

**TRANSPORT FOR LONDON
FINANCE AND POLICY COMMITTEE**

**SUBJECT: TfL INVESTMENT PROGRAMME REPORT –
SECOND QUARTER 2010/11**

DATE: 24 NOVEMBER 2010

1 PURPOSE AND DECISION REQUIRED

- 1.1 The Investment Programme report for the second quarter of 2010/11 (27 June 2010 – 18 September 2010) is attached to inform the Finance and Policy Committee of Transport for London's Investment Programme performance.
- 1.2 The paper will be considered at the TfL Board meeting to be held on 8 December 2010.

2 RECOMMENDATION

- 2.1 The Committee is asked to NOTE the report.

3 CONTACT

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Investment Programme Report

Second Quarter 2010/11

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Transport for London

Investment Programme Report

Second Quarter, 2010/11 (27 June 2010 – 18 September 2011)

I. Programme Highlights

The key highlights from the second Quarter of 2009/10 were:

- Cycle Hire – go-live for registered users;
- Cycle Superhighways – routes 3 and 7 opened;
- Sub-Surface Railway upgrade – first S8 train in passenger service;
- Victoria line upgrade – 10 new trains accepted into service;
- Cooling the Tube – Victoria line mid-tunnel vents tranche 2, first site brought into beneficial use; and
- London Rail Overground rolling stock – North London Railway fleet delivered.

Post Quarter events include:

- Neasden Depot – new cleaning shed operational;
- Station upgrades – Notting Hill Gate station practical completion; and
- Green Park step-free access – installation of lifts 5 and 6 commenced.

Cover picture:

The Cycle Hire scheme was opened to registered users on 29 July 2010. The scheme will deliver 6,000 new hire cycles and 400 docking stations in total. Registered users only need to pay a £1 daily, £5 weekly, or £45 annual membership fee to use the scheme. The first half an hour of cycle rental is free of charge.

2. Projects (over £50m) and Programmes (over £10m per annum)

TfL's Investment Programme contains a range of programmes and projects over £50m, in addition to a multitude of smaller activities. These are delivered by TfL directly, through partners in the London boroughs, or through long-term partnerships with the private sector such as Private Finance Initiatives (PFI).

This main body of this report covers discrete projects with a total cost greater than £50m and programmes spending over £10m per annum. For each project, key milestones are listed with a forecast date compared against the March 2010 baseline. If appropriate, milestones listed as deliverables for the year in the 2010/11 Budget document are included.

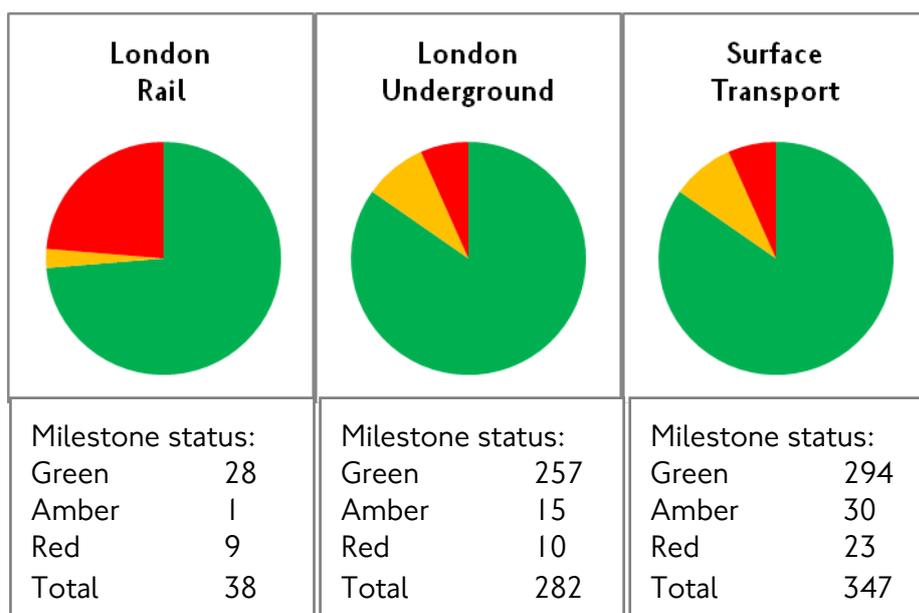
A new section to report on the projects delivered by Tube Lines has been added this Quarter.

Key to RAG status:

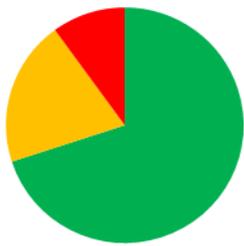
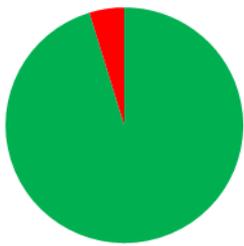
Status	Discrete Projects	Annualised Programmes
●	On time or early	100% of target achieved
▲	Between 1 and 89 days late	>75% of target achieved
■	Greater than 90 days late	<75% of target achieved

Milestone Status by Mode – Quarter 2 2010/11:

The status of all milestones included in the periodic reporting to the modal Investment Management Review meetings is shown in the charts below.



Milestones status by mode (continued):

Corporate	Tube Lines
	
Milestone status: Green 7 Amber 2 Red 1 Total 10	Milestone status: Green 7 Amber 2 Red 1 Total 10

This report focuses on the delivery of investment projects. For discussion on wider financial performance, see the Quarter 2 Operational and Financial Report.

The estimated final cost (EFC) of some of the projects are not included (marked as *) for reasons of commercial confidentiality.

London Underground

Sub-Surface Railway Line Upgrade

Spend to end Q2 2010/11 £m	EFC £m
810.5	4,050.2

Milestones	Current Plan Date	Actual/F'cast Date	RAG
ATC supply - confirm approved shortlist	26/06/2010	08/07/2010	Completed
ATC – appoint contractor	05/02/2011	03/02/2011	●
Enabling Works - Lillie Bridge depot ready for Operational use for Working Timetable 10	08/01/2011	12/12/2010	●
Neasden Depot - new cleaning shed operational	18/09/2010	18/09/2010	Completed
S7 enabling works - start of full infrastructure integration testing	31/07/2011	31/07/2011	●
S8 enabling works – Baker Street complete (incl. train arrestors)	01/05/2010	31/07/2010	Completed
Trains - S7 test train delivered to London and available for testing	31/03/2011	31/03/2011	●
Trains - first S8 train in passenger service (M2)	18/09/2010	31/07/2010	Completed
S Stock migration complete	31/07/2015	31/07/2015	●

The Sub-Surface Railway network (consisting of the Circle, District, Hammersmith & City and Metropolitan lines) upgrades will provide new rolling stock, signalling and a new control centre, to increase capacity and reduce journey times. The programme is scheduled to complete by 2018.

Metropolitan Line Upgrade

This sub-programme includes station remodelling at Baker Street and Aldgate, platform modifications, new conductor rail, signalling immunisation, legacy signalling changes and other works to permit the operation of the new S Stock trains on the Metropolitan line.

The first train was put into passenger service from Wembley Park to Watford ahead of target in July 2010. The new train is achieving a higher level of fault-free running than expected from previous new trains. The good performance is attributed to extensive off-site testing at the Old Dalby Test Track. The second production train is now also in passenger service. Driver training continues, with 92 drivers now fully trained.

The various track, legacy signalling and immunisation, and platform works have reached a level of completion that permits station integration testing to be undertaken for the entire

London Underground

Metropolitan line to Aldgate.

Neasden Depot

Neasden is the busiest depot on the LU network and will be upgraded as part of the programme. The upgrade must take place at the same time as supporting the maintenance and operation of 56 Metropolitan line trains as well as the entry/exit of 20 Jubilee line trains. As part of the upgrade, Neasden will provide light maintenance for 58 new eight-car (S8) trains and heavy maintenance for the full fleet of 191 S7 and S8 trains.

The new cleaning shed was successfully brought into use on 18 September 2010. The largest mobile crane in Europe was used successfully to install a Bailey bridge that will enable the remainder of the construction works.

District, Circle and Hammersmith & City Lines Upgrade

This sub-programme includes upgrades to permit the operation of the new S Stock trains on the District, Circle and Hammersmith & City lines. Works include:

- upgrades to Ealing Common and Upminster depots;
- significant works at Lillie Bridge depot;
- remodelling Hammersmith station;
- major modifications to the legacy signalling at Edgware Road;
- legacy signalling works, along with one person operation, CCTV design and installation;
- third party track immunisation;
- platform lengthening modifications;
- new conductor rail;
- signalling immunisation; and
- power works, including conductor rail upgrades.

At Lillie Bridge depot, work is continuing to plan with modified track already handed over to Maintenance. The remaining work is on plan to be ready for the revised operating timetable planned for December. Significant amount of works on the Hammersmith & City line were able to be undertaken at reduced cost during the recent Crossrail Paddington blockade; it is estimated to have saved the programme £4m.

All legacy signalling immunisation has now been successfully completed, with the exception of six District line sites. During Quarter 2, a total of 17km of extra low loss composite conductor rail was installed across the network.

Automatic Train Control

The procurement of the new signalling contract is underway, evaluation of the received tenders has commenced and a shortlist of two bidders has been announced. The best and final offer specification has been issued to the shortlisted bidders following risk reduction work. Contract award is on target for February 2011.

London Underground

SSR Signalling Power

Spend to end Q2 2010/11 £m	EFC £m
0	56.8

This project will provide the Main power supplies for the Sub-Surface Railway signalling (local distribution of signalling power is covered elsewhere).

The programme governance process has been established in this quarter and prices sought for the first phases of work as variations to existing contracts. Procurement of the initial phase is now underway. The scoping and design contract is ready to be placed once procurement authority is granted. Milestones are being identified and are expected to be agreed shortly.

There is a risk that the Sub-Surface Upgrade Project may have to adopt air-actuated points at some locations, prolonging the demand for compressed air and delaying the transfer to electrical actuation. The project is working to understand the potential cost and schedule implications.

London Underground

SSR Power

Spend to end Q2 2010/11 £m	EFC £m
137.2	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Package 1b (Eastcote civil works) - start of Construction	24/07/2010	29/06/2010	Completed
Package 4 - completion of Edgware Road bulk supply point boundary wall piling	18/09/2010	16/06/2010	Completed
Package 1b (Eastcote transformer rectifier 2) - commission/energise QICC Part 8	16/10/2010	11/02/2011	■
Package 1a (Neasden Depot) - available to supply traction power	23/12/2010	23/12/2010	●
P8M substation full beneficial use (All S7 Sites)	28/02/2013	17/01/2013	●

The power system upgrade programme will deliver the additional power capacity that is required to support the line upgrades.

Within package 1 (Metropolitan line north of Baker Street), package 1a has delivered the first new rectifiers at Harrow and Finchley Road. The package is behind schedule by 12 weeks and is subject to a 20 per cent cost escalation, a result of the supplier being new to LU and taking longer than expected to complete its designs. If not effectively managed, slippage threatens to constrain the rate of introduction of the new S8 trains to service. A revised programme was received in October for Package 1a and its viability is under detailed examination. The next critical milestone is to make the new rectifier capacity at Neasden available before Christmas. Package 1b has been changed to help compensate and a re-baselined programme is undergoing detailed review prior to acceptance. The Eastcote transformer rectifier milestone has been re-scheduled to 11 February 2011 as part of the revised programme; it is not yet needed and the rephasing allowed resources to be concentrated at other sites.

Package 2 (District/Circle/Metropolitan Acton Town and Baker Street group) is on plan, with design and equipment procurements are progressing. Major design issues at Embankment have been resolved and the revised site at South Kensington has been secured. Both are very significant achievements in de-risking the programme. Package 4 (Bulk Supply Point at Griffith House) is on plan, piling around the entire site boundary is complete and excavation is progressing well. The conceptual designs for some of the associated line-side cable routes have not been fully accepted and further survey and design work is underway. Package 6 (132Kv feed to Griffith House Bulk Supply Point and Neasden) tender returns have been received and review and negotiations are almost complete.

London Underground

Victoria Line Upgrade

Spend to end Q2 2010/11	EFC £m
712.4	1,060.8

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Start trialling the new service control centre (line control) in passenger hours	26/06/2010	23/05/2010	Completed
10 production trains accepted for service	24/07/2010	20/07/2010	Completed
Demonstrate operation of the new service control centre	21/08/2010	20/07/2010	Completed
20 production trains accepted for service	11/12/2010	22/11/2010	●
Start to control Victoria line operations from the new service control centre	15/08/2011	15/08/2011	●
Full service operation for 09 Tube stock	23/09/2011	19/09/2011	●
Demonstration of line upgrade capability	26/04/2012	26/04/2012	●
Victoria line upgrade programme completion	07/04/2013	07/04/2013	●

The Victoria line is the first major line upgrade on the Bakerloo, Central and Victoria lines (BCV) network. The works include new rolling stock, signalling, control equipment, depot and track. The programme remains on target and budget to complete ahead of the contractual completion date of August 2013. Fleet production and system reliability remain the primary focus.

Rolling Stock

Fourteen new 09 Stock trains (09TS) have been commissioned into passenger service and the reliability trend is increasing. 27 new trains are planned to be in service by the end of the year. By the end of Quarter 2, Bombardier achieved a production rate of five cars per week, against the target of six. Improvements to the production rate are expected by the end of the year, with seven cars per week set as an achievable target.

Signals

Signalling reliability growth remains a key focus for the project team. A revised reliability growth strategy has been accepted and supports the planned rate of introduction of the new rolling stock. In pursuing the new reliability growth plan and increasing the proportion of 09ST providing the service, some new failure modes have become apparent which have had an overall adverse effect on service performance. Invensys is responding to deliver new software to an accelerated programme, which will address the most injurious failure modes.

London Underground

Other Bakerloo Central and Victoria Line Upgrade Works

Spend to end Q2 2010/11 £m	EFC £m
144.9	661,6

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Central Line Bogie Mods - 960 frames delivered to fleet	13/07/2010	18/06/2010	Completed
Central Line Bogie Mods - 1,420 frames delivered to fleet (manufacture complete)	05/03/2011	11/01/2011	●

The majority of the estimated final cost for the programme relates to the Bakerloo line upgrade which is in the pre-feasibility stage.

The Central Line Bogie Modifications project is contained in this programme of works. Following the Chancery Lane incident, this project was instigated to address the issues identified in the Aylward Inquiry. The project comprises the re-design, manufacture and fitting of 1,420 new bogie assemblies to the entire Central line fleet, known as 1992 Stock.

The manufacture of the new bogie frames began in January 2009 and the delivery schedule is on target with 960 new frames delivered to fleet by 18 June 2010 (thus achieving the milestone early). The enabling activities to support five programme lift units are progressing to plan. This will enable achievement of the target to complete 1,420 bogies delivered to fleet by January 2011.

London Underground

Victoria Station Upgrade

Spend to end Q2 2010/11 £m	EFC £m
84.2	670.4

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Main works contract award	28/10/2009	15/04/2010	Completed
Bring into use ticket office	13/09/2010	01/11/2010	▲
Birse utility works planned completion date	31/03/2011	24/12/2010	●
Northern ticket hall - civils complete (inc removal of traffic management)	15/12/2014	22/09/2014	●
Southern ticket hall - station operations room complete	06/12/2017	13/09/2017	●
Delivery into service	01/02/2019	12/10/2018	●

This project will provide a significant increase in passenger circulation space in key congested areas of the station, and step-free access from street to platform for the Victoria line and District & Circle lines.

The main works contractor - Vinci BAM Nuttall joint venture (VBN) - has increased its value management activity and is proposing changes to the scheme footprint to LU. Birse Metro continues to make good progress with utility diversions in Wilton Road. Preparations are being made for the closure of Terminus Place highway. Bus route diversions will be required to undertake major utility works. Installations for the ground/structures monitoring equipment are complete. Background data will be collected before main works construction starts in May 2011. The completion of the main works design has been delayed by three weeks and the contractor is developing mitigation plans for consideration by LU to minimise the impact of the delay; at present no project milestones are affected.

London Underground

Channel Tunnel Rail Link at King's Cross

Spend to end Q2 2010/11 £m	EFC £m
853.6	860.0

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Completion of phase II works (excl post NTH works)	30/04/2010	30/04/2010	Completed
New passenger lift and ramp open to public	31/08/2010	20/09/2010	▲
Completion of phase II works (incl post NTH works)	16/10/2010	16/10/2010	●

King's Cross congestion relief delivers increased capacity at King's Cross St. Pancras. Phase 1 included an expanded Tube ticket hall and new western ticket hall. Phase 2 includes a new northern ticket hall, step-free access and improved links to Northern, Victoria and Piccadilly lines, and the new Channel Tunnel Rail Link Terminal. The King's Cross project is funded by the Department for Transport and contracted by London Underground.

Works on the Mobility Impaired Passenger (MIP) lift 5 and ramp 4 were completed post Quarter 2. Phase 2 works on the Northern Ticket Hall were also formally completed.

London Underground

Green Park Step-Free Access

Spend to end Q2 2010/11 £m	EFC £m
33.1	77.0

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Detailed design approved RIBA EF (Phase 3) - below ground	24/07/2010	22/03/2010	Completed
Lifts 5 and 6 installation start	31/03/2011	13/09/2010	Completed
Green Park delivery into service (as agreed with ODA)	19/12/2011	24/10/2011	●

This project provides step-free access at Green Park station, to provide a key interchange for mobility impaired passengers travelling to 2012 Games events using the Underground. The programme is currently on target to meet the Games delivery date of December 2011.

The project remains slightly ahead of schedule. Installation works for lifts 4, 5 and 6 began earlier than forecast. Changes to the construction sequence have allowed some elements of the programme to be achieved earlier than originally planned.

London Underground

Paddington (Hammersmith & City) Congestion Relief

Spend to end Q2 2010/11 £m	EFC £m
14.7	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
LU approve Crossrail Detailed design for interim and final scheme	13/11/2010	15/10/2010	●
Completion	25/11/2013	26/03/2013	●

Paddington (Hammersmith & City line) station is one of LU's top priorities for congestion relief because of demand growth associated with local area redevelopment and the Sub-Surface Railway upgrade. The project seeks to deliver congestion relief and step-free access benefits to ensure the continued safe operation of the station.

Crossrail has now selected the main works contractor to construct the LU station box. The contract award was made on 18 October 2010, Carillion has now been instructed as the main works contractor. The opportunity to realise further savings in the final cost resulting from this award is being assessed by the LU project team.

Further work is underway to determine the most appropriate contracting approach to deliver the phase 2 fit out works. Decisions are expected to be made in mid 2011 once the main contractor's performance is proven and the taxi tank construction is underway.

London Underground

Tottenham Court Road Congestion Relief

Spend to end Q2 2010/11 £m	EFC £m
149.3	503.5

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Completion of demolition of Goslett Yard	21/08/2010	04/06/2010	Completed
Commence Oxford Street new entrance civil works	11/12/2010	10/12/2010	●
Delivery into service	09/09/2016	09/09/2016	●

The congestion relief scheme includes an upgraded and enlarged ticket hall, three new entrances, additional escalator access to the Northern line platforms, improved circulation space, step-free access throughout and an interchange with Crossrail.

The programme of work to strengthen and replace utilities on Oxford Street is entering its final phase, with completion scheduled for the end of November 2010. Piling has commenced on the Astoria site for the new Falconberg Court shaft.

Escalator jacking operations have commenced on schedule for escalator 5, a change from hydro cutting to diamond coring having been agreed. The remaining sections of the concrete wall to the Centre Point pool have been removed to allow for the diversion of pedestrians on Charing Cross road on schedule.

Preparations for the construction of the road slab over which Charing Cross Road will be diverted continue, with the breaking down of piles.

The London Fire and Emergency Planning Authority carried out an unannounced inspection of the Tottenham Court Road station on 16 September 2010. No issues or concerns were raised and positive feedback was received regarding the project.

London Underground

Bond Street Congestion Relief

Spend to end Q2 2010/11 £m	EFC £m
17.6	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Main works contract award	18/09/2010	04/08/2010	Completed
Take Possession of 354-358 Oxford Street	08/01/2011	22/11/2010	●
Start of main tunnelling operations	15/07/2013	22/05/2013	●
Completion	28/04/2017	07/03/2017	●

Bond Street station is a key interchange between the Jubilee and Central lines. Long term demand and congestion is forecast to increase further as a result of growth in employment and leisure travel and the completion of Crossrail in 2017. In addition to congestion problems, the station does not have step-free access. The scheme provides:

- two additional escalators from the interchange level to the Jubilee line;
- a low-level interchange route between the Central and Jubilee lines;
- a new step-free entrance and ticket hall on Marylebone Lane;
- four new lifts, allowing step-free access to both Central and Jubilee line platforms, interchange and street levels; and
- a step-free route to the Crossrail station will also be available.

Number 2 Stratford Place has been handed over to the main contractor (Costain Lang O'Rourke joint venture) as a worksite. The lease for the new joint project site office has been signed. The main contractor's mobilisation and set up within the co-located offices is proceeding to schedule.

Crossrail has issued the compulsory purchase notices for the businesses and flats at 354-358 Oxford Street, and at 1 Marylebone Lane for the new Bond Street construction site. Meetings have been held with City of Westminster regarding relocation of street traders with pitches that fall within the boundaries of the proposed worksite.

London Underground

Bank Walbrook Square

Spend to end Q2 2010/11 £m	EFC £m
4.3	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Detail Design Compliance Submission	13/11/2010	28/10/2010	●
Complete Design of Box Fit out (Design)	30/08/2010	11/02/2011	■
Delivery into service	10/07/2015	10/07/2015	●

The Bank Walbrook Square project will provide more convenient access to streets south and south-west of the station, reduce congestion on the Waterloo & City line platforms, and provide step-free access to the Waterloo & City line. LU is making a fixed contribution to the funding of the construction of the station box shell, which will be delivered by the developer (Legal & General). LU will fit out the station box to complete the new entrance.

A joint design review funded by the developer Legal & General is nearing completion. The review process should realise cost savings in the future. Legal & General has confirmed that it has authorised funding for site clearance and construction of the LU station box. Enabling works for demolition have now commenced.

Delays have been incurred in agreeing the revised primary dimensions for the station box between Legal & General and LU, but these have now been agreed. Legal & General is picking up the cost of the re-design.

London Underground

Bank Congestion Relief and Step-Free Access

Spend to end Q2 2010/11 £m	EFC £m
6.9	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
RIBA C Design Accepted / Phase Complete	05/02/2011	08/12/2010	●
Delivery into service	23/01/2021	23/01/2021	●

The Bank Northern line congestion relief project will relieve current and expected congestion in Bank station. By mitigating increasingly frequent congestion of the Northern line/DLR area station closures will be reduced.

In Quarter 2, design work to RIBA stage C (outline proposal) has continued to schedule on the preferred design option. A corporate gate B+ review (further appraisal of chosen design option) was completed in the Quarter. The project will shortly be requesting authority to proceed to RIBA stage D (scheme design).

London Underground

Other Station Upgrades

Spend to end Q2 2010/11 £m	EFC £m
212.3	230.5

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Notting Hill Gate station modernisation - practical completion	16/10/2010	16/10/2010	●
Notting Hill Gate station modernisation - delivery into service	18/11/2010	18/11/2010	●
Marble Arch station modernisation - practical completion	08/01/2011	07/01/2010	●
Marble Arch Station modernisation - delivery into service	31/01/2011	31/01/2011	●
Former Silverlink Stations Upgrade - Deliver Into Service Last Station (Approved by LU)	23/12/2010	31/03/2011	■

The programmes are generally on target. At Cannon Street, the topping out of the main development took place on 22 September 2010. Phase three of the platform works was commenced on schedule.

At the former Silverlink stations, six customer information screens have now been completed. Cabling works have been delayed by subcontractor resource shortages and works by Network Rail on their civil assets (bridge replacement and subway strengthening) which have disrupted LU works. Delivery into service of the final station is subsequently delayed to 31 March 2011.

Works at Marble Arch and Notting Hill Gate are progressing to plan. At Notting Hill, the platform resurfacing is underway and the renewal of heritage lighting on the District and Circle platforms has commenced. At Notting Hill Gate, practical completion of the modernisations works was completed on 16/10/2010.

London Underground

Cooling the Tube

Spend to end Q2 2010/11 £m	EFC £m
148.1	894.4

Milestones	Current Plan Date	Actual/F'cast Date	RAG
MTV Tranche 1 and 1A - all sites brought into beneficial use	21/08/2010	23/07/2010	Completed
Victoria line: mid tunnel vents tranche 2 - first site brought into beneficial use	16/10/2010	14/08/2010	Completed
Victoria line: mid tunnel vents tranche 3 - first start on site	11/12/2010	09/11/2010	●
Out of service fans phase 3 - first fan available for beneficial use	05/06/12	08/05/12	●
Out of service fans phase 4 – all fans available for beneficial use	04/09/12	07/08/12	●

This is a long term programme to control ambient temperatures on the Underground. Without intervention, temperatures will rise as more energy is dissipated within the tunnels due to increased train service capability delivered by the deep-line upgrades. Planned mitigation measures include improved energy efficiency, increased ventilation and selected station cooling systems.

Due to budgetary pressures, only the works to support the Victoria line upgrade are being progressed currently. Victoria line station-based cooling system designs are complete and the implementation of cooling at Victoria Station is being integrated with station upgrade works.

All mid-tunnel vent works on the Victoria line are progressing to schedule. Seven of the nine vents planned to be commissioned are now in beneficial use. For the final tranche, advanced site works are due to begin in November 2010.

Designs for bringing four further disused fans back into service are under review.

London Underground

Crossrail Services and Safeguarding

Spend to end Q2 2010/11 £m	EFC £m
74.2	240.6

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Provided all LU input and support to facilitate MPRG (Major Project Review Group) Review Point 4	05/02/2011	15/12/2010	●
Finish on site works - Whitechapel	10/04/2011	10/02/11	●
Barbican interlocking machine room - deliver into service	22/05/2011	23/03/11	●
Communications Equipment Room - complete at Liverpool Street	21/12/2011	18/11/11	●

Scope challenge workshops have been held to assess the options at Paddington, Tottenham Court Road, Bond Street and Liverpool Street stations. LU is working closely with Crossrail to finalise station designs including assessing the impacts on existing LU facilities.

LU continues to work with Crossrail to develop a full suite of requirements while simultaneously the project is progressing towards major contract award.

London Underground

Connect and Minor Power Works

Spend to end Q2 2010/11 £m	EFC £m
357.2	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Connect VN422 13 Video SDPs Northern and Piccadilly (RAC/ENG/PRG/0028 VI.17) - Practical Completion	01/05/2010	30/04/2010	Completed
Metronet video cut-in - installation Complete 76-100 (of 100)	29/10/2010	07/07/2010	Completed
Survey and implementation for Tubelines video cut-in - practical completion	16/10/2010	15/10/2010	●

Connect is a 20 year PFI contract to upgrade and maintain the radio and transmission system used on the Underground.

Works to provide increased functionality, resilience, and improved video capability on the new Connect system are progressing. The rollout of train mobile software had been delayed due to an interference issue with the Tracknet system; this work completed on 6 September 2010, earlier than forecast.

The Connect Airwave project enhances the emergency services' communication system on the Underground by expanding coverage and capacity. Airwave Phase 2 has now been agreed with the National Police Information Authority (NPIA), including an extension of coverage to Stratford. The enabling works for the programme are complete with the main implementation due to begin in November 2010.

London Underground

BCV/SSR Station Upgrades and Lift and Escalator Works

Spend to end Q2 2010/11	EFC to 2017/18 £m
1,244.1	2,330.6

Stations	Current Plan Date	Actual/F'cast Date	RAG
Mile End station modernisation - LUL accept delivery into service	31/03/2010	30/06/2010	Completed
Kings Cross station modernisation - delivery into service	16/10/2010	16/10/2010	●
Aldgate East station modernisation - delivery into service date agreed by LUL	31/03/2010	15/07/2010	Completed
Warren Street station modernisation - delivery into service	13/11/2010	13/11/2010	●
BCV Asset Stabilisation (09-10 workbank) - replacement of obsolete fire control system	24/07/2010	24/07/2010	Completed
Lifts and Escalators	Current Plan Date	Actual/F'cast Date	RAG
Piccadilly Circus escalators 1 to 11 refurbishment - returned to service (escalator 1)	10/07/2010	01/07/2010	Completed
Bank escalator 1,2,3 refurbishment - approval of practical completion submission (escalator 2)	26/11/2010	29/10/2010	●

The platform adjustment works to provide compliance with the Rail Vehicle Accessibility Regulations (RVAR) are underway on the Metropolitan line. 22 of the 24 platforms have now been completed. On the District, Circle and Hammersmith & City lines, the design is complete on eight platforms and the work is ready for tender.

In the Lifts and Escalators programme, works are underway at Bank, Oxford Circus, Piccadilly Circus and Warren Street. Work at Earl's Court has now completed.

At Warren Street, delays have occurred in obtaining certification of fire compliance for Fibre Reinforced Polymer panels. To accelerate the works, remaining areas will be fitted with powder coated panels. The forecast delivery into service date of 13 November 2010 will now be challenging to achieve. The King's Cross Station modernisation delivery into service was achieved to target post quarter.

London Underground

Track Renewal BCV/SSR

Spend to end Q2 2010/11	EFC to 2017/18 £m
483.8	1,561.5

SSR Milestones	Current Plan Date	Actual/F'cast Date	RAG
SSL Points and Crossings - 3 units achieved (year to date, 09/10 deliverable)	29/05/2010	06/04/2010	Completed
SSL Ballasted Track Replacement and Reballast metres - 6,750 metres achieved (year to date)	18/09/2010	21/08/2010	Completed
Track drainage - 5950m replaced (year to date)	18/09/2010	21/08/2010	Completed
SSL Ballasted Track Replacement and Reballast - 13,250 metres achieved (year to date)	31/03/2011	07/02/2011	●
Track drainage - 8,250m replaced (year to date)	31/03/2011	13/12/2010	●
BCV Milestones	Current Plan Date	Actual/F'cast Date	RAG
BCV Ballasted Track Replacement and Reballast metres - 1,500 metres achieved (year to date)	31/03/2011	31/03/2011	●
BCV Points and Crossings - 6 units achieved (year to date)	31/03/2011	11/10/2010	●
BCV Class 1 (expected trackform life of 40 years) - 2,400m achieved year to date	31/03/2011	31/03/2011	●

During Quarter 2, production was broadly on target.

The tender for a new five year contract is nearing completion, with tender award planned for the end of October 2010.

London Underground

Civils BCV/SSR

Spend to end Q2 2010/11	EFC to 2017/18 £m
103.0	454.7

BCV Milestones	Current Plan Date	Actual/F'cast Date	RAG
C156 EM3, 4, 7, 8 and 9 - Perivale to Greenford C156 - practical completion	26/06/2010	19/02/2010	Completed
C172 CTS1C and CT52 West Acton to Hanger Lane Junction Cutting Stabilisation - Start on Site	21/08/2010	26/07/2010	Completed
SSR Milestones	Current Plan Date	Actual/F'cast Date	RAG
M072 EM2 - Pinner to North Harrow M072 - Practical Completion	16/10/2010	23/07/2010	Completed
EM12 and 13 Rickmansworth to Moor Park - practical completion	11/12/2010	08/09/2010	Completed
M020 EM10, EM11 and EM12 Chalfont & Latimer to Amersham embankment stabilisation - start on site	16/10/2010	17/09/2010	Completed
D164-EM1,2,4,5 East Putney to Southfields D164 practical completion	20/09/2010	20/08/2010	Completed
M020 EM1,2,3 Amersham to Chalfont & Latimer Practical Completion	28/11/2011	31/10/2011	●

Following the integration of Metronet, BCV and SSR structures are jointly managed. The programme comprises a range of improvement and monitoring works to the civils assets on the BCV and SSR networks.

The current two year programme consists of approximately 40 separate remediation projects across four asset groups. The condition of the assets in the programme is generally well known, but the Civils team is working to complete the asset condition database and a whole-life cost model for each of the asset classes.

The bridge projects are on target, with one completed and three remaining on site. At Hammersmith, the bridge deck replacement is planned for the weekend of 6-7 November 2010.

Earth Structure projects are generally on target. Four live projects are on site and running to programme. Two projects completed in Quarter 2, at Moor Park and Greenford-Northolt. A new Earth Structures framework contract is under tender, with returns made in September 2010. Contract award is planned for December 2010.

London Rail

East London Line Extension

Spend to end Q1 2010/11 £m	EFC £m
969.3	995.2

Milestones	Current Plan Date	Actual/F'cast Date	RAG
East London Line (Phase I) complete	30/06/2010	23/05/2010	Completed
Contractual completion of works	27/07/2010	27/07/2010	Completed
Croydon crossover operational	31/01/2011	31/01/2011	●

This project is a 2012 Games deliverable, with TfL as the passenger service operator through a joint East London Line/North London Railway concession with London Overground Rail Operations Ltd (LOROL). The line was opened on 23 May 2010. All stations have now been handed over to LOROL for operation.

In Quarter 2, work to complete minor snagging items continued; the focus remains on completing as-built drawings and finishing outstanding works, including minor defects. The current forecast is to complete all snagging issues by January 2011.

London Rail

East London Line Phase 2

Spend to end Q2 2010/11 £m	EFC £m
3.8	55.3

Milestones	Current Plan Date	Actual/F'cast Date	RAG
TfL South London Line Link GRIP 5 design complete	31/05/2010	02/07/2010	Completed
Award GRIP 6 South London Line Link contract	31/10/2010	31/03/2011	■
Commence passenger services	14/05/2012	14/05/2012	●

East London Line (ELL) Phase 2 will provide an additional four trains per hour on the core ELL. These trains will run to Clapham Junction via a new chord that leaves the ELL Phase 1 route to the south of Surrey Quays and joins the South London Line to the North of Queens Road (Peckham). Passenger service is scheduled to commence in autumn 2012.

The proposed Implementation Agreement is being drafted with Network Rail by Overground senior management and finalisation of this agreement is expected in the first Quarter of 2011/12.

Network Rail released a schedule update during the Quarter. This is being used to agree a combined overall project schedule and to consider the implications of the delayed release of the invitation to tender for the civil engineering design works.

The London Borough of Lewisham will continue to fund the design of the Surrey Canal Road station and support design evaluation for its developer's proposals through to the preliminary design stage.

London Rail

London Rail Concession Rolling Stock

This project is delivered under an operating lease. No direct costs are reported.

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Delivery of NLR fleet	30/04/2010	31/08/2010	Completed
Completion of 24 NLR three car units to four car units	31/12/2010	01/01/2011	▲
Delivery of ELR fleet	30/04/2010	31/03/2010	Completed
First train in service ELR	30/06/2010	27/04/2010	Completed

The London Rail Concession Rolling Stock project will provide 216 new vehicles in three-car and four-car formation to be utilised on the North London Railway (NLR) and the East London Railway (ELR).

The final two units were late delivered in late August 2010, supplied in four-car configuration rather than three-car as originally planned. By supplying the final units in four-car configuration slightly later than planned, a further rework at a later date has been prevented. Work to upgrade to the signalling to allow four-car units to operate has been completed, and four-car operations began on 14 September 2010.

Work to convert existing NLR three-car units to four-car configuration has commenced; six units have been completed to date.

London Rail

North London Railway Infrastructure Project

Spend to end Q2 2010/11 £m	EFC £m
199.5	252.2

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Complete all lines blockade	01/06/2010	01/06/2010	Completed
Core signalling and infrastructure practical completion	31/01/2011	31/01/2011	●
Project completion	31/01/2011	31/01/2011	●

The North London Railway Infrastructure Project covers a programme of track, signalling and civil infrastructure enhancements to facilitate the operation of the future London Overground service commitment, which is to be introduced in January 2011.

Signalling infrastructure continues to be laid out across the route. The works on the Willesden high level platform extensions have been completed in the Quarter, which enabled LOROL to start four-car operations on 14 September 2010.

The first designs for the Latchmere Curve works have been received by Network Rail and remaining designs are progressing.

London Rail

DLR Three-Car Infrastructure

Spend to end Q2 2010/11 £m	EFC £m
289.6	295.9

Milestones	Current Plan Date	Actual/F'cast Date	RAG
North route – three-car service operational	30/06/2010	27/05/2010	Completed
Poplar to Woolwich Arsenal – three-car service operational	30/06/2010	19/04/2010	Completed
East route - practical completion of scissor crossover	21/09/2010	29/05/2010	Completed
East route - construction work complete	28/03/2011	28/03/2011	●
East route - service operational for Olympic test	30/05/2011	30/05/2011	●
East route – three-car operational capacity available	31/05/2011	31/05/2011	●

This project delivers the structural works necessary for three-car operation on the DLR. This includes platform extensions, track realignment and viaduct strengthening. The project includes three-car works on the Bank to Lewisham section, Delta Junction, the Poplar to Stratford Route, Poplar to Woolwich, Tower Gateway, Games station capacity (East route) and West route resilience.

Construction is complete on all packages of work for the North route and Poplar to Woolwich Arsenal. Sectional completion has been withheld on package 1 (Bank to Crossharbour) due to water leaking on the Crossharbour concourse and on package 7 (Canning Town Junction) due to outstanding snagging items around the remaining temporary speed restrictions. These items are due for completion in December 2010.

On the East route works, significant construction work continued at Prince Regent, Custom House and Beckton, with minor works ongoing at Gallions Reach and Royal Albert.

A consolidated snagging list for the complete three-car works at time of handover is steadily reducing. The majority of the snagging items are of a minor nature or consist of outstanding paperwork or drawings. Weekly progress meetings are scheduled between the DLR project team and Taylor Woodrow to ensure the timely completion of snagging and that no safety issues arise as a result of snagging works.

DLR Stratford International Extension

Spend to end Q2 2010/11 £m	EFC £m
168.0	182.5

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Complete conversion of North London line to DLR	20/09/2010	31/01/2011	■
Service operational	20/09/2010	14/02/2011	■

This project covers the extension of the DLR from Canning Town to Stratford International, using the existing North London Line alignment as far as Stratford.

All DLR works associated with Package 8 (Network Rail platforms at Stratford) are substantially complete. All critical operational assets have been handed back to Network Rail and adopted into its maintenance regime. The close out of snagging items has continued, with one item remaining (establishing the power supply at the local substation).

On Package 6 (conversion of NLL to DLR), civil construction, fittings and finishes are nearing completion at all stations. Due to delays in the installation of communications and power systems, the forecast operational date has slipped since the quarter 2 forecast, the operational date is now expected to be the end of February 2011.

Surface Transport

Congestion Charging Re-Let

Spend to end Q2 2010/11 £m	EFC £m
92.4	99.8

Milestones	Current Plan Date	Actual/F'cast Date	RAG
IBM functionality complete	31/08/2010	31/10/2010	▲
Release 2 - go live of automated payment account charging	31/12/2010	31/12/2010	●
Project close approved	30/06/2011	30/06/2011	●

The Congestion Charging Re-Let project is to deliver new, more effective contracts to operate and manage the Congestion Charging and Low Emission Zone. The Re-Let will also incorporate more flexible and varied charging options.

Public consultation to introduce Auto Pay, increase the daily charge and make changes on some discounts and exemptions finished on 2 August 2010. A decision was announced by the Mayor on 20 October to remove the Western Extension Zone on 24 December 2010 and introduce Auto Pay. Changes to the Congestion Charge fee and to some discounts and exemptions will come into effect on 4 January 2011.

For Release 2, IBM completed the detailed design a week early on 16 July 2010. System testing is underway and integration testing has completed with third parties as planned. The project is on track to deliver the planned functionality by the end of October 2010. A pilot with a small number of stakeholders is scheduled to run between 8 November and 24 December 2010 to ensure any operational issues are addressed.

Go-live is expected on 31 December 2010.

Surface Transport

TLRN Capital Renewals Programme

The annual budget for the Capital Renewals Programme is based on long-term investment modelling and an objective assessment of the maintenance required to deliver a safe and serviceable network.

Spend to end Q2 2010/11 £m	2010/11 EFC £m
20.9	46.1

Description of works	Units	2010/11 annual target	2010/11 achieved to date	2010/11 target to date
Area of carriageway resurfaced	m ²	468,000	133,047	144,047
Area of footways resurfaced	m ²	58,500	12,326	17,276
Number of lighting units replaced	No.	1,080	221	221

The Capital Renewals Programme is an annualised programme of schemes that maintain the physical infrastructure of the TLRN, including carriageways, footways, structures, tunnels, lighting and drainage. The programme consists of maintenance schemes that lengthen the useful life of an asset, either by replacing it with a new one, or by some other intervention such as reconstruction or refurbishment.

Schemes are formulated to meet the annual delivery target and added to the programme on a rolling basis (the majority of schemes are identified one or more years in advance of delivery). Progress and costs for each scheme are monitored and the programme is refined accordingly. Each Quarter, a baseline is established for schemes that are programmed into the forecast. This baseline is used to assign targets to ensure the annual target is met. The delivery against the Q2 forecast is shown in the table above.

Carriageway resurfacing:

By the end of Quarter 2, 133,047m² of carriageway was resurfaced against a forecast output of 144,047m² for the year to date. The variance to target was due to one scheme (the A202 Kender Street Triangle) being delayed. The scheme is now forecast to be completed in Quarter 3. Overall, the forecast for the year is to deliver a total of 532,842m², 64,842m² above the target for the year at present.

The higher than budgeted year end forecast includes reserve projects that can be delivered if other planned projects become delayed. Delays can be caused by external factors such as severe winter weather, refusal of permits to work for congestion reasons and other unplanned events. There are always more high priority projects than can be accommodated within the annual budget. If high priority projects are delayed, reserve projects are initiated to ensure that the effect on the State of Good Repair measure is maximised using the funds available. Any projects not delivered in the current year will be scheduled for delivery in the next financial year, subject to their prioritisation ranking remaining sufficiently high.

Surface Transport

Footways resurfacing:

By the end of Quarter 2, 12,326m² of footway was resurfaced against a forecast output of 17,276m² for the year to date. The variance to target was to three schemes delivering late (A232 Croydon Road , A1 Holloway Road and A202 Kender Street Triangle). The schemes will all now be delivered in Quarter 3. Overall, the forecast for the year is to deliver a total of 61,624m², 3,124m² above the target for the year at present.

Lighting column replacements:

By the end of Quarter 2, 221 lighting columns were replaced against a forecast output of 221 for the year to date. Overall, the forecast for the year is to deliver a total of 1,779 columns, 699 above the target for the year.

Surface Transport

A406 Bounds Green

Spend to end Q2 2010/11 £m	EFC £m
22.0	56.1

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Completion of advance statutory works	19/04/2010	19/04/2010	Completed
Commence main works	31/05/2010	19/04/2010	Completed
Complete protection structure for LUL bridge	31/03/2011	10/05/2011	▲
Completion of main works	03/05/2012	14/05/2012	▲

The section of the A406 between Bounds Green Road and Green Lanes suffers from congestion and has a poor accident record. The project will create a predominantly two-lane dual carriageway with improved traffic flows at junctions, improved pedestrian crossing facilities, a dedicated cycleway, improved bus journey reliability, and improvements to the local street scene.

Problems with the Thames Water water main continued to cause problems during this quarter. Leakages on the Telford Road threatened progress with the offline widening works, which required a redesign of the highway drainage system to accommodate the large diameter storm drain pipes. Thames Water has refused to replace the main despite a history of leakages. At a meeting in early October 2010 with Thames Water, an agreement in principle was reached on a revised method of working which will allow works to progress unhindered.

Work started on the Wilmer Way retaining wall on 26 July 2010, with two properties still occupied. Installation of sheet piles commenced on 6 August 2010. Installation of piles for the new footbridge is nearing completion and assembly of the footbridge structure is underway at the supplier in Belfast. Offline widening work continues and the diversion of utilities continues to plan.

The project is still expecting to be completed by 14 May 2012. The next major milestone is the completion of protection structure for the LU bridge on 10 May 2011.

Surface Transport

Blackwall Tunnel Northbound Refurbishment

Spend to end Q2 2010/11 £m	EFC £m
32.4	73.3

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Mobilisation Period complete	03/05/2010	03/05/2010	Completed
Shaft 2 complete	18/03/2011	23/02/2011	●
Construction complete	02/12/2012	01/06/2012	●

This project will bring the Northbound tunnel to European best practice standards. Work includes: shaft alterations, ventilation upgrades, lighting, drainage, signage and public address system works and upgrades to the emergency points and fire detection and fighting systems. The project is being delivered during night time and occasional weekend possessions.

The timeline for the project has been accelerated by six months to complete ahead of the London 2012 Games. Spend has been accelerated into 2010/11 but the overall cost is expected to be the same.

Temporary lighting and emergency phones have become operational throughout the tunnel. Removal of the existing lighting is complete and installation of the new lighting system has begun. New fans have also been installed in two of the tunnels four shafts.

The level of complaints from customers has remained relatively low, mainly about specific junctions or signage rather than the project as a whole.

Night time and weekend possessions have continued, the possession on 6 September 2010 was cancelled due to the Underground strike.

The next milestone of the completion of shaft 2 on 18 March 2011 has been accelerated with the new programme to 23 February 2011.

Surface Transport

Cycle Hire

Spend to end Q2 2010/11 £m	EFC £m
46.3	109.3

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Go live #1 - website	Summer 2010	23/07/2010	Completed
On street construction completed	06/07/2010	31/12/2010	■
Systems integration end to end testing	28/07/2010	31/12/2010	■
Go live #2 – on street	Summer 2010	30/07/2010	Completed

The Barclays Cycle Hire scheme launched successfully on 29 July 2010 to registered members. By 8 October 2010, around 92,000 users had registered for the scheme, making around 20,000 journeys every weekday and over 1 million journeys had been made in total.

54 per cent of registered users have opted for annual membership, which means they get access for 12 pence per day, and as the vast majority of trips are under 30 minutes, this is a low cost as well as convenient alternative for many travellers.

Work is underway with the contractor Serco to deliver the remainder of the planned 400 docking stations and bring the total number of available hire cycles to 6,000. By 20 September 2010, an additional 22 docking stations had been opened, taking the total to 337. The outstanding casual user functionality and the implementation of the remainder of the docking stations are currently being forecast to be completed by the end of 2010.

Surface Transport

Two Cycle Superhighways

Spend to end Q2 2010/11 £m	EFC £m
14.7	22.1

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Route 3 - completion of detailed design and Network Assurance Team (NAT) works approval	14/04/2010	19/07/2010	Completed
Route 3 - construction complete	Summer 2010	19/07/2010	Completed
Route 7 - completion of detailed design and NAT works approval	14/04/2010	19/07/2010	Completed
Route 7 - construction complete	Summer 2010	19/07/2010	Completed

Two Cycle Superhighways is a pilot project to deliver the first two cycle superhighway routes – Route 3 (Barking to Tower Hill) and Route 7 (South Wimbledon to the City) by summer 2010.

The remaining ten routes will be delivered in a separate project by 2015. The project objective is to encourage modal shift to cycles and to enhance the cycling experience for current users by creating wider lanes, improved surfacing and further segregation.

These two routes have been delivered using the Highways and Maintenance Works Contractors (HMWC) framework agreement that provides resources to deliver Streets schemes in Surface Transport.

These first two routes were launched by the Mayor on the 19 July 2010. Since then, the project team has been undertaking work to assure the reinstatement of infrastructure by the utility companies when work is carried out. During the 'bedding in' period, the routes will be monitored in terms of operation, flows, accident data, user behaviour and customer feedback. The plan for longer term benefits realisation is being discussed with Better Routes and Places and will form part of the handover pack to Business as Usual in April 2011.

Surface Transport

Ten Cycle Superhighways

Spend to end Q2 2010/11 £m	EFC £m
1.9	142.4

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Phase 1 invitation to tender Issued	09/04/2010	09/06/2010	Completed
Phase 1 preliminary design completed	30/09/2010	14/01/2011	■
Phase 1 contract award	31/08/2010	31/08/2010	Completed
Phase 1 detailed design completed	28/02/2011	28/02/2011	●
Phase 1 complete (two routes total)	31/05/2011	31/05/2011	●
Phase 2 complete (four routes total)	31/10/2012	31/10/2012	●
Phase 3 complete (six routes total)	31/07/2013	31/07/2013	●
Phase 4 complete (eight routes total)	30/04/2014	30/04/2014	●
Phase 5 complete (ten routes total)	30/01/2015	30/01/2015	●

The Ten Cycle Superhighways scheme will deliver a further ten radial routes into central London following the pilot project. Planning and development are occurring in parallel with the delivery of the first two pilot routes. The ten routes will be delivered in five phases of two routes, annually from May 2011 and the last is expected to be delivered by January 2015.

On phase one (Route 2 – Ilford to Aldgate, Route 8 – Wandsworth to Westminster) preliminary and detailed design is continuing. Construction commenced in the week beginning 27 September 2010 after Carillion and Skanska were appointed as contractors for the work. The completion of preliminary design has moved from the end of September 2010 to 14 January 2011 as a result of reprogramming, based on better understanding of traffic modelling requirements. Completion of the detailed design and the commencement of construction are now being undertaken in parallel.

On Phase 2, Route 5 and 12 the feasibility stage is continuing. Phase 3 work has been put on hold until after the Spending Review.

Future Ticketing

Spend to end Q2 2010/11 £m	EFC £m
0.4	*

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Phase 1 – initial bus launch to be implemented, payment of the bus single fare by contactless bank card	Early 2012	Early 2012	●
Phase 2a – multi-modal daily travel and daily capping with contactless bank card to be implemented	31/12/2012	31/12/2012	●
Phase 2b – 7 day capping to be implemented	31/12/2013	31/12/2013	●

The Future Ticketing Project enables the acceptance as payment for travel of contactless cards issued on an EMV (Eurocard, Mastercard, Visa) platform both by banks and by TfL. To enable cost savings and acceptance of contactless cards, changes to the existing ticketing system and back office processes will be made.

Project Authority for all of phases 1, 2a and 2b was granted by the Finance and Policy Committee at its meeting in September 2010. The drafting of a variation to the Future Ticketing Agreement for phase 1 (the initial bus launch) has taken place with the intention of issuing it to Cubic in October 2010. Recruitment for additional technical support and other positions for delivery of the project has now commenced.

Corporate

ITSO

Spend to end Q2 2010/11 £m	EFC £m
19.1	56.0

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Head office processing system operational	19/06/2012	19/06/2012	●
3G communications software development complete	16/06/2011	23/06/2011	▲
Completion of changes to back-office systems	10/08/2011	24/11/2011	▲
Completion of project	31/12/2012	31/12/2012	●

ITSO (Integrated Transport Smartcard Organisation) is the name of the smartcard specification being mandated by the Department for Transport (DfT) for rail franchises and for the national bus concessionary scheme. Enabling the acceptance of ITSO specified tickets requires changes to TfL's ticketing systems, including a card reader capable of reading both Oyster and ITSO tickets, establishment of a head office processing system, new or upgraded communications links and other system changes. The project is being funded by the DfT under an agreement with TfL dated 28 May 2009.

The DfT has issued change requests to implement a newer version (2.1.4) of the ITSO specification, and to implement new security modules allowing faster transaction speeds. Together with the later delivery of the ITSO business rules by the DfT, this has caused project delivery to slip to December 2012. The Finance and Policy Committee approved an increase of the project authority from £56m to £59.1m at its meeting in September 2010 to implement the DfT sponsored requests, subject to confirmation of additional funding being received from the DfT. As a result of the change in project scope, it was agreed with the DfT that the project dates should be re-baselined. The new baseline dates are shown in the table above.

In Quarter 2, two further milestones were completed, for reader assurance and the witness testing of wireless communications. The 29 new card readers on Underground and rail and 30 on buses, which are capable of accepting cards issued under either the ITSO or Oyster specification, are still operating and being monitored.

Tube Lines

Tube Lines Station Upgrades

Spend to end Q2 2010/11 £m	2010/11 EFC £m
8.0	21.0

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Kingsbury - delivery into service	30/10/2010	09/09/2010	Completed
Stratford ODA Platform 3A - delivery into service	16/11/2010	05/09/2010	Completed
Stratford ODA - delivery into service	24/11/2010	24/11/2010	●
Finsbury Park – delivery into service	08/02/2011	08/02/2011	●
Heathrow T 1, 2 and 3 – delivery into service	30/09/2011	30/09/2011	●

The Stations programme consists of five stations; Kingsbury, Finsbury Park, Stratford, Heathrow Terminals 1, 2 and 3 and Green Park. In addition, the programme will deliver the Northern line Signal Equipment Rooms (SERs) which are part of the Northern line upgrade enabling works.

In Quarter 2, the Kingsbury station and Stratford ODA Platform 3A upgrades were delivered into service.

Tube Lines

Tube Lines Infrastructure

Spend to end Q2 2010/11 £m	2010/11 EFC £m
1.7	12.6

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Canary Wharf E 10 module 2 refurbishment - return to service	14/08/2010	14/08/2010	Completed
North Greenwich E4 module 2 refurbishment - return to service	14/08/2010	13/08/2010	Completed
Waterloo E 19 module 2 refurbishment - return to service	14/08/2010	13/08/2010	Completed
Waterloo E12 module 1 refurbishment - return to service	06/09/2010	04/09/2010	Completed
Waterloo E1 and 2 DC-AC PLUS Conversion - return to service	04/10/2010	04/10/2010	●
Canary Wharf E12 module 2 refurbishment - return to service	08/11/2010	08/11/2010	●
Southwark E1 module 2 refurbishment - return to service	08/11/2010	08/11/2010	●
North Greenwich E6 module 3 refurbishment - return to service	21/12/2010	21/12/2010	●
West Ham E2: module 3 - return to service	18/01/2011	18/01/2011	●
Southwark E5: module 3 - return to service	22/03/2011	22/03/2011	●

The Infrastructure programme consists of escalator and lift refurbishments, structural asset assessments and bridges and structures capital works. The programme of works is devised, planned and managed by Tube Lines and agreed with London Underground through the Annual Asset Management Plan (AAMP).

In Quarter 2, four escalators were completed and returned to service on schedule.

Tube Lines

Tube Lines Track

Spend to end Q2 2010/11 £m	2010/11 EFC £m
2.7	16.9

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Spot re-sleepering, complete 2,770m	31/03/2011	31/03/2011	●
Track replacement, install 8,800m of rail	31/03/2011	31/03/2011	●

The track programme of works is planned and managed by Tube Lines and agreed with LU through the Annual Asset Management Plan (AAMP). No Enhanced Track Replacements (ETR) are planned before March 2011. Discussions to confirm the ETR programme for 2011/12 are currently in progress.

Productivity levels were broadly on target for both track and sleeper works with 6,849m of rail installed and 394m of spot re-sleepering completed in the Quarter.

Tube Lines Civils

Spend to end Q2 2010/11 £m	2010/11 EFC £m
0.5	5.7

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Drainage renewal, complete 1,200m	31/03/2011	31/03/2011	●
Earth structure renewal, complete 350m	31/03/2011	31/03/2011	●

The programme of works is devised, planned and managed by Tube Lines and agreed with LU through the Annual Asset Management Plan (AAMP).

In Quarter 2, good progress was achieved on undertaking surveys and design work for drain renewals. For the drainage programme, physical site works will commence next quarter and confidence of achieving the target for the year remains high.

Earth Structure renewal works were undertaken between Kingsbury and Queensbury (Jubilee line). By the end of Quarter 2 a total of 70m of renewal works had been completed.

Tube Lines

Tube Lines Jubilee and Northern Line Upgrade Works

Spend to end Q2 2010/11 £m	2010/11 EFC £m
36.2	140.0

Milestones	Current Plan Date	Actual/F'cast Date	RAG
Jubilee line - J5 system commissioning – ready for revenue service	15/04/2010	25/04/2011	■
Northern line – Due to the change of delivery strategy, scope and functionality all reporting milestones are suspended pending resolution. New milestones will be set upon agreement of issues where by a cost estimate and programme can be produced.	tbd	tbd	-

Since the acquisition of Tube Lines by TfL, a “one team” approach is being embedded to enable greater integration between Tube Lines, London Underground and Thales.

Jubilee Line Upgrade

Installation of the hardware across the line is complete, as is system testing on the large section of the line between Dollis Hill and Stratford (referred to as J234). Weekend Passenger Service was achieved over this section in August and September with mixed results, although up to 18 trains were operated in service. Recent weekend operation during October has been more successful.

The immediate objective is to switch permanently over to the Transmission Based Train Control (TBTC) system for seven day passenger service by Christmas, largely bringing an end to line closures south/east of West Hampstead for the foreseeable future. Work to address the particular complexities in the section of the line, north of Dollis Hill (referred to as J5) including the interface with Neasden depot, will continue into 2011 with the full upgrade expected to be completed in the spring.

Northern Line

Despite cancellation of all the proposed line closures, installation work continued during engineering hours. During the quarter 24 trains were converted to TBTC operation bringing the total to 86 trains out of 106. TBTC fitment times improved and were less than the 15 days per train target.

A new approach which would dramatically reduce the number of closures, whilst delivering the upgrade no later than the end of 2014, has been developed. Discussions with Thales, the incumbent signalling contractor, continue and it is expected that a firm plan for delivering the upgrade will be in place by early 2011.