Nine Elms on the South Bank

Designing for Cycling

Transport for London

Contents

1 Introduction

Nine Elms on the South Bank (NESB) is a 195 hectare Opportunity Area (OA). It is scheduled to transform from a peripheral, inner city area to a new district of London's Central Activities Zone (CAZ), with 16,000 new homes and 20,000 – 25,000 jobs.

Another transformation currently underway in London is two - wheeled. Cycling in the capital has been increasing rapidly since 2000. Barclays Cycle Hire, launched in 2010, has increased the accessibility of the bicycle in London. Accordingly, cycling has risen up the political agenda, with the Mayor of London pledging to "Go Dutch" prior to the 2012 election. This has been followed by the publication in March 2013 of the Mayor's Vision for Cycling in London, which aims to normalise cycling, increasing its modal share and making it a part of everyday life.

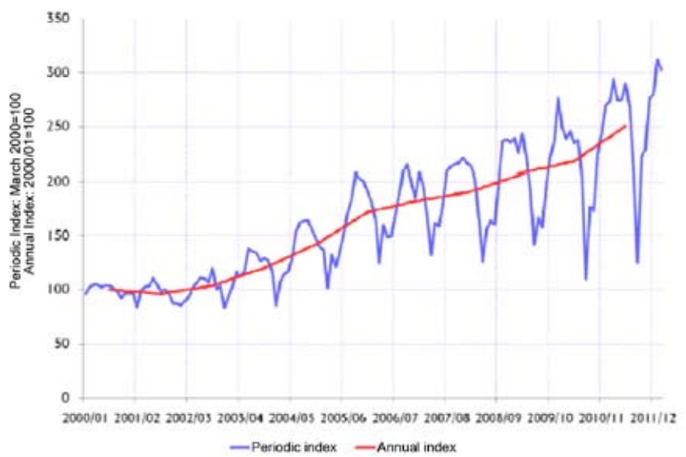
The Mayor's Cycling Vision follows on from a 2012 pledge to create a flagship cycle scheme at Vauxhall Cross. This reflects a wider consensus that it is possible and desirable to design urban areas to have a high cycle mode share.

The impending transformation of NESB and the ambition of the Mayor's Cycling Vision means that it is important to integrate cycling into the emerging public realm, complementing the area's increasing walkabiity. This will mean that Vauxhall is uniquely placed to emerge as a liveable area of central London in which cycling is uniformly comfortable, convenient and accessible to anyone.

This strategy sets the scene by outlining existing and future development in NESB with respect to cycling. It examines the relationship between design and cycle mode share and identifies how a cycle friendly urban area should be delivered, looking both at the design components and the nature of the delivery and making recommendations for its implementation.

Nine Elms On the South Bank

Nine Elms on the South Bank occupies 195 hectares of inner South London



Cycling levels in London are steadily increasing

2 2.1 Cycling Policy and Evidence

Cycling has moved markedly up the policy agenda in recent years. It is crucial that the transformation of the NESB area accommodates the bicycle as a mainstream mode of transport. This section summarises recent cycling policy in London and how it can deliver a successful cycling environment.

The Mayor's Cycling Vision for London

Following the appointment of Cycling Commissioner Andrew Gilligan in January 2013, the Mayor's Cycling Vision was launched in March. It is backed by over £900m in TfL's Business Plan and has the following four aims:

1) A Tube network for the bike - direct, joined up, high capacity routes, including more mandatory lanes, fully-segregated lanes, and direct quietways, with segregation and junction improvements. This will remove common barriers to cycling by making it easier, more comfortable and safer.

2) Safer Streets for the bike - 85% of cycling casualties occur at junctions. Action will be taken to reduce conflict between cyclists and other road users, via improved street designs, junction reconfiguration and training. London streets and spaces will be places where cyclists feel they belong

3) More people travelling by bike - cycling will be normalised, to make it feel comfortable, safe, easy, quick and pleasant way to get about the Capital by all types of Londoners, across all boroughs, with convenient facilities available to match.

4) Better places for everyone - cycling will transform London into a more liveable city. It will free up space on public transport and make town centres more accessible, strengthening local economies. A better cycling environment will lead to better streetscapes, safer roads, better health and higher quality of life.

The Vision aims to achieve a 400% increase in cycling between 2001 and 2026. There is a strong emphasis running through the document that mass cycling cannot simply be "encouraged" - it has to be **designed in** to the transport system.

The Mayor's Cycling Vision envisages a number of different types of cycle routes. The following are particularly relevant to NESB:

- **Better Barclays Cycle Superhighways** - delivered to much higher standards [than previously], closer to international best practice.
- **Quietways -** these will be created on low-traffic back streets and other routes. They will be well connected, well signposted and designed as complete routes.

Removing the Barriers to Cycling

While many people would like to walk and cycle for transport purposes, few do so; traffic is a major deterrent for all but the most committed cyclists. This influences everyday travel decisions. Fear of injury is the main reason why Londoners do not cycle. The Vision will deliver better routes and junctions that will reduce accident rates and lead to a cycling environment that feels safe.

London Cycling Design Standards (LCDS)

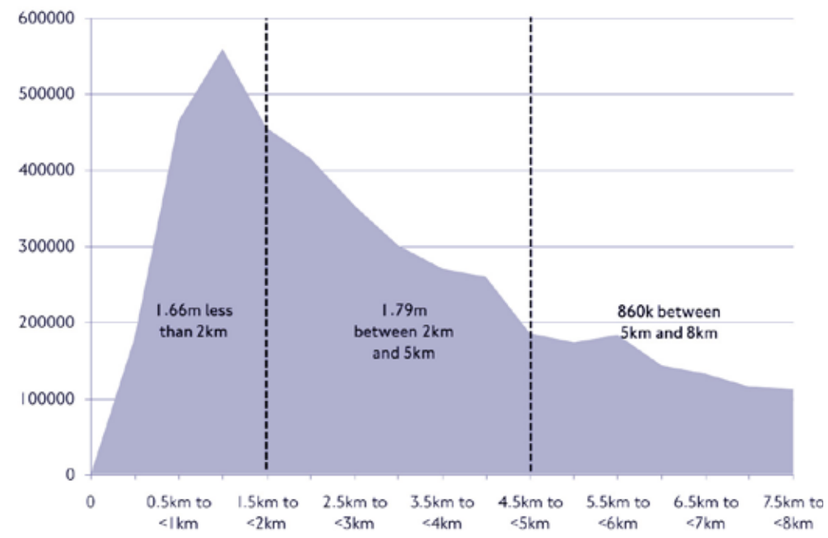
First developed in 2005, this document is currently being re-written. LCDS2 is due for publication in late 2013. In accordance with the Mayor's Vision for Cycling, it will be a significant upgrade of the existing standards. LCDS2 will draw upon international best practice for the design of cycle routes and the surrounding environment. New developments should be designed to anticipate the significant increase in quality of provision that will accompany LCDS2.

Analysis of Cycling Potential (TfL)

TfL's *Analysis of Cycling Potential* (2011) calculates the future potential of cycling, based upon trips that are cyclable (unconstrained by distance, disability, luggage, etc).

In inner and central London (which includes LB Lambeth and LB Wandsworth), only 10% of cyclable trips are actually taken by bike. This implies that cycling has the potential to multiply hugely in importance (by a factor of nine) if barriers to cycling are removed. In total, around **4.3m journeys in London per day** could be cycled. This is indicative of significant latent demand for cycling and a high potential for mode shift.

Figure 1.9 Potentially cyclable trips by trip distance (crow-fly)



Source: Analysis of Cycling Potential, London Travel Demand Survey 2005/06 to 2007/08

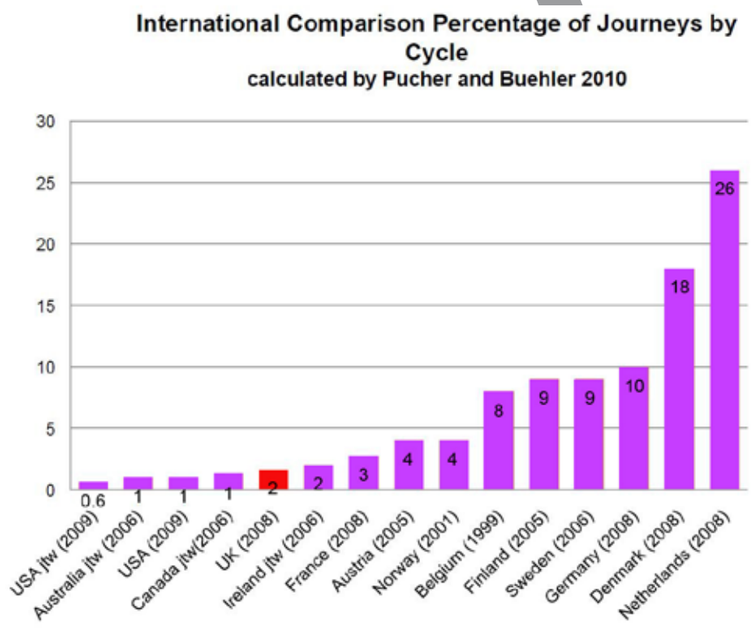
Characteristics of successful cycle routes

These characteristics are taken from the Netherlands' CROW Manual (2006). The London Cycle Design Standards (LCDS) update will build on these to support the Mayor's Vision.

1) Cohesion: Every home, workplace and amenity and travel mode must be accessible by bicycle and cyclists must be able to choose from various routes.

2) Directness: Cycletracks must deviate as little as possible form the crow-fly route and must permit unimpeded cycling.

3) Safety: Each encounter with motor traffic is a potential conflict. Cyclists and motor vehicles have different mass, velocity and other traits . Routes and junctions need to minimise or avoid these differences



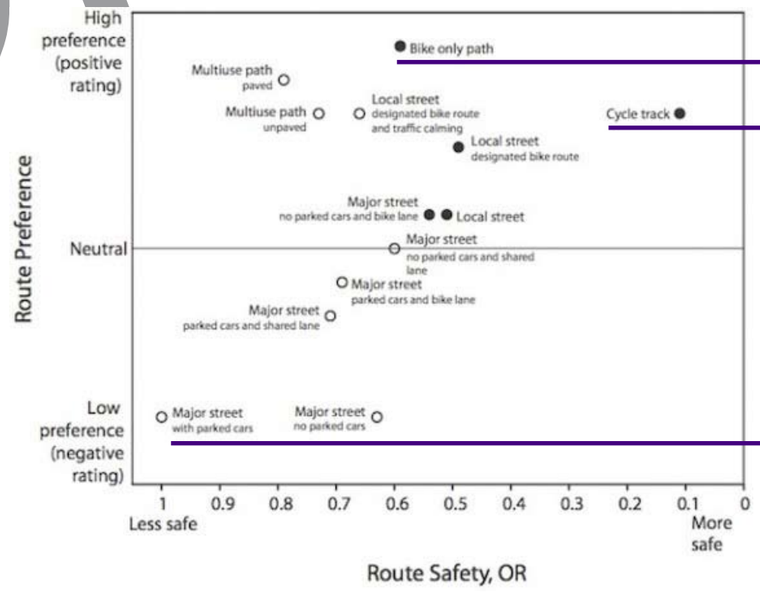
4) Comfort: Nuisances to cycling such as repeated stopping and starting, bottlenecks, difficulty of wayfinding and poor surfacing need to be minimised.

5) Attractiveness: Cycle infrastructure should make cycling more attractive by removing the physical and psychological obstacles to cycling.

Route Types and Preferences

The chart below plots people's preferences for 14 different types of cycle routes, compared with their levels of safety.

Lower levels of risk are associated with quiet streets and cycle-specific infrastructure on main roads. This also correlates with people's preferences and can be used to inform the choice of treatments on different route types.



Most preferred route type

Safest route type

Least preferred route types

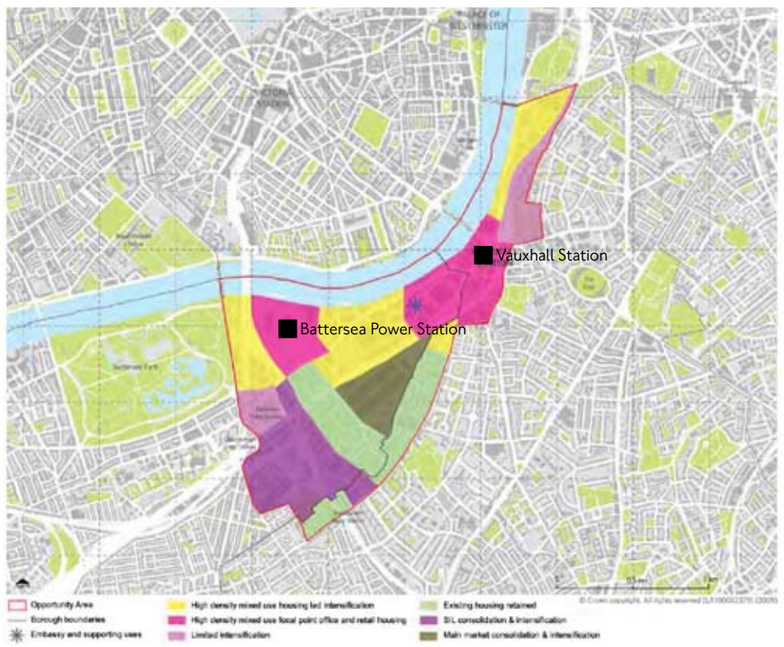
From: *Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study* (Teschke *et al*, 2012)

2.2 Area Context

Land use strategy

The land use strategy for the area is based upon two main considerations: Firstly, much of NESB is located in London's Central Activities Zone (CAZ), as per the London Plan. Secondly, the central part of the area is no longer designated as Strategic Industrial Land (SIL).

Together, these considerations support the transformation of the area from low-density industrial to high density commercial and residential, accompanied by a step change in the provision of public transport and quality of urban realm. By building a high quality cycle network in the area, accessibility levels can be improved, maximising the value of public space.



Land use strategy for Nine Elms on the South Bank

Intensification

Intensification of almost all land uses will occur throughout NESB, with the exception of existing residential areas to the south of Nine Elms Lane. Around 200,000m^2. of mixed use development is proposed for the OA, plus 60,000m^2 of retail, 160,000m^2 of new office and 80,000m^2 of other employment-related uses at Battersea Power Station.

The Vauxhall Nine Elms Battersea Opportunity Area Planning Framework (VNEB OAPF) sets out a vision for area of high density mixed use development. This comprises 16,000 new homes and 20-25,000 jobs; such intensification will make NESB more similar to London's Central Activities Zone (CAZ).

The intended travel mode share in NESB is as follows: 50% public transport; 30% walking and cycling; 20% car. Residential car parking allowances are accordingly low; for developments that have received planning permission so far, the ratio is generally between 0.3 and 0.4 spaces per unit.

People will tend to walk, cycle or use public transport for day-to-day travel. Vauxhall's central location can provide a strong incentive for people to cycle if levels of provision are good. This will be aided by increased Barclays Cycle Hire provision.

Cycle demand - existing

At present, cycling accounts for around 12% of all surface vehicle movements through NESB over a 24 hour period. This equates to around 6,600 cycle trips per weekday in the area. Cycle demand is significantly higher in peak periods, when up to 50% of road traffic can be cyclists (South Lambeth Road southbound, 18:30 - 18:45).

Cycle demand - future

The delivery of new homes in NESB will lead to a major increase in the area's population. The GLA assumes an average household size in NESB of 2.34, which equates to a population increase of around 37,500; almost six times the current level.

The increases in new homes and jobs in NESB to 2030 will be accompanied by a rise in London's overall cycle mode share from 2% to 5% - this is likely to be higher in central London. LB Wandsworth is seeking 7%, LB Lambeth is aiming for 8%.

Assuming a 7.5% cycle mode share, new jobs in NESB will generate 2,550 - 3,200 work-related cycle trips per weekday. This will be complemented by around 6,000 residential cycle trips arising from the new developments. Further cycle trips will be generated by other land uses, as well as social infrastructure such as schools. A consistently high standard of cycle infrastructure in the area will be a contributing factor here.

Based upon these figures, NESB is likely to see at least 20,000 cycle trips per day generated by employees, residents and increases in background flows. This represents a tripling of existing cycle numbers and does not include trip generation arising form other land uses such as hotels, retail and student accommodation.

Vauxhall: Mayor's Cycling Flagship

In May 2012, the Mayor of London named Vauxhall as one of two locations likely to benefit from a transformation into flagship walking and cycling projects. This reflects the fact that the cycling environment is generally hostile and unpleasant and that the area is due to receive significant, sustained investment in the coming decades.

2.3 The need for a Cycling Strategy in Nine Elms on the South Bank

Summary

As an area of inner London facing major intensification of land uses, Nine Elms on the South Bank has very high potential for cycling. The demand for cycle trips in the Opportunity Area is likely to increase substantially in the coming decade.

In the context of increasing political support for cycling, the redevelopment of NESB provides a unique opportunity to design-in a high cycling mode share. This will require the development of a cycle network that appeals to potential cyclists, as well as people who already ride bicycles.

The design of cycle infrastructure in NESB should reflect the Mayor's Vision for Cycling, as well as the updated LCDS and well-informed research on infrastructure design and people's travel preferences. This strategy will set out how to overcome the barriers to cycling in NESB and create an attractive accessible cycle network.

Structure of NESB Cycling Strategy

- Chapter 3 examines the existing and proposed cycle infrastructure in NESB, identifying where it works, where it falls short and what is required to procure a wholly accessible cycling environment
- Chapter 4 develops these observations into a strategy, setting out the overall aim and what it will consist of at ground level, including potential routes, treatments for each route type and associated measures required for a bicycle accessible urban area
- Chapter 5 provides route-by-route recommendations for the sixteen cycle routes identified in NESB
- Chapter 6 concludes.

3 Existing and Planned Provision

3.1 Roads in NESB

There are three main types of road in NESB, plus a small number of off-road cycle routes.

1) Main Roads

These are the most direct routes through the area and are normally A-roads. They support bus routes and carry large amounts of through-traffic, including construction vehicles (particularly Nine Elms Lane). Some of these have cycle provision, including on-carriageway lanes (advisory and mandatory), shared use foot/cycle ways and advanced stop lines.

Cycle provision on main roads is generally inconsistent and low quality; this means that it is often under-used. While main roads provide the quickest, clearest and most direct routes, they are not pleasant or safe for cycling. Almost all the main roads in NESB converge at Vauxhall Gyratory.

TfL-controlled main roads:

- Albert Embankment
- Battersea Park Road
- Nine Elms Lane
- Lambeth South Road
- Vauxhall Bridge
- Vauxhall Gyratory

Borough-controlled main roads:

- Chelsea Bridge Road
- Lambeth Road
- Queenstown Road
- Silverthorne Road
- Wandsworth Road

2) Secondary Roads

These are typically residential, with some industrial access. Steps have been deliberately taken to restrict through-traffic and driving speeds are low. Many of these routes haves on-street car parking. Motor vehicle access is required for residents, deliveries, refuse collections, and similar uses.

When suitably direct, the secondary roads are well used by cyclists. Obstacles to cycling along secondary roads include quality of surfacing and a lack of continuity; their function as local access roads does not necessarily correspond to the needs of two-wheeled through-traffic. NESB's role as an industrial area means that some secondary roads provide local access for HGVs.

- Stewart's Road
- Cringle/Kirtling Streets
- Thessaly Road
- Miles Street

3) Off-Road Routes

The main off-road cycle route in NESB is the Thames River Path; at present it is not continuous. When complete it will provide a river-side link between Chelsea, Vauxhall and Lambeth Bridges.

Surface treatment along the Thames River Path is variable because much of it has been created as part of larger riverside developments. This route is shared with pedestrians; cycling capacity is limited by sharp corners, pinch points and the discontinuous nature of the trail.

- Thames River Path

Initial observations

The diagram opposite shows the main roads, secondary roads and off-road routes in NESB.

Issues

- The route network is very coarse; in many cases there is no substitute route
- The route network is not well connected; many elements are separate from each other
- Nine Elms Lane provides the only west-facing access to the Opportunity Area
- There are large gaps in the network, particularly the west half of the Thames River Path
- The majority of the continuous routes in the area are main roads with little or no cycle provision.

Opportunities

- Join disparate links to build a route network
- Provide a choice of cycle routes through area
- Enable local journeys to shops, schools and local services to be made by bicycle
- Improve consistency of materials and surface treatments
- Overcome severance and poor levels of connectivity
- Develop links to surrounding areas and networks.

The next section examines the standard of cycle provision on these routes

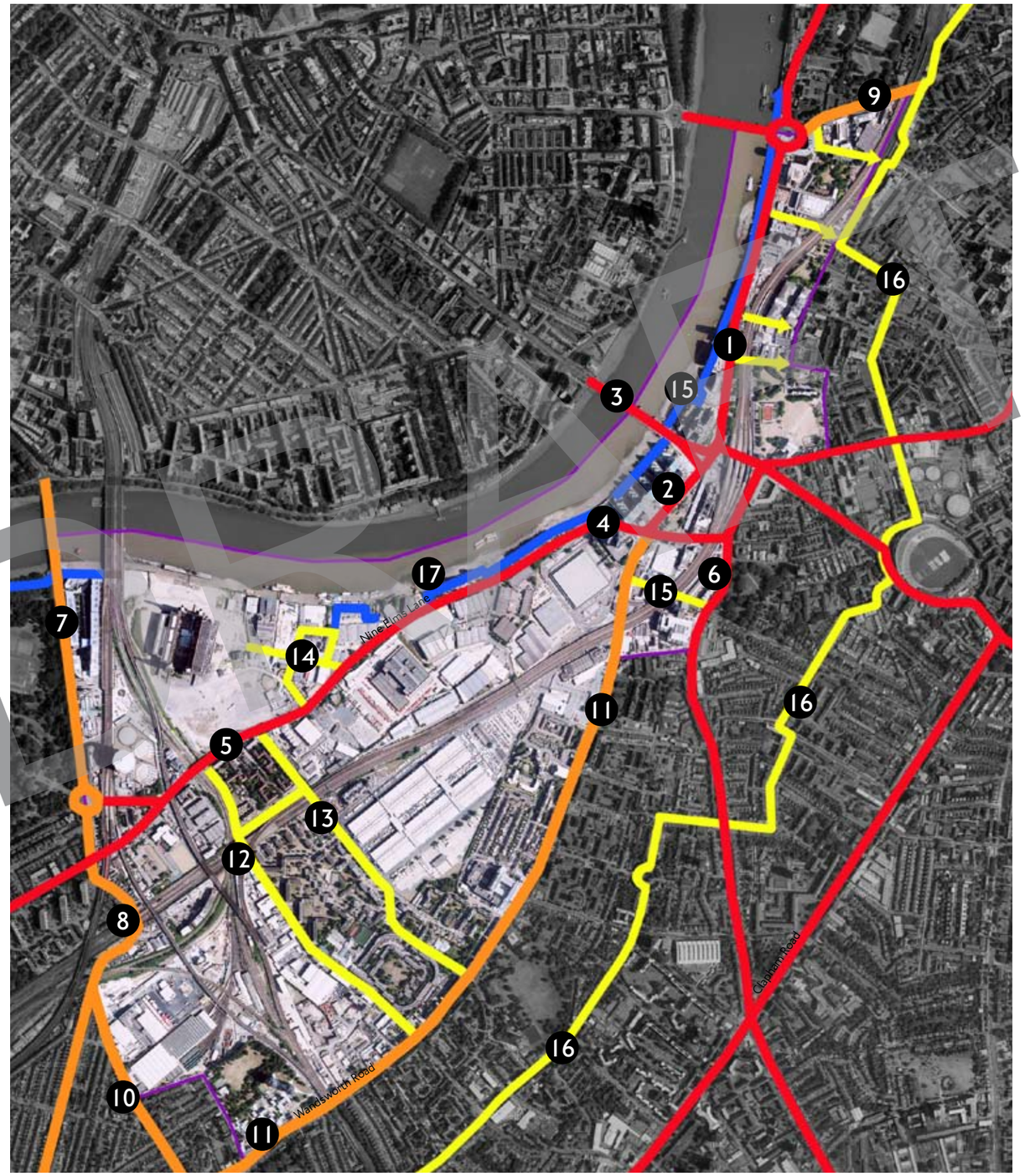
Diagram to show principal through-routes in NESB and environs

TLRN

1. Albert Embankment
2. Vauxhall Gyratory
3. Vauxhall Bridge
4. Nine Elms Lane
5. Battersea Park Road
6. South Lambeth Road

Borough Roads

7. Chelsea Bridge Road
8. Queenstown Road
9. Lambeth Road
10. Silverthorne Road
11. Wandsworth Road



Secondary Roads

12. Stewart's Road
13. Thessaly Road
14. Cringle/Kirtling Streets
15. Miles Street
16. LCN Route 3

Off-Road Routes

17. Thames River Path

3.2 Routes – existing

A number of signed cycle routes pass through NESB or adjacent to it. Most are located on main roads and are low quality.

Barclays Cycle Superhighways

1 **CS8** runs adjacent to the western boundary of NESB along Chelsea Bridge Road, via Queen's Circus.

2 **CS7** passes further to the south, along Clapham Road.

London Cycle Network and LCN+

3 **LCN Route 3** uses secondary roads to link Clapham and Waterloo and provide local access.

4 **LCN route 37** is signposted along the A3205 (Nine Elms Lane/Battersea Park Road). This is one of the busiest roads in NESB, carrying 1,100pcu/hour in the AM peak, with a high proportion of goods vehicles (14%). It features a low quality shared-use foot/cycleway, plus some advance stop lines (ASLs) in the carriageway.

5 **LCN Route 5** follows the western boundary of NESB along Chelsea Bridge Road. Some off-carriageway provision exists, but it is not consistent or particularly high quality.

6 **An unnumbered LCN route** runs north-south from Lambeth Roundabout to South Lambeth Road, via Vauxhall Gyratory. This is almost entirely on-carriageway. There are some cycle lanes provided on the footway at Vauxhall Gyratory but their low quality means they are under-used.

7 **Thessaly Road** is a LCN route on a secondary road. It provides a cycle route between Battersea Park Road and Wandsworth Road. Motor vehicles cannot access Thessaly Road from Nine Elms Lane. This eliminates through-traffic.

Other non-marked cycle routes

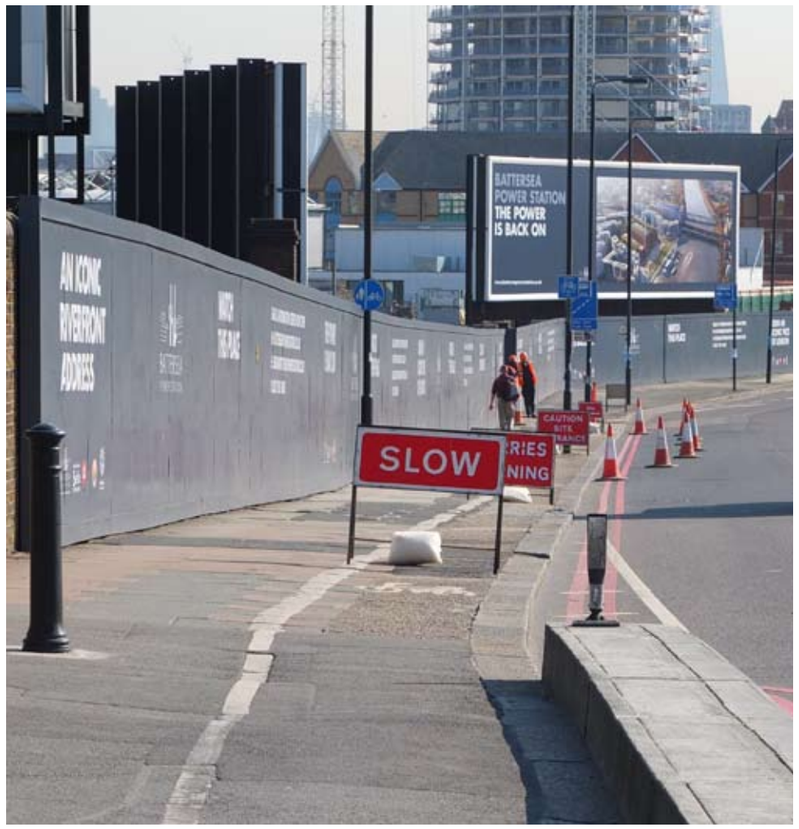
8 **Wandsworth Road (A3036)** is a major traffic route with some cycle provision. Between Vauxhall Gyratory and Lansdowne Way there is an on-carriageway cycle lane southbound, with a bus lane heading northbound that is used by cyclists. This provision does not continue further south, though there are some ASLs.

9 **Stewart's Road** is parallel to Thessaly Road. It also provides north-south connections for cyclists between Battersea Park Road and Wandsworth Road. This is well used by bikes, though the northern access is restricted. It also provides access between Wandsworth Road and the Stewart's Road Industrial Area.

10 The **Thames River Path** is used as a cycle route, though it is not currently designated as one. It is currently severed by construction works. It also has sharp corners, pinch points and variable surface quality. Its northern end provides a continuous route to the South Bank. The other end links to the cycle route through Battersea Park.

1 5 CS 8 (carriageway) and LCN 5 (footway)

3 Filtered permeability along LCN 3

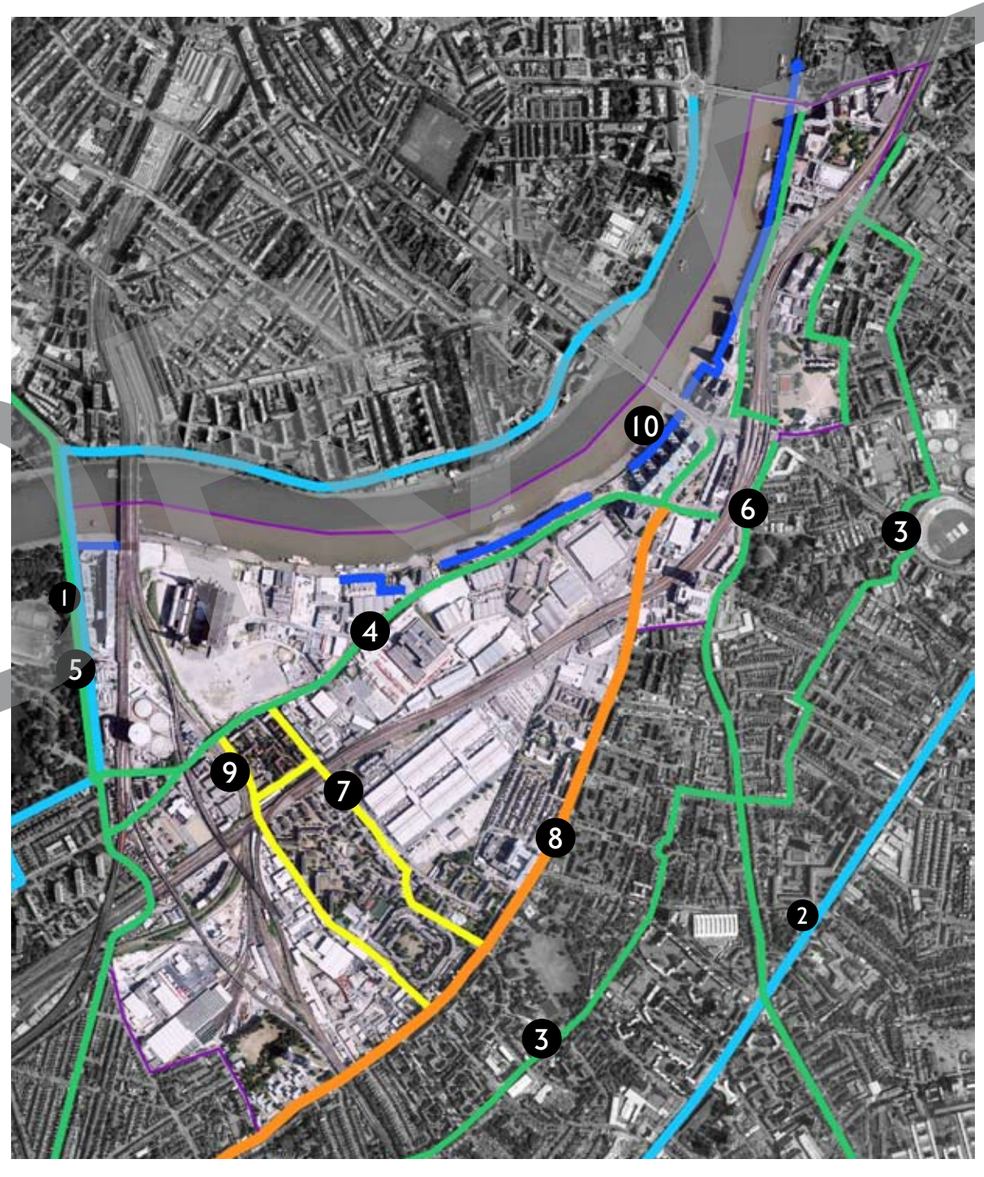


4 LCN 37 uses half of the footway alongside Nine Elms Lane

6 Under-used footway cycle paths at Vauxhall Gyratory

7 Raised table in Thessaly Road

Diagram to show existing cycle routes in NESB



8 Cyclist in Wandsworth Road

9 Stewart's Road is closed to through-traffic at its north end

10 Thames River Path, interrupted by construction

3.3 Routes - planned

New or improved cycle routes are planned as part of the redevelopment of NESB; many of these are roads with restricted access to motor traffic. Other routes fit into strategic links across London

1 Barclays Cycle Superhighway 5

This will run from Victoria Station to New Cross, following the A202. It passes through NESB at the Vauxhall Gyratory. This will increase bicycle through-traffic in the area and improve cycle access to the Albert Embankment. Construction will start later in 2013.

The layout of CS5 through Vauxhall Gyratory is not yet confirmed, owing to a wider plan to redesign the gyratory. This may delay the completion of this section of CS5.

2 Central London Cycle Grid

Announced in the Mayor's Cycling Vision, this encompasses the northernmost part of NESB. It is aimed at improving the cycling coherence of central London.

3 Thames River Path - completion

The Thames River Path will be completed between Battersea Park and Vauxhall Bridge. This has potential to be an excellent leisure cycling route.

4 Nine Elms Lane

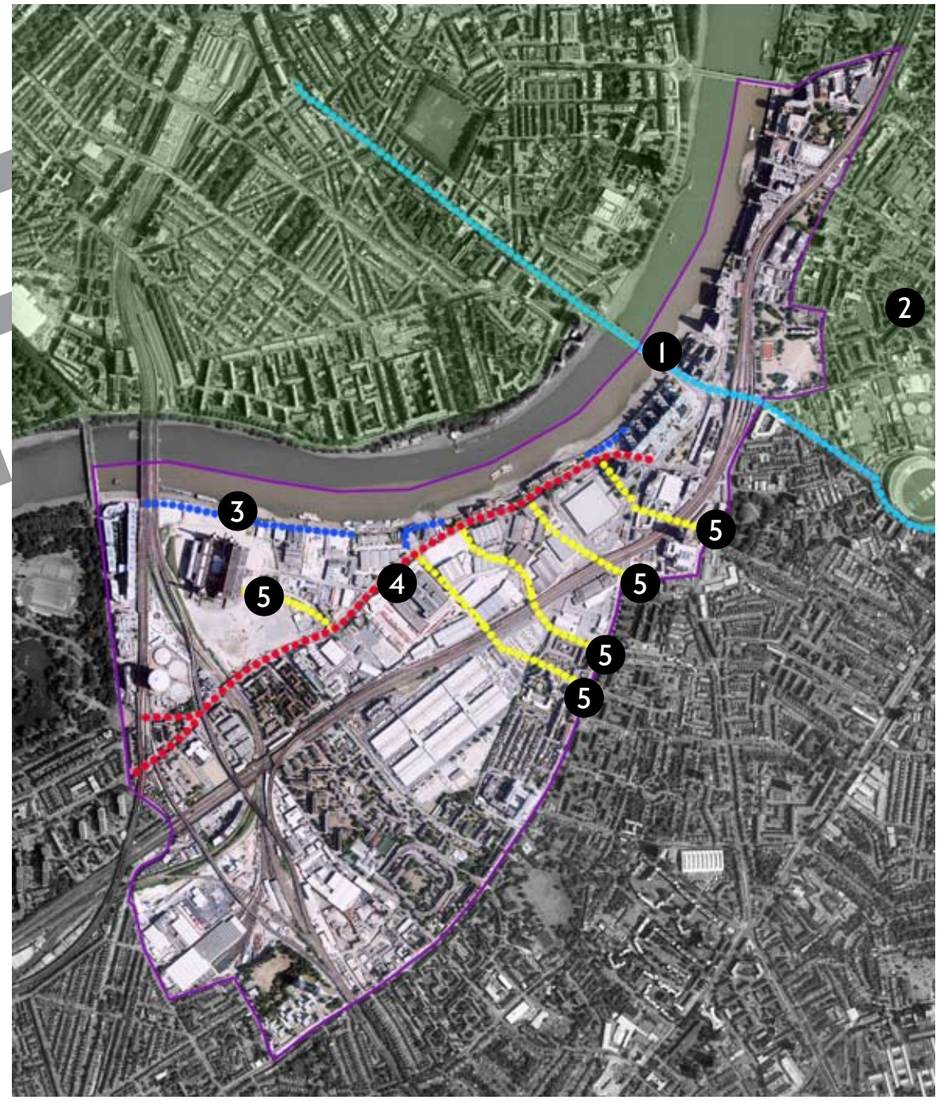
Nine Elms Lane is scheduled to be rebuilt with high quality materials as part of the regeneration of the area, changing its nature from an industrial through-route to a civilised boulevard. Options have been considered with varying levels of cycling provision. Nine Elms Lane will form the spine of development in NESB and will connect a number of separate secondary networks. It is essential that it can provide an accessible cycling route.

5 Quietways (Green Links)

A series of north-south routes between Wandsworth Road and the Thames will be developed. These are referred to in the Opportunity Area Planning Framework as the Green Links. They will create new connections under the railway viaduct, which acts as a major barrier in the area. The routes will have sections that are accessible to all traffic; however, the through routes in many cases will be limited to pedestrians and cyclists.

6 Quietways (Mayor's Cycling Vision)

In addition to the planned cycle routes shown on this map, further links may be developed as part of the Mayor's Vision for Cycling.



3.4 Cycle Access

Existing and Planned

At present, NESB is not particularly accessible by bicycle. The area is blighted by large physical infrastructure, in particular the viaduct which severs the area. Levels of permeability are low.

The forecast increase in cycle mode share is likely, when coupled with the expected population growth, to lead to a major increase in cycle demand in the area.

Vauxhall Cross - a multi modal interchange

Vauxhall is very well connected by public transport and its roads provide a vital traffic movement function. Vauxhall is one of London's busiest bus stations, providing access to much of south and west London via 10 routes. Vauxhall Railway Station is on the South Western Main Line and serves around 16 million passengers per year. Even busier is Vauxhall Underground on the Victoria Line, used by 18 million passengers annually.

Vauxhall Cross has very high strategic importance on London's road network. It marks the southernmost boundary of the London Congestion Charging zone. Six major traffic routes converge on Vauxhall Gyratory, including the London Inner Ring Road (IRR). The importance of Vauxhall as a multi-modal interchange will increase further with the completion of CS5 and other developments throughout NESB.

Barclays Cycle Hire - scheme expansion

There are currently five docking stations in NESB; all are located at, or north of, Vauxhall Gyratory. Barclays Cycle Hire is planned to expand south west; this will encompass NESB and the surrounding area. A total of 18 docking stations are proposed for NESB, The majority of these are adjacent to Nine Elms Lane, with others proposed for Thessaly Road and Chelsea Bridge Road. Along the southern boundary of the OA, BCH stands are being installed in Wandsworth Road.

Highway obstacles

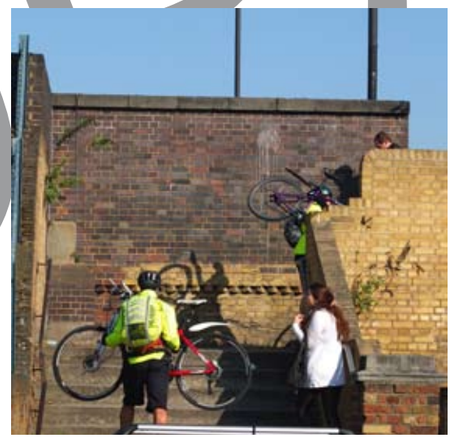
The many railway lines cause huge severance; moreover through-routes in NESB are sometimes compromised by poor design features. Stewart's Road, for example, is a well-used north-south cycle route but it ends abruptly at Battersea Park Road - cyclists have either to carry their bicycles up a flight of stairs or negotiate parked cars and a set of barriers. This weakens the accessibility and strength of the existing network. Obstacles such as this must be overcome through good design.

Potential

For cycling to be accessible in Vauxhall, the use of bicycles will need to be as seamless and effortless as possible.

Cycling has potential as a mainstream means of transport when every journey in and around the area can be made by bike. This requires a route network that links all origins and destinations and is as safe, direct, consistent and well-connected as possible.

The cycle network must be complemented by plentiful cycle parking that is designed in such a way as to be aesthetically pleasing, well-located and easy to use. This is discussed in the next section.



Bicycles need to be carried where Stewart's Road meets Battersea Park Road

Thessaly Road is marked as a cycle route, but it terminates abruptly at Battersea Park Road

Stressful cycling environment reduces accessibility

Barclays Cycle Hire at Vauxhall Station is well used

At-grade access restricted by barriers and car parking

3.5 Cycle Parking

This is, at present, relatively limited. When all permitted developments are complete, there will be in excess of 10,000 new cycle parking spaces in NESB.

Requirements

In addition to a coherent network of cycle routes, cyclists need to be able to park their bicycles tidily, easily and safely.

Any land use that generates a cycle trip will require some form of bicycle parking. Residential parking needs to be easily accessible, yet secure. Stations and transport interchanges benefit from high quality cycle parking as this makes it easier to incorporate a cycle trip into a rail/Underground journey.

Existing

Cycle parking in NESB is concentrated around Vauxhall Gyratory, where there is a large number of Sheffield stands, particularly around Vauxhall Bridge. Cycle stands are also found at various locations along Wandsworth Road. There is a single set of stands in Nine Elms Lane and some residential cycle parking at Chelsea Bridge Wharf.

Proposed

Cycle parking provision is a condition attached to developments in NESB. The following numbers of spaces have been secured:

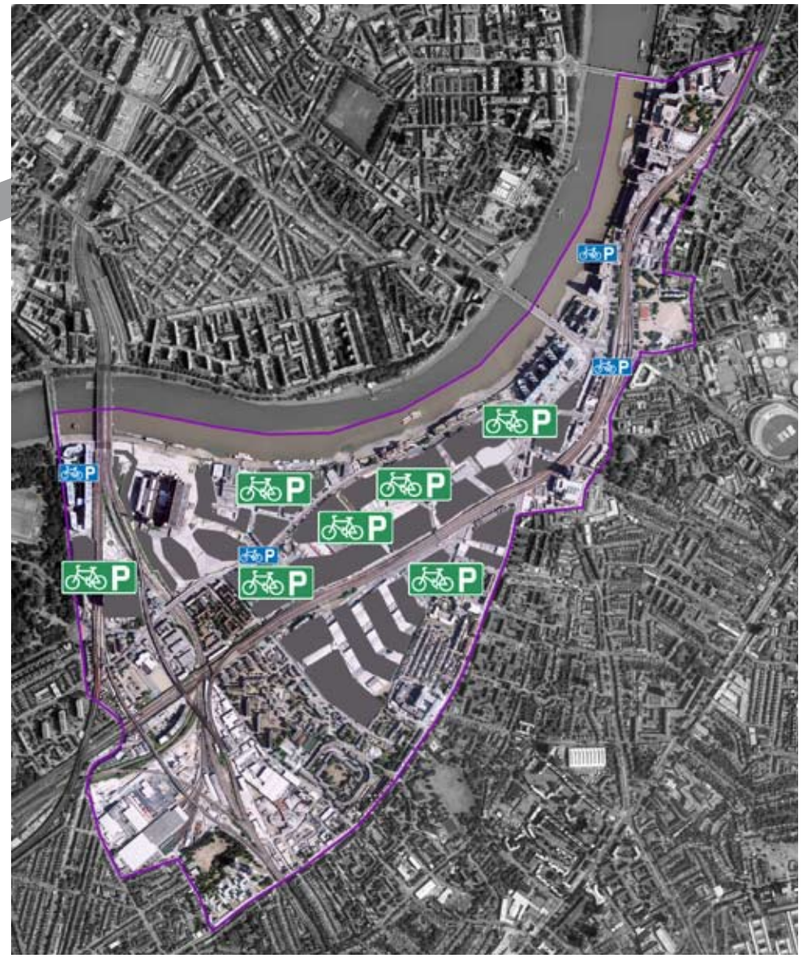
- Market Towers - 653
- New Covent Garden Market - 3,025
- Embassy Gardens Phase 1 - 757
- Embassy Gardens Phase 2 - 1,585
- RMG - 2,414
- Riverlight - 952
- Marco Polo House - 607

The spaces listed above total 9,993. The majority of this parking is residential. Many of the residents' cycle parking spaces are located in basements, with visitors parking their bicycles at grade. There is also parking for commercial and retail developments.

Further developments of smaller sites in NESB will yield 1,500 - 2,000 further residential units, with between one and two spaces per unit. Additional cycle parking will be provided as a result of NESB-related developments taking place in LB Lambeth. Planning conditions do not specify the quality of provision that will be made and it is important that the many spaces provided are actually usable.

Potential

In addition to further provision of on-street cycle parking, the potential exists for a cycle hub at Vauxhall Station. This would provide a bicycle maintenance workshop, a large amount of secure undercover cycle parking, a shop and a cafe. Elsewhere in NESB, secure cycle parking could be developed in railway arches, providing a further source of covered parking.



Left: Cycle hub in Leeds
Middle: Cycle parking must be easy to access
Right: Underground cycle parking in Strasbourg

3.6 Summary

Network development

The diagram opposite combines the figures from pages 11 and 13 to show how the new cycle routes will complement the existing ones. While they will improve the physical environment, they will not make up a comprehensive cycle network due to the following issues:

1) Low cycle capacity and poor safety at Vauxhall Gyratory causes severance where many of the main routes converge

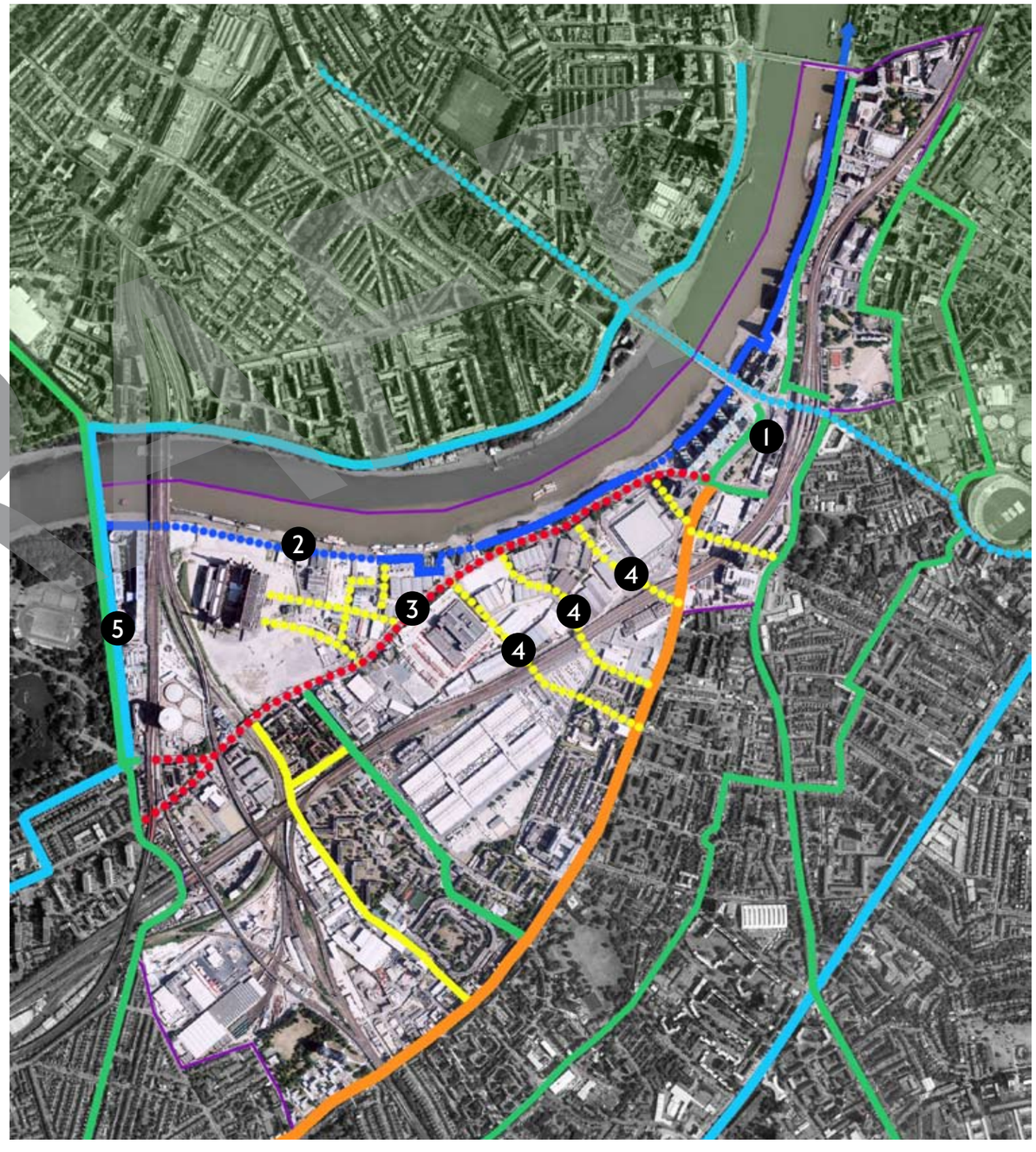
2) Lack of connections between Thames River Path and surrounding area in westernmost portion of OA

3) No cycle route parallel to Nine Elms Lane

4) Quietways/Green Links not connected at midpoints - very large block sizes

5) Low standards of provision on Queenstown Road/Battersea Park Road

6) Lack of consistent connections between routes, impeding network development



Requirements

As set out in chapter 2.1, a cycle network needs to be cohesive, with a complete set of connections between origin and destination points, and to the wider area. Different design features will be needed for different types of routes. They will all need to increase subjective safety and ensure that cycling for transport NESB is comfortable, attractive, direct and stress-free.

The next chapter develops these requirements further, producing a strategy for the area to deliver the aim of an exemplary, universally accessible cycling environments in Nine Elms on the South Bank.

4 Strategy

4.1 Aim

An exemplary cycling network

The overall aim of this strategy is to develop a cycle network that provides access to all areas of Nine Elms on the South Bank, is sympathetic to the walking environment and is accessible to anyone with a bicycle.

Routes + Connections = Network

A cycling network is a collection of *routes* plus *connections*. A successful network will allow people to cycle between points of origin and destination via as direct a route as possible. A network's strength is reduced if elements of it are substandard or unusable. The entire network must function coherently and be accessible to all users. It must be built to the high standards envisaged for LCDS2.

Sub-aims

These are taken from the Mayor's Vision for Cycling in London

1) Better cycle routes along main roads, to be delivered to international standards of best practice,
2) A network of high quality Quietways on low traffic back routes,
3) New off-road greenway routes through parks and along waterways,
4) Routes to link together and be easy to understand,
5) Many more people cycling for everyday transport in NESB; and,
6) Widespread recognition of NESB as an exemplary cycling environment.

Objectives

In order to deliver these aims, the following objectives will be used for the design of the cycling environment in NESB. These are based on guidance from the Netherlands and will underpin LCDS2.

Build a coherent network: Every home, workplace and amenity and travel mode must be accessible by bicycle and cyclists must be able to choose from various routes.

Ensure direct routes Cycletracks must deviate as little as possible from the crow-fly route and must permit unimpeded cycling.

Maximise safety (perceived and actual) Each encounter with motor traffic is a potential conflict. Cyclists and motor vehicles have different mass, velocity and other traits. Routes and junctions need to minimise or avoid these differences.

Provide a comfortable cycling environment: Nuisances to cycling such as repeated stopping and starting, bottlenecks, difficulty of wayfinding and poor surfacing need to be minimised.

Provide an attractive cycling environment: Cycle infrastructure must remove the physical and psychological obstacles to cycling, making it more attractive.

Allow for high levels of adaptability: Cycle networks should meet present and future needs and be able to grow over time.

Delivery of Objectives

These five objectives will apply to all routes through NESB. The will be delivered by different organisations depending upon the nature of the route. All will contribute to the delivery of NESB as an exemplary, fully accessible cycling environment.

Densification and Treatments

In order to deliver the aim of an exemplary cycling network, additional routes will be required to provide a sufficient density. These are shown overleaf.

Different route types will require different treatments to provide a coherent network overall and satisfy the six objectives listed in 4.1.

A high cycle mode share is designed into new developments in Malmö, as shown here. A similar approach should be used in NESB.

4.2 Network densification

The existing and proposed cycle network in NESB will need to be augmented by extra links. Potential options are shown here:

1) Viaduct Road

This series of secondary roads will provide local access to the developments adjacent to the railway line. It can potentially be adapted into a cycle route, improving local connectivity by linking secondary roads, bridging the CGMA access road and joining Thessaly Road to Wandsworth Road.

2) Linear Park

This is proposed as a new public space for NESB, running roughly parallel to the railway lines. This provides the opportunity for a further east-west Quietway. Provision along Nine Elms Lane, the Viaduct Road and the Thames River Path will create complementary routes.

3) Vauxhall Gyratory

The existing cycle provision at Vauxhall Gyratory is inadequate and difficult to use. Given the level of expected cycle movements through the gyratory, a transformation of the quality and quantity of cycling provision is essential. This is being designed separately.

4) Battersea Power Station (BPS) paths

These will connect the developments around BPS with Nine Elms Lane and the Thames River Path. They will also provide a link to the proposed London Underground station at Battersea. These paths will also provide access to shops, flats, parks and offices around Battersea Power Station and it is essential that they can accommodate bicycles, in order to ensure complete cycle routes in the area.

5) New Thames Crossings

Two possible locations are under discussion.

- **New pedestrian and cycle track at Grosvenor Bridge**

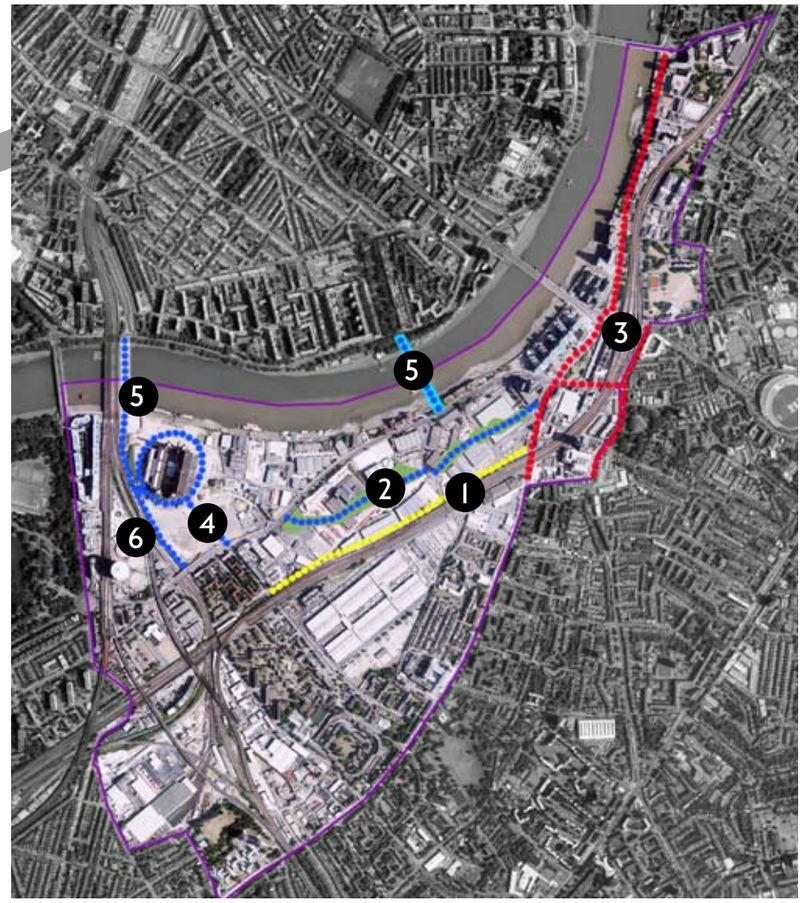
This, if delivered in conjunction with the Stewart's Road Extension (see below) would provide a continuous and largely traffic-free route from Chelsea to Wandsworth Road.

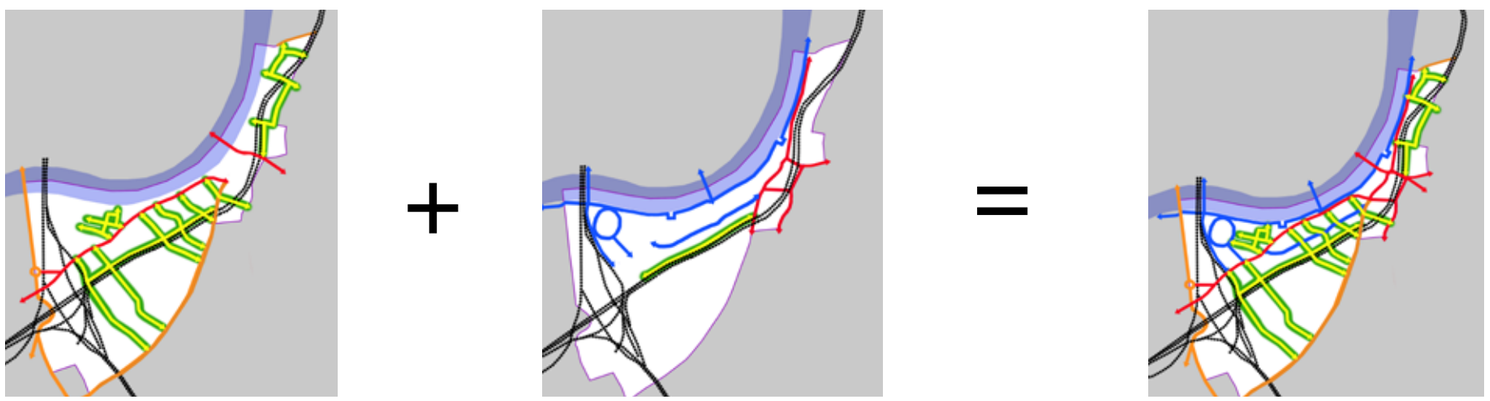
- **Nine Elms - Pimlico pedestrian and cycle bridge**

This would provide a link between St George's Square in Pimlico and Nine Elms Lane. It would also lead directly into the pedestrian/cycle route between the future US Embassy and the proposed Nine Elms Underground station.

6) Northward extension of Stewart's Road

A continuous, dedicated foot-and-cycle track could be built between Grosvenor Bridge and Battersea Park Road. Running parallel to the railway lines, this would cross under Battersea Park Road, connecting to Stewart's Road and Wandsworth Road. This requires expansion of the existing (closed) foot tunnel beneath Battersea Park Road.





4.3 Main roads

Main roads, particularly Nine Elms Lane provide the most direct routes through NESB. They will need to provide dedicated space for cyclists, particularly in the case of TLRN roads. They will also need to link seamlessly with all other cycle routes in the area.

Characteristics

- Strategic traffic routes - particularly TLRN
- Heavy traffic flows - particularly at junctions
- Used by buses, with associated infrastructure
- Well-connected to other main roads in area
- Important crossings of railways and river Thames.

Functions in NESB Cycle Network

- Direct, point-to-point routes
- Connections between secondary routes
- Continuous route through NESB, connecting shorter links.

Treatment

TLRN

- Continuous segregated cycle tracks provided along main roads, separated from traffic and pedestrians. Sufficient overtaking space. Turning movements to be separated at junctions, via traffic light timings, for example.

Borough roads

- Segregation essential where borough roads provide a crucial linking function, as at the north end of Wandsworth Road.
- Segregation desirable, where possible, along remainder of borough roads, particularly at junctions
- Bus stop bypasses and other measures designed to reduce conflict with motor traffic.

Both

- High quality attractive materials to be used
- Cycle routes continued through junctions and over side roads
- Seamless, safe connections with intersecting cycle routes
- Use of toucan crossings, with sufficient space for cyclists
- Surfacing, signage and kerb treatments as per 4.6.

Delivering the Objectives

Coherence: By providing cycle route infrastructure along the main roads in the area, the NESB cycle network will link up with existing car, public transport and pedestrian networks.

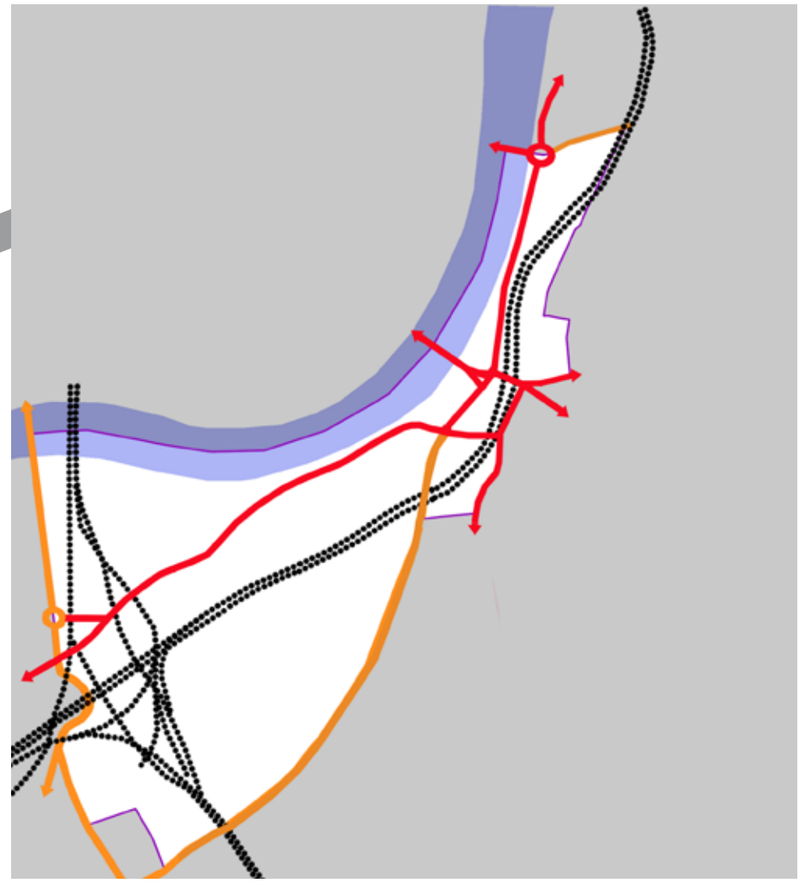
Directness: Main roads generally follow desire lines and reflect existing travel patterns. Detours and delays are reduced compared to minor routes, particularly with well-designed connections.

Safety: Main roads in NESB can carry very heavy traffic loads. Segregation of bicycle and motor traffic will reduce the need for different traffic types to interact, reducing the risk of accidents and increasing people's sense of safety. This will increase the appeal of cycling in the area.

Comfort: Cyclists need to be able to use the network without difficulty - this necessitates high quality connections between main road cycle routes and other cycle route types.

Attractiveness: Main road routes need to be enjoyable to use and aesthetically pleasing, with high quality materials.

Adaptability: As the principal connectors in NESB, main roads must be able to allow the rest of the cycle network to develop over time.



Main roads in NESB

Note:

Many of the photographs of high-quality cycle routes are surfaced in red-coloured asphalt. This is standard practice in the Netherlands; **it does not mean that red surfacing is advised for NESB.**

Segregated cycle tracks - different systems

Cycle lanes segregated from traffic via kerbs and planting

Split-level kerbs provide light segregation

Kerb segregation provides high levels of subjective safety and is widely used in the Netherlands

Planters and rubber studs are used to provide light segregation

Split level segregation with high quality materials (Copenhagen)

Junctions

Cycle tracks segregated through roundabouts (undergoing trials)

Clear, safe route provided at major road junctions

Seamless junctions with off-road cycle paths

Route continuity

Cycle tracks continuous through side roads - turning traffic gives way

Bus stops

Floating bus stops reduce conflict between cyclists, buses and motor traffic and help maintain a continuous route

Separation of bus and cycle routes reduces stress for cyclists and bus drivers

4.4 Quietways: Side roads

Side roads in NESB mostly run in a NW-SE direction. The majority of these routes are ideal for use as Quietways, providing strategic links between the Thames and Wandsworth Road. They will also connect to the cycle routes on the main roads and provide local access in the area. They do not form a complete secondary network on their own; connections must be made via main roads.

Characteristics

- Mostly unclassified roads, with low levels of through-traffic
- Relatively well connected to one another, but not capable of functioning as a standalone network

Functions in NESB Cycle Network

- Form the 'ribs' of the cycle network in the area
- Provide access to local homes, businesses and amenities
- Important through-routes from Thames to Wandsworth Road, linking NESB to surrounding areas (e.g. Clapham)
- Parallel route to complement Nine Elms Lane
- Connections across South West Main Line

Treatment

- 20mph speed limit. Through-traffic restricted to local access (filtered permeability)
- High quality connections with intersecting cycle routes
- Traffic calming measures to be used at junctions and crossings to reduce traffic speeds in the area
- Segregation generally not necessary, but may be required on certain stretches shared with heavy vehicles
- Surfacing, signage and kerb treatments as per 4.6

Delivering the Objectives

Coherence: The Quietways will increase the mesh density of the NESB cycle routes, providing a higher quality network and facilitating local access to routes.

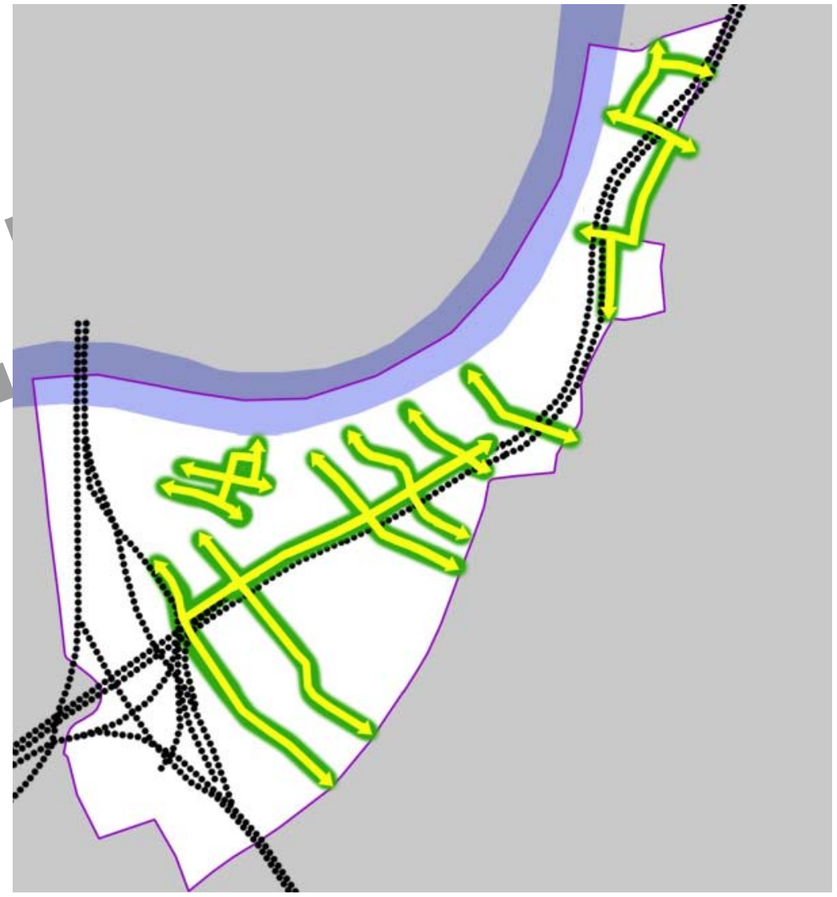
Directness: The high mesh network density provided by the Quietways will allow for direct point-to-point journeys by bicycle. Filtered permeability will ensure that this is quicker than driving.

Safety: By ensuring that traffic on the Quietways is low in volume and speed, the routes will feel safe to use.

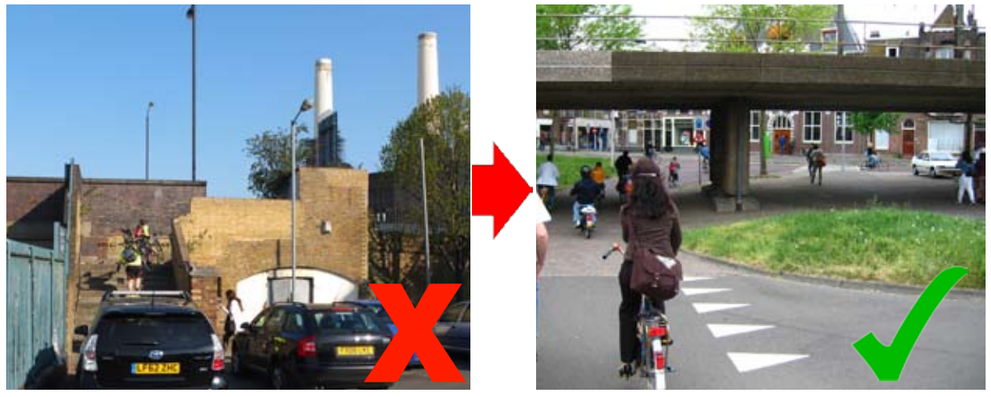
Comfort: By delivering the Quietways to a high standard, the vast majority of people in NESB will be able to use the cycle network comfortably.

Attractiveness: The Quietways should be made attractive, via a well-chosen materials palette, planting and detailing.

Adaptability: Quietways may be delivered in sections; it is essential that each section is able to contribute to a complete route and a coherent network.



Existing, proposed and potential secondary roads in NESB

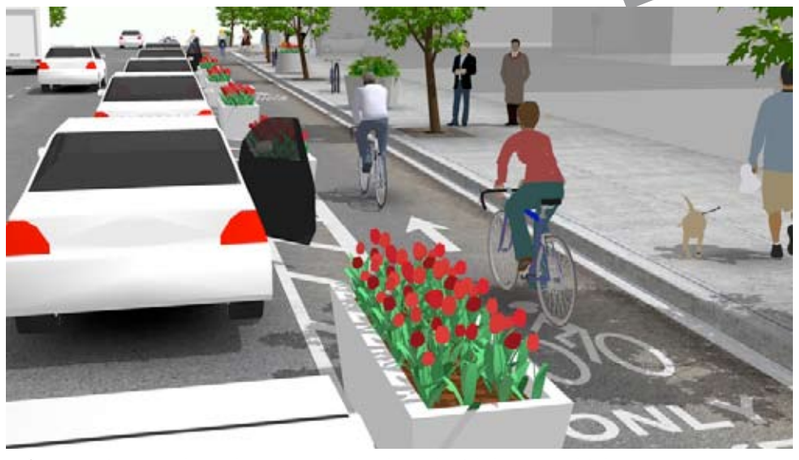


Secondary roads can terminate abruptly. Quietways will delivered as a whole route and will not give up at the difficult places.

Cycle connections on secondary roads can be obstructive. Quietways provide continuous through-routes

Filtered permeability

Filtered permeability allows cycling through-routes and is simple to implement



Segregation used on short stretches shared with heavy vehicles

Traffic calming

Raised tables reduce traffic speeds at junctions and can use attractive materials

Traffic calming incorporating parking and high quality surfacing

Safety and accessibility

Refuge lanes at junctions with main roads

Pedestrian crossing with wide island accommodates bicycles

20mph zone complements traffic calming measures

Exemptions from one way restrictions

4.5 Greenways: Off-road tracks

London's Greenway network will include off-road routes through parks and along waterways. In NESB this potentially includes the complete Thames River Path and the route through the proposed Linear Park. An exemplary pedestrian environment is not necessarily suited to cycling, and the same applies in reverse. Nonetheless, careful design can to allow both user groups to coexist.

Characteristics

- Dedicated routes for cyclists and pedestrians
- Coherent paths that are not linked to each other
- Paths contribute to cycle network density

Functions in NESB Cycle Network

- Provide local access, particularly around Battersea Power Station
- Parallel routes to much of Nine Elms Lane
- Connect NESB to Pimlico and Chelsea
- Link Thames-side parks to one another
- Potential leisure/recreation routes
- Connect secondary roads to one another

Treatment

- Delivery of off-road tracks as continuous routes, suitable both for utility and leisure cycling
- Designed to be cyclable, with no steps, sharp bends, or blind corners
- Suitable for pedestrians and cyclists - design must fully accommodate needs of both user groups
- High quality connections to all intersecting cycle routes
- Safe crossings with main and side roads
- Sufficiently wide to be useful - delineated between pedestrians and cyclists if necessary
- Surfacing, signage and kerb treatments as per 4.6

Delivering the Objectives

Coherence: These routes will contribute to the network and further increase the choice of cycle routes available, complementing parallel tracks in Nine Elms Lane.

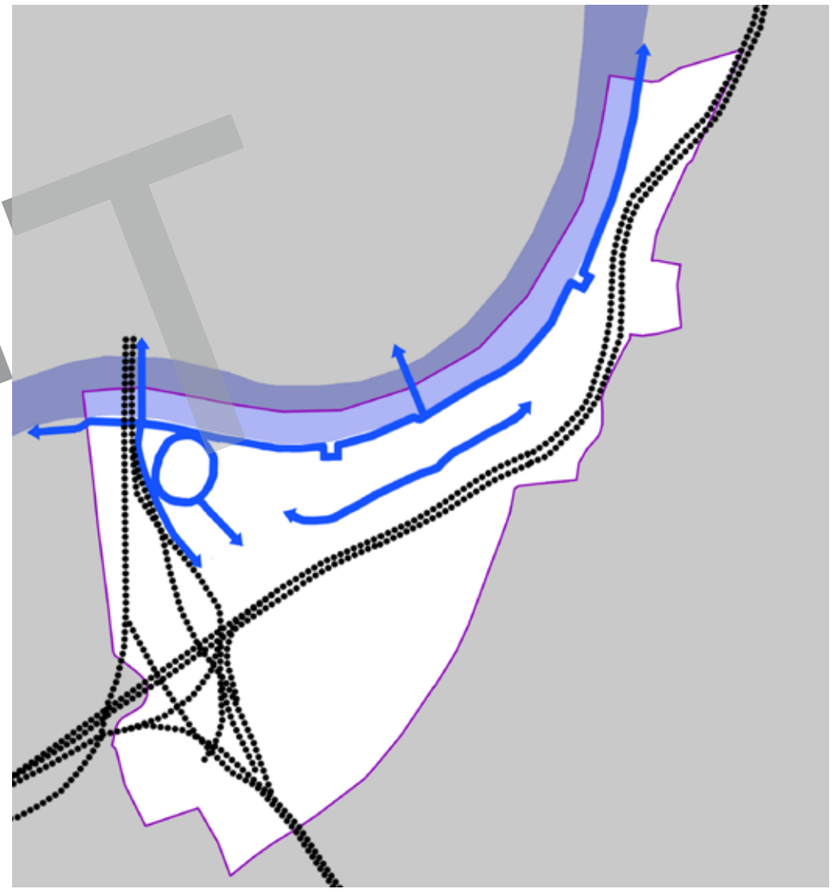
Directness: By connecting with almost all of the on-road routes, the Greenways will increase network density and reduce the need to take detours.

Safety: Being fully off-road, these routes will be subjectively and objectively extremely safe. Interactions with traffic will be few in number and high in predictability.

Comfort: The location away from road traffic and connections to the other cycle routes in NESB will make the tracks particularly comfortable to use. Good design will minimise conflicts with pedestrians.

Attractiveness: Being adjacent to water and/or parks, the routes are likely to be pleasant to use and particularly attractive to leisure cyclists.

Adaptability: The Greenways will need to accommodate a variety of users and cater both for leisure and utility cycling.



Existing, proposed and potential secondary off-road tracks in NESB

Route treatments

Wide path allows shared use without conflict

Continuous cycle route leading into a park

Successful sharing of space on the South Bank

Usability

Lighting allows the tracks to be used 24 hours a day

Light fittings should be high quality and attractive

Cycle routes cross the main roads cohesively

Continuous and connected

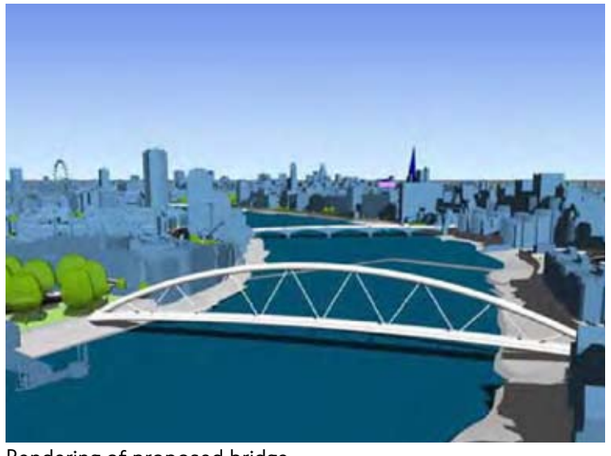
Clear connections to other foot and cycle paths

Clear connections to main roads and on-road Quietways

Continuous route with high quality surfacing.

Overcoming barriers

Pedestrian and cycle bridges overcome barriers of water and rail



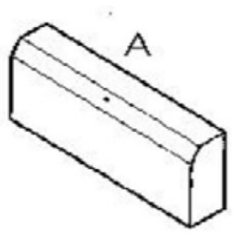
Rendering of proposed bridge

4.6 Treatments - common to all routes

Each route type has a different set of requirements for route treatments. Some of these correspond to all three. These are shown here.

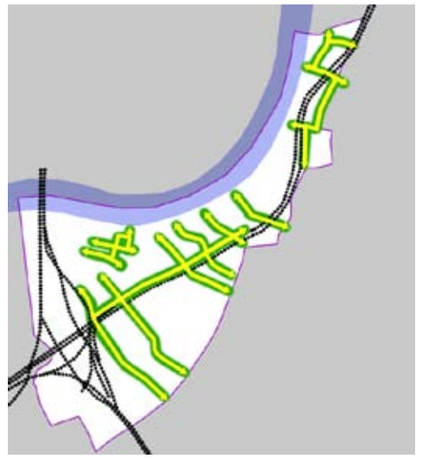
All cycle routes in the area need to be well signposted. Signs should be attractive and readable while on the move

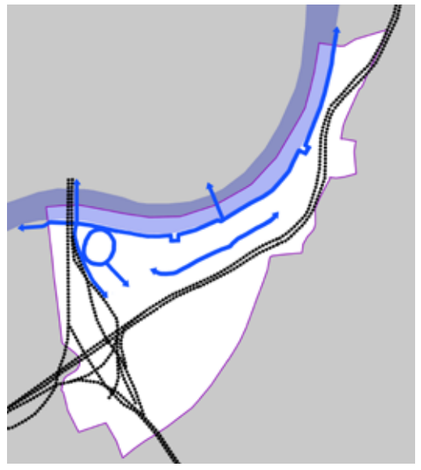
Well-lit paths enhance safety



Where kerb-segregated cycle tracks are built, chamfered 45 ° kerbs should be used. These are more forgiving than square kerbs and increase the effective width of the track. Choice of materials should depend on the location

Surfacing needs to be smooth and high quality to ensure a comfortable ride





4.7 Treatments to avoid

Lack of priority at side turnings

Abrupt, inconsistent lane treatments

Insufficient protection from HGVs

Confusing signs

Unsafe, highly obstructed off-carriageway provision

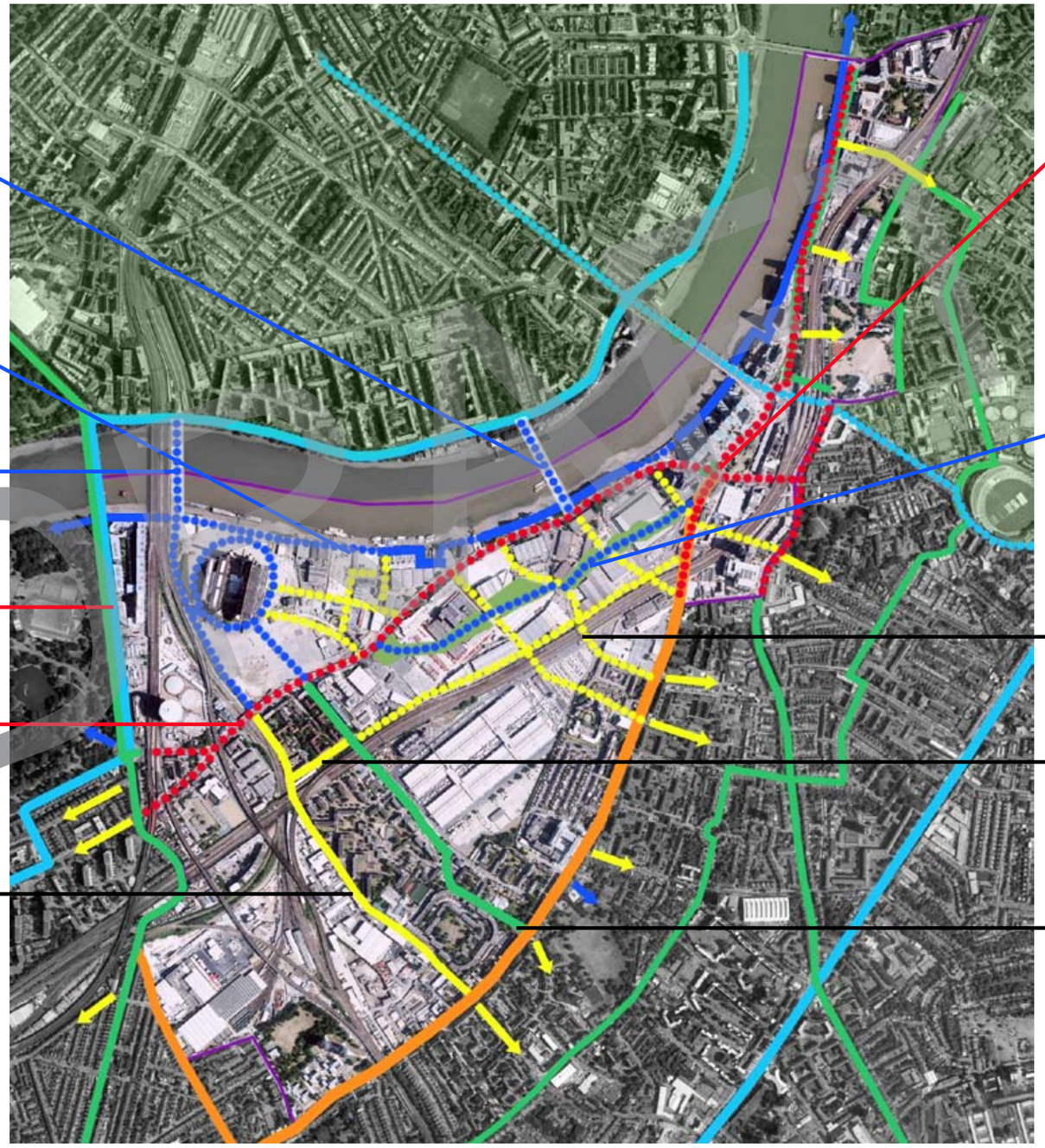
Unsafe on-carriageway provision

Infrastructure that does not cater for the needs of all cyclists

Hostile management regimes

5 5.1 The Cycle Network in NESB

This diagram provides an introduction to the NESB cycling routes. These are examined in detail in this chapter



New Thames Bridge (potential)

This needs to offer equally high quality provision for pedestrians and cyclists

Thames River Path

Needs to be continuous and well connected to surrounding paths

Grosvenor cycle bridge (potential)

This needs to offer equally high quality provision for pedestrians and cyclists

LCN5/CS8

Consistent cycle route provision required, plus rationalisation of off-carriageway provision

Nine Elms Lane A3205/LCN 37

Consistent cycle route provision required, segregated from traffic

Stewart's Road

Needs to avoid over-dominance by motor traffic and be continuous

Vauxhall Gyratory

Will need to accommodate heavy flows of cyclists, plus cycle parking requirements. Also must minimise conflicts with pedestrians and other road users

Linear Park

Any cycle route through the Linear Park must be continuous and well connected to all intersecting cycle routes

Pascal Street

Potentially very heavy pedestrian flows - user conflict must be avoided

Viaduct Road

Provides cycle link parallel to railway lines - must be safe and coherent

Thessaly Road

Needs to avoid over-dominance by motor traffic and be continuous

This strategy examines 16 interlinked routes. Each will require a slightly different approach to build a cohesive cycle network.


Chelsea - Wandsworth Road

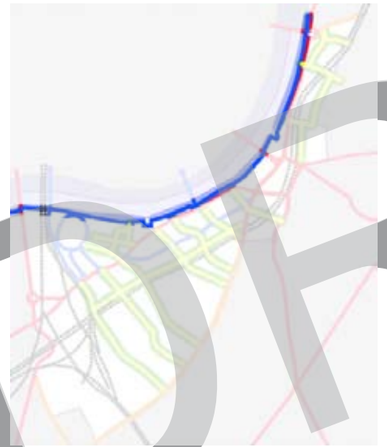

BPS - Thessaly Road

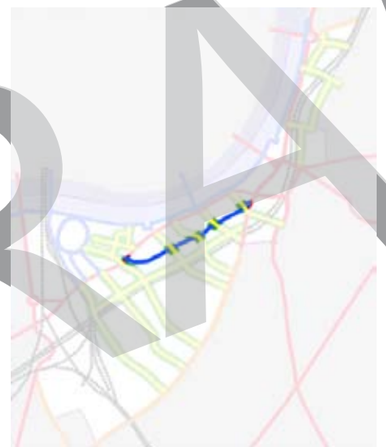

Nine Elms Pier - Wandsworth Road

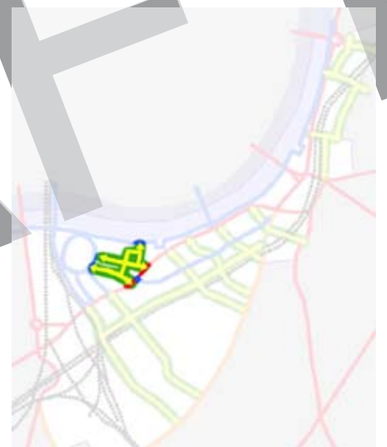

Thames Path - Nine Elms Underground


Pimlico - Wandsworth Road and South Lambeth Road


Market Towers - Miles Street


Thames Riverside Path


Linear Park


Cringle St, Kirtling St and New Road


Viaduct Route


Wandsworth Road


Nine Elms Lane


Vauxhall Gyratory


Cycle Superhighway 5


Albert Embankment


Battersea Park Road - Queenstown Road - Silverthorne Road

5.2 Route-by-Route Treatments

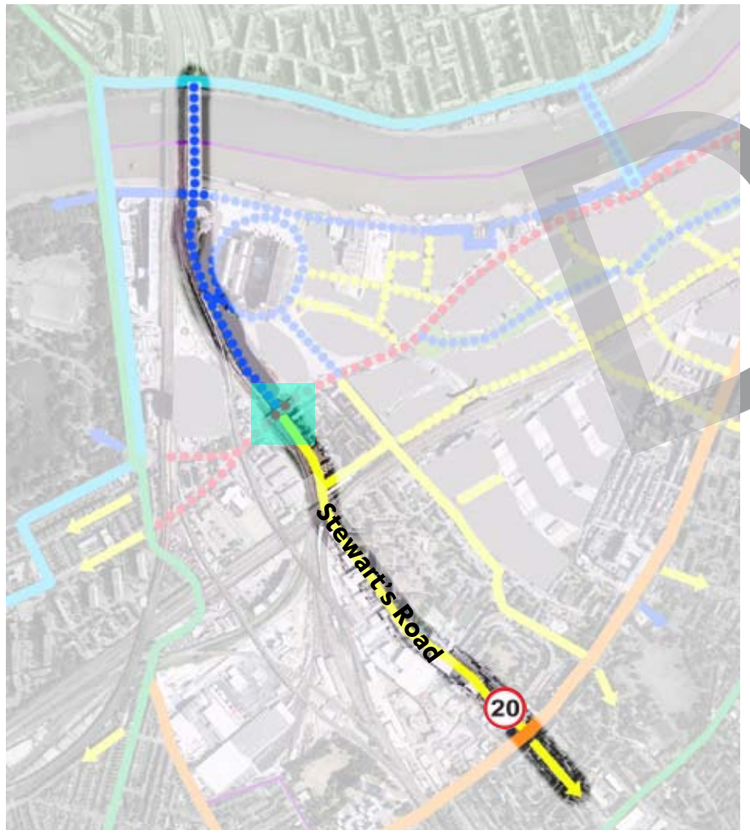
Grosvenor Bridge and Stewart's Road

Route Description

Length
1800m

Function
Direct cycle route between Chelsea and Wandsworth, providing strategic link between NESB and surrounding areas.

Route type
Combination of off-road cycle track and residential streets. Directness and connectivity would be enhanced by provision of new Thames crossing.



Requirements

- Coherent pedestrian and cycle track between Thames River Path and Battersea Park Road railway bridge
- Expansion of existing closed underpass (highlighted) beneath Battersea Park Road railway bridge to accommodate pedestrians and cyclists
- Connections to Battersea Park Road cycle tracks.
- Aesthetically pleasing traffic calming in Stewart's Road
- 20mph speed limit
- Cycle protection measures at junctions along Stewart's Road including refuge lanes and raised tables.
- Continuation of route into Pimlico, if new Thames crossing is delivered.

Street design prevents over-dominance by motor traffic

Cycle track adjacent to railway lines

Cycle path continues under road bridge

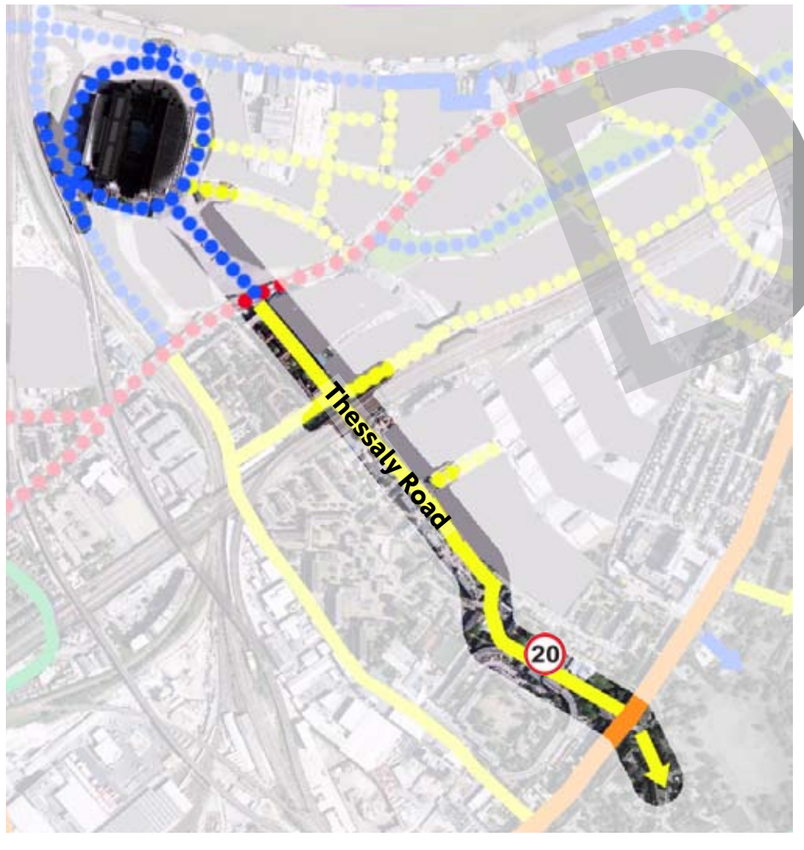
Battersea Power Station and Thessaly Road

Route Description

Length
1100m (BPS to Wandsworth Road)

Function
Link between Thames River Path, Battersea Park Road and Wandsworth Road. Local access to residences, workplaces, and schools, plus connections to wider area.

Route type
Combination of pedestrian/cycle only routes and residential streets.



Requirements

- Routes around BPS need to avoid conflicts with pedestrians.
- BPS routes must be continuous, provide local access and well connected to other cycle routes in area
- Clear, safe crossing of Battersea Park Road, with sufficient space for large numbers of cyclists
- Cycle friendly entry treatment at north end of Thessaly Road
- Traffic calming and 20mph speed limit along Thessaly Road
- Entry treatment at junction with Wandsworth Road, to indicate slow speeds and ped/cycle priority.

Improved entry treatment to Thessaly Road

Traffic-calmed street in residential area is pleasant for cycling

Nine Elms Pier - Wandsworth Road

Route Description

Length
650m

Function
Link specified in OAPF between Nine Elms Pier and Wandsworth Road. Provides local traffic access and a cycling through-route. Will need to align with proposals for Covent Garden Market Heart.

Route type
Mostly secondary roads, with limited off-road sections.

Requirements

- Cohesive through-route that uses measures such as traffic calming, safe crossings, filtered permeability and entry treatments to create a suitable cycling environment
- Seamless links with all intersecting cycle routes
- 20mph speed limit
- Route must address the height differences between north and south sides of South West Main Line.

Filtered permeability and on-carriageway cycle lanes provide a safe and attractive through-route for cyclists

Nine Elms Lane - Pascal Street

Route Description

Length
550m

Function
Connection between Thames River Path and proposed Nine Elms Underground, specified in OAPF. Local access to new developments, including US Embassy. High pedestrian footfall likely.

Route type
Mostly secondary roads, with limited off-road sections.

Requirements

- Secondary road able to accommodate high pedestrian flows between Nine Elms Underground and Nine Elms Lane
- High quality materials to reflect importance of route
- Seamless connections with Linear Park cycle path and Viaduct Route
- High capacity filtered permeability
- 20mph speed limit
- Cycle parking to be provided at Underground Station

Attractive streetscape with traffic calming

Refuge lanes at junction with main road

Filtered permeability enhances the streetscape

Pimlico to Wandsworth Road and South Lambeth Road

Route Description

Length
650m

Function
New crossing of Thames, plus onward connections to Linear Park, Viaduct Route, Wandsworth Road, Wyvil Road and South Lambeth Road. Local access to new developments, including US Embassy. High pedestrian and cycle flows expected (9,000 and 10,000 per day, respectively)

Route type
Pedestrian and cycle bridge, secondary roads.

Requirements

- Ramped access to/from bridge
- Clear, direct crossing of Nine Elms Lane
- Complete connections with all intersecting routes
- Filtered permeability at junction with Linear Park
- Sufficient space provided in on-road sections to allow space sharing with other road users
- 20mph speed limit
- Connection to cycle infrastructure in Wandsworth Road

Coherent, safe crossing at Nine Elms Lane, connections with intersecting routes and clear signage.

Thames River Path - Vauxhall Gardens

Route Description

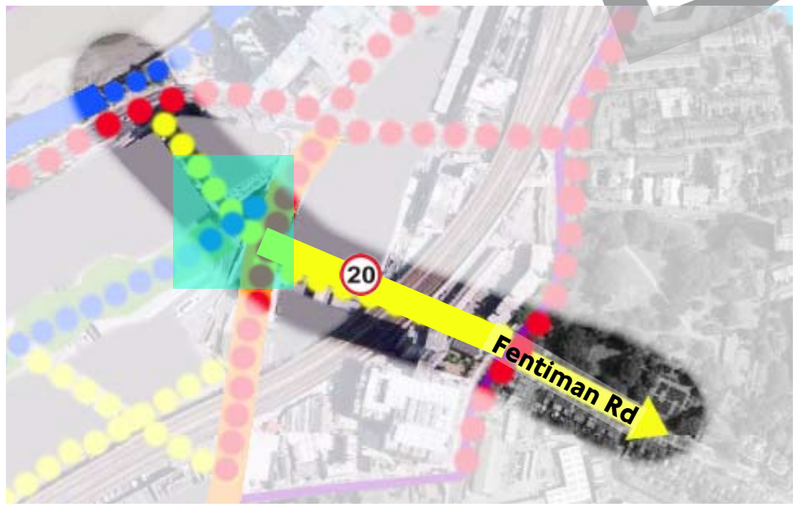
Length
450m

Function
Connector linking Thames Riverside Path, Nine Elms Lane, Miles Street, Linear Park, Wandsworth Road, Lambeth Road South and Fentiman Road. This is one of NESB's shorter routes but has wider strategic importance because of its connection to Fentiman Road, which links Vauxhall and Clapham.

Route type
Secondary roads, with frequent crossings of main roads.

Requirements

- Seamless connection with cycle infrastructure in Linear Park and Wandsworth Road - this junction (highlighted) will need to accommodate high flows of cyclists
- Filtered permeability to exclude motorised through-traffic
- Crossings with main roads provide route continuity and protection from turning traffic
- 20mph speed limit.



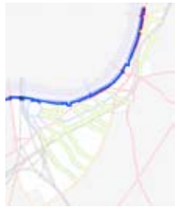
Coherent, high capacity cycle junction with Linear Park and Wandsworth Road

High quality filtered permeability

Enhanced lighting where Miles Street crosses under the South West Main Line

Thames River Path

Route Description



Length
2900m

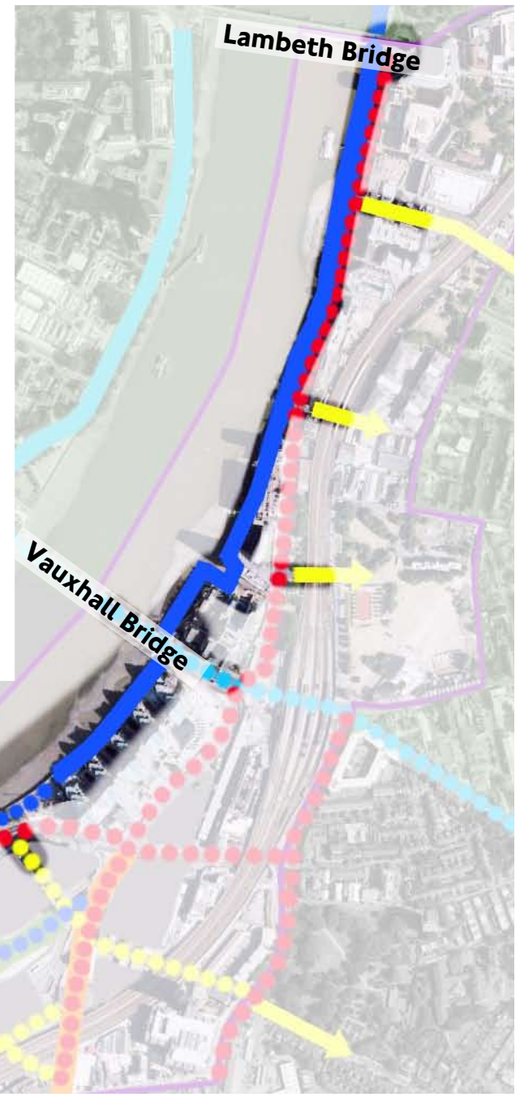
Function
Riverside route linking Battersea Park, Battersea Power Station, Vauxhall Bridge and Lambeth Bridge. Connects numerous Quietways leading into NESB and passes under Chelsea, Grosvenor, Vauxhall and Lambeth Bridges. Potential for utility and leisure uses.

Route type
Intermittent path of varying quality, delivered in stages as part of residential developments. Cycling does occur but is not currently permitted. Proposal exists for re-paving, widening and adoption by local authorities. Section between Battersea Power Station and Nine Elms Pier will not be connected until 2023, when Thames Tideway Tunnel works are complete.

Requirements

- Cycle Track Order to be applied to route
- Whole-route approach to be taken, with consistent materials and provision for walking and cycling along entire route
- Width sufficient to accommodate all users
- Materials to be high quality, attractive, and smooth
- Connections with other cycle tracks to be well detailed and designed to very high standards
- Existing obstructions and impediments to cycling (e.g. flights of steps) to be removed/mitigated
- Improved connection with Albert Embankment and Lambeth Roundabout
- Incomplete sections to be bypassed with suitably high-quality, well-signed diversions
- High standards of signage and wayfinding.

The Thames River Path has the potential to be a coherent and attractive off-road cycle route.



Cringle Street, Kirtling Street and New Road

Route Description

Length
800m total

Function
Access between Nine Elms Lane, Thames River Path, Battersea Power Station, Cemex site, civic amenity site, existing industry and other future developments. Addresses the severance of the Thames Tideway Tunnel works, providing a bypass while construction works block the Thames Riverside Path.

Cringle Street currently permits on-street car parking and is used by a particularly high proportion of HGVs.

The new road will be the main route from Battersea Power Station to Nine Elms Lane and will be used by delivery and construction vehicles, as well as residents' cars, cyclists and pedestrians.

Route type
Existing secondary roads with relatively narrow (7.5m wide) carriageways. New road dimensions unknown.

Requirements

- New road to provide safe, convenient access between Battersea Power Station and Nine Elms Lane - separation of road users may be beneficial here
- High quality connection between Thames River Path and Nine Elms Lane
- Continuous, protected links to Nine Elms Lane cycle tracks
- Surface treatment in north east corner of Kirtling Street to emphasise connection to Thames path via choice of materials
- Kirtling Street to use traffic calming and smooth surfacing, with possibility of restrictions to through-traffic
- 20mph speed limits.

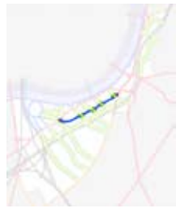
Segregated cycle lanes in new road

Traffic calming and filtered permeability to be used in Kirtling Street

Coherent connection with Cycle Tracks in Nine Elms Lane

Linear Park

Route Description



Length
900m

Function
Pedestrian and cycle route through new park. Links Greenways together and connects Nine Elms Lane to Wandsworth Road. Clean-sheet approach allows route to be built to a consistently high standard. Delivery of the Linear Park requires continued cooperation on the part of all developers - it cannot open until all adjacent developments have been completed.

Route type
Off-road track.

Requirements

- High quality connections to all adjoining cycle routes, particularly where Linear Park meets Wandsworth Road
- Must be designed to provide for utility and leisure trips
- The path must provide a direct route through the Linear Park and be unimpeded and continuous
- Filtered permeability to reduce number of secondary roads crossing Linear Park, minimising encounters with crossing traffic and reducing accident risk (perceived and actual)
- Path to be well-lit and open 24 hours a day.

The Linear Park provides green space and local access to surrounding developments

The park's width varies, with a maximum of 50m.

This route has significant potential for leisure use, as well as providing local access

Viaduct Cycle Route

Route Description

Length
950m

Function
Running parallel to the South West Main Line is a series of secondary roads that provide access to many of the developments to the south of the Linear Park. If linked together, this could form a continuous pedestrian and cycle route. This would connect the Quietways together and provide a link between Stewart's Road and Wandsworth Road. Motor traffic would be access-only and limited to residents.

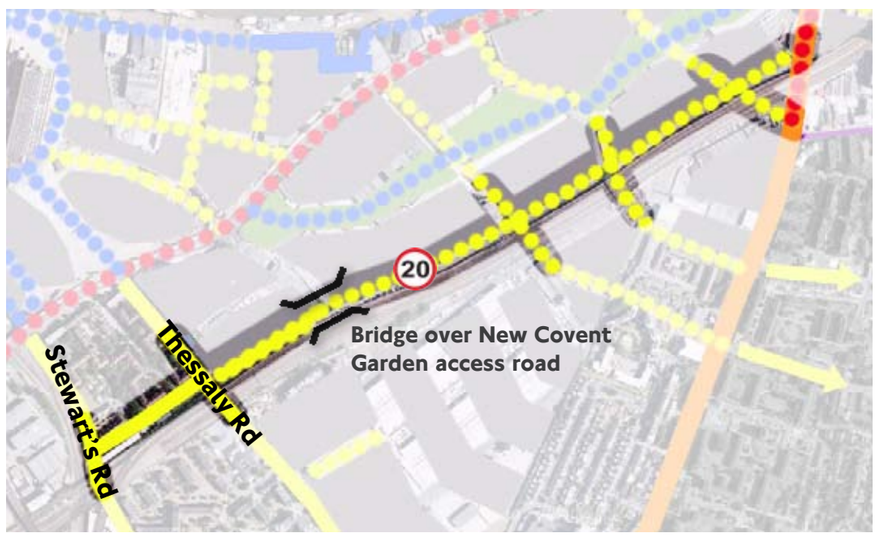
Route type
Secondary roads, with possible short sections of off-road track.

Requirements

- Whole-route treatment, with smooth, high quality surfacing
- Coherent, direct connections with perpendicular Quietways
- Height changes (e.g. bridge over New Covent Garden access road) to be accomplished using gentle (<5%) gradients
- High capacity cycle route junction with Wandsworth Road
- Clear, continuous sightlines; dog-legs to be avoided
- Filtered permeability and traffic calming. 20mph speed limit on sections shared with motor traffic
- Interactions with motor traffic need to be clear and safe to negotiate, with priority for cyclists and pedestrians
- Connections provided to adjacent developments
- Junction designs should allow unimpeded cycling unless absolutely necessary
- Clear wayfinding will be needed; this is particularly important owing to the many connections and side-turnings
- This route will need to be well-lit and well-maintained in order to function as part of a cycle network, as opposed to feeling like a service alley
- Railway arches to be developed for businesses that will benefit from bicycle accessibility and through-traffic.

High quality surfacing provides a smooth ride

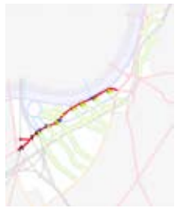
Route is traffic-calmed and has priority over side roads at junctions



Shops in railway arches along busy routes benefit from passing trade

Battersea Park Road/Nine Elms Lane (A3205)

Route Description



Length
1800m

Function
Arterial route. This is the only A-road to be contained entirely within NESB and its most direct route. It functions as a spine to the OA and to the NESB cycle network, linking in with surrounding areas. It is one of the busiest roads in NESB with a high proportion (14%) of HGVs. Will be substantially rebuilt as a part of the OAPF, transforming the quality of place.

Route type
TLRN A-road, generally with two traffic lanes and two bus lanes, with some variation at junctions.

Requirements

- Minimisation of conflict with motor traffic
- Continuous, fully segregated cycle tracks along entire route
- Consistent, high quality materials used throughout
- Cycle tracks continuous through junctions
- Cycle track unimpeded by bus stops
- Seamless connections to intersecting routes
- Continuation of road's overall ability to accommodate buses.

Draft plan for full-length segregated cycle tracks along Nine Elms Lane (Burns + Nice)

High quality materials and tree planting make for an attractive avenue

Vauxhall Gyratory

Route Description

Length
850m circumference, plus internal roads

Function
Gyratory system. Convergence point of six main roads. Southernmost boundary of the London Congestion Charge zone and a strategically important node on the Inner Ring Road. Also provides access to London Underground, National Rail and bus stations.

Major convergent point for local and city-wide cycle routes, despite low quality of existing infrastructure. Cycle Superhighway 5 is due to pass through the northern area of the gyratory. LB Lambeth is seeking to convert Vauxhall Gyratory to two way working.

Route type
TLRN One-way main road, with between four and six traffic and bus lanes. Multiple connections with other main roads.

Requirements

- Complete system of protected high-capacity cycle tracks that are able to accommodate large flows of cyclists and connect seamlessly to all adjoining routes
- Cycle tracks must be separate from carriageways, protected from bus stops and coherent throughout
- Cycle tracks must be as quick as cycling in the carriageway, while being safer and more pleasant to use
- Minimum impediments to cycle flows through area; routes are continuous
- Sufficient width of cycle tracks, to allow for anticipated flows
- Cycle Hub at station to facilitate modal interchange.

Continuous high-quality segregated two-way cycle tracks, protected from multi-lane arterial road. Vauxhall Gyratory may require wider lanes than these.

Cycle hub facilitates multi-modal transport

Wandsworth Road (A3036)

Route Description

Length
2300m

Function
Wandsworth Road connects Clapham with Vauxhall and marks the southern boundary of NESB. It is a major high street in the area and is served by six bus routes, plus the proposed Northern Line extension. Connects to most Quietways, plus Linear Park. Managed by LB Lambeth.

The northernmost section of Wandsworth Road (highlighted) is the only direct link between the Viaduct Route, the Linear Park and Vauxhall Gyratory.

Route type
Main road, with many side turnings and crossings.

Requirements

- Highlighted section to have high capacity segregated cycle tracks to connect Vauxhall Gyratory with Linear Park, Viaduct Road and Wandsworth Road
- Segregated cycle tracks at northern end of Wandsworth Road to feed into segregated cycle tracks at Vauxhall Gyratory and connect to onward routes
- Elsewhere in Wandsworth Road, junctions with Quietways will need to provide adequately for cycle movements and be coherent and safe.
- Light segregation and separation of cycle and motor vehicle traffic would add a great deal of coherence to the route and make it more pleasant to use.

Cycle tracks to be located adjacent to northernmost stretch of Wandsworth Road, connecting Viaduct Cycle Route and Linear Park to Vauxhall Gyratory.

Floating/bypass bus stop ensures cycle route continuity and is more comfortable than overtaking buses in main carriageway

Albert Embankment

Route Description

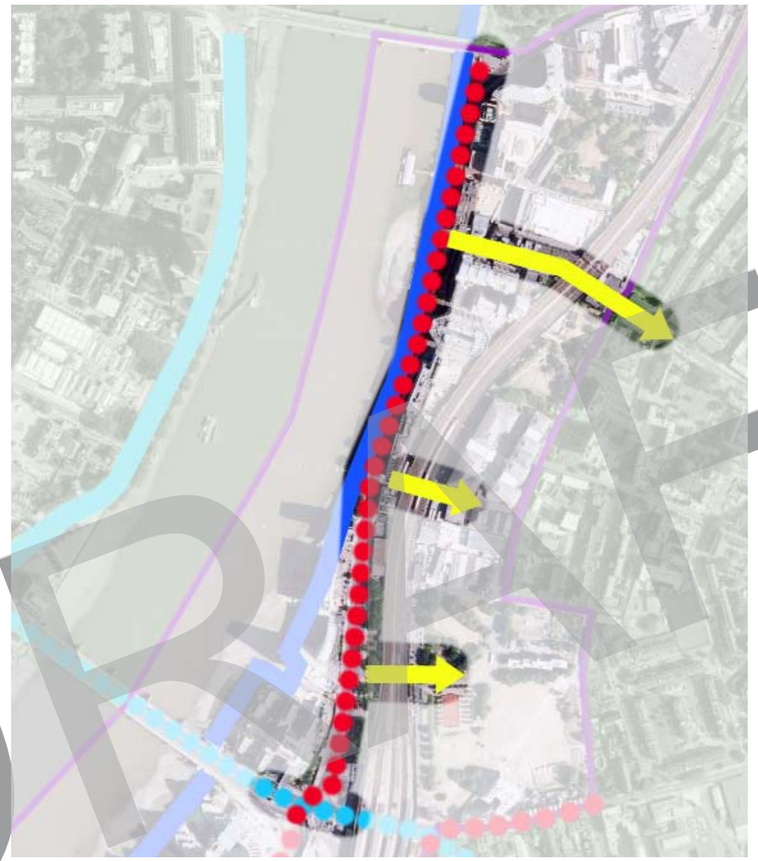
Length
900m

Function
Connector between Lambeth Roundabout and Vauxhall Gyratory. Major bus route, with bus lane provision along much of the road. Potential for some rebuilding at southern end, as part of redevelopment of river-side buildings.

Route type
A-road, managed by LB Lambeth.

Requirements

- Connection to segregated cycle tracks around Lambeth Roundabout
- Connection to segregated cycle tracks at Vauxhall Gyratory
- Links to Thames Riverside Path to be improved
- Design proposal should explore how best to protect cyclists from motor traffic along route.



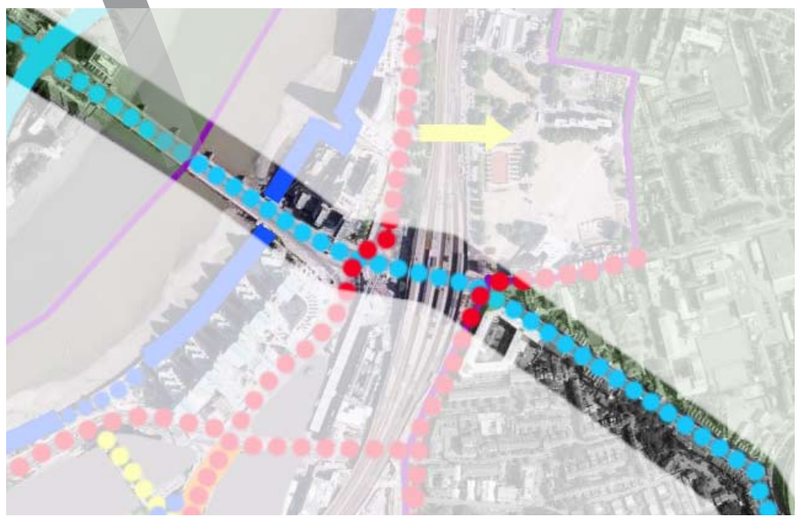
Kerb provides protection from HGVs at junctions

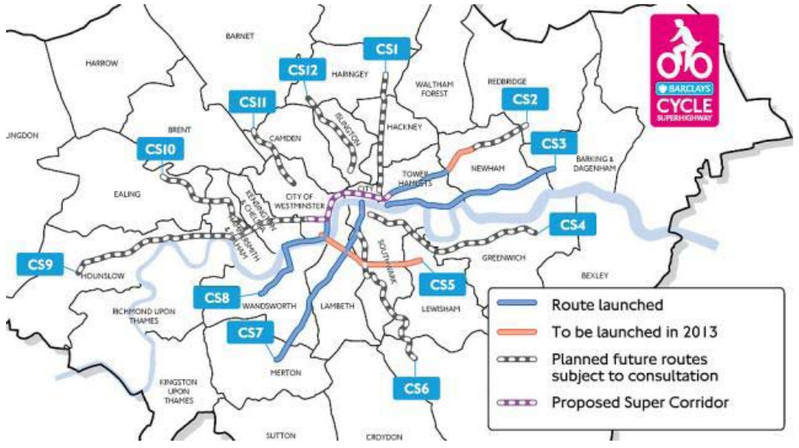
Continuous route, with coherent links to side roads

A202/CS5 (proposed)

This route links Westminster to New Cross Gate and the A2, via Camberwell and Peckham. CS5 is proposed for completion by late 2013. The existing proposal sees a two-way segregated cycle track on the northern edge of Vauxhall Gyratory, linking Vauxhall Bridge and Kennington Road.

CS5 must link in coherently with all future cycle routes in NESB, to ensure that it contributes fully to the network.

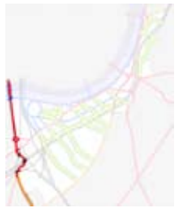




CS5 will contribute to London's network of Barclays Cycle Superhighways

Queenstown Road/Chelsea Bridge Road (A3216) and Silverthorne Road

Route Description



Length
1900m

Function
This forms the western boundary of NESB, connecting Wandsworth Road and Battersea Park Road with Chelsea Bridge. It has two cycle route designations (LCN and BCS) and very high levels of cycle traffic in am peak, particularly over Chelsea Bridge

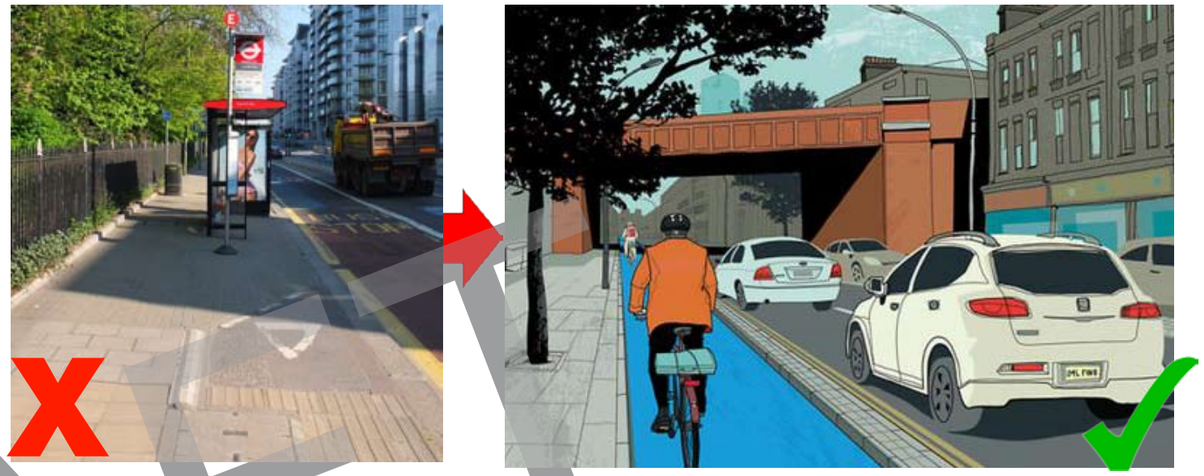
Route type
Combination of A and B roads, with varying levels of cycle provision. The A roads on this route are TLRN.

Requirements

Chelsea Bridge Road
- Replacement of inconsistent cycle lanes north of Queen's Circus with a high quality tracks.
- Separation of cycle routes and bus stops
- Segregated cycle lanes around Queens Circus.

Queenstown Road
- Improvement of cycling environment between Queen's Circus and Silverthorne Road, within constraints of level changes, railway bridge abutments and tight corners.
- 20 mph limit and surface treatments to be explored.

Silverthorne Road
- Improved signage
- Redesign of carriageway to provide more attractive surface while maintaining low speeds for vehicles.



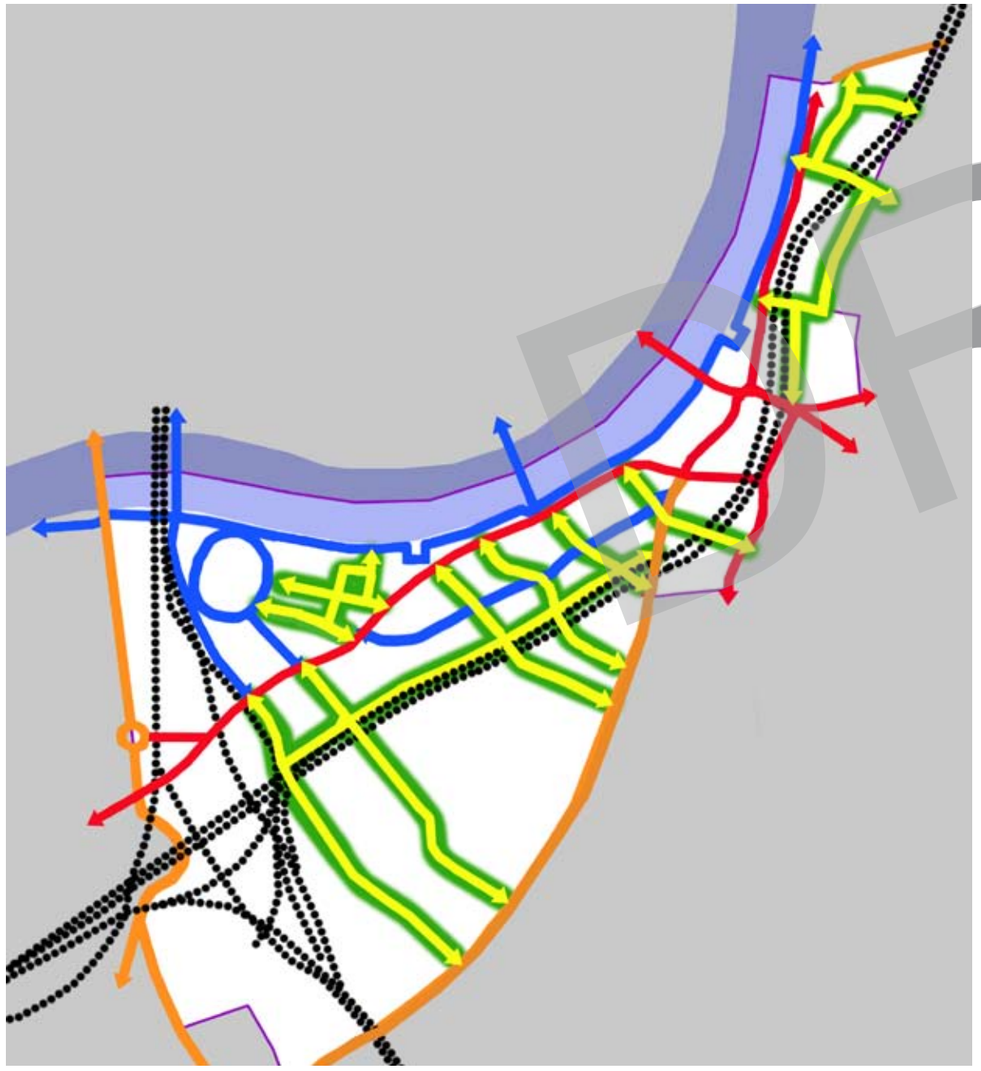
Existing inconsistent cycle lanes replaced by continuous segregated tracks

Segregated cycle tracks around Queen's Circus

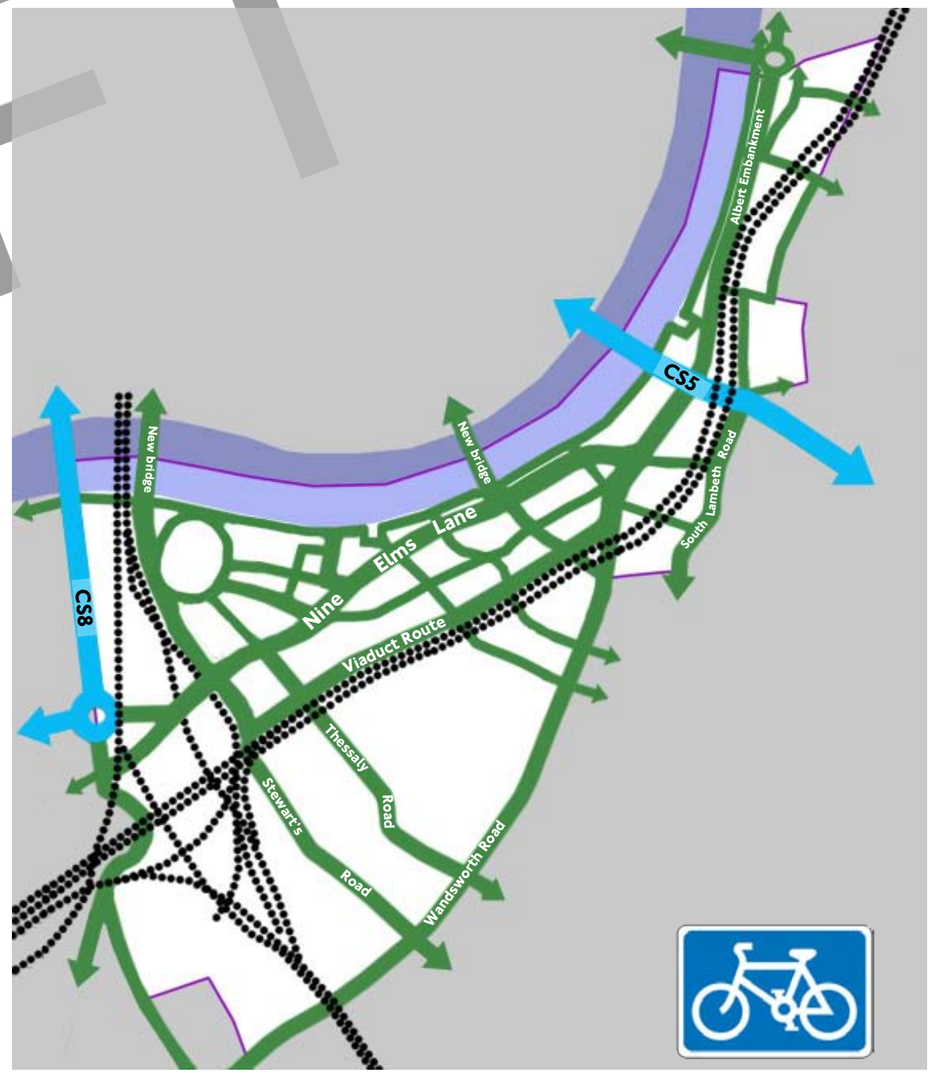
5.3 Complete Network

The completion of the routes described in this document will result in the delivery of a complete, area-wide cycle network.

The success of this network will depend on the cohesion of the routes and the quality of the connections between them. It must be considered as a single entity, worth more than the sum of its component parts. Consistent input will be required to ensure that the network is delivered to a suitably high standard.



Complete cycle network built from different route types in NESB



The routes fulfil a variety of functions; all are equally accessible by bicycle

6 Summary and Conclusion

Summary: delivering the sub-aims

The overall aim of this development-based cycling strategy is to develop a cycle network that provides access to all areas of Nine Elms on the South Bank and is accessible to anyone. This is manifested in a number of sub-aims which are taken from the Mayor's Vision for Cycling. They will be addressed as follows:

1) Better cycle routes along main roads, to be delivered to international standards of best practice
These will be continuous, safe, and suitable for all types of cyclists, connecting to secondary roads and off-road tracks and providing direct cycle routes through NESB.

2) A network of high quality Quietways on low traffic back routes
These roads will make up the majority of the NESB cycle route network. They will provide complementary routes to the main roads and also facilitate local access.

3) New off-road Greenway routes through parks and along waterways
By providing this extra set of links in NESB, the route network density will be further increased. As well as displaying the directness and coherence of the other route types, these have the potential to be particularly attractive to new users.

4) Routes to link together and be easy to understand
Connectivity has, throughout this document, been emphasised as a necessity for the cycle network. Logical routes, clear wayfinding and minimisation of obstacles will ensure that the cycle links in NESB are able to function as a complete network.

5) Many more people cycling for everyday transport in NESB
By providing a coherent, direct and safe cycle network, cycling will become much more accessible as a means of transport in NESB. The cycling environment will appeal to existing cyclists and, crucially, to the much larger number of potential cyclists. This will greatly increase the number of journeys in NESB that can be made by bicycle.

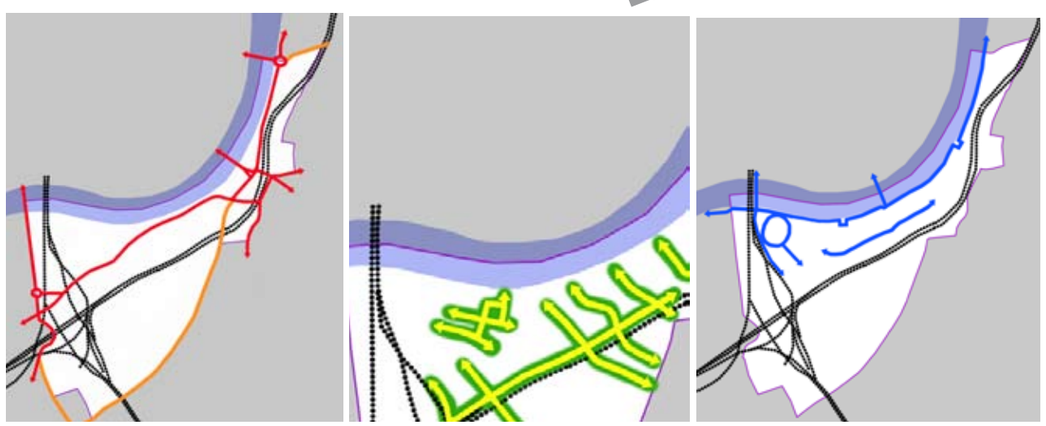
6) Widespread recognition of NESB as an exemplary cycling environment
The recommendations contained herein are based upon well-established design principles and underlying research. If followed, they will deliver a cycling environment of exceptionally high quality.

Conclusion

This document has set out the aim for Nine Elms on the South Bank to be transformed into an area of London where cycling can have an unprecedentedly high mode share. This requires the development of a cohesive network of direct cycle routes that are comfortable for all people to use and link into wider networks beyond the NESB boundary.

Route treatments have been informed by the Mayor of London's Cycling Vision, the London Cycling Design Standards, the Dutch Design Manual for Bicycle Traffic and existing research into the characteristics of successful cycling environments.

The routes recommended in the strategy are useful point-to-point links; however, their utility will be limited if they are constructed in isolation, or to varying degrees of quality. The development of NESB as an exemplary cycling environment is a once-in-a-generation opportunity to achieve a step-change in the quality of life in this new area of London.



Phasing and Delivery

This strategy is about embedding cycling provision in an area that is being transformed. This will take many years to complete and it is recognised that the detailed implementation of various parts of the proposed network will need to be clearly linked to development phases. High quality cycle routes will need to be connected to developments as soon as they are complete.

The delivery of the strategy will need to tie in with construction phases and upcoming developments and recognise the importance of utility provision in the area. There may be an opportunity to provide utility upgrades and cycle route improvements as part of the same workstream. Similarly, disruption to the cycle network in the event of utilities being replaced/upgraded must be avoided and routes must be maintained.

Construction traffic will need to be carefully managed in relation to the cycle provision and use in the area. This aspect will quite rightfully be considered in detail in a separate document. Nine Elms Lane and its cycle tracks will only be fully delivered when all the schemes along the route are complete. There will, however be an interim condition will some parts are implemented and others not. The detail of cycle provision on such a key route will need to be carefully considered in order to avoid creating points of conflict and ensure that the cycling environment is delivered to a consistently high standard.

Transport for London