

### 3. Borough Context

#### 3.1 Geography

Greenwich lies in South East London, and forms part of the Thames Gateway. Although classed as an Inner London borough it also displays many characteristics of an Outer London borough. Housing comprises the largest land use within Greenwich, covering approximately 35% of the total area.

The Borough is bounded to the north by the River Thames, to the east by the London Borough of Bexley, to the south by the London Borough of Bromley and to the west by the London Borough of Lewisham. The Borough has a land area of 5,044 hectares and is the twelfth largest Borough in London.

**Figure 3.1: London Boroughs**



##### 3.1.1 Topography

The physical structure of the London Borough of Greenwich is marked by a 13 kilometre frontage to the River Thames (from Deptford to Thamesmead), the former marshy river flood plain, the steep slope of the river cliff escarpment that rises to a plateau stretching from Blackheath to Plumstead and Bostall Heath. This plateau in turn rises to Shooters Hill, the highest point in the Borough (at 129 metres). To the south and west the land slopes away to the Ravensbourne and its tributaries before rising again to the southern boundary. The Ravensbourne marks the Borough's western edge and joins the Thames at Deptford Creek.

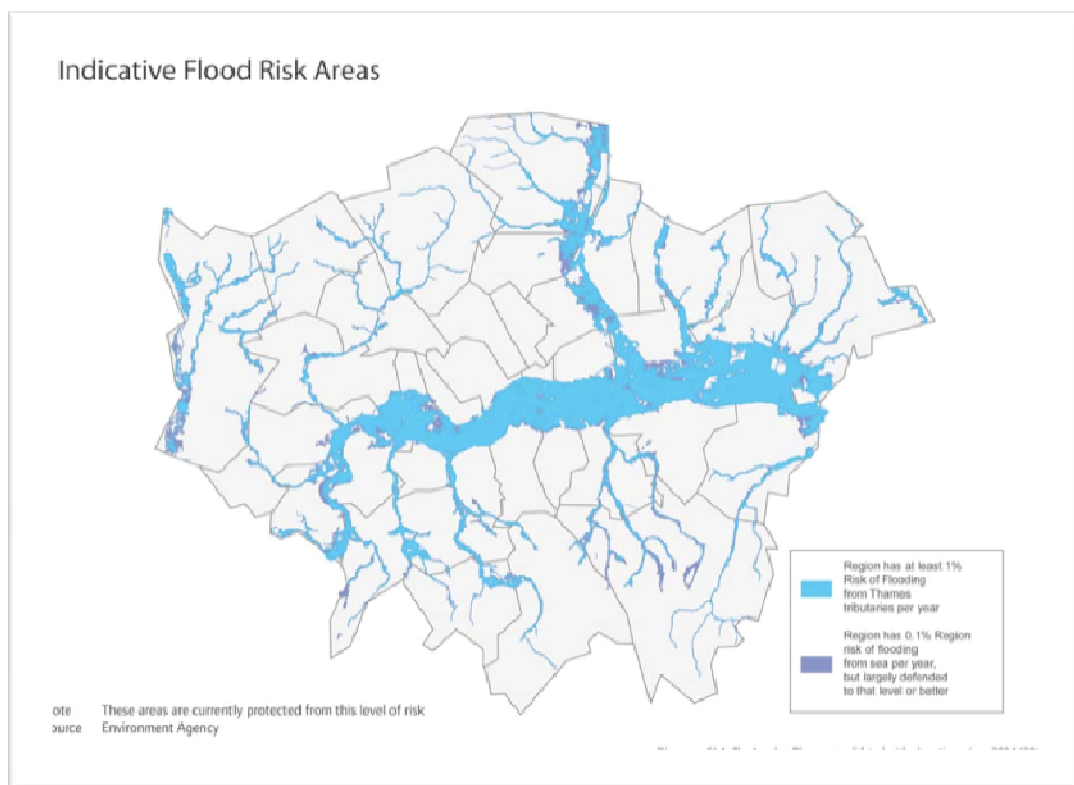
On this basic structure an ecological heritage has developed, reflected in different landscapes. One of the most important features is in the east of the Borough, Oxleas Wood, ancient woodland of great ecological merit and significance. The Borough is also rich in other woods and commons and almost a quarter of its area is classified as open space.

### 3.1.2 Flood Risk

Due to its river frontage, areas of flood plain and low-lying land, the Borough has areas of land categorised as being at risk of flood (see figure 3.2). Managing flood risk in London cuts across the responsibilities of many organisations. Whilst the Environment Agency has the lead responsibility, the Flood and Water Management Act (2010) now places a duty on local authorities to manage responses to local flood risk.

Flood risk is recognised as an important consideration for all developments. It is referred to in relation to several of the Opportunity Areas where there is known to be a particular threat. Flood risk has been an important constraint in identifying capacity for housing in London through the Strategic Housing Land Availability Assessment (SHLAA) and Housing Capacity Study; with capacity reduced depending upon the severity of the risk and no sites used within the functional flood plain (zone 3b) or greenfield zone 3a sites were identified as having housing capacity.

**Figure 3.2: Flood Risk**



Climate change is projected to increase the frequency and intensity of heavy rainfall events, whilst London's growth will mean that more people and assets will be at risk. It is estimated

by London Councils that a 1 in 50 year rainfall (or 2% annual chance) event today would flood 1 in 7 buildings in London.

In north east and south east London there are large areas of derelict or under used land within the Thames Gateway area. These areas have mostly been in industrial use, many of which have now ceased or are declining but these areas now make up some of the major opportunities for London to accommodate its own growth pressures. Being alongside the river it is to be expected that many of these areas will have an associated element of flood risk. Despite their derelict, underused or industrial nature these areas are also protected from flooding to a high standard.<sup>1</sup>

### **3.2 Air Quality**

Greenwich has been at the forefront of air pollution control for many years and is committed to improving air quality. This has led to the Borough becoming one of only four Beacon Authorities for air quality in the country.

The Council:

- Was the first local authority in the country to declare a Low Emission Zone (LEZ), implemented on the Greenwich Peninsula in 2004.
- Is introducing on street charging points to encourage electric vehicles that produce no tailpipe emissions.
- Has an extensive network of monitoring sites across the Borough, measuring various pollutants.

A major air quality problem today is no longer caused by factory pollution, but by vehicle emissions. This means that the Council now concentrates on pollution monitoring and air quality improvement programmes and measures that:

- control vehicle emissions at the source
- minimise vehicle use
- encourage the uptake of cleaner fuels and vehicles

### **3.3 Town Centres**

The Borough's main town centres are Woolwich, Eltham and Greenwich. Woolwich and Eltham are designated Major Centres and the Borough's largest and second shopping and office employment areas respectively. Greenwich, a district centre, is a vital asset in terms of heritage and tourism to the borough, London wide. The Borough will be a key location for the 2012 Olympic and Paralympic Games.

---

<sup>1</sup> <http://static.london.gov.uk/mayor/strategies/sds/docs/regional-flood-risk09.rtf>

**Woolwich** is a key historic town and designated a Major Centre in the Mayor's draft London Plan and has experienced significant development and investment. It has the potential for continued residential, commercial and retail growth over the next decade. Interest in the area has been revived by the regeneration of the historic Woolwich Arsenal and the extension of the Docklands Light Railway to the area. While these changes have dramatically improved Woolwich, it is constrained to the north by the River Thames and access to the Royal Arsenal, Riverside Walk and Riverside Park is hampered by the busy A206. However, Woolwich has grown in importance as a transport hub and offers greater regenerative potential with the proposed arrival of Crossrail in 2018. The draft London Plan indicates that Woolwich will remain an Opportunity Area with potential for future classification to Metropolitan Centre within the Plan period.

**Eltham** (also designated a Major Centre) is a significant, employment and retail centre, with Eltham Palace, the Tudor Barn and Well Hall Pleasaunce also placing the town as a key tourist attraction. However, its modest size makes it vulnerable to competition from larger centres outside the Borough. Bluewater shopping centre and the more successful town centre at Bromley have impacted on the area's ability to thrive. Proposals are currently in place for the local Primary Care Trust to build a new community hospital in the heart of the town centre, however in order to take full advantage of the opportunities such as this Eltham's transport links must be improved. Therefore, continued investment is required to address the challenges the area faces.

**Greenwich** (East and West) are recognised as the most significant of the Borough's District Centres, being a visitor destination of international status. Part of the town centre falls within the inscribed Greenwich Maritime World Heritage Site, with most of the remainder of the town centre area falling within either the West Greenwich or Greenwich Park Conservation Areas. The historic Greenwich Market and a wide range of additional visitor facilities further complement the architectural and cultural attractions.

In addition to the three main town centres other designated District Centres include **Plumstead, Thamesmead, North Greenwich, Lee Green and Blackheath**<sup>2</sup>.

Although not categorised by the Mayor, **Charlton** is an area with a significant population concentration and retail provision, as well as the potential for new development.

### **3.4 Borough Demographics**

#### **3.4.1 People**

By 2027 the population of the Borough is expected to have grown to 288,000, an increase of approximately 53,000 or 22.6% since 2010. Accommodating this high level of population growth in the Borough is a significant challenge.

The Borough has a relatively young population with over 42% of the Borough's residents aged less than 29 years. This is a higher proportion than both Greater London (40.9%) and England (37.5%). A 4% projected decline in the proportion of residents in the Borough aged 20-40 between 2006 and 2025 is forecast. Conversely, in the same period, there is a 5%

---

<sup>2</sup> Mayor's Consultation Draft Replacement London Plan (2009)



projected increase in the proportion of 40-60 year olds<sup>3</sup>. The Borough's population comprises a rich mix of ethnicity, culture and language. In 2006 its make up was 70.9% White, 16.6% Black, 8.7% Asian, 1.5% Chinese and 2.3% other. By 2026 ethnic projections for Greenwich Borough are 60% White, 23.6% Black, 11.1% Asian, 2.1% Chinese and 3.0 % other<sup>4</sup>.

### 3.4.2 Deprivation

The Borough of Greenwich has high levels of deprivation and ranks nationally as the 24<sup>th</sup> most deprived local authority, 17 places lower (i.e. more deprived) than the previous 2004 data where the Borough was ranked 41<sup>st</sup>.

**Table 3.1: London Boroughs Indices of Multiple Deprivation National Ranking<sup>5</sup>**

Borough	National Rank	Change
Hackney	2	-3 ▲
Tower Hamlets	3	-1 ▲
Newham	6	-5 ▲
Islington	8	2 ▼
Haringey	18	5 ▼
Lambeth	19	-4 ▲
Barking and Dagenham	22	-20 ▲
Greenwich	24	-17 ▲
Southwark	26	9 ▼
Waltham Forest	27	-20 ▲
Lewisham	39	-18 ▲
Brent	53	-28 ▲
Camden	57	38 ▼
Hammersmith and Fulham	59	-6 ▲
Westminster	72	33 ▼
Enfield	74	-30 ▲
Ealing	84	-15 ▲
Kensington and Chelsea	101	-15 ▲
Hounslow	105	3 ▼
Croydon	125	-15 ▲
Barnet	128	-65 ▲
Redbridge	143	-20 ▲
Wandsworth	144	16 ▼
Hillingdon	157	-9 ▲
Bexley	194	-18 ▲
Havering	200	-14 ▲
Harrow	205	-27 ▲
Merton	222	2 ▼
Bromley	228	-10 ▲
Sutton	234	-2 ▲
Kingston upon Thames	245	-21 ▲
City of London	252	26 ▼
Richmond upon Thames	309	8 ▼

Note: Triangle shows borough's 'direction of travel'. Green shows an improvement, red a worsening in the national ranking

<sup>3</sup> ONS 2007

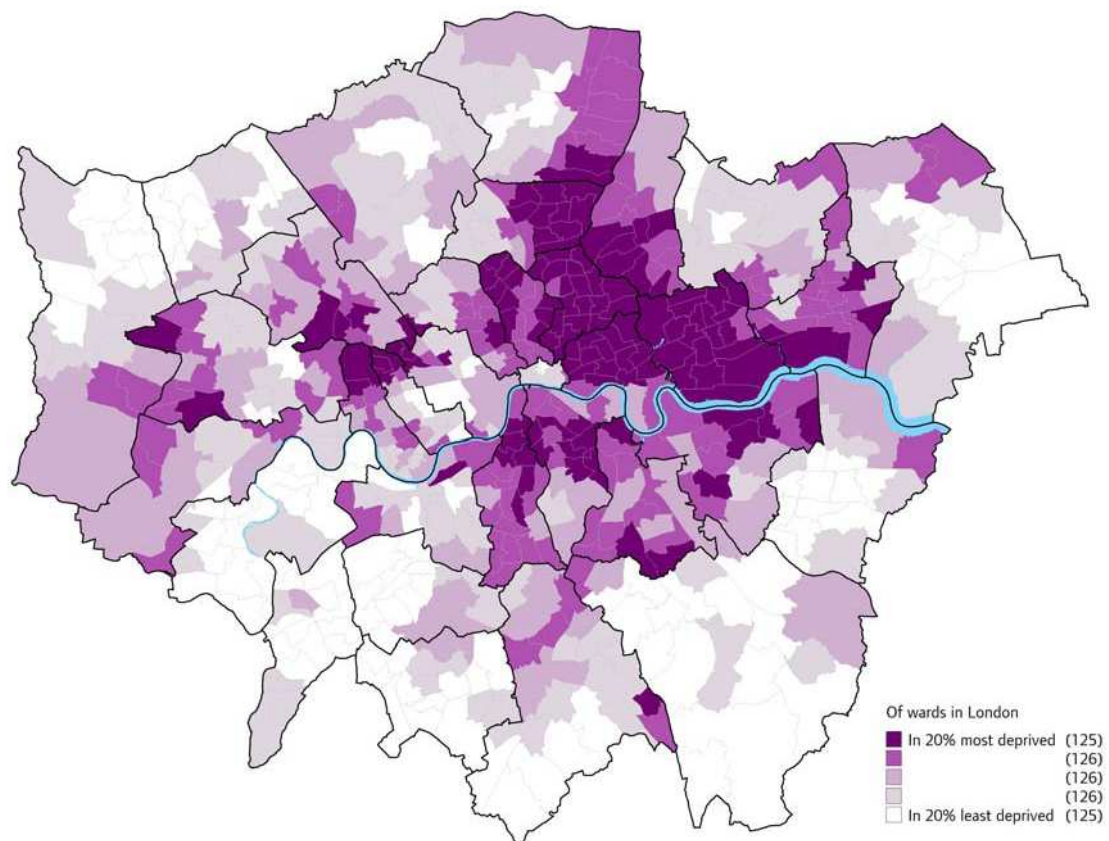
<sup>4</sup> GLA Ethnic Group Population Projections 2006

<sup>5</sup> Government Office for London Corporate Information & Analysis Team DMAG Briefing 2008-22 (May 2008)

There is considerable variation within the Borough, which contains both relatively prosperous and less well-off areas. To a large extent, the distribution of residents from black and minority ethnic (BME) backgrounds (who constitute around 29% of the borough's residents) follows the distribution of disadvantage, with the highest percentages of BME residents all in the north of the borough, in Woolwich Common (41.3%), Woolwich Riverside (35.6%), Glyndon (38%) and Plumstead (34.9%), although it should be pointed out that this is far from unique to Greenwich<sup>6</sup>.

In addition, some of the more prosperous areas themselves, which are located predominantly in the south of the borough, contain pockets of deprivation. Such areas of deprivation suffer from a combination of economic and social problems.

**Figure 3.3: London Wide Indices of Multiple Deprivation (by ward)<sup>7</sup>**



The emerging Core Strategy identifies significant development and employment opportunities along the Waterfront particularly on the Greenwich Peninsula, Charlton Riverside and around Woolwich and the redevelopment at Kidbrooke.

<sup>6</sup> <http://www.londonpovertyprofile.org.uk/indicators/boroughs/greenwich/>

<sup>7</sup> Department for Communities and Local Government, Indices of Deprivation 2007

### **3.4.3 Education and Young People**

Within the Borough there are 67 primary schools and 15 secondary schools run by the Council. There are also a number of independent and voluntary schools, (administered in most cases either by the Church of England or the Roman Catholic Church).

The main providers of higher and further education in the Borough are Greenwich University, Trinity College of Music based at the Old Royal Naval College in Greenwich, Ravensbourne College on Greenwich Peninsula and the Greenwich Community College, which offer a range of courses.

For 16-19 year olds who choose to remain in education, there are eight G-Plus learning centres which assist with a range of education and training options.

### **3.4.4 Leisure**

The Borough of Greenwich has inherited an environment that in many areas is of high quality and a considerable asset. There is recognition of Maritime Greenwich, through the inscription of the town centre and neighbouring environs, as a World Heritage Site of international importance. Significant landmarks include the National Maritime Museum, the Royal Observatory and the Old Royal Naval College. Greenwich town centre is a key visitor destination for London. There are in the region of 6.8 million visitors per year to the town centre, who arrive by a variety of modes, including river services. The area suffers from traffic congestion, caused by through traffic and visitor traffic, despite a permanent ban on heavy goods vehicles.

To the south of the Borough, Eltham Palace and the Tudor Barn both provide attractions for visitors.

The Greenwich Peninsula is the largest and most important development area in the Borough and is home to the flagship event venue of the O<sub>2</sub>, a world-class concert and entertainment facility. Greenwich Peninsula has the land capacity for substantial amounts of development, which will contribute to the wider regeneration of the Thames Gateway and East London.

Charlton Athletic Football Club is located in the north of the Borough, at 'The Valley'.

### **3.4.5 Greenwich as an Olympic Borough**

Greenwich has been selected to host a number of events at the London 2012 Olympic and Paralympic games.

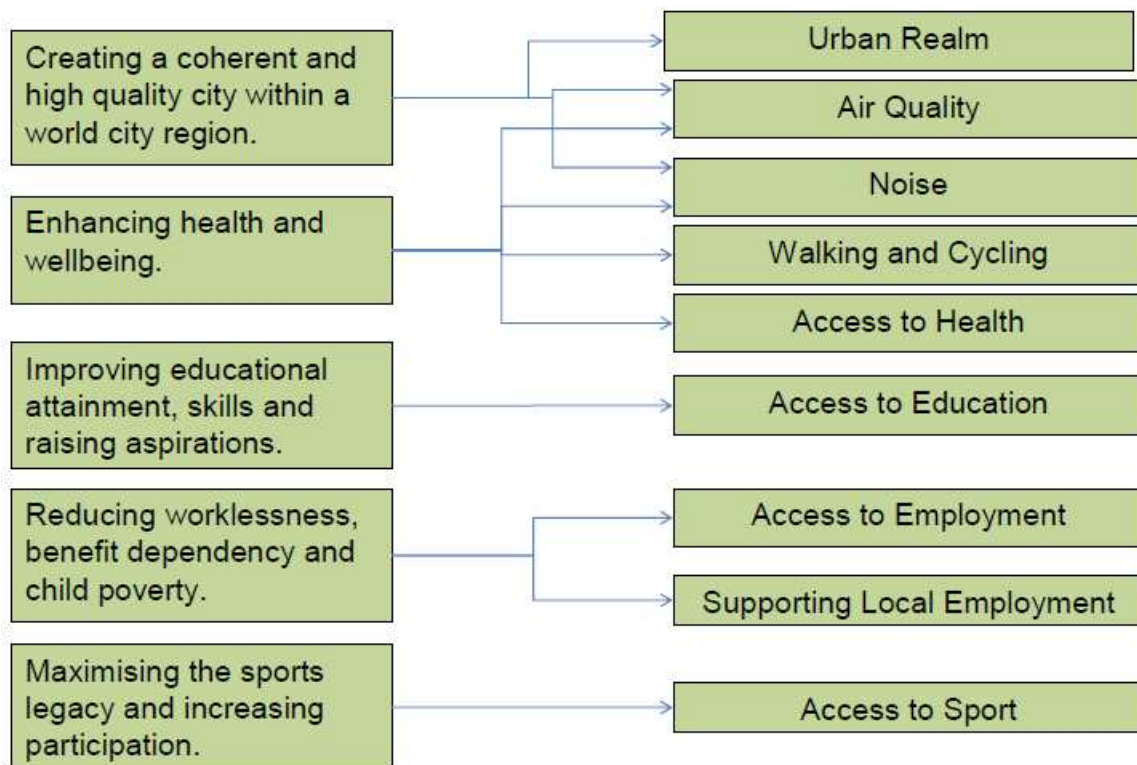
Equestrian and Modern Pentathlon events are to take place in Greenwich Park, Shooting and Paralympics Archery at the Woolwich Barracks, with Gymnastics and Basketball at the North Greenwich Arena (the O<sub>2</sub>).

The Greenwich Park venue will accommodate up to 23,000 spectators in the main arena, with more in the remainder of the park. It is expected that up to 75,000 spectators could attend on the busiest of the event days.

In the previous Mayor of London's 'Five Legacy Commitments'<sup>8</sup>, one relates specifically to 'Transforming the Heart of East London'; Policy 26 and Proposal 47 of the current Mayor's Transport Strategy undertake to maximise both the physical and behavioural transport legacy provided by the committed transport system that the Olympics delivers. The production of an Olympic Action Plan and associated monitoring programme, developed by TfL in conjunction with the 5 Olympic host boroughs, ensures that the benefits will be maximised, with short, medium and long term actions running to 2031. The outcomes delivered will support regeneration and convergence of social and economic factors between the eastern host boroughs and the rest of London and help to underpin the wider objectives of this Plan.

The seven outcomes that need to be addressed to achieve the convergence targets are contained in the Strategic Regeneration Framework<sup>9</sup>; of these seven outcomes transport plays a major role in five.

**Figure 3.4: The role of transport in delivering an Olympic and Paralympic legacy**



In December 2009 Greenwich Council began consultation on changes to the highways layout in Greenwich Town Centre as part of its work to smooth traffic flow and improve pedestrian and cycle access in the World Heritage Site. The proposals will see the existing town centre gyratory system removed, and the pedestrianisation of its northern and eastern arms (College Approach and King William Walk). This scheme would allow two-way traffic in Nelson Road, and creating a new clockwise gyratory to the west of the Town Centre.

<sup>8</sup> 'five legacy commitments' GLA 9<sup>th</sup> January 2008

<sup>9</sup> Strategic Regeneration Framework, October 2009. Mayor and Five Host Boroughs  
<http://www.walthamforest.gov.uk/strategic-regeneration-framework-report-2.pdf>

If the scheme is approved the highways work will be funded through the prioritisation of the agreed Local Implementation Plan settlement from Transport for London (TfL) for 2010/11 and 2011/12. The work will be completed in time for the Olympics, allowing safe car free access through the Town Centre for visitors arriving by river and the Docklands Light Railway (DLR) at Cutty Sark Gardens to the Royal Park.

Additional work to improve walking and cycling links along the Riverside walk/Thames Path and a major regeneration of the Woolwich interchange and its two town squares will be complete prior to 2012 to ensure walking and cycling are maximised.

### **3.5 Integrating transport and land use planning**

The north of the Borough, near the river, has a contrasting mix of older developed areas (where communities have grown in association with the river and riverside industries), and contemporary waterfront developments. The urban fabric is generally tight knit with streets of terraced housing interwoven with other commercial uses. Interspersed with the older areas are a number of relatively recent developments of housing and industrial estates.

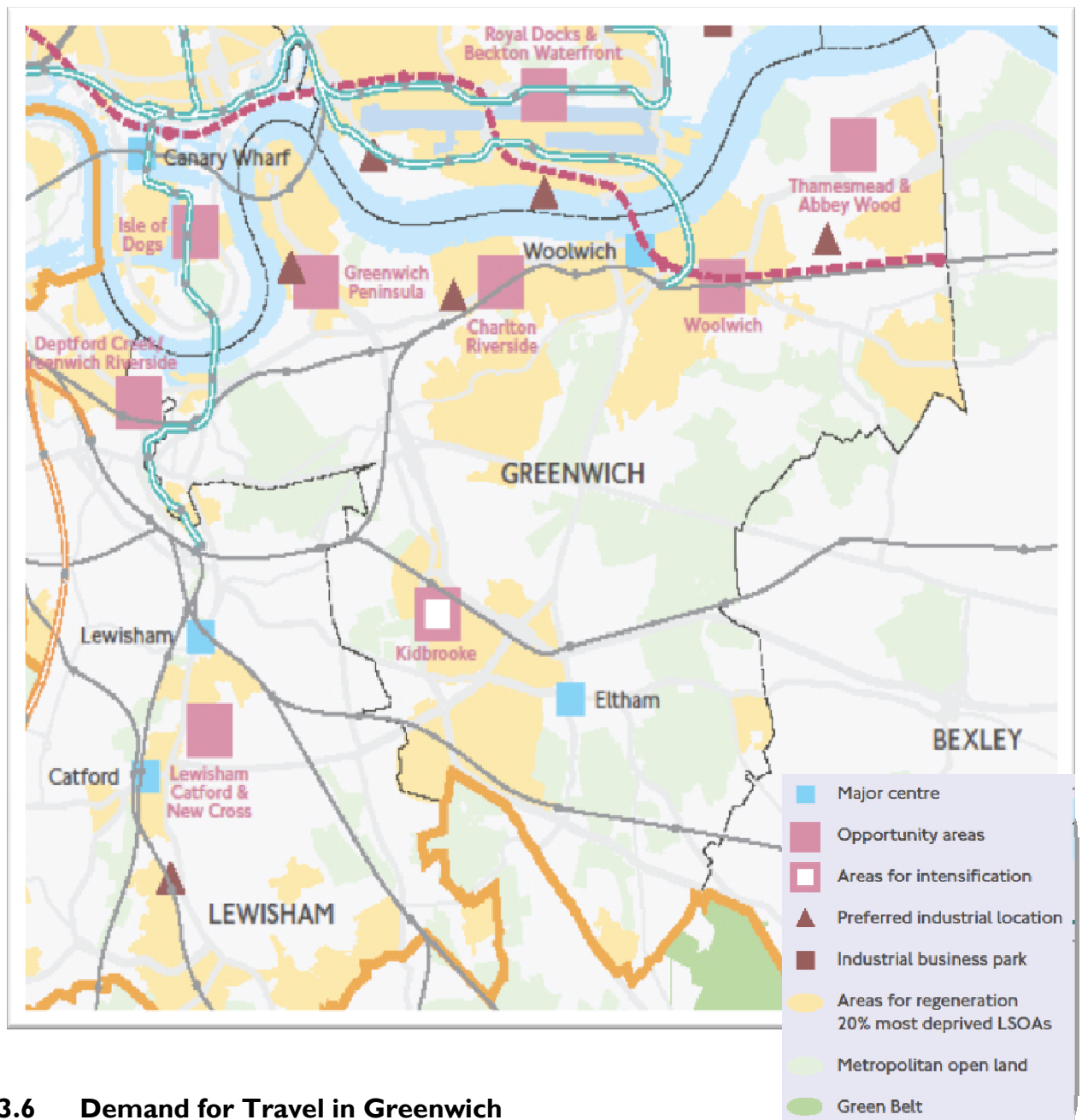
London's Opportunity and Intensification Areas which are identified in the London Plan and reflected in the Draft Core Strategy are vital to planning development; London has limited opportunities for accommodating large scale development, these sites provide potential space for both homes and jobs. In Greenwich four Opportunity Areas (Thamesmead and Abbey Wood, Woolwich, Charlton Riverside and Greenwich Peninsula) are identified in the Mayor's draft London Plan. Intensification Areas, one of which is located in Greenwich – Kidbrooke is also identified.

The Draft London plan has set provisional housing targets at 25,950 by 2021. Of the targets set in the London Plan, which covered the period from 2007/08 to 2016/17, a housing provision target of 20,010 additional homes was set. Nearly 90% of that target can already be met by from sites under construction and outstanding planning permissions and resolutions to grant planning permission. In 2006, there were 102,724 households in the Borough. This is projected to increase to 134,509 households by 2027 a projected increase of 35%.<sup>10</sup> In the past ten years over 11,000 homes have been built in the Borough.

---

<sup>10</sup> LDF Draft Core Strategy 2010

**Figure 3.5: Opportunity and Intensification Areas<sup>11</sup>**



### 3.6 Demand for Travel in Greenwich

Travel in London data is provided as a rolling mean over three year periods and describes the modal share originating in the Borough. Table 3.2 shows the mode share of trips

<sup>11</sup> 1. Opportunity Areas are London's major source of Brownfield land with significant capacity for new housing, commercial and other development linked to existing or potential improvements to public transport accessibility. Typically, they can accommodate at least 5,000 jobs or 2,500 new homes or a combination of the two, along with other supporting facilities and infrastructure.

2. Intensification Areas are built up with good existing or potential public transport links and can support redevelopment at higher densities. They have significant capacity for new jobs and homes but at a level below that which can be achieved in the Opportunity Areas.<sup>11</sup>

originating in the borough. Approximately 54% per cent of trips made by Greenwich residents are by non-car modes for the period 2006-2009.<sup>12</sup>

**Table 3.2: Travel Patterns in Greenwich**

Travel In London: Period	Rail	Underground/ DLR	Bus/ Tram	Taxi/ Other Public	Car/ Motorcycle	Cycle	Walking
2005/08	5%	3%	18%	1%	45%	1%	26%
2006/09	5.0%	2.8%	17.0%	1.4%	46.3%	1.0%	2%

During the period of the Report 2, neighbouring boroughs, Bexley and Lewisham have non-car use of 40% and 61% respectively. These findings reflect the existing transport networks within each borough. Lewisham is classed as an Inner London borough, whereas by contrast, Bexley is regarded as an Outer London borough<sup>13</sup>.

**Table 3.3: Trip Generators in Greenwich**

Level	Employment	Shopping	Services	Leisure
<b>International</b>			Greenwich University, Trinity Laban Conservatoire of Music and Dance	The O <sub>2</sub> at Greenwich Peninsula, Maritime Greenwich World Heritage Site
<b>National</b>			Ravensbourne College	Eltham Palace
<b>Regional</b>	Greenwich Peninsula/O <sub>2</sub>		Belmarsh prison complex (including Isis YOI)	Charlton Athletic FC
<b>Sub Regional</b>	Greenwich Council, Queen Elizabeth Hospital, White Heart business park	Greenwich town centre and market, Charlton Retail Park.	Hospitals New Wine Church	The Tudor Barn at Eltham
<b>Local</b>	Town Centres, Charlton Retail Park.	Eltham town centre, Woolwich town centre and market	Schools Libraries Health Centres	Local cinemas and Leisure Centres

<sup>12</sup> Travel in London Report 2

<sup>13</sup> Travel in London Report 2



### **3.6.1 Cross-River Linkages**

The Borough provides a variety of cross-river links for non-car owners. For pedestrians and cyclists there are the Woolwich Ferry and the foot tunnels at Greenwich and Woolwich. These tunnels are currently being upgraded following the Council's successful bid for £11.5 million from Central Government. The lifts are being upgraded and automated to ensure availability at all times. CCTV and lighting are also being upgraded along with the provision of help points and a public address system.

Thames Clippers provide a timetabled service stopping at Woolwich, North Greenwich (O2) and Greenwich, which then links eastward to Canary Wharf and Central London

Additional links for public transport users are provided by:

- The bus service through the Blackwall Tunnel,
- The Jubilee Line at North Greenwich, and
- The two Docklands Light Rail extensions from the Isle of Dogs southwards to Greenwich and Lewisham and the City Airport/Woolwich

The established major public transport schemes of Jubilee Line Extension and Docklands Light Railway have enhanced the Borough, making it more accessible and improving transport's resilience, as well as opening up destinations and new opportunities to residents, visitors and businesses. Crossrail scheduled for implementation in 2018 will add an additional public transport cross-river link.

Currently TfL are progressing a cable car, which if implemented, is designed to link Greenwich Peninsula to the Royal Docks; when complete it will form an additional pedestrian and cycle link across the Thames. It is scheduled to become operational before the 2012 Olympics and will be able to carry 2,500 passengers per hour in each direction.

The cross-river road network in the Borough is limited to the Woolwich Ferry and Blackwall Tunnel, consequently cross river connectivity for drivers is severely limited and in need of major improvements. The current TfL works to upgrade the northbound Blackwall Tunnel are scheduled to complete at the end of 2012. Although welcomed for its potential to smooth traffic flow and to improve safety with ventilation and other measures, it will do little to add capacity to the network.

The previous Mayor's Transport Strategy and London Plan supported further transport infrastructure improvements in the Borough, including the provision of additional river crossings at Gallions Reach (the Thames Gateway Bridge) and Greenwich Peninsula (the 3<sup>rd</sup> Blackwall Crossing, or Silvertown Link). These schemes are not funded in the current TfL Business Plan, and although a study to examine the need for additional river crossings is included as part of the Mayor's current Transport Strategy there is currently no funding or date for their implementation. Greenwich Waterfront Transit, a bus based rapid transit system and a pre Olympic delivery project (designed ultimately to form part of the Thames Gateway Transit, by linking to East London Transit via the Thames Gateway Bridge) also had its funding revoked in the current TfL Business Plan.

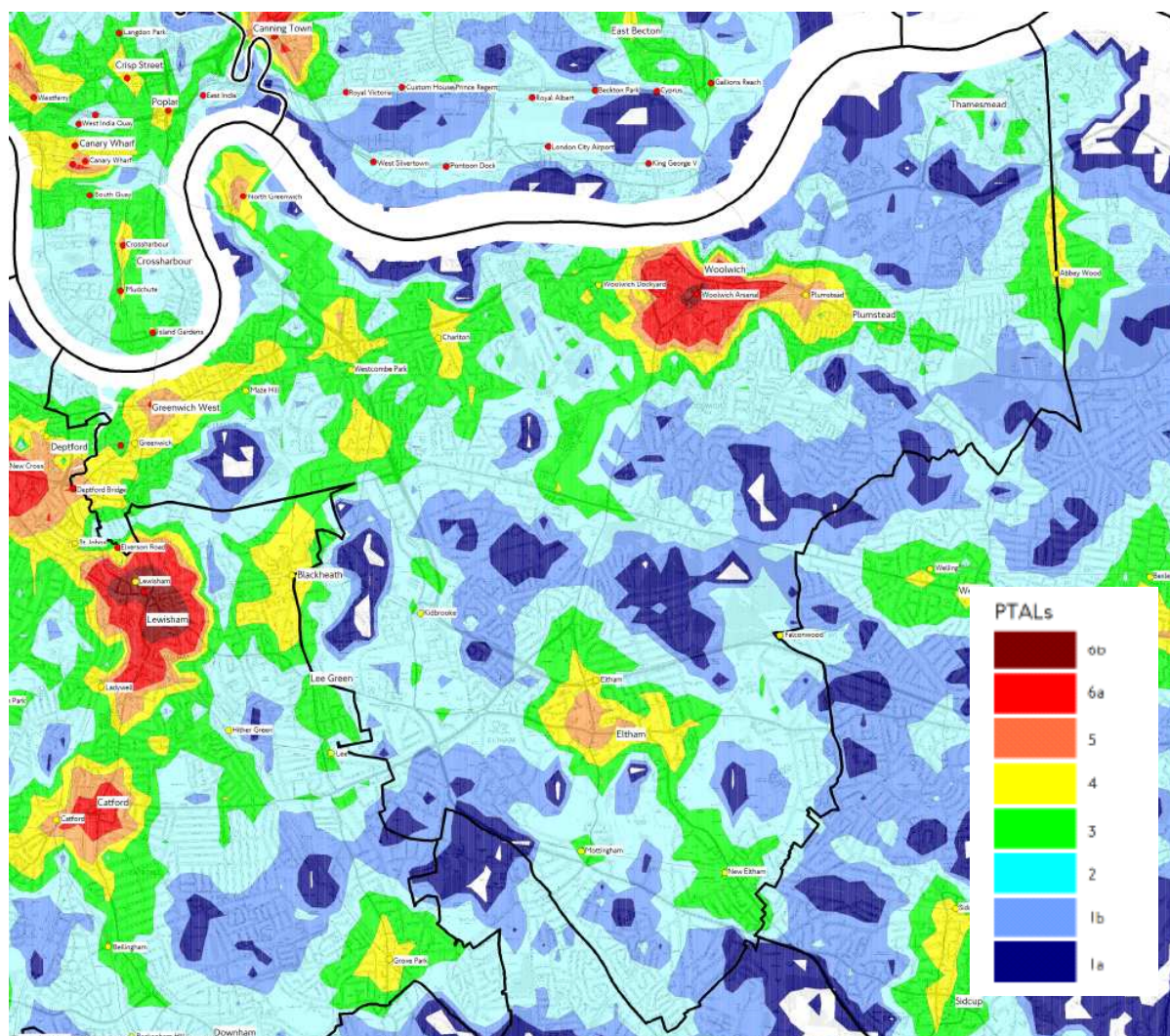


### 3.7 Public Transport

Public transport is vital in giving residents and visitors access to employment, shopping, educational opportunities and leisure. Often journeys require the use of more than one mode of transport, and the ability to interchange between them is critical to their effectiveness. Schemes such as the new interchange created in Woolwich town centre, prioritises pedestrians, cycles and public transport. It allows ease of movement between bus routes, DLR, Network Rail, the Thames Clipper ferry service (and from 2018 Crossrail). It is an example of how to be at its most effective transport provision must be treated holistically.

Public transport is essential for travel to work and services for a large proportion of the population and walking also makes an important element of all journeys, for which provision needs to be made. The map shown as Figure 3.6 is the Public Transport Accessibility (PTAL) map for the Borough. The colours represent the 'amount of access' to public transport in all areas of the Borough. They range from Level 1 (dark blue) which is poor access to Level 6b which shows areas with the best possible access..

**Figure 3.6: Greenwich's PTAL Ratings<sup>14</sup>**



<sup>14</sup> TfL Boroughs Intranet: Greenwich PTAL Ratings 2010

Table 3.4 summarises Greenwich's transport and includes public transport, walking and cycle routes and principal roads. Of the two road networks shown the Transport for London Road Network (TLRN) is the only section of highway for which the Borough is not the transport authority, these roads come directly under the control and ownership of TfL

**Table 3.4: Summary of Transport Provision in Greenwich**

<b>Transport Mode</b>	<b>Existing/Funded infrastructure</b>
<b>Walking (including public realm)</b>	Green Chain Walk Capital Ring Thames Path
<b>Cycling</b>	London Cycle Network (LCN) Links
<b>Bus</b>	A total of 49 bus routes operate in the Borough: <ul style="list-style-type: none"> <li>• 28 routes are classified as frequent</li> <li>• 5 routes are night buses</li> </ul>
<b>Rail</b>	Three heavy rail radial lines operated by Southeastern Trains linking the Borough with Kent and Central London  Crossrail running east west from Abbey Wood and Woolwich to Canary Wharf, Central and West London and Heathrow airport (scheduled to become operational in 2018)
<b>Underground</b>	North Greenwich (Jubilee Line)
<b>Roads</b>	<p><b>Transport for London Road Network (TLRN):</b>  A102 Blackwall Tunnel Southern Approach; Blackwall Tunnel  A2 Shooters Hill Road; Rochester Way Relief Road; Blackheath Road; Deptford Bridge; Blackheath Hill  A20 Sidcup Road; Eltham Road (part)  A205 (the South Circular Road) Westthorne Avenue; Woolwich Common; John Wilson Street; Grand Depot Road; Woolwich New Road; Academy Road; Ferry Approach; Well Hall Road  A210 Eltham Road (part)  A2213 Kidbrooke Park Road (part)</p> <p><b>Strategic Road Network:</b>  A206 Creek Road to Plumstead Gyratory  A2016 Eastern and Western Way</p>
<b>DLR</b>	Lewisham Extension (Cutty Sark Gardens and Greenwich) Woolwich Extension
<b>River Services</b>	Thames Clippers ferry bus services at Woolwich Arsenal, North Greenwich(O <sub>2</sub> ) and Greenwich

### 3.7.1 Rail provision

The Borough has 3 heavy rail lines running through it, these form a series of radial (east – west) links for the Borough the between Central London and Kent. The train operator is Southeastern.

The North Kent (Woolwich) line passes through Abbey Wood, Plumstead, Woolwich Arsenal, Woolwich Dockyard, Charlton, Westcombe Park, Maze Hill and Greenwich.

**Table 3.5: Mainline Rail, Station Use in Greenwich**

Station Name	District or Unitary Authority	Station Facility Owner	0708 Entries & Exits	0708 Interchanges	Change
Abbey Wood	Greenwich	South Eastern	3,096,498	228,386	Growth
Charlton	Greenwich	South Eastern	1,505,735		Growth
Eltham	Greenwich	South Eastern	2,298,853		Growth
Greenwich	Greenwich	South Eastern	2,700,789		Growth
Kidbrooke	Greenwich	South Eastern	973,450		Growth
Maze Hill	Greenwich	South Eastern	837,573		Growth
Mottingham	Greenwich	South Eastern	1,214,567		Growth
New Eltham	Greenwich	South Eastern	2,394,627		Growth
Plumstead	Greenwich	South Eastern	1,385,266		Growth
Westcombe Park	Greenwich	South Eastern	919,206		Growth
Woolwich Arsenal	Greenwich	South Eastern	2,339,456		Decline
Woolwich Dockyard	Greenwich	South Eastern	423,892		Growth

Entry/exit figures taken from [1] <http://www.rail-reg.gov.uk/upload/xls/st...>

The Bexleyheath line passes through Falconwood (in Bexley borough but on the boundary), Eltham and Kidbrooke.

The Sidcup Line passes through New Eltham and Mottingham.

### 3.7.2 Docklands Light Railway

The DLR has two lines in the borough. The Lewisham line crosses the River Thames to pass through Cutty Sark, Greenwich and Deptford Bridge. This line was upgraded to increase its capacity by introducing 3 car train sets in 2010.

The Woolwich Extension crosses the River Thames to terminate at Woolwich Arsenal. In its first year of operation Woolwich DLR saw 5 million passenger journeys to or from the station, more than doubling DLR's forecasts. The economic case for new infrastructure often relies on predicted usage and this may indicate an underestimate of the suppressed demand for cross river transport in the Borough.

**Table 3.6: Passenger Numbers at Greenwich DLR Stations**

	Cutty Sark		Deptford Bridge		Greenwich		Woolwich Arsenal	
	Board	Alight	Board	Alight	Board	Alight	Board	Alight
<b>2006</b>	2,502,636	2,362,160	1,299,325	1,241,472	1,460,813	1,653,299	-	-
<b>2007</b>	2,546,310	2,388,880	1,504,939	1,428,888	1,939,092	2,058,529	-	-
<b>2008</b>	2,219,663	2,108,897	1,547,900	1,505,819	1,855,826	1,976,964	-	-
<b>2009</b>	2,462,803	2,337,153	1,706,473	1,632,364	1,631,950	1,778,729	2,448,229	2,224,902

Both lines link to west of Canning Town and continue on to terminate at Bank. In late 2010, a further extension opens from Canning Town to Stratford International, giving a direct link from Woolwich Arsenal to Stratford and the Olympic Park.

### **3.7.3 London Underground**

The Greenwich Peninsula has the Borough's only underground station on the Jubilee line at North Greenwich. A capacity upgrade to the Jubilee Line is scheduled to be complete at the end of 2010. Unfortunately, the disruption caused during the signalling upgrade has had a major detrimental effect on businesses and in particular the O<sub>2</sub> and its associated venues.

In 2009 18.1 million underground journeys started or finished at North Greenwich<sup>15</sup>

### **3.7.4 Bus Services**

There is a well-established network of London Transport Bus Services that run on both local and more strategic routes in Greenwich. Crucially they form the only north south links in the Borough and provide the links between major transport hubs and residential, opportunity and intensification areas.

The Council have ensured that since 2000 a programme of measures (the London Bus Priority Network) have been implemented, as part of the LIP programme, on the strategic road network to help ensure bus time reliability; these include bus lanes, 'protecting' bus stops, and junction prioritisation for buses.

<sup>15</sup> <http://www.tfl.gov.uk/tfl/corporate/modesoftransport/tube/performance/default.asp?onload=entryexit>



Figure 3.7: Bus Routes in Greenwich<sup>16</sup>



### 3.7.5 Using the Thames and the River's Passenger Services

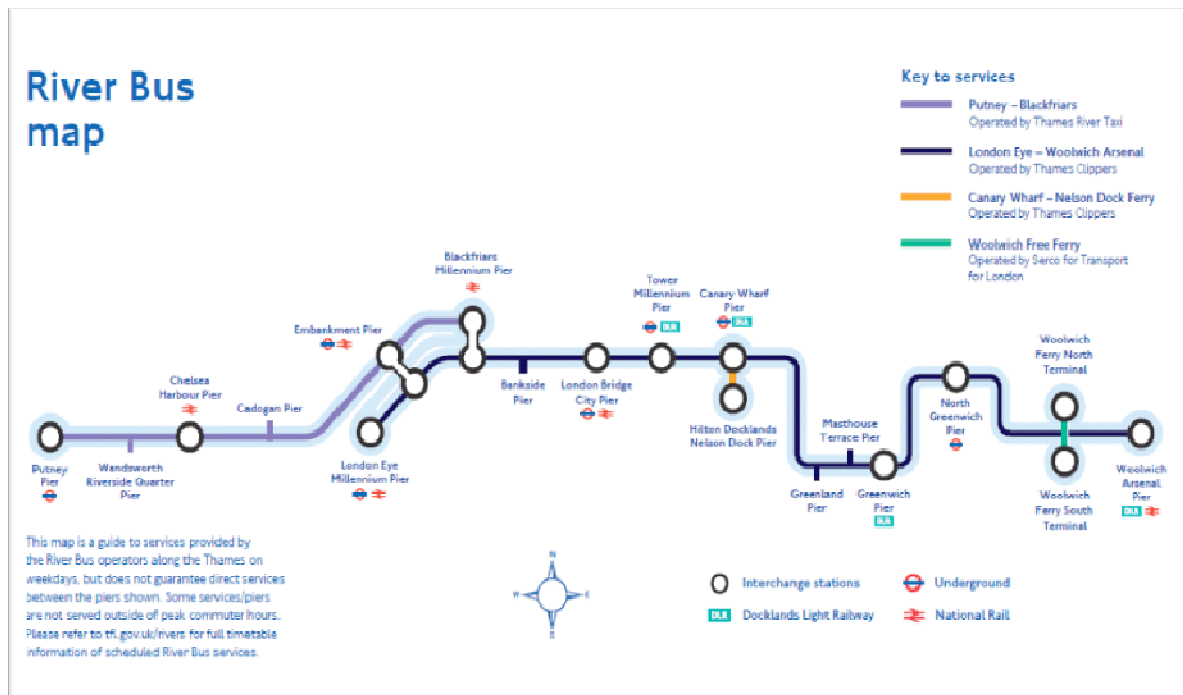
#### Passenger Services

Timetabled River Bus services are provided from piers located at the Royal Arsenal in Woolwich, North Greenwich and Greenwich. The extension of the service from the O<sub>2</sub> to Woolwich is subsidised jointly by TfL and Greenwich Council.

The eastern arm of the commuter services is run by Thames Clippers who tendered to TfL for its operation. The tender is due to be re-let in 2013.

<sup>16</sup> <http://www.tfl.gov.uk/assets/downloads/south-east-london-bus-map.pdf>

**Figure 3.8: Thames River Bus Services**



Additionally charter and tourist services run from the pier at Cutty Sark Gardens in Greenwich.

Signage to the pier at Greenwich is being upgraded in 2010 by TfL. Signage to the Council owned Woolwich pier (and throughout Woolwich town centre) will be upgraded in 2010/11 as part of the Council's current Wayfinding project, and is being developed in line with best practice developed as part of the Legible London scheme.

### Greenwich Cruise Liner Terminal

By 2012 a new Cruise Liner Terminal will be completed (pre Olympic and Paralympic games) as part one of a phased residential and leisure development at the site formerly known as Enderby's Wharf on the western side of Greenwich Peninsula. The terminal will also provide an additional pier and interchange for Thames Clippers and other passenger river services to stop between Greenwich town centre and the O<sub>2</sub> at North Greenwich

As well as providing an international link for tourism, the development will provide employment opportunities for approximately 370 staff members on the site.

### Promoting the River: Sail Greenwich

On Sunday 5 September 2010, 48 boats from sailing clubs across the capital converged on Greenwich Yacht Club to take part in London's biggest dinghy racing event of the year: the fifth annual London Regatta.

The Regatta takes advantage of the annual test closure of the Thames Barrier which creates non-tidal conditions on the up-river side towards London. This allows competitors to race

in open water of the River Thames without needing special qualifications or tidal water experience.

The Council is looking to build on the interest raised by the Regatta to develop 'Sail Greenwich' on the lines of the internationally successful 'Sail Amsterdam', as a way of highlighting the river and the part it can play both as a transport artery and a leisure facility.

### **Case Study: Improving Public Transport Interchanges**

Award winning work in Woolwich Town Centre has already seen improvements to pedestrian and cycle facilities, the creation of a new interchange and public transport corridor. The ongoing works (funded by a combination of public and private sector contributions) will see the two town squares redesigned and their reconstruction complete by summer 2011.

**Figure 3.9: Woolwich Interchange - Woolwich New Road and DLR**



Often journeys require the use of more than one mode of transport, and the ability to interchange between them is critical to their effectiveness. Schemes such as the new interchange created in Woolwich town centre, provide links to mainline commuter trains, which reduces the need to travel through central London. The scheme prioritises pedestrians, cycles and public transport. It allows ease of movement between bus routes, DLR, Network Rail, the Thames Clipper ferry service (and from 2018 Crossrail).



The DLR Woolwich Extension opened in January 2009 and was forecast to carry 2.4 million passengers in its first year of operation. The data collected in 2010 showed that the actual numbers carried in year one was in fact over double this at 5 million.

**Figure 3.10: Woolwich Interchange A206**



Additional work is planned in Woolwich town centre to integrate walking routes between the transport interchange and one of the London 2012 Olympic venues, Woolwich Barracks. This will include proposals to incorporate the palette of materials already used in the town centre south along Wellington Street, which will be the primary route for pedestrians to the venue.

### **3.8 Smarter Travel**

Smarter Travel refers to schemes and initiatives that promote modes of travel other than the private car. This includes both utilisation of public transport and the Active Travel options of cycling and walking. Currently the Council are working in close partnership with the Primary Care Trust to promote Active Travel and the positive health benefits it provides.



### **3.8.1 Cycling in Greenwich**

The Greenwich cycle network is a mature network, which has arisen over several years and provides a framework for users to make journeys by bicycle. Most locations in the Borough have a local cycle route nearby (see Figure 3.11). Two of the best used routes in the Borough are National Cycle Network routes 1 and 4 (the Thames Cycle Route). Funding for this work has come from many sources.

Nearly 1000 new signs have been installed, upgraded or refurbished in the last 2 years. In addition road markings (cycle logos) have been installed to complement the signs in some 750 locations.

The current programme is being driven in part by the provision of an Olympic legacy. These works include improvement works on the Thames Cycle Route between the foot tunnels at Greenwich and Woolwich, which links the Borough's three Olympic venues.

The development of larger schemes such as the completion of missing links at Broadwater Dock, Greenwich Park (in partnership with Royal Parks), and Thamesmead, will require individual funding, probably, in partnership with other providers.

#### Cycle Parking in Greenwich.

Currently there are some 355 cycle stands in the borough in nearly 100 locations. Each of these is identified on the website [www.greenwichcycling.com](http://www.greenwichcycling.com). This provision is mainly, but not exclusively, located in town centres, like Woolwich, Greenwich and Eltham.

#### Cycle Training

The Road Safety and School Travel Teams in Greenwich provide a variety of services to promote cycling in the Borough. 'Bikeability' is a cycle training scheme designed to give cyclists the skills and confidence to ride their bikes on today's roads. Greenwich Council has 15 professionally qualified and nationally accredited cycling teachers providing the following training:

- School Holiday Cycle Training Courses
- Cycle training courses are arranged during the summer, Easter and half term breaks for adults and children. Adults Cycle Training and Individual Cycle Travel Plans are available as weekend courses
- Special Events

Events supported include:

- Car Free Day
- Great Get Togethers
- Cycle Races.
- Road Safety events

The cycle training team is able to transport up to 30 pool bikes to venues in the Borough in order to deliver safer cycling tuition to a greater number children and adults.

- Schools

Cycling courses during term time and school holidays for the Borough's school children. Training mainly targets year five and six pupils, but is also provided for older pupils. Students can work towards levels one, two and three of the new national 'Bikeability' award scheme. The numbers of cyclists who received training in the Borough in 2009/10 is shown below:

**Table 3.7: Numbers of Cyclists Trained**

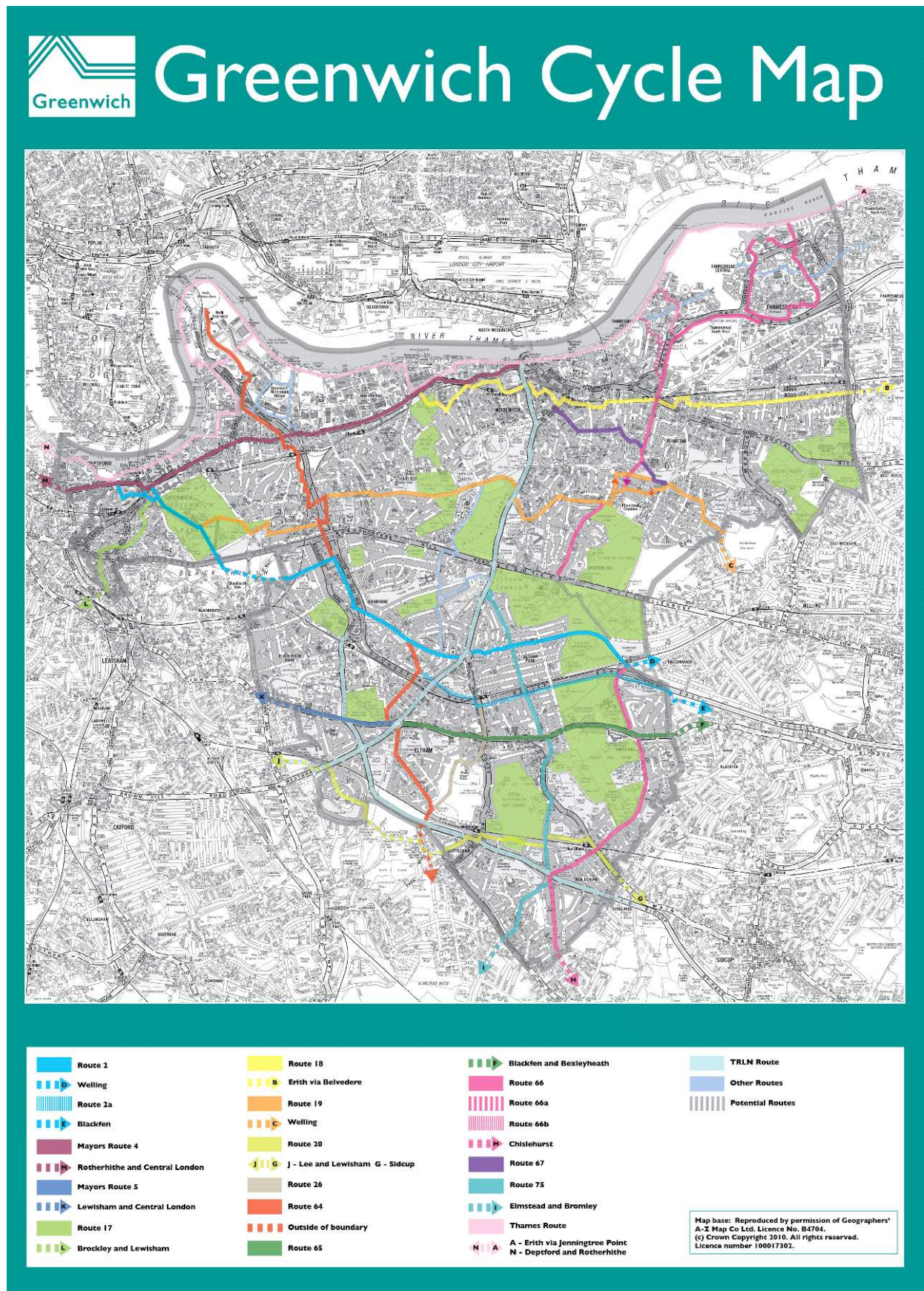
<b>2009/10 Training</b>	
<b>Total Schools Delivered</b>	<b>37</b>
<b>Total pupils trained</b>	<b>1034</b>
<b>Total trained to levels 1, 2</b>	<b>767</b>
<b>Borough Primary Schools covered</b>	<b>58%</b>
<b>Year 6 pupils trained</b>	<b>37%</b>
<b>Year 5 &amp; 6 pupils trained</b>	<b>19%</b>
<b>Total adults</b>	<b>120</b>

#### Best Value Review

In September 2010 a first meeting of a committee charged with completing a best value review into cycling capacity and facilities in the borough was held. The review's aim help inform future cycling investment, projects and schemes in the Borough. A number of stakeholder groups focused around training, infrastructure, promotion and storage have been held to gather views of stakeholder groups and examining best practice in other boroughs.

Alongside the stakeholder meetings, a consultation survey has been used to encourage wider participation. The survey was available online for a month, for residents and staff to complete and requested information about a range of cycling issues. Cyclists and Non-cyclists were invited to respond and the survey appeared on the public Council website and intranet. Greenwich Primary Care Trust also promoted the cycling survey to their web users. Respondents were invited to provide their email addresses to create a cycling distribution list which will be used to distribute information about cycling related activities in Greenwich.

Figure 3.11: Greenwich Cycle Routes





### 3.8.2 Walking

There is a network of walking routes in the Borough including the Thames Path and the Green Chain Walk (which also extends into the surrounding south-eastern boroughs).

There are two foot tunnels, which take pedestrians and cyclists across the river at Woolwich and Greenwich. These tunnels form vital parts of both cycle and walking networks.

Greenwich promotes travelling by foot as a free, functional and reliable method of moving around the borough, and it is now widely acknowledged that walking can contribute towards providing wider health and environmental benefits.

For pedestrians, the Woolwich Ferry and the foot tunnels at Greenwich and Woolwich are viable routes to access areas to the north of the river. These tunnels are currently being upgraded following the Council's successful bid for £11.5 million from Central Government. The lift mechanisms are being replaced and the service automated to ensure accessible access is available at all times. The refurbishment is also designed to improve safety, with additional CCTV, improved lighting and the provision of help points and a public address system.

The Thames Path crosses Greenwich and enters into the neighbouring borough, Bexley travelling through Woolwich, Thamesmead and on to Erith. Similarly, the Green Chain Network begins at three points along the Thames, climbing up from the river through Lesnes Abbey and Woolwich Common. The three paths converge at Shooters Hill and descend towards Eltham and Grove Park.

**Figure 3.12: London Walking Routes**



### 3.8.3 Car Clubs

Car Clubs have been shown to have numerous benefits to the individual, such as increased accessibility and mobility, whilst also offering convenience, choice, and financial savings. In addition there are benefits for the community and local authority, with reduced car usage, reductions in private car ownership and parking pressure, raised awareness of travel habits, and increased sense of community. Car Clubs also have the potential to help address issues of social exclusion by introducing vehicles into areas where opportunities for both the benefits of car ownership and the choice of vehicle type are not as widely available.

Greenwich started to implement car clubs in 2005 with the introduction of ten vehicles in and around Greenwich Town Centre. Since then the council has rolled out additional bays to the east and south of the existing bays. Greenwich currently has a total of 35 car club bays and is committed to adding additional bays with a target of having 90% of residents within a 5 minute walk of a bay by 2012.

**Figure 3.13: Existing and Potential Car Club Locations**



Zipcar (formerly Streetcar) are presently the provider of on-street car club cars in Greenwich.

Car Club provision is also considered as part of planning conditions for new building developments and may be used as a tool in their Travel Plan. For example, the Royal Arsenal development currently has both Car Club cars and a van in designated parking bays within its site.

Figure 3.13 shows existing sites marked with a Streetcar logo. The red arrows show sites that have been identified as potential future locations but yet to be formally agreed

### **3.8.4 ‘Door to Door’ Transport**

#### Dial-a Ride

Dial-a-Ride is a multi-occupancy door-to-door transport service for disabled people who cannot use buses, trains and the Tube. It can be used for all sorts of journeys, for example shopping, visiting friends and family, doctors and dentists appointments and going out at night.

Dial-a-Ride is a membership service which you pre-book, and is generally best for providing local trips, but longer journeys can often be arranged on request.

#### Taxicard

Taxicard is a scheme that provides subsidised door-to-door transport for people who have serious mobility impairment and difficulty in using public transport. Taxicard holders make journeys in licensed London taxis and private hires vehicles, and the subsidy applies directly to each trip.

The London Taxicard Scheme is funded by the participating London boroughs and the Mayor of London. London Councils Transport and Environment Committee (TEC) manages the London Taxicard Scheme on behalf of Greenwich Council. Taxicard can be used anytime, 24 hours a day, 365 days of the year, subject to taxi and private hire vehicle availability.

#### Special Educational Needs Transport

Home to school transport is provided for children with a special educational needs statement, and who are unable to use public transport. This includes children attending schools in Greenwich and, in certain circumstances, schools outside the borough.

Transport may also be provided for other pupils, for example in emergency medical situations.

### **3.8.5 Travel Demand Management**

Travel Demand Management (TDM) is the application of strategies and policies to reduce demand (specifically that of single-occupancy private vehicles), or to redistribute this demand in terms of space or time. In transport, as in any network, managing demand can be a cost-effective alternative to increasing capacity. A demand-management approach to

transport also has the potential to deliver better environmental outcomes, improved public health and stronger communities, and more prosperous and 'liveable' cities.

TDM is subject to numerous definitions but can be summarised as a set of tools to offer people better travel information and opportunities, and help people choose to reduce their need to travel, especially by car. TDM is wide-ranging and covers tools and techniques ranging from land-use planning to travel plans and the introduction of parking management systems. Tools for achieving change will vary and often a 'carrot and stick' method is used where incentives or rewards may be used for choosing more sustainable ways of travel and disincentives (often fiscal or legislative with examples such as road user pricing, in London seen as Congestion Charging, or high occupancy vehicle lanes) for continuing to drive.

### **Case Study: The O<sub>2</sub> Travel Plan**

The Travel Plan for The O<sub>2</sub> on Greenwich Peninsula was part of its planning conditions and took 18 months to develop and agree before the Arena opened for its first event in 2006. Over 2 million people attended events at The O<sub>2</sub> in 2009 and the measures set out in the Travel Plan ensured that their movement to and from the venue was managed in a way that still allowed existing background travel to continue. In 2010 the Council won the Transport Partnership of the Year award with AEG, (the company that owns the O<sub>2</sub>) for the Plan at the London Transport Awards.

### **Targets and monitoring**

With 98 targets and a rigorous 20-year monitoring programme, The O<sub>2</sub> Travel Plan is very much an industry leader, committing AEG to deliverables on a scale never seen before within a travel plan document.

### **Key targets delivered by June 09 – The first periodic review**

- 75% of customers/ 90% staff to travel by non car modes.
- Employ 40% staff from Greenwich Borough
- Appoint a river -boat operator to serve the venue.
- Deliver new escalators at North Greenwich Station to enhance station capacity.
- New bus routes to south east London and 24hr bus services.
- Set up a controlled parking zone on the Greenwich Peninsula.
- Traffic management and signage strategy documents.
- Parking pricing policy to discourage car-use.
- Promotion of sustainable travel choices in marketing.
- Event management plan for all transport modes.
- Monitor transport demand for two events within the first three months and subsequently two events annually.

Travel Plans are typically a package of practical measures to encourage the use of alternatives to the private car, and may be developed on an individual, workplace, venue or residential basis

Greenwich Council is at the forefront of requiring Travel Plans for new developments, with their production being required as part of their planning application and its future conditions.

### 3.8.6 School Travel Plans



A School Travel Plan is a live document which is developed and implemented by the school community, working alongside a range of partners including the Council, local police and TfL.

The school travel plan identifies how car use will be reduced and travel by sustainable modes encouraged for the journey to school. Greenwich successfully met regional and national targets, assisting 99% of schools to develop their school's travel plan by the target date of 2009, as

set by the previous Mayor of London in response to national targets set by the DfT/DfE.

In Greenwich Children's and Young People's Services there are 64 primary, 12 secondary, 4 special schools, 4 stand alone nurseries and 1 Pupil Referral Unit. In addition, there are 4 independent primary schools, 3 independent primary and secondary schools, 2 independent special schools, and one independent college for foreign students.

The Sustainable Mode of Travel Strategy (SMoTS) now supersedes the School Travel Plan Strategy. The Council has a duty to promote sustainable modes of travel for all travel to educational establishments, as laid out in the Education and Inspections Act 2006 .

Greenwich's SMoTS objectives for the period 2010-2015 are:

1. Support the implementation of STP's and safe, sustainable and active travel initiatives
2. Reduce car use and increase walking and cycling
3. Improve facilities, services and information provision that enables and supports safe and sustainable travel and access to education
4. Support and contribute to other local relevant Agendas and Strategies which concern community and environmental wellbeing

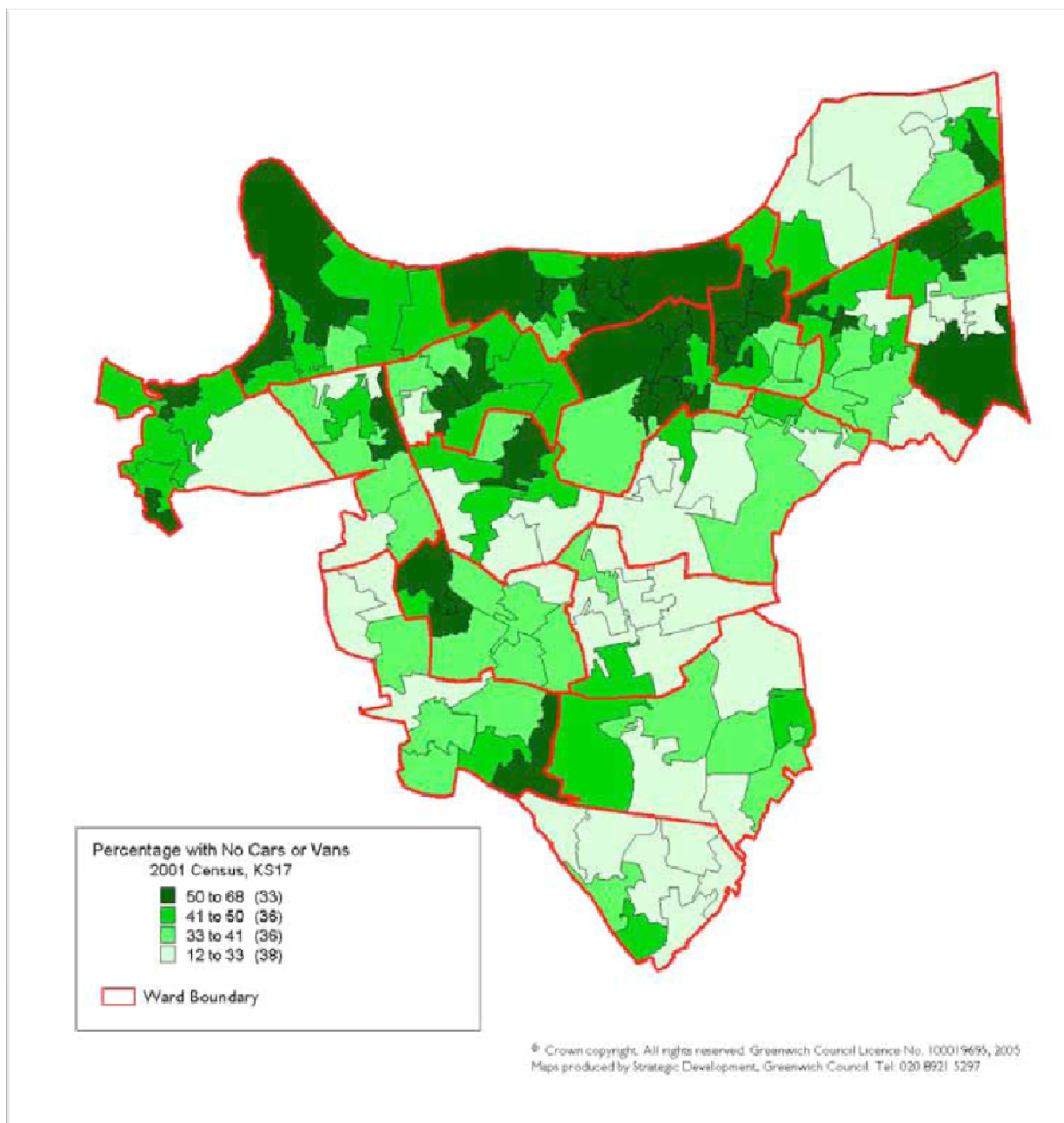
In summer of 2010, Greenwich Council were successfully awarded funding from central government to design and deliver signs to place outside school entrances, to make drivers aware of the need to switch off idling engines on the school run. The signs were delivered to over 60 primary schools.



### 3.9 Cars and Roads

Travel patterns vary considerably between different parts of the borough, reflecting Greenwich's geography and the existing provision of transport networks.

**Figure 3.14: Percentage of Greenwich households with no private vehicle (by ward)**



Public Transport is the main mode when travelling in the north of the Borough, but the car is the most significant mode in the south as a consequence of public transport constraints.

There is great discrepancy across the Borough in relation to access to private transport. The 2001 Census indicated that 41% of households do not have access to a car or van but

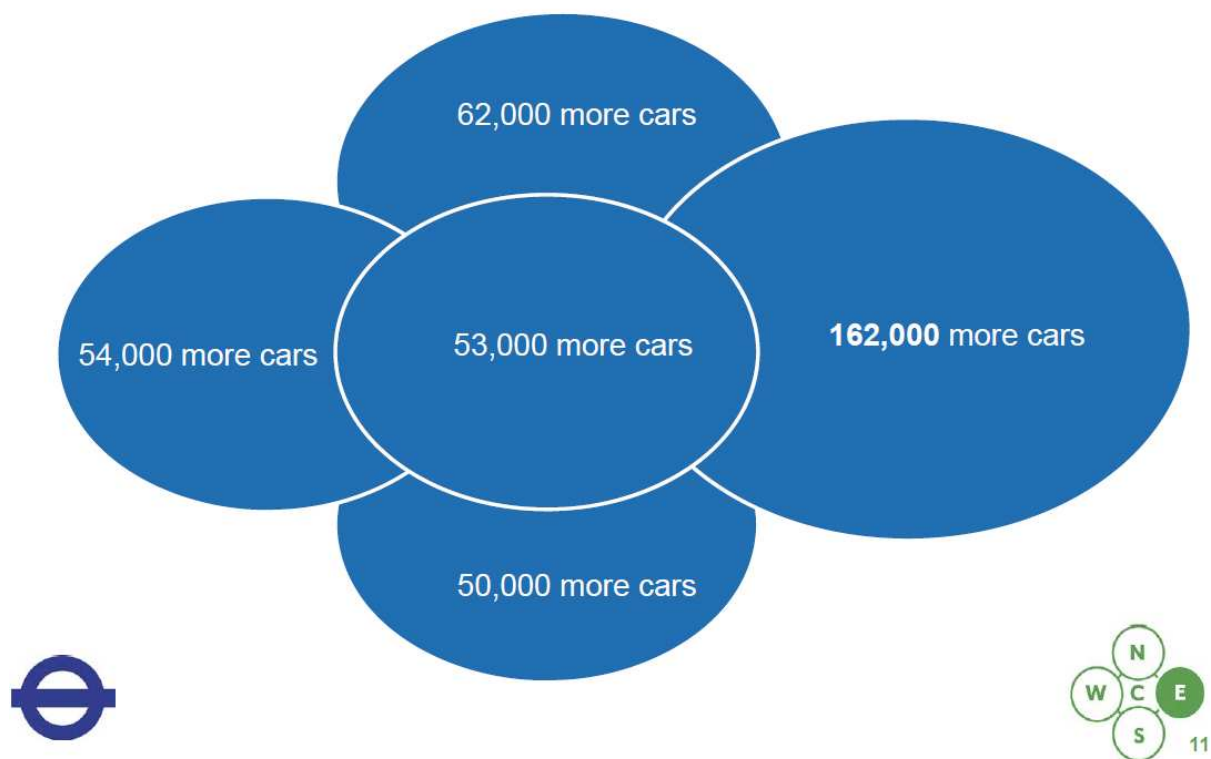
this disguises significant differences between areas, with wards in the north of the Borough having very high rates of car and van non-availability (55% in Woolwich Riverside, 51% in Woolwich Common), compared to 27% in Coldharbour and New Eltham (the most southerly part of the Borough).

### 3.9.1 Car Use

The Travel in London Report (2) indicates that car trips, originating in the borough, made up 44% of mode share for the period 2006/07-2008/10. The Inner London average for car use for this same period is 26%, which is a significant contrast to the Outer London average of 51%.

Greenwich experienced an increase of 1% from the findings for car use taken from Travel in London Report (1), which covered the period 2005/08.

**Figure 3.15: Projected growth in car ownership by sub region to 2031** <sup>17</sup>



Car ownership has increased by 17.7% between the 1991 and 2001 census. The population of Greenwich has increased by only 3.25%

Increasing car ownership has wider implications. Despite an increase in the public transport share of travel within the Thames Gateway London Partnership area, the number of cars owned in the could rise by as much as 40% due in part to the growth in population together with general enhancement in wealth and prosperity. The forecasts also show that there will still be a substantial increase in the number of car trips together with road-based freight and distribution. This will have negative impacts on air quality and pollution and increase the pressure on residential parking, both on- and off-street, as well as leading to greater road

<sup>17</sup> TfL: East London Sub Regional Workshop 16<sup>th</sup> July 2010.

congestion, falling traffic speeds and hence reduced accessibility by car and by road based public transport.<sup>18</sup>

### **3.9.2 Electric Vehicle Charging Points (EVCPs)**

The Mayor's Transport Strategy sets challenging targets for the provision of EVCPs. Greenwich is currently developing on street provision for electric vehicles and in 2010 installed 10 points in 5 locations as part of its roll-out process. The use of these bays will be monitored, and additional bays will be implemented when necessary on a demand led basis.

### **3.9.3 Roads and Traffic Flow**

The Transport for London Road Network (TLRN) is made up of roads that are owned and maintained by TfL. Five per cent of the roads in London are TLRN but they carry about a third (approximately 33 per cent) of the city's traffic. These are the key routes or major arterial roads in London.

Establishing a baseline position for the performance of the transport network is important and forms the basis for future monitoring. Monitoring of traffic and transport flows, including through traffic, pedestrian footfall and the use of interview surveys to identify travel modes and behaviour all have a role to play in establishing this baseline.

Congestion on the network is caused by a variety of issues including the increasing volume of traffic, accidents, road works and the need for access to services by utilities companies. Bottlenecks in the Borough, including Greenwich Town Centre, Blackwall Tunnel and Woolwich Ferry approaches, and the A20 between Eltham and Lee have all been identified as congestion 'hotspots'. Systems have been put in place to smooth traffic flow where possible, with the introduction of 'intelligent technology' by TfL with projects such as SCOOT which links traffic light systems to maintain and prioritise flow and minimise delay. Section 3.8.5 provides more detail about measures to manage travel demand.

Greenwich has appointed a Traffic Manager as required by the Traffic Management Act 2004 to enhance both the current enforcement role carried out under the New Roads and Street Works Act 1991 and the administration role required by the Act. This ensures greater control of both road and street works ensuring that works are both better coordinated but also carried out at the most appropriate times of the work for the type of road concerned. Co-ordination of Streetworks and the management of works done by utilities companies plays a central role in smoothing traffic flow in the Borough.

### **3.9.4 Parking Management**

Parking control is vital to ensuring the free flow of traffic and turnover at parking spaces to support local shopping areas. Controlled Parking Zones have also been introduced around train stations to deter commuter parking and to provide parking spaces for residents. The Council operates a parking management service to control the issuing of permits and to provide an effective deterrent to misuse of parking spaces. The detail of Greenwich's

---

<sup>18</sup> <http://www.thames-gateway.org.uk/documents/TGLP%20Sustainable%20Transport%20Stage%20III%20Refresh%20Final.pdf>

current parking strategy is contained in the Parking Enforcement Plan which was produced in 2007.

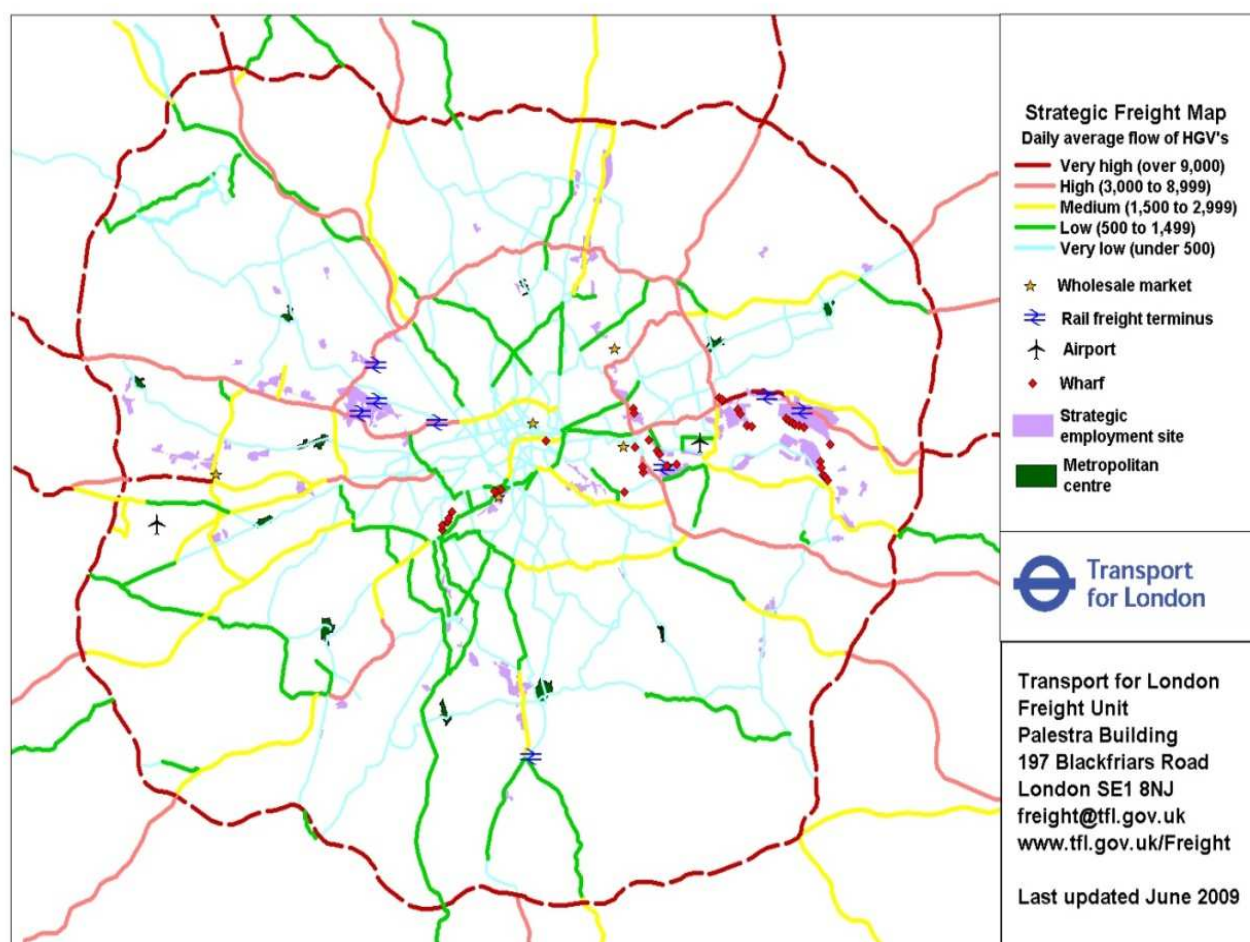
### 3.10 Freight

#### 3.10.1 Road and River Freight

The movement of goods by road through the Borough is a major contributor to poor air quality, especially in areas where there is a high density of goods vehicles and the potential for congestion and delay, for example in the approaches to the Blackwall Tunnel and the Woolwich Ferry. The plan shown as Figure 3.16 clearly shows the attraction for large vehicles for the A2 and Blackwall Tunnel, where their use of the highway is categorised as 'high'.

The Council is currently working on a local level to manage freight movement in new developments by requiring travel plans and strategic freight delivery plans as part of conditions attached to planning approvals. At the sub regional level, Greenwich Council is working with Thames Gateway London Partnership as part of cross borough group developing a Freight Quality Partnership aimed at improving the logistics of freight movement in the sub region.

**Figure 3.16: Freight Movement Flows**



### 3.10.2 Safeguarded Wharves

Greenwich has six wharves which have been safeguarded. These are Angerstein, Brewery, Murphy's, Riverside, Tunnel Refineries, and Victoria Deep Water Terminal. The Council supports the use of wharves for the movement of goods to help reduce freight movement on the existing road network which is less damaging environmentally and can help reduce the impacts on congestion.

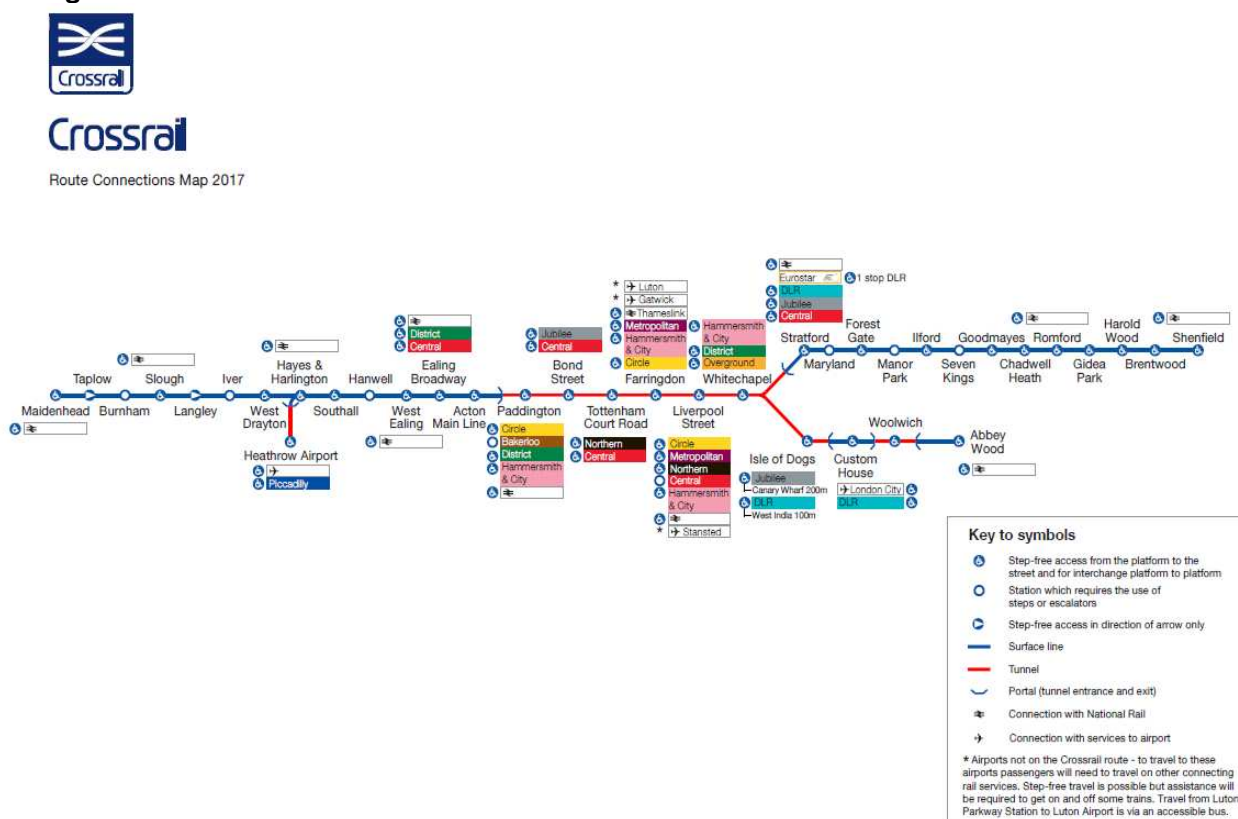
## 3.11 Future Major Schemes

### 3.11.1 Future Committed and Funded Schemes

#### Crossrail

Crossrail is scheduled to be complete in 2018; the south-eastern route will cross the Thames between Custom House and Woolwich and extend to Abbey Wood. At Abbey Wood a new high-level station will be built to accommodate the two new tracks and the interchange with the North Kent Line, and to allow accessible access to the bus interchange at Harrow Manor Way. There are future plans to extend the line to Ebbsfleet where it would link with the High Speed 1 line running from St Pancras, via the Channel Tunnel.

Figure 3.17: Crossrail route and connections

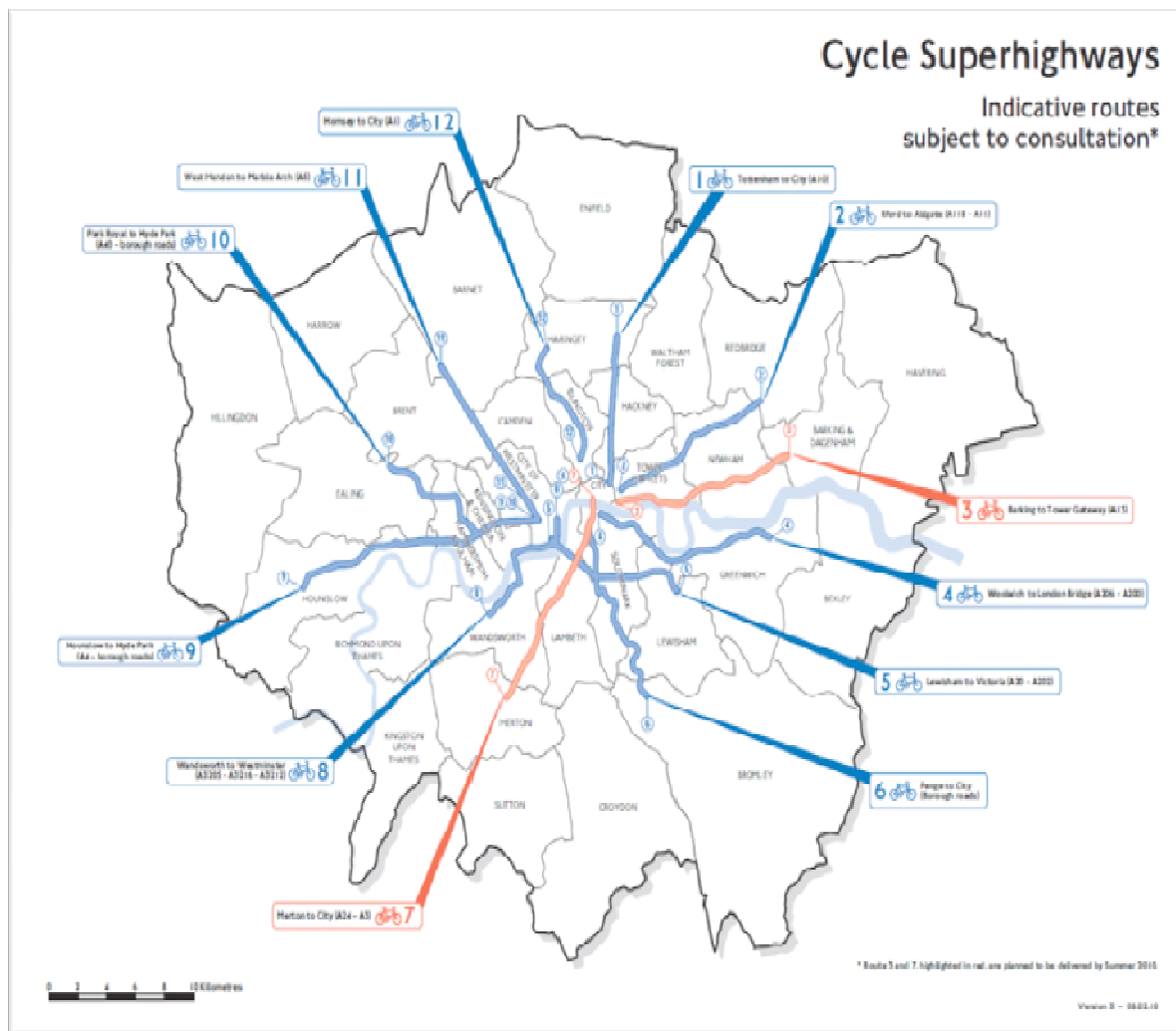


The economic case for a new station at Woolwich has been proven and it is to be built to the north of the A206, serving the town centre, the Royal Arsenal development, and linking with the DLR and the existing bus interchanges.

## Cycle Superhighways

Superhighways are a scheme proposed and funded by the Mayor of London which will create 12 new 'Superhighways' throughout London for cyclists, these will run on existing highways with priority/safety measures for cyclists. Route 4 runs from Woolwich to London Bridge and TfL currently plan to implement this in 2013/14

**Figure 3.18: Cycle Superhighways - Proposed Routes**



## Network Rail Capacity Enhancements

The most significant scheme being completed in CP4 (the current Network Rail funding period) will be infrastructure modifications to station platform length to enable 12-car trains to operate. This will be carried out at all stations in the Borough with the exception of Woolwich Dockyard where there is not room to increase the length due to the tunnels. Most stations only require relatively minor works, for example platform extensions, moving signals and/or the relocation of Driver Only Operation equipment.

**Table 3.8: Network Rail - Funded works in the south east sector<sup>19</sup>**

May 2010.	12 car trains to Dartford	Greenwich line 12 car platforms Bexleyheath line 12 car platforms Sidcup line 12 car platforms Hayes line 12 car platforms Grove park line 12 car platforms Power supply enhancements	Capability for 12 car operation on most suburban routes into Charring Cross and Cannon Street
2013 - 2016	Crossrail Abbey Woods works	New tracks and platforms for Crossrail services. Associated works between Plumstead and Belvedere to facilitate amended services during works	Temporary service changes during the period of work

### **Blackwall Tunnel Refurbishment**

In 2010 TfL began a project to refurbish the northbound Blackwall Tunnel. The scheme is due to be completed in late 2012, and while it does not enhance the capacity of the tunnel it will provide new safety features including ventilation, lighting, communications and CCTV.

### **Greenwich Peninsula Cable Car**

TfL are developing detailed plans to deliver a Cable Car link from Greenwich Peninsula to the Royal Docks for pedestrians and cycles. The scheme is set to be implemented pre Olympic Games and (although underwritten by TfL) funded by the private sector. While it will not provide additional capacity for the road network it will add resilience to the Peninsula's transport offer by linking the site to the DLR's Beckton extension, and providing a walking and cycling cross river option between the existing ones at Greenwich and Woolwich.

## **3.11.2 Future Unfunded or Uncommitted Infrastructure**

### **Thames River Crossings**

Following the cancellation of the Thames Gateway Bridge scheme (which would have provided a fixed river crossing at Gallions Reach, Thamesmead), the Mayor and TfL have acknowledged that given the planned growth in development across the Thames Gateway, demand for travel in South East London is increasing at a faster rate than other parts of the Capital, and problems of congestion at existing crossing points will get worse. This is accentuated when one of the crossings (or the M25 Thames crossing at Dartford) are temporarily unavailable, and the areas around the remaining crossings are quickly gridlocked.

With existing crossings operating at their capacity, accommodating significant traffic growth is likely to be unachievable in practice, which would impact severely on the regeneration of

<sup>19</sup> Network Rail, Moving ahead: Planning tomorrow's railways. Route Plan A Kent 2010.



the Thames Gateway. It is therefore important that the ability of commercial traffic to cross the river in the face of increasing traffic congestion at crossing points is considered a priority.

TfL are currently working towards a 'package of river crossings'. In the Examination in Public of the Mayor's Draft Replacement to the London Plan in July 2010, the following paragraph (6.37) has been added by the Mayor's Office:

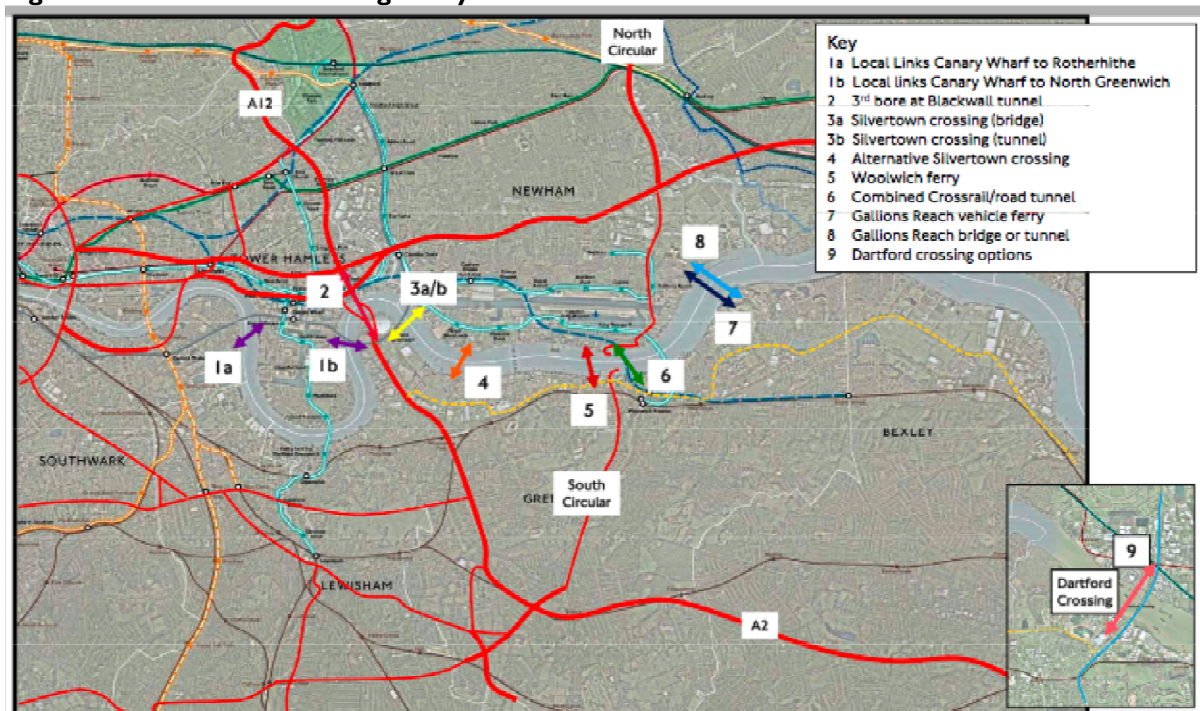
*The projected increases in jobs and population in the Thames Gateway will increase the problem of highway congestion and road network resilience at river crossings further. The Mayor is therefore supportive of additional road-based river crossings in east London as part of a package of transport improvements.*

In addition to the Cable Car, current schemes which TfL are investigating include:

- A vehicle tunnel from the A102 on Greenwich Peninsula to Silvertown,
- Improvements to the Woolwich Ferry,
- A vehicle ferry at Gallions Reach,
- A fixed link at Gallions Reach.

While welcomed in principle, none of these schemes have a funding commitment, or form part of the TfL Business Plan, which sets out the TfL spending programme to 2018

**Figure 3.19: TfL River Crossing Study Areas**



### North South 'Fixed Links'

Greenwich is bus reliant for public transport links between the north and south of the Borough. The Council has been undertaking feasibility studies of schemes such as light rail



extensions between the north and south of the Borough (linking North Greenwich, Kidbrooke, Eltham and beyond).

While, in the current economic climate, these may be considered prohibitively expensive by TfL, their importance in the long term capacity planning should mean they are acknowledged in the Mayoral and TfL long term strategies; currently the Council is continuing to stress the importance for interim measures, such as rapid bus links, to be implemented to test their demand.

### **Mitigation Measures for the Cancellation of Greenwich Waterfront Transit (GWT)**

GWT was a bus based rapid transit system, which was designed by TfL to link the transport hubs of Abbey Wood and North Greenwich via Thamesmead, Woolwich and Charlton. The scheme was scheduled to be delivered by TfL in time for the 2012 Olympics.

In 2009 the Mayor of London cancelled the funding for the scheme and has subsequently removed it from the Draft London and Business Plans.

The Council believes it is crucial for their delivery to link the residential and Opportunity Areas of Thamesmead/Abbey Wood, Woolwich and Charlton with major transport hubs and is continuing to work with both TfL and new developments to try and secure commitment to the provision of a rapid bus service which mitigates in part for GWT and provides this linkage.