

March 2012

# Leaving a transport legacy

Olympic and Paralympic  
Transport Legacy Action Plan



**MAYOR OF LONDON**

**Greater London Authority  
March 2012**

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This summer's sporting spectacle will focus the eyes of the world on London with transport being one of our biggest tests. On the busiest days of the Games, the network will carry more than 600,000 spectators on top of our usual demand.

To this end, a huge amount of planning has gone into ensuring that the Capital's travel infrastructure is primed for action, with more than £6.5bn invested to improve the transport network and ensure the smooth running of the Games.

But our true test is to ensure that these upgrades and extensions benefit Londoners after the last medal has been presented and for future generations for decades to come. We also want to learn valuable lessons from the unique challenges we will overcome during this unprecedented period. This will secure better access to jobs, education and leisure for people all over our city.

We've worked closely with the six host boroughs to develop this document and my thanks go to all involved. It is testimony to a wholesale commitment to ensure this investment is money well spent.



I believe that the 2012 Games has presented us with an incredible opportunity and we must grasp it with both hands. By doing so, we are taking significant steps towards transforming huge parts of the Capital for ever and ensuring that London remains the best big city in the world.

A handwritten signature in black ink, which appears to be 'Boris Johnson'.

**Boris Johnson**  
Mayor of London



# Chapter one – Introduction and policy context

## 1.1 About this document

- 1 This document sets out a series of actions to leave a transport legacy from the London 2012 Olympic and Paralympic Games.
- 2 The objectives are to:
  - Set out the actions required to embed a physical and behavioural transport legacy across London
  - Set out the actions related to transport that can support convergence, as measured by a range of socio-economic and environmental indicators, between the cluster of six Olympic host boroughs in east and southeast London (Barking & Dagenham, the Royal Borough of Greenwich, Hackney, Newham, Tower Hamlets and Waltham Forest) and the rest of London
- 3 The document sets out:
  - The physical legacy
  - The behavioural legacy
  - Opportunities arising from the 2012 Games
  - How these elements will support convergence and tackle transport challenges



## 1.2 Mayor's vision

- 4 The Mayor's London Plan identifies the Olympic Park and the surrounding area as 'London's single most important regeneration project for the next 25 years'. The Mayor's vision for an Olympic and Paralympic legacy is to develop and implement a viable and sustainable legacy for the 2012 Games to deliver fundamental economic, social and environmental change within east London, and to close the deprivation gap between the cluster of six Olympic host boroughs in east and southeast (referred to as the six host boroughs in the rest of this document) London and the rest of London.
- 5 The Mayor supports the overall ambition of the six host boroughs to achieve convergence in quality of life with the London average across a range of key indicators.
- 6 Convergence is defined as:
 

'Within 20 years the communities who host the 2012 Games will have the same social and economic chances as their neighbours across London.'<sup>1</sup>
- 7 Indicators of convergence (as defined by the Olympic and Paralympic SRF<sup>2</sup>) include:
  1. Creating a coherent and high-quality city within a world city region
  2. Improving educational attainment, skill and raising aspirations
  3. Reducing worklessness, benefit dependency and child poverty
  4. Enhancing health and wellbeing
  5. Maximising the sports legacy and increasing participation
  6. Homes for all
  7. Reduce serious crime rates and antisocial behaviour
- 8 The leaders and Mayors of the host boroughs have agreed to work with the Mayor, Government and key stakeholders to lead the development of action plans to achieve three basic improvements in living conditions as a legacy of the 2012 Games. These action plans will be grouped into the themes of:
  - Creating wealth and reducing poverty
  - Supporting healthier lifestyles
  - Developing successful neighbourhoods
- 9 The host boroughs have identified a set of indicators against which to assess progress on convergence across the three themes. A small number of extra indicators may be added in due course.

<sup>1</sup> Olympic Legacy Strategic Regeneration Framework (SRF), October 2009

<sup>2</sup> Olympic Legacy SRF, October 2009



Theme	Indicator
<b>Creating wealth and reducing poverty</b>	Proportion of children living in families on key benefits to London average
	Pupils achieving at least Level 4 in English and maths at Key Stage 2
	Pupils achieving five GCSE grades A*-C (including maths and English) in maintained schools
	Economically active people in employment
	Median earnings for full time workers living in the area
<b>Supporting healthier lifestyles</b>	Life expectancy: male female
<b>Developing successful neighbourhoods</b>	Violent crime levels

Source: Convergence – Update Report to East London Legacy Group, 3 March 2011

- 10 The Mayor is also committed to ensuring that the significant public sector investment and infrastructure being put in place for the Games leaves a lasting legacy for the most disadvantaged Londoners by acting as a catalyst for tackling decades of underinvestment across east London, and accelerating regeneration. This includes addressing issues of health inequality and ensuring that behavioural change activities are appropriately focused on groups least likely at present to consider walking and cycling for their journeys reducing their risk of cancer and heart disease. The Games provide an opportunity to showcase the wealth of transport improvements already made, under way or planned, and to promote the benefits that improved transport connections and infrastructure will mean for Londoners. These include improved access to employment for people living in the most deprived communities in east and southeast London, independent travel for disabled people, which in itself improves their access to employment and education, and a more pleasant travelling environment for all Londoners.
- 11 Transport has an important role in supporting convergence and wider regeneration. In particular, transport supports access to employment and services, as well as potentially contributing to improving people's health and environment. A number of specific transport outcomes have been defined which support the overall convergence ambition and will support growth:
- Improving connectivity (and access to jobs)
  - Improving highway network reliability
  - Improving access to education
  - Improving access to sport
  - Improving the built environment
  - Improving air quality
  - Reducing noise impacts
  - Increasing active travel
  - Improving access to healthcare
  - Reducing crime, fear of crime and anti social behaviour on the transport network

12 The 2012 Games transport legacy itself is a key component of overall convergence, affecting people’s ability to access jobs and education and influencing their mode of choice. It covers three areas:

- Behavioural or physical<sup>3</sup> change due to the staging of the 2012 Games
- Interventions to enable development and/or use of the 2012 Games venues after the Games to help meet outcomes such as increased use of sustainable travel modes, access to jobs and health improvements
- Using the 2012 Games to help achieve convergence and other outcomes of the Mayor’s Transport Strategy (MTS)



<sup>3</sup> Infrastructure such as new rail lines, roads, footpaths and cycleways and open space

## 1.3 Background

- 13 The 2012 Games will be held in an area of London expected to see significant levels of growth in population and employment over the next 20 years. The east London sub-region is expected to accommodate half of London's population growth and nearly a quarter of its growth in jobs to 2031. The six host boroughs are therefore expected to have very high levels of growth over the next 20 years, with Tower Hamlets and Newham seeing the largest increases of over 100,000 residents each.
- 14 This regeneration is also likely to result in changes in the demographics of the area, which will also have consequential impacts on how the transport network is used. The impact of these changes needs to be considered and planning and policies used to ensure that walking, cycling and public transport use is promoted to enable the growth to be achieved sustainably within the area.
- 15 The 2012 Games themselves will be focused mainly around Stratford. It is currently designated as a major centre in the London Plan and forms part of the larger Lower Lea Valley Opportunity Area. The London Plan proposes that a new metropolitan centre will be focused around Stratford to be complemented by a mix of employment, housing and open spaces, much of which will be located around the Olympic Park.
- 16 Even before the announcement of the successful bid for London to host the 2012 Games, Stratford's transformation and growth was well under way. The hosting of the Games enables this transformation to be accelerated and built on. Stratford is highly accessible being served by numerous transport links including National Rail (Great Eastern and Lea Valley lines), London Underground (Central and Jubilee lines), high-speed commuter services between central London and Kent, London Overground and the DLR (one line towards Canary Wharf with an additional line opened in 2011 enabling direct connections to ExCeL, London City Airport and under the Thames to Woolwich). In addition, numerous bus services connect to Stratford and support the local area. From 2018, Stratford will also benefit from Crossrail services towards central and west London, including Heathrow Airport. These strong transport connections will form the foundation for Stratford's growth and supporting development of the area.
- 17 For many London residents Stratford is already a key destination in its own right. However, this is currently being enhanced with the recent opening of Westfield Stratford City. One of Europe's largest regeneration projects, it will include a new shopping centre, purpose-built 5,000-home community, offices, schools and public spaces as well as municipal and other facilities.
- 18 It is important to ensure that regeneration and growth in the areas immediately surrounding the Games sites and the rest of the east sub-region continues, so that the area reaches its maximum potential.

<sup>4</sup> [www.london.gov.uk/publication/mayors-transport-strategy](http://www.london.gov.uk/publication/mayors-transport-strategy)

## 1.4 Planning policy context

19 The basis and requirement for an Action Plan is set out in Proposal 47 of the MTS<sup>4</sup> published in May 2010. This places a requirement on the Mayor to produce a Transport Legacy Action Plan that supports convergence. Proposal 47 states:

‘The Mayor in partnership with the London boroughs, Transport for London (TfL) and Olympic Park Legacy Company, will develop a Transport Legacy Action Plan and monitoring programme to ensure the benefits of the legacy of the 2012 Games are maximised and that transport interventions support convergence as set out in the five [now six] Olympic Boroughs Strategic Regeneration Framework. The plan will be monitored for 10 years after the Games, and will define:

- Partners and their responsibilities
- The monitoring within the five [now six] Olympic boroughs
- Key indicators and targets within the monitoring area and London-wide
- Actions and interventions required to meet the targets
- Annual review of targets.’

20 The Action Plan supports Policy 26 of the MTS which seeks to maximise the benefits of the physical and behavioural legacy of the 2012 Games to support convergence. In addition, the MTS aims (set out in the MTS figure 85, page 293) to deliver key outcomes against the Olympic legacy goal. These include:

- New public transport connections supporting the Olympic Park
- Smarter travel initiatives to promote active travel within the six host boroughs
- New and improved cycling and walking infrastructure within the six host boroughs

21 The MTS sets out the expected outcomes of the Olympic legacy in 2031 compared to current levels. These include:

- Convergence of social and economic outcomes between the six host boroughs and the rest of London
- Improved access to and from the Olympic Park
- Increased mode share of walking and cycling within the six host boroughs

22 The first of these outcomes is one of the strategic outcome indicators for the MTS as a whole, which will be monitored and reported on annually through TfL’s Travel in London report.

23 The Olympic Park and surrounding area is currently London’s most important regeneration project (as stated in the London Plan), because it combines some of the areas of greatest need in London with one of the greatest opportunities this city has had.

24 To help realise this, the Mayor has proposed that a new Mayoral Development Corporation (MDC) is formed based on powers contained within the Localism Bill which is currently before Parliament and therefore may be subject to change. The MDC should take over the assets and responsibilities of the existing Olympic Park Legacy Company (OPLC) as well as some programmes and assets of other agencies currently working in the area, becoming the single body responsible for driving regeneration in the area. The Mayor proposes that the Corporation’s purpose will be:

‘To promote and deliver physical, social, economic and environmental regeneration in the Olympic Park and surrounding area, in particular by maximising the legacy of the Olympic and Paralympic Games, by securing high-quality sustainable development and investment,

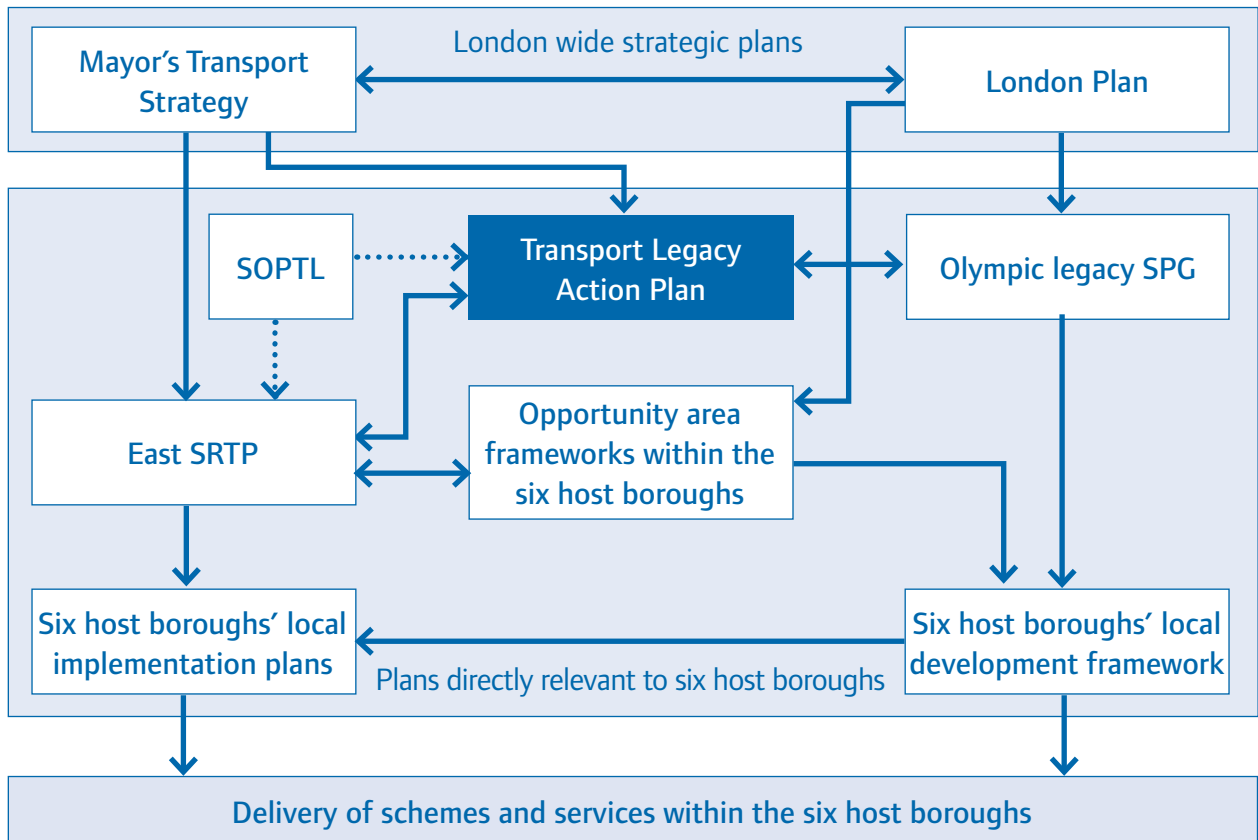
ensuring the long-term success of the facilities and assets within its direct control and supporting and promoting the aim of convergence.’

- 25 The Mayor proposes that, in order to meet his objectives, the MDC should assume the full range of planning powers and responsibilities permitted by the Localism Act 2011. It should therefore become the planning authority for the area for the purposes of both plan-making and development control, and for setting and collecting the Community Infrastructure Levy. The Mayor intends that the Corporation would develop a strong collaborative approach to its planning functions with the four host boroughs whose boundaries coincide with the proposed boundary of the Corporation, and in particular proposes that those boroughs

should be represented on the Corporation’s planning committee.

- 26 The Games also provide an impetus to address a number of wider MTS outcomes, because of the large scale of new development in the Olympic Park and large population growth expected in the six host boroughs. The transport operations in place for the Games could in some cases continue after the Games to help meet growth demands, while the Games itself can inspire people to change behaviour and walk or cycle more.
- 27 In addition, this Action Plan is closely linked with a number of other plans. A continuation of the coordinated planning and delivery of improvements is essential to fully meet its objectives.

Figure 1 – Links between the action plan and other planning policy documents



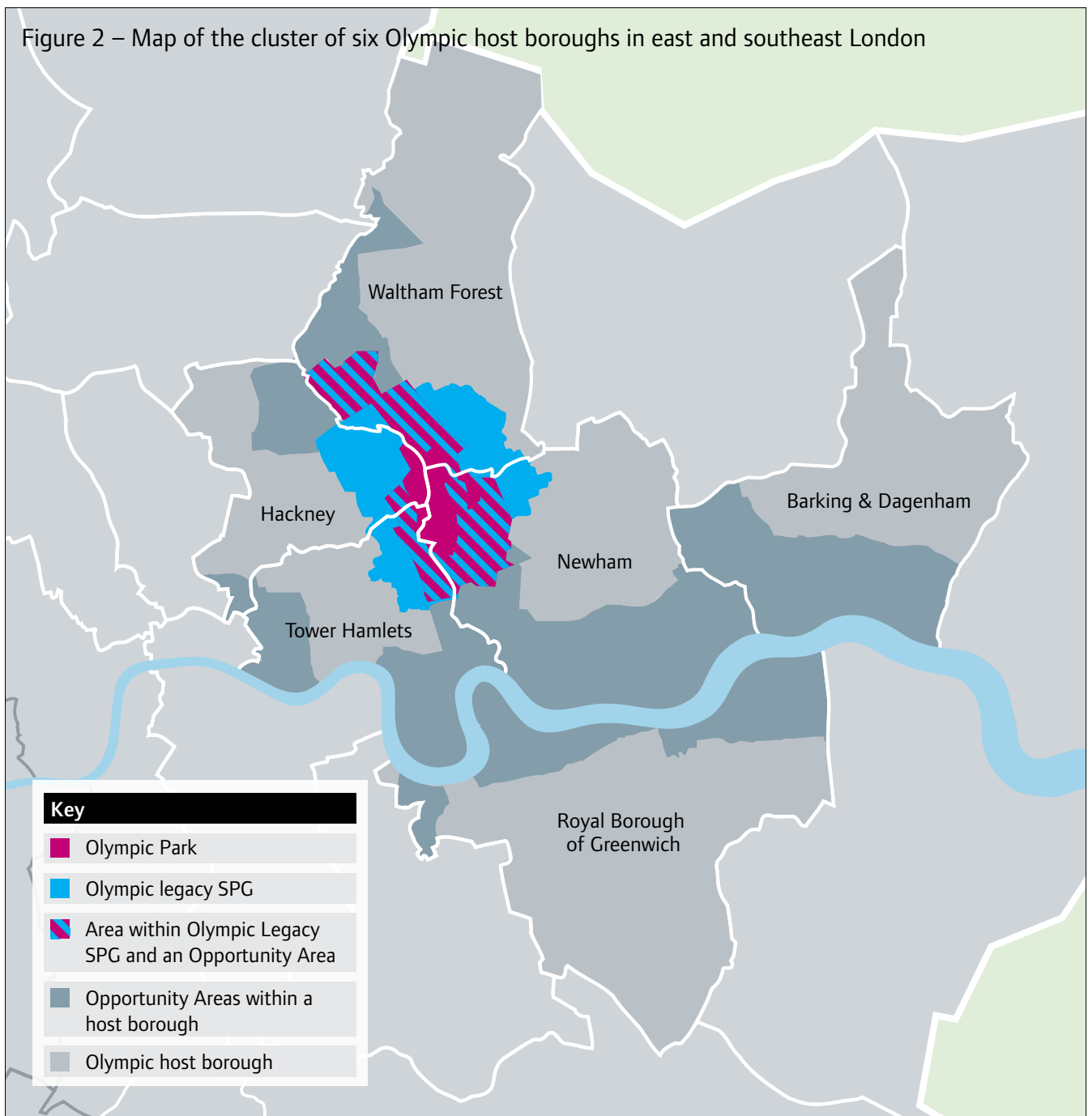
- 28 The Transport Plan for the London 2012 Olympic and Paralympic Games was published by the Olympic Delivery Authority (ODA) in June 2011. This is the transport strategy for the Games and the spectator transport operations plans for each venue. This outlines both the transport infrastructure needed and the change in travel behaviour needed during the 2012 Games. The Action Plan develops a number of the schemes and plans within the Transport Plan for the 2012 Games for the broader legacy. This Action Plan also supports the London 2012 Sustainability Plan 'Towards a one planet 2012'.
- 29 The East Sub-Regional Transport Plan (ESRTP) acts as a link between the MTS and borough Local Implementation Plans (LIPs). The ESRTP considers the specific challenges faced in terms of transport in east London and supports the growth and regeneration of the area. Both the ESRTP and LIPs will provide a number of schemes and interventions that will support convergence, regeneration and growth. In terms of the 2012 Games, the transport plan sets out the areas which TfL believes the boroughs should focus on to maximise the wider benefits of the 2012 Games. These include how to incorporate sustainable travel into the construction of new homes and offices, ways of driving the uptake of physically active travel and where to locate new development to make the most out of what transport exists and what is planned. How the Action Plan relates to the ESRTP and LIPs is shown in figure 1. When revised the ESRTP will consider the six host boroughs' report *Securing the Olympic and Paralympic Transport Legacy (SOPTL)*.
- 30 In addition, the Action Plan has taken account of the Olympic Legacy Supplementary Planning Guidance (SPG) that is being developed by the Mayor with key stakeholders (including the four surrounding boroughs, ODA, London Thames Gateway Development Corporation, Design for London, London Development Agency [LDA] and Department for Communities and Local Government [DCLG]). This covers 2011–2031 and sets out how the Mayor envisages the areas within and around the Olympic Park at Stratford should change to help achieve the lasting transformation of east London. The area of the Olympic legacy SPG is shown in figure 2 with other Opportunity Areas in the six host boroughs. The Olympic legacy SPG provides more detail of related London Plan policies and is designed to guide and shape planning applications that will come forward within the legacy area (such as the Olympic Park Legacy Company's Legacy Master Plan and planning applications for the Olympic Park), as well as informing and shaping funding decisions and local policy development. Specifically, it sets out a strategic planning context for land use change in the legacy area so as to maximise the regeneration potential of the Games and benefits of the related transport investment. The public consultation of the SPG was held in the summer of 2011.
- 31 Other Mayoral strategies this Action Plan supports include the Equality and Diversity Strategy and the Health Inequality Strategy while the six host boroughs' Local Development Framework, as well as other planning documents, will ensure future development supports sustainable travel and the Mayor's vision.

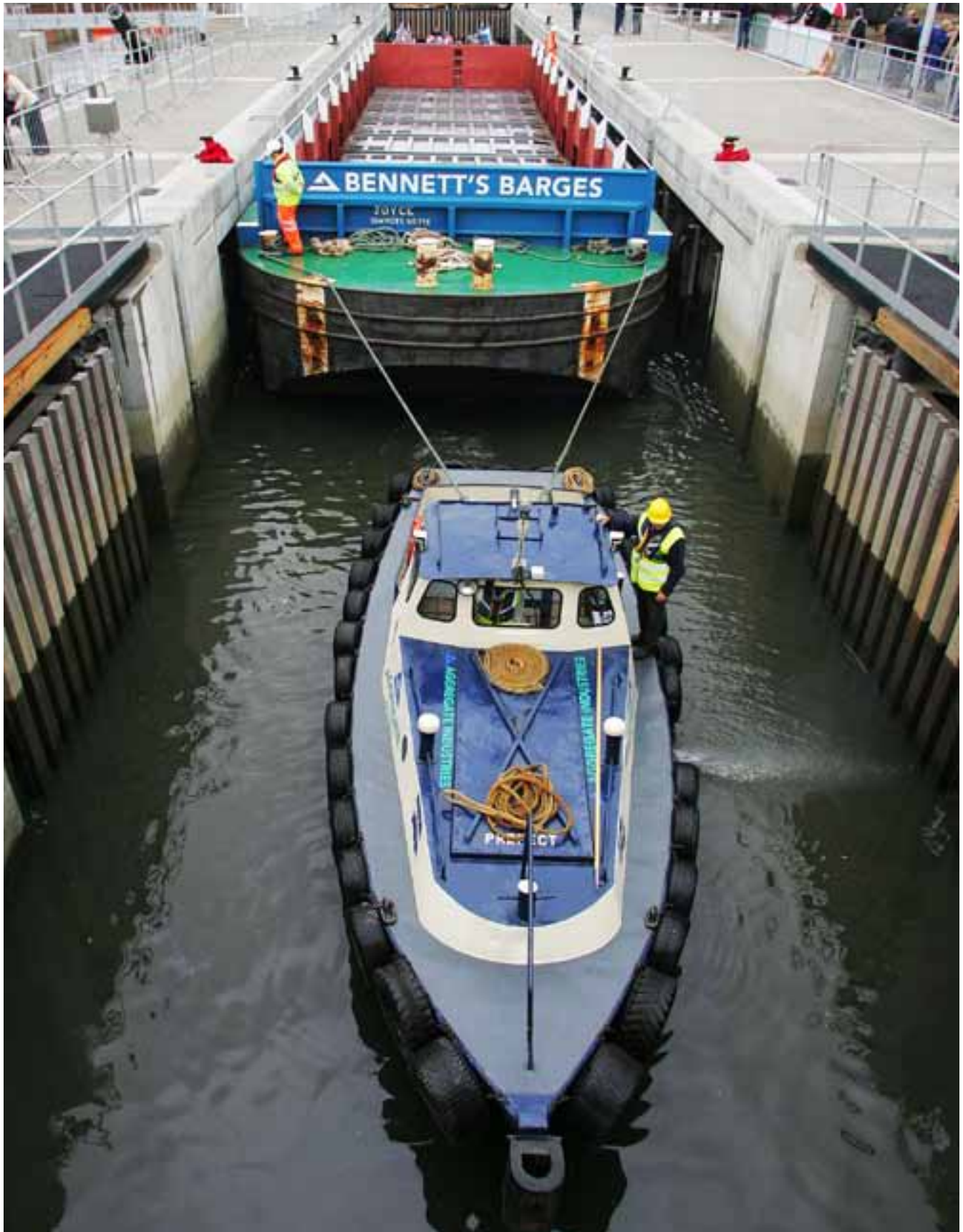
32 Monitoring of the programme will be included as part of the Travel in London Report published by TfL. The Travel in London Report is published annually and monitors progress against MTS goals and outcomes. The key MTS goal for this Action Plan is ‘support the delivery of the London 2012 Olympic and Paralympic Games and its legacy’.

## 1.5 Responsibilities

33 Each of the actions identified within this Action Plan details which organisation is expected to carry out the action. In addition, as mentioned above, TfL is responsible for carrying out monitoring of the indicators and targets.

Figure 2 – Map of the cluster of six Olympic host boroughs in east and southeast London







## 2.1 Introduction

<sup>34</sup> The 2012 Games will provide London with a wide range of new transport infrastructure, known as the physical legacy. This is vital to ensure the 2012 Games are a success and provide useable infrastructure for London, helping to support the MTS outcomes. While the majority of this physical legacy will be in east and southeast London - which will have some of the best transport links in the Capital, there will also be improvements across London, such as step-free access at Green Park and Southfields Underground stations. In addition, the land use changes after the 2012 Games, for example, large areas of open space, riverside walks and cycle paths, will provide a lasting physical legacy.

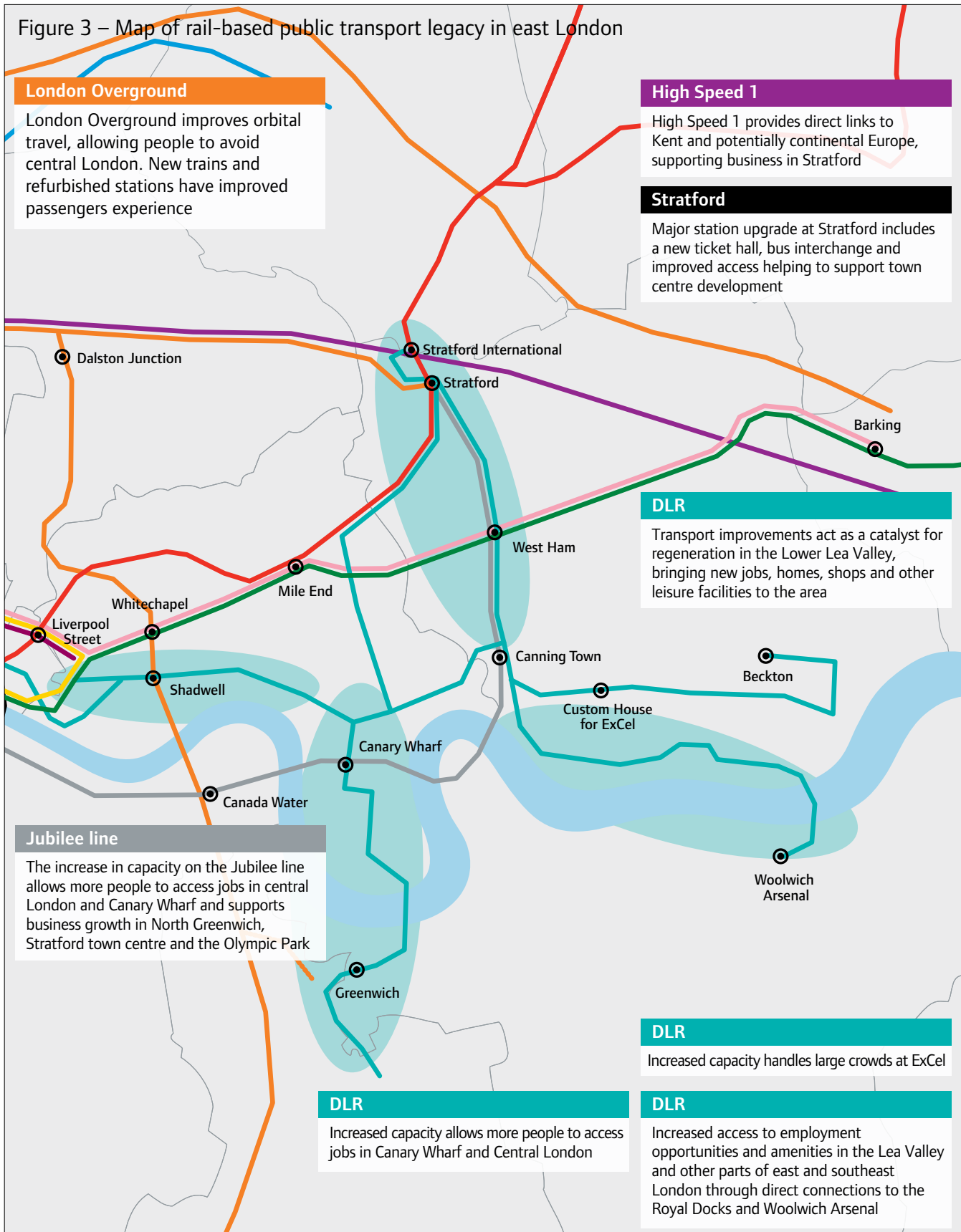
## 2.2 Highway, water and rail infrastructure

### 2.2.1 Rail infrastructure

<sup>35</sup> The 2012 Games provides a range of legacy benefits for rail users in London, primarily in east London around the Olympic Park and venues either side of the River Thames. Although they were planned before the 2012 Games was awarded to London, the decision was a catalyst for implementing programmes to a quicker timescale and ensuring they are implemented in time for the 2012 Games.



Figure 3 – Map of rail-based public transport legacy in east London



- 36 Within east London there has been substantial investment in the Docklands Light Railway (DLR), Underground, London Overground and National Rail services, as shown in figure 3. This has been funded by TfL, the ODA, and Network Rail. A number of these improvements have occurred ahead of development within the area and have therefore helped to facilitate new development. This enables a land use mix with increased use of public transport, walking and cycling compared with many other developments.
- 37 The Jubilee line, with a new signalling system and longer trains, will provide greater capacity within east London with a 33 per cent increase on the line. This will allow greater numbers of people to access jobs within Canary Wharf, North Greenwich, Stratford town centre and the Olympic Park, helping to support local employment and businesses within the area while improving connectivity for east London as a whole.
- 38 The improvements to London Overground, enhance the connectivity to and from Stratford, and within Hackney and Tower Hamlets. This greatly improves people's access to jobs and services, as well as supporting businesses within and around the Olympic Park, Shoreditch and Dalston.
- 39 The improvements to the DLR have been substantial for the 2012 Games. This has included increases in capacity, construction of new lines and delivery of new trains. This provides for the passengers and opening of new stations within areas previously poorly serviced by public transport, helping people to access jobs and supporting regeneration within the Lower Lea Valley. This is covered in more detail in the case study on page 22.
- 40 National Rail improvements that support the 2012 Games include a new station at Stratford International on High Speed 1. This will be crucial to moving large numbers of spectators from central London to the Olympic Park (on high-speed 'Javelin' services from St. Pancras). This will also provide wider legacy benefits, including direct high-speed train links from Kent and, potentially, from continental Europe to Stratford and the Olympic Park. Completion of High Speed 2, with its link to High Speed 1, will provide further links to other UK regions, which will be crucial in attracting business to the Olympic Park and wider Stratford area in the long term.
- 41 Stratford Regional station is itself seeing major improvement works. Two new London Overground platforms have been built and the previous London Overground platforms have been converted so they can be used by the new DLR line extension to Stratford International station. Improvements have been made to the Central line, allowing westbound trains to open doors on both sides. All of these improvements allow greater numbers of passengers to use Stratford Regional station and provide a better passenger experience and allow easier interchange between modes.
- 42 To facilitate rail freight around the Olympic Park, there has been the replacement of Angel Bridge Lane, improvements to allow platform 10a to act as a passing loop and the use of Bow East Logistics Centre was used for park construction. This has allowed more than 50 per cent of construction materials to be brought in by sustainable means. The centre is being removed for the 2012 Games so that the stadium warm-up track can be located there but is scheduled to revert to a rail freight facility. Following the Games, this will allow the centre to play an important role in the provision of a freight legacy for the area.

## Case study

### Docklands Light Railway

London 2012 has invested around £86m to improve the DLR network. It will form a crucial link to several Games venues, including the Olympic Park, Greenwich Park and ExCel.

Further investment by TfL and local partners has seen a £666m investment to provide line extensions, new stations, a control centre and new railcars, benefiting Londoners long after 2012. The parallel project to extend the existing railway to three-car operation will boost capacity by 50 per cent on existing routes.

Improvements for the 2012 Games include:

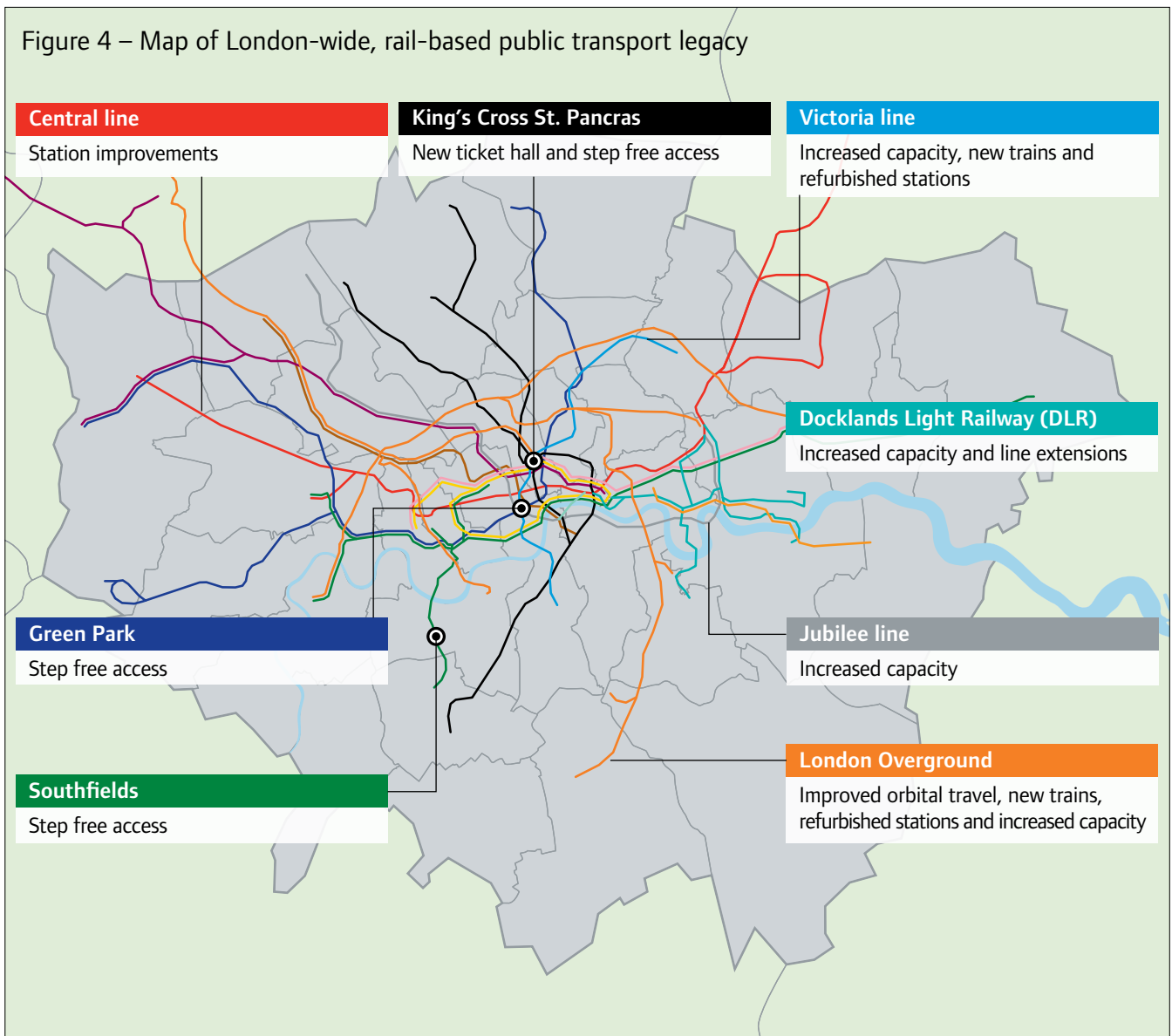
- A total of 55 new railcars co-funded by TfL and the ODA which are now in service
- The new extension between King George V and Woolwich Arsenal station – the DLR's second crossing under the River Thames – which opened in January 2009
- A second new extension from Canning Town to Stratford International station, opened in 2011
- Construction of a new control centre
- Expanding capacity at most stations

The DLR will therefore:

- Continue to act as a catalyst for wider regeneration in the Lower Lea Valley, bringing new jobs, homes, shops, services and other leisure facilities to the area
- Provide improved public transport capacity, reliability, accessibility and frequency on the corridor between Stratford and Canning Town by converting the North London line to DLR use
- Enable people to take advantage of employment opportunities and amenities in Lea Valley and other parts of east and southeast London through direct connections to the Royal Docks and Woolwich Arsenal
- Create greater access to public transport with the provision of intermediate stations between Stratford and Canning Town to serve existing and future communities
- Offer passengers an environmentally friendly alternative to the car and significantly improve orbital journey opportunities between north, northeast, east and southeast London
- Provide a new link to Stratford International to serve high-speed train services



Figure 4 – Map of London-wide, rail-based public transport legacy



43 In addition to improvements in east London, there are a number of ongoing transport network enhancements throughout the Capital, as illustrated in figure 4. On London Underground, as well as the Jubilee line improvements, work continues on the Victoria line to increase capacity by 21 per cent, refurbish stations and to introduce new trains. Central line stations are also being modernised. Together, these changes will help enhance passenger journeys and reliability across London.

44 Strategic London Underground stations for the 2012 Games, including Green Park, are being improved with step free access. Southfields and King's Cross St. Pancras have been made step-free opening up a greater range of journey opportunities for people unable to use escalators and stairs. A new ticket hall has been provided at King's Cross St. Pancras that will make it more welcoming to international visitors, help passengers interchange between National Rail and the Tube, make the station cooler and provide an increase in capacity.

- 45 The London Overground improvements include the East London line extension, an entirely new train fleet and improved frequency of 12 trains per hour between Dalston Junction and Surrey Quays. These improvements are helping orbital travel (allowing people to avoid central London), improving the passenger experience and increasing capacity.

**Action 1**

After the 2012 Games, TfL will use the rail infrastructure delivered to support the outcomes of the MTS



## Case study

### Physical accessibility

A number of improvements to accessibility are being made in readiness for the 2012 Games, including step-free access at stations. Across London's public transport network there has been an increase in the number of areas that can be accessed by step-free travel within east London. This has been complemented by an increase in the number of streets and paths that are accessible particularly through the eight walking and cycling routes which are included in Section 2.3.1.

The DLR and Jubilee lines from Westminster to Stratford are already step free. London Overground provides new step-free stations across London, such as Shoreditch High Street in east London, and current stations at Crystal Palace in south London and Imperial Wharf in west London.

Although large parts of the Underground network remain without step-free access, Southfields and key strategic stations at King's Cross St. Pancras and Green Park have been made step free for the 2012 Games. This, combined with the 100 per

cent low-floor, step-free bus fleet, will allow a greater number of journeys to be made without the need to use escalators or stairs.

TfL recognises that accessibility is more than 'step-free access' and is also focusing on improving access to information and ensuring all staff are trained to support passengers with different needs. This is part of the 'whole journey' approach, which takes into account the fact that disabled people need access to information to plan their journey and that routes to transport are as important as physical access to the transport itself. TfL will continue to improve other aspects of physical accessibility.

These improvements and better information will allow a greater number of people to take advantage of the improved access to and through the public transport system during the 2012 Games and afterwards. This will allow a greater number of people, including disabled people, parents with push chairs and people with luggage to take advantage of London's opportunities.



### 2.2.2 River and water services

46 Facility enhancements are being implemented in time for the 2012 Games to Tower and Greenwich Piers as shown in figure 5. The extension of Tower Pier will provide additional capacity and the installation of a roof at Greenwich Pier will provide shelter. Passenger information will be improved and rest points installed. These facilities will enhance the experience of river passengers travelling between central London and Greenwich town centre (where the equestrian events will be held) as well as other locations along the Thames.

47 In addition to services on the River Thames, during the 2012 Games, there will be shuttle services on the River Lea. These will connect the Olympic Park to Limehouse Basin and Tottenham Lock. This demonstrates the potential for the River Lee to be used for passenger services.

**Action 2**

TfL will work with River Service Operators to ensure that service capacity is appropriately used to improve links between central London and Greenwich, and TfL will support River Service Operators' use of the River Lea for passenger services.

Figure 5 – Map of river services

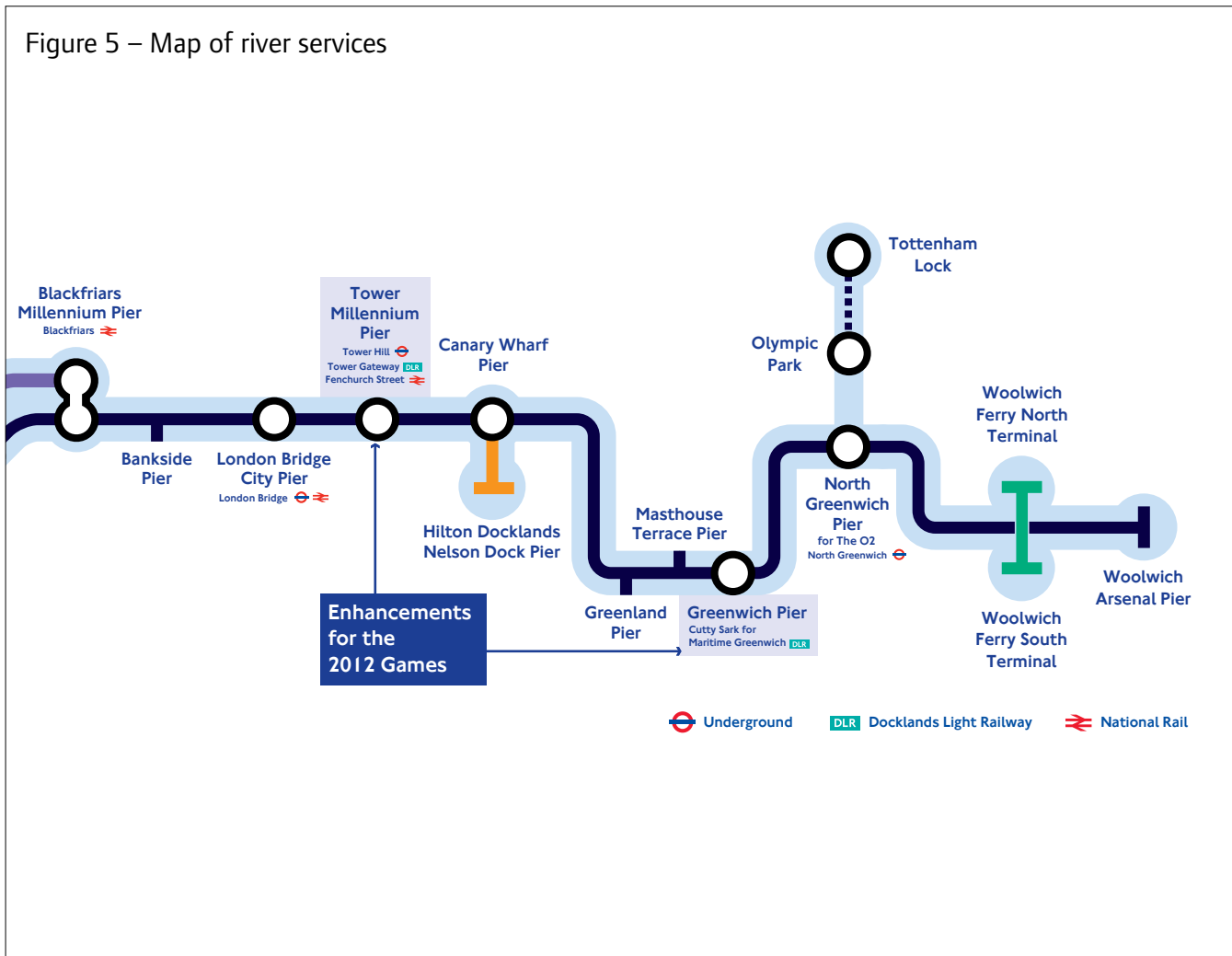
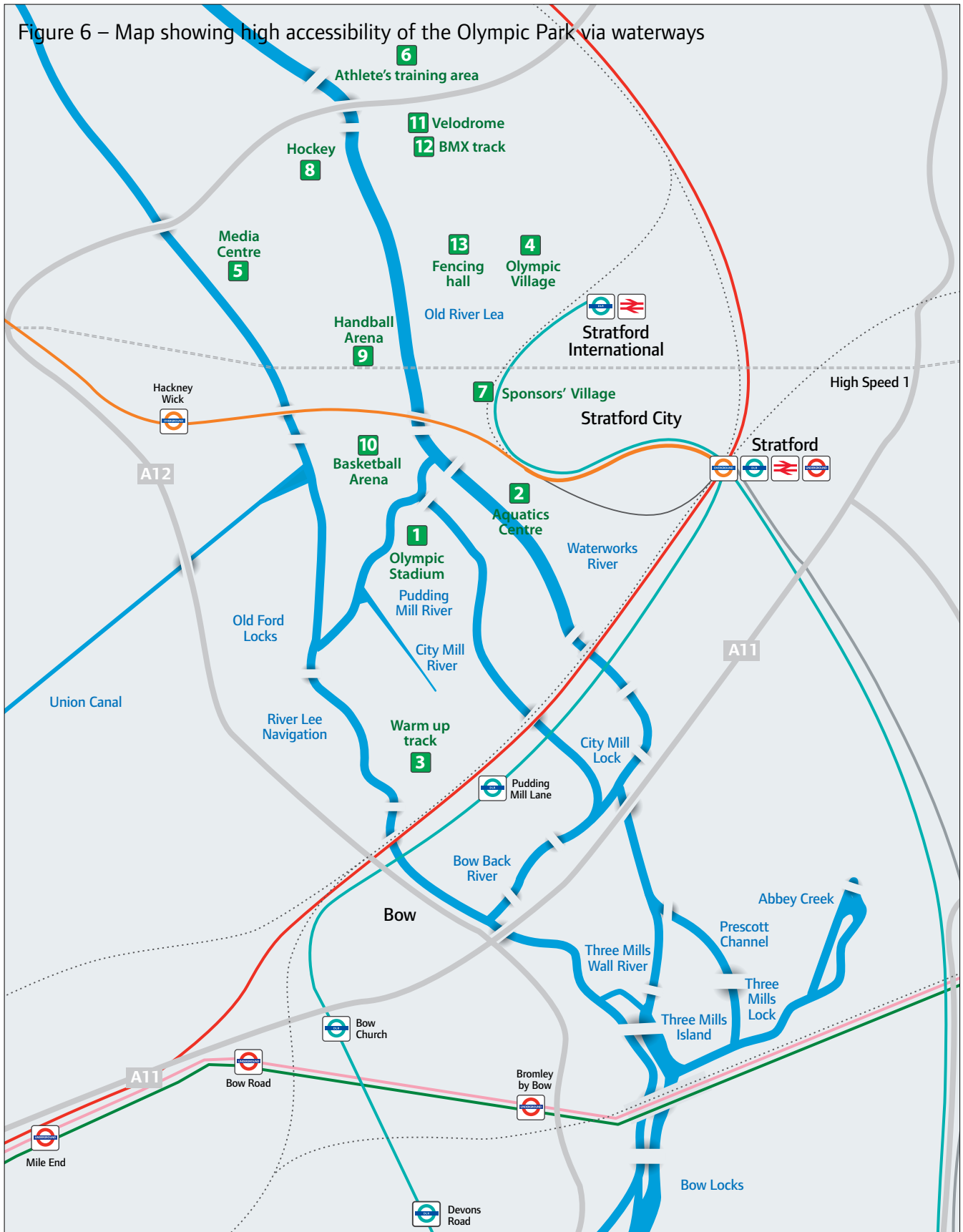






Figure 6 – Map showing high accessibility of the Olympic Park via waterways



- 48 For water freight, the facilities developed for the construction of the Olympic Park, including Three Mills lock (also known as Prescott Lock) shown in figure 6 and potential wharfs in the Olympic Park, provide an opportunity for increasing the use of water for freight movements on the River Lea. This allows the future servicing of the Olympic Park by water rather than road freight. This could reduce demand for road freight, helping manage the road network and improve air quality within the local vicinity.

### Action 3

TfL will work with the Greater London Authority (GLA), British Waterways and the six host boroughs to enable the continued use of the River Lea and surrounding waterways to deliver freight to the Olympic Park and the surrounding area in the future.

## 2.2.3 Highway improvements

- 49 To enable the Games to be a success, the Games Family – athletes, team officials and technical officials (referees and umpires) – need to access the events on time. To ensure they do, an Olympic Route Network (ORN) and a Paralympic Route Network (PRN) are to be established for the duration of the 2012 Games. This includes routes with dedicated lanes and enhanced traffic management measures upgrading traffic control infrastructure to SCOOT technology on all traffic signals on the ORN and over 40 new CCTV cameras allowing operators of London’s road network to intervene in real-time to resolve unplanned events.
- 50 The operation of the ORN and PRN, supported by a new Transport Coordination Centre (TCC), will leave a legacy of improved transport coordination across London. The upgrade traffic signals, new CCTV cameras and the TCC will facilitate the movement of Games Family vehicles during the 2012 Games and because the fixed installations are permanent they will provide benefits to London’s travelling public both before and post 2012 in line with the Mayor’s smoothing traffic flow agenda.
- 51 Highway improvements have been included in the construction of the Olympic Park. In particular there are a number of bridges that reduce severance caused by the River Lea and railways. These will help connect the park to the surrounding area.

### Action 4

Working with the boroughs, TfL will use the new highway infrastructure, including traffic signal infrastructure such as CCTV provided for the 2012 Games to help smooth traffic flow.

## Case study

### Transport Coordination Centre

The TCC will be the first coordinated transport centre in the UK, bringing together TfL, transport operators and the British Transport Police, to improve coordination of transport information. The TCC will leave a physical legacy through new equipment and systems which has the potential, with the support of stakeholders, to be invaluable when delivering transport on a day-to-day basis and for large-scale events in the future, benefiting London's transport operations, and the UK.

These improvements will be brought about by:

- Development of new relationships where they did not exist before; the TCC will bring together all transport organisations into a new partnership that traditionally operated separately. These will continue after the 2012 Games, improving future transport and event management
- Formalising existing relationships, responsibilities and procedures for working together more closely
- Improved incident management with the TCC coordinating the incident management between transport providers, rather than working separately
- Improved knowledge sharing between transport operators



## 2.3 Walking and cycling infrastructure

<sup>52</sup> Walking and cycling are healthy and sustainable ways to travel and, for the 2012 Games, there is a range of improved infrastructure for both pedestrians and cyclists that will provide a lasting physical legacy. This is predominately

focused in the six host boroughs in east and southeast London and builds on commitments in the 2012 Sustainability Plan and Mayoral Strategies.

<sup>53</sup> The walking and cycling improvements being carried out for the Games include greenways, expansion of Barclays Cycle Hire eastwards and better streets projects.



## Case study

### Barclays Cycle Hire

Barclays Cycle Hire has been a huge success since its introduction in central London with 1.5 million journeys made in the first three months of operation. In time for the 2012 Games, the cycle hire scheme will be expanded into east London to cover an additional 20sq km, with 2,700 more docking points in it. This will ensure the Barclays Cycle Hire area will link the West End and City of London to the Olympic Park and other areas in East London, including Canary Wharf.

Journeys that could be carried out within 30 minutes (which incur no usage charge) from docking stations in the expanded Barclays Cycle Hire service area include: Regent's Park to Bethnal Green (29 minutes), Victoria Park to

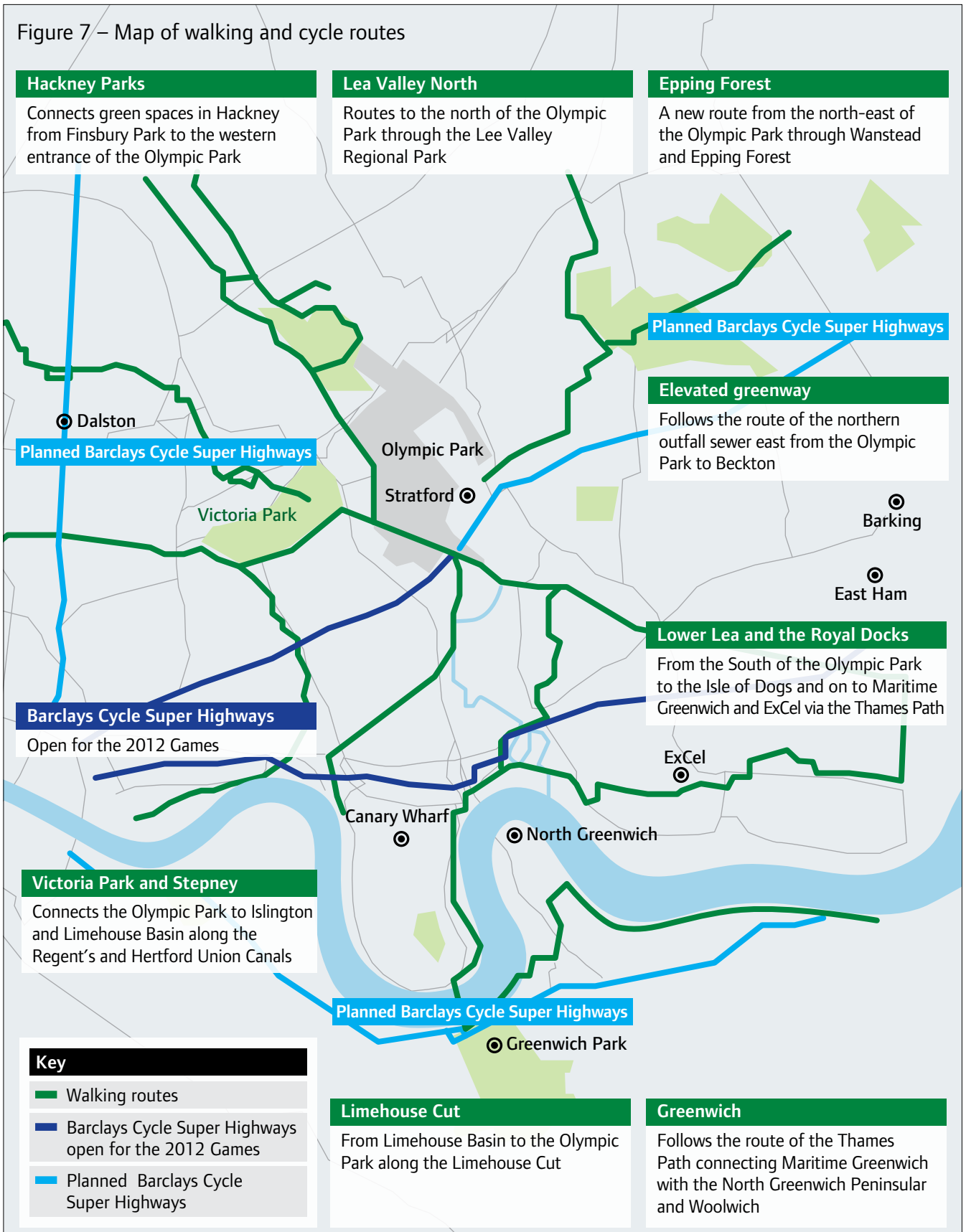
Shoreditch (12 minutes) and Canary Wharf to Liverpool Street (26 minutes).

This will provide a far greater range of potential cycle hire journeys in time for the 2012 Games. After the Games, Barclays Cycle Hire will still be available to communities in east London, allowing them to cycle at low cost (currently the subscription fee is £1 a day, or £45 a year, which includes the first 30 minutes free).

Early evidence shows that Barclays Cycle Hire is encouraging more to cycle. Six in 10 users started cycling for the first time in London in the last three months, demonstrating that Barclays Cycle Hire can encourage non-cyclists to give cycling a try. Many are now frequent cyclists, using the scheme several times a week.



Figure 7 – Map of walking and cycle routes



### 2.3.1 Walking and cycling routes

- 54 The main pedestrian and cycle routes (outlined in Figure 7) are the greenways being improved for the 2012 Games. Enhancements have included improved access points, surface treatments, improved crossings and generic signage. The routes include
- Lea Valley North – through the Lee Valley Regional Park
  - Epping Forest – through Wanstead and Epping Forest
  - Elevated greenway – from the Olympic Park to Beckton
  - Lower Lee and the Royal Docks – around the Isle of Dogs and the River Thames
  - Limehouse Cut – from Limehouse Basin to the Olympic Park
  - Victoria Park and Stepney – along the Regent's and Hertford Union Canals
  - Hackney Parks – connects Finsbury Park to the Olympic Park
  - Greenwich – follows the route of the Thames Path
- 55 These routes, as well as the Strategic Walking Network and the wheelchair accessible Fatwalk from the River Thames to the Olympic Park on the River Lea, provide a range of benefits to the area. They improve local connections to a number of town centres (including Angel, Canary Wharf, Woolwich, Greenwich, Stratford, and North Greenwich), providing access to quality food shopping and a range of services within these town centres, as well as local employment. Also, they improve access to open space, through connections to a range of parks.

- 56 There is potential, with the help of these routes, for significant growth in walking and cycling among residents of the six host boroughs. Newham, Barking and Dagenham, the Royal Borough of Greenwich and Waltham Forest all have a cycle mode share for trips by residents of just one per cent, lower than the London average of two per cent. In comparison, Hackney has achieved a mode share of eight per cent among its residents and Tower Hamlets two per cent. These routes go through the six host boroughs helping to encourage cycling. Across the six host boroughs two-thirds of a million trips are currently made by car or public transport that could potentially be cycled. Furthermore, the six host boroughs are anticipating significant population growth. The populations of Tower Hamlets and Newham are each expected to grow by more than 100,000 people by 2031, and more than 90,000 within the Royal Borough of Greenwich, which could bring a further increase in walking and cycling instead of using the car, preventing further congestion on roads.
- 57 To fully realise these legacy benefits after the Games these routes will need to be better linked to a number of town centres and other cycle routes such as the Barclays Cycle Superhighways to ensure their full use is realised. These links could either be by the careful use of signage or improvements to roads and paths. Legible London is being applied to the areas surrounding the Olympic Park. This will have wider benefits as the ease of use encourages people to walk in the area.

#### Action 5

TfL will work with the boroughs to unlock the full potential of walking and cycling routes improved for the 2012 Games. This may include providing better signage and information, cycle parking and new cycling or walking routes to link to the wider cycle and pedestrian network and town centres.





### 2.3.2 Better streets improvements

<sup>58</sup> To improve and enhance the quality of London's urban realm in time for the 2012 Games, TfL is funding a number of streetscape improvement works by the boroughs. These form part of the Mayor's programme for improving London's public spaces; London's Great Outdoors. Some of these improvements will play a key role in supporting the Games (for example through the provision of Live sites<sup>5</sup>) and all will provide a lasting legacy which will benefit Londoners and visitors. Schemes across the six host boroughs include:

- Improved pedestrian connectivity and public realm in Gillett Square next to Dalston station on London Overground with wider footways, better lighting, removal of clutter and improved crossings

- New public space at Shadwell DLR and London Overground station on the site of the old station building. TfL has commissioned an artist to design public artwork for the area
- Public realm improvements along Ruckholt Road including a new pedestrian and cycle bridge over the railway line, to improve connections to Leyton and better connections into the Olympic Park
- Public realm improvements to Crownfield Road (and Cann Hall Road) which will improve connections between Leyton and the Olympic athletes' village with Wanstead Flats, and better connections to the Olympic Park
- Public realm improvements to High Road Leyton, Leytonstone corridor scheme, Leytonstone town centre and Wood Street



<sup>5</sup> Live sites will be showing events on big screens



- Reducing the dominance of the A13 in Canning Town and encouraging safe and easy pedestrian movements to and in the town centre
- High Street 2012 aims to improve and celebrate the A11/A118 corridor which links the City with Stratford, reconnecting the places along it to make it a world-class destination during the Games and beyond
- Public realm improvements and improving signage with Legible London along all of the routes connecting Hackney Wick and Fish Island to the Olympic Legacy Park which will open in 2013. This will ensure access to the amenities and opportunities that the Legacy Park will bring for adjacent communities in Hackney and Tower Hamlets as currently this area separates these established communities and the Olympic Park area
- The Meridian Square (Stratford town centre) project will revitalise and strengthen Stratford town centre and encourage the use of public transport as well as remove barriers to make spaces accessible for everyone
- Renewal of existing Woolwich town centre squares (Beresford Square and General Gordon Square) including re-landscaping, creating shared surfaces, lighting and paving. This includes improved access to Woolwich Arsenal station
- Improved pedestrian links to the new Dalston Kingsland London Overground station by means of wider footways
- Streetscape improvements to East Ham town centre including resurfacing the carriageway and footways, street lighting and improved priority for buses
- Improved public access and legible routes through Walthamstow wetlands, with improved east/west links to reconnect the area to surrounding communities

## 59 Schemes across the rest of London include:

- Work to improve the Piccadilly, St. James and Pall Mall one-way system. More than one kilometre of railings will be removed and two-way traffic will be reintroduced. More space will be devoted to pedestrians and the transformative scheme will open up the gateway to St. James's Park and Horse Guards Parade (the venue for beach volleyball), this will reduce crowding on pavements improving the experience for pedestrians
- Establishing Britannia Junction outside Camden Town Underground station as a new public space. Wider pavements will be created and crossings improved, reducing crowding and improving pedestrian experiences. This will help boost visitor numbers to this already popular tourist destination
- Extensive improvement works around Russell Square to support Games activity that will leave the lasting benefits of improved traffic flow, enhanced walking and cycling environments, better public realm and improved signage with Legible London installed
- Upgrading the Harbet Road/Towpath Road section of the River Lea Towpath (within the London Borough of Enfield) and delivery of the 'missing link' in the network of greenway (walking and cycling) routes through to the Olympic Park. In addition, this work will help transform an industrial area into a route that helps improve pedestrian and cycle links across the North Circular Road as well as improve local links in Edmonton

- Improvements to Wimbledon town centre with junctions to be redesigned and improved pedestrian connectivity from the town centre to the All England Lawn Tennis and Croquet Club (the venue for the tennis events). Improvements will also be made around Wimbledon station, based on a review of delivery and servicing activities. This will enhance visitors' experience during the 2012 Games and will improve the experience of those attending the annual Wimbledon Championships

60 In addition to these transformational projects, there are a number of improvements being implemented across streets in London. Legible London pedestrian signage is being introduced in the four host boroughs surrounding the Olympic Park and following Better Street principles, a number of streets are being tidied up and decluttered and so progressively improving the streets' environment. These improvements help support social inclusion, community cohesiveness, access to walking and cycling opportunities and better quality of life for residents of the host boroughs.

61 It is important that boroughs and TfL work together to ensure these streets are well maintained once they are upgraded.

### Action 6

TfL will work with the boroughs to ensure the schemes are delivered by the Games, and that they are well maintained beyond 2012.

## 2.4 Land use legacy

- 62 The 2012 Games will bring about substantial land use change and regeneration in east London. East London boroughs are experiencing significant population growth (Tower Hamlets and Newham are expected to grow by more than 100,000 residents by 2031).
- 63 New developments in the area as a result of the Games need to maximise opportunities to embed low-emission transport options into their fabric through the travel planning process. This would include provision of the necessary infrastructure for cycling and walking, accessing public transport, car clubs and electric vehicles.
- 64 In particular, the bus network can help support new developments by improving connectivity between the Olympic Park and the wider local area. To support the development initially, bus route 97 and 339 are being extended to the park, while the D8 and the 241 will be diverted to better penetrate the Olympic Park. The flexibility of the bus network allows it to be responsive to the increasing demand, as the area develops after the Games.



65 The impact of these land use changes need to be considered and planning and policies used to ensure that walking, cycling and public transport use is promoted to enable the growth to be achieved while improving the quality of life of the residents.

### 2.4.1 Olympic Legacy Supplementary Planning Guidance

66 Building on the new rail investment for the 2012 Games (as described in Section 2.2.1), the Olympic Legacy SPG area is well connected as can be seen in figure 8. It has rail links to other parts of London, its neighbouring regions and, via Stratford International, the potential for direct links to mainland Europe, following the completion of High Speed 2. Some of London's key strategic roads run through the area. It also has an extensive waterway network that provides additional transport opportunities, particularly for freight and construction.

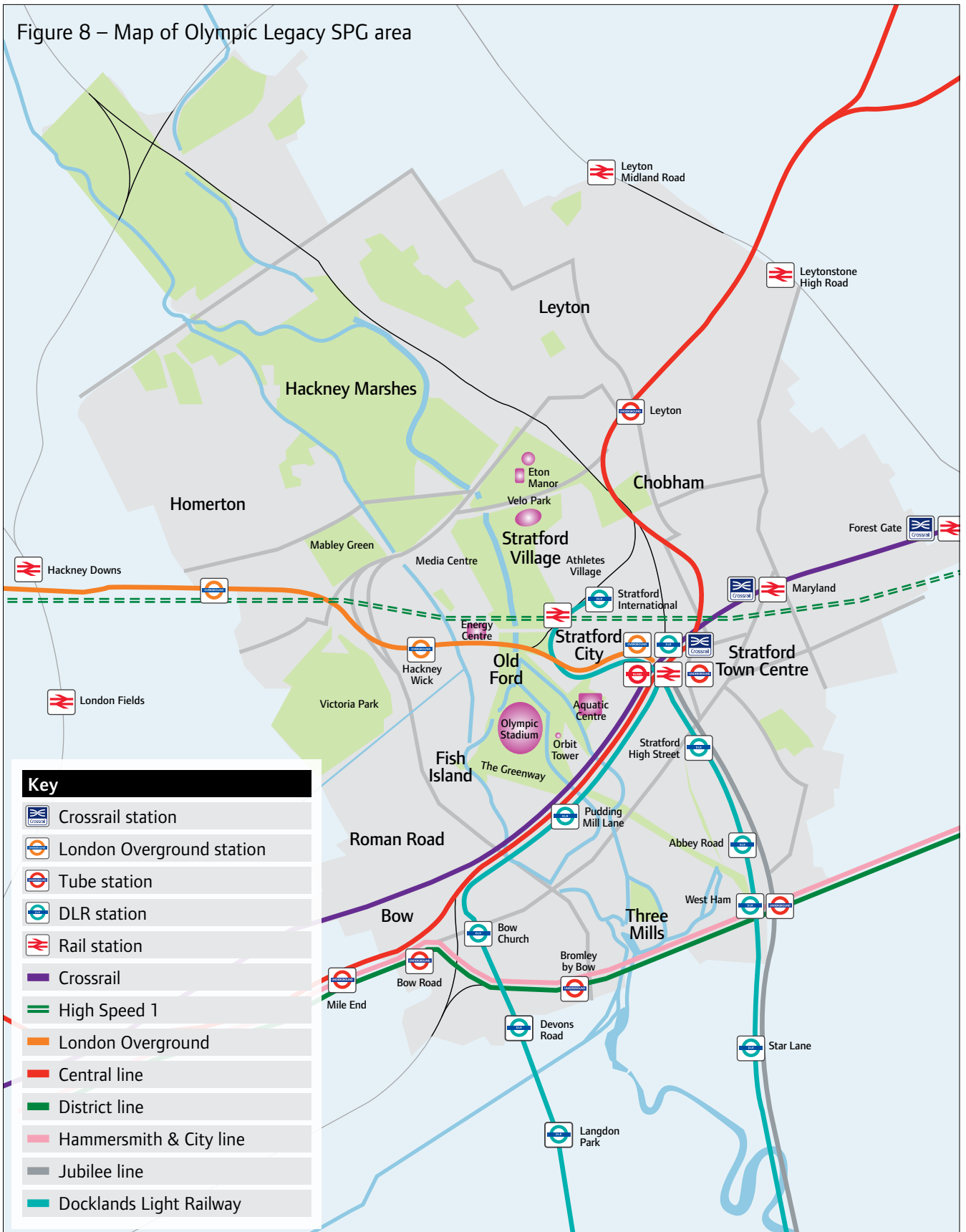
67 Some specific aspects of the current transport infrastructure such as the severance associated with crossing the A12 present major challenges to the creation of new, improved and attractive communities.

68 The SPG promotes significant new development – and so transport demand – in an area where there are existing issues of road congestion and crowding on some parts of the rail network. These new developments can be designed to encourage sustainable travel, and so act as a showcase to the rest of the capital. Achieving this will require a coordinated approach to land use and transport planning, as required both by the London Plan and MTS.

#### Action 7

TfL will work with the GLA and boroughs to ensure that the Olympic Legacy SPG, borough development plans, masterplans and planning applications support the coordination of land use and transport planning to build on the area's exceptional public transport infrastructure, creating a network of strategic and local connections that will fully integrate the Olympic Park and Stratford into their surroundings, and with travel planning to achieve a modal shift towards more active and sustainable forms of transport.

Figure 8 – Map of Olympic Legacy SPG area







# Chapter three – Behavioural legacy

## 3.1 Introduction

<sup>69</sup> During the Olympic and Paralympic Games there will be a unique pattern of travel demand. This means that the 2012 Games will provide a once in a lifetime opportunity to change people's perceptions of travel. The preparation, operations and surrounding publicity will stimulate Londoners, particularly young people in the local area, to examine their own travel behaviour and could encourage them to choose more active modes of travel. This could improve their health, help to reduce congestion and encourage them to think about how they treat others on the transport network.

## 3.2 Active travel

<sup>70</sup> For the 2012 Games, the London 2012 Active Travel Programme (ATP) and Travel Demand Management has been developed to help manage the demand and increase levels of cycling and walking before, during and after the Games. These programmes are focused on the UK and London as a whole rather than specifically the six host boroughs. To fully realise the potential of the behavioural legacy, particularly helping to address the health inequalities within the six host boroughs, there may be a need, depending upon the rates of walking and cycling, for further future interventions. This will be determined based upon monitoring travel patterns in the area as described in chapter seven.



## Case study

### The London 2012 Active Travel Programme

The London 2012 ATP aims to capture and build on the effects of the 2012 Games as a means to inspire people to select active modes of travel. With nearly three-quarters of all journeys in the UK less than five miles in distance, there is considerable potential to replace short car and public transport journeys with walking or cycle trips. The 2012 Games could help to inspire a change in individuals' travel behaviour to further increase levels of walking and cycling.

There are three distinct phases of the ATP: the pre-Games phase, Games-time and the legacy.

In the pre-Games phase, the focus is on encouraging locally led active travel projects that have been inspired by the 2012 Games to develop new walking and cycling projects through the London 2012 Inspire programme, raising the awareness of active travel options. These projects will help raise the profile of healthy, low-carbon travel options and increase levels of walking and cycling across London and the UK. The ATP coexists with a broad package of walking and cycling infrastructural developments as described in chapter two.

During the Games, the ATP will support the London 2012 commitment to achieve 100 per cent of spectators travelling to the Games by foot, cycle or public transport. It is important that spectators and commuters have a positive travel experience so they are more willing to continue the behaviour after the Games. Activity during this phase will ensure the availability of comprehensive information on journey planning options, with the necessary infrastructure and services to provide a positive experience for those that walk and cycle to competition venues.

However, it is critical that the work conducted by the ATP does not end after the closing ceremonies. The legacy phase should ensure the Games provide a lasting mode shift to active modes. This will ensure that there are long lasting health benefits for individuals with increased levels of active travel by reducing their risk of cancer, heart disease and a whole range of additional health benefits.



- 71 Activities should be targeted at the whole community and at all ages but in particular the younger generation at school who generally have a greater propensity to change their behaviour and will provide a positive influence for their own children in the future.
- 72 Encouraging cycling at school will be critical to influence people from a young age. This will enable cycling to become the norm in the future. With the success of the Team GB cyclists at the 2008 Beijing Olympics, there is an opportunity to inspire children from the local area. The velodrome and BMX circuit will, following the Games, be available for local people to participate in cycling as part of a multi-disciplinary VeloPark, using the same state of the art facilities where Olympic medals were won.

### Action 8

TfL, working with the boroughs, will promote cycling for children. This may include cycle training within schools and will build on the successes of Team GB and state of the art facilities in the future VeloPark to inspire future generations to cycle.

- 73 The marketing opportunities afforded by international sporting events could be exploited to encourage the bicycle industry and large retailers to produce more affordable cycling products including bikes, so that these are more widely available.

### Action 9

The Mayor and TfL will promote cycling by encouraging the development of a range of London 2012 cycling merchandise, to produce the maximum benefits to London. The range should include affordable cycling products.

- 74 Although athletes will be the main role models for the young during the Games, in the longer term the key role models are adults within their communities. By walking and cycling themselves, adults can create an atmosphere where walking and cycling is the norm. There are a series of led walks already under way, taking in a number of the competition venues. These include the Ramblers' 'Get Walking for the Games' walks.
- 75 Promoting walking and cycling within communities with people who generally do not normally cycle, which includes many of the residents in the six host boroughs (less than five per cent of residents cycled at least two days a week<sup>6</sup> in Newham and the Royal Borough of Greenwich) requires the support of influential people within communities. This can be helped using two approaches. The first is working directly with a range of community groups, including lunch clubs and religious groups, sporting groups and leisure centres. The second is to encourage and support community ambassadors or walking and cycling champions, such as the Department for Environment, Food and Rural Affairs (DEFRA) funded Active Travel Champions project led by Sustrans. This project seeks to recruit and train champions to promote walking and cycling within their communities.

<sup>6</sup> Based on LTDS 2007/08 Household Survey

**Action 10**

TfL will work with the boroughs, to support walking and cycling amongst London's adult population. This may include a programme of engagement with a wide range of community groups and individuals to encourage walking and cycling.

- 76 The 2012 Games provide an ideal opportunity for high-impact health campaigns. This could involve working with local GPs, hospitals, polyclinics, other health facilities and athletes themselves to deliver the healthy lifestyle message. Furthermore, GPs could encourage their patients to walk or cycle generally or more specifically take cycle training, become members of the Barclays Cycle Hire scheme or use the Strategic Walking Network.

**Action 11**

TfL will work with the boroughs, the NHS and GPs to include the benefits of walking and cycling within public health campaigns in the run up to 2012, and develop a range of options for GPs, based on good practice to encourage walking and cycling.

- 77 The eastern expansion of Barclays Cycle Hire is a great opportunity for residents in those areas. To ensure that it is extensively used by all sections of the local community, TfL and the six host boroughs need to ensure that it is promoted to the diverse local community.

**Action 12**

TfL and the relevant boroughs will work together to fully maximise the benefits of the Barclays Cycle Hire expansion by promoting its use to all Londoners. This may include the creation of an ambassadorial scheme to promote it to specific communities.



### 3.3 The Paralympic Games and a positive image of disabled people

<sup>78</sup> The Paralympic Games will provide an opportunity to raise awareness of physical accessibility issues and the specific needs of disabled travellers. This could be useful in continuing to improve the travelling public's awareness of disabled passengers' needs and in doing so encourage improved attitudes and behaviours towards fellow passengers.

#### Action 13

TfL will raise awareness with a view to improving people's attitudes towards each other and to disabled people in particular, to ensure that the travelling environment does not present a barrier to travel during and after the Paralympic Games.

<sup>79</sup> The Paralympic Games can also be used to encourage other disabled people, where appropriate, to use the public transport network or cycle. This can be done through inspiring people with disabilities to cycle where possible, promotion of the accessible transport system and provision of better information for disabled travellers.

<sup>80</sup> TfL will build on its relations with organisations that promote mobility and cycling for disabled people.

#### Action 14

TfL will promote public transport and cycling for all in the run up to, during and after the Paralympic Games.





# Chapter four – Opportunities presented by the Games

## 4.1 Introduction

81 Arrangements in place during the 2012 Games provide an opportunity for transport providers in London to reassess how they managed their services, which could have lasting transport benefits in terms of congestion, information and the environment.

## 4.2 Ticketing and journey planning

82 The 2012 Games will be a ‘public transport, walking and cycling games’, with all spectators arriving on public transport, foot or bike. To achieve this, with each ticket issued for the Games there will be a Travelcard and travel information. This could be used in other circumstances, for example at other sporting and cultural events in London.

83 Providing a Travelcard and journey information, including accessible journey information, with theatre tickets could alone reduce the number of people buying a ticket at an Underground station each day by more than 5,000<sup>7</sup>, with tens of thousands for one-off sporting fixtures. Providing these tickets with event tickets (after the 2012 Games) could help reduce waiting times and congestion in London Underground ticket halls. Furthermore, this will make visiting London more attractive for those visitors, making their journey quicker and easier.

84 The programme of marketing and communications in the run up to the Games will also prompt Londoners more than ever before and encourage them to consider other modes of travel such as walking and cycling. The communications programme will raise awareness of the potential to walk all or part of a journey, as well as the importance of avoiding busy times and places on the transport network.

### Action 15

TfL will work with entertainment venues to provide travel tickets at the same time as venue tickets, which will also include information on the most appropriate route to travel to the venue. The travel ticket will either be sold as an add-on to the venue ticket or as part of the venue ticket. After the 2012 Games TfL will have established a trial venue with a programme for wider use if proved successful.

<sup>7</sup> Figure is based on 5,000 people making an overnight stay in London from Mayor’s Cultural Strategy [www.london.gov.uk/sites/default/files/Cultural-metropolis-strategy.pdf](http://www.london.gov.uk/sites/default/files/Cultural-metropolis-strategy.pdf)

## 4.3 Waste collection

<sup>85</sup> All public service operations have an impact on transport. The timing of waste collection on certain roads can cause congestion in a localised area. During the 2012 Games the timings of waste collections are being altered on certain routes owing to the impact on congestion. There may be opportunities to continue this after the 2012 Games and consider greater use of the new waterway infrastructure for waste transport, especially the onward movements of waste collections to processing centres.

### Action 16

TfL will work with the boroughs, waste authorities, and waste collection companies to consider the timing of waste collections on the Strategic Route Network. This will consider impacts on congestion and smoothing traffic flow, as well as wider implications of changing waste collection timings.

## 4.4 Traffic management

<sup>86</sup> London is one of the busiest, most densely trafficked major cities in the world. Its roads carry, on average, 40 per cent more traffic than other cities in the UK. Building on TfL's expertise, traffic management put in place for the 2012 Games will help to further develop the best practice of various traffic management techniques already in use such as banned turns as well as waiting, loading and parking restrictions. This will help improve traffic management and thereby maintain reliable journey times, particularly for the bus network.

<sup>87</sup> In addition, there may be extra pressure on residents' parking spaces near the Olympic Park after the Games. Further improved best practice developed during the 2012 Games may help inform parking management measures that may help protect local residents' parking spaces.

<sup>88</sup> For example, around Stratford there may be extra pressure on parking from the development on the Olympic Park and other developments, such as Westfield – Europe's largest urban shopping centre at 1.9 million sq ft, with a catchment of 4.1 million people. The pressure on parking from visitors to the Stratford area is likely to be significant and careful management of parking might help manage this demand and reduce congestion for local residents and businesses.

### Action 17

TfL, working with the boroughs where appropriate, will review traffic management arrangements put in place for the 2012 Games, helping to further develop best practice. This will include the use of parking controls to protect residential parking.



## 4.5 Using volunteers for major events

- <sup>89</sup> To be successful, staging the 2012 Games will require up to 70,000 volunteers. Although the scale of the 2012 Games will be bigger than other events, the Games will provide the opportunity to learn lessons on how information on travel is shared between volunteers, transport and venue staff to ensure they can provide a quality service to their customers. The 2015 Rugby World Cup would provide an ideal opportunity to build on the experience and ensure visitors for the World Cup can access their destinations easily.
- <sup>90</sup> Ensuring visitors to London have a good experience during the 2012 Games, and other major events, will enhance London's reputation as a tourist destination. These positive experiences will help ensure London maintains its position as a key tourist destination, supporting employment in the tourist industry.

### Action 18

TfL will work with the boroughs, LOCOG and the GLA to learn from the experience of 2012 Games in particular the success of the Mayor's London Ambassadors, borough volunteers and Games Makers, and establish best practice in coordinating the provision of consistent travel information between volunteers, transport and venue staff.

## 4.6 Spectator travel

- <sup>91</sup> The 2012 Games, with 100 per cent of spectators travelling to the venues by public transport, walking or cycling, presents the opportunity to examine how this could be achieved at other venues through the development of planning and operational policies. This would help reduce associated traffic congestion and disruption to other users of the road network.
- <sup>92</sup> A sports stadium has the potential for quite a significant local impact. With a 60,000-seater stadium, increasing the mode share away from cars by just five per cent could remove 1,500 cars from surrounding roads. This would have a large impact on localised congestion before and after an event.

### Action 19

TfL will work with the GLA and boroughs to develop policies to maximise public transport, walking and cycling travel to sporting venues.

## Case study

### Spectator travel during the 2012 Games

The 2012 Games has a target of 100 per cent of ticketed spectators travelling by public transport, foot or bike. Although this is ambitious, evidence from other major sporting venues suggests that it is possible.

Travel patterns to the Emirates Stadium show that with good access and targeted parking strategies, high levels of spectator use of public transport can be achieved.

More than 87 per cent (as of 2007) of spectators travel to the Emirates via public transport, walking, cycling or coach - higher than any arena of comparable size in London. This is because of the comprehensive public transport links (Arsenal, Finsbury Park and Highbury & Islington stations on the Underground and London Overground, as well as National Rail at Finsbury Park). Alongside this the London Borough of Islington operates an 'events day parking scheme'

in which only car owners with resident permits are allowed to park near the stadium.

Evidence from other venues suggests a link between Public Transport Accessibility Levels (PTALs) and the propensity of spectators to travel to stadia on public transport. Venues with low PTALs, such as Twickenham or the All England Lawn Tennis Club (Wimbledon), tend to experience higher proportions of spectators visiting by car.

By 2012, the Olympic Park will have a PTAL of six (indicating excellent levels of public transport access) with significant public transport links at Stratford Regional, Stratford International and West Ham Underground stations with comprehensive cycling and walking infrastructure. With parking restrictions and limited off street spaces, parking will be limited in the vicinity of the Olympic Park, allowing 100 per cent access by public transport or active travel.



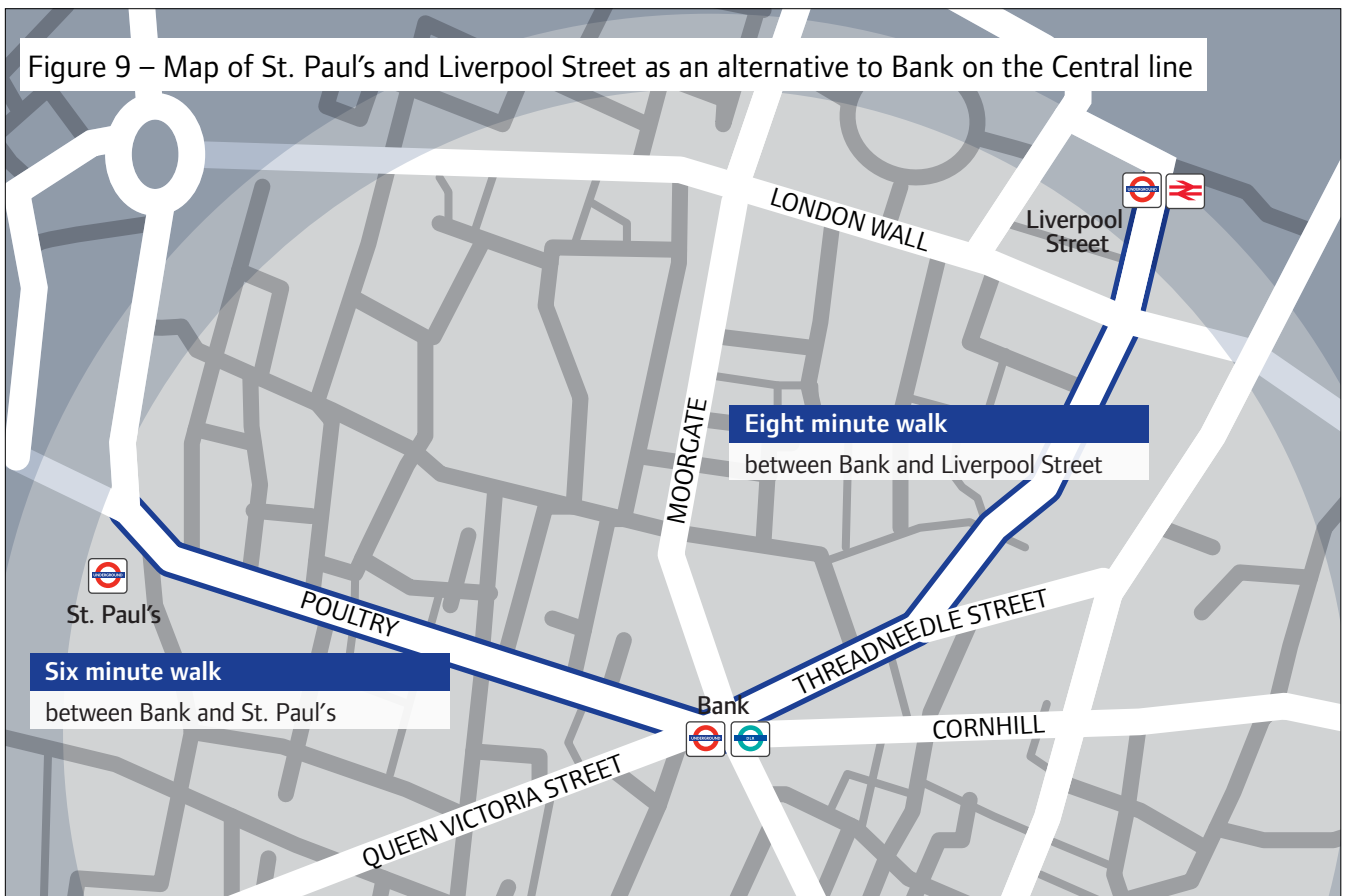
## 4.7 Avoiding busy stations

- 93 During the 2012 Games, information will be provided to businesses to help their staff avoid the busiest stations on the Underground, National Rail and DLR network. This will help to manage demand at busy stations and has the potential to be used after the Games.
- 94 The programme of Travel Advice to Businesses in the run up to the 2012 Games will leave a legacy of organisations across the Capital working with their staff to advise on travel to work. By engaging with hundreds of businesses, their staff will be encouraged to reduce the impact on the transport network through walking and cycling, working from home and travelling at different times by different routes.

- 95 For example, this would potentially help reduce congestion at key strategic stations. Bank station suffers from significant overcrowding, people will be encouraged through the roll out of Legible London to use alternative stations within short walking distance such as St Paul's or Liverpool Street (as shown in figure 9) on the Central line. This will manage congestion, improve passengers' journey experience and provide increased levels of physical activity.

### Action 20

TfL will assess the impact of working with businesses during the 2012 Games and whether similar measures can be used after the Games including the use of Legible London to manage demand on public transport.



## 4.8 Transport operations

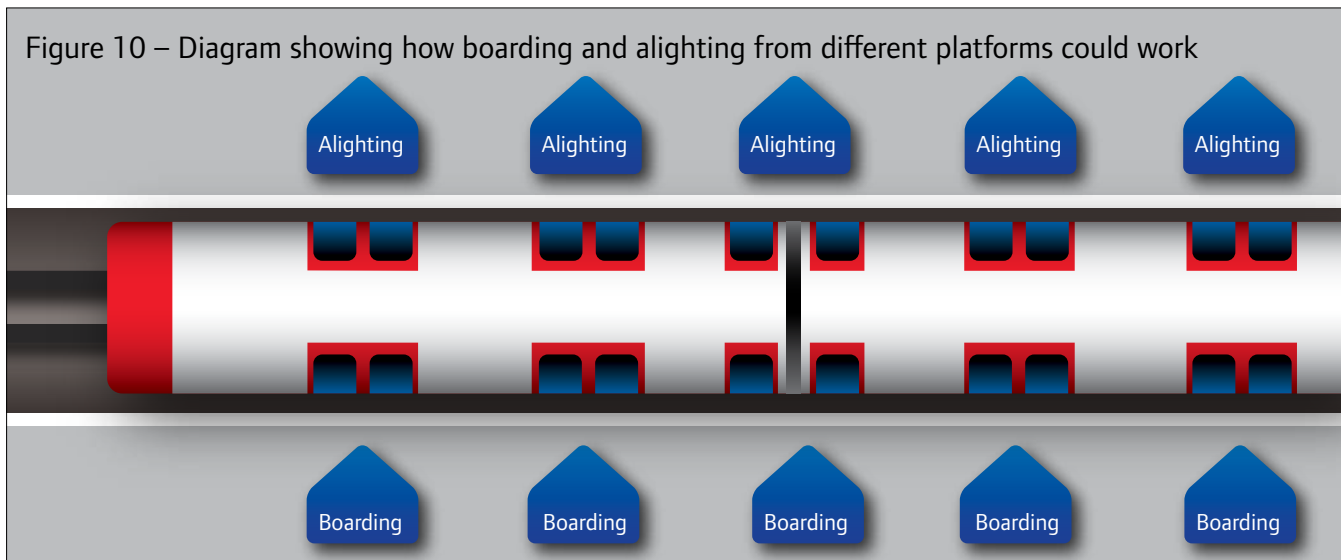
- 96 A number of transport operational procedures will be implemented during the 2012 Games to help manage the increased demand. Some of these measures could potentially be used after the Games, helping to reduce congestion on the network and improve journey times more generally.
- 97 For example, at Stratford Regional station, Central line westbound trains now open on to two platforms, '3' and '3A'. During the Games, it is envisaged that these will be used to partially separate boarding and alighting flows and Olympic and non-Olympic passengers as shown in figure 10. This should facilitate shorter dwell times, smoothing station flows and improving train service reliability, with a corresponding journey time benefit for passengers. The flows are likely to be managed using a combination of staff direction and signage and if successful, there could be an opportunity after the Games to employ this type of approach, with refinements, elsewhere on the network.
- 98 In order to run an efficient road network for the 2012 Games, there is greater collection and management of traffic data. The amount of data on traffic operations is vast and its analysis is being

used to support traffic operations. This will improve the planning and management of traffic operations for the 2012 Games and in its legacy. In addition systems which support the planned and real-time management of road disruptions in London are being enhanced for Games time. This will result in lasting benefits in how planned and unplanned disruptions are managed beyond the Games.

- 99 The 2012 Games will give the opportunity to improve operational techniques on the bus network. This includes maintaining a reliable bus network while road closures to all traffic are in place in addition to deal with greater demand to specific locations. The 2012 Games will provide the opportunity to monitor the successes of these bus management techniques in order to understand which best practice could be beneficial at other large events.

### Action 21

TfL will investigate maintaining and building on operational practices used during the 2012 Games, including exploration of the potential for two platform faces per train at select locations on the Underground network to help manage passenger flows, reduce dwell times and deliver improved journey times.



## 4.9 Delivery and servicing activity

- <sup>100</sup> During the Games the delivery and servicing of the Park and Olympic Venues will be managed as a discrete activity by LOCOG using a network of consolidation and break bulk centres operated by their supplier, UPS. Additionally London-wide deliveries will be restricted owing to the operation of the ORN, with a greater number of deliveries occurring overnight.
- <sup>101</sup> The ODA is sponsoring a trial of quiet overnight deliveries linked to a Quiet Delivery Demonstration Scheme trial sponsored by the Department for Transport, The Freight Transport Association and the Noise Abatement Society. In addition businesses are being encouraged to examine their supply chain and consider elements of delivery and servicing plans to reduce the impact of their activity.

- <sup>102</sup> After the Games there will be an opportunity to further encourage out-of-hours deliveries based on their successful use during Games time. In addition the monitoring of delivery and servicing planning for Games time will generate great examples of cost savings and benefits to both businesses and the local area. There will also be a once in a lifetime opportunity to consider how to reduce the impact on the new Olympic Park developments through the consolidation of delivery activity.

### Action 22

TfL, working with the boroughs, will encourage the uptake of delivery and servicing planning including consolidation and out-of-hours deliveries for existing and new developments to mitigate the delivery and servicing activity.



## 4.10 Managing roadworks

- 103 During the 2012 Games there is an embargo on roadworks in London. This has led to unprecedented working and sharing between utility companies and highway agencies through the project ClearWay 2012. The potential legacy of ClearWay 2012 provides the opportunity to manage London's roads far better, making journeys quicker and more reliable.
- 104 To enable quicker emergency repairs, TfL is working with utility companies to secure a shared reinstatement service for utility emergencies during the Games provided by TfL's highway maintenance works contractors. The need to assess, repair and reinstate in the quickest possible time will ensure that critical roads are returned to full use following a utility emergency at Games times. This service has the potential for use after the Games.
- 105 A planned works embargo period during the Games means that utility companies and highway authorities have been asked to share details of their works well in advance of the

statutory notice periods. In addition to the normal coordination of works this is also helping to identify opportunities for collaborative working to enable essential works to be undertaken in advance of the 2012 Games. Early sharing of works programmes is also promoted within the Mayor's Code of Conduct and will continue to be encouraged after the 2012 Games to aid greater coordination.

- 106 In addition to utility company workings, information is being collated on potential highway schemes and developments to enable early engagement in advance of statutory requirements. This provides an opportunity for forward planning of projects on the network and potential flexibility of programmes. The practice is planned to continue after the 2012 Games to help assess demand or capacity changes.

### Action 23

TfL, working with boroughs and utility companies, will assess ClearWay 2012 for the management of roadworks for the 2012 Games and consider the potential of continuing practices that help manage London's road network.



## 4.11 Planning events

- <sup>107</sup> London already stages a huge range of public events (up to 4,000 a year) from Notting Hill Carnival to the Lord Mayor's show. There are also many sporting events around London including the London marathon, the Tour de France and the Tour of Britain, that benefit from the backdrop of London's iconic sites. However, London in the summer of 2012 is going to experience an even greater range of planned and parallel events during the Olympic and Paralympic Games.
- <sup>108</sup> To enable this greater range of events, the GLA, police, emergency services, TfL, Network Rail and local authorities have developed a new streamlined approach to assessing events and the response to ensure they are safe and enjoyable. This has been led by the GLA through the London Events Coordination Calendar, which provides advance notice of events (up to 18 months in advance) and the local authority use of appropriate Licensing and Safety Operating Planning Group, Augmented Safety Advisory Group and Safety Advisory Group to verify their operation and multi-agency support.
- <sup>109</sup> The potential legacy benefits of this are that it makes it easier for event organisers to allow an active use of London's public realm and help London to maintain and build its reputation as a city of festivals and culture. In turn this helps boost the tourist economy, attracting more visitors to the city.

### Action 24

TfL will explore, with local authorities and other key stakeholders, the potential to continue appropriate use of local authority-led Licensing and Safety Operating Planning Groups, Augmented Safety Advisory Groups and Safety Advisory Groups, to continue efficient and safe approval of planned events.

## 4.12 Working together

- <sup>110</sup> TfL, the boroughs and other stakeholders are already establishing closer relationships to ensure the success of the 2012 Games. For instance, work between TfL, the boroughs and suppliers to establish and operate the road network during the 2012 Games is already paying dividends. This work is already under way with a common specification contract for highway maintenance, which can be used London-wide from 2013. Working together can help public authorities to reduce costs, providing better value for money to London's tax payers.

### Action 25

TfL, the boroughs and other public authorities, building on the partnerships established for 2012 Games, will continue to work together to achieve better value for money for the public.





# Chapter five – Transport’s role in Convergence

## 5.1 What is convergence?

- 111 A decisive aspect of London’s winning bid for the 2012 Games was the transformative effect it would have on the areas in which they are to be held. The six host boroughs have made a commitment to achieving sustainable convergence for the six boroughs with the London average against a range of socio-economic indicators through securing and building as the legacy of the 2012 Games. The Mayor is entirely supportive of this objective and offers explicit support for helping to achieve it in the London Plan and MTS.
- 112 As their Olympic Legacy SRF makes plain, the six host boroughs together constitute the greatest cluster of deprivation in England and Wales. On almost every indicator available, the life chances of residents living in the six host boroughs is on average worse than other communities in London. There are significantly lower employment rates, dramatically higher rates of overcrowded housing and lower rates of educational qualifications. Rates of premature death and childhood obesity are also above the London average.
- 113 The SRF marks the six host boroughs’ commitment to achieving a convergence in the next 20 years between the life chances of their residents with those of all Londoners, as measured through a range of life indicators such as those indicated above.
- 114 The final part of the legacy from the Games will be the realisation of the economic potential of the six host boroughs. The Economic Model the six host boroughs commissioned from Oxford Economics (OE5 Report, November 2010) to support work on the Olympic legacy SRF. The model forecasts that over the next 20 years as many as 200,000 new jobs will be created within the six host boroughs as a result of new investment and growth.
- 115 If this growth is realised then the six host boroughs will become a significant contributor to national GDP. The growth is not inevitable, however, and the opportunities presented in the OE6 Report need to be grasped. The two main challenges are securing the predicted growth and getting host borough residents into the jobs the growth generates. It is vital that transport investments help enable this.

## 5.2 Which transport strategies and plans address convergence?

- <sup>116</sup> Transport, and the transport legacy of the 2012 Games, will be key contributors to addressing convergence. New transport infrastructure provided for the 2012 Games will benefit existing and future residents by improving their access to jobs and other facilities such as education and leisure facilities across the wider area. Convergence will not be achieved by the provision of transport alone but transport measures alongside other interventions have a clear part to play. The influence transport has on convergence is shown in figure 11.
- <sup>117</sup> The MTS provides the overarching policy framework for transport in London, providing a broad vision and specific policies and proposals which will achieve the Mayor's goals. It makes specific mention of the six host boroughs' convergence agenda and provides the context for this Action Plan. This is supported by five sub regional Transport Plans which contain the priorities for different regions of London and are in the process of being reviewed with updated versions due to be published in the New Year. The Olympic legacy SPG and the boroughs' LIPs take these tasks forward at the local level, with the six host boroughs undertaking a huge range of activities to support this overall ambition through LIPs and other borough programmes.

Figure 11 – How transport outcomes influence convergence



## East Sub Regional Transport Plan

- 118 The principle of convergence is integral to the East Sub Regional Transport Plan, which sets out how the policies and proposals of the MTS should be delivered at sub-regional level. An updated version of this plan is being produced which will provide more specific details of the strategic transport priorities for east and southeast London. A key feature of this plan is the scale of growth expected across east and southeast London over the next 20 years which creates the need for further investment in transport infrastructure. The six host borough area is expected to see significant population growth especially the boroughs of Tower Hamlets, Newham, Hackney and the Royal Borough of Greenwich. The six host boroughs' population expected to grow by 423,000 based on the population projections set out in the London Plan from 2006 to 2031.
- 119 There are an estimated additional 145,000 jobs within the six host boroughs by 2031, concentrated in the London Plan designated Opportunity Areas and town centres. This employment growth will provide opportunities to the residents of the six host boroughs. For residents to be able to access these job opportunities, additional links and capacity will be required in some areas.
- 120 The current East Sub Regional Transport Plan includes the following short (2012-13), medium (2013-20) and long-term (2020-31) priorities for six host borough area. The updated plan is likely to include further priorities, reflecting in part the work undertaken by the six host boroughs. Future priorities are shown on Figure 12.

## Short term priorities (2012-2013)

- Maximising the impact and benefit of new/expanded infrastructure
- Reviewing bus network to cater for growth in population and employment
- Local connectivity improvements including walking and cycling

## Medium term priorities (2013-2020)

- International trains stopping at Stratford International
- Delivering Crossrail with direct access to the city, west end and Heathrow, from Canary Wharf, Stratford, Maryland, Forest Gate and Manor Park
- Maximising the benefits of Crossrail through enhanced connections to stations
- Ensuring the Crossrail station at Woolwich is delivered
- Increased rail capacity on C2C lines to provide significant rail capacity in the London Riverside Opportunity Area

- Rail improvements along the West Anglia Corridor to provide more capacity and direct services to Stratford with improvements to key stations including provision of a new station at Lea Bridge
- DLR capacity enhancements to secure a full 3 car service across the network
- Key station improvements to improve access to growth areas and to improve interchange
- Providing improved bus priority infrastructure, including bus only links to improve reliability for buses between Barking and the Royal Docks
- Delivering the river crossing package including a new crossing at Silvertown, and Gallions Reach
- Additional road capacity at key points to support growth in opportunity Areas and to address congestion and allow for longer term growth in population and employment,
- Improved road network management at the A12 and Blackwall Tunnel approaches

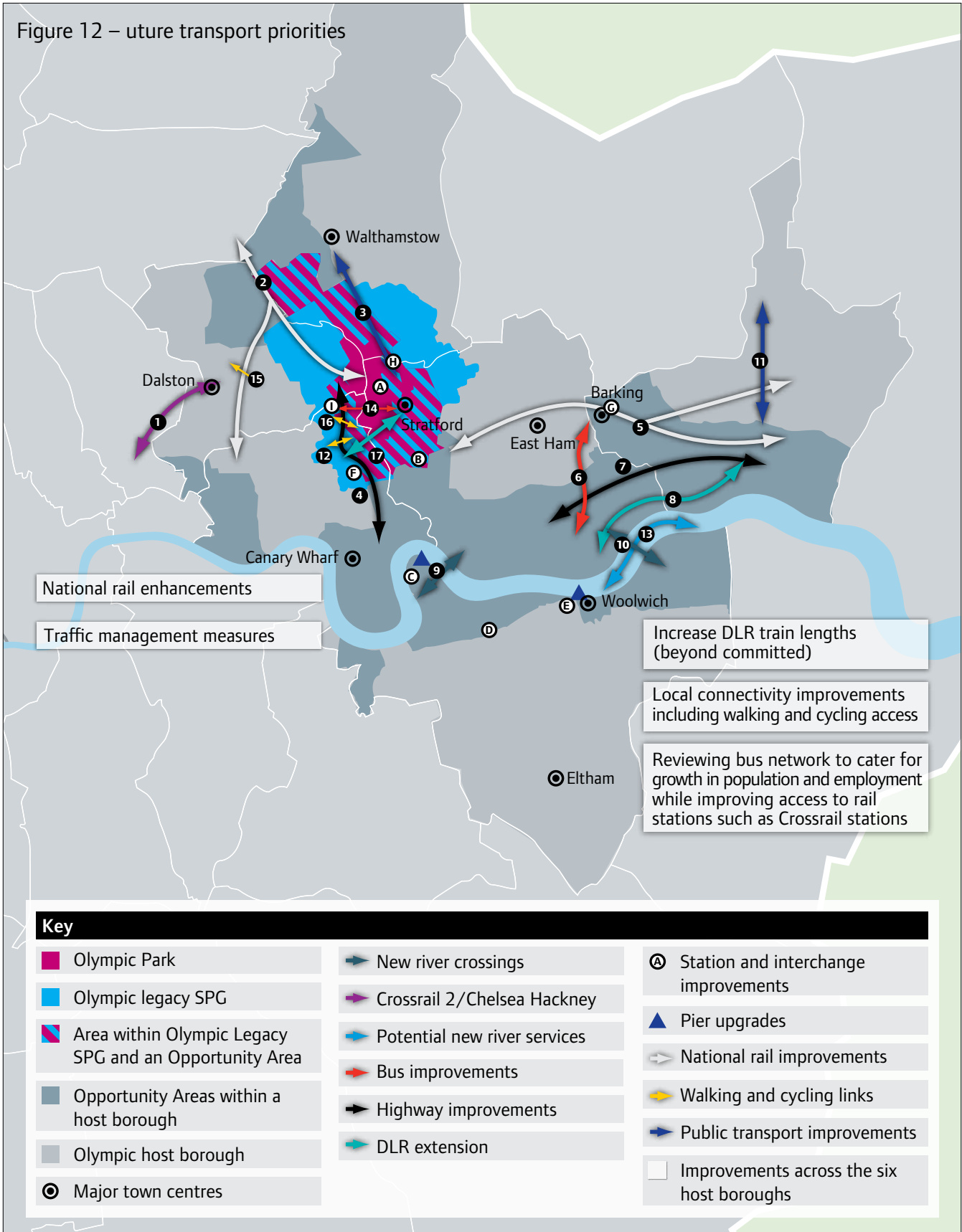
### Long term priorities (2020-2031)

- Crossrail 2 (Chelsea Hackney Line) to provide a direct link between Hackney and central London
- DLR from Gallions Reach through the Barking Riverside development to Dagenham Dock station
- Improvements to rail connections between Walthamstow and Stratford possibly through an extension of the DLR
- Additional road capacity to support growth across east London and to address key congestion hotspots and provide the necessary resilience to support the continued growth in population and jobs across the whole area

#### Action 26

Building on the Olympic and Paralympic legacy TfL, in partnership with the six host boroughs will further develop proposals, including those outlined in Section 5.3 and figure 13 as well as proposals contained in SOPTL, to address convergence and its implications over the medium to long-term. These will be included as part of updating the ES RTP by March 2012.

Figure 12 – Future transport priorities



### Corridor improvements

- 1 Chelsea Hackney/Crossrail 2
- 2 West Anglia Main Line 4 Tracking
- 3 Improved transport links between Walthamstow and Stratford
- 4 Improved road management on A12 and Blackwall Tunnel Approach
- 5 Increased capacity on C2C lines
- 6 Barking to Royal Docks bus infrastructure improvements
- 7 Improved road network management including A13 Renwick Road junction improvements
- 8 DLR Dagenham Dock extension
- 9 New Thames road crossing at Silvertown
- 10 Thames vehicle ferry crossing at Gallions Reach
- 11 Improve public transport access north of Dagenham Dock
- 12 A12, River Lea and Canal pedestrian and cycle crossings
- 13 Commercial River Thames commuter services beyond Woolwich
- 14 Improve bus links between Olympic Park, Stratford City and wider local area
- 15 Improved pedestrian link between Hackney Downs station and Hackney Central station
- 16 Improved access to Fish Island
- 17 Double-tracking the DLR between Stratford and Bow Church

### Station and interchange improvements

- A International services calling at Stratford International
- B National rail improvements at West Ham station
- C North Greenwich bus interchange long term capacity issues
- D Charlton station improvements to support growth
- E Fit out Woolwich Crossrail station
- F Bromley by Bow improvements to access growth areas
- G Barking station improvements
- H Leyton station improvements to increase capacity
- I Hackney Wick improvements to access Olympic legacy area

## 5.3 Summary of the actions supporting convergence

<sup>121</sup> Many of the actions contained in this plan contribute towards delivering the convergence outcomes sought by the six host boroughs and the Mayor. Figure 13 summarises the contribution of each action against the convergence outcomes.

Figure 13 – Table of actions that support Convergence

Convergence outcome	Supporting transport outcome
Reducing worklessness, benefit dependency and child poverty	Improving connectivity (and access to jobs)
	Improving highway network reliability
Improving educational attainment, skills and raising aspirations	Improving access to education
Maximising the sports legacy and increasing participation	Improving access to sport
Creating a coherent and high-quality city within a world city region	Improving the built environment
Enhancing health and wellbeing	Improving air quality
	Reducing noise impacts
	Increasing active travel
	Improving access to health care
Reducing serious crime rates and anti social behaviour	Reducing crime, fear of crime and anti social behaviour on the transport network



Physical legacy actions							Behavioural legacy actions							Opportunities presented by the Games actions										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
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- 122 TfL will continue to work with the six host boroughs to monitor and deliver the actions set out in this Action Plan. Progress will be reviewed annually and reported through the recently established East Sub Regional Panel meetings between TfL and the boroughs. This would include an update on progress of the actions and relevant activities taken forward by TfL and the boroughs and an overview of how this relates to the MTS outputs and outcomes for the MTS Olympic legacy goal. Further, TfL will continue, through the ES RTP, to facilitate shared working to achieve the wider MTS goals and local objectives such as improving sustainable mode share in the area.
- 123 Implementation of the actions within this Action Plan can be grouped into funded and unfunded proposals. The following actions can be regarded as funded or implementable within existing budgets: Actions 1, 2, 3, 4, 6, 7, 9, 15, 16, 18, 19, 21, 22, 24 and 25.
- 124 The other actions will require sources of funding to be identified. A number could be funded through existing or proposed funding streams, such as borough LIP funding, Section 106 agreements associated with the Olympic legacy and other developments, Local Enterprise Partnerships, Tax Increment Financing (TIF) or a local Community Infrastructure Levy (CIL). To enable this to happen, best practice needs to be shared among boroughs and TfL.
- 125 However, a number of these actions may not be eligible for funding via known funding streams. For these, third-party support will have to be obtained for these programmes, particularly from the private sector given the current constraints on public funding in the next few years. Sources of possible financial (or project) support include corporate sponsorship, though ensuring this does not conflict with 2012 commercial sponsorship or charitable organisations requirements.

## Action 27

TfL will work with relevant boroughs to develop and share best practice for implementing transport improvements. This will include funding opportunities such as Section 106 as a potential for funding transport projects and initiatives. TfL and the six host boroughs will report on progress of the actions to the East Sub Regional Panel.



126 The monitoring and reporting for this Action Plan will be through the framework provided by TfL's annual Travel in London Report, alongside monitoring of the wider MTS strategic outcomes. The outcomes to be monitored are:

- Convergence of social and economic outcomes between the six host boroughs and the rest of London
- Improved access to and from the Olympic Park
- Increased mode share of walking, cycling and public transport within the six host boroughs

127 TfL will develop a range of strategic performance measures based on these transport legacy outcomes, which include:

- Accessibility to jobs and services by public transport, walking and cycling
- Walking, cycling and public transport mode share
- Local air quality

128 Monitoring will be carried out for at least 10 years and up to 20 years (based on future needs) after the Games. The area will be based on the boundaries of the six host boroughs. As set out in Travel in London Report 3 (December 2010) section 5.14, this will include selected indicators and targets and an annual review of progress. Future editions of the Travel in London Report will include appropriate content covering the 2012 Games themselves and the legacy. This will also capture the impact of specific infrastructural and behavioural change initiatives. There will also be an opportunity using the LIPs reporting process to identify and monitor specific legacy related schemes.

129 Baseline conditions and trends in the six host boroughs will be measured and compared

with equivalent trends for the rest of Greater London. Future changes in the six host boroughs compared with equivalent change in the rest of London will thereafter be identified.

130 Maximum use will be made of existing data, such as TfL's operational data for the transport networks and existing London-wide surveys (including TfL's London Travel Demand Survey), alongside specific new work addressing aspects of the behavioural transport legacy.

131 Inputs will be required from the six host boroughs themselves and the Olympic legacy authorities so that the key influences on transport change can be understood, as well as the contribution of transport change to wider legacy objectives.

## Action 28

TfL will establish a range of strategic performance measures and associated set of monitoring work for the transport legacy and will report progress towards legacy objectives through the framework provided by the annual Travel in London Report as outlined in the 2011 report. Consideration will be given by TfL and the six host boroughs to additional monitoring and funding sources, potentially to include the monitoring of specific legacy-related schemes and reporting via LIPs.

132 Findings from the monitoring will enable a review of progress and further actions and activities to be defined where required. The monitoring will also inform the future plans and strategies that will support convergence. These in turn will outline transport schemes and projects to support convergence, where required beyond those highlighted in this document



# Annex A – TfL and London borough projects that support convergence

Convergence outcome	Supporting transport outcome	Intervention	2012-2013	2013-2020	2020-2031
Reducing worklessness, benefit dependency and child poverty	Improving connectivity (and access to jobs)	Olympic infrastructure			
		Cable car			
		London Overground improvements			
		Ways to Work – project in Hackney helping council and social housing residents to overcome transport obstacles to employment.* (improving perceptions of connectivity)			
		Bus network regular reviews			
		Crossrail (and fit out of Woolwich Crossrail station)			
		Tube upgrades			
		DLR – Stratford to Bow Church double tracking			
		Interchange improvements			
		Pier upgrades			
		Improved Stratford and Walthamstow public transport links			
		Crossrail 2 (Chelsea-Hackney Line)			
		DLR extensions			
		New Thames road crossing at Silvertown			
		Thames vehicle ferry crossing at Gallions Reach			
	Bakerloo line Extension				
	Improving highway network reliability	Traffic Control Centre			
		Further expansion of car clubs			
		Improved road management and junction improvements to roads across six host boroughs			
		Bus infrastructure improvements			
Improving educational attainment, skills and raising aspirations	Improving access to education	School Travel Plans			
Maximising the sports legacy and increasing participation	Improving access to sport	Improved links to Olympic Park for 2012 Games			
		Transport Improvement scheme to support development of new sports centre In Mayesbrook Park (Barking & Dagenham)			

Convergence outcome	Supporting transport outcome	Intervention	2012-2013	2013-2020	2020-2031
Creating a coherent and high-quality city within a world city region	Improving the built environment	Tidy and declutter key roads			
		Olympic Park			
		Better Streets - Range of projects and schemes across the Host Borough, including measures to improve town centres			
		Legible London			
		Olympic Legacy SPG Interventions			
Enhancing health and wellbeing	Improving air quality	LEZ phase three			
		Cleaner buses			
		An Electric Vehicle Delivery Plan for London			
		Adjustment or removal of traffic lights			
		Effective policing of red routes			
		Extension of Freight Operator Recognition Scheme			
		Emission monitoring and inspections and enforcement of idling vehicle enforcement			
	Modification of London-wide LEZ or local LEZs				
	Reducing noise impacts	Targeting measures where significant populations are most exposed to road			
		In order to address noise disturbance from the DLR, Underground and rail networks, further work will be undertaken to identify locations where noise from services and station announcements are most problematic.			
An Electric Vehicle Delivery Plan for London					



Convergence outcome	Supporting transport outcome	Intervention	2012-2013	2013-2020	2020-2031
Enhancing health and wellbeing	Increasing active travel	Establish community-based programmes			
		Use 2012 Games			
		GP referrals/prescriptions			
		Schools outreach			
		Barclays Cycle Hire eastern expansion			
		Strategic Walk Network			
		The Olympic Cycle and Walk Routes Enhancement Programme			
		The Lea Valley Walk project			
		Canning Town on the A13 – reduce the dominance of highway infrastructure			
		Cycle parking (in line with London plan) on all new housing developments			
		Smarter travel options include: personalised travel planning, school outreach programme, travel maps, walking initiatives, walk leaders, and local community projects			
		Six host boroughs are also using school travel plans to promote walking and cycling			
		Improvements to cycle routes including implementation of lengths of routes			
		Projects to improve walking and cycling permeability and improving the street scene for pedestrians and cyclists			
		Cycle safety awareness schemes including cycle training			
		Projects to increase for cycle parking			
	Olympic legacy SPG interventions				
	Barclays Cycle Superhighways				
	Improving access to health care	TfL will encourage the NHS to site health facilities in areas of good public transport access and where gaps in provision exist			
Reducing serious crime rates and anti social behaviour	Reducing crime, fear of crime and anti social behaviour on the transport network	The Right Direction: The Mayor’s strategy to improve transport safety and security in London			

Key:

- Interventions and projects by six host borough
- Project and intervention in transport legacy Action Plan

# Annex B – TfL-committed projects for the 2012 Games

## Projects to be completed by the 2012 Games

### London Overground

- North London Railway station upgrades
- North London Railway infrastructure project

### DLR

- Three-car Project (Custom House – Beckton east route)
- Bank – Lewisham west route signalling improvements
- Stratford International extension

### London Underground

- Line upgrades – Victoria line
- Line upgrades – Jubilee line
- Olympics accessibility works – Green Park
- Station modernisation and enhancement programmes (78 station improvements)
- Stratford station upgrade
- Heathrow Terminals 1,2,3 station enhancement scheme including step free access

## Road network and active modes

- Additional network instrumentation – upgraded signals and CCTV for the ORN
- ORN – junctions and carriageways
- ORN – TCC
- Walking and cycling route enhancement
- Road Events and Movement Management Area
- Traffic Regulation Order Coordination
- Travel Demand Management for Games and Freight

## River Services

- Tower Pier enhancement
- Greenwich Pier enhancement

## Completed projects

### London Overground

- East London Line extension
- East London Railway and North London Railway rolling stock

### DLR

- London City Airport extension
- Railcar refurbishment
- Stratford Regional station
- Woolwich Arsenal extension
- Woolwich Arsenal (three-car railcars)
- Stratford International railcars
- Delta junction grade separation
- Bank – Lewisham west route resilience
- Three-car project Bank – Lewisham west route
- Three-car project Poplar – Woolwich Arsenal
- Three-car project Poplar – Stratford north route
- Olympics additional railcars

### London Underground

- Wembley Park station
- Central line upgrade
- North Greenwich congestion relief
- Stratford Regional station upgrade
- Waterloo and City line upgrade
- Piccadilly extension to Heathrow T5
- Jubilee, Northern and Piccadilly lines station modernisation and enhancement programme
- Olympics accessibility works – Southfields
- King’s Cross congestion relief

### Road network

- Improvements to the A13
- ORN – network instrumentation

### Buses

- Relocation of bus garages from Waterden Road at the Olympic Park
- East London Transit phase 1a

# Annex C – List of actions

Action number	Action
1	After the 2012 Games, TfL will use the rail infrastructure to support the outcomes of the Mayor's Transport Strategy.
2	TfL will work with River Service operators to ensure that service capacity is appropriately utilised to improve links between central London and Greenwich, and TfL will support River Service operators use of the River Lea for passenger services.
3	TfL will work with the GLA, British Waterways and the six host boroughs to enable the continued use of the River Lea and surrounding waterways, to deliver freight to the Olympic Park and the surrounding area in the future.
4	TfL will use the new highway infrastructure, including traffic signal infrastructure such as CCTV, provided for the 2012 Games to help smooth traffic flow.
5	TfL, working with the boroughs, will unlock the full potential of the walking and cycling routes improved for the 2012 Games. This may include providing better signage and information, cycle parking and new cycling or walking routes to link to the wider cycle and pedestrian network and town centres.
6	TfL will work with the boroughs to ensure the schemes are delivered by the Games, and that they are well maintained beyond 2012.
7	TfL will work with GLA and boroughs to ensure that the Olympic legacy SPG, borough development plans, masterplans and planning applications support the coordination of land use and transport planning to build on the area's exceptional public transport infrastructure, creating a network of strategic and local connections that will fully integrate the Olympic Park and Stratford into their surroundings and with travel planning to achieve a modal shift towards more active and sustainable forms of transport.
8	TfL, working with the boroughs, will promote cycling for children. This may include cycle training within schools and will build on the successes of Team GB and state of the art facilities in the future VeloPark to inspire future generations to cycle.
9	The Mayor and TfL will promote cycling by encouraging the development of a range of London 2012 cycling merchandise, to produce the maximum benefits to London. The range should include affordable cycling products.
10	TfL will work with the boroughs to support walking and cycling amongst London's adult population. This may include a programme of engagement with a wide range of community groups and individuals to encourage walking and cycling
11	TfL will work with the boroughs, the NHS and GPs to include the benefits of walking and cycling within public health campaigns in the run up to 2012 and develop a range of options for GPs, based on good practice, to encourage walking and cycling.
12	TfL and the relevant boroughs will work together to fully maximise the benefits of the Barclays Cycle Hire expansion by promoting its use to all Londoners. This may include the creation of an ambassadorial scheme to promote it to specific communities.
13	TfL will raise awareness with a view to improving people's attitudes towards each other and to disabled people in particular, to ensure that the travelling environment does not present a barrier to travel during and after the Paralympic Games.
14	TfL will promote public transport and cycling for all in the run up to, during and after the Paralympic Games.
15	TfL will work with entertainment venues to provide travel tickets at the same time as venue tickets, which will also include information on the most appropriate route to travel to the venue. The travel ticket will either be sold as an add-on to the venue ticket or as part of the venue ticket. After the 2012 Games TfL will have established a trial venue with a programme for wider use if proved to be successful.

Action number	Action
16	TfL will work with the boroughs, waste authorities, and waste collection companies to consider the timing of waste collections on the Strategic Route Network. This will consider impacts on congestion and smoothing traffic flow, as well as wider implications of changing waste collection timings.
17	TfL, working with the boroughs where appropriate, will review traffic management arrangements put in place for the 2012 Games, helping to further develop best practice. This review will include the use of parking controls to protect residential parking.
18	TfL will work with the boroughs, LOCOG and the GLA to learn from the experience of the 2012 Games, in particular the success of the Mayor's London Ambassadors, borough Volunteers and Games Makers, and establish best practice in coordinating the provision of consistent travel information between volunteers, transport and venue staff.
19	TfL will work with the GLA and boroughs to develop policies to maximise public transport, walking and cycling travel to sporting venues.
20	TfL will assess the impact of working with businesses during the 2012 Games, and whether similar measures can be used after the Games, including the use of Legible London to manage demand on public transport.
21	TfL to investigate maintaining and building on operational practices used during the 2012 Games, including exploration of the potential for two platform faces per train at select locations on the Underground network to help manage passenger flows, reduce dwell times and improve journey times.
22	TfL, working with the boroughs, will encourage the uptake of delivery and servicing planning, including consolidation and out-of-hours deliveries, for existing and new developments to mitigate the delivery and servicing activity.
23	TfL, working with boroughs and utility companies, will assess the management of roadworks for the 2012 Games and consider the potential of continuing practices that help manage London's road network.
24	TfL will explore with local authorities and other key stakeholders the potential to continue appropriate use of local authority-led Licensing and Safety Operating Planning Groups, Augmented Safety Advisory Groups and Safety Advisory Groups to continue efficient and safe approval of planned events.
25	TfL, the boroughs and other public authorities, building on the partnerships established for 2012 Games, will continue to work together to achieve better value for money for the public.
26	Building on the Olympic and Paralympic legacy TfL, in partnership with the six host boroughs will further develop proposals, including considering those outlined in section 5.3 and figure 13 as well as proposals contained in SOPTL, to address convergence and its implications over the medium to long-term. These will be included as part of updating the East Sub Regional Transport Plan by March 2012.
27	TfL will work with relevant boroughs to develop and share best practice for implementing transport improvements. This will include funding opportunities such as Section 106 as a potential for funding transport projects and initiatives. TfL and the six host boroughs will report on progress to the actions to the East Sub Regional Panel.
28	TfL will establish a range of strategic performance measures for the transport legacy and will report progress in the annual Travel in London Report, as outlined in the 2011 report. Consideration will be given by TfL and the six host boroughs to additional monitoring and funding sources, potentially to include the monitoring of specific legacy-related schemes and reporting via LIPs



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### Public Liaison Unit

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### Chinese

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### Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

### Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

### Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

### Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

### Hindi

यदि आप इस दस्तावेज़ की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

### Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলি (কপি) চান, তা হলে নীচের ফোন নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

### Urdu

اگر آپ اس دستاویز کی نقل اپنی زبان میں چاہتے ہیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

### Arabic

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

### Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

