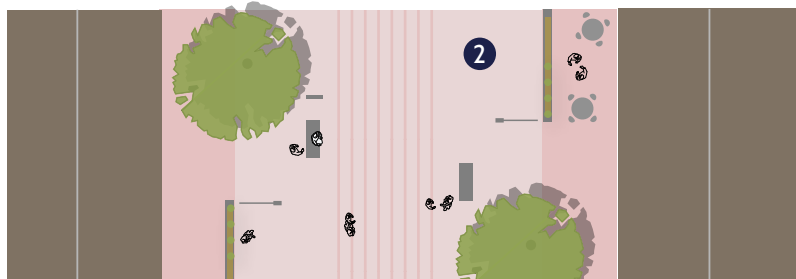
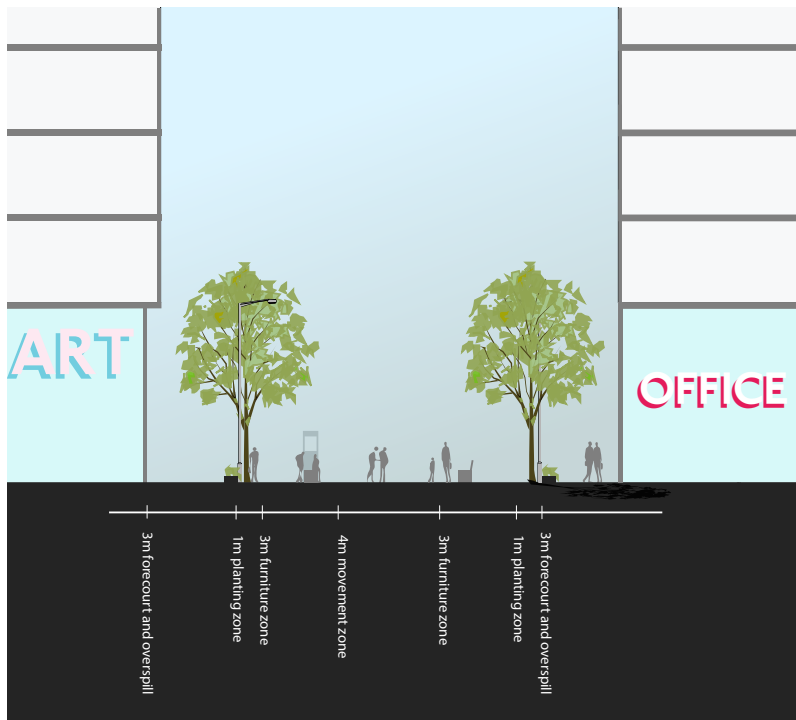
BS.9.2 M1/P3 CITY PLACE - DESIGN PRINCIPLES

1	City Places should be fun and active streets which make users feel safe and comfortable. Opportunities to attract a range of different users should be explored
2	City Places should be able to accommodate high numbers of pedestrians with clear, uncluttered footways
3	Retail and other commercial and leisure uses should have out of hours servicing arrangements to avoid conflict between vehicles and pedestrians
4	City Places should have good connections to public transport infrastructure. There may be requirement for additional elements in some locations such as coach parking - these should be carefully incorporated into the design of the public realm
5	A high quality materials palette will be important in distinguishing these as world class destinations
6	Where cycle flows are high, cyclists and pedestrians should have clearly separated facilities.

BS.9.3 HEALTHY STREETS PRIORITIES

Hertsmere Road: Upgrades to Hertsmere Road to include provision for cycle links between Westferry Circus and Cycle Superhighway Route 3. New development should provide active frontage at ground level to create an animated and vibrant street environment.





Illustrative cross section showing how the design principles can be applied to a City Place in the Isle of Dogs and South Poplar Opportunity Area



Precedents - clockwise from top left:

- Effra Road, Brixton
- West India Avenue, Canary Wharf
- Places to rest, share and shelter, Euston Circus



ENABLING ACTIVE TRAVEL

Walking is the glue that binds London's transport system together, seamlessly connecting our public transport hubs with the Capital's network of streets and public spaces.

AT.1 BETTER PLACES FOR WALKING

AT.1.1 MORE AND BETTER WALKING

The design of our streets can have a significant impact on people's attitudes to walking, whether for health, for pleasure or to get from a to b. Factors that can influence whether people choose to walk over other modes include:

1. Journey times - people are more likely to walk for local journeys or trips that they know would be as fast on foot as by public transport
2. Street conditions - clean, comfortable and well maintained streets are more appealing to pedestrians
3. Interest and activity on-route - walking for pleasure
4. Environment and health benefits
5. Convenience and cost - walking is free, as opposed to other modes of transport.

By creating an environment that encourages more people to walk, we can help to unlock the following benefits:

- Reducing travel congestion
- Reducing road casualties by creating safer streets and spaces
- Economic uplift – supporting London's economy
- Personal health, increasing activity and reducing NHS demand
- Improved air quality and environments through lower emissions and noise reductions.

PERS and Pedestrian Comfort Surveys are tried and tested tools for assessing walkability and accessibility and should be used in the upgrade of existing connections and the design of new walking routes.

REF

For more information, refer to:

1. TfL Attitudes to Walking Survey, 2012
2. Improving the Health of Londoners: Transport Action Plan, TfL 2014

AT.1.2 DESIGNING WALKING ENVIRONMENTS

When designing high quality places for pedestrians, there are a number of important factors to take into account.

Accessibility

- The pedestrian environment should provide a high level of accessibility to ensure that people of all ages and abilities are catered for
- Appropriate tactile paving should be used to assist visually impaired persons. The three main types applied in London include: blister; corduroy; ladder and tramline.

Traffic calming

- The Borough's 20mph speed limit will help to calm the movement of traffic
- Other complementary traffic calming measures include:
 - Carriageway narrowing
 - Tightening of junction radii
 - Colour and surface texture changes
 - Greater pedestrian presence.

Personal safety

- Avoiding the need for people to use underpasses by providing at-grade crossings where possible
- Lighting to ensure that all routes are well lit and overlooked where possible.

Legibility

- The use of Legible London signage will help people to find their way around the area as well as highlighting walking distances to local destinations
- Around the Canary Wharf Estate there is a two-tier approach to walking with underground malls carrying a large amount of footfall. Where this occurs there should be good signage regularly located to help people to orientate themselves.

Ambience and environment

- The use of central medians can help to provide opportunities for informal pedestrian crossing as well as visually narrowing the carriageway
- Seating should be designed into the streetscape to enable opportunities to rest and pause
- Greening and tree planting play an important role in creating more pleasant streets for pedestrians, providing shade and shelter and creating a human scale
- Pocket parks can help to create visual interest and activity at important points along a street corridor.



Oxford Street east



Britannia Junction, Camden



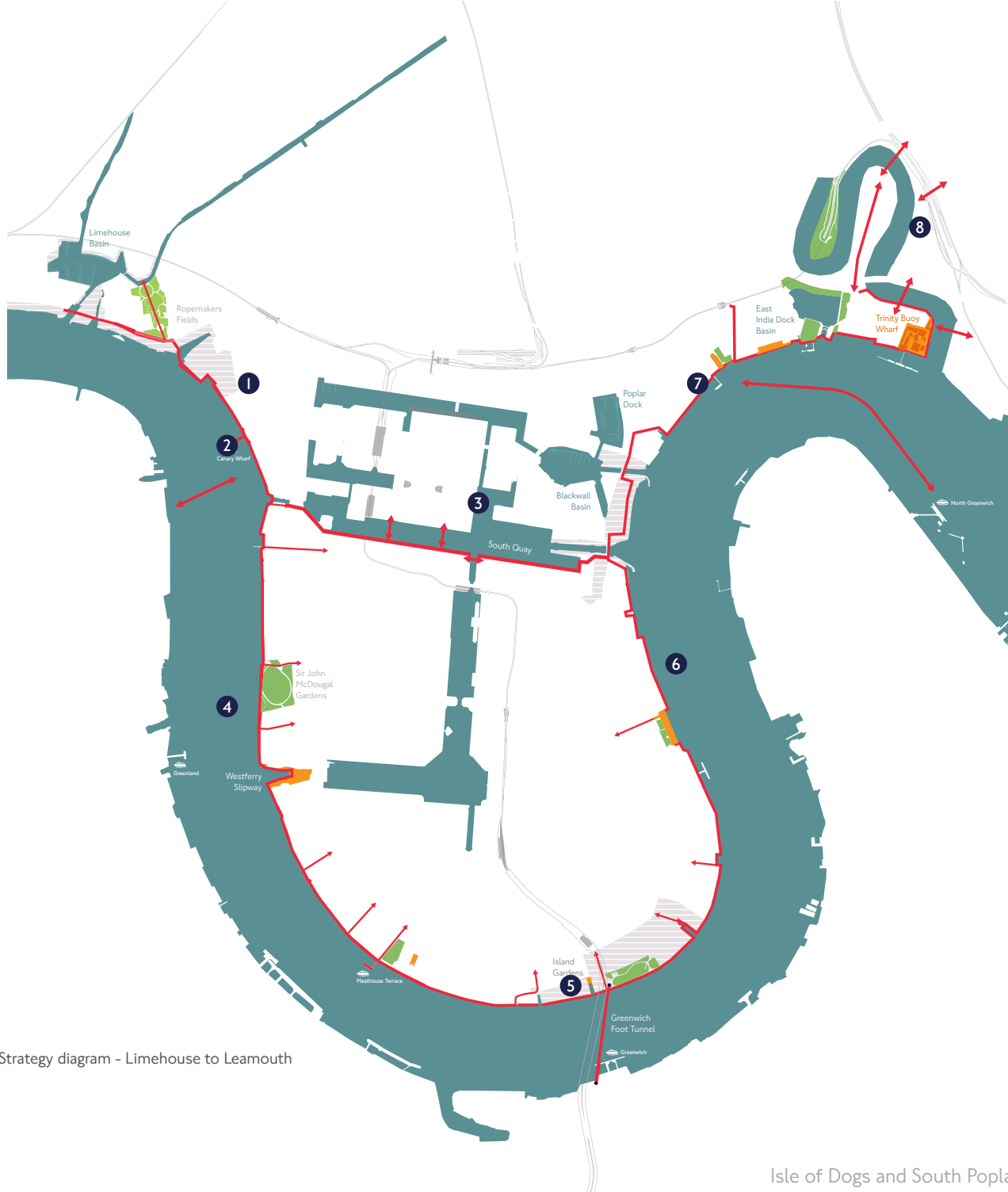
Byng Place, Fitzrovia



High Street, Stratford

AT.1.3 LIMEHOUSE TO LEAMOUTH WALKING ROUTE

LIMEHOUSE TO LEAMOUTH WALKING ROUTE					
Programme	Key principles	Description	Character zone	Modes	Interventions
Limehouse to Leamouth walking route	<p>A network of walking and cycle routes</p> <p>Placemaking and transformation</p>	<p>Upgrades to the Thames Path to improve its amenity and leisure function.</p> <p>Completion of missing sections of this link where possible to connect Limehouse to Leamouth.</p> <p>Wayfinding and legibility along this route to build identity and enable ease of access and egress for users at key locations.</p> <p>Maximising amenity value of waterside spaces and creating a continuous connection along the dock edges, with new development fronting onto the water expected to safeguard public access to the dock edges.</p>	OA wide	Walking	<p>02-L Rotherhithe to Canary Wharf crossing</p> <p>03-L River crossing - Blackwall to North Greenwich</p> <p>07-B South Dock bridges</p> <p>08-B Millwall Inner Dock footbridge</p> <p>09-B East India Dock Basin bridge</p> <p>10-B Trinity Buoy Wharf bridge</p> <p>11-B Hercules bridge</p> <p>14-B City Peninsula - 24 hour connection</p> <p>28-U Connections to the Leaway</p> <p>32-O Limehouse to Leamouth walking route</p> <p>33-O Dock edge connections</p> <p>36-O Promotion of River Services</p> <p>37-O Legible London signage</p> <p>38-O Creative and cultural strategy including wayfinding initiatives</p>
SECTION REF:	1.2	3.4	2.2	AT.1	3.1 - 3.4



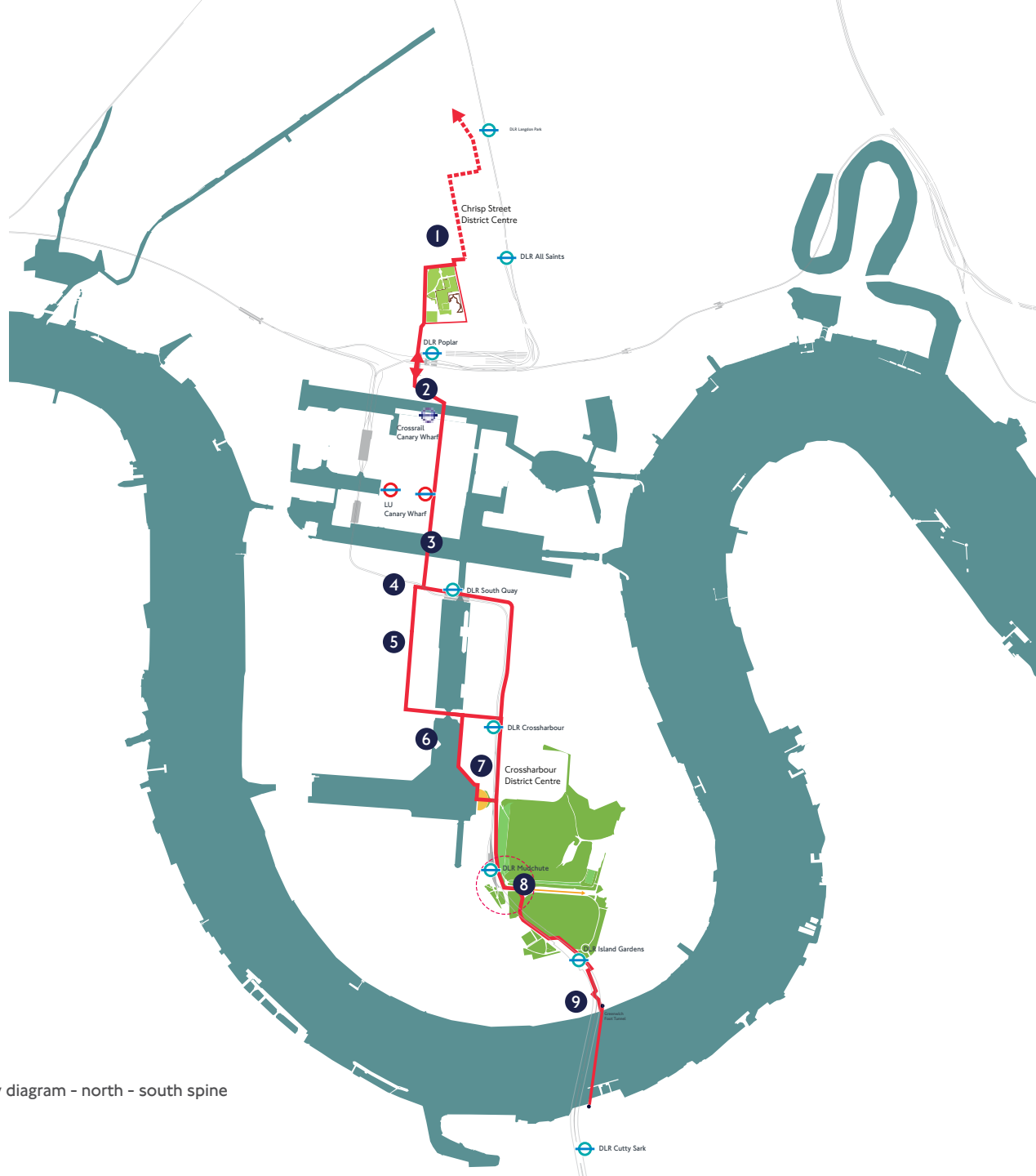
Strategy diagram - Limehouse to Leamouth

INTERVENTIONS

- ① Improved access to Canary Wharf from River Services pier
- ② Proposed Rotherhithe to Canary Wharf river crossing
- ③ New / upgraded bridge connection at South Dock and dock edge upgrades to provide an east-west link across the peninsula
- ④ Westferry Slipway – join up fragmented sections of the Thames Path as sites come forward for development. Enhancement of public realm at slipway
- ⑤ Explore feasibility of completing the Thames Path in this location
- ⑥ Improvements to public space and viewing area
- ⑦ Completion of Thames Path and connection to the Leaway. Enhanced pedestrian and cycle connections to potential future river crossing
- ⑧ Improved connections between Tower Hamlets and Newham through a series of proposed bridges over the River Lea.

AT.1.4 NORTH-SOUTH SPINE ROUTE

NORTH-SOUTH SPINE ROUTE					
Programme	Key principles	Description	Character Zone	Modes	Interventions
North-south spine - strategy	A network of walking and cycle routes	An enhanced north-south connection through the Isle of Dogs and South Poplar linking the north of the Borough to Greenwich via the Greenwich Foot Tunnel. This route stitches existing connections together through new or upgraded crossings over major barriers (South Dock and Aspen Way) to create a continuous active travel corridor from north to south.	OA wide	Walking Cycling	01-L Isle of Dogs central spine 06-L Aspen Way decking 07-B South Dock bridges 12-B Poplar footbridge upgrade 13-B Glengall bridge 16-U East India Dock Road 19-U Poplar High Street 21-U Marsh Wall 22-U East Ferry Road 24-U Tiller Road / Pepper Street 25-U Millharbour 30-U Greenwich Foot Tunnel - active travel management 37-O Legible London signage 38-O Creative and cultural strategy including wayfinding initiatives
SECTION REF:	1.2	3.1	2.2	AT.1, AT.2	3.1 - 3.4



Strategy diagram - north - south spine

INTERVENTIONS

- 1 Improved crossings on East India Dock Road
- 2 Upgraded bridge connections over Aspen Way providing a high quality, seamless link between Poplar and Canary Wharf
- 3 Proposed pedestrian and cycle bridge on South Quay - Upper Bank Street alignment
- 4 Marsh Wall - improved crossing facilities for pedestrians and cyclists
- 5 Upgrades to Millharbour to provide a high level of service for pedestrians and cycles
- 6 Access improvements to Glengall Bridge
- 7 Improvements to safety and accessibility of the pedestrian/cycle underpass to make this a safer, more appealing and usable connection
- 8 Station public realm improvements including cycle parking and a redesigned public space to enhance the relationship to Millwall Park. Traffic calming to improve safety for cyclists crossing East Ferry Road
- 9 Connections to Greenwich utilising the existing Greenwich Foot Tunnel

AT.2 CYCLE NETWORK

All proposals in the Opportunity Area must take into account the growing role of cycling in London and the importance of accommodating high-quality cycle provision into the design of the streetscape.

There is not a one-size fits all approach to the design of cycle routes and the approach taken will vary depending on the street cross-section and the alternative route options in the surrounding area.

AT.2.1 OBJECTIVES FOR CYCLING IN THE OA

1. Cycling should be given the same consideration as all other modes when designing for the movement of people
2. Cycle infrastructure should cater for existing need while facilitating the future growth of cycling in London
3. Cycle infrastructure should cater to all types of cycle trip, from long commutes to shorter local journeys
4. All designers of cycling infrastructure in the OA should refer to the 2014 London Cycling Design Standards (LCDS) and Tower Hamlets Cycle Strategy (2016).

REF

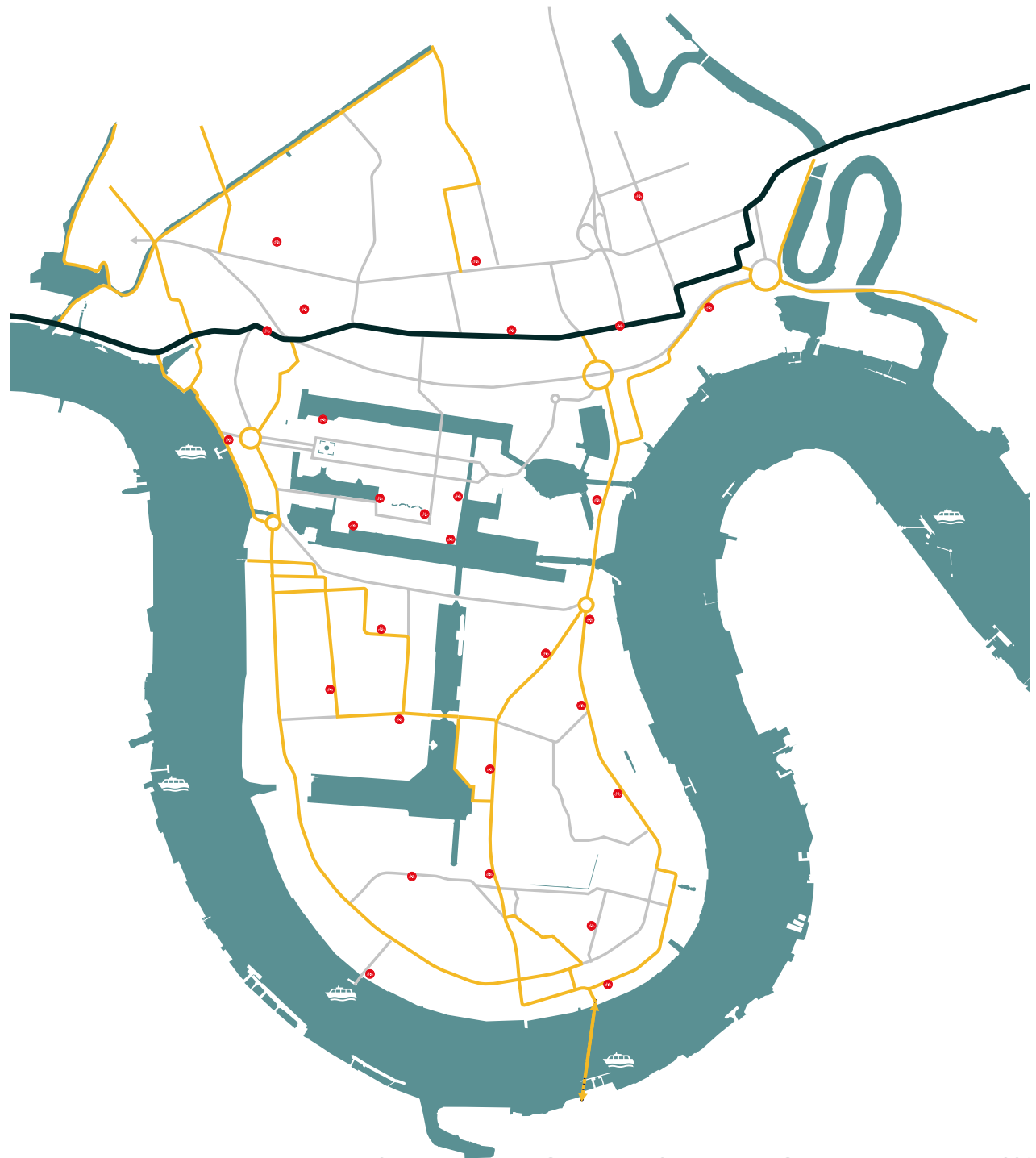
For more detail, refer to:

1. London Cycling Design Standards, TfL 2014
2. LBTH Cycle Strategy, 2016




AT.2.2 EXISTING CYCLEWAYS IN THE OA

The area is currently served by the London Cycle Network, however many of the signed cycle routes are on-carriageway and involve mixing with high levels of vehicular traffic. More attractive and comfortable facilities are needed to encourage more people to cycle.

The diagram to the right shows the area's existing cycle network.



Existing cycle network (right)

-  Cycle Superhighway Route 3
-  Signed cycle routes
-  Santander cycle hire

AT.2.3 PROPOSED CYCLE NETWORK

The diagram to the right shows the proposed future cycle network to be delivered through upgrades to existing cycle routes alongside proposed additional connections. We have worked on the principle of achieving a dense grid of cycle routes spaced roughly every 400 metres to ensure access for all to high quality cycle infrastructure.

Key principles for the provision of cycleways in the area include:

- Creating continuous cycleways which ensure a high level of service on links as well as through junctions
- Improving cycle connections to key destinations such as local, district and major centres in the area
- As well as tackling cycle safety on the roads, the personal safety of cyclists should be considered and improvements made to lighting and visibility to reduce crime or perception of crime in locations such as underpasses
- Improving interchange between cycling and public transport modes through signage, cycle connections and facilities for cyclists at transport hubs

- Maintaining cycle connections during construction or highways works or identifying and clearly signing alternative routes which are direct and offer a high level of service
- Exploring opportunities for filtered permeability on local streets where it would add significant cycling benefits.

Overcoming barriers

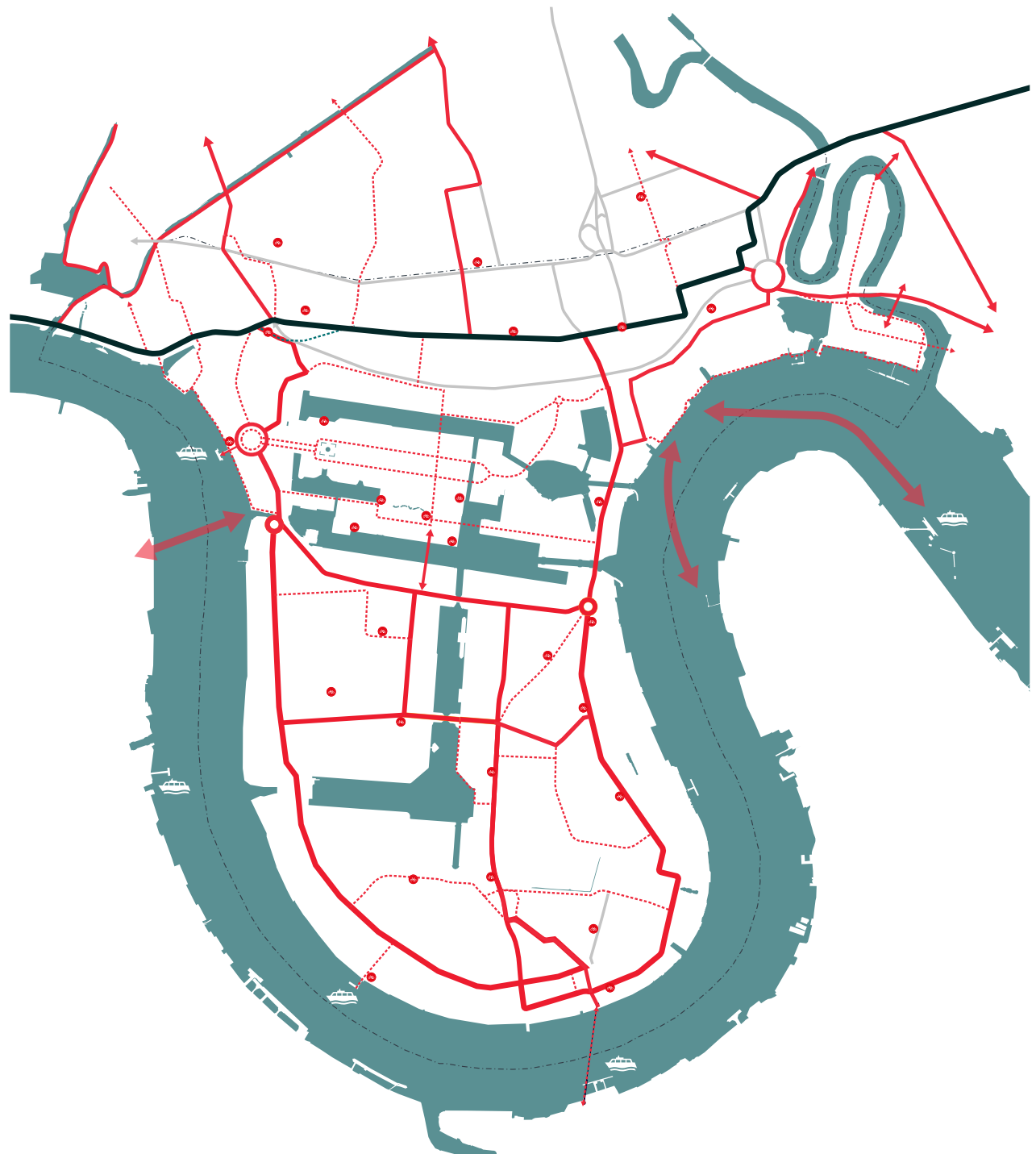
Investment in new infrastructure to overcome barriers in the OA, such as bridges or improved river services, should be designed to accommodate cycling, with consideration given to their integration into the network of onwards cycle connections.

AT.2.5 COMPLEMENTARY FACILITIES

New developments in the Opportunity Area will be expected to provide the following cycle facilities:

- Visitor cycle parking at busy locations including public transport hubs, community and cultural destinations and public spaces
- Residential and commercial developments will be required to provide a high standard of cycle parking, as well as changing and showering facilities to ensure that it is possible for anyone to travel easily in the area by foot or by bicycle

- Internal streets should be comfortable and attractive for cycling
- Good quality connections to the surrounding cycle network will be required.

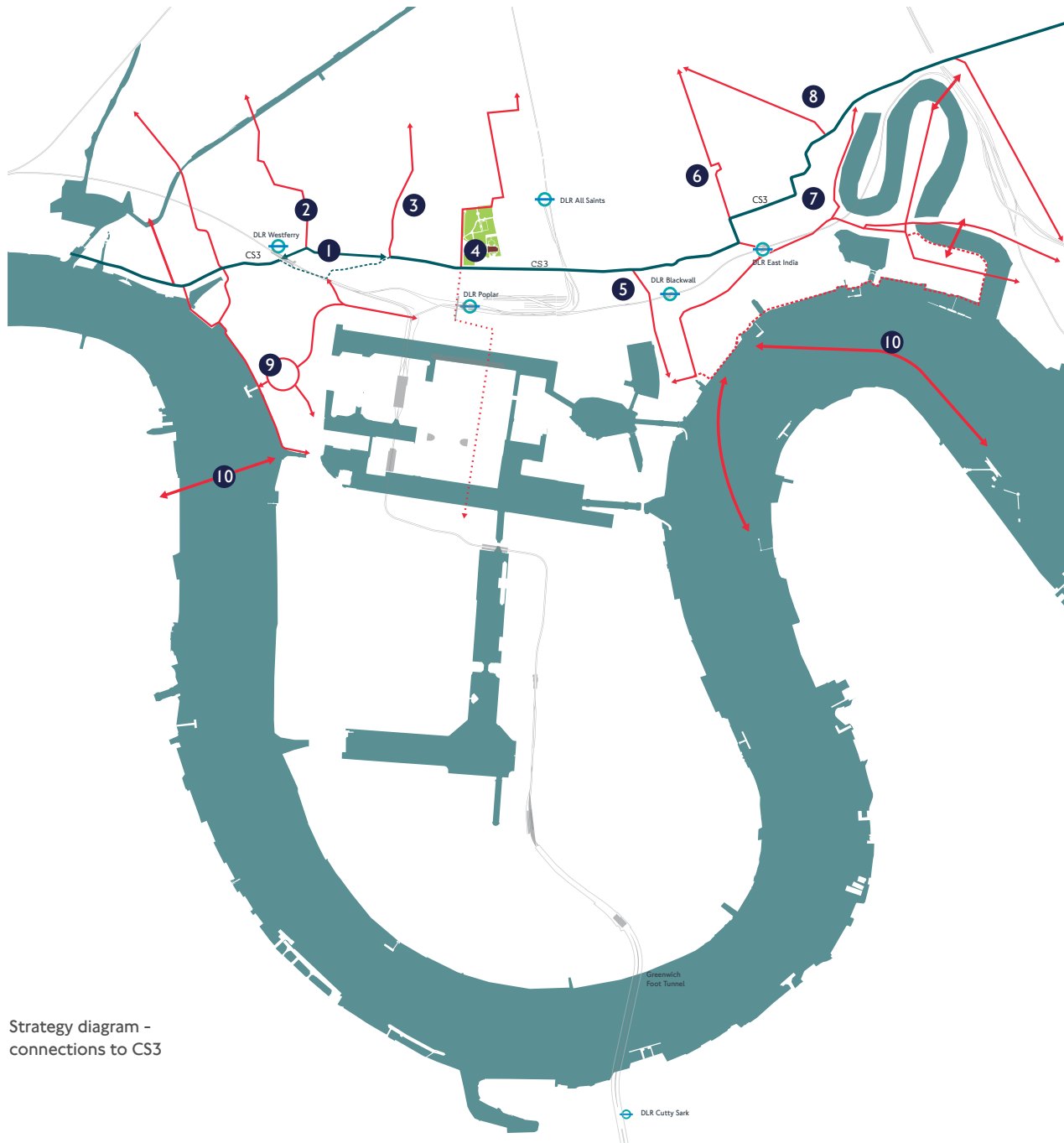


Proposed future cycle network

- Cycle Superhighway Route 3
- Proposed primary cycle routes
- - - Proposed cyclable routes
- 🚲 Santander cycle hire

AT.2.5 CONNECTIONS TO CS3

CONNECTIONS TO CYCLE SUPERHIGHWAY ROUTE 3					
Programme	Key Principles	Description	Character Zone	Modes	Interventions
Connections to CS3	A network of walking and cycle routes	Improving links to Cycle Superhighway Route 3 to make it easier for people to cycle for strategic journeys as well as local trips.	South Poplar and Leamouth	Cycling	02-L Rotherhithe to Canary Wharf crossing 03-L River crossing - Blackwall to North Greenwich 04-L Connections to the Royal Docks 05-L Links to Poplar Riverside 06-L Aspen Way decking 10-B Trinity Buoy Wharf bridge 11-B Hercules bridge 12-B Poplar footbridge upgrade 14-B City Peninsula - 24 hour connection 16-U East India Dock Road 17-U West India Dock Road 18-U Blackwall connections 19-U Poplar High Street 27-U CS3 upgrades and connections 28-U Connections to the Leaway 36-O Promotion of River Services
SECTION REF:	1.2	3.3	2.2.1	AT.2	3.1 - 3.4



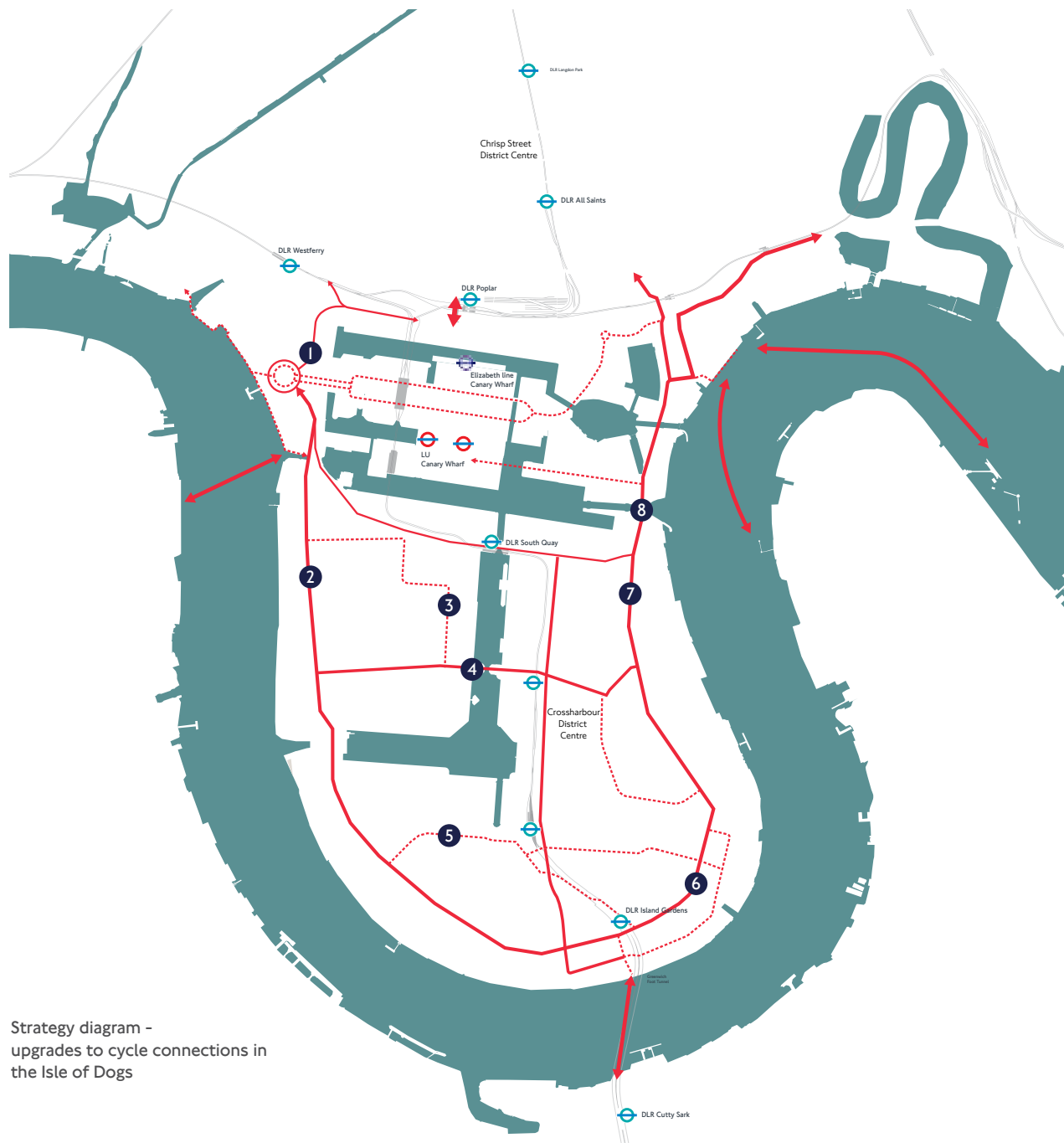
Strategy diagram - connections to CS3

INTERVENTIONS

- 1 Simplified routing of CS3 between Ming Street/ Westferry Road to Pennyfields (subject to junction upgrades at Westferry Rd/West India Dock Rd jn)
- 2 Improved pedestrian and cycle link - Burdett Road to Limehouse Causeway
- 3 Improved crossing facilities - Upper Bank Street - Saltwell Street (East India Dock Road)
- 4 Improved cycle connection from the signed cycleway on Kerbey Street to Poplar High Street (via Woodstock Terrace). Potential re-routing of Kerbey Street southern section to Sturry Street
- 5 Junction improvements and proposed cycle crossings at Preston's Road roundabout
- 6 Cycle connection north-south through Aberfeldy Village (crossing East India Dock Road)
- 7 Improved connection - Leamouth to public transport hubs (East India and Canning Town) and CS3
- 8 Junction improvement - cycle connection CS3 to Abbott Road
- 9 Improved connections between Canary Wharf pier and CS3
- 10 Proposed strategic cross-river cycle connections

AT.2.6 UPGRADES TO CYCLE CONNECTIONS IN THE IOD PENINSULA

UPGRADES TO CYCLE CONNECTIONS - IOD PENINSULA					
Programme	Theme	Description	Character Zone	Modes	Interventions
Corridor Upgrades	A network of walking and cycle routes	A better environment for cycling on the Isle of Dogs peripheral loop road and important lateral links across the peninsula.	Canary Wharf and Wood Wharf South Quay and Marsh Wall Crossharbour and Millwall Island Gardens	Cycling	13-B Glengall bridge 15-B Blue bridge upgrades 18-U Blackwall connections 20-U Manchester Road 23-U Westferry Road 24-U Tiller Road / Pepper Street 25-U Millharbour 26-U Spindrifft Avenue 32-O Limehouse to Leamouth walking route
SECTION REF:	1.2	3.3	2.2.2 - 2.2.5	AT.2	3.2 - 3.4



Strategy diagram - upgrades to cycle connections in the Isle of Dogs

INTERVENTIONS

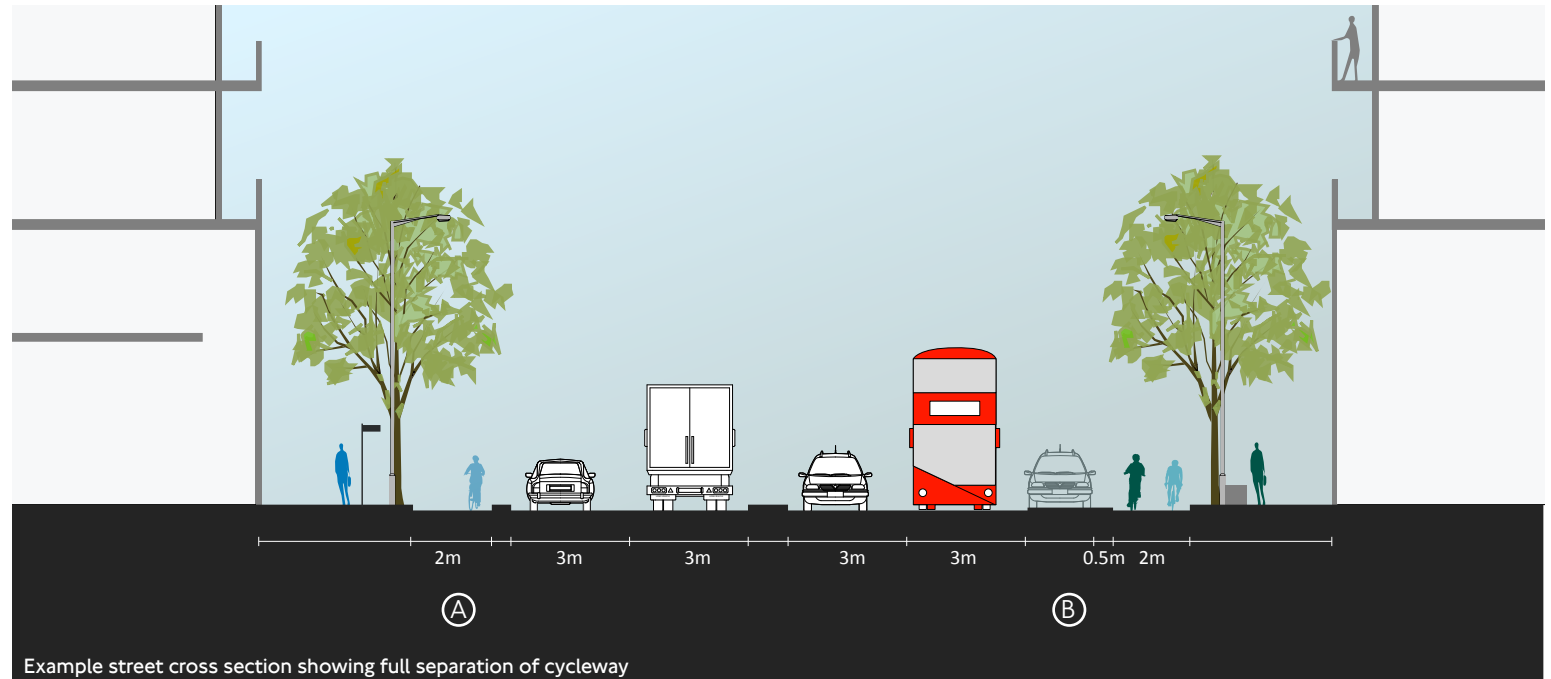
- 1 Improved facilities for cyclists through Westferry Circus linking CS3 (Hertsmere Road), the main Isle of Dogs peninsula and the proposed Rotherhithe to Canary Wharf crossing
- 2 Improvements to cycle facilities on Westferry Road
- 3 Millharbour cycle improvements as part of an upgrade to LCN Route 1 in the Isle of Dogs peninsula
- 4 Improvements to cycle facilities on Tiller Road/Pepper Street including upgrades to Glengall Bridge
- 5 Improvements to Spindrift Avenue, providing an important link from Manchester Road and Masthouse Terrace pier to the DLR at Mudchute and on to Crossharbour District Centre
- 6 Recent upgrades to Manchester Road carried out by LBTH
- 7 Proposed upgrades to Preston's Road/Manchester Road to be carried out by LBTH (including safety improvements to the Marsh Wall junction)
- 8 Upgrades to the Blue Bridge to improve facilities for cycling

AT.2.7 DESIGNING CYCLE INFRASTRUCTURE

This section sets out examples showing how high-quality cycling provision can be accommodated within typical street cross sections.

Full separation

Full separation is appropriate for busy roads that include a range of different vehicle types including freight or servicing vehicles. While this provides the highest level of separation between cyclists and other traffic, it is the most challenging to accommodate on existing streets due to a lack of available space. Fully separated cycleways provide a continuous physical buffer between cyclists and vehicles, or vertical stepping of cycle tracks at an intermediate level between the footway and carriageway.



Design standards

- A One-way cycle tracks should be min 1.5m; with 2.0m achieved wherever possible.
- B In areas of on-street parking the cycleway should be located on the footway side to reduce potential conflicts with vehicles crossing the cycle lane to enter or exit the carriageway. A buffer of at least 0.5 metres between cyclists and parked cars is recommended to minimise risk of collision between cyclists and car doors.



Segregated cycleway, Rotterdam



Continuous uninterrupted cycle path, London



Cycle Superhighway 7, Southwark Bridge



Full separation, East West Cycle Superhighway

Dedicated cycle lanes

These can comprise mandatory cycle lanes or light segregation.

Mandatory cycle lanes are marked for exclusive use of cyclists during the advertised hours of operation.

Light segregation uses intermittently placed objects (such as planters, pre-formed separators or flexible posts) next to the mandatory cycle lane marking, in order to deter encroachment of the lane by motor vehicles.

Light segregation has many benefits over full segregation in that it is easier to install, usually costs less, is more adaptable and does not create barriers to pedestrian crossing movements.

Design standards

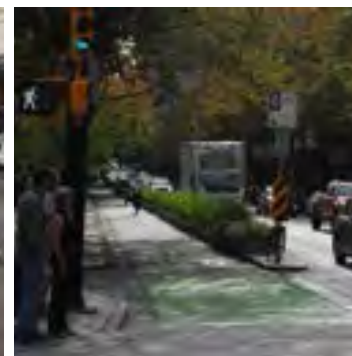
- A The minimum width for cycle lanes is 1.5m; at least 2.0m should be achieved wherever possible, particularly where light segregation is used (as the objects reduce the available width for cycling).
- B Where cycleways are adjacent to bus lanes, bus stop bypasses may be used.



Light segregation, Camden



Light segregation, Antwerp



Light segregation, Vancouver



Bus stop bypass, Stratford High Street, London

Shared lanes

Shared lanes can comprise:

- Shared bus lanes, where cycles may use the full width of the bus lane during and beyond its hours of operation; or
- Advisory cycle lanes, which are intended for, but not legally restricted to, cyclists' use.

Shared lanes are appropriate for streets that have a reasonably high movement function, but where speeds are not excessive. For mass cycling, however, shared lanes are only suitable when traffic flows are quite low.

Design features of these routes should include:

- Traffic calming where appropriate
- High quality, consistent materials
- Clear signage and good visibility for cyclists.

Design standards

- A Bus lanes should ideally be at least 4.5m wide to allow comfortable overtaking between buses and cyclists. Narrow bus lanes of 3.0 - 3.2m may be appropriate where bus frequency and cycle flow are both low. Lanes of 4.0 - 4.5 can be acceptable where the adjacent lane is lightly trafficked and generally free of larger vehicles.
- B Where cyclists and motor vehicles are on carriageway together the borough's 20mph speed limit will create a calmer speed of movement.



With-flow bus lane, London

Integration

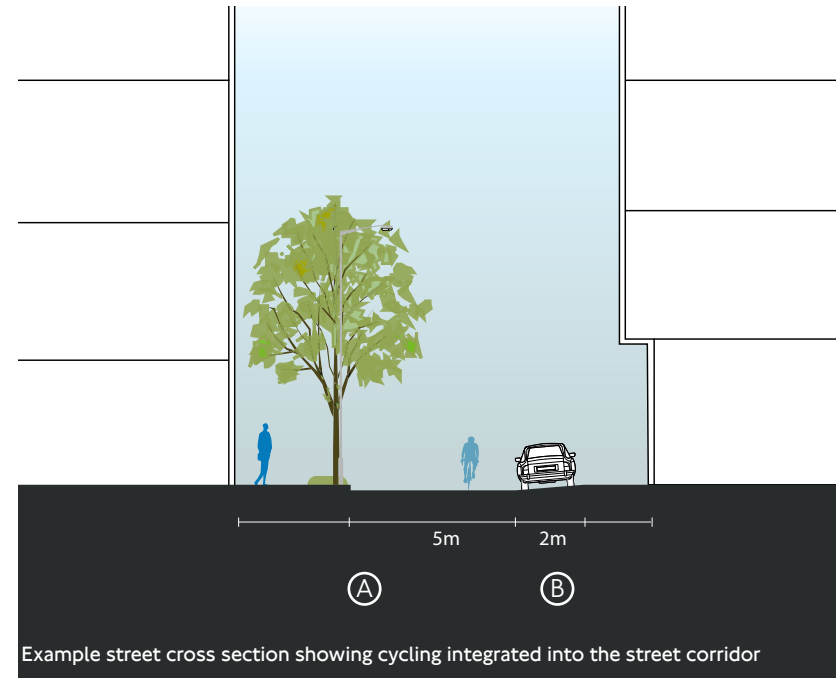
Lightly trafficked local streets should be part of a network of quiet routes through the Isle of Dogs and South Poplar, allowing cyclists to use them for a range of different journey types. These routes should provide access to physical, social or cultural assets in the area including the dockside and river as well as quieter connections between residential areas and schools or other local destinations.

Design requirements include:

- Limited carriageway width for two-way traffic, keeping speeds low
- Filtered permeability can be implemented to as part of a wider approach to traffic management in an area of local streets
- Materials should be smooth and consistent to maximise comfort whilst having appropriate skid resistance.

Design standards

- A Where motor vehicles and cyclists share the carriageway the borough's 20mph speed limit will ensure a calmer pace of movement.
- B Well-planned on-street parking that does not dominate the street and contributes to a comfortable low-speed environment.



Woonerf, Netherlands



Mini-Hollands - filtered permeability, Waltham Forest

AT.3 BUS INFRASTRUCTURE

AT.3.1 BUS STOP LOCATIONS

Bus stops should be situated near places of particular need such as local shops, health facilities, schools or sheltered housing. Precise locations are determined by London Buses in consultation with highway authorities and the police.

We use a distance of 400 metres / five minutes walk for assessing the preferred proximity of bus stops.

Design considerations include:

- Providing adequate footway width to allow for waiting space as well as uninterrupted pedestrian flows
- Locating bus stops close to (on the exit side of) pedestrian crossings
- Stops should be located 'tail to tail' on opposite sides of the road
- Ensuring that there is adequate space to provide a bus shelter
- Where bus stops interchange with other modes they should be sited to minimise walking distance between stops.

AT.3.2 CROSSHARBOUR BUS TERMINUS

Upgraded bus stop and stand facilities are proposed at the Crossharbour District Centre. The following principles should be considered in the design of these:

- Designs should minimise the impact of bus standing on the wider streetscape environment
- Pedestrian crossings should be provided in close proximity to bus stops to reduce the risk of informal crossing, ensuring that good sight lines are maintained and traffic speeds are kept to a minimum
- Care should be taken to ensure that cycle routes are not interrupted by the location of bus stands
- Signage for onwards journeys should be provided to encourage people to walk or cycle for the last mile of their journeys
- High-quality seating and shelter should be provided for people waiting for buses
- Facilities should be provided for drivers such as toilets and mess rooms.

REF

For more detail, refer to:

1. Accessible Bus Stop Design Guidance, TfL 2006

AT.4 DLR STATIONS AND VIADUCTS

Opportunities to improve the relationship of the DLR infrastructure to the street should be explored, including:

- Improvements to the public realm around and beneath DLR stations to capitalise on their place-making potential
- Activation of the space beneath the DLR viaducts to make more of these as a feature and an integrated part of the street
- Upgrading or creating connections over the tracks at grade or beneath the DLR viaduct to break down barriers to pedestrian and cycle movement.

AT.4.1 OWNERSHIP AND OPERATION

DLR's ownership of land around its tracks and stations varies according to location and conditions. For viaducts DLR generally owns the viaduct structures and the airspace above them (all buildings must be constructed and maintained without any over-sailing either above or alongside the DLR viaduct). DLR does not generally own the airspace or ground below the viaducts, with the exception of the ground on which the columns sit, however it owns contractual land rights, referred to as 'protection zones' normally running five metres either side of the boundary fence or viaduct edge. These protection zone rights will exist independent of development proposals or planning permissions.

These land rights generally limit land uses within the protection zone to road, pathway or cycleway, landscaping and car parking. Any proposals outside of these activities would be assessed on a site-by-site basis. Proposals to enhance these areas should address one or more of the following objectives:

- Improvements to the quality, legibility and usability of the public realm around stations and viaducts
- Improvements to safety of passengers going to and from a station
- Opportunities for commercial enterprise which would help to animate the area around a station.

AT.4.2 STATION PUBLIC REALM ENHANCEMENTS

A number of DLR stations in the Opportunity Area which would benefit from public realm enhancements to improve the relationship to the surrounding area.

Station public realm enhancements should build on the place-shaping potential of the station. Interventions should consider:

- Station presence on the street - is the station visible from a distance
- Incorporation of Legible London or agreed alternative signage to improve wayfinding
- Provision of street furniture which can provide passive resting points with consideration given to lighting, greening, shade and shelter
- Where DLR platforms are elevated there should be passenger information at street level
- Provision of good quality pedestrian crossings to improve access to and from the station
- Provision for seamless cycle interchange (including well-located, accessible cycle parking, crossings and good signage of cycle routes for onward journeys)
- Opportunities for commercial activity such as kiosks or vending machines should be considered.



For more detail, refer to:

1. TfL Station Public Realm Design Guidance, 2015

AT.4.3 PROPOSED IMPROVEMENTS

1. Upgrades to the existing footbridge at Poplar DLR Station to provide a better connection between South Poplar and Canary Wharf
2. Opportunities for activation of the area beneath the viaducts should be explored across the network and prioritised around South Quay and Delta Junction
3. Station public realm upgrades: Westferry, Poplar, Blackwall, South Quay, Crossharbour and Mudchute
4. Investigation of opportunities to reduce the impact of DLR infrastructure on the public realm and pedestrian permeability, in particular around the embankment at Crossharbour
5. Upgrades to the East Ferry Road underpass to improve visibility from the street and tackle actual and perceived personal safety issues
6. Improvements to wayfinding and interchange for onward journeys.

Impact on the street

The DLR has a significant impact on the streetscape of East Ferry Road, where impermeable banks rise up to meet the elevated track and the pedestrian environment is highly constrained. Where possible the potential to reduce the impact on the street should be explored, with interventions carried out to improve permeability, visual connection and claim some land back for the footways where possible.

Feature lighting

Feature lighting of viaducts and under-crofts can help to improve visibility and address safety concerns and have a positive impact on the wider public realm. This should form part of a coordinated lighting strategy for the viaducts as opposed to being considered on a site by site basis.

Maintenance and protection from vandalism must be considered.

Sports facilities / play

The provision of sports facilities and play areas beneath the viaducts may be considered in specific locations however some activities such as ball games may not be permitted unless appropriate protection such as netting is in place to protect the track. Any structures must be easily moveable.



Sylvia Park, New Zealand
Image: <http://www.isthmus.co.nz>



Underpass park Toronto.
Image: Nicola Betts / Waterfront Toronto

Events and temporary activities

Events such as street markets or outdoor cinemas could be explored on an occasional basis. It should be noted that for safety reasons uses that could lead to smoke or fire, such as hot food preparation, would be considered inappropriate.

Temporary structures

There may be opportunities for temporary demountable structures to be located beneath the DLR viaducts in some locations. Proposals would need to be supported by a clear rationale, and any items would need to be movable on short notice (not exceeding 48 hours) and not encroach on space needed for maintenance or risk damage to the structure.

Public art

The provision of public art along the DLR viaducts or around the stations could be considered, provided that any proposals were developed closely with TfL and DLR. Proposals would be considered based on their merits and positive impact on the wider urban realm.



Modular Market structure, Wynyard Quarter Auckland Koko



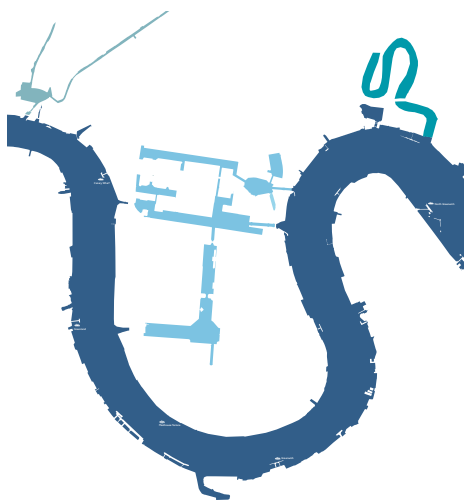
Inflatable canopy for temporary uses
Image source unknown



Lighting and public art, Canary Wharf
Copyright Julius Popp

AT.5 ACTIVATING THE WATERWAYS

The waterways are one of the defining characteristics of the Isle of Dogs with the OA set around the rivers Thames and Lea; the historic Docks and the Limehouse Cut. While you don't have to travel far in the area to access the water, each water body is different in character and requires a bespoke response.



Waterways in the Opportunity Area

WATERWAY	DESCRIPTION	PRIORITIES	TOOLS
RIVER THAMES	The Thames forms the boundary of the Isle of Dogs peninsula. The river creates desirable views and an attractive setting for development however its exposure also creates challenging conditions with high winds experienced and little shelter on the Thames Path. There are currently limited opportunities to physically and visually connect to the Thames from the peripheral loop road.	<ol style="list-style-type: none"> 1. Upgrades to the Thames Path to improve the experience of users and make more of this important asset 2. Address issues of inconsistent management due to private ownership of sections of the Thames Path 3. Reconnect the missing links to provide a continuous riverside connection as well as new physical and visual connections to the river 4. Build a strong identity for the Limehouse to Leamouth river walk 	WM1, WM3 WA2 WE2 WI1, WI2, WI3
RIVER LEA	The River Lea is a focal point for regeneration with the Poplar Riverside Housing Zone set to bring a large area of former industrial land forward for development. The Leaway proposals seek to enliven this corridor and create an attractive new river park linking the Thames up to the Queen Elizabeth Olympic Park.	<ol style="list-style-type: none"> 5. Improve connections to the Leaway 6. Provide new crossings over the River Lea 	WM1, WM2, WM3 WA1, WA2 WE1, WE2 WI1, WI2, WI3
LIMEHOUSE CUT	The Limehouse Cut provides an important walking and cycle connection between the Thames and Poplar Riverside. This corridor, once a focus for industrial and employment activity, is now framed by new residential development.	<ol style="list-style-type: none"> 7. Improve cycling connections to the Limehouse Cut and onwards to CS3 (south) and CS2 (north) 8. Ensure that the Limehouse Cut is well lit and improve safety and perception of safety for pedestrians and cyclists 	WM1, WM2 WA1 WE1 WI1, WI2, WI3
DOCKS	The Docks are one of the defining features of this area and have been a focal point for development activity. The dock edges are largely accessible, with those that are currently inaccessible set to be activated by new development.	<ol style="list-style-type: none"> 9. Increase access to and activity along the dock edges through location of new commercial uses with a strong relationship to the public realm 10. Provide new connections across the docks on desire lines 11. Seek opportunities for softening and greening of the dock edges 12. Protect existing recreational pursuits using the docks, such as the Docklands Sailing and Watersports Centre 	WM1, WM3 WA1, WA2, WA3 WE1, WE2 WI1

AT.5.1 WATERWAYS STRATEGY

The opportunity to strengthen the identity and raise the quality of experience along the waterways should be unlocked through the OAPF and emerging development. This will ensure that the Blue Ribbon Network is central to the recreational landscape of the area and the waterways are accessible for all to enjoy.

A strategy for maximising the use of the waterways should consider their role under the following themes:

- Movement
- Activity
- Ecology and biodiversity
- Identity.

Guidance for each of these themes is set out on the following page.



Above and right: completed sections of the Leaway

AT.5.2 MOVEMENT

The waterways should provide attractive environments for walking and, in some locations, cycling.

WM1 Walking

Towpaths, dock edges and river walkways should be generous, well lit and overlooked to ensure that pedestrians feel comfortable using these at all times of day and night.

WM2 Cycling

Cycling is encouraged on the two important north-south connections - the Leaway and the Limehouse Cut, providing important links between the Thames and the north of the Borough.

Conversely cycling is discouraged on much of the Thames Path and the dock edges, where activity is encouraged to overspill into the public realm and conflicts may occur. In these instances, alternative routes for cyclists will be provided which are equally direct.

WM3 River transport

Improving the visibility of piers from the surrounding street network will be important. Where there is an interface with a pier, clear and legible onward connections for pedestrians and cyclists must be ensured. Passenger information should be provided to communicate opportunities for interchange with other modes.

AT.5.3 ACTIVITY

WA1 Sport and recreation

The use of the water as a recreational asset should be encouraged through providing new opportunities for watersports and protecting those assets already located in the area such as the Docklands Sailing and Watersports Centre.

WA2 Play

Playable spaces should be incorporated into towpaths and waterside parks. These will help to activate and draw people to the waterside and create interest and animation in these areas.

WA3 Commercial activity

Small commercial units can further help to bring activity to the water and provide opportunities for outdoor seating, making the most of the attractive waterside settings.

WA4 Public space

Upgrades to existing public spaces or creation of new spaces located on the waterways can provide active destinations or passive spaces for reflection.



South Bank, London



HafenCity, Hamburg



Paris



North Dock, Canary Wharf

AT.5.4 ECOLOGY AND BIODIVERSITY

WE1 Greening

Opportunities to green the hard edges of some of the waterways should be explored. Innovative measures such as floating gardens may be explored provided they do not negatively impact on other uses of the waterways.

WE2 Habitat Creation

Opportunities to create habitat for species using the waterways should be explored. These can include nesting boxes or perches for bats and river birds and enhancements to the dock edges to provide habitat for fish.



Floating gardens, Paris
Image: unknown source

WE3 Urban comfort

Tree planting and greening can help to soften towpaths and river walkways and create a more comfortable environment for users, in particular in exposed areas where conditions can be windy.



Floating gardens, Paris
Image: unknown source

AT.5.5 IDENTITY BUILDING

WI1 Signage and wayfinding

The waterways should be incorporated into a wider wayfinding strategy for the OA, utilising the Legible London system. There may also be opportunity to develop additional wayfinding elements which are bespoke to the waterway, potentially referencing the heritage and history of the area.

WI2 Gateway elements

The use of gateway elements to signal arrival at key points along the waterway paths will help to orientate users and signpost important locations along the route.



Leaway signage, London

WI3 Interface with other routes

Improvements should be made to the legibility of the waterways from the wider street network. This includes securing direct sight lines or safeguarding new connections through development sites.



Canal-side wayfinding features, London



TECHNICAL ADVICE

T.1 STREET FURNITURE ZONES

T.1.1 INCLUSIVE DESIGN

Inclusive design principles should be at the heart of streetscape design to ensure accessibility for all. Allowing for prams and mobility scooters in pavement widths and parking of prams and mobility scooters at the bottom of buildings will be important considerations.

- Footway widths should be 2m min to allow for two wheelchairs to pass each other
- 1m is the absolute minimum footway width for use only when footfall is low and space is severely constrained or an obstacle is present
- Kerbs should be 125mm standard upstand (140mm at bus stops for deploying boarding and bus ramps).

T.1.2 STREETScape ZONES

The area between the kerb line and the highway boundary can be divided into four zones, which serve distinct functions within the streetscape.

Kerb zone

A kerb zone should be kept completely free of street furniture to prevent damage from vehicles overhanging the carriageway edge.

Furniture and planting zone

The furniture zone is provided adjacent to the kerb zone to coordinate street furniture in a consistent arrangement which maximises the unobstructed width of the footway for pedestrian use. Features such as lighting and signage should be located in this zone, along with cycle parking, seating and other amenity elements.

Furniture should only be provided where it serves a specific function and is appropriate for the location. A furniture zone should therefore not exist where there is no need for street furniture.

Footway clear zone

The clear zone should be entirely free of permanent and temporary street furniture, to allow for unhindered pedestrian movement along the footway. The width of the clear zone provided should relate directly to the character and use of the street, and in particular the volume of pedestrians.

Frontage zone

The frontage zone is the area adjacent to the property line and highway boundary. Wherever possible this zone should be kept free of street furniture to:

- Enable visually impaired people who use canes to navigate the street using the building line
- Minimise obstructing retail frontages to encourage window browsing.

The relative importance, scale and treatment for each of the zones will vary according to the context.

REF

For detail on street furniture, tree planting, soft landscaping and SuDS refer to:

1. TfL Streetscape Guidance, 2015
2. Tower Hamlets Streetscape Design Guide, July 2014 Draft



Furniture placement standards

T.1.3 FURNITURE PLACEMENT

Seating

- Recommended set back from kerb for inward facing seat - 1,000mm
- Recommended set back from kerb for outward facing seat - 2,000mm
- Maximum recommended spacing interval for seating on high streets and steep inclines - 50 metres.

Bins

Litter bins should be placed a minimum of 450mm from the kerb edge.

Signage

Where Legible London signage is used, the following standards should be adhered to:

- Totems - placement should be a minimum 450mm from the kerb edge, and increased to 800mm on flush surfaces or where road speeds are 40mph or greater
- Finger posts - ensure that the sign allows for a minimum clearance of 450mm away from the kerb edge, including the fingers. This can mean that the pole for the sign needs to be mounted more than 1,000mm from the kerb edge.

T.2 MATERIALS AND WHOLE LIFE COSTS

The OA has a varied streetscape materials palette which reflects the historical character of the area as well as the layers of development and renewal over the years. Looking forward, a coordinated approach to streetscape materials is needed to ensure that existing and emerging neighbourhoods mesh together as a series of coherent, continuous and recognisable places.

The LBTH Streetscape Design Guide and the TfL Streetscape Guidance set out clear guidance for the use of materials on public highway. The following principles should supplement these documents to respond specifically to the context of the OA.

REF

For more detail, refer to:

1. TfL Streetscape Guidance, 2015
2. Tower Hamlets Streetscape Design Guide, July 2014 Draft

T.2.1 RESPECTING LOCAL CHARACTER

The history of an area is often reflected in its streetscape materials: in the Isle of Dogs these treatments range from the traditional cobbled streets reminiscent of the area's industrial past, to the more recent red clay paving of the LDDC in the 80's and '90's.

These distinctive treatments should be retained and enhanced where possible, however if these materials repeatedly fail they should be replaced with a more robust and durable alternative.

T.2.2 KEEPING IT SIMPLE

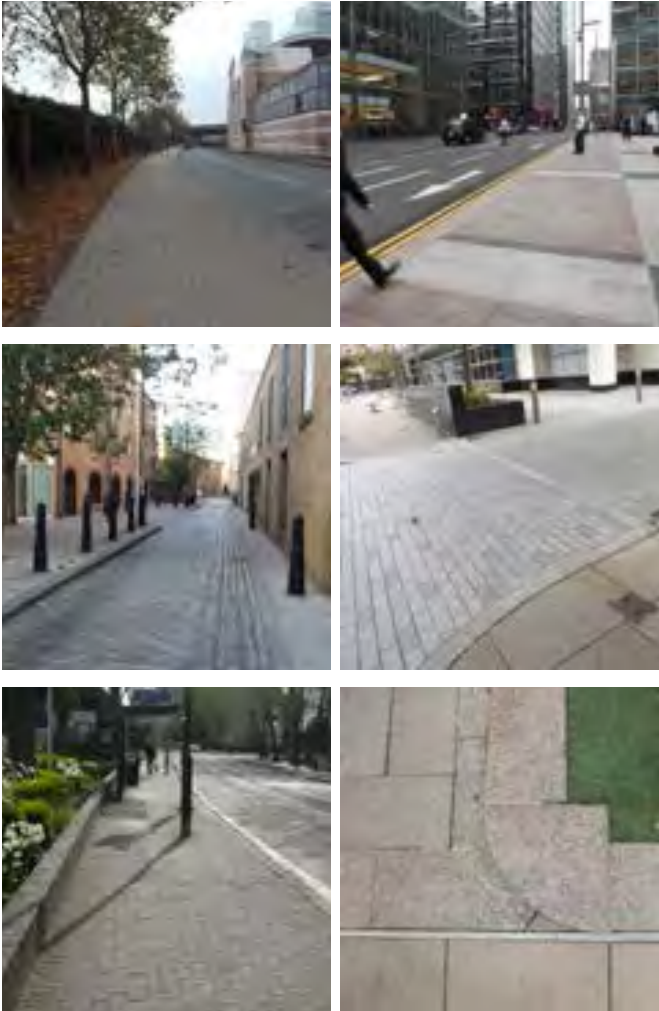
Carriageways and pavements should be simple and uncluttered. This can be achieved through the use of a restrained materials palette as well as by organising street furniture and signals into a clear furniture zone (see Section T1). The use of guard railing, bollards and carriageway signing and lining should be limited, with these elements removed where appropriate to create clearer and less cluttered streets.

T.2.3 TRANSITION ZONES

Detailing of edges, insertions and level changes within paving should be resolved by the design team before construction. Design teams should consider how the scheme terminates, where the edge is located and how best to tie in with the adjoining street materials. This is equally important in relation to the management of privately owned but publicly accessible spaces.

T.2.4 CONSISTENCY

- Private landowners should establish their own maintenance regimes
- Public realm schemes should be consistent and where possible extend to include private forecourts, to be maintained in conjunction with the landowners
- Materials should continue to the kerb edge so that public realm treatments appear seamless and there is not a visible boundary between public highway and private land.



Existing materials and treatments in the OA

T.2.5 MANAGEMENT AND MAINTENANCE

Consideration of maintenance and ongoing costs should be at the heart of all public realm projects to ensure they remain quality places over the long term and potential problems are designed-out at an early stage. The following points should be agreed during the planning stages of a project:

- A management strategy should be put in place when new public realm is created with the whole-life costs and responsibilities of maintenance understood prior to the scheme going ahead
- Maintenance budgets should reflect the high standards invested in the design of the public realm
- Maintenance regimes must reflect the level of use of streets or spaces to ensure regular scheduling of work occurs
- Where materials and treatments are to be maintained by the Highway Authority proposals should be in accordance with the relevant Streetscape Guidance (LBTH Streetscape Design Guide and the TfL Streetscape Guidance) to ensure that materials and elements can be cleaned, repaired and replaced where necessary
- Some key spaces could be managed or curated by a third party to unlock the potential for programming of the space and organising events that bring the community together

- Consideration should be given to opportunities to save maintenance or management costs such as through developer contributions
- Opportunities for income generating elements that could help to fund the maintenance and upkeep of schemes or spaces and supplement budgets should be considered
- Natural surveillance in public spaces is preferred to CCTV.

T.2.6 SUSTAINABILITY

- Materials chosen should be high quality, easy to maintain, durable and sustainable.
- Adequate drainage solutions must be designed into schemes
- Planting and ongoing maintenance of this to be considered as part of the design process.

T.2.7 CLEANING AND STREET CLUTTER

- Access to clean and pick litter must be carefully considered, in particular around gullies and drainage channels
- Bins should be provided and sized according to the expected number of people using the space
- Advertising A boards should be located within the clearly defined frontage zone only, minimising their narrowing impact on footways.

T.3 DELIVERY AND SERVICING CONSIDERATIONS

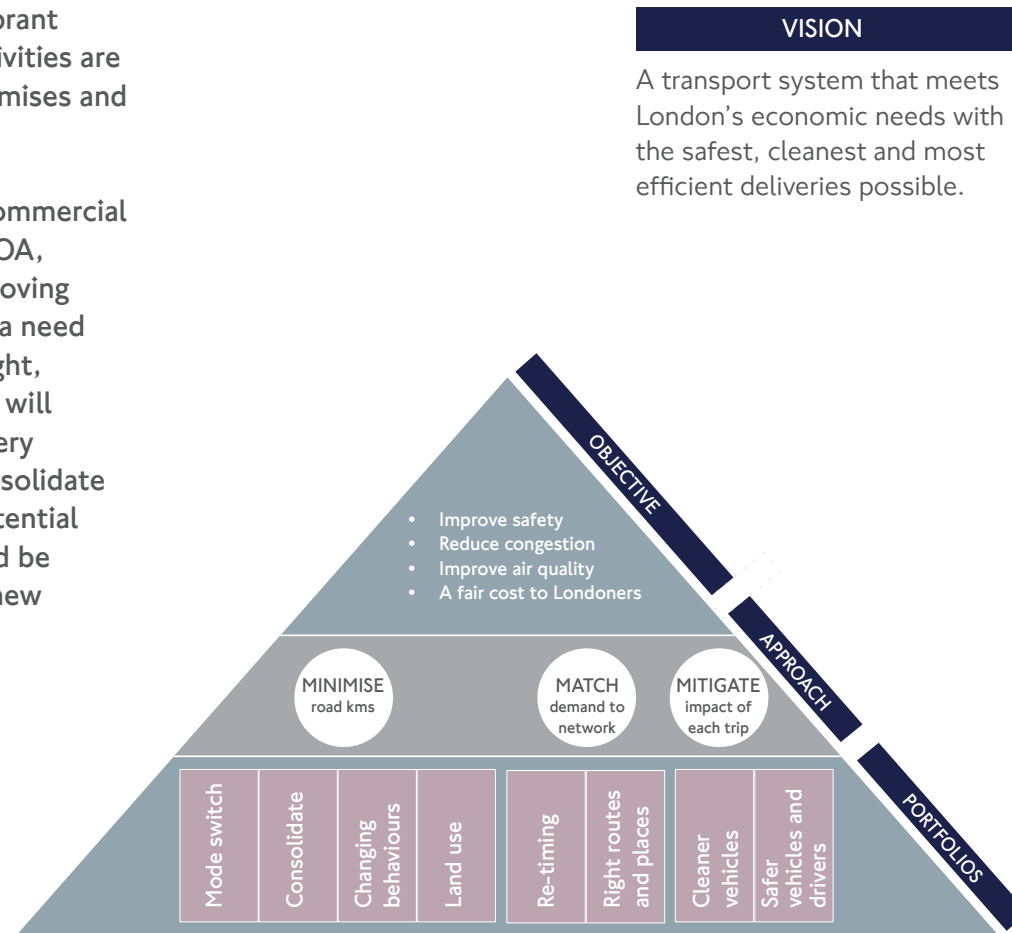
Deliveries are vital for a thriving and vibrant local economy. Likewise, servicing activities are essential for maintaining buildings, premises and their equipment.

Given the projected increase in both commercial and residential accommodation in the OA, as well as shopping trends in the UK moving more towards online retailing, there is a need to develop a strategic response to freight, servicing and deliveries in the OA. This will help to rationalise the number of delivery vehicle movements in the area and consolidate these where possible. A number of potential solutions are set out here which should be given consideration in the planning of new developments.

REF

For more information refer to:

1. TfL Streetscape Guidance, 2015 Part E - Kerbside activity
1. TfL Kerbside Loading Guidance, 2009



Strategic approach to managing delivery and servicing, TfL 2016

T.3.2 BEHAVIOURAL SOLUTIONS Procurement led solutions

A group of businesses jointly purchase goods and services from a number of carefully selected suppliers. A major benefit of collective procurement is that it increases buying power and usually results in lower prices.

Upstream supply chain

The sharing of transport resources through collaboration between businesses can lead to a reduction in trips as well as financial and environmental savings.

Click and collect at store

The exponential growth of e-commerce, coupled with the high failure rate of deliveries to homes, has led to the development of new delivery services. These services consolidate deliveries from online retailers to a single location with collections by the customer. Click and Collect services also reduce the number of delivery vehicles on the road as items are sent in bulk to collection points.

T.3.3 PHYSICAL SOLUTIONS

Urban consolidation centres

At urban consolidation centres (UCC), vehicles from multiple suppliers drop off their goods. They are sorted into mixed goods for delivery to multiple end users. While a UCC is not strictly a warehouse, it can provide short-term storage until goods are required by the customer.

Micro-consolidation centres

The consolidation of goods at a facility much closer to the delivery point is referred to as micro-consolidation. These usually serve smaller areas, handling small and lightweight goods often delivered by couriers. Zero emissions last mile solutions such as cargo bikes and small electric vans can be used to provide additional environmental benefits.

Pick Up / Drop Off Sites

Home deliveries are normally made during the day when customers are not at home resulting in failed delivery attempts. A counter measure to this

would be to actively promote the installation of pick up, drop off sites (PUDO) to reduce van trips.

This means that deliveries can be consolidated in one location, close to the final delivery address and accessed at a time that is convenient for the user. Deliveries to locker banks can also be made during less busy hours (e.g. during the night).

Alternatively promotion of on-site concierge services and ensuring, at the design phase of new developments, that letter boxes are sized to receive small parcels will also reduce failed delivery.

Re-timing deliveries

Working with businesses to arrange out-of-hours deliveries to micro consolidation centres to reduce freight vehicles on the street during the day and take advantage of quieter streets at night.

T.3.4 MANAGING LOADING AND SERVICING

Despite the measures set out above, appropriately located loading spaces will still be needed. New developments should incorporate off-street delivery and servicing locations where possible. However, many business in London do not have off-street loading facilities and for these the frontage is a key entry point for goods.

Where this is the case and the availability of on-street parking is limited, alternative arrangements such as loading on nearby side roads, off-street facilities or multi-use parking bays used for loading during off-peak periods may provide desirable solutions.

Adequate parking spaces are also needed for servicing vehicles as they cannot use loading spaces legally.

The location of a loading facility in relation to the land-use it is serving, the loading space size and its availability are critical to the successful performance of any street.

Loading activities can cause congestion by blocking the flow of traffic or increase safety risks. Several issues need to be considered in this respect:

- The physical location where a vehicle stops to load/unload
- The time the activity takes place
- The frequency of vehicles stopping in the loading facility
- The size of the facility and size of vehicle
- The flow of traffic past the loading facility.

Goods will need to be transferred and this will involve the manual handling or the use of lifting equipment. The means of handling goods between a delivery vehicle and a delivery premises will also affect the distance from a premises that a driver will be prepared to stop.

The design and layout of the built environment should accommodate such equipment. Pedestrian amenity can be impacted where large volumes of goods have to be moved along the pavement.

T.4 TREE PLANTING

Green infrastructure and street trees can contribute significantly to the appearance of the townscape and add significantly to the amenity of an area. They also have an environmental benefit by providing a wildlife habitat, shading and improved air quality, contributing to the creation of more pleasant places to live, work and visit.

T.4.1 RETENTION OF EXISTING TREES

Tree coverage in the Isle of Dogs and South Poplar is varied. Whilst some locations are defined by the character created by their street trees, a number of streets in the area are notable for their lack of greenery.




Careful consideration should be given prior to the removal of any existing trees.






T.4.2 PLANTING NEW STREET TREES

The planting of new street trees will be strongly encouraged over the OAPF period. Consideration should be given to the species of tree planted, in particular on highway, to minimise the requirement for maintenance, the growth of the root ball and potential pollarding. New trees should be planted as semi-mature specimens.

Tree species chosen should take account of existing trees and the long term aspirations for the area, and should give due consideration to:

- Ultimate height, crown spread, stem diameter and habit
- Honeydew from aphids
- Fruit fall
- Ability to cope with a changing climate
- Pests and diseases
- Maintenance requirements
- Water requirements
- Scale of setting
- Climate change adaptation benefits, including shade.

	Good street tree coverage
	Patchy street tree coverage
	Poor street tree coverage

LOCATION	STREET TREE COVERAGE	SPECIES	COMMENTS
East India Dock Rd		London Plane	Protect existing trees, whilst recognising that in several parts of the street these are on private land. Additional greening should be provided where possible to address gaps in tree planting.
Cotton Street		Lime, Chestnut, Ash, Maple, Pear, Alder	Protect existing trees as Blackwall Reach development comes forward. Plant additional street trees to frame the street.
Poplar High Street		Maple, London Plane	Protect existing trees and focus tree planting around emerging Neighbourhood Centre at Poplar High Street/ Preston's Road area.
West India Dock Road			Trees are an important part of the street's character . Existing trees should be retained and additional trees planted.
Westferry Road - North			Would benefit from a range of pedestrian environment upgrades, including tree planting and softening and upgrades to legibility of walking and cycle routes.
Marsh Wall		London Plane, Birch, Chestnut	Protect existing mature trees and seek opportunities to complete missing sections of planting. Potential to replace some of the young trees in the planters to the east of Limeharbour junction subject to wider streetscape or development proposals.
Preston's Road		London Plane, Cherry, Ash	Seek opportunities to provide additional street tree planting.
Manchester Road		London Plane, Lime	Protect and enhance existing very mature street trees.
Westferry Road South		London Plane, Lime, Apple	As development comes forward street trees should be planted to create a green character and frame the street.
Millharbour		London Plane, Lime	Good tree coverage on Millharbour – as additional developments come forward they should contribute to the street planting.
Tiller Road		Hornbeam, Maple	Patchy tree coverage - infill planting would improve the quality of the street environment.
Alpha Grove		Maple, London Plane	High quality avenue of mature trees forming a fundamental part of the street's character.
Spindrifft Avenue			Pleasant, quiet tree-lined street.
East Ferry Road		London Plane, Maple, Ash	Protect trees including improving growing conditions by potentially looking into build-outs around tree roots. Explore options for feature lighting of the landscape to improve the general ambience and experience of the street.
Limeharbour		London Plane	Retain and protect street trees at northern end as a major part of the street's character.
Blackwall Way			As sites come forward, they should contribute to the greening of Blackwall Way.

T.5 SUSTAINABLE URBAN DRAINAGE SYSTEMS

This section sets out a series of sustainable drainage techniques which could be applied in the Isle of Dogs and South Poplar. The Tower Hamlets SuDS Guidance note states that ‘the LB of Tower Hamlets is characterised as having contaminated land throughout the borough, because of this certain SuDS which rely on infiltration are not applicable anywhere within the Borough, these being soakaways and borehole soakaways.’

The expectation is that where opportunities arise to incorporate sustainable drainage as part of other required maintenance, repair, refurbishment or replacement of facilities, options are duly considered and implemented where practical. Drainage should be designed in ways that deliver other policy objectives, such as optimising water use efficiency and quality, reducing air pollution, improving biodiversity and creating amenity and recreation spaces.

REF

For more information refer to:

1. LBTH, SuDS Guidance

T.5.1 RAIN-GARDENS

Planted areas usually edging paved surfaces to allow the diversion of rainwater. These can be incorporated into the landscaping plans for a site. They are flexible in design and are suitable for gardens, communal spaces and along the roadside. Rain gardens can allow infiltration into the ground or incorporate tanked systems for water retention, depending on site conditions.

Opportunity: landscaping enhancements around buildings and transport assets.



Rain Gardens, Derbyshire Street pocket park, LB Tower Hamlets
Image: www.susdrain.org

T.5.2 SUDS PLANTERS/ RAIN WATER HARVESTING SYSTEMS

In order to increase water attenuation SuDS planters can collect rainwater from a drainpipe or other inlet or can be simply used to collect rainwater falling on them. They are best placed where they can be used in conjunction with other SuDS techniques and are suitable for gardens, communal spaces, alongside roads, footpaths and can be integrated into the design of public spaces.

Opportunity: greening areas where it is not practical to remove or break up permeable surfaces.



SuDS planter
Source unknown

T.5.3 TREE PITS

Tree pits acts as bio-retention areas, capturing incoming run off from permeable surfaces and removing it through transpiration, evaporation and infiltration. These can be incorporated into residential and commercial areas and used for car parks, verges, landscaped areas and paving.

Opportunity: In the urban environment they provide all the benefits of tree planting, with additional surface water mitigation.



Simplified layout, Euston Circus, London

T.5.4 PERMEABLE PAVEMENTS/ SURFACES

Previous surfaces are multi-layered surfacing systems designed to allow infiltration and subsequently retain or convey rainwater underground. The design and materials required vary based on the intended load bearing and traffic; generally continuous laid systems are suited to high load bearing and frequencies while grid systems are appropriate for low loading and low frequencies.

Opportunity: reducing peak discharge rates, reducing pollutant transport through direct infiltration, improving site landscaping benefits (grass pavers only)



Permeable paving, Islington Town Hall

T.5.5 SWALES

Dry ditches used as landscape featured to allow the storage and infiltration of rainwater. Often used as linear features alongside roads, footpaths or rail lines but capable of being integrated into the design of public spaces.

Opportunities: swales connect different SuDS elements such as rainwater diversion from gullies to street trees or swales. These provide potential biodiversity improvements.

Swales can be incorporated into landscaping or play features.



Swale, Hornsey (LB Haringey)

T.6 FUTURE-PROOFING UTILITIES

Many of the Capital's streets are congested with cables and pipes, making installation of future infrastructure difficult. In areas of growth and major development, we should look at sustainable, long term solutions to ensure the future delivery of services to properties.



Image of a service subway

T.6.1 RESILIENCE

The Isle of Dogs and South Poplar relies on utilities to function and meet the needs of its various communities. Energy, gas, water and telecoms are of particular importance. There are challenges to providing the infrastructure necessary to sustain the area's existing requirements, whilst also catering to a growing population as a result of projected housing and employment growth over the next twenty years, including:

- Congested cable routes currently located under carriageways and footways
- Installing new infrastructure can cause major disruption to streets and public realm
- Maintenance can require repeat excavations of the carriageway or public realm which can be costly and disruptive, as well as undermining the quality of the surface level treatment by digging up and reinstating.

All of these elements can create negative public perception due to travel delays, safety issues and congestion caused by roadworks

We can work more sustainably by being more efficient through:

- Strategic thinking
- Reducing impacts by planning ahead
- Protecting new schemes from being dug up to access utilities for maintenance and future works.

T.6.2 SERVICE SUBWAYS

Service subways under streets accommodate gas and water mains and electricity and telecoms cables more efficiently than simply burying pipes and cables in the ground. London already has a series of service subways, concentrated around the City of London, however extension of these or creation of new subways can be costly and disruptive.

The potential for constructing more pipe subways should be explored where:

- Major highways works are proposed which will involve digging up or realigning large sections of carriageway
- Major development opportunity areas where a number of new developments are set to come forward in a close geographical location (such as South Quay)

This would provide a sustainable, long term solution to ensuring future delivery of services to properties, whilst reducing the need for disruptive street works in the future.

T.6.3 FUNDING

Key stakeholders would need to work together to understand how future service subways could be funded. TfL has identified potential funding mechanisms, which should be investigated further, including:

- Funding through monies generated by lane rental Lane rental waivers when works are carried out on the TLRN
- Private development
- Planning obligations.

T.6.4 THINKING INNOVATIVELY

Innovative ways of incorporating utilities into other infrastructure elements include:

- Working with utilities companies ways to explore ways to mitigate the impact of congested utilities beneath the highways or footways such as the removal of abandoned cabling or use of old ducts to install utilities infrastructure.
- Cables and pipes can be carried through existing or redundant subways
- Ducting can be incorporated into new bridges
- In areas of development, the use of adjoining basements to run cabling can be a low cost, effective solution incorporated into development proposals.



CASE STUDY EXAMPLES

This section looks at a series of case studies from across the Opportunity Area. The purpose of this section is to:

- Illustrate our shared aspiration for each of these key corridors
- Demonstrate how the guidance set out in the report should be applied on a corridor by corridor basis

Case Studies:

- CS.1 West India Dock Road
- CS.2 East India Dock Road
- CS.3 East Ferry Road
- CS.4 Westferry Road
- CS.5 Poplar High Street
- CS.6 Marsh Wall
- CS.7 Preston's Road







CASE STUDY EXAMPLES

CS.1 WEST INDIA DOCK ROAD

WEST INDIA DOCK ROAD CORRIDOR					
Character Zone	Objectives	Street Type	Modes	Interventions	
South Poplar and Leamouth	Objectives for local connectivity: <ul style="list-style-type: none"> Invest in the public realm along key movement corridors to make streets that are engaging and encourage people to walk and cycle Invest in improvements to safety and accessibility at major junctions in the area Ensure that CS3 is well integrated into the wider network of cycle routes, improving connections where possible 	M3/PI Core Road	Walking Cycling (CS3 Interface) Bus DLR Car Taxi Freight	17-U 27-U 31-U 35-O 36-O 37-O 38-O	West India Dock Road CS3 upgrades and connections Greening strategy Station public realm improvements Promotion of River Services Legible London signage Creative and cultural strategy including wayfinding initiatives
SECTION REF:	2.2.1	2.2	BS.2	AT.1-4	3.3, 3.4

CS.1.1 WEST INDIA DOCK ROAD - CHALLENGES

- West India Dock Road is a vehicle dominated environment with multiple lanes of traffic and a lack of on-street activity
- Complex junctions at the northern and southern extents create an intimidating environment for cycles and pedestrians:
 - The junction with Burdett Road is poorly framed by the buildings around it. Pedestrian crossings have multiple stages and there are no dedicated cycle facilities
 - Westferry Road/West India Dock Road junction has multiple stages for pedestrians to cross the road, enhancing the sense of severance
- Footways are interrupted by a number of vehicle crossovers and on-street parking for Limehouse Police Station
- Pockets of soft landscaping are poorly integrated with the wider public realm and offer little amenity value to the local area.





West India Dock Road - Opportunities

CS.1.2 WEST INDIA DOCK ROAD - OPPORTUNITIES

- 1 Reduce the carriageway width, subject to feasibility, in order to:
 - Re-assign space to sustainable modes
 - Provide additional areas of public realm and deliver landscaping and SuDS features
 - Improve the relationship between the facing street frontages in conjunction with potential development opportunities
- 2 Provide a cycle connection between Burdett Road and CS3 at Limehouse Causeway (several potential routing options to explore)
- 3 Simplify the junction arrangement at Westferry Road / West India Dock Road and provide better crossings for pedestrians and cycles on desire lines
- 4 Removal or reconfiguration of parking for Limehouse Police Station. This could potentially be situated in a widened median strip in order to reduce potential conflicts with pedestrians
- 5 Improve cycle facilities at Westferry DLR to encourage interchange with public transport for onward journeys
- 6 Improve the relationship between the fragmented green spaces in the area to increase their collective value for the local area. SuDS should be specified in the design
- 7 Explore the possibility of activating the DLR viaducts with workspace or other temporary uses.

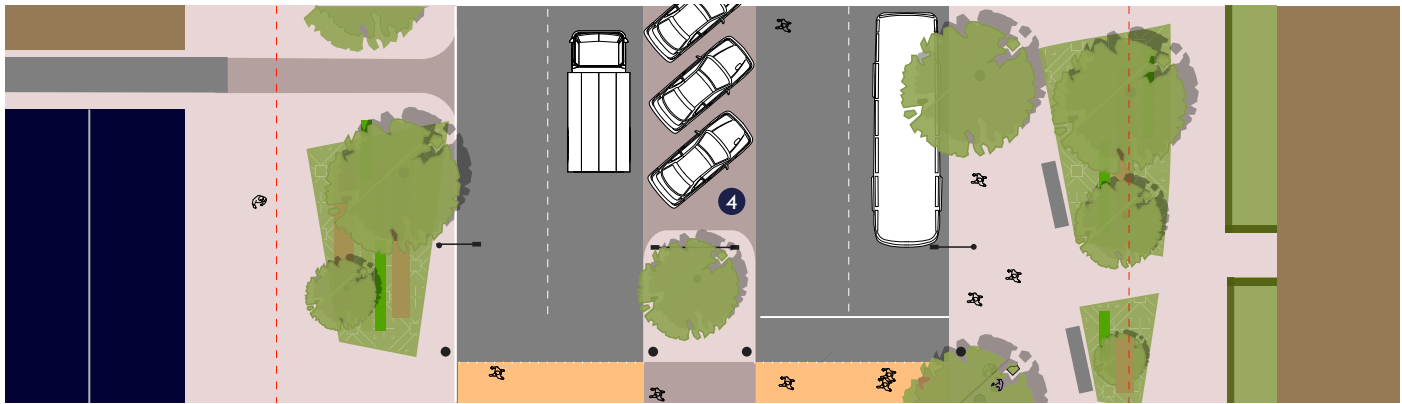
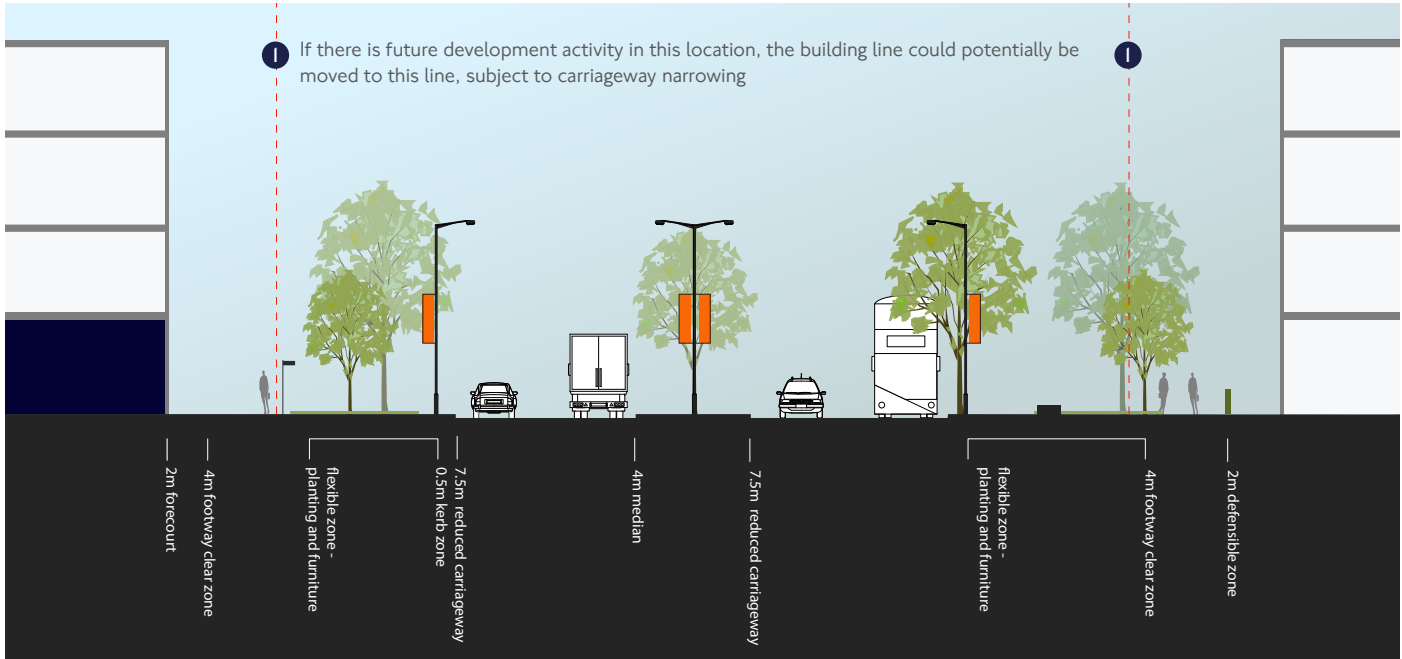
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Cycle Superhighway Route 3
- Major public realm improvements
- 🚲 Cycle hire



Top: Wide median strip accommodating parking and waiting areas, Bishopsgate
 Above: Euston Road

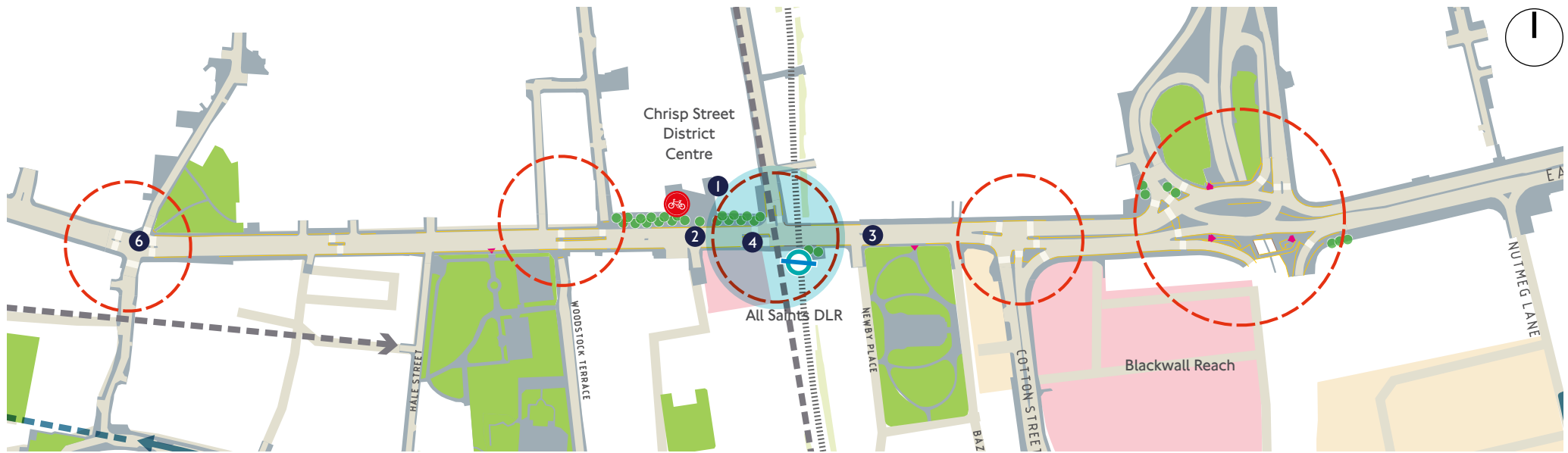
CS.2 EAST INDIA DOCK ROAD

EAST INDIA DOCK ROAD CORRIDOR						
Character Zone	Objectives		Street Type	Modes	Materials	Interventions
South Poplar and Leamouth	Objectives for local connectivity: <ul style="list-style-type: none"> Invest in the public realm along key movement corridors to make streets that are engaging and encourage people to walk and cycle Invest in improvements to safety and accessibility at major junctions in the area Support the enhancement of Chrisp Street District Centre 		EXISTING M2/P1 Connector and M2/P2 High Street (around Chrisp Street District Centre)	Walking Cycling Bus DLR (All Saints DLR Station) Private vehicles	STANDARD Potential uplift at Chrisp Street District Centre	01-L Isle of Dogs central spine 05-L Links to Poplar Riverside 16-U East India Dock Road 18-U Blackwall connections 27-U CS3 upgrades and connections 31-U Greening strategy 37-O Legible London signage 38-O Creative and cultural strategy including wayfinding initiatives
SECTION REF:	2.2.1	2.2.1	BS.4, BS.5	AT.1-4	T.3	3.1, 3.3, 3.4

CS.2.1 EAST INDIA DOCK ROAD - CHALLENGES

- East India Dock Road is a wide, vehicle dominated road that provides a poor environment for pedestrians in places
- Guard-railing along much of the length of the street enforces a sense of separation between the northern and southern footways
- Poor quality public realm around All Saints DLR station which adds to a poor sense of arrival at Crisp Street District Centre. This is compounded by complex crossing arrangements at the Crisp Street junction and limited cycle access to the retail and community facilities in this location
- Complex pedestrian crossing facilities are a characteristic of the majority of major and minor junctions along this corridor
- The redevelopment of Poplar Baths alongside the proposed regeneration of Crisp Street District Centre, will increase the importance of providing a high quality environment for pedestrians and cyclists in this location. The public realm should be pleasant and attractive and encourage people to walk and cycle as well as providing space to dwell.





CS.2.2 EAST INDIA DOCK ROAD - OPPORTUNITIES

- 1 Interventions around Crisp Street District Centre should enhance its role as the heart of the area and help to address the dominance of the road
- 2 Improvements could include creating a raised table and/or wide, accessible median strip to enable pedestrians to cross informally in a low speed environment

- 3 Removal of guard railing and improvements to pedestrian crossing facilities will strengthen the relationship between both sides of the street, forging better connections between All Saints DLR station, Poplar Baths and the District Centre
- 4 Junction upgrades should be carried out to improve conditions for pedestrians and cyclists and reduce the severance caused by the road

- 5 Legible London signage should be introduced in order to improve wayfinding for pedestrians to the key destinations in the area as part of an integrated wayfinding strategy
- 6 Cycle crossings on East India Dock Road should be improved to enable connections southwards to CS3.

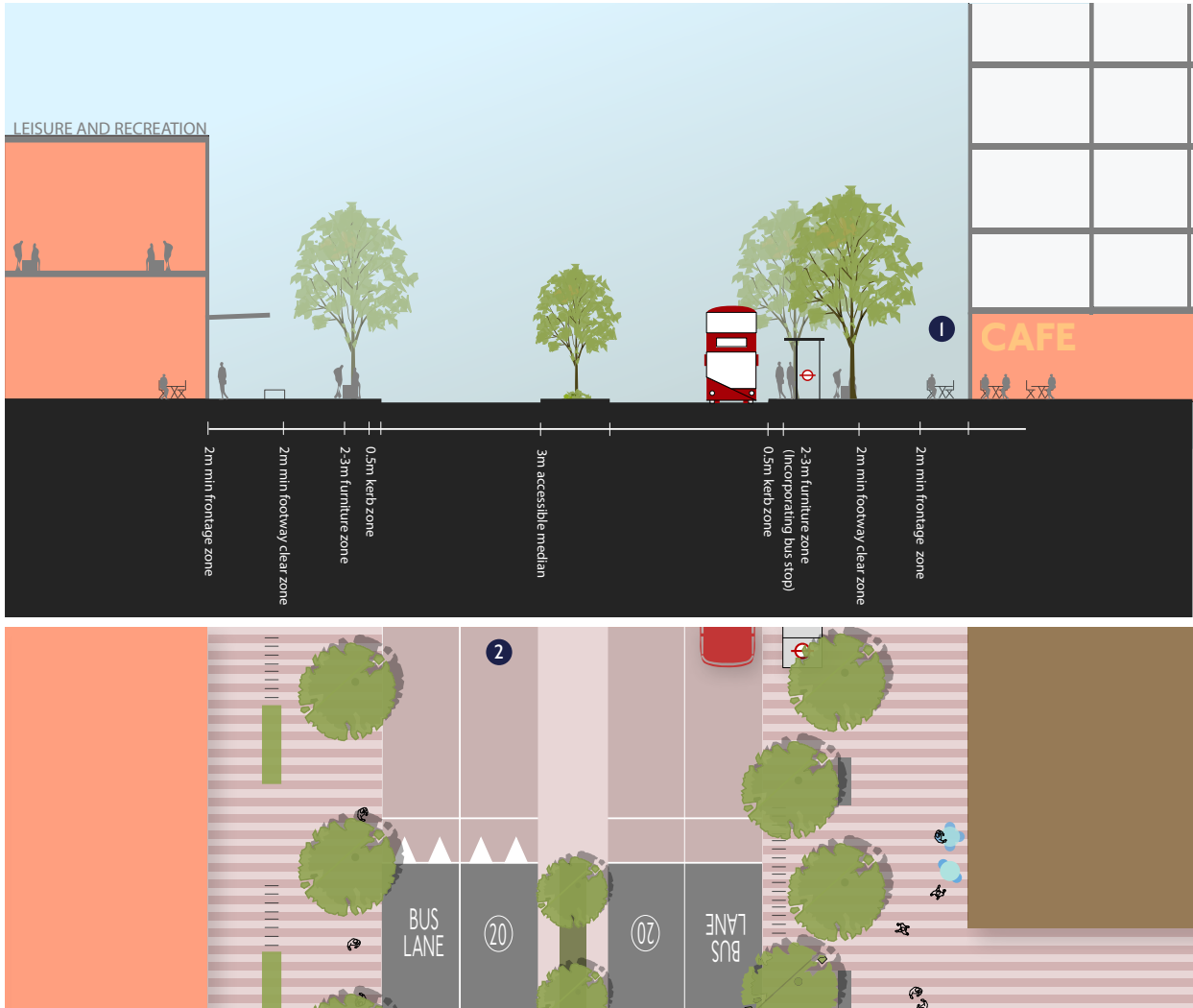
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Cycle Superhighway Route 3
- 🚲 Cycle hire



Top: Wimbledon
Above: Station Road, Harrow

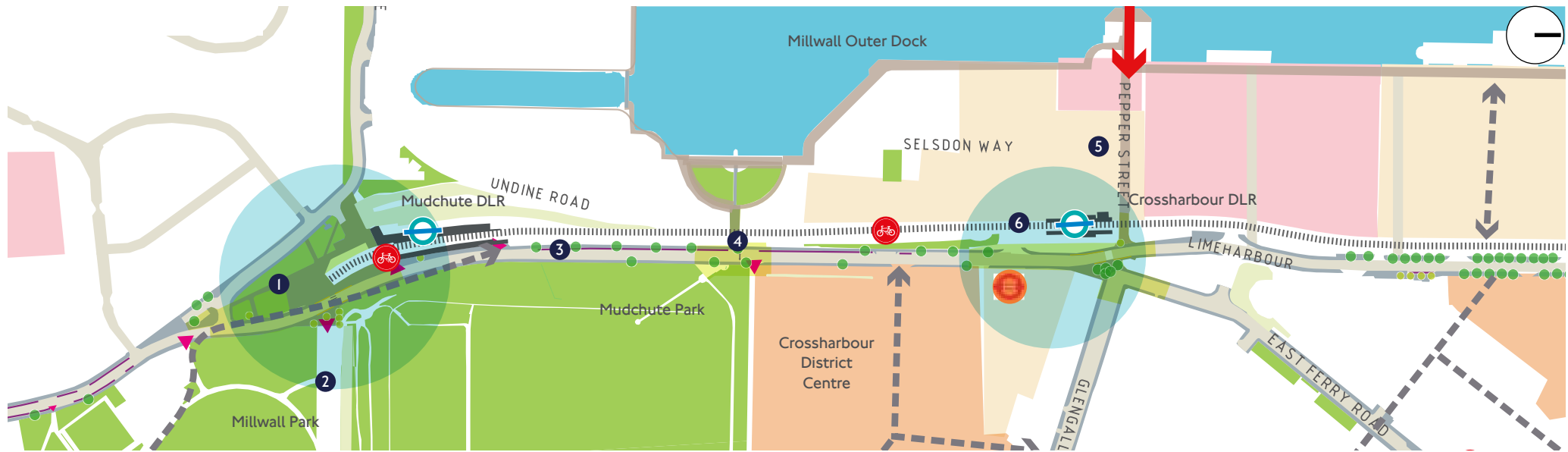
CS.3 EAST FERRY ROAD

EAST FERRY ROAD CORRIDOR							
Character Zone	Objectives	Street Type	Modes	Materials	Interventions		
Crossharbour and Island Gardens	<p>Objectives for local connectivity:</p> <ul style="list-style-type: none"> Improve the public realm and environment for walking and cycling along the key link routes of Manchester Road and East Ferry Road Manage the relationship between new development and existing neighbourhoods by ensuring consistency of public realm treatment along the main corridors that stitch these areas together Create new public spaces between proposed development and existing buildings to better integrate existing and new urban fabric and create opportunities for communities to meet and interact Enhance the potential of the DLR stations as footfall generators and locations for high quality public space, kiosks and activity Ensure reliability of bus connections serving the Isle of Dogs Calm traffic and create a more pedestrian focused environment on East Ferry Road / Limeharbour Create a pedestrian focused area at the junction between East Ferry Road, Pepper Street and Glengall Grove in order to improve legibility and connectivity across the District Centre Improve connections to Crossharbour District Centre from across the wider area, including sites to the west of East Ferry Road which are currently cut off by the solid embankment around Crossharbour DLR station 	<p>EXISTING M2/P1 Connector</p> <p>POTENTIAL FUTURE STREET TYPE M2/P2 High Street (in the area around Crossharbour District Centre)</p>	<p>Walking</p> <p>Cycling</p> <p>Bus (bus terminus at Crossharbour District Centre)</p> <p>DLR</p> <p>Car</p> <p>Freight</p>	<p>STANDARD</p> <p>Potential uplift around Crossharbour District Centre</p>	<p>01-L Isle of Dogs central spine</p> <p>13-B Glengall bridge</p> <p>22-U East Ferry Road</p> <p>24-U Tiller Road / Pepper Street</p> <p>26-U Spindrift Avenue</p> <p>31-U Greening strategy</p> <p>34-O Crossharbour bus terminus</p> <p>35-O Station public realm improvements</p> <p>37-O Legible London signage</p> <p>38-O Creative and cultural strategy including wayfinding initiatives</p>		
SECTION REF:	2.2.4-5	2.2.4-5	BS.4, BS.5	AT.1-4	T.3	3.1 - 3.4	

CS.3.1 EAST FERRY ROAD - CHALLENGES

- There is a poor perception of safety for pedestrians along East Ferry Road due to the hard edge of the DLR wall and a dense, inaccessible green edge on the eastern side. The long and straight road, coupled with a lack of stopping or turning places, encourages vehicles to travel at high speeds
- Narrow footways are constrained by on-street parking
- Mature trees lack adequate space on the footway and further reduce the footway clear zone
- Mudchute DLR station has a poor relationship to the wider urban realm including Mudchute Park
- The pedestrian underpass between Millwall Dock and East Ferry Road provides an important east-west connection but suffers from actual and perceived personal safety issues
- Crossharbour District Centre (in its current form) is isolated from the surrounding urban fabric. The District Centre will be extended to include Pepper Street (proposed in draft LBTH Local Plan 2017).





CS.3.2 EAST FERRY ROAD - FUTURE OPPORTUNITIES

- 1 Public realm upgrades at Mudchute Station to enhance its positive impact on the street, including:
 - Linking the green spaces either side of East Ferry Road,
 - Traffic calming and resurfacing of the carriageway in high quality materials to improve connections between the park and the station
- 2 Upgrades to the cycleway through Millwall Park to Island Gardens

- 3 On-street parking should be re-provided at footway level to allow this space to be used more flexibly when not in use. Footway build outs around street trees will improve growing conditions and may be used to create chicanes to calm traffic
- 4 A raised table at the crossing point and access to the pedestrian underpass will calm traffic on the approach to Crossharbour District Centre where footfall is likely to be higher. Upgrades to the underpass to address safety concerns

- 5 The District Centre should be enhanced by clear, legible routes creating a greater sense of continuity throughout
- 6 Improvements to the interchange at Crossharbour should consider options to open up new connections through the DLR embankment (subject to engineering and cost constraints) and contribute to East Ferry Road becoming a future High Street.

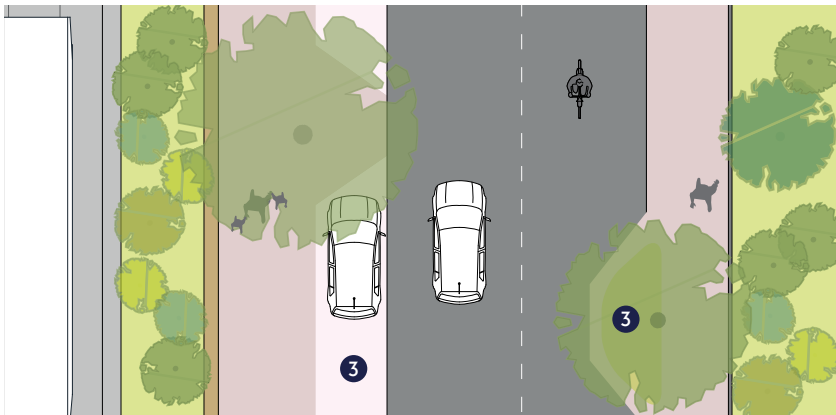
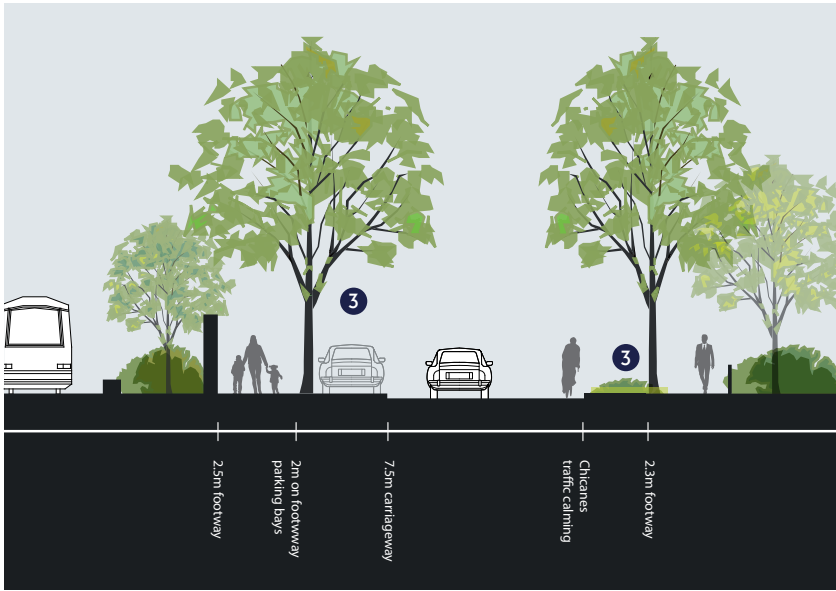
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Major public realm improvements
- Upgraded bus terminus
- Cycle hire
- Existing bridge enhancement



Above: Queen Elizabeth Olympic Park, London



Top: LED pedestrian tunnel, Munich



Above: Mirrored subways, Netherlands

CS.4 WESTFERRY ROAD

WESTFERRY ROAD LOCAL CENTRE ENHANCEMENTS						
Character Zone	Objectives	Street Type	Modes	Materials	Interventions	
Crossharbour	<p>Objectives for local connectivity:</p> <ul style="list-style-type: none"> Manage the relationship between new development and existing neighbourhoods by ensuring consistency of public realm treatment along the main corridors that stitch these areas together Ensure reliability of bus services in the loD Improve east west connections across this zone, and extend these to connect to the Thames Path where possible Improve the environment for walking and cycling on the peripheral loop road Support the enhancement of the Barkantine Estate Local Centre Enhance the amenity value of Millwall Slipway as an important connection to the Thames. This car park could be used more flexibly to support activity and provide a community focus at certain times of day, week or year 	<p>EXISTING</p> <p>M2/P1 Connector</p> <p>POTENTIAL FUTURE STREET TYPE</p> <p>M2/P2 High Street (around the Barkantine Estate Local Centre)</p>	<p>Bus</p> <p>Car</p> <p>Walking</p> <p>Cycling</p>	<p>STANDARD</p> <p>Possible uplift around Barkantine Estate Local Centre</p>	<p>23-U</p> <p>31-U</p> <p>32-O</p> <p>37-O</p> <p>38-O</p>	<p>Westferry Road</p> <p>Greening strategy</p> <p>Limehouse to Leamouth walking route</p> <p>Legible London signage</p> <p>Creative and cultural strategy including wayfinding initiatives</p>
SECTION REF:	2.2.4	2.2.4	BS.4, BS.5	T.3	3.2 - 3.4	

CS.4.1 WESTFERRY ROAD - CHALLENGES

- The quality of the pedestrian environment is varied, subject to changing patterns of land use and intensity along Westferry Road, variable footway widths and significant use of guard-railing in several locations
- Westferry Road currently has limited pedestrian crossing facilities with the pedestrian link between Sir John McDougal Gardens and the Barkantine Estate requiring the use of a footbridge rather than surface level crossings
- Narrow footways, in particular around the local retail parade to the north of Sir John McDougal Gardens, provide a poor level of pedestrian comfort made worse by a prevalence of on-street parking and servicing
- Poor visual and physical connectivity between Westferry Road and the Thames Path, made worse by the dominance of gated residential communities on the western side of the street limiting access to the Thames to just a few narrow links
- The Thames Path is not continuous in this location, obstructed in places by impermeable sites and boundary walls.





CS.4.2 WESTFERRY ROAD - OPPORTUNITIES

1 Upgrade Millwall Slipway to create a more flexible public space, which allows use by the Sailing Centre (as overflow car park and landing point for sailing boats on the Thames) whilst providing a riverside amenity space for the wider area. These should be considered in conjunction with wider improvements to the Thames Path

- 2 Improvements to the crossing facilities and the public realm between the Westferry Print Works site and Arnhem Wharf primary school
- 3 Replacement of the existing pedestrian footbridge with a surface level crossing to normalise the pedestrian experience in this location

- 4 Public realm and placemaking interventions to reinforce the Barkantine Neighbourhood Centre. Active frontages and improved servicing arrangements will enhance the retail environment
- 5 Traffic calming will create a more pedestrian friendly environment
- 6 Improvements to connections to the Thames Path through additional signage and new physical links where possible
- 7 Completion of the missing sections of the Thames Path will help to enhance this riverside connection.

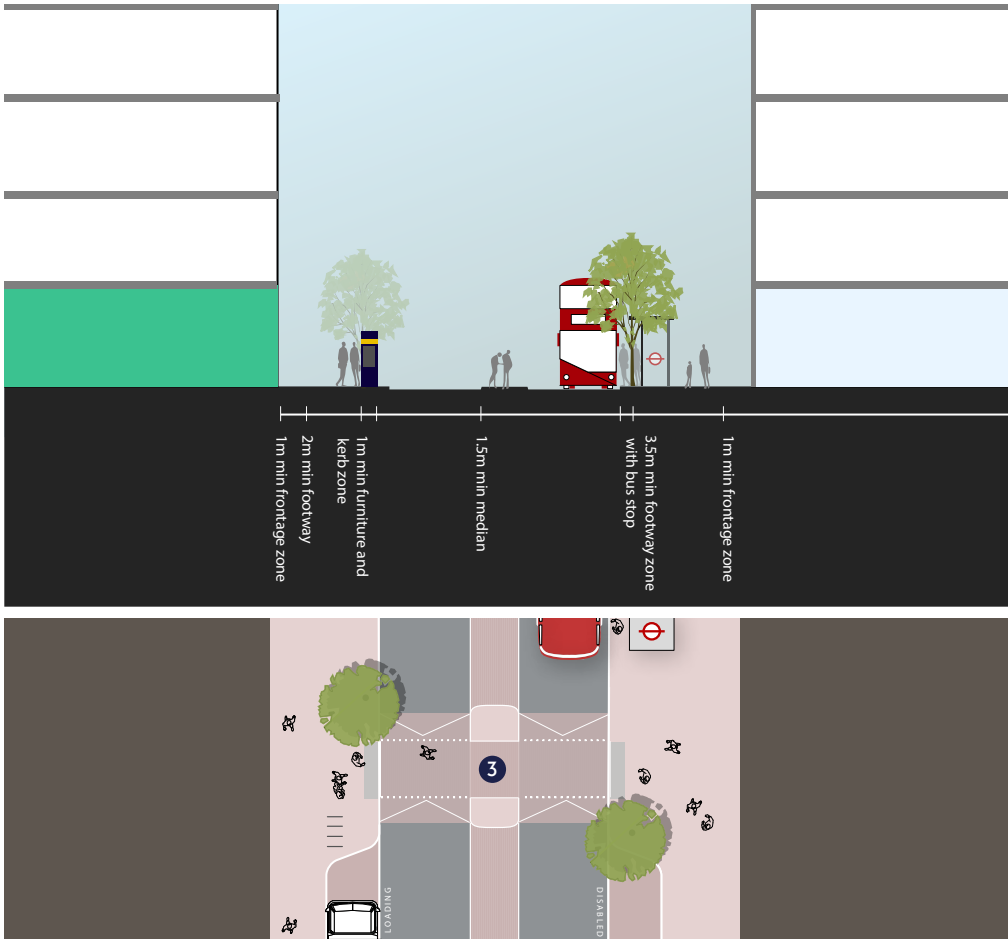
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Major public realm improvements



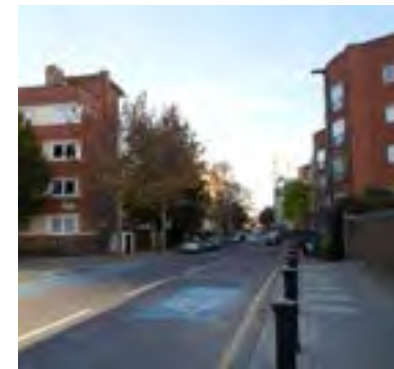
Poynton Town Centre

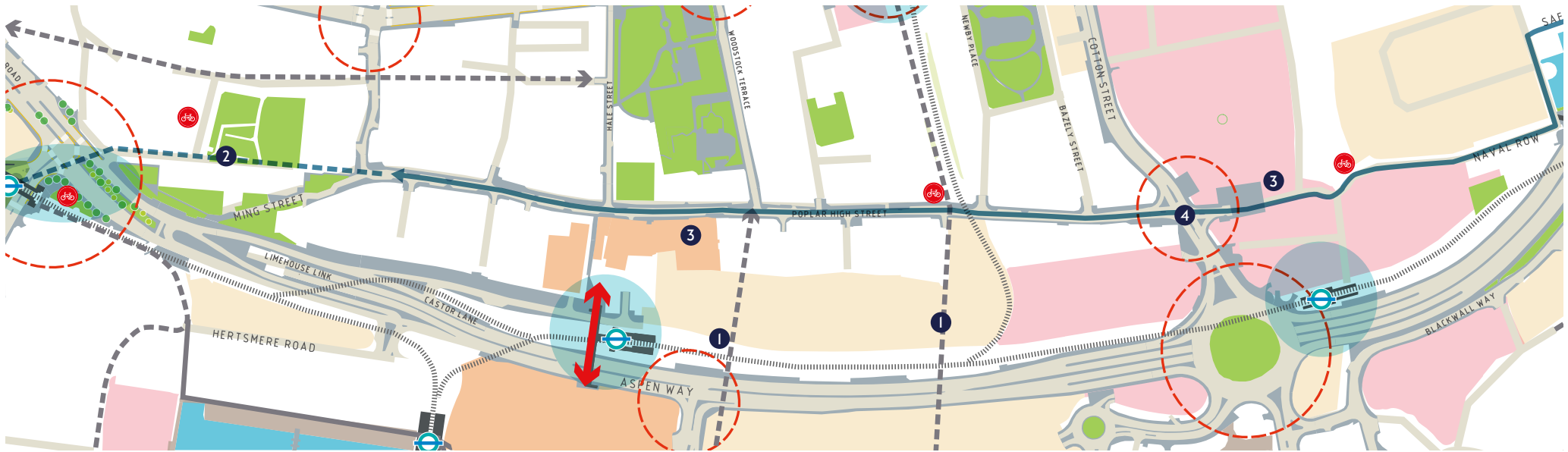
CS.5 POPLAR HIGH STREET

POPLAR HIGH STREET						
Character Zone	Objectives	Street Type	Modes	Materials	Interventions	
South Poplar	<p>Objectives for local connectivity:</p> <ul style="list-style-type: none"> Invest in improvements to safety and accessibility at major junctions in the area Ensure that CS3 is well integrated into the wider network of cycle routes, improving connections where necessary Through new development at North Quay, Billingsgate and Poplar DLR depot / Poplar High Street, the opportunity to better integrate Poplar DLR with the area to the south of Aspen Way should be seized. This will significantly improve connections to and from Poplar DLR and create better access to the Elizabeth line from the north Improvements to Poplar High Street to create a more engaging environment with a mix of ground floor uses, capitalising on the place-making potential of Poplar DLR station and development opportunities in the area Support the enhancement of Crisp Street District Centre 	<p>EXISTING M2/P1 Connector</p> <p>POTENTIAL FUTURE STREET TYPE Extension of M2/ P2 High Street</p>	<p>Cycle Walking DLR Bus Car</p>	<p>STANDARD / LANDMARK</p>	<p>01-L 06-L 12-B 18-U 19-U 27-U 31-U 35-O 37-O 38-O</p>	<p>Isle of Dogs central spine Aspen Way/DLR depot decking Poplar footbridge upgrade Blackwall connections Poplar High Street CS3 upgrades and connections Greening strategy Station public realm enhancements Legible London signage Creative and cultural strategy including wayfinding initiatives</p>
Section Ref:	2.2.1	2.2.1	BS.4-5	T.3	3.1 - 3.4	

CS.5.1 POPLAR HIGH STREET - CHALLENGES

- Poplar High Street is an east-west corridor with a varied character. At its eastern extent is the Blackwall Reach regeneration area, while to the west it is characterised by post-war low density housing. There are a number of development opportunity sites situated on or around Poplar High Street
- The street is an important connector between a series of neighbourhoods, however it currently lacks a clear identity and sense of place. As development comes forward in the area opportunities will arise to enhance this as a focal point for these new neighbourhoods. Improvements should be planned as part of a corridor-wide approach
- At its eastern end the street is heavily trafficked, with the environment at the junction of Preston's Road/Cotton Street dominated by vehicles
- High bus flows provide an important public transport function but with the current street layout they impact on the pedestrian environment between Cotton Street and Newby Place
- Guard railing and level changes between the carriageway and footway creates separation between facing sides of the road. Footways on the southern side are narrow creating pinch points in particular around bus stops
- Traffic movement and on-street parking makes the environment for cyclists using Cycle Superhighway Route 3 challenging in places.





CS.5.2 POPLAR HIGH STREET - OPPORTUNITIES

- 1 Given the potentially transformative impact of the DLR depot to Billingsgate connections, there is an opportunity to reconsider the role of Poplar High Street in the medium to long term. This corridor could become the focal point of an enhanced neighbourhood, with walking, cycling and public transport prioritised
- 2 Explore opportunities to re-route CS3 along Pennyfields, subject to future development coming forward in this area

- 3 Active ground floor uses should be delivered through new development, in particular to the eastern part of Poplar High Street, with opportunities identified to set the buildings back to widen footways and provide additional space for cycles
- 4 The Poplar High Street / Cotton Street junction should be improved to reduce its severance. Opportunities to reduce the number of vehicle movements at the eastern end of Poplar High Street should be explored as a means to create a more pedestrian focused environment. Potential to divert some bus services to Cotton Street should be considered

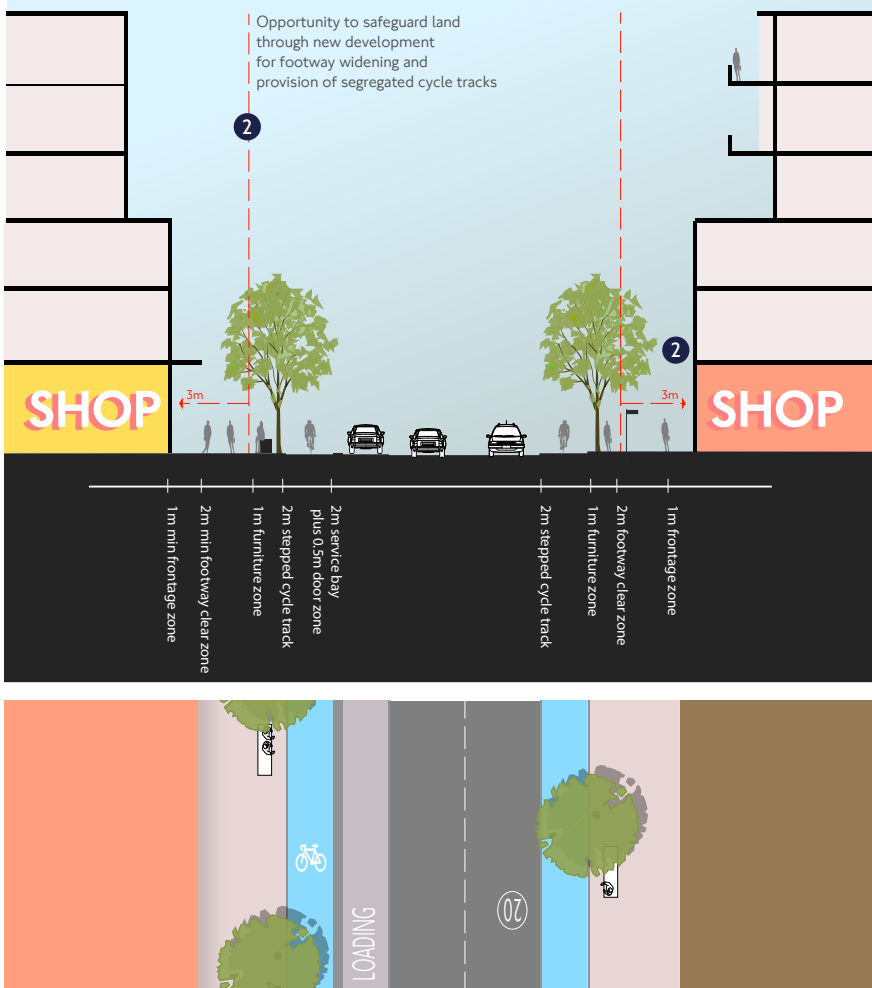
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Cycle Superhighway Route 3
- C Cycle hire
- B Existing bridge enhancement



Top: Inset bays, Wood Green
 Above: resurfacing and de-cluttering, Wood Green

CS.6 MARSH WALL

MARSH WALL CORRIDOR						
Character Zone	Objectives	Street Type	Modes	Materials	Interventions	
South Quay	<p>Objectives for local connectivity:</p> <ul style="list-style-type: none"> Transformational public realm and streetscape works along the Marsh Wall corridor to strike a better balance between the needs of all road users in light of the intensification of development and subsequent uplift in activity in the South Quay area Improve safety through implementing measures to calm traffic at the junction of Marsh Wall and Preston's Road Improve the relationship of the elevated DLR infrastructure to the streetscape by greening and animating the area beneath the viaducts to create a linear public amenity space on Marsh Wall Explore opportunities for better and more flexible management of kerb side space 	<p>EXISTING M2/P3 City Street and M2/P1 Connector</p> <p>POTENTIAL FUTURE STREET TYPE Extension of M2/ P3 City Street to east and west sections</p>	<p>Bus Car DLR Walking Cycling</p>	LANDMARK	<p>01-L Isle of Dogs central spine 07-B South Dock bridges 08-B Millwall Inner Dock - footbridge 21-U Marsh Wall 31-U Greening strategy 33-O Dock edge connections 35-O Station public realm enhancements 37-O Legible London signage 38-O Creative and cultural strategy including wayfinding initiatives</p>	
Section Ref:	2.2.3	2.2.3	BS.4-6	T.3	3.1 - 3.4	

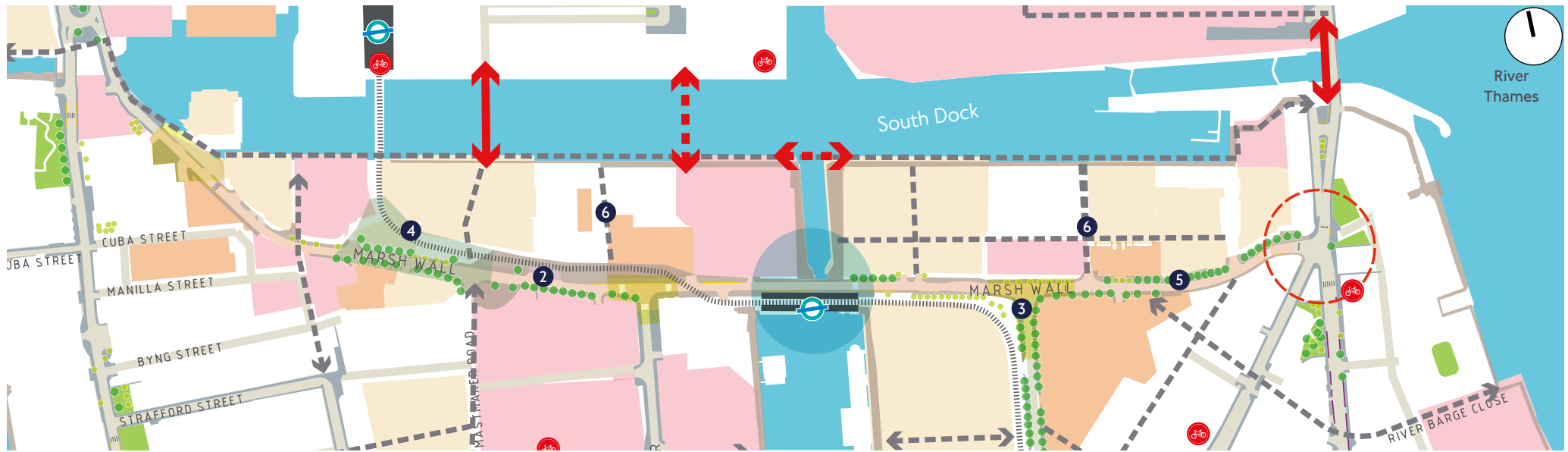
CS.6.1 MARSH WALL - CHALLENGES

- Marsh Wall is one of the few east-west vehicular connections in the Isle of Dogs peninsula. A large number of vehicles use this corridor as a through-route as well as for servicing and drop off
- Provision for pedestrians is varied, with generous footways in places yet also several pinch points, the most significant being on the bridge deck over Millwall Inner Dock
- The DLR creates an unusual condition along this corridor with viaducts soaring above the street. DLR operational restrictions have led to much of the space beneath these viaducts historically being open and under-utilised
- There is a lack of physical and visual connectivity to South Dock due to the arrangement of buildings to the north of Marsh Wall.



Above: Aerial view of Marsh Wall showing elevated DLR viaducts





CS.6.2 MARSH WALL - OPPORTUNITIES

- 1 Marsh Wall is likely to see the most significant scale of change in the OA, with the 2015 South Quay Masterplan set to guide its transformation to a high density environment with commercial activity at street level animating the public realm
- 2 There is an opportunity to bring forward a transformative solution here in order to sustain the likely increase in on-street activity. Options to restrict vehicle access should be

- investigated, with a focus on creating a world class destination that puts walking, cycling and public transport first
- 3 Traffic should be calmed and priority given to north-south pedestrian movement at junctions or key crossing points
- 4 Improvements to pedestrian comfort should complement the creation of a linear public space utilising the area beneath DLR viaduct

- 5 Existing green infrastructure should be protected and enhanced, including the mature trees along Marsh Wall which contribute to the character of the street
- 6 High quality, well located connections should be provided to access the dock edges and serve the South Dock bridges
- 7 Servicing and deliveries should be carefully managed to reduce the impact of these vehicles on the street. New developments should provide off-street servicing areas.

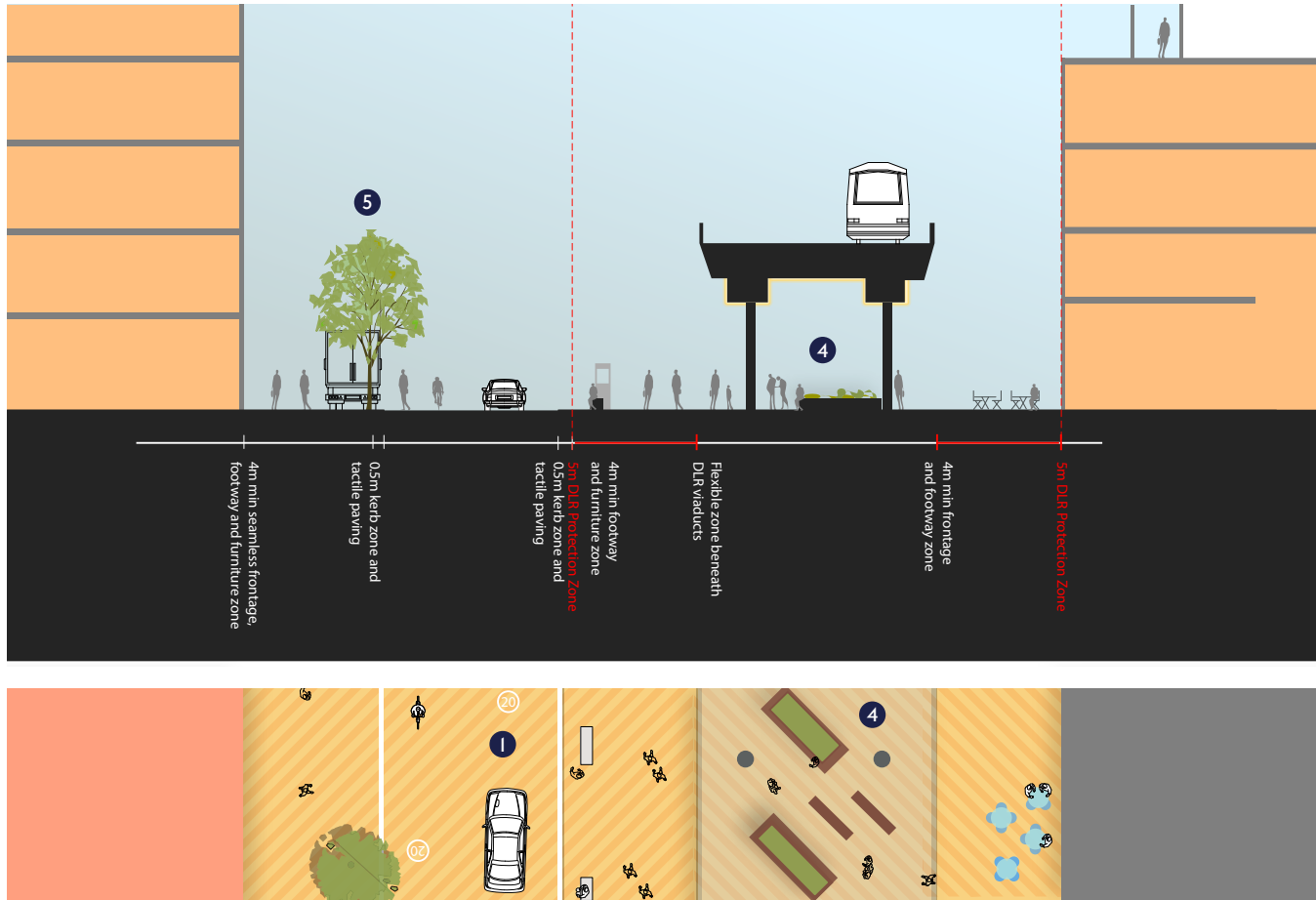
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Cycle Superhighway Route 3
- Major public realm improvements
- Existing bridge enhancement
- Future bridge connections
- Cycle hire



Top: High quality surfacing giving a new identity - Exhibition Road, London

Above: High quality surface treatment - footway and carriageway - Sloane Square, London

CS.7 PRESTON'S ROAD

PRESTON'S ROAD CORRIDOR						
Character Zone	Objectives	Street Type	Modes	Materials	Interventions	
Canary Wharf	<p>Objectives for local connectivity:</p> <ul style="list-style-type: none"> Improve safety and accessibility at the two main gateways into Canary Wharf - Westferry Road/West India Dock Road junction to the west, and Preston's Road roundabout to the east Improve pedestrian and cycle access to Canary Wharf Support the delivery of a new east-west connection through Wood Wharf from Preston's Road to Westferry Road 	EXISTING M2/PI Connector	Bus Car Freight Walking Cycling	LANDMARK	15-B	Blue Bridge upgrades
					18-U	Blackwall connections
					20-U	Manchester Road
					31-U	Greening strategy
					32-O	Limehouse to Leamouth walking route
					36-O	Promotion of River Services
					37-O	Legible London signage
					38-O	Creative and cultural strategy including wayfinding initiatives
Section Ref:	2.2.2	2.2.2	BS.4	T.3	3.2 - 3.4	

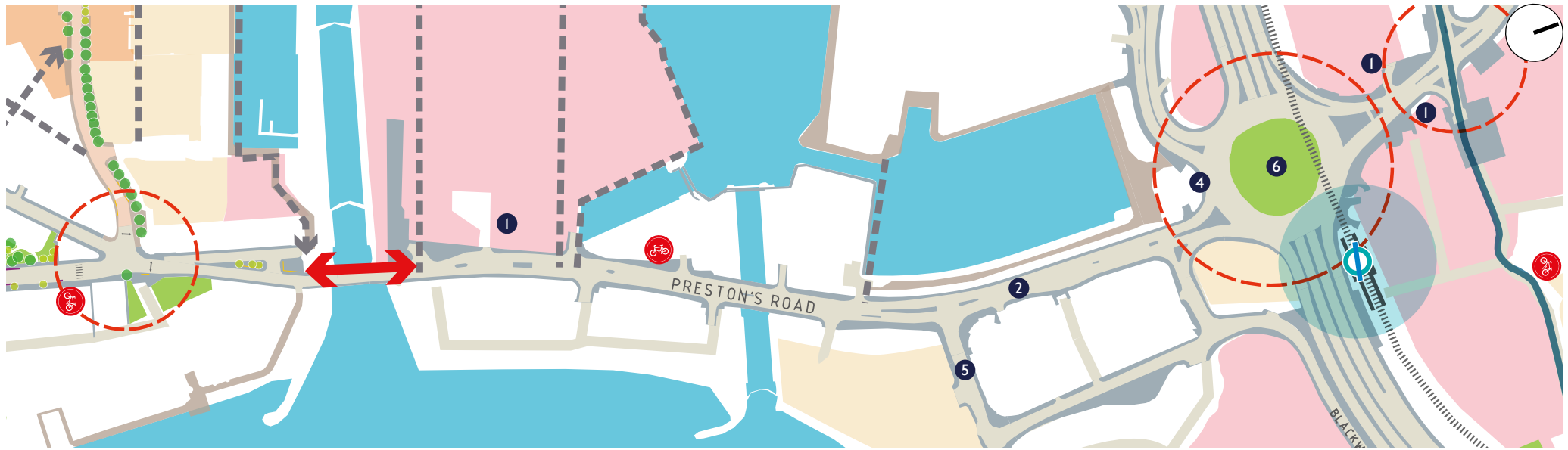
CS.7.1 PRESTON'S ROAD - CHALLENGES

- Preston's Road is a wide movement corridor with an environment that does not serve the needs of pedestrians well
- This corridor performs poorly as a gateway into the Isle of Dogs, with a poorly defined character and poor legibility of onward routes
- There is little active frontage with the western side of the street largely framed by the historic dock wall, and back gardens and boundary walls facing the street to the east. New development is starting to remedy this by creating buildings that address the street and this will be further enhanced by the Wood Wharf development which will animate the street frontage and create an important new link into Canary Wharf, however there are relatively few other opportunity sites along this corridor
- Long stretches of pedestrian guard railing create a sense of disconnection between the two sides of the street
- Junctions with side roads are sweeping in many places, further breaking down the continuity of the pedestrian environment
- Preston's roundabout provides one of the few north-south pedestrian and cycle connections in the area however the underpass is an intimidating environment after dark and can act as a deterrent to people using this link.



Above: Aerial view of Preston's Road with Preston's roundabout visible to the north





CS.7.2 PRESTON'S ROAD - OPPORTUNITIES

- 1 When new development comes forward in the area, buildings should provide active frontage to animate the street
- 2 Investment should be focused on upgrading the quality of the pedestrian environment, including removal of guard railing, tightening of junction radii and treatment of crossovers in complementary materials to the footway

- 3 Traffic calming measures should be implemented to slow vehicle movement at key points
- 4 The use of public art or lighting interventions should be explored as a means to uncover and reinforce local identity at this gateway location
- 5 Better wayfinding to destinations in the local area including the Thames Path and public transport hubs such as Blackwall and East India DLR stations will help to improve legibility of the local area

- 6 Investment in upgrades to Preston's roundabout to provide surface level crossings for pedestrians and cycles, set in an upgraded public realm will make this important connection much more appealing to users.

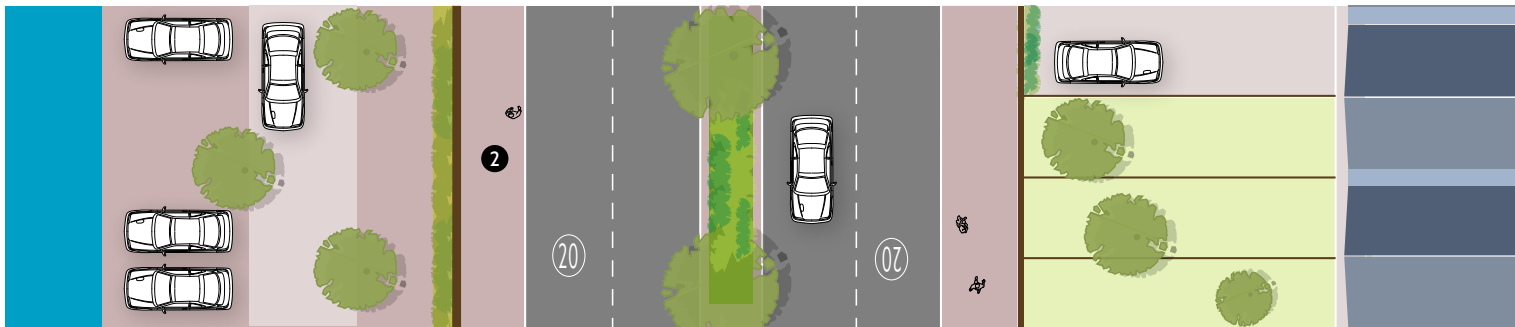
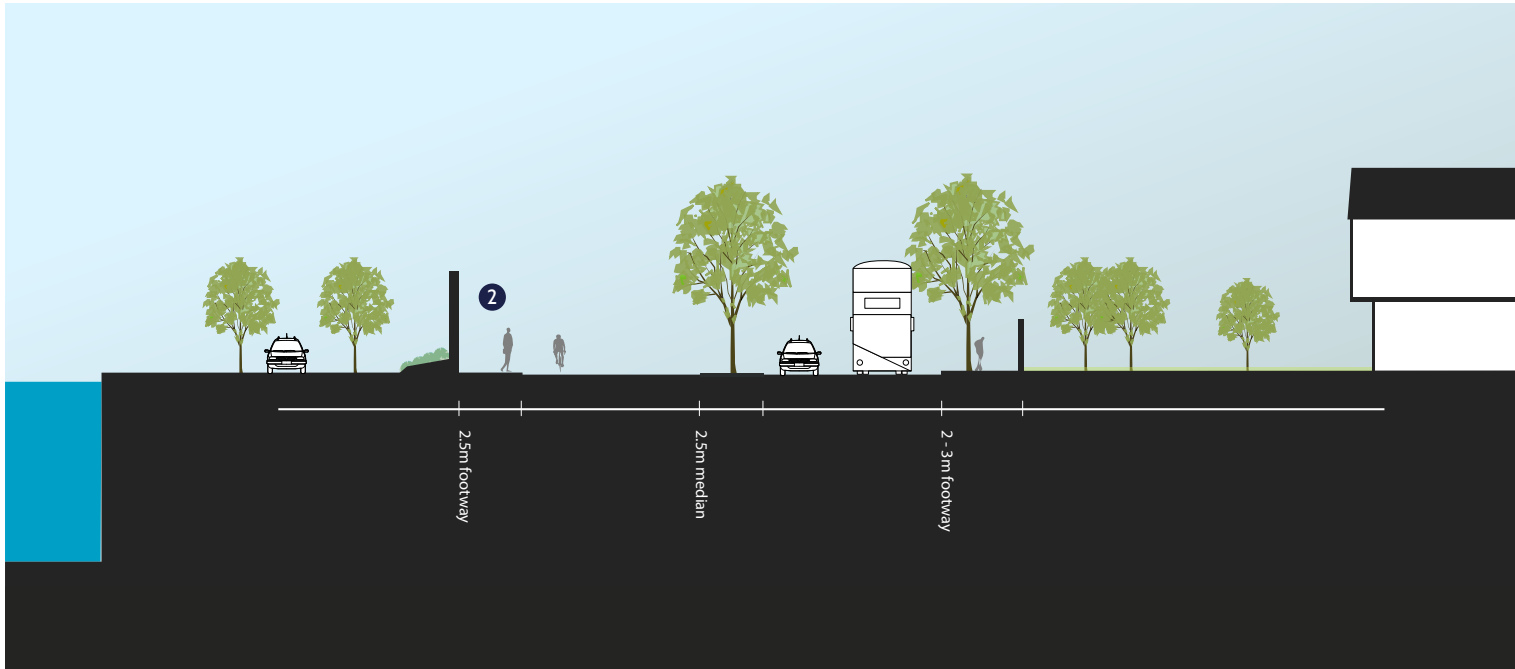
KEY

Opportunity sites - planning status

- Permitted site
- Active site
- Future potential

Proposed local connections network

- Major junction improvements
- Future connectivity improvements
- Cycle Superhighway Route 3
- Major public realm improvements
- Existing bridge enhancement
- 🚲 Cycle hire



Above: Feature lighting of railway arches in Southwark



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