

# West London

Sub-regional Transport Plan update report, 2012/13



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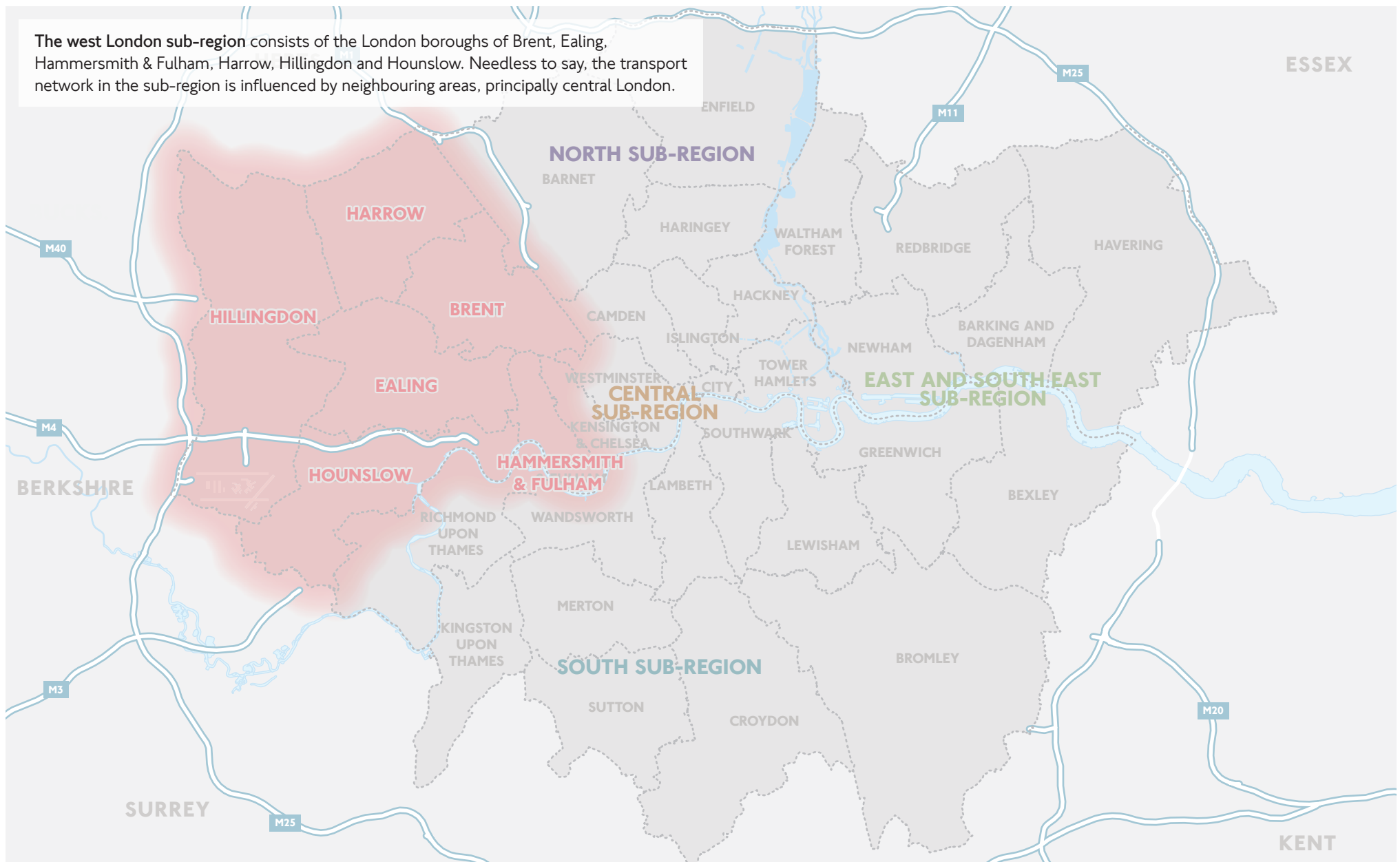
## **Images**

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The west London sub-region consists of the London boroughs of Brent, Ealing, Hammersmith & Fulham, Harrow, Hillingdon and Hounslow. Needless to say, the transport network in the sub-region is influenced by neighbouring areas, principally central London.





# Foreword

The last year has been a busy and successful one for transport within London, with the Capital not only responding to the challenges of events such as the Diamond Jubilee and the 2012 Games, but also delivering the local transport improvements necessary for the people who live and work across the city.

I am pleased to see the strategic collaboration continue between Transport for London (TfL), WestTrans, the West sub-region's boroughs and other key stakeholders, such as businesses, Business Improvement Districts and neighbouring authorities, through the sub-regional panel. This is of course complementary to our day-to-day engagement.

The Sub-regional Transport Plan (SRTP) has been updated to showcase work in the West sub-region and to provide a short update on:

- » what has happened over the last 12 months
- » what is committed

- » what future opportunities exist to address the remaining challenges

This annual update will also help boroughs with the development of the 2014/15 Local Implementation Plan programmes. In addition, the updated plan will help TfL consider priorities for the business planning process to address the medium to longer term challenges.

The SRTP is accompanied by a map for the West sub-region which provides a useful summary of the update and a snapshot of the challenges, priority work areas and opportunities we can all work together to address over the coming years.

I would like to thank you for all the support and effort that has gone in to making the sub-regional collaboration such a success and I look forward to working with you over the coming year.



**Sir Peter Hendy CBE**  
Transport  
Commissioner

West London contains a wide mix of environments; from attractive open spaces, a range of housing types, to key town centres and industrial sites. It also includes the UK's only hub airport and plays host to many major blue chip companies. While the sub-region benefits from a generally good level of connectivity, including a number of strategically important radial and orbital transport corridors, it remains vital that Transport for London, local boroughs, WestTrans, West London Businesses, interest groups and employers continue to work together for the benefit of this vitally important part of the country.

As a key driver behind the UK economy, we are forecast to experience significant growth over the next two decades, with Opportunity Areas (including Old Oak Common, Wembley City, Southall Gasworks) and other key locations likely to see extensive development and intensification.

Whilst the impact of large scale infrastructure projects such as Crossrail and High Speed 2 are likely to encourage growth and ensure West London retains its prosperity, we must not overlook the importance of high quality environments for walking and cycling. As thousands more homes and workplaces are developed in the next few decades, improving connections to town centres, transport hubs and making orbital cycling trips easier are essential parts of promoting sustainable growth and reducing unsustainable dependency on the car. This document aims to promote a range of solutions to help meet west London's needs, fostering greater collaboration between those agencies whose dedication is vital to achieving our shared goals.

**Cllr Bassam Mahfouz**  
Transport and Environment  
Portfolio Holder  
London Borough of Ealing

# Working in partnership

The West Sub-regional Transport Partnership provides a forum in which to openly discuss the transport issues facing west London and for all parties to share information and news on upcoming projects and policies. In addition to the Partnership meetings, sub-regional 'Panel' meetings were held, bringing together borough heads of transport, WestTrans, TfL, West London Business and other stakeholders such as Heathrow Airport Limited.

The partnership met on the following dates:

- » 26 January 2012
- » 22 March 2012
- » 24 May 2012
- » 26 July 2012
- » 27 September 2012
- » 22 November 2012
- » 22 January 2013
- » 21 March 2013

Additional meetings on thematic topics were held, including:

- » 3 February 2012 (corridors workshop)
- » 24 April (work programme)
- » 12 June (meeting with Tim Forrester)
- » 21 August (corridor meeting)

The meetings were chaired by west London sub-regional Ambassador Alex Williams, and covered key leading issues facing west London.

The following topics were discussed during 2012/13:

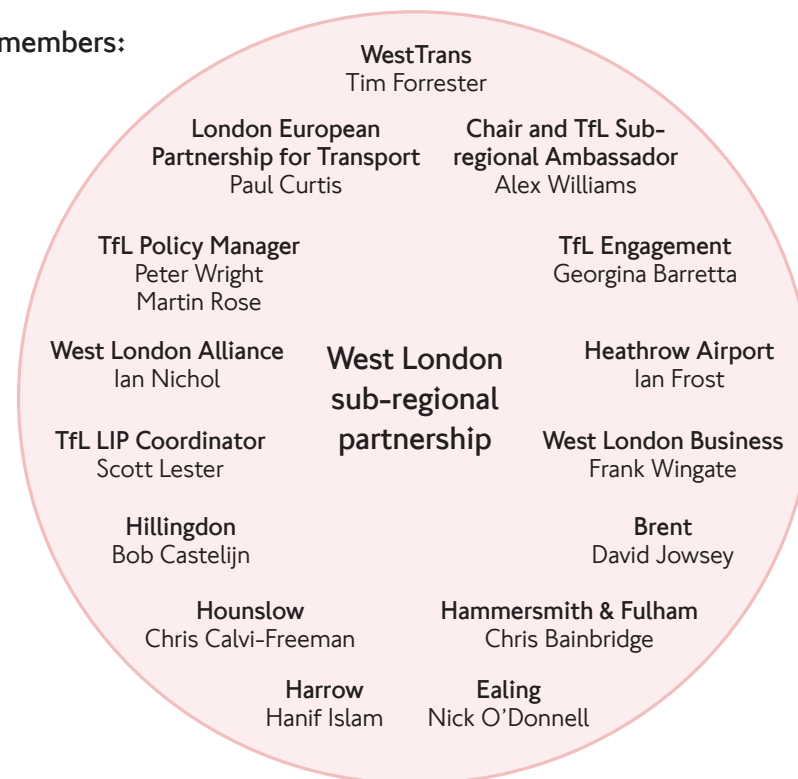
- » Priorities for 2012/13
- » Roads Task Force
- » Bus framework
- » Improvements to cycling and the cycle network
- » London 2012 Olympic Games/legacy
- » 20mph zones
- » Road Safety Action Plan
- » Air quality

The panel meetings held on 22 January 2013 discussed the 2013 update and priorities.

The panel meetings will continue onwards with meetings scheduled to take place on the following dates:

- » 16 May 2013
  - » 25 July 2013
  - » 26 September 2013
  - » 28 November 2013
  - » 23 January 2014
- Further dates are to be arranged.

## Panel members:



# Travel in West London

The majority of trips (56 per cent) originating in west London are undertaken by public transport, walking or cycling. Car and motorcycle has a 43 per cent mode share, walking 29 per cent, followed by bus with a 15 per cent mode share. Rail modes, including Underground and Overground services, account for 10 per cent of trips. In 2012, cycle mode share remained stable at three per cent and taxi and other modes comprised just one per cent of trips.

West London's mode share for trips using rail and walking are both three per cent below the pan-London average, whereas car and motorcycle use is seven per cent above the average. However, the sub-region incorporates a diversity of environments and therefore travel characteristics across inner and outer London. For instance, households in large parts of Hammersmith and Fulham, and town centre locations tend to make less use of private modes.

In line with employment and population forecasts, travel in London by residents and visitors will increase substantially by 2031.

There will be increased travel to and within west London for employment and educational purposes with greater demands placed on shopping, leisure and tourist facilities within the region.

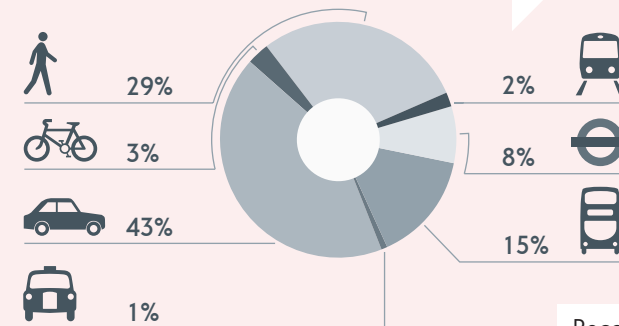
There is also a significant opportunity to increase the current cycle and walking mode share in the west sub-region and work towards achieving the Mayor's Transport Strategy (MTS) mode share assumptions to 2031. TfL will continue to work with the sub-regional partnership on how to make the most of these opportunities.



Modal share for London residents in the west London sub-region  
London Travel Demand Survey, 2011/12 (Average day/seven – day week)

There was a 9 per cent increase in cycle flows on the TLRN major road network in 2012

By the end of 2012, London Overground carried 120 million passengers - nearly four times the number carried when it launched in 2007



Volumes of vehicles on London's road network are continuing to fall

More than 70% of bus stops within the west sub-region are fully accessible

Record patronage was seen on the underground in 2012

# Addressing the challenges

When the West Sub-region Transport Plan was first developed in 2010 it helped to translate the MTS goals, challenges and outcomes to a sub-regional level. It was agreed with boroughs that whilst all MTS challenges must be considered across London, and addressed locally through Local Implementation Plans (LIPs), there were some which would benefit from concerted effort at a sub-regional level.

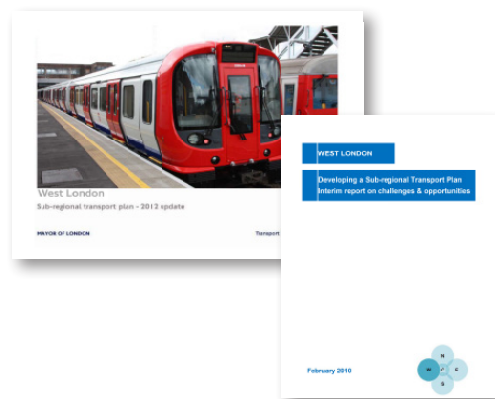
Consequently, the cross-cutting challenges of improving air quality, reducing CO<sub>2</sub> emissions and achieving the targets for - and desired outcomes from - an increase in the mode share of cycling and walking were identified as challenges within all sub-regions.

In addition to these challenges, five sub-regional challenges were identified and agreed for the west London sub-region.




On an individual basis, each west London local authority delivers its responsibilities effectively and efficiently in a very challenging financial and operational environment

to address these and other challenges. However, as a number of key issues are cross-boundary, key priority work areas for the sub-regional were agreed.

While each priority area can be addressed in isolation, the inter-related nature of these issues illustrate clearly that an integrated approach is required. This document is intended to update local authority members and staff - and representatives of other organisations participating in sub-regional transport planning - working to improve transport in West London with information about recent investments, and help guide future transport planning as the area faces the challenges of future growth.










## Challenges in every sub-region

-  Improve air quality to meet and exceed legal requirements and ensure health benefits for Londoners
-  Transform the role of cycling and walking in the sub-region
-  Meet CO<sub>2</sub> targets

## West London-specific challenges

-  Enhance east-west capacity and manage congestion
-  Improve access to, from and within key locations
-  Enhance the efficiency of freight movement
-  Improve north-south public transport connectivity
-  Improve land-based air quality

## What are the priority work areas?

- Cycling enhancements with connections across boroughs 
- WestTrans is leading on a cycle strategy for the west sub-region. 
- Investing in area, corridor, and junction studies to address challenges on the road network 
- Freight routing enhancements, including journey planning 
- Development of Old Oak Common Opportunity Area Planning Framework (including Overground and Crossrail spur) 
- Smarter Travel initiatives targeted at key trip generators (NHS, HE/FE, Faith, Hotels, Businesses) 
- Cross-borough Rail and Underground station access schemes 



## Supporting growth areas and regeneration

### Growth and Regeneration

This update to the Sub-regional Transport Plan presents an opportunity to reflect on how the sub-region is accommodating and supporting this growth, both in terms of developing existing communities and creating new ones, while achieving the goals set out in the MTS.

A significant proportion of the growth in the west sub-region is projected to be within the identified seven Opportunity Areas and four Areas for Intensification.

Since the last update, work has continued on a number of key areas in the sub-region, as described below.

### Earls Court Opportunity Area Planning Framework (OAPF)

By 2031, redevelopment of a number of sites could see the area accommodate a further 7,000 jobs and 4,000 new homes. Located close to central London, with good public transport connections.

### White City Opportunity Area Planning Framework

By 2031, a total of 8,400 new jobs and 6,800 homes could be accommodated in White City Opportunity Area. Key issues to be addressed include public transport capacity constraints, highway congestion – at key junctions and

improving physical connectivity overcoming severance caused by transport infrastructure.

### Southall Opportunity Area Planning Framework

The wider Southall OAPF area contains a large number of sites with capacity for 6-7,000 homes and 2-3,000 jobs. It contains a diverse, thriving local economy, but at the same time, Southall is one of the most deprived locations in the country. Sites include the National Grid 'Gasworks' site and the town centre, market and Broadway.

### Wembley

By 2031 a total of 11,500 new homes and 10,000 jobs could be accommodated in the Wembley Opportunity Area. Key issues identified include improving cycle/walking links and overcoming severance, integrating the bus network as development comes forward and highway congestion at key junctions. TfL and LB Brent have collaborated to develop a Bus Strategy and model the impacts of cumulative development.

#### London Plan projections for west London sub-region



Population  
1.6m

1.8m by 2031



Jobs  
690,000

757,000 by 2031



Households  
600,000

670,000 by 2031



## Supporting growth areas and regeneration

### Heathrow Opportunity Area (12,000 new jobs and 9,000 new homes)

This OA contains a range of locations with potential to contribute to economic development. Heathrow 'north' (including the A4 corridor) will continue to benefit from airport related growth – e.g. transport and logistics, office premises and hotels. Stockley Park has a particular draw for a diverse range of office-based activity which benefits from close international connections.

Opportunities for new business and some residential development are anticipated at: RAF Uxbridge, Uxbridge Business Park, the Hayes-West Drayton corridor, Hayes and Feltham town centres. TfL traffic engineers are aware of congestion issues in the area – for instance, at Bulls Bridge Roundabout (A312 Hayes Bypass) and will engage with local boroughs to better understand the causes of congestion and potential solutions.

### Old Oak Common Opportunity Area Planning Framework

A Planning Framework is currently being developed by TfL, the GLA and borough partners. The OAPF will detail how the planned growth in the areas can be accommodated, capitalising upon excellent levels of public transport connectivity at the proposed Old Oak Common interchange, provided by Crossrail, High Speed 2, the Great Western Main Line and potentially the Overground. The area represents an opportunity to secure improvements that go beyond the station footprint, connecting with communities, local businesses and enhancing employment opportunities by increasing access to public transport and maximising the benefits from regeneration. The area could see approximately 100,000 additional jobs and 19,000 homes. The Old Oak Common Opportunity Area Planning Framework includes the Kensal Canalside OAPF in Kensington and Chelsea.

The cumulative effect of development in West London could be significant, particularly near to Heathrow Airport and within the 'Western Arc' extending from Wembley through Old Oak Common, White City and Earl's Court. There are a number of large Opportunity Areas in neighbouring sub-regions such as Burnt Oak / Colindale and Vauxhall, Nine Elms and Battersea.

TfL is undertaking further work to better understand the potential effects and interventions which may be required to reduce demand and/or increase capacity and reliability of transport networks. These interventions may include new transport services and Travel Plans to encourage a more efficient use of existing facilities, including greater levels of walking and cycling.

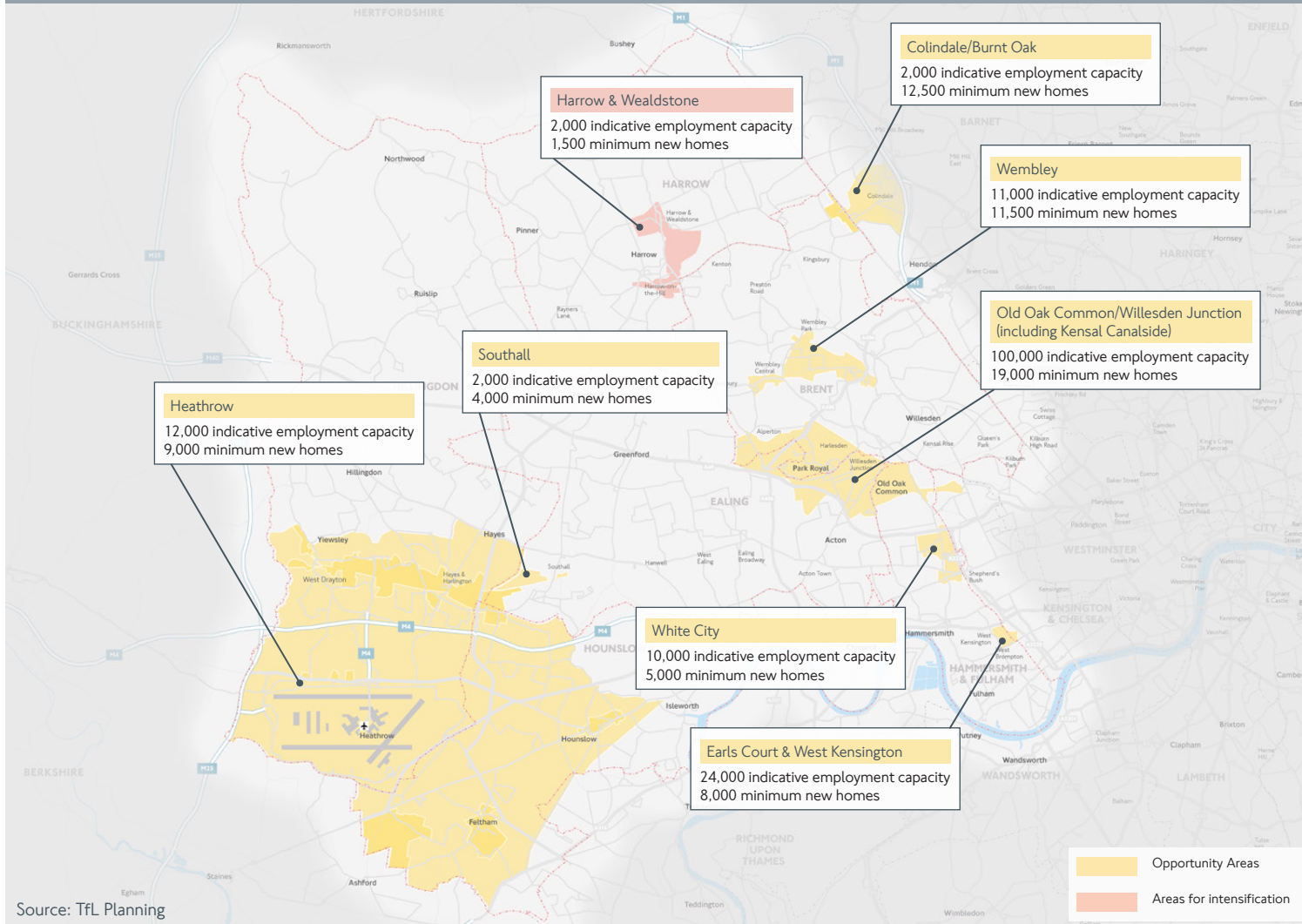
### Travel Plan monitoring

In June 2012, a full-time Travel Plan Monitoring Officer was appointed by West Trans in order to help realise the full range of benefits from Travel Plans secured across member boroughs by encouraging a more robust and comprehensive monitoring of their implementation and effectiveness.

A database of all sites with Travel Plan requirements has now been created; surveys and monitoring reports for 93 sites were secured, encouraging interest in establishing up a new London-wide Travel Plan database. Knowledge-sharing events have been organised in order to help practitioners preparing and reviewing plans in the future secure an effective and ambitious product.

The combination of well-designed Travel Plans, a robust legal framework, and strong working relationships with site managers will ensure that Travel Plans are effective in minimising site-based car traffic generation and maximising sustainable transport choices.

West London Sub-region Growth and Regeneration Areas



Source: TfL Planning

## Supporting growth areas and regeneration

### Updated Growth Forecasts

The GLA population projections form the basis of the Mayor's strategies, being a key input to the London Plan and the MTS, together with related modelling and analysis.

The 2011 London Plan estimated that London's population would reach 7.8 million by 2011. However, recent population projections taken from the 2011 Census shed new light on the distribution of growth across the sub-regions, with the population now estimated to be more than 8.2 million.

The population estimates over the past decade were based on the 2001 Census, with the population being estimated every year by adding births, subtracting deaths, and adding in any net international migration that had taken place since 2001. The latest figures are based on the 2011 Census, which provides a more accurate population estimate than the annual mid-year estimates.

The updated figures show that populated growth in west sub-region between 2011 and 2031 is even greater than the previous projections underlying the London Plan at an additional 205,000 people, which represents 14% of the overall growth in London.

Growth Projections in London 2011 and 2031





### TfL Sub-regional models

The TfL suite of multi-modal models represent a significant investment in transport planning for London and their development has helped to improve the capability to analyse and understand various situations. As the impacts of the updated Census continue to be understood, the models will be updated appropriately in order to continue to provide this key tool for London.

TfL's suite of strategic multi-modal models continues to be used in a variety of areas – with around 50 external uses to date. The suite consists of:

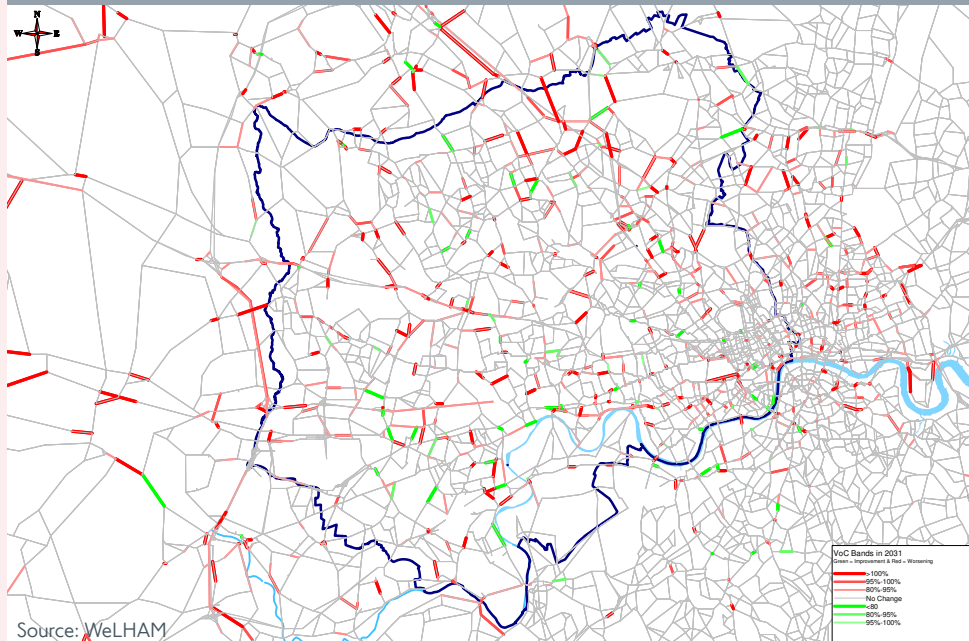
- » Demand modelling, primarily through London Transportation Studies Model, London Land Use Transport Interaction Model and the London Regional Demand Model

- » Five highway assignment models, one for each sub-region
- » Public transport modelling through Regional Railplan

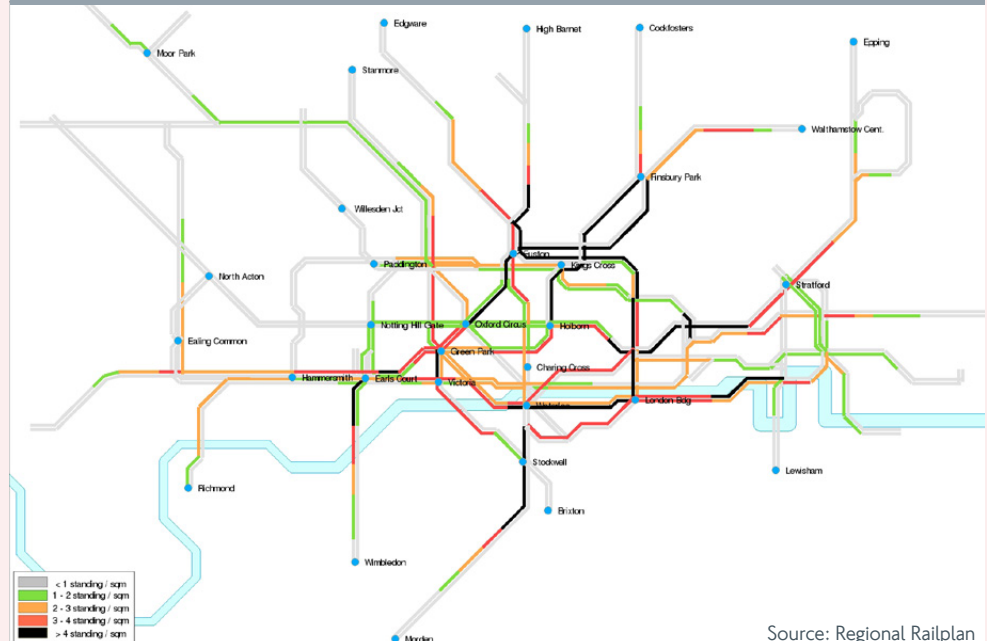
For example, in 2012 uses have included analysis for the Southall and Wembley Opportunity Area Planning Frameworks.

For more information please contact: Alison Cowie, [alisoncowie@tfl.gov.uk](mailto:alisoncowie@tfl.gov.uk)

Change in Volume over Capacity between 2009 and 2031 in the morning peak



Crowding on the London Underground and DLR network in the morning peak for 2013





## London 2012 Olympic and Paralympics Games and legacy

London's transport networks supported a great 2012 Games with services operating well and carrying record numbers of passengers, while also keeping London moving and open for business.

Transport was widely recognised as one of the key successes of the Games, delivering a legacy of improved transport infrastructure and operational performance, accessibility, demand management, customer information and unprecedented levels of collaboration between transport authorities and operators.

This transport success was built on a £6.5bn investment in transport infrastructure and improved transport links, delivered a year ahead of the Games and providing an early legacy of increased capacity and more reliable services which supported the Games but will also provide greater access to jobs, leisure and education for generations to come.

As London looks back on a very successful Games, attention now turns to securing their legacy.

The Olympic and Paralympic Transport Legacy Action Plan, 2012 sets out a number of actions.

Key transport legacy actions include:

- » Building on improved transport capacity and reliability from the Games related new infrastructure by continuing to invest in improvements to support development
- » Better public transport and road network operations – including the identification of faults before they occur, and continuing use of 'rapid response' arrangements on the Tube
- » A more accessible transport system – with both specific and general improvements either put in place for, or piloted during, the Games
- » Better partnership working among transport providers to provide an integrated customer experience across public transport - using Games-time arrangements such for future major events and incidents

- » Harnessing the opportunities and lessons learned from Games time travel demand management (TDM) initiatives
- » Building on the success of the Travel Ambassador and Incident Customer Service Assistant volunteering programmes during the Games
- » Continued engagement with freight operators and businesses to build on innovative and flexible freight practices employed during the Games
- » A comprehensive review of signage on the TfL network in light of the success of the integrated magenta signage scheme used during the Games

Travel in London 5 includes a spotlight chapter on the demand and operational performance during the Games. Travel in London and related publications will continue to explore lessons from the London 2012 transport

experience. TfL will continue to develop and work with others to embed beneficial transport policy and operational initiatives based on these for the future.



## Improving air quality and reducing CO<sub>2</sub> emissions

### Low Emission Zone

In 2012, stricter requirements were introduced for vehicles entering the Low Emission Zone. All vans must now meet a Euro III standard requirement for particulate matter and 99 per cent of these comply with the new LEZ standard. All HGVs, buses and coaches must now meet a Euro IV standard for particulate matter and around 96 per cent of these vehicles comply with the new LEZ standard.

From 2015, all TfL buses will be required to meet a Euro IV standard for nitrogen oxides (NO<sub>x</sub>), as well as particulate matter. This will be achieved through a combination of new Euro VI buses and innovative retrofitting.

### London Buses

TfL is working to reduce the environmental impact of its bus fleet by trialling innovative new technologies; hydrogen, and increasing the number of hybrid buses and trialling electric buses in 2013.

The hybrid fleet is set to reach 1,600 vehicles by 2016, including 600 New Bus for London vehicles (20 per cent of the fleet). The deployment of new hybrid buses will take account of local air quality considerations.

The Mayor has also announced his ambition for all TfL buses operating in central London to be hybrid by 2020 (approximately 30 per cent of the fleet).

In 2012, the New Bus for London prototype was trialled along route 38. This is one of the most environmentally friendly vehicles of its kind, emitting half the NO<sub>x</sub> and CO<sub>2</sub> compared to conventional diesel buses.

### Taxis and private hire vehicles

Age limits and new minimum emissions standards have been introduced for licensed taxis and private hire vehicles. From 2012, taxis have to meet a 15-year age limit and a minimum Euro V standard. A 10-year age limit now applies to private hire vehicles plus new private hire vehicles have to meet

the Euro IV standard as a minimum and be no older than five years old.

### Electric vehicles

Electric vehicle charging points continued to be delivered through Source London in 2012, and the number of charge points will rise to 1,300 in 2013. With around half of transport CO<sub>2</sub> emissions coming from private cars, encouraging uptake of electric vehicles will be among the key measures to reduce CO<sub>2</sub> emissions.

### Clean Air Fund 1

A £5m Department for Transport (DfT) fund implemented by

TfL demonstrated that local measures can play a supporting role to London-wide emissions reduction measures, including:

- » Bus diesel particulates filters which provide a long term benefit as buses are in service for a minimum of three years
- » Dust suppressants at waste/construction sites
- » 'No idling' marshals as 'no engine idling' provides a short term tangible emission reduction benefit
- » Green infrastructure has local air quality and wider benefits



## Improving air quality and reducing CO2 emissions

### Clean Air Fund 2

A second Clean Air Fund, led by the GLA, will focus on reducing NO<sub>x</sub> emissions from transport and non-transport sources at air quality focus areas.

Measures include:

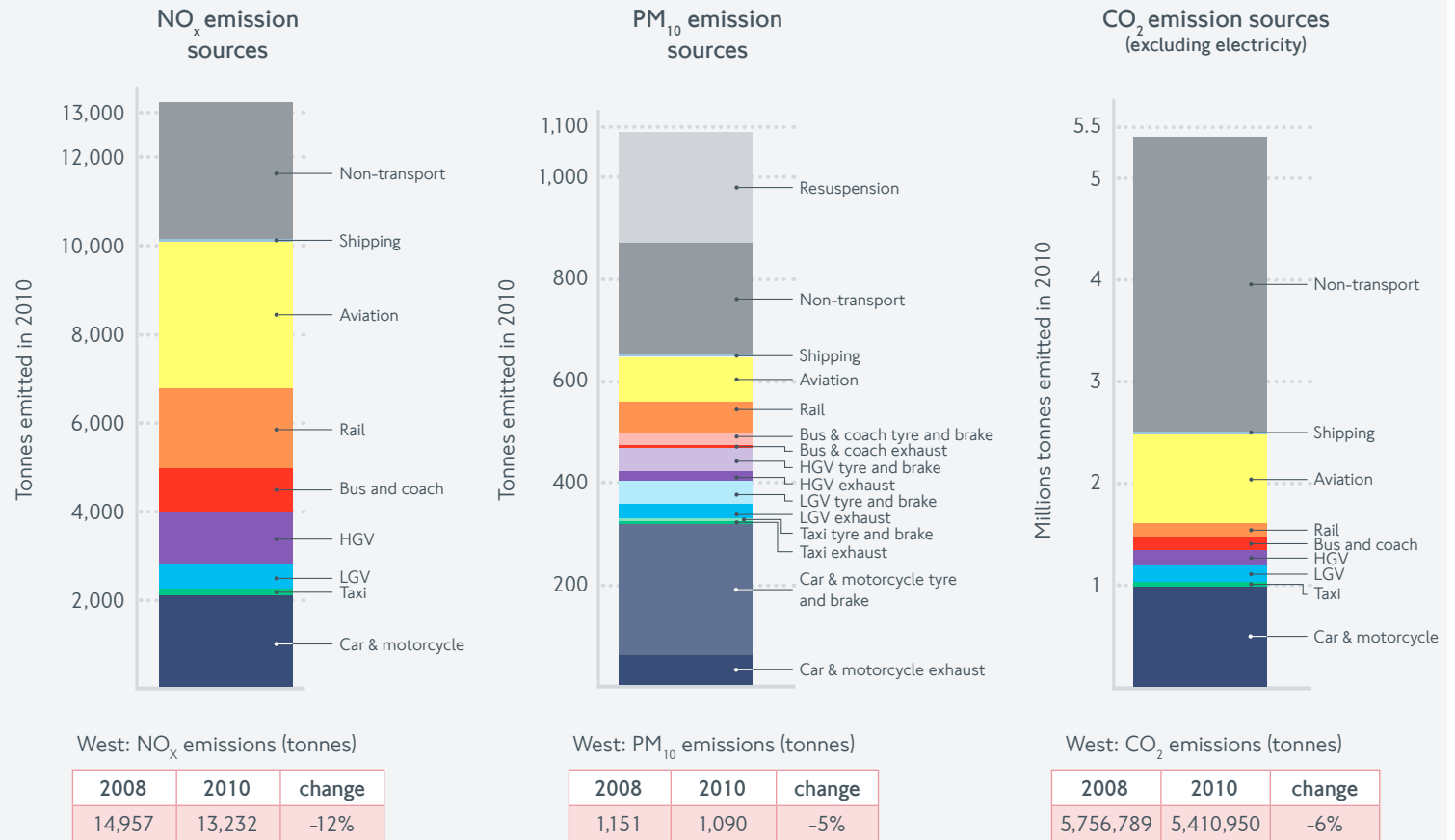
- » Clean Air Zones at schools
- » Business engagement
- » Green infrastructure
- » Clean Air 'champions' scheme

### Mayor's Air Quality Fund

From Spring/Summer 2013, a new fund totalling £6m over three years and £20m over 10 years will be made available to London boroughs determined to make a difference and implement local, innovative, transport-related air quality measures. Information can be found on the Borough Extranet.

### London Atmospheric Emissions Inventory (LAEI) - 2010 estimate

The updated LAEI is an estimation of emissions from different sources across London in 2010 using reported or observed activity data. It also contains a back calculation to 2008 and forecasts for 2012, 2015 and 2020.



## Making efficient use of the road network

### Roads strategy

Roads and streets are vital to the Capital's economy and to movement around the city; almost all trips start or end by road, and roughly 80 per cent of all passenger trips and 90 per cent of freight trips in London are wholly made by road. Roads and streets also contribute to the quality of life of Londoners as places where people live, shop, work and play.

London's roads face a number of challenges in the short, medium and long term. These challenges include conflicts between competing users, accommodating population and employment growth, rising expectations for high quality public space and the imperative to improve road safety and improve the environment.

The Mayor has established a Roads Task Force to help develop a strategic direction for London's roads and streets. Further information is accessible online at [www.london.gov.uk/priorities/transport/investing-transport/roads-task-force](http://www.london.gov.uk/priorities/transport/investing-transport/roads-task-force).

### Road safety

Recent years have seen substantial and sustained reductions in the number of casualties from road traffic collisions in London.

The number of fatalities and serious injuries has fallen in all categories except cycling, where there has been a slight increase, but in a period that has seen a far greater rise in the numbers taking up cycling.

In Greater London the number of people killed or seriously injured (KSI) from road traffic collisions fell by three per cent in 2011 compared to 2010 (from 2,886 to 2,805 – see 'Casualties in Greater London during 2011 Factsheet': [www.tfl.gov.uk/assets/downloads/corporate/casualties-in-greater-london-2011.pdf](http://www.tfl.gov.uk/assets/downloads/corporate/casualties-in-greater-london-2011.pdf)).

In May 2013 the new Road Safety Action Plan was published which set out priority areas for action to deliver road safety improvements to 2020.

A new Road Safety Reference Board is proposed to steer the implementation

of the plan and road safety policy. This will include borough representatives and road safety stakeholders.

The Road Safety Action Plan includes a target for London to achieve a 40 per cent reduction in KSI casualties by 2020.

There are further proposals to implement new safety action plans for pedestrians and motorcyclists, as well as updating the Cycle Safety Action Plan.



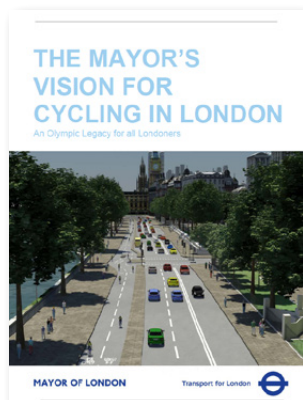


## Transforming the role of cycling

This year the Mayor announced his vision for cycling in London with an aim to achieve an Olympic legacy for all Londoners.<sup>1</sup> Following the 2012 TfL Business Plan, the level of funding for cycling in the Capital now takes London towards the level of spend seen in other leading cities with high cycling levels. Initiatives will focus on four themes:

- » A Tube network for the bike
- » Safer streets for the bike
- » More people travelling by bike
- » Better places for everyone

Borough-wide monitoring will be undertaken by TfL to build a robust understanding of cycling levels across London.



### A Tube network for the bike

The Barclays Cycle Superhighway programme is on course to be completed by 2016<sup>1</sup>. Four routes are already in place, including CS2, CS3, CS7 and CS8. All future superhighways will be delivered to much higher standards and closer to international best practice. There will be an additional east-west segregated Superhighway delivered by 2016 as part of 'A Crossrail for the bike'.

New funding will be made available to significantly enhance London's cycle network. TfL is working in partnership with the boroughs to create a network of cycle routes that will upgrade popular, high-volume cycling routes in central London to form an exemplar 'grid'. This will be complemented by further investment in a London-wide network of guided quiet routes on low-traffic backstreets and greenways ('quietways'), including transformative continental-style cycling facilities in Outer London town centres ('mini-Hollands').

<sup>1</sup> <http://www.tfl.gov.uk/roadusers/cycling/15832.aspx>

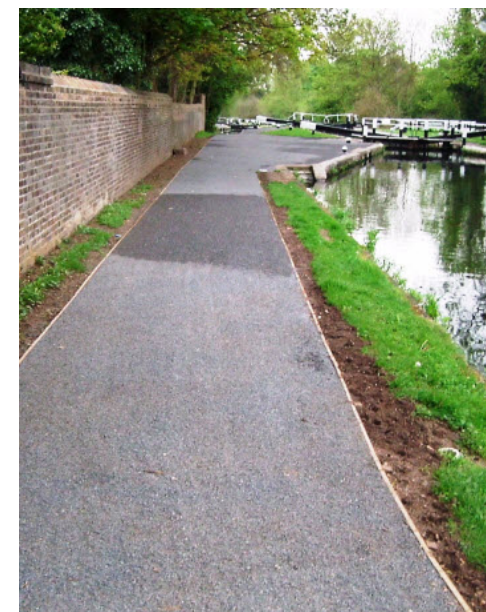
### Safer streets for the bike

As part of the Better Junctions programme, an initial review of more than 500 junctions was undertaken in 2012 to improve safety for cyclists and pedestrians. The programme will now see priority placed on major improvements across London.

Cycle theft will be tackled through a joint initiative between TfL and policing partners. The Metropolitan Police Service's Cycle Task Force will be expanded to improve enforcement against anti-social behaviour, including cyclists that disobey traffic signals and motorists that encroach advanced stop lines.

Cycle safety is at the forefront of ensuring that London becomes a 'cyclised' city. A significant proportion of cycling fatalities involve large commercial vehicles. An extensive programme of work is underway to address this concern, of which more detail can be found under the Freight section. Eight full-time Metropolitan Police officers will be funded to investigate HGV collisions with cyclists.

Good progress has been made on actions in the Mayor's Cycle Safety Action Plan (2010) and work is now beginning on the second Cycle Safety Action Plan which should be published later in 2013 and will provide further actions and direction for addressing cycle safety. The plan was developed by the Cycle Safety Working Group, which is made up of a number of stakeholder organisations, boroughs and interest groups.





### More people travelling by bike

Secure and convenient cycle parking facilities are important to helping people cycle more often. A comprehensive programme is underway to improve parking facilities at homes, workplaces and stations across the Capital. Subject to planning and support from Network Rail, a Dutch-style cycle superhub will be introduced in at least one central London mainline rail terminus.

Cycle training will continue to be available to all children in London and complemented by 'Cycle to School Partnerships', which will improve cycling routes to schools. More funding for adult cycle training will be allocated, alongside major safety education campaigns undertaken in partnership with the boroughs.

More than 20 million trips have now been made using Barclays Cycle Hire. This is a testament to the success of the scheme and TfL will continue to work with the boroughs to ensure

the cycle hire network is working as well as it can, which includes an expansion towards the end of 2013.

### RideLondon

It is the commitment of TfL and the boroughs to inspire the next generation of cyclists. Every year, London will celebrate its place at the forefront of world cycling and ensure a fitting legacy to the sporting success of the London 2012 Olympic and Paralympic Games, with an annual festival of cycling known as RideLondon.

### Better places for everyone

It is widely recognised that an increase in cycling will benefit all Londoners. Investment in cycling improvements should create better neighbourhoods, encourage more prosperous places, improve the perception of cyclists, ease demands on the public transport network and ensure the Mayor and boroughs reduce health inequalities in the Capital.



## Supporting efficient freight and servicing

### Safety

TfL and the freight industry continue to work together to promote safety, in particular regarding conflicts between freight vehicles and cyclists.

Between 2008 and 2011, 56 per cent of the cycling fatalities in London involved large commercial vehicles, including a high per cent of construction vehicles, while 15 per cent of pedestrian fatalities involved large commercial vehicles.

The 'Exchanging Places' events run by the Metropolitan Police Service's Cycle Task Force aims to raise awareness of visibility issues for both categories of road users. TfL also lends support to the 'Safer Lorries, Safer Cycling' campaign. Boroughs play a vital role in devising and delivering road safety schemes, for instance Hammersmith and Fulham has led an award-winning programme of awareness training for lorry drivers and cyclists.

TfL is now working with vehicle manufacturers, the Mineral

Products Association, the European Commission and others to implement the recommended actions within the independent Construction Logistics and Cycle Safety Report, 2013. Actions include changes to operations such as adjusting delivery windows and improvements to vehicle design to reduce blind spots.

### Fleet Operator Recognition Scheme (FORS)

This scheme has grown in size over the past year, with approximately 40 per cent of all freight vehicles operating in London now registered members. This comprises a 35/65 per cent split between vans and lorries.

### Rail freight

Rail freight continues to provide an important role for the carriage of bulk commodities and containerised goods and use is forecast to increase significantly.

Over the next few years extra deep-sea shipping capacity is likely to increase pressure for freight paths on the North London line.

Enhancements to capacity, including diversionary routes and the 'electric spine' are made within Network Rail's recently announced Strategic Business Plan for 2014-2019.

### Connections with High Speed 2 (HS2)

TfL continues to work with HS2 Ltd to ensure that the opportunities for using the conventional and high speed rail networks for freight are maximised, and that any risks to existing or future operations can be avoided or mitigated.

### Waterborne freight

A range of opportunities exists to expand the range of freight carried by water, including solid waste, recyclates and consumer goods.

The recommendations of the forthcoming Safeguarded Wharves Implementation Report will be designed to ensure a viable series of wharves exists to enable east-west movement across London, enabling mode shift from road.

As new development sites are considered, along with Thames Water's projects and the renewal of waste infrastructure, TfL will work with partners in the GLA, boroughs and others to maximise the opportunities for modal shift during the construction process and operational life.





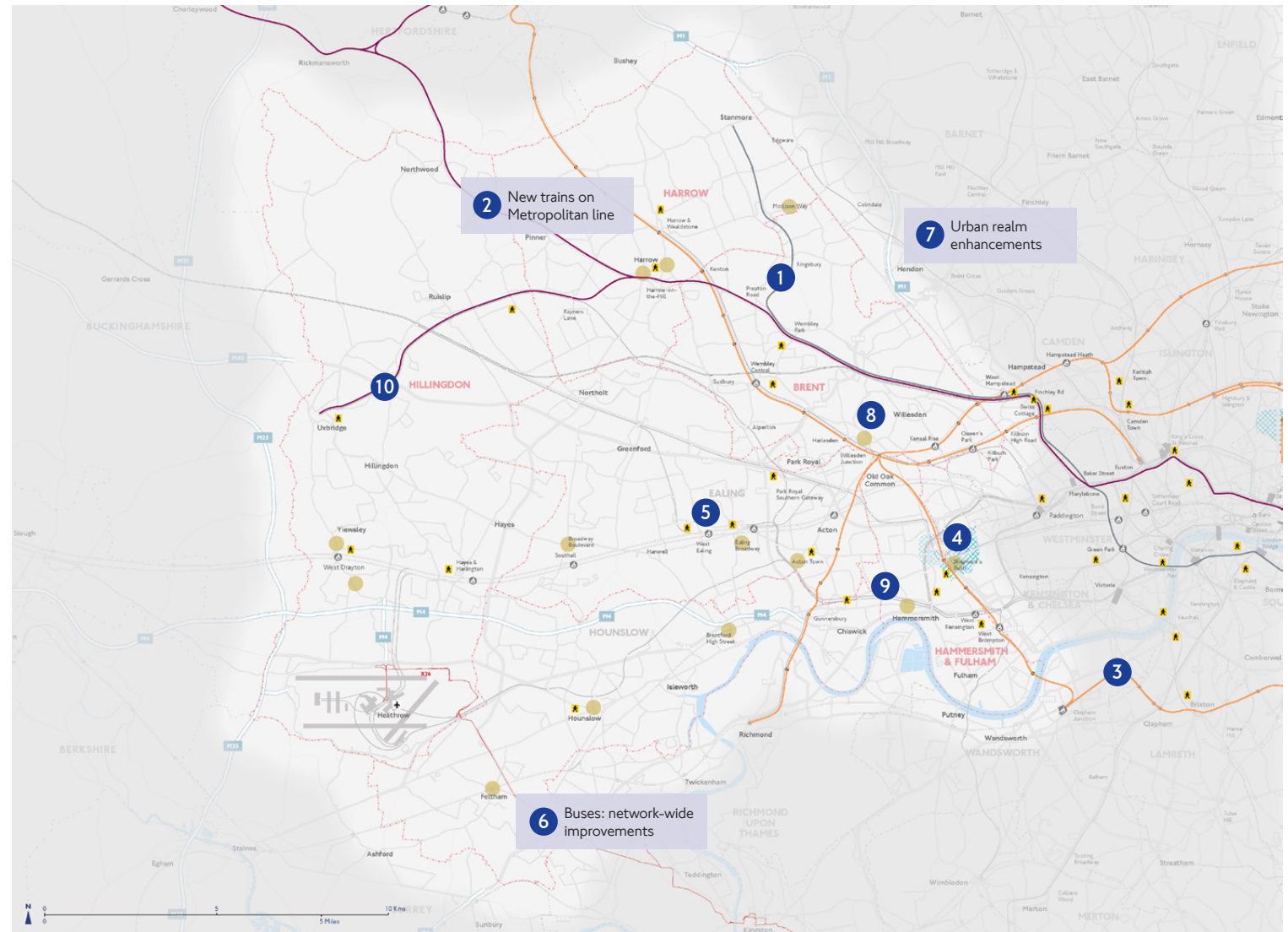


# Addressing the sub-regional priorities in 2012/13

The following projects have been implemented within the 2012/13 year to address the identified challenges and priorities.

## What was delivered in 2012/13?

- 1 — Jubilee line: 33 per cent capacity increase
  - 2 — Sub-surface railway, new trains on Metropolitan line
  - 3 — Completion of the Overground's orbital route
  - 4 — Barclays Cycle Hire: phase 2 expansion
  - 5 — Ealing Broadway Cycle Hub
  - 6 — Buses network-wide improvements
  - 7 — Urban realm enhancements
  - 8 — Walk London - completion of full network and Key Walking Route: Willesden Green
  - 9 — Hammersmith fly-over repair work
  - 10 — Additional sheltered parking storage, with CCTV at Hillingdon station
- Other London-wide projects
- Wi-Fi provision at underground stations
  - Pedestrian countdown roll out
  - Continuation of the bus stop and station step-free access programme 
  - Legible London expansion 



## Addressing the sub-regional priorities in 2012/13

The west sub-regional partnership offers the opportunity for TfL and the boroughs to work together to implement pilot studies and undertake research to work towards addressing the sub-regional priorities and challenges.

In 2012/13 the following pilot studies and projects were taken forward by the west sub-regional partnership:

### West London Strategic Cycling Study

WestTrans has developed a cycling vision for the sub-region, establishing the core themes and strategic

direction for cycling throughout West London. It brings together national, regional and local policies, and activity and funding to identify core objectives. Following the collection and analysis of data, the Vision is intended to act as the foundation for securing additional commitment and funding to help deliver improvements in cycling facilities and increased take-up in the sub-region.

### Strategic Corridors Study

Following the completion of the Strategic Corridors Studies (as identified in the original WL S RTP

2010/11) conducted by MVA for WestTrans in 2012, implementation frameworks have been developed, identifying a range of improvements to facilitate orbital movement, to be funded from different sources.

### Bus Lane Lighting Pilot

WestTrans have been working on an innovative pilot project geared towards removing uncertainties that drivers may have relating to the use of bus lanes by other vehicles during non-operational hours. The pilot aims to use some form of lighting to indicate more clearly (than the current signage provision) the times when the bus lane is in operation.

The predicted benefits of this are considered to be two-fold:

- » better through flow of traffic (potential benefits of reduced congestion & improved air quality);
- » decreases in penalty charges for motorists arising from uncertainty over permitted use of bus lanes

Further work on design concepts is ongoing during 2013.




















### Sudbury stations access and interchange study

WestTrans commissioned a study to assess two station pairings in Sudbury and identify a series of interventions to improve access, interchange and the public realm. Sudbury Hill (LU) and Sudbury Hill, Harrow (NR) were paired, as were Sudbury Town (LU) and Sudbury & Harrow Road (NR).

The studies highlighted a number of opportunities which are now being assessed by the sub-regional transport partnership to determine potential action. These were:

- » Short Term - de-cluttering, information provision, feature lighting
- » Medium Term – widen footways, improved pedestrian crossing, delivery and parking strategy
- » Long Term – step free access, High St Placemaking, resurfacing

#### What are the priority work areas?

- Cycling enhancements with connections across boroughs   
- WestTrans is leading on a cycle strategy for the west sub-region.   
- Investing in area, corridor, and junction studies to address challenges on the road network   
- Freight routing enhancements, including journey planning   
- Development of Old Oak Common Opportunity Area Planning Framework (including Overground and Crossrail spur) 
- Smarter Travel initiatives targeted at key trip generators (NHS, HE/FE, Faith, Hotels, Businesses)    
- Cross-borough Rail and Underground station access schemes  

## Freight mapping

WestTrans is working with PIE Mapping to undertake the first two phases of a three-phase project to allow freight organisations to more easily utilise freight-related data held within local authorities. The three phases are described below:

- » Phase 1: Data collection – sourcing all applicable freight data from west London boroughs
- » Phase 2: Data Processing and automation – formatting the data to make it accessible to freight industry stakeholders
- » Phase 3: Freight Gateway – the local authority portal that illustrates the data collected, it defines freight policy, routing priorities and provides a public face to how each authority can help local businesses, residents and freight operators balance the need for essential freight services. Freight Gateways also provide local residents with the opportunity to report

inappropriate freight movements and to use the tool to build robust evidence on specific geographic problems. This is subject to a funding bid made to Mayors Air Quality Fund.



The following projects were implemented – or have been progressed – by TfL, Network Rail and boroughs:

### London Overground extension

The London Overground orbital railway around the Capital has been completed in 2012 with an extension of the network from Clapham Junction to Highbury & Islington, with new stations connecting Surrey Quays to Clapham Junction.

This is the final stage to improve the London Overground for a more frequent, reliable and accessible network. With frequent services, the new link also opens up an alternative means of reaching destinations from the West London Line to stations in South and East London.

### Electrification of the Great Western Main Line

In addition to the significant upgrade works taking place arising from Crossrail and at Reading, the Great Western Main Line is being electrified to serve stations as far as Oxford, Newbury and Swansea. This will enable the introduction of faster Intercity Express trains on the long distance corridors and the cascade of electric-powered rolling stock to serve outer suburban services.

The introduction of bi-mode diesel-electric trains means that all passenger services will run on electric traction in west London, delivering significant air quality improvements along the corridor.

## On-going Bus network review

The bus network is kept under regular review involving continued liaison with stakeholders. This will include planning for the effects of Crossrail and other major rail schemes on the bus network.

Indicative service change schemes will be developed and refined over the coming years up to the introduction of Crossrail services in 2018 and liaison with stakeholders, including boroughs, will continue throughout this process.

TfL met with each borough in the sub-region throughout 2012/13 and presented at the partnership meeting to discuss the network review process and associated changes.

### Bus network-wide improvements

The sub-region has seen the roll-out of a number of bus network wide improvements, including:

- » Countdown II (real-time passenger information system)



## Addressing the sub-regional priorities in 2012/13

- » Contactless ticketing available (December 2012)
- » Bus stop accessibility enhancements (more than 70 per cent stops now accessible)
- » Service enhancements, for example, a more frequent X26 (Croydon- Heathrow orbital) throughout the day and evening.



### New Bus for London

The New Bus for London (NBfL) prototype was trialled on route 38 in 2012. TfL has placed an order for 600 more vehicles following the success of this scheme. This summer, route 24 (in central London) will be the first route to be converted for full scale operation. Shortly afterwards the NBfL will be introduced on route 11 between Fulham Town Hall and Liverpool Street Station.

### Contactless ticketing

Contactless payment systems is another innovation for London's ticketing system. During 2012 contactless payment systems were provided on London buses providing customers with a convenient payment method and more payment choices.

### WiFi provision at stations

Following a successful trial of WiFi technology at Charing Cross station, WiFi is now provided at selected stations across the Underground network, including in ticket halls, corridors and platforms. The roll

out of WiFi technology across the public areas of the stations allows customers to use mobile devices to access the internet and real-time information at their fingertips.

### Improving accessibility and step-free access

Step-free access has been delivered at Wembley Central station in the past year, with two lifts and a stair-lift being provided in time for the Olympics 2012.

To date, 70 per cent of bus stops are fully accessible across London. As a whole, 72 per cent of bus stops are accessible in the west sub-region. London Borough of Harrow has the highest accessible bus stops with 84 per cent being accessible.

### London Underground

Improvements on the Underground have included:

- » A 33 per cent capacity increase on the Jubilee Line as a result of completion of the Jubilee Line upgrade ahead of the 2012 Games.

- » Introduction of a fleet of new, air-conditioned trains on the Metropolitan Line.

### Legible London

Further expansion of the Legible London system has been undertaken throughout the west sub-region. Over the past financial year, Legible London signs have been provided throughout the west London sub-region in the following areas:

- » Hillingdon – 8 signs and 3 map base signs outside the stations, funded in 2011/2012 and completed in 2012/13
- » Ealing – on-going, funded in 2012/13, will be completed in 2013/14
- » Hounslow – on going, funding in 2012/13, will be completed in 2013/14.

### Key Walking Routes

Key walking routes are streets or paths that have been improved for walking, including for example to schools, public transport stations and stops, and local community,

health and shopping centres. The schemes are being developed in partnership with local residents and TfL. In the west sub-region a key walking route project has been implemented at Willesden Green.

### **Traffic Management / Split Cycle Offset Optimisation Technique (SCOOT)**

TfL has begun to equip 1,500 more traffic lights with SCOOT technology London-wide. SCOOT is an intelligent traffic control system with proven ability to reduce delays by 12 per cent.

It optimises traffic signals in response to real-time traffic conditions and further planned enhancements will allow the system to take account of pedestrians and cyclists.

### **Pedestrian Countdown roll-out**

TfL has proposals to implement pedestrian countdown timers at over 20 sites in Hounslow and Hammersmith and Fulham. Further information is available in a map on TfL's website.

### **Barclays Cycle Hire Expansion**

In 2012, the eastern expansion of cycle hire went live and an additional 2,300 bikes and 4,800 docking points were added to the scheme. Following preparatory work, the scheme remains on course to extend to parts of West London later this year.

### **Better Junctions**

An initial review of more than 500 junctions has been undertaken. Improvements have already been made at locations in central and southwest London. Up to 100 new roadside safety mirrors have also been installed across London.

In light of the recently published Mayor's Cycling Vision document, TfL is currently reviewing the Better Junctions programme to ensure resources are focused on the larger junctions and gyratories. TfL will be aiming to meet with boroughs in Summer 2013 to further consider their requirements.

Infrastructure has been built to enable off-street trials of

a range of innovative cycling improvements, which would be new features on London's streets.

### **Biking boroughs**

#### **Ealing Cycle Hub**

An award-winning, sheltered, well-lit and secure parking facility with CCTV opened at Ealing Broadway

station in 2012. It marks the location of the Biking Borough cycle hub, providing high-quality cycle parking for the area. The London Borough of Ealing also continues to support and develop its successful Asian Community Cycling Project and Direct Support for Cycling initiatives.



## Addressing the sub-regional priorities in 2012/13

### Other Biking Boroughs

improvements are planned for Brent, Hillingdon and Hounslow.

- » Hillingdon: Uxbridge to West Drayton Hub (build 2013/14). Hayes Muslim Centre, successful work in encouraging cycling amongst Asian women.
- » Hounslow: Isleworth/Brentford cycle hub (2013 build). Successful residential cycle parking scheme in Chiswick.
- » Brent: Kensal Rise hub (build 2013/14), including workplace engagement. Engagement with National Health Service Workplace sites. Although not an official Biking Borough, The London Borough of Harrow is a key leader in cycling and is investing in the links into Harrow town centre and Northwick Park hospital.

### Cycle parking at stations

Recently TfL enhancements have been made to cycle parking facilities at stations, including Hillingdon station where CCTV has been installed. North Acton cycle hub is currently being designed with build in 2013 (subject to consultation).

North Acton cycle hub is currently being designed for construction in early 2013 (subject to planning approvals). The new cycle hub would include four next shelters providing 48 cycle parking spaces to help cater for the needs of an increasing residential population, arising from the construction of new student accommodation and other local developments.

### Heathrow Cycle hub

The Heathrow Cycle Hub has over 1800 members and caters for airport staff and businesses within the airport boundary. It has given cycling to work at Heathrow a much greater profile not only within Heathrow, but within London.

The Heathrow Cycle Hub offers members a 10% discount on cycles and equipment, free maintenance (parts are payable but also with a 10% discount), free maintenance training, a

cycle to work purchase scheme and free emergency call outs in the event of a break down.

The introduction of the hub has contributed to an increase in cycling to work by almost 45%. It has won the 'Best Workplace Initiative' at the London Cycling Awards 2013. Heathrow continue to work in partnership with LB Hillingdon to improve cycle links/routes to Heathrow.



## Major borough LIP and TfL schemes

The major schemes that were completed in 2012/13 include:

### Yiewsley/West Drayton town centre

The improvements included upgrades to pavements, new trees, reduction in street furniture clutter, better access for buses, improvements at the two bridges in the town centre, better pedestrian crossings and a reduction in traffic congestion.

### Fulham Palace Road

The new slip road outside 24-36 Fulham Palace Road allows a smoother transition for all vehicles driving onto the side road gyratory and reduces conflicts with buses. The scheme provides surface level crossings for pedestrians and cyclists, replacing subways, and allows easier access for buses to and from the gyratory.

### 2012 Corridor programme

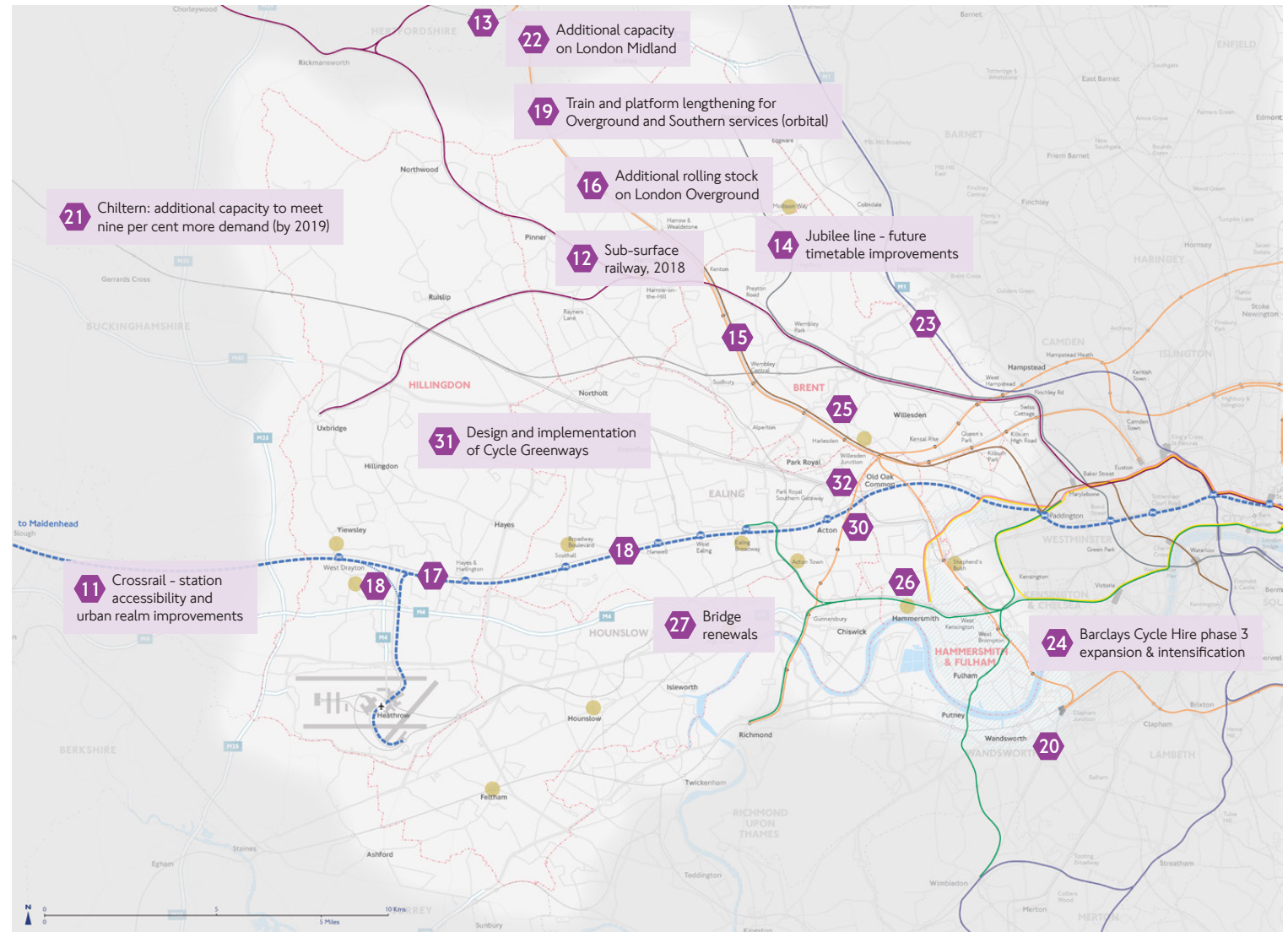
Part-funded by the ODA and TfL, 2012 Corridor highway schemes were completed in early Summer 2012. This programme included several median strips to improve pedestrians crossing opportunities, a removal of a large gyratory and conversion to mini roundabout as well as creation of new public space.



# Investing to improve west London from 2013/14

## - schemes with committed funding

The following projects are committed with funding from sources including the TfL business plan, borough LIPs funding and European funding.





## What is committed?

- 11  Crossrail - station accessibility and urban realm improvements
  - 12  Sub-surface Railway 2018
  - 13  Completion of Croxley Link to Watford Junction
  - 14  Jubilee Line: timetable improvements
  - 15  Bakerloo Line, additional trains
  - 16  Additional rolling stock on Overground
  - 17  Crossrail
  - 18  Electrification of Great Western Main Line. Heathrow western access
  - 19  Orbital - Overground and Southern services: lengthening to eight cars
  - 20  South Western - Train lengthening on Reading line
  - 21  Chiltern: additional nine per cent capacity (by 2019)
  - 22  London Midland - additional 10% capacity (by 2014)
  - 23  Thameslink
  - 24  Barclays Cycle Hire Expansion and Intensification
  - 25  Biking Boroughs
  - 26  Hammersmith Flyover - phase 2 strengthening, Autumn 2013
  - 27  Bridge renewals, 2016
  - 28  Road safety improvements
  - 29  Urban realm enhancements
  - 30  Cycle Parking at stations
  - 31  Cycle Greenways
  - 32  Willesden Junction reconstruction of the station approach
- + Other London-wide projects
    - Wi-Fi provision at underground stations
    - Pedestrian countdown at traffic signals
    - Continuation step-free access programme 
    - Contactless ticketing on all modes
    - SCOOT roll out
    - Introduction of electric vehicle charging points
    - New bus for London buses
    - Legible London expansion 
    - Investment in strategic and local roads
    - Implementing the Mayor's Vision for Cycling in London

## Crossrail 1

Crucial to London's future, Crossrail will expand the city's peak rail network capacity by 10 per cent. Currently Europe's largest construction project it will represent the biggest single increase in the Capital's transport capacity since 1945.

This will reduce congestion by up to 60 per cent on many Underground lines and generate £42bn for the UK economy.

More than 1.5 million additional people will have access to quick, direct links to the heart of the Capital. The new railway will provide west London with fast, frequent, high capacity services to the City, West End and Docklands.



## Investing to improve west London sub-region from 2013/14

### Crossrail - complementary schemes

As a complementary measure, TfL, Crossrail and local authorities are developing plans for improvements to enhance the urban realm and local transport access on approaches to all the stations due to be served

by Crossrail. Joint urban realm planning studies will be carried out with local authorities.

In West London, subject to funding, this would cover better pavements, crossings and cycling facilities in the vicinity of the stations listed in the table.

Station	Status of work
West Drayton	Complementary LIP Major Scheme for the nearby town centre nearing completion. Crossrail/TfL/Borough joint plan under MOU for station environs agreed. Implementation resourcing activity started.
Hayes and Harlington	Complementary LIP Major Schemes proposal for Hayes town centre has been successful in obtaining funding. Crossrail/TfL/Borough joint master-plan under MOU for station environs agreed. Implementation resourcing activity started.
Southall	Adjacent to major consented development site. Crossrail/TfL/Borough joint master-plan under MOU for station environs agreed. Implementation resourcing activity started. OAPF being developed in parallel.
Hanwell	Crossrail/TfL/Borough joint plan under MOU for station environs under development during 2013.
West Ealing	Crossrail/TfL/Borough joint plan under MOU for station environs agreed. Implementation resourcing activity started.
Ealing Broadway	LIP Major Schemes proposal being developed for station forecourt and adjacent Haven Green area Crossrail/TfL/Borough joint master-plan under MOU for station environs agreed. Implementation resourcing activity started.
Acton Mainline	Crossrail/TfL/Borough joint plan under MOU for station environs at advanced stage of preparation. Implementation resourcing activity started. Adjacent highway works being designed by LBE.

### River Action Plan

The River Action Plan outlines a number of specific measures to be taken by TfL and other stakeholders such as operators, property developers and borough councils, to facilitate a growth in annual passenger river journeys among leisure and business travellers, as well as commuters between now and 2020. The measures are categorised under four themes: better piers, better passenger information and public transport service integration, promotion and marketing, and improved partnership working between agencies. TfL's current Business Plan allocates additional funding to help implement these actions. The River Action Plan can be downloaded from the TfL website<sup>3</sup>.

In April 2013, River Bus services from Putney to Blackfriars were enhanced significantly, following the appointment of a new operator on the route. As a result of close

collaboration between the Mayor's office, TfL and Wandsworth Council, enhancements included improved frequency, real-time information and accessibility at piers in Wandsworth, helping to open up the river to the public in the area.

### Transforming the Tube programme

A new, modern, centralised signalling system will be delivered on the District line, together with the Circle, Hammersmith & City and Metropolitan lines. This state-of-



<sup>3</sup> <http://www.tfl.gov.uk/assets/downloads/corporate/Item07-STP-26-February-2013-Achieving-the-Mayors-Vision-for-Rivers.pdf>

the-art system will replace a number of older systems, one of which is now more than 80 years old. This will enable faster, more frequent and more reliable services, significantly expanding capacity on the sub-surface lines.

On the District line capacity will increase by 24 per cent, which means it can carry about 10,000 more passengers an hour.

53 new trains will be introduced on the Circle and Hammersmith & City lines. These will be seven carriages long - one carriage longer than current trains. Together with the signalling upgrades the enhancements will increase capacity on the Circle and Hammersmith & City lines by 65 per cent, approximately 17,000 more passengers an hour.

Eighty new trains will be introduced in 2013, with the full fleet in service by 2016. These will be air-conditioned, be much more accessible and have walk-through carriages, as per the trains on the Metropolitan line.

### **Croxley link**

#### **Metropolitan line: Croxley Rail Link**

TfL is working with Hertfordshire County Council to re-route and extend the Metropolitan line to Watford Junction. The scheme is being promoted by Hertfordshire County Council, which was awarded funding from the DfT in December 2011. The scheme would improve local connectivity in Watford and northwest London. It would also provide access to West Coast Mainline National Rail links from Watford junction station for Metropolitan line passengers.

In partnership with Hertfordshire County Council, TfL applied for a Transport and Works Act Order from the Secretary of State for Transport in January 2012 and Public Inquiry was held in October 2012. The independent Planning Inspector will supply his report to the Secretary of State for Transport, whose decision is expected by 2013.

### **Station congestion relief schemes**

On the Underground, extensive improvements are necessary at the busiest central London stations, including Paddington - used by a large number of West London residents to access central London - to relieve congestion, minimise the need for station overcrowding control measures, facilitate interchange and increase capacity.

Works include new ticket halls, step-free access to platforms and interchange improvements.

#### **Bakerloo line**

From 2014, it will be possible to operate an additional two peak trains per hour on the Bakerloo line using rolling stock cascaded from the Victoria line.

#### **Piccadilly line signalling control system**

The Piccadilly line signalling control system, based at Earl's Court, dates from the 1960s and will be gradually replaced by a new control centre at

Hammersmith by 2014, reducing the risk of disruption to services.

### **Overground capacity increase**

- » TfL has announced a programme to introduce five-car trains on London Overground to increase its capacity by 25 per cent to meet increasing demand for the railway's services
- » The programme includes the construction of longer platforms and the delivery of an extra 57 carriages, with the first longer trains on the North and West London Lines operating by the end of 2015
- » Network Rail is also delivering train and platform lengthening to eight cars on all South Central services between Croydon and Watford/Milton Keynes on the West London Line, to complete by the end of 2014

### **South Western**

- » Main Line: Around 10 per cent additional capacity by lengthening more peak services.



## Investing to improve west London sub-region from 2013/14

- » Network Rail and TfL are currently assessing options to enhance capacity at Waterloo. In the sub-regional context this would benefit passengers travelling on the Windsor and Reading lines in particular. Work is under way to consider the best use of the former Waterloo International station platforms and enhance platforms five and six at Waterloo as well as at other stations on the Windsor and Reading lines.
- » Windsor lines: Train and platform lengthening to 10 cars is being provided on peak services to/from Virginia Water and Reading

### Orbital services

- » Train and platform lengthening to eight cars on all South Central services between Croydon and Watford, but brought forward to complete by 2014. Note, this is an extra CP4 scheme. Chiltern Main Line and Aylesbury route: Sufficient additional capacity is being provided to meet nine per cent more demand

- » West Coast Main Line, suburban services (London Midland) sufficient additional capacity is being provided to meet 10 per cent more demand
- » Thameslink: Completion of Thameslink Programme by December 2018, benefiting passengers in parts of northwest London.

### Great Western Main Line (GWML) – Infrastructure changes:

As a result of Crossrail and the Intercity Express Programme, a number of changes will be made to the Great Western Main Line, with reliability and capacity benefits. Improvements will also be made for access to Heathrow airport.

Reconfiguration of the Great Western relief lines with platform extensions to cater for longer trains will be undertaken at:

- » Acton Main Line
- » Ealing Broadway
- » West Ealing (including a new bay platform for Greenford services)

- » Southall
- » Hayes & Harlington and
- » West Drayton

### Reading station upgrade

The £900million redevelopment of Reading station due for completion in 2015, will deliver capacity and reliability improvements for passengers along the Great Western Main Line and some South Western lines, including those in West London using suburban rail services.

- » An additional four train paths per hour in each direction on each line
- » 125 per cent improvement on through-line platform capacity
- » 37.7 per cent improvement in performance (train delay minutes)
- » Platforms which can accommodate longer trains of up to 12-cars from the London Waterloo lines.





Grade separation of the West Junction complex will be completed during 2015 and result in the major benefits to capacity and journey time falling in control period 5 (CP5).

A core of new platforms for Great Western Main Line services will be provided, alongside a new platform and platform extensions for London Waterloo services.

### Heathrow Western Access - to be developed 2014-19

A direct western link into Heathrow Airport from the GWML has been identified in the HLOS as a scheme



for development in CP5 (2014-19) and implementation in CP6 (2019-24).

Network Rail is exploring options to identify the most suitable corridor east of Slough to link the two and deliver a typical four trains per hour between Heathrow Terminal 5 and Reading. A number of options have been proposed and these will be assessed as part of the scheme development.

### Step-free access programme

The step-free bus stop and station access programme will be continued and include upgrades to Bond Street and Tottenham Court Road Stations, benefiting passengers travelling to or from West London using Crossrail and the London Underground.

### Wi-Fi provision at stations

Wi-Fi provision at Underground stations will be continued and includes, but is not limited to provision at Bank, Baker Street, Earsl Court, Cannon Street, Monument and Blackfriars stations.

### Contactless ticketing on all modes

By late 2013, contactless payment cards will work on:

- » Tube
- » Dockland Light Railway (DLR)
- » Trams
- » London Overground

Oyster will still be accepted across the network, but the use of contactless payment will result in a reduction of people queuing for tickets and for Oyster card top-ups.

### New Bus for London (hybrid)

The hybrid fleet is set to reach 1,600 vehicles by 2016, including 600 new bus for London vehicles (20% of the fleet). The deployment of new hybrid buses will be targeted in air quality focus areas. 2013/14 will see the conversion of Route 24 for full scale operation.

### Pedestrian Countdown rollout

Pedestrian countdown will be provided at traffic signals to improve traffic flow and reduce emissions at junctions at more than 200 sites London-wide.

### Legible London wayfinding scheme

Legible London is to be continued to be rolled out in a number of town centres and suburban environments. More localised Legible London schemes will also be implemented in a number of boroughs.



## Investing to improve west London sub-region from 2013/14

### Barclays Cycle Hire Expansion

The south west expansion will be launched in late 2013, with all docking stations to be expected to be placed mid 2014.

The south west expansion of the scheme includes parts of Wandsworth, Hammersmith & Fulham, Lambeth and Kensington & Chelsea.

### Smarter travel measures

WestTrans will target key trip generators to deliver sustainable travel messages and strategies, focussing on the following: Travel

Planning to Faith buildings; Higher and Further Education Sustainable Travel Event Days; helping hotels to develop event management and travel plans. WestTrans will also administer funding for innovative NHS travel projects; make the case for European funding and host international knowledge-sharing events and support organisations developing sustainable travel initiatives with offerings such as Dr Bike sessions, Cycle Training, and bespoke travel information maps.

### Major borough LIP and TfL schemes – 2013/14

The major schemes that will be progressing through 2013/14 include:

#### Harlesden Town Centre, LB Brent

Project completes 2014/15

The aim of the Harlesden Town Centre scheme is to improve the local environment by reducing the impact of motor vehicles and improving conditions for pedestrians, cyclists and public transport users. The first stage of the improvements on Station Road between Tubbs Road and Acton Lane is now complete. Brent Council is currently working on the detailed design and consulting with disability groups to ensure the final scheme is accessible for all. Work began in April 2013 and will take around 18 months.

#### Ealing Broadway, LB Ealing

Project completes 2014/15

The focus of these plans is to useability and gateway function of Ealing Broadway transport interchange and Haven Green. Improvements will be made to pedestrian access routes and crossings; greater provision of cycle parking; the station forecourt will be upgraded and bus arrangements will be altered. Parking, drop-off, and loading arrangements will be rationalised. Ealing Council has secured £4.3 million of funding to deliver interchange improvements in the area as part of Crossrail station urban design complementary measures.

These will be rolled out in phases starting with the station forecourt. Enhancements to improve the quality of Haven Green will also be delivered, New high quality lighting and public art will be installed at the station. New trees and planting, signage and way finding will be improved as part of measures to reduce street clutter will improve access routes to the station.

West Drayton High Street



Source: Central London Forward

**Shepherds Bush West, LB Hammersmith and Fulham** Project completes 2014/15

The proposals aim to significantly improve linkages/routes from the local area to the two stations on the Hammersmith and City Line, which have recently benefitted from capacity improvements. Wider footways, de-cluttering, and improved crossings form part of the scheme.

**Harrow town centre** Project completes 2013/14

A package of measures to support and develop Harrow town centre's metropolitan status and drive its regeneration. To be achieved through delivering good transport access via all modes of transport prioritising sustainable modes of transport, in particular walking and cycling, and improving the quality, capacity, and accessibility of Harrow-on-the-Hill rail and underground station and Harrow bus station.

**Hounslow Town Centre, LB Hounslow** Project completes 2014/15

Design work to: connecting the town centre via a series of high quality public spaces and permeable routes, give priority to people throughout the town centre, and rationalise bus and vehicle movements to reduce traffic domination and provide good access to the town.

**Hayes Town Centre, LB Hillingdon** Project completes 2015/16

Partnership work with Hayes Town Centre and Crossrail. Focus on creating better pedestrian access to the station including measures to create an attractive arrival experience, attract investment in the area and enable collection of automated traffic count (ATC) data at Hayes Bypass/North Hyde Road.

**Uxbridge Road, Southall - Corridor 1B** Project completes 2013/14

Southall Broadway - urban realm corridor scheme to improve road safety and footway capacity to accommodate pedestrians and shoppers. The scheme involves cycle improvements, widened footways and narrowing carriageways, providing side road entry treatments, inset parking and loading bays on The Broadway, improving delivery access to local businesses, their innovative design will mean space can be used by pedestrians when vehicles are not using them.

The scheme will also see the installation of informal pedestrian crossings within 'Boulevard Zones' at key locations with ramped gateways, tree planting, raised carriageways and matching materials across the street; these will improve convenience and with additional street lighting are expected to improve safety. A 20 mph speed limit will be applied throughout the extent of the scheme. Whilst the bus lane between Tudor Road and Greenford Avenue will be removed, the installation of a bus gate will help reduce delays to buses. All design work and approvals have been secured, work will start on site in August 2013.

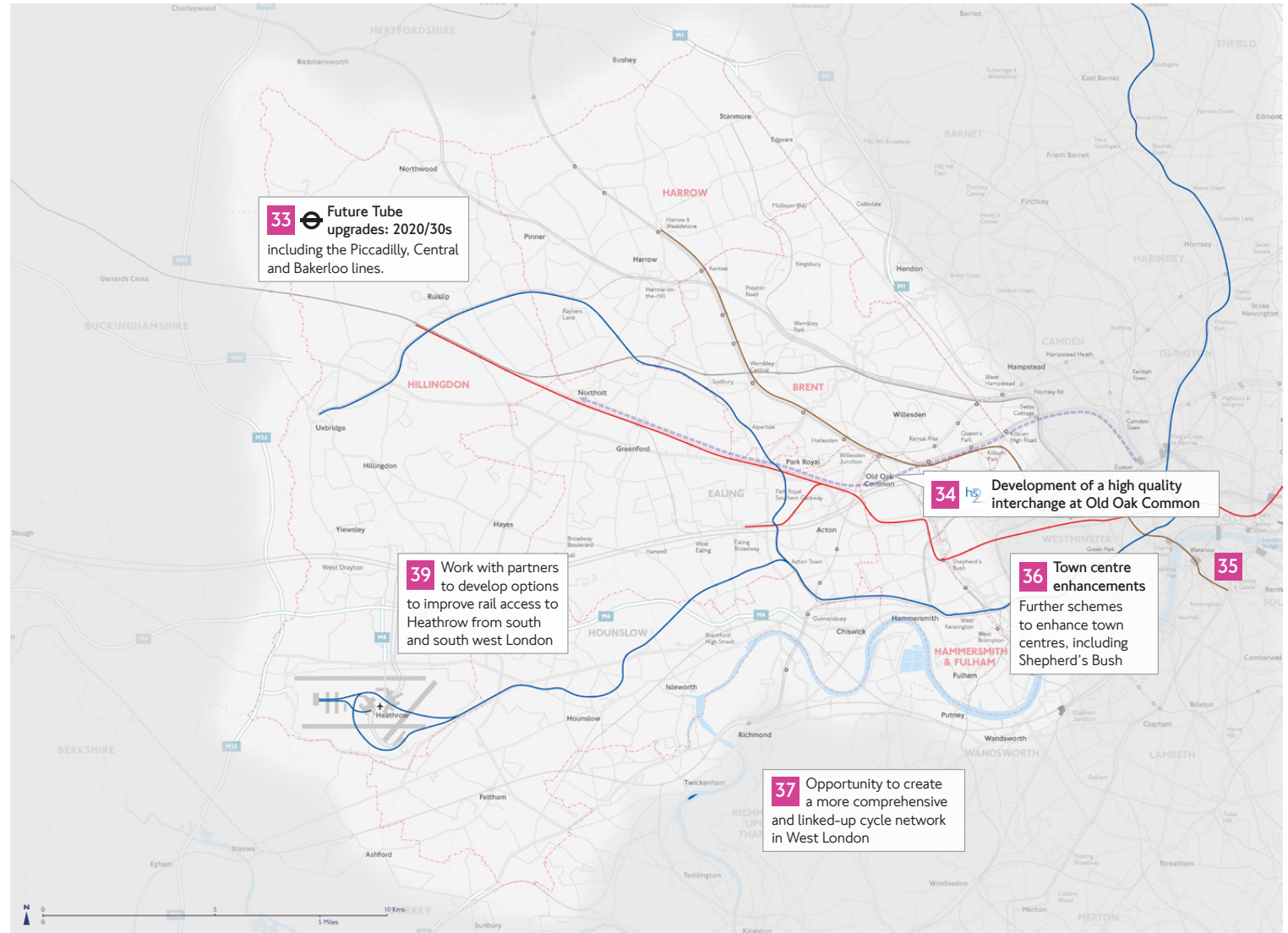
**Shepherds Bush town centre west**

The proposals aim to significantly improve linkages/routes from the local area to the two stations on the Hammersmith and City Line, which have recently benefitted from capacity improvements. Wider footways, de-cluttering, and improved crossings form part of the scheme.

# Future opportunities



Many challenges in west London will still remain after the committed initiatives set out in the TfL Business Plan are implemented.

More can still be done in order to support continued economic growth; deliver a better quality of life; improve access to opportunities; reduce transport's contribution to climate change; and improve safety and security - both within west London and more widely for London as a whole.





Future opportunities

- 33  Future Tube upgrades: 2020/30s including the Piccadilly, Central and Bakerloo lines
- 34  Development of a high quality multi-modal interchange at Old Oak Common, supporting growth in the Park Royal City Opportunity Area and orbital connectivity in west London - including HS2, National Rail, Crossrail and Overground services
- 35 Waterloo station options
- 36 Further schemes to enhance urban realm / town centre enhancements and approaches to Crossrail stations
- 37 Opportunity to create a more comprehensive and linked-up cycle network in West London
- 38 Local Bus Challenge U4, 92, 183, 182 and 111
- 39 Work with partners to develop options to improve rail access to Heathrow from south and south west London
- + Other London-wide projects
  - Improvements to the road network following the outcomes of the Roads Task Force
  - step-free access programme
  - Continual review of the bus network
  - Potential schemes to improve air quality
  - Behaviour change measures
  - Implementing the Mayor's Vision for Cycling in London

**Investment in strategic and local roads**

The Mayor's Roads Task Force report and TfL response is to be published in Summer 2013 and may include recommendations for further investigation and investment on local and strategic roads. TfL continues to be aware of local concerns over some of the impact some of the sub-region's strategic roads (for instance the M4 / A4 and A40) have on the quality of the urban environment and will work closely with local authorities to address known issues.



**Further schemes to enhance urban realm/town centre environments**

Public realm schemes make streets and public spaces safer, and create a city in which people can enjoy being outdoors. They improve accessibility and connections between places and modes of travel, encourage walking and cycling, and enhance the quality of the local environment. These are being progressed through Crossrail complementary measures programme and Local Implementation Plans.

**Future Tube upgrades: 2020-2030s including the Piccadilly, Central and Bakerloo lines**

TfL's acquisition of Tube Lines has created the opportunity for a joint approach to the Piccadilly and Bakerloo line upgrades which should deliver substantial savings. A common design will be used for trains on both lines, reducing their cost and lessening passenger disruption. Passengers will travel in more capacious trains that use less energy

and emit less heat using technological developments now becoming standard in the industry. Being more energy efficient, the trains will reduce the investment required in power upgrades and lower the quantity of CO<sub>2</sub> emitted. They will also be more accessible and, as with the new subsurface line trains, passengers will be able to walk through them, increasing their effective capacity.

The question of whether to replace the Piccadilly or Bakerloo line fleet first is now being considered. This design will also be used to replace the fleets on the Central line reducing costs through common components and maintenance.

**Rail enhancements**

**Southern Rail Access to Heathrow**

Support continues to grow for a southern rail link into Heathrow and has been identified by Network Rail as a strategic gap in the rail network. A number of proposals are being considered by different parties that could improve rail

## Future opportunities

access between Heathrow and key catchments and interchanges in south London, Surrey and the South Coast. Options could include interchange via Old Oak Common.

### Maximising the potential of High Speed 2

HS2 will provide faster journey times to key city regions throughout Great Britain including Birmingham, Manchester, Leeds, Newcastle, Glasgow and Edinburgh, in addition to locations on the Great Western Main Line. An intermediate station at Old Oak Common is planned by HS2 Ltd, an opportunity therefore exists to expand on HS2 Ltd's current plans to develop an interchange offering an unparalleled level of connectivity serving the area. The facility could connect HS2, Crossrail - including a potential spur to the West Coast Main Line, Great Western Main Line, Overground and bus services .

In addition to the national connectivity, such a facility would help support radial and orbital travel

within west London. Interchange on to the West and North London lines would significantly increase the catchment not only of the proposed interchange but also boost the commuting catchment of new commercial land uses in the vicinity of the station. TfL, the GLA and local boroughs are currently preparing the Old Oak Common Opportunity Area which seeks to ensure an appropriate level of development is planned to capitalise on the opportunities afforded by the scheme.

### Behaviour change measures - potential opportunities to improve the sustainability of freight and servicing

As described elsewhere in the Plan, the London 2012 Games were the catalyst for travel behaviour change from many individuals and businesses, implementing the four Rs, either: by reducing their travel, re-timing, re-routing and/ or revising mode. There may be an opportunity to embed some

of these behaviour changes under business-as-usual circumstances. Switching mode to walking or cycling and changing time of travel may be some of the most effective ways to better balance demand with available transport capacity.

Of TfL's survey sample, 77 per cent of individuals changed their travel behaviour during summer 2012. The amount of change was greater in those commuting or travelling for business. 58 per cent of freight operators and 57 per cent of businesses changed their operations to some extent. Further information is available in the Travel in London report and more detail will be published in supplementary reports later in spring 2013.

### Addressing the sub-regional priorities in 2013/14

The west London sub-region partnership has the opportunity to continue to address the sub-regional challenges by working together to implement pilot studies and undertake research over the following year.

The draft priorities for the west London sub-region to address the identified challenges for 2013/14 include:

#### 2013/14 draft priority work areas

- Cycling enhancements with connections across boroughs
- WestTrans is leading on a cycle strategy for the west sub-region.
- Investing in area, corridor, and junction studies to address challenges on the road network
- Freight routing enhancements, including journey planning
- Development of Old Oak Common Opportunity Area (including Overground and Crossrail spur)
- Smarter Travel initiatives targeted at key trip generators (NHS, HE/ FE, Faith, Hotels, Businesses)
- Cross-borough Rail and Underground station access schemes

# Funding

In December 2012, TfL published its Business Plan ([www.tfl.gov.uk/corporate/about-tfl/investorrelations/1462.aspx](http://www.tfl.gov.uk/corporate/about-tfl/investorrelations/1462.aspx)), setting out its plans for investment over the coming decade. Subject to government funding, the investment committed in the plan will continue to support the delivery of the MTS, unlocking economic growth through increased capacity and connectivity as well as achieving wider aims to improve Londoners' quality of life.

TfL and the boroughs work together to implement LIP schemes and projects outlined in the MTS. The 2013/14 TfL LIP funding allocations for the West sub-region are shown in the following table:

## Match funding

The gap between what is assumed to be funded and what is required widens over time within the west sub-region. The importance of working in partnership with businesses, BID and other third

parties is critical to securing match funding and to maximise delivery.

During 2012/13 additional match funding sources were used to implement the west sub-regional projects including TfL SRTP pilot funding; European funding; borough funding; and BID funding.

Potential funding sources for future match funding may include;

- » TfL LIP programme
- » TfL sub-regional pilot funding

- » Local Authority EMAS and Procurement (LEPT) European funding
- » Borough funding
- » BID funding
- » Clean Air Fund 2
- » Mayor's Air Quality Fund
- » Road Strategy
- » Section 106 (Town and Country Planning Act)
- » Community Infrastructure Levy



2013/14 LIP Funding Allocations

Borough	Corridors, neighbourhoods and Supporting measures (£,000)	Principal road maintenance (£,000)	Local transport funding (£,000)	Major schemes funding (£,000)	Total (£,000)
Brent	2,547	724	100	2,800	6,171
Ealing	3,211	569	100	1,365	5,245
Hammersmith & Fulham	1,947	637	100	1,202	3,886
Harrow	1,678	685	100	2,463	4,925
Hillingdon	2,774	1,200	100	200	4,274
Hounslow	2,665	0	100	300	3,065

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# Appendix A:

## West London Sub-regional Implementation Summary

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# West Sub-regional Implementation Summary

Scheme	Challenges	Completed 2012/13	Completion 2013/20	Completion Post 2020
Jubilee line: 33 per cent capacity increase		●		
Sub-surface railway, new trains on Metropolitan line		●		
Completion of the Overground's orbital route		●		
Barclays Cycle Hire: phase 2 expansion, including Westfield Shopping Centre in White City, and later expansion and intensification		●	●	
Biking boroughs - new bicycle hub near Ealing Broadway station, followed by locally-led enhancements		●	●	
Buses: network-wide improvements. Countdown II (real-time passenger information system), contactless ticketing available stops now accessible); service enhancements, e.g. more frequent X26(December 2012); bus stop accessibility enhancements (over 70% (Croydon- Heathrow orbital) throughout the day and evening		●	●	●
Major borough and TfL LIP schemes		●	●	●
Walk London - completion of full network and Key Walking Route: Willesden Green		●		
Hammersmith fly-over repair work and phase 2 strengthening, late Summer/ Autumn 2013.		●	●	
Additional sheltered parking storage, with CCTV, at Hillingdon station recently delivered		●		
Further schemes to enhance urban realm / town centre enhancements and approaches to Crossrail stations and station accessibility			●	●
Wi-Fi provision at underground stations		●	●	
Pedestrian countdown roll out		●	●	
Continuation of the bus stop and station step-free access programme		●	●	
Legible London expansion		●	●	

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## Challenges and priority work areas

### Challenges in every sub-region

- Improve air quality to meet and exceed legal requirements and ensure health benefits for Londoners
- Transform the role of cycling and walking in the sub-region
- Meet CO<sub>2</sub> targets

### West London-specific challenges

- Enhance east-west capacity and manage congestion
- Improve access to, from and within key locations
- Enhance the efficiency of freight movement
- Improve north-south public transport connectivity
- Improve land-based air quality

● Delivered ● Committed ● Opportunity

## West London Sub-regional Implementation Summary

Scheme	Challenges	Completed 2012/13	Completion 2013/20	Completion Post 2020
Sub-surface Railway 2018 – new fleet on Metropolitan line by end of 2013; Circle and Hammersmith & City (H&C) lines by end 2014 and District line end of 2016. Signalling upgrades to be completed by 2018. Paddington (H&C) station by end 2018				
Completion of Croxley Link to Watford Junction				
Jubilee line - future timetable improvements to take full advantage of new technology and potential for further reliability / frequency improvements				
Bakerloo Line, additional 2 peak trains per hour				
Additional rolling stock on all Overground lines, including West London Line, North London Line, Euston-Watford line				
Crossrail, reconfiguration of the GWML relief lines with platform extensions at: Acton Main Line, Ealing Broadway, West Ealing (incl. a new bay platform for Greenford services), Southall, Hayes & Harlington and West Drayton.				
Great Western Main Line - range of projects to add capacity and reduce journey times. Heathrow western access to be developed 2014/19 for opening by 2021/22				
Orbital – Overground and Southern services: Train and platform lengthening to 8 cars on all South Central services between Croydon and Watford, to complete by 2014				
South Western - Train lengthening on Reading line (by 2019). Limited 10-car services to Waterloo platforms 5 and 6; other Waterloo platforms to be lengthened (by 2019)				
Chiltern - additional 9% capacity (by 2019)				
London Midland - additional 10% capacity (by 2014)				
Thameslink - completion of programme (by end 2018)				
Bridge renewals, 2016	-			
Cycle Parking at stations - North Acton cycle hub, 2013				

### Challenges and priority work areas

#### Challenges in every sub-region

- Improve air quality to meet and exceed legal requirements and ensure health benefits for Londoners
- Transform the role of cycling and walking in the sub-region
- Meet CO<sub>2</sub> targets

#### West London-specific challenges

- Enhance east-west capacity and manage congestion
- Improve access to, from and within key locations
- Enhance the efficiency of freight movement
- Improve north-south public transport connectivity
- Improve land-based air quality

Delivered Committed Opportunity

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## West London Sub-regional Implementation Summary

Scheme	Challenges	Completed 2012/13	Completion 2013/20	Completion Post 2020
Design and implementation of Cycle Greenways				
Continuation of the bus stop and station step-free access programme				
SCOOT roll out to a further 1,500 sites London-wide				
Introduction of electric vehicle charging points				
Network wide roll out of a further 600 New bus for London buses				
Investment in strategic and local roads (following the Roads Task Force Strategy)				
Future Tube upgrades: 2020/30s including the Piccadilly, Central and Bakerloo lines				
Development of a high quality multi-modal interchange at Old Oak Common, supporting growth in the Park Royal City Opportunity Area and orbital connectivity in west London				
Waterloo station: options for former Waterloo International platforms are under review				
Local Bus Challenge U4, 92, 183, 182 and 111				
Beyond the committed step-free access programme there are others identified. For a complete list please refer to TfL's Accessibility Implementation Plan				
Potential schemes to improve air quality				
Behaviour change measures: potential opportunities to improve the sustainability of freight and servicing				
Implementing the Mayor's Vision for Cycling in London				
Willesden Junction reconstruction of the station approach				
Work with partners to develop options to improve rail access to Heathrow from south and south west London				

## Challenges and priority work areas

## Challenges in every sub-region

- Improve air quality to meet and exceed legal requirements and ensure health benefits for Londoners
- Transform the role of cycling and walking in the sub-region
- Meet CO<sub>2</sub> targets

## West London-specific challenges

- Enhance east-west capacity and manage congestion
- Improve access to, from and within key locations
- Enhance the efficiency of freight movement
- Improve north-south public transport connectivity
- Improve land-based air quality

Delivered Committed Opportunity

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# Appendix B:

## West London Sub-regional Plan: Addressing the Challenges

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# West London

## Sub-Regional Transport Plan: addressing the challenges

2013 update

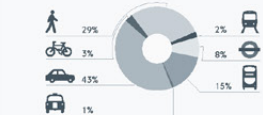
### Who lives and works in the west London sub-region?

The west London sub-region, represented via WestTrans, consists of the London boroughs of Brent, Ealing, Hammersmith and Fulham, Harrow, Hillingdon and Hounslow.



### How people travel in the west London sub-region?

Modal share (average city centre/weekday), 11.12.2011 (17)



### Challenges and priority work areas

#### Challenges in every sub-region

- Improve air quality to meet and exceed legal requirements and ensure health benefits for Londoners
- Transform the role of cycling and walking in the sub-region
- Meet CO<sub>2</sub> targets

#### West London-specific challenges

- Enhance east-west capacity and manage congestion
- Improve access to, from and within key locations
- Enhance the efficiency of freight movement
- Improve north-south public transport connectivity
- Improve land-based air quality

#### What are the priority work areas?

- Cycling enhancements with connections across boroughs
- WestTrans is leading on a cycle strategy for the west sub-region
- Investing in area, corridor, and junction studies to address challenges on the road network
- Freight routing enhancements, including journey planning
- Development of Park Royal City OAPF (including Overground and Crossrail spur)
- Smarter Travel initiatives targeted at key trip generators (NHS, HE/FE, Faith, Hotels, Businesses)
- Cross-borough Rail and Underground station access schemes

#### Opportunity Areas

Opportunity Areas include Heathrow, Wembley, Old Oak Common, Southall, White City, Earl's Court and West Kensington, Brent Cross, Colindale/Burnt Oak in the neighbouring North London sub-region

#### Further information

The west Sub-Regional Transport Plan 2012/13 update provides more detail on the implementation plan for sub-regional projects planned and committed until 2020.

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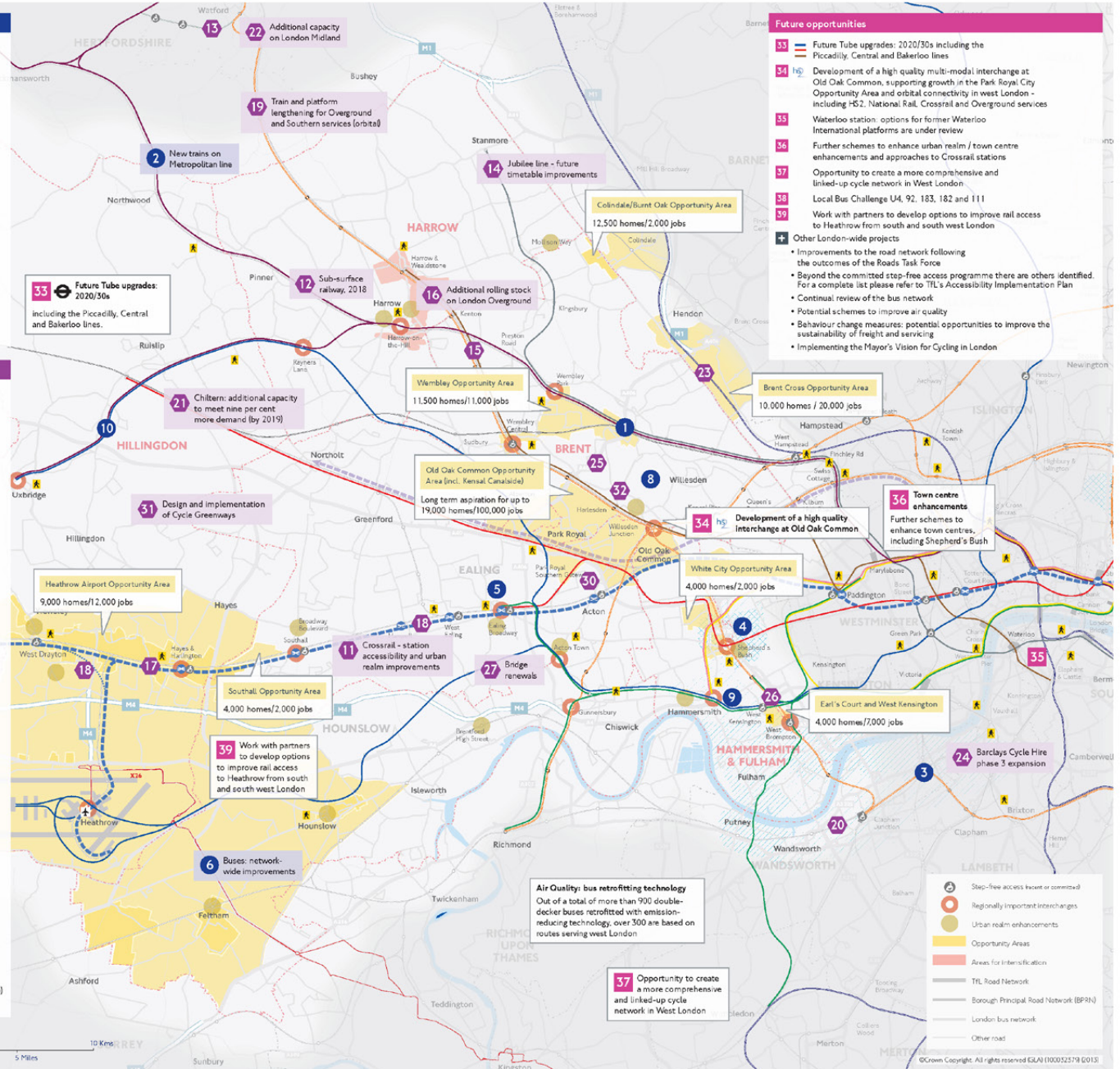
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### What was delivered in 2012/13?

- Jubilee line: 33 per cent capacity increase
  - Sub-surface railway, new trains on Metropolitan line
  - Completion of the Overground's orbital route
  - Barclays Cycle Hire: phase 2 expansion, including Westfield Shopping Centre in White City
  - Ealing Broadway Cycle Hub
  - Buses - network-wide improvements: Countdown II (real-time passenger information system), contactless ticketing available (December 2012); bus stop accessibility enhancements (more than 70% stops now accessible); service enhancements, for example more frequent X26 (Croydon-Heathrow orbital) throughout the day and evening
  - Urban realm enhancements
  - Walk London - completion of full network and Key Walking Route: Willesden Green
  - Hammersmith fly-over repair work
  - Additional sheltered parking storage, with CCTV, at Hillingdon station recently delivered
- Other London-wide projects
- Wi-Fi provision at underground stations
  - Pedestrian countdown roll out
  - Continuation of the bus stop and station step-free access programme
  - Legible London expansion

### What is committed?

- Crossrail - station accessibility and urban realm improvements
  - Sub-surface railway 2018 - new fleet on Metropolitan line by end of 2013; Circle and Hammersmith & City (H&C) lines by end of 2014 and District line by end of 2016. Signalling upgrades to be completed by 2018. Paddington (H&C) station by end of 2018
  - Completion of Crossley Link to Watford Junction
  - Jubilee Line: future timetable improvements
  - Bakerloo Line, additional two peak trains per hour
  - Additional rolling stock on the Overground
  - Crossrail, reconfiguration of the Great Western Main Line relief lines with platform extensions at many stations and capacity enhancements to Greenford station
  - Electrification of Great Western Main Line - range of projects to add capacity and reduce journey times. Heathrow western access to be developed 2014/19 for opening by 2021/22
  - Orbital - Overground and Southern services: Train and platform lengthening to eight cars on all South Central services between Croydon and Watford, to be complete by 2014
  - South Western - Train lengthening on Reading line (by 2019). Limited 10-car services to Waterloo platforms 5 and 6; other Waterloo platforms to be lengthened (by 2019)
  - Chiltern: additional nine per cent capacity (by 2019)
  - London Midland - additional 10% capacity (by 2014)
  - Thameslink - completion of programme (by end 2018)
  - Barclays Cycle Hire Expansion and Intensification
  - Biking Boroughs: Locally-led enhancements to cycling in Hillingdon, Hounslow, Brent. Additional cycling investments in Harrow
  - Hammersmith fly-over: phase 2 strengthening, late Summer/Autumn 2013
  - Bridge renewals, 2016
  - Road safety improvements
  - Urban realm enhancements
  - Cycle Parking at stations - North Acton cycle hub, 2013
  - Design and Implementation of Cycle Greenways
  - Willesden Junction reconstruction of the station approach
- Other London-wide projects
- Wi-Fi provision at underground stations
  - Pedestrian countdown at traffic signals
  - Continuation of the bus stop and station step-free access programme
  - Contactless ticketing on all modes
  - SCOOT roll out to a further 1,500 sites London-wide
  - Introduction of electric vehicle charging points
  - Network wide roll out of a further 600 New bus for London buses
  - Legible London expansion
  - Investment in strategic and local roads (following the Roads Task Force Strategy)
  - Implementing the Mayor's Vision for Cycling in London



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## Appendix C:

Published research and strategies, 2012/2013

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# Published research and strategies, 2012/2013

The table below lists publications from the past year that document recent travel behaviour data, trends and strategies:

Published Research and Strategies	Accessible from
Accessibility Implementation Plan, 2012	<a href="http://www.tfl.gov.uk/assets/downloads/">http://www.tfl.gov.uk/assets/downloads/</a>
Casualties in Greater London during 2011/12	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>
Central London Peak Count, Travel in London Supplementary Report, TfL, 2013	<a href="http://www.tfl.gov.uk/corporate/about-tfl/publications">http://www.tfl.gov.uk/corporate/about-tfl/publications</a>
Clean Air Fund – End of Programme Report, TfL, 2013	<a href="http://www.tfl.gov.uk/assets/downloads/corporate/caf-end-of-programme-report.pdf">http://www.tfl.gov.uk/assets/downloads/corporate/caf-end-of-programme-report.pdf</a>
Collisions and casualties on London's roads 2011/12	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>
Transport planning for healthier lifestyles - a best practice guide, TfL, 2013	<a href="http://www.tfl.gov.uk/businessandpartners/21189.aspx">http://www.tfl.gov.uk/businessandpartners/21189.aspx</a>
Levels of collision risk in Greater London (Issue 13) , 2012	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>
Logistics and Safety Summary Report, 2013	<a href="http://www.tfl.gov.uk/microsites/freight/documents/publications">http://www.tfl.gov.uk/microsites/freight/documents/publications</a>
London Atmospheric Emissions	
Olympic Legacy Transport Action Plan, TfL, 2012	
Pedestrian fatalities in London, 2012	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>
River Action Plan, 2013	
Road Danger Reduction Plan, City of London, adopted January 2013	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>
Safe Roads for London, TfL, 2013	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>
The Mayor's Vision For Cycling In London, An Olympic Legacy For All Londoners, TfL, 2013	<a href="http://www.london.gov.uk/publication/mayors-vision-cycling">http://www.london.gov.uk/publication/mayors-vision-cycling</a>
Travel in London 5, TfL, 2012	<a href="http://www.tfl.gov.uk/corporate/about-tfl/publications">http://www.tfl.gov.uk/corporate/about-tfl/publications</a>
Towards the year 2010: monitoring casualties in Greater London (Issue 11), 2012	<a href="http://www.tfl.gov.uk/roadsafety">www.tfl.gov.uk/roadsafety</a>

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[www.tfl.gov.uk](http://www.tfl.gov.uk)

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