

Section 2



Surface Transport

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Mode:	Surface Transport
Project location:	Central London
Estimated cost £m:	94
Next TfL gateway	E - Project close

Purpose

The contracts for the central London Congestion Charging scheme expire in November 2009. These will be re-let and implemented to enable the operation of the Central London Congestion Charging and Low Emission Zone schemes for five years (extendable for a further 5 years) from November 2009. The re-let programme will also enable the introduction of customer accounts.

Outputs

The programme includes the prime contracts for core IT, business operations and enforcement operations, retail services, and European debt recovery and bailiffs. Refreshing of existing central London zone cameras, number plate readers and customer accounts. New, flexible and scaleable core IT, business operations and enforcement operations services.

Smoothing traffic flow

Re-let of the current Congestion Charging contracts will continue the delivery of the current scheme's benefits (reduced traffic).

Cost and efficiency savings

The programme contributes some £200m to Surface Operational Cost Reduction targets and forms the platform for the introduction of automated payment accounts functionality in 2010. Net revenues are re-invested in public transport.

Improving accessibility

Equal access to zone for charge payers. Improved bus services for target groups. Health benefits from improved air quality equivalent access.

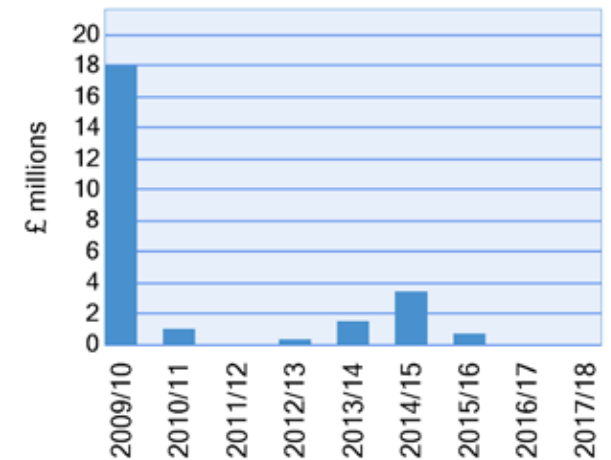
Improving air quality

The beneficial environmental impacts of the Congestion Charging scheme are maintained.

Milestones

Nov	2009	Release 1 - go live of new system for Congestion Charging and Low Emission Zone
Nov	2010	Release 2 - go live of automated payment account charging

Spending to 2017/18



Mode:	Surface Transport
Project location:	London Borough of Enfield and Haringey
Estimated cost £m:	69
Next TfL gateway	D - Contract award

Purpose

This is a safety and environmental improvement scheme. The section of the A406 between Bounds Green Road and Green Lanes is a traffic bottleneck that is regularly congested, resulting in rat-running traffic in residential streets. It has high accident levels and presents a serious barrier to pedestrians and a poor environment for the local community.

Outputs

This scheme will improve facilities for all users of the road, including cyclists and pedestrians. It will create a predominantly two-lane dual carriageway, with improved traffic flows at junctions, greatly improved pedestrian crossing facilities and a dedicated cycleway. The scheme will also upgrade lighting and provide improvements to the local environment and streetscene.

State of good repair

Full pedestrian facilities at all junctions. A new two-way cycle route along the A406 North Circular Road to encourage cycling.

Smoothing traffic flow

The scheme will smooth traffic flow by junction widening at the four major signals, more efficient traffic signal operation and linking the traffic signals. Estimated journey time savings are about 151 seconds per vehicle through the scheme, so this will reduce congestion and improve journey time reliability.

Improving accessibility

Better crossing facilities will minimise severance and improve social inclusion for all sections of the community. Better lighting will improve safety and security for pedestrians.

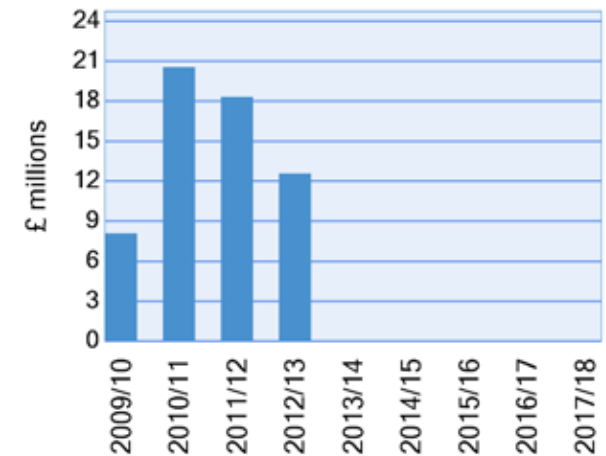
Improving traffic and transport safety

Accident savings of an estimated £1.7m per year. Residential streets benefit from reduced rat-running traffic.

Milestones

Jan	2009	Commence advance statutory utilities work
Sep	2009	Invitation to tender dispatched
Feb	2010	Award contract
Mar	2010	Completion of advance statutory works
Apr	2010	Commence main works
May	2012	Completion of main works

Spending to 2017/18



Mode:	Surface Transport
Project location:	A406, Ealing, West London
Estimated cost £m:	29
Next TfL gateway	E - Project close

Purpose

This project comprises essential replacements to the Waldegrave Road and South Road bridges on the A406 Hanger Lane. Both are in poor structural condition and do not meet current loading standards for road and rail. Replacement will mitigate significant safety risk, especially of HGVs mounting weak footways on the bridges.

Outputs

Road bridges over the Great Western main rail and Underground lines. Replacement bridges will also include improvements for pedestrians and cyclists. Creation of dedicated turning lanes. Creation of more open space areas and landscaping.

State of good repair

Existing bridges are in poor state of repair and public safety would be compromised if these maintenance issues are not addressed and the integrity of the structures adversely affected. The provision of new bridges will significantly reduce the ongoing and future maintenance liabilities and the need for lane closures and associated delays to road users.

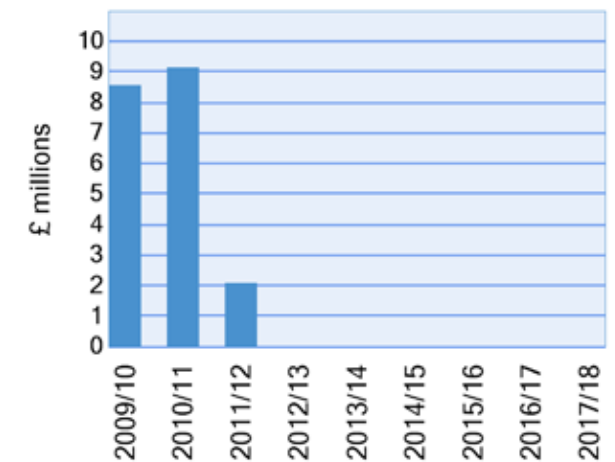
Improving accessibility

Improved accessibility for pedestrians and cyclists will be provided in accordance with Disability Discrimination Act requirements.

Milestones

May	2009	South Bridge caisson commencement - all approvals in place
Jul	2009	Waldegrave caisson commencement - all approvals in place
Aug	2010	Waldegrave Bridge construction complete
Aug	2010	South Bridge construction complete
May	2011	Construction complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	East London Thames crossings
Estimated cost £m:	60
Next TfL gateway	D - Contract award

Purpose

Blackwall Tunnel provides an essential link between north and south London, and this planned upgrade and refurbishment is necessary for continued compliance with safety standards.

Outputs

Safety work to keep facilities in line with current safety standards:

- Carriageway renewal
- Lighting replacement
- Pump houses renewal and upgrade
- Incident protection
- Improved communication systems
- Improved ventilation

Cost and efficiency savings

Refurbishment to extend the life of the northbound Blackwall Tunnel by 25 years. Future maintenance costs will be minimised.

Smoothing traffic flow

Non-availability of these essential routes and assets would produce severe congestion and extensive diversions for vehicles, increasing emissions and fuel consumption. It is estimated that without refurbishment, an additional two closures of the tunnel per week may be required to carry out increased maintenance in order for the tunnel to remain operational.

Improving traffic and transport safety

Early warning of traffic incidents, leading to a reduced safety risk and meeting current standards where appropriate.

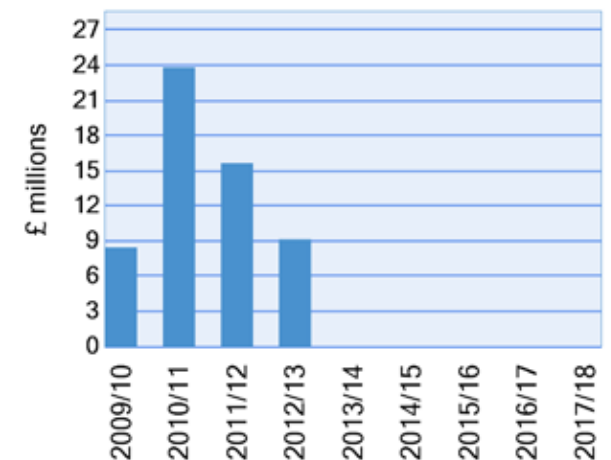
Improving accessibility

Maintenance of access via the link is essential for the London economy and social interaction. Severance from non-availability of the tunnel would be detrimental to the local community.

Milestones

Dec	2009	Award contract
Feb	2010	Start of main works
Jun	2012	Construction complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	A127 Ardleigh Green
Estimated cost £m:	15
Next TfL gateway	B - Option selection

Purpose

This bridge is currently in poor condition and does not meet current load capacity standards. Its condition has deteriorated significantly in the past three years. Should the structure be left to continue in its present condition there is a high probability that it would have to be severely restricted or closed. This would result in diversions and increased congestion. Rail services might also be affected, resulting in increased journeys by road.

Outputs

Construction of a new bridge.

A business case is in development and costs (including phasing) will be revised and updated.

Cost and efficiency savings

The new structure will reduce whole life maintenance costs.

Improving journey experience

Improved pedestrian and cyclist facilities, resulting in safer journeys and promoting active travel choices.

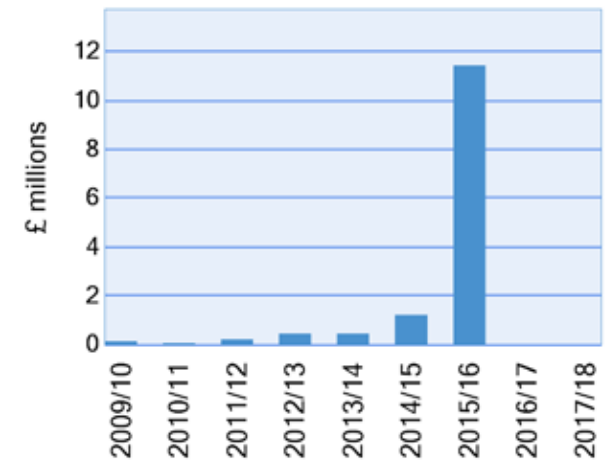
Improving traffic and transport safety

Reconstruction will mitigate safety risks by strengthening the structure, addressing safety aspects.

Milestones

Apr	2011	Completion of feasibility design
Sep	2012	Completion of preliminary design
Jun	2014	Completion of detailed design
Jun	2015	Issue invitation to tender
Oct	2015	Complete procurement and tender stage
Nov	2015	Appoint contractor
Oct	2016	Commence construction
Oct	2017	Completion of construction

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	15
Next TfL gateway	E - Project close

Purpose

Hydrogen has the potential to offer zero-emission transport. However, the technology is in the pre-commercial stage and requires financial stimulus, development of refuelling infrastructure and high-profile use in an operational setting to help prove its viability and potential benefits.

Outputs

Provide five hydrogen fuel-cell buses towards the peak vehicle requirement for the RV1 route in central London. A designated refuelling infrastructure and maintenance workshop to be built in an east London bus depot. The range of the vehicles will be maximised by use of hydrogen hybrid technology.

Reducing CO2 emissions

Hydrogen fuel-cell offers zero-carbon, zero-emission transport, at the tailpipe. Significantly less operational noise than diesel counterpart. Contributes towards the Mayor of London's strategy of limiting the impact of climate change.

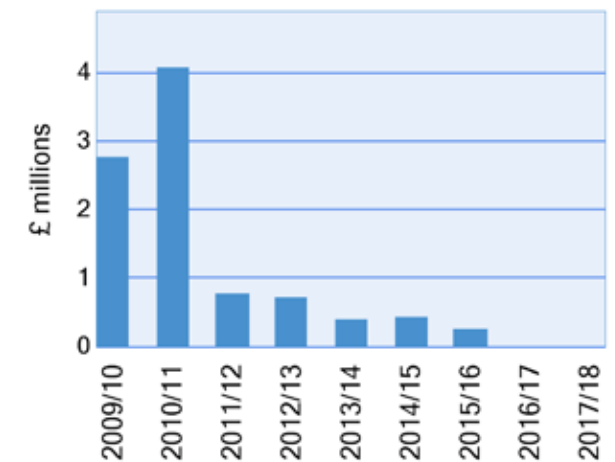
Improving accessibility

The vehicles will have low-floor access.

Milestones

Oct	2009	Planning application awarded
Dec	2009	Prototype bus final acceptance of engineering build
Jul	2010	Prototype bus delivered and certified for UK operation
Dec	2010	All buses enter service

Spending to 2017/18



Mode:	Surface Transport
Project location:	London Borough of Lambeth
Estimated cost £m:	10
Next TfL gateway	E - Project close

Purpose

Create new public space for Brixton in an area that is one of London's most diverse but deprived areas.

Outputs

The key design elements of the central square scope of works are:

A new tree planting scheme, durable paving and surfacing, improved lighting, accessible seating, a new 'mist' water feature, incorporation of public artwork and new CCTV cameras to monitor the square.

The highway works to the southern triangle include the following:

Removal of the existing gyratory system, improvement and upgrade of the junction, reduction in traffic, reconstruction of the footways, resurfacing of the carriageway and provision of new street furniture.

Smoothing traffic flow

This project will benefit buses and the general traffic through:
Reduction in journey times as a result of the removal of the gyratory and the implementation of 2 way traffic along Brixton Hill. Improvement to journey times due to the reduced traffic flows along Effra road.

Improving traffic and transport safety

A reduction in accidents as a result of the improved highway layout at Brixton's southern triangle. Improved pedestrian crossings. Bus lanes widened and access to bus stops improved. Provision of advance cycle stop lines to aid the movement of cyclists and ensure they are visible to other road users.

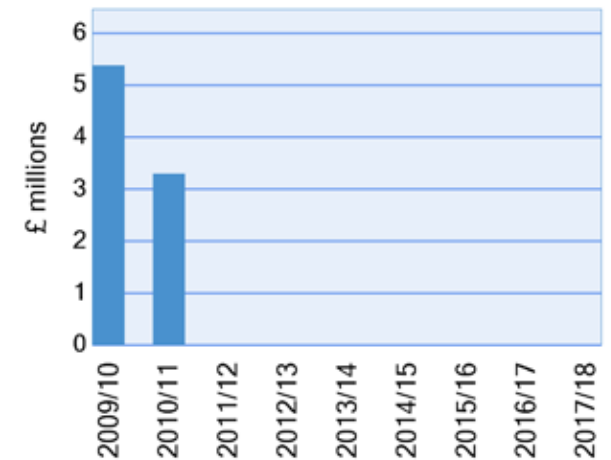
Reducing crime and anti-social behaviour

It is envisaged that the scheme will have an impact on crime reduction. The open design of the square will mean that anyone walking through it can see who is in the area and what they are doing. Combined with carefully placed CCTV cameras and improved lighting, this will enhance the feeling of security.

Milestones

Jun	2009	Contract award
Aug	2009	Start main works on site
Dec	2010	Works completion

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	14
Next TfL gateway	P - Programme

Purpose

The Investment Programme allows for replacement of life-expired vehicles used by Dial-a-Ride (DaR) and will enhance the quality of services operated. By the end of the plan period from 2005/06 to 2017/18, half of the 310-strong fleet from 2005 will have been replaced, resulting in a reduction in the average vehicle age to eight years. A volume of larger vehicles are to be replaced, following the small vehicle renewal phase of the programme from 2005 to 2007, to customise the fleet to customer demand and vehicle occupancy patterns.

Outputs

Ongoing replacement of the DaR fleet from 2009/10 to 2017/18.

Improving journey experience

Improved travel environment for DaR customers and quicker loading and unloading owing to low-floor access, safety features and enhanced passenger handling.

Improving accessibility

Improving the travel environment and service reliability of DaR, which is targeted at disabled people. The new small and large vehicles will have low-floor access, and improved passenger handling and safety features.

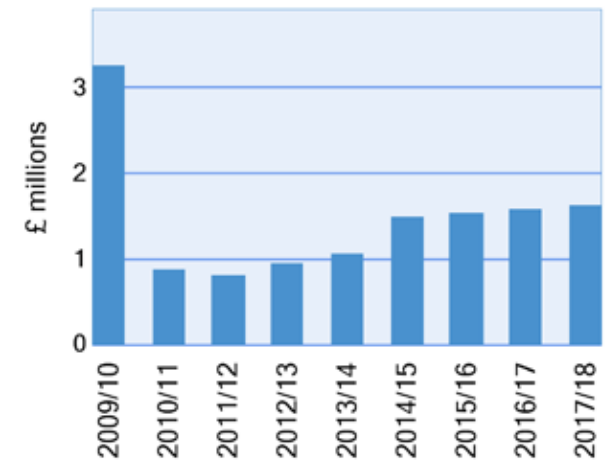
Reducing CO2 emissions

The fleet replacement programme will result in DaR vehicles meeting Euro III (or better) emission standards by 2012/13. They will improve air quality as well as comply with the Low Emission Zone and improved noise requirements.

Milestones

Mar	2010	60 vehicles delivered
Mar	2011	Delivery of 13 vehicles
Mar	2012	Delivery of 12 vehicles
Mar	2013	Delivery of 14 vehicles
Mar	2014	Delivery of 15 vehicles
Mar	2015	Delivery of 20 vehicles
Mar	2016	Delivery of 20 vehicles
Mar	2017	Delivery of 20 vehicles
Mar	2018	Delivery of 20 vehicles

Spending to 2017/18



Mode:	Surface Transport
Project location:	Greater London
Estimated cost £m:	40
Next TfL gateway	E - Project close

Purpose

The Low Emission Zone scheme is the most effective option for reducing the most harmful road transport-generated emissions. Since February 2008, lorries over 12 tonnes and since July 2008 lorries between 3.5 and 12 tonnes, together with buses and coaches, are liable to pay a daily charge if they do not meet a standard of Euro III for particulate matter (PM). In 2012, the emissions standards for these vehicles will be tightened to Euro IV for PM. The new draft Mayor's Air Quality Strategy proposes to extend the Euro III PM standard to vans and minibuses in 2012.

Outputs

Some additional enforcement cameras to be added to the network in advance of proposed inclusion of vans and minibuses in 2012.

Future years funding is yet to be agreed.

Improving air quality

Cleaner vehicles mean a reduction in PM and NOx emissions inside and outside London with Low Emission Zone phases three and four set to deliver further reductions. Reduced air pollution delivers concomitant health benefits.

Improving accessibility

The air quality benefits of the zone will be greater for those in poor health and vulnerable groups, particularly children, the elderly and those with pre-existing respiratory conditions.

Milestones

Costs are not shown for commercial reasons

Mode:	Surface Transport
Project location:	Ilford-Barking-Dagenham Dock
Estimated cost £m:	26
Next TfL gateway	E - Project close

Purpose

Transits will be a key part of public transport improvements to support regeneration in the London Thames Gateway area helping to improve access to employment, education, healthcare and leisure services for local communities.

Passengers will experience fast, frequent and reliable journeys with improved bus priority.

Passengers will benefit from on-street improvements such as urban realm enhancements, and new bus shelters that provide well-lit waiting areas.

Outputs

ELT1a will deliver buses into the heart of Barking town centre, for improved connections to shops and services through the construction of a new busway, significantly improving connections from the south of Barking. Bus priority will be further enhanced with improved management of parking and loading and junction improvements including traffic signal upgrades. Urban realm enhancements will be delivered along the route including tree planting, landscaping and the use of high quality materials. There will be a new passenger facility at Dagenham Dock to support the service extension.

Smoothing traffic flow

Reduced traffic delays along the route for buses and other road users as a result of new parking and loading controls including inset bays, revised traffic orders and improved enforcement of restrictions.

Improving transport capacity

Provision of a fast, frequent and reliable service to encourage modal shift to public transport and accommodate expected increase in demand related to nearby developments.

Improving journey experience

A five per cent increase in customer satisfaction compared with appraisal of existing route before implementation. The travel time from Ilford to Barking and Dagenham will reduce by five per cent once the scheme is open.

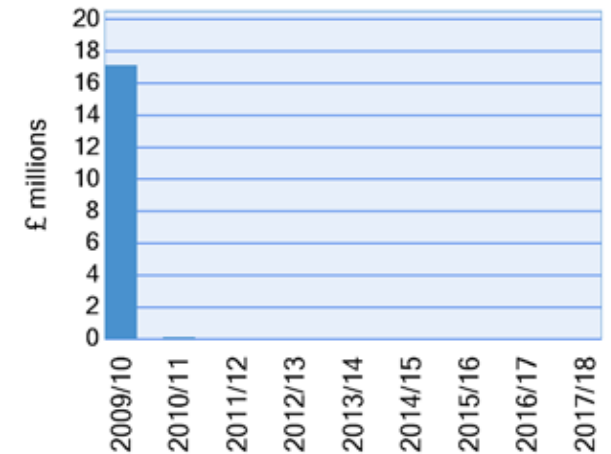
Improving transport connectivity

ELT1a provides a new connection from Dagenham Dock to other transport modes including Underground, Overground and other bus services in Barking town centre.

Milestones

Jan	2009	Construction starts
Jan	2010	Construction completed - including all stops and shelters, road infrastructure and urban realm improvements
Feb	2010	Services commence

Spending to 2017/18



Mode:	Surface Transport
Project location:	Barking Town Centre (River Road) to Barking Riverside
Estimated cost £m:	20
Next TfL gateway	C - Pre-tender

Purpose

Transits will be a key part of public transport improvements to support regeneration in the London Thames Gateway area helping to improve access to employment, education, healthcare and leisure services for local communities. Passengers will experience fast, frequent and reliable journeys with improved bus priority. Passengers will benefit from on-street improvements such as urban realm enhancements and new bus shelters that provide well-lit waiting areas.

Outputs

Introduction of East London Transit Phase 1b (ELT1b) will enable Barking Riverside to increase the number of residential units beyond 1,500. ELT1b provides new bus lanes through road widening and parking removal, junction improvements at Bastable Avenue and Thames Road, and a new segregated busway via the Barking Riverside site (funded by Barking Riverside Ltd). The urban realm will be improved through use of high quality materials and tree planting.

Smoothing traffic flow

Public transport journey times - the travel time from Barking Station to Barking Riverside will reduce by around three minutes once the scheme is open.

Improving journey experience

Improvements to the urban realm.
Environmentally friendly buses.

Improving transport capacity

Passenger demand - 1,500 more people will be using ELT1b every am peak (07:00-10:00) than currently use the existing 387.

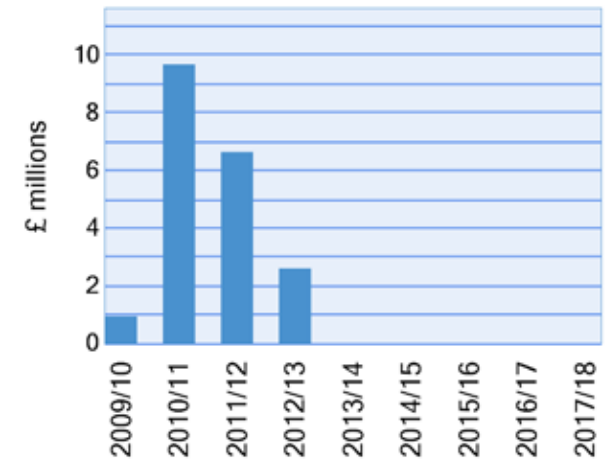
Improving transport connectivity

ELT1b provides a new connection from the Barking Riverside development to other transport modes including Underground, Overground and other bus services in Barking town centre.

Milestones

Nov	2009	Detailed design complete
Jun	2011	Construction started
Jun	2013	Construction completed
Jul	2013	Service commences

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	18
Next TfL gateway	B - Option selection

Purpose

The Olympic Route Network (ORN) is a requirement of the London 2012 Host City Contract and is part of the memorandum of understanding signed by the Mayor. It is expected to provide guaranteed reliable and safe journey times for the Olympic Family during the 2012 Games. The project will develop, implement and decommission a range of temporary traffic interventions and one legacy scheme, to meet the required journey times in conjunction with other enabling projects and mitigating actions.

Outputs

A number of junction and carriageway alterations and improvements will be implemented along the ORN. Supporting design tools, such as journey time calculator and processes to enable commissioning/ decommissioning are being put in place. The majority of modifications are temporary and will be developed during 2009/10; built between 2011 to 2013 and decommissioned in 2012/2013. 'Junctions' include major nodes, the approaches to major junctions and mitigation measures on side roads at major junctions.

Smoothing traffic flow

Development of designs to achieve specific journey time targets, reliably and safely. Implementation of a range of temporary junction and carriageway modifications necessary to transport the Olympic Family for the duration of the 2012 Games period and mitigate specific impacts.

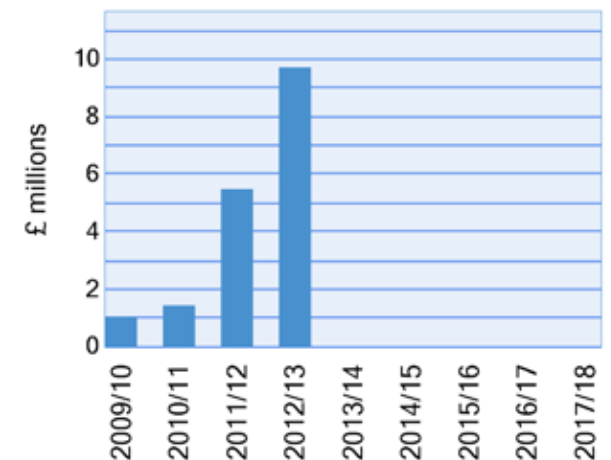
2012 ongoing benefits

Project is essential to the running of the 2012 Games, underpinning its economic regeneration and inward investment benefits. It also delivers one legacy scheme which will provide benefits to London post-Games through permanent modifications made to the road network.

Milestones

Jun	2009	Legacy scheme detailed design commences
Jun	2009	Temporary schemes procurement - preliminary design contract awarded
Aug	2010	Temporary schemes procurement - detail design, build & operate contract awarded
Dec	2010	Legacy scheme build completed
Sep	2011	Temporary schemes build commence
Mar	2013	Project closure

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	9
Next TfL gateway	C - Pre-tender

Purpose

The London 2012 Olympic and Paralympic Games bid identified the need for a single transport coordination centre (TCC). TfL is responsible for delivering the centre on behalf of the London Organising Committee of the Olympic and Paralympic Games (LOCOG) and the Olympic Delivery Authority (ODA), who are funding the project. The centre will provide integration and coordination of traffic and transport agencies as well as coordination with security and emergency agencies.

Outputs

An operational facility based at Palestra resourced by agency representatives. These agencies are the Surface Transport and Traffic Operations Centre, LUL Network Operations Centre, Highways Agency, British Transport Police, Metropolitan Police Service, Docklands Light Railway, Network Rail, Main Operations Centre Liaison and other LOCOG Operation Centres as appropriate and the National Olympic Coordination Centre. Non-executive support from the Government Olympic Executive, Department for Transport and the Mayor's Office.

Smoothing traffic flow

Coordinate the management of the Olympic and Paralympic route networks in realtime to allow accredited vehicle fleets to meet the required journey times. Coordinate spectators and workforce movements on public transport.

Improving transport capacity

Enhanced real-time traffic management and control for the 2012 Games transport operation. Journey time reliability will continue to be maintained at the highest levels.

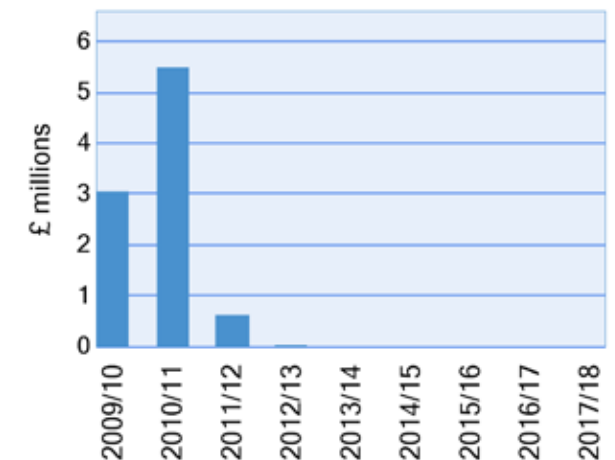
2012 ongoing benefits

The ongoing benefit of the centre will be delivered through new and improved collaboration and coordination of the multimodal transport providers and service operators. Greater cooperation and new formalised relationships between the agencies will be established.

Milestones

Nov	2009	Operations planning lead appointed
Sep	2010	TCC fit-out complete
Dec	2010	TCC technology testing and commission complete
Jan	2011	Start of operations for 2011/12 test events
Dec	2011	Operational trials and process adjustments completed

Spending to 2017/18



Mode:	Surface Transport
Project location:	Various Boroughs across London
Estimated cost £m:	8
Next TfL gateway	D - Contract award

Purpose

The London 2012 Games Bid promised to provide 50km of new and/or improved cycle routes for the Games and the Olympic Delivery Authority (ODA) subsequently provided £8m (outturn) for this work. TfL is the delivery agency for transport related to the Games and is working with the ODA, the London boroughs and other stakeholders to deliver the bid commitment.

Outputs

Eight new and/or improved cycle greenway routes at various locations linking to the 2012 Games sites (shared with walking), cycle parking and route signage. Total length of c. 74km (includes synergies with other TfL cycling and walking programmes).

Promoting active travel choices

A predicted 1.9 per cent modal share for cycling to the Games. Contribution to wider Transport 2025 targets of five per cent modal share for cycling in London.

2012 ongoing benefits

Legacy enhancement of cycle routes and parking facilities in the east of London

Improving accessibility

Providing for cycling as part of the 2012 Games planning process will broaden spectator and workforce travel options. Local residents will be encouraged to attend the Games and in that way support the creation of 'sustainable communities'.

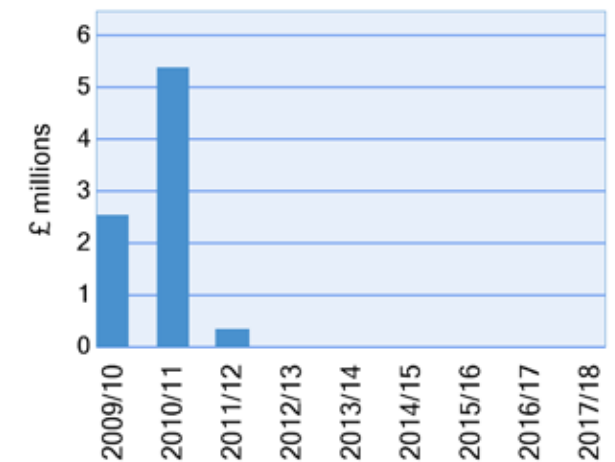
Improving transport capacity

Encouraging journey by bike in the longer term, reducing dependence on car travel and improving transport capacity in general.

Milestones

Aug	2009	Design started for all routes
Aug	2010	Implementation started for all routes
Dec	2010	Design completed for all routes
May	2011	Complete implementation of Olympic cycling schemes

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	31
Next TfL gateway	E - Project close

Purpose

Countdown provides visible and accessible bus arrival time at bus stops. It will also make bus arrival information available via SMS text messages and the web. The project builds on the major capital investment of the first phase of Countdown and updates the existing sign technology to meet current disability guidelines and passenger requirements.

Outputs

The new Countdown project replaces 2,000 existing Countdown signs, installs 2,500 new signs and delivers SMS and web realtime information (RTI) services, which will extend the availability of RTI and secure its ongoing benefits.

Improving journey experience

RTI enhances the quality of bus travel by providing reassurance and empowering passengers to make informed travel choices. The availability of this information at bus stops and through web and SMS services will secure comprehensive access to RTI, covering every stage of the journey.

Improving accessibility

The new signs will meet current disability guidelines, including the availability of audio Countdown at stops. RTI across all the services will be designed to be easy to obtain and understand, to meet the needs of a range of passenger groups.

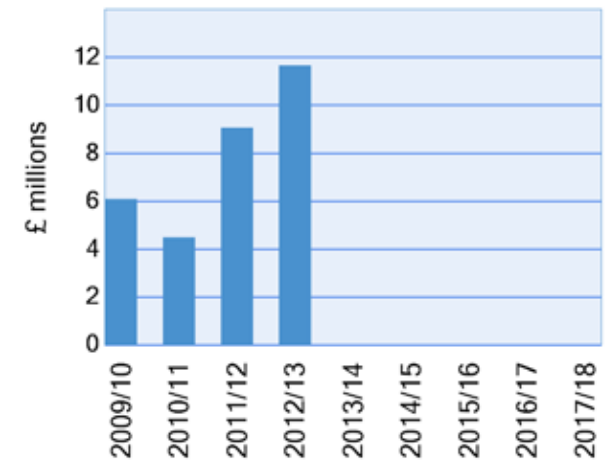
Improving traffic and transport safety

RTI provides reassurance of bus arrival. Remote access to this information will also allow passengers to better time their arrival at a stop, which may help alleviate any feelings of vulnerability.

Milestones

Sep	2009	Award contract to successful bidders
Sep	2009	Start development of central system infrastructure, including web and mobile SMS
Jan	2010	Critical design review completed
Jun	2012	Final acceptance

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	82
Next TfL gateway	E - Project close

Purpose

iBus is a radio and automatic vehicle location system to provide a 'code red' emergency service, and control facilities for bus operators, plus performance monitoring tools to support better service reliability and meet business needs. Audio-visual next stop information is provided on all buses. iBus provides geographic information system mapping for code red calls, low-bridge alarms, digitisation of bus lane enforcement cameras and an interface to on-bus realtime CCTV.

Outputs

On-bus iBus equipment for more than 8,000 vehicles and workstations at approximately 90 garages. Complete replacement of existing assets by April 2009.

Improving transport capacity

Reliable, comprehensive automatic vehicle location. Improved bus reliability and better real-time information for bus users. The system supports improved service reliability, with the potential to reduce wait times.

Improving journey experience

Improved customer satisfaction by enabling information on the street, on mobile phones and the web. Secure, resilient radio coverage for dealing with emergencies.

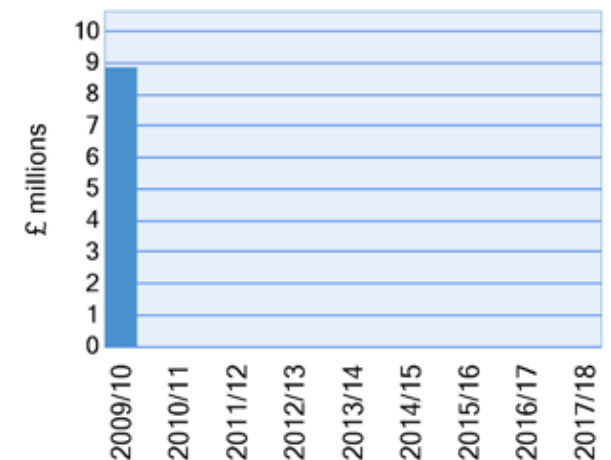
Improving accessibility

Improved security on vehicles from radio by displaying bus location for code red calls at CentreComm. Shorter wait times reduce feelings of vulnerability at stops.

Milestones

Apr	2009	All vehicles in fleet (8,208) installed with iBus
Jun	2009	Old system decommissioned and all operations transferred to new system
Jul	2009	Final acceptance milestone for iBus
Jul	2009	Legacy radio system turned off

Spending to 2017/18



Mode:	Surface Transport
Project location:	Stephenson Street, Canning Town, London, E16
Estimated cost £m:	53
Next TfL gateway	E - Project close

Purpose

Construction of a new bus garage to replace two bus garages located in Waterden Road, Stratford that have been demolished to make way for London 2012 Games infrastructure. A single replacement garage is being built on land made available by the London Development Agency at Stephenson Street, close to West Ham station. The garage will be used by East London Bus Group and will include offices for its head office functions, a bus driver training school and relocated bus operations from the two Waterden Road sites.

Outputs

Provision of a new bus garage for around 320 buses including engineering facilities, offices supporting the bus operation, a new head office building, bus driver training school and a separate bus washing and fuelling facility. The project also provided a temporary bus garage which allowed for the early relocation from Waterden Road while the permanent replacement garage is constructed. The design incorporates numerous sustainable and energy saving features including the use of timber for main structural supports, a sedum 'green roof', a biomass boiler for site heating and a 37 metre, 100Kw wind turbine.

Improving transport capacity

Bus garage is to replace two existing garages and will provide capacity for around 320 buses and will provide for network growth in the area.

Reducing CO2 emissions

A high level of sustainability is included within the design including wooden beams for main structural roof supports, the provision of a sedum 'Green Roof', a biomass boiler for heating and hot water systems and a 100kW wind turbine producing electricity, will reduce the site's reliance on fossil fuels, thus improving air quality.

Improving accessibility

Increased social inclusion by improving transport provision in the area. A modern building that fully meets accessibility guidelines.

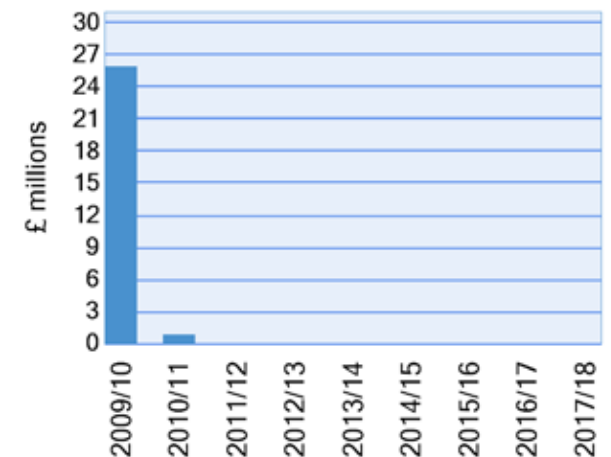
Cost and efficiency savings

The location and capacity of the garage will lead to reduced operating costs combined with the highly efficient and modern building.

Milestones

Apr	2009	Access and commence permanent bus parking area (phase 3)
Nov	2009	Completion of main garage building - West Ham bus garage (Phase 2)
Mar	2010	Completion of wind turbine
May	2010	Completion of permanent bus parking area
May	2010	Completion date (opening of bus garage)

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	23
Next TfL gateway	D - Contract award

Purpose

TfL needs to implement robust disaster recovery and resilience, for critical traffic management and CCTV systems, prior to the 2012 Olympic Games. These systems will also need to be relocated out of Kings Buildings (due to lease expiry in 2017) and into modern, fit for purpose, data centres. TfL needs to upgrade the current analogue CCTV systems, which use obsolete technology, with limited scalability and flexibility, to a modern digital platform.

Outputs

Disaster recovery capability for critical traffic management and CCTV systems before the 2012 Olympics.
 A modified communications architecture enabling the future relocation out of Kings Buildings.
 A digital CCTV system and communications network, with improved flexibility, scalability and functionality.
 Relocation of the systems from Kings Buildings to TfL's purpose built data centres before 2017.

Smoothing traffic flow

The improved functionality, reliability and disaster recovery capability of the new CCTV and traffic management systems will enable TfL to better manage the road network, resulting in more reliable journey times and reduced congestion.

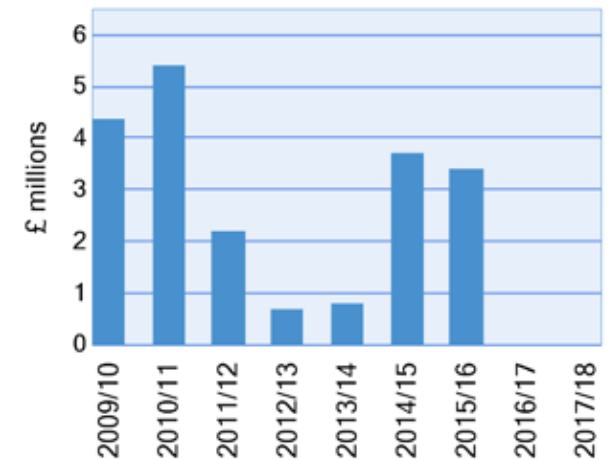
State of good repair

The new systems will be modernised, resulting in improved reliability and reduced risk of technology obsolescence for TfL.

Milestones

Mar	2010	External delivery contractors mobilised
Jul	2011	Completion of CCTV in-station migration to digital
Sep	2011	Full disaster recovery live at data centre 2
Oct	2011	New CCTV Graphic User Interface (GUI) available to all existing users
Mar	2016	Migration of all primary systems from Kings Buildings to data centre 1 complete
Mar	2016	CCTV digital field communications network to street complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	Tottenham Hale Gyratory
Estimated cost £m:	37
Next TfL gateway	C - Pre-tender

Purpose

The project will deliver transport benefits but also facilitate housing growth and act as a catalyst to regeneration of the local area. Community severance will be significantly reduced and the public realm and environment improved. The project will also link a currently isolated island site to allow creation of a new urban centre at Tottenham Hale.

Outputs

The project will return the existing one-way gyratory system to two-way traffic flow and create a new bus station and public square at Tottenham Hale. This will involve remodelling of the key junctions, removal of the contraflow bus lane in Tottenham High Road and significant reduction of traffic volume on Broad Lane. Pedestrian ambience and crossing facilities will be improved, road accidents reduced and new cycle facilities provided.

Improving transport capacity

Providing highway capacity for proposed local housing growth (5,000 homes).

Improving journey experience

Improved bus station at Tottenham Hale.
Easier and quicker public transport interchange.
Better ambience for pedestrians.

Improving air quality

Broadly beneficial (eg large decrease (15-25 per cent) in nitrogen dioxide levels forecast for south and east side of gyratory).

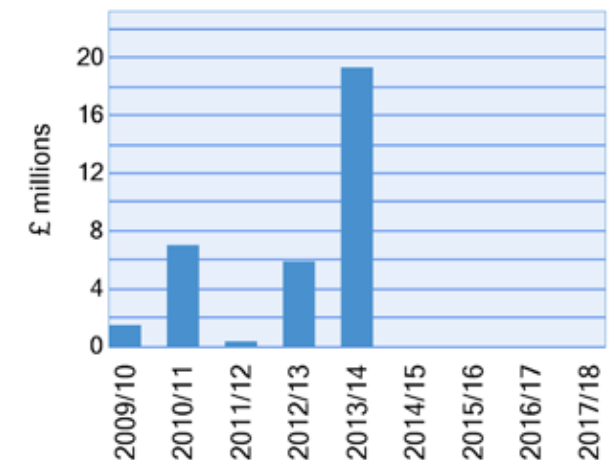
Improving traffic and transport safety

Improved road safety and fewer accidents (forecast reduction of approximately eight accidents per year).
Improved community safety through enhanced street lighting and CCTV.

Milestones

Jan	2010	Completion of consultation and analysis
Jun	2010	Detailed design completion
Sep	2012	Construction starts
Feb	2014	Construction complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	London Borough of Barnet
Estimated cost £m:	8
Next TfL gateway	C - Pre-tender

Purpose

The project is a junction improvement scheme that aims to provide signal-controlled pedestrian crossing and cycling facilities, resulting in smoother traffic flow.

Outputs

Providing filter and stacking lanes to remove turning traffic from the A406. Improved pedestrian and cycle facilities. New traffic light operation to improve network reliability.

Smoothing traffic flow

Assuming the existing traffic flows remain constant the predicted average journey time improvement for each vehicle is 247 seconds in the morning peak and 135 seconds in the evening peak.

Improving accessibility

Inclusive crossing points for those with mobility problems by providing rotating cones, tactile paving and dropped kerbs. Satisfies Jewish Sabbath requirements by providing automatic pedestrian crossings, rendering 'push buttons' unnecessary.

Promoting active travel choices

Providing controlled crossing points on all arms of the junction for pedestrians and cyclists to encourage people to walk or cycle for local journeys.

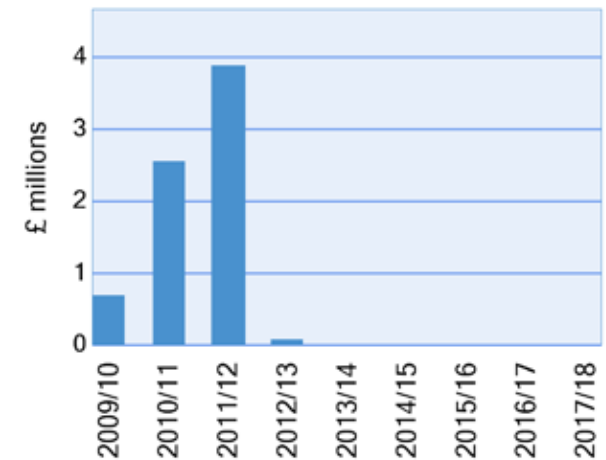
Improving journey experience

Better road user and public transport user satisfaction due to reduced queues in the morning and evening peak.

Milestones

Apr	2010	Detailed design complete
Jun	2010	Construction invitation to tender issued
Mar	2011	Construction starts
Feb	2012	Construction complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	Central London
Estimated cost £m:	92
Next TfL gateway	E - Project close

Purpose

This project fulfils a Mayoral manifesto pledge to introduce a cycle hire scheme to London. It will improve journey times over short distances, be environmentally sustainable and remove current access barriers preventing use of a bike in London.

Outputs

The project will deliver 400 cycle docking stations, 10,200 docking points, 6,000 bikes and supporting infrastructure within a defined central London zone of 44 square kilometres.

Improving transport capacity

Increasing access to bicycles for short journeys by providing 6000 hire bicycles in central London by summer 2010.

Promoting active travel choices

Raising profile of cycling and promote as a mode of public transport in London.

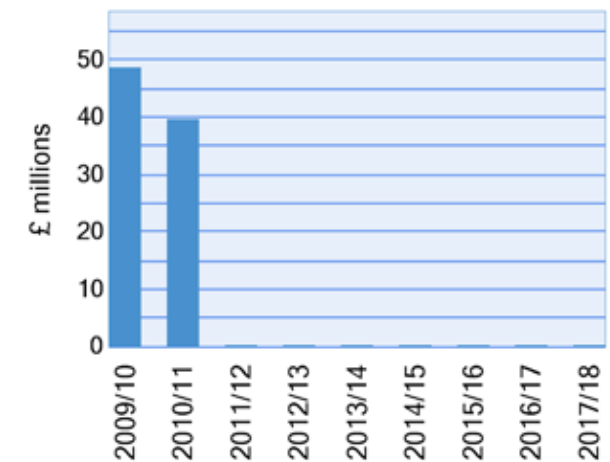
Improving journey experience

Improved perception of ease of use and reliability of service.

Milestones

Aug	2009	Contract award
Nov	2009	Planning applications submitted
Feb	2010	Planning decisions returned
May	2010	Go live #1 - website
Jul	2010	Go live #2 - on street

Spending to 2017/18



Mode:	Surface Transport
Project location:	Barking - Tower Gateway (A13) and Merton to City
Estimated cost £m:	23
Next TfL gateway	E - Project close

Purpose

The Cycle Superhighways programme is aimed at improving conditions for existing cycling commuters and encouraging more people to cycle to and from work. Twelve radial Superhighways from outer London into the centre will provide cyclists with safe, fast, direct and continuous routes along recognised commuter roads. The first two, Barking to Tower Gateway (A13) and Merton to City (A24-A3), will be piloted by Summer 2010.

Outputs

The following interventions will be implemented on the Cycle Superhighways routes: new cycle lanes, new advanced stop lines, 'Trixi' mirrors, priority for cyclists, urban realm improvements, clearly branded routes, and Smarter Travel initiatives to promote cycling and encourage new cyclists.

Improving transport capacity

Encouraging people to cycle to and from work (focusing on the home and work catchment areas).

Improving journey experience

Improving cycling conditions for new and existing cycling commuters, through good quality road surfacing, signage, and safety measures such as 'Trixi' mirrors.

Promoting active travel choices

The project aims to influence modal shift by encouraging cycling to and from work.

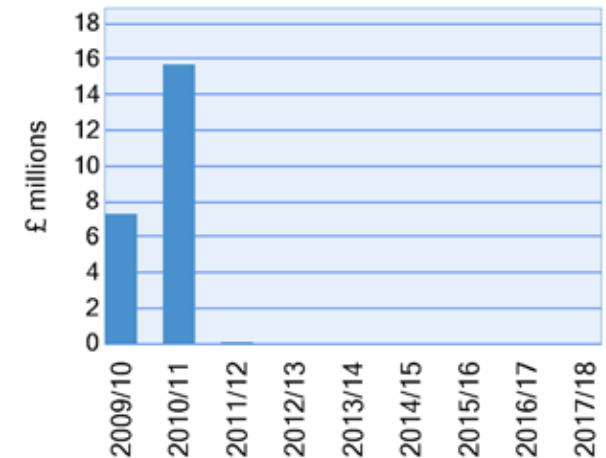
Improving traffic and transport safety

Clearly visible cycle lanes and other engineering interventions to improve safety for cyclists.

Milestones

Jul	2009	Route 3 - Completion of definition of route & measures
Aug	2009	Route 7 - Completion of definition of route & measures
Nov	2009	Route 7 - Completion of preliminary design and NAT scheme approval
Nov	2009	Route 3 - Completion of preliminary design and NAT scheme approval
Nov	2009	Route 3 - Borough approvals (Section 8s) in place
Feb	2010	Route 7 - Completion of detailed design and NAT works approval
May	2010	Route 7 - Construction end
May	2010	Route 3 - Construction end

Spending to 2017/18



Mode:	Surface Transport
Project location:	Various
Estimated cost £m:	145
Next TfL gateway	D - Contract award

Purpose

The Cycle Superhighways programme is aimed at improving conditions for existing cycling commuters and encouraging more people to cycle to and from work. This project provides for ten of the twelve radial Superhighways from outer London into the centre which will provide cyclists with safe, fast, direct and continuous routes along recognised commuter roads. These 10 routes will be implemented by the end of 2015.

Outputs

The following interventions will be implemented on the cycle superhighways routes: new cycle lanes, new advanced stop lines, 'Trixi' mirrors, priority for cyclists, urban realm improvements, clearly branded routes, and Smarter Travel initiatives to promote cycling and encourage new cyclists.

Improving transport capacity

Encourage people to cycle to and from work (focus on the home and work catchment areas).

Improving journey experience

Improve cycling conditions for new and existing cycling commuters, through good quality road surfacing, signage, and safety measures such as 'Trixi' mirrors.

Promoting active travel choices

Through Smarter Travel measures, the project aims to influence modal shift by encouraging cycling to work and from work.

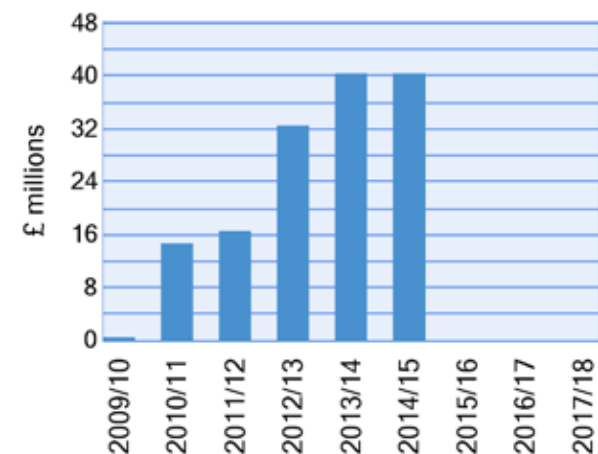
Improving traffic and transport safety

Clearly visible cycle lanes and other engineering interventions, to improve safety for cyclists.

Milestones

May	2011	Phase 1 (2 routes from 2, 5, 8, 12) construction complete
Oct	2012	Phase 2 (2 routes from 2, 5, 8, 12) construction complete
Jul	2013	Phase 3 (2 routes) construction complete
Apr	2014	Phase 4 (2 routes) construction complete
Jan	2015	Phase 5 (2 routes) construction complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	13
Next TfL gateway	A - Project commencement

Purpose

Pedestrian Countdown at traffic signals will indicate how long there is left to clear a pedestrian crossing following the 'green man' invitation to cross period. The system will provide enhanced information at signalised crossings for pedestrians and has the potential to achieve more capacity for vehicles by reallocating unused pedestrian green man time to traffic phases.

Outputs

The Pedestrian Countdown project is currently in a feasibility phase to determine, develop and test solutions and technology. This will be done with off and on street trials to secure Department for Transport (DfT) approval. The feasibility phase will also involve substantial pedestrian research and behavioural analysis.

Improving journey experience

Pedestrian Countdown will provide enhanced information at pedestrian crossings to support pedestrians to make more informed crossing decisions.

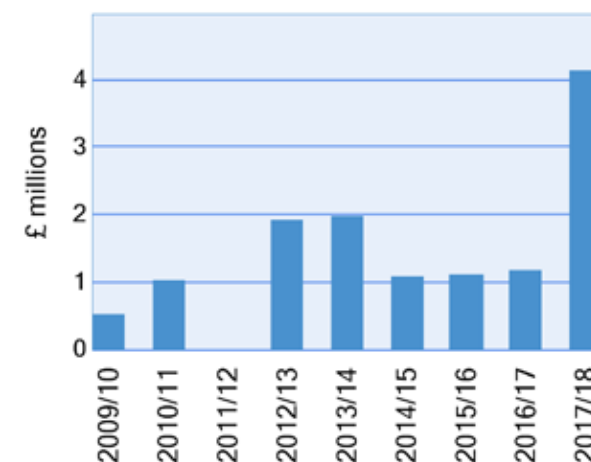
Smoothing traffic flow

Pedestrian Countdown will mean that 'green man' time can be reduced, while still providing a safe crossing time for pedestrians. Information on how long is left to complete the crossing will be displayed. The reduction in green man time will result in increased capacity on London's roads as this extra time can be re-allocated to traffic.

Milestones

Dec	2009	Pedestrian Countdown - production of laboratory-based demonstration units from a variety of manufacturers complete (subject to negotiations with DfT)
Mar	2010	Pedestrian Countdown - live off-street trials completed to examine pedestrian behaviour with countdown (subject to ongoing negotiations with DfT)
Jun	2010	Installation of first on street trial site complete
Dec	2011	Target date for DfT approval to be given for implementation
Apr	2012	Commence implementation on wider scale
Apr	2018	Implementation complete

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan London
Estimated cost £m:	58
Next TfL gateway	D - Contract award

Purpose

SCOOT is an urban traffic control system that automatically optimises traffic signal timings based upon traffic demand over a sequence of closely associated signal sites. The system has been operating in London since 1984 and is the preferred technology for traffic signal sites operating under centralised, remote control in London. The upgrade of existing traffic signal sites to SCOOT technology is a Mayoral priority and has been identified specifically as a major element of the smoothing traffic flow agenda.

Outputs

Over a seven year period, 1,000 of London's most important traffic signal sites will be upgraded to SCOOT. The programme consists of the design, installation, enabling and maintenance of SCOOT technology at all sites upgraded. The traffic signal technology will be enabled within 12 months of the signal technology installations. A prioritisation model has been created to identify sites which will benefit from the installation of SCOOT.

Smoothing traffic flow

Under normal flow conditions traffic signal sites installed with SCOOT technology will deliver a reduction in delay and stops. Under abnormal conditions, such as an increase in traffic flow or an incident on the network causing traffic to divert, SCOOT can adjust signal timings to better control traffic flow.

Cost and efficiency savings

There is an economic cost of delay to traffic in London. By improving the efficiency of traffic signal operation through SCOOT, research has shown that reductions in delay of typically 12 per cent are achievable.

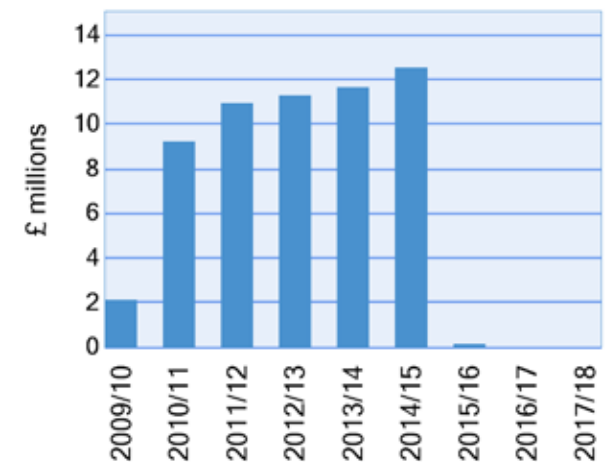
Improving journey experience

In general, UTC SCOOT, a tried and tested technology, improves the experience for all road users, as priority at signals can be balanced and adjusted to meet modal, strategy or policy-based realtime needs.

Milestones

Mar	2010	20% signal technology upgrades installed
Mar	2011	40% signal technology upgrades installed
Mar	2012	50% signal technology upgrades installed
Mar	2013	70% signal technology upgrades installed
Mar	2014	85% signal technology upgrades installed
Mar	2015	100% signal technology upgrades installed
Mar	2016	Final signal technology enabling completed
Mar	2016	Conclusion of signal technology upgrades completed.

Spending to 2017/18



Mode:	Surface Transport
Project location:	Pan-London
Estimated cost £m:	30
Next TfL gateway	E - Project close

Purpose

Traffic signal selected vehicle detection (SVD) bus priority delivers bus delay savings of an average six seconds per bus per junction, resulting in shorter, more efficient and more reliable bus journeys. The level of capability and extent of this activity is likely to expand as a result of the introduction of new iBus technology.

Outputs

SVD works by detecting buses as they approach traffic lights and alters the sequence to reduce significantly the time the bus is held at a red signal. SVD will be applied at 500 sites in 2009/10, and will be further accelerated at the end of this year. The project is scheduled to complete during 2010.

Improving transport connectivity

SVD improves bus reliability and thus assists connectivity and interchange with other modes.

Smoothing traffic flow

SVD technology improves responsiveness and versatility of traffic signals.

Improving journey experience

Improved bus reliability and shorter journey times provides a better journey experience.

Milestones

Mar	2010	500 SVD Sites completed systems acceptance testing
Mar	2010	240 vehicle activated junctions enabled
Mar	2010	384 urban traffic control junctions enabled

Spending to 2017/18

