

Transport for London

Projects and Planning Panel

**Subject: TfL Investment Programme Report – Third Quarter
2013/14**

Date: 26 February 2014

1 Purpose

- 1.1 The Investment Programme Report for the third quarter of 2013/14 (16 September – 7 December 2013) is attached to inform the Panel of TfL's Investment Programme performance.
- 1.2 The report presents Investment Programme progress and notes changes in schedule and financial performance.

2 Transparency

- 2.1 In keeping with the changes in governance providing greater transparency, the Investment Programme Report will provide an additional level of detail from this third quarter of 2013/14 and going forwards.
- 2.2 Estimated final cost (EFC) against project authority and spend to date will now be provided for all major projects (unless by exception where there are considerations of commercial sensitivity).
- 2.3 Any values not included for reasons of commercial confidentiality are marked as * in the Investment Programme Report.
- 2.4 The inclusion of a new executive summary together with a cost and schedule variance analysis, will highlight and explain: variances between EFC and project authority; significant changes in EFC; year end forecast against budget; actual spend against budget; significant late milestones and significant milestone movements.

3 Recommendation

- 3.1 The Panel is asked to note this report.

4 Contact

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Victoria Station Upgrade piling rig working at the South Ticket Hall

Investment Programme Report Third Quarter September – December 2013/14

MAYOR OF LONDON

Transport for London



TfL Capital Programmes

Investment Programme Report

TfL's Investment Programme contains a range of programmes and projects with an estimated final cost (EFC) of 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 (PFIs). Any values not included in this report for reasons of commercial confidentiality are marked as *.

The structure of the report covers:

- Executive Summary and Programme Headlines
- Detailed Programme Report
- Cost and Schedule Variance Analysis

Committed schemes and milestones listed in Annex B of the 2013 Spending Review funding settlement letter are included in this report. The milestones contained in Annex B are identified with the note '(Annex B: date)' listed after the description.

Executive Summary

The quarter saw significant progress in the delivery of the TfL Investment Programme, with major achievements across the London Underground (LU) line modernisation work, station developments, track and cycling portfolios. 110 Budget milestones were completed by the end of the quarter, exceeding the target of 103. The year-end forecast currently indicates that 159 of the 170 planned Budget milestones will be completed on or ahead of schedule.

Major achievements in the quarter included:

- The Track Partnership delivered five kilometres of Ballasted Track Renewal which included innovative overnight re-ballast works during mid-week, never undertaken on the LU network previously.
- Northern line upgrade Migration Area 3 (Camden Town area) entered revenue service six months ahead of programme and will now be followed by the two Central London branches.
- The roll out of S7 trains into operational service has increased by another ten in the quarter, bringing the total to 27 by the end of the quarter. (This has risen to 35 by early February 2014.)

At the end of quarter 3 the Investment Programme net year to date actual spend is £992m against a budget of £1,117m (an underspend of £125m). The full year forecast is currently £1,740m against a budget of £1,907m (an underspend of £167m). This forecast underspend at year end is primarily a timing difference with expenditure being reprofiled into future years of the Investment Programme. This includes expenditure on the road investment programme, for which expenditure profiles on elements such as the Structures and Tunnels Investment Programme, improvements to network performance and major highways enhancements have been refined as the detailed delivery plans have further developed.

As a result of forecast delays on the Sub-Surface Automatic Train Control Signalling contract it was decided to terminate the contract by mutual agreement and seek a new contractor while holding to the delivery date.

Executive Summary

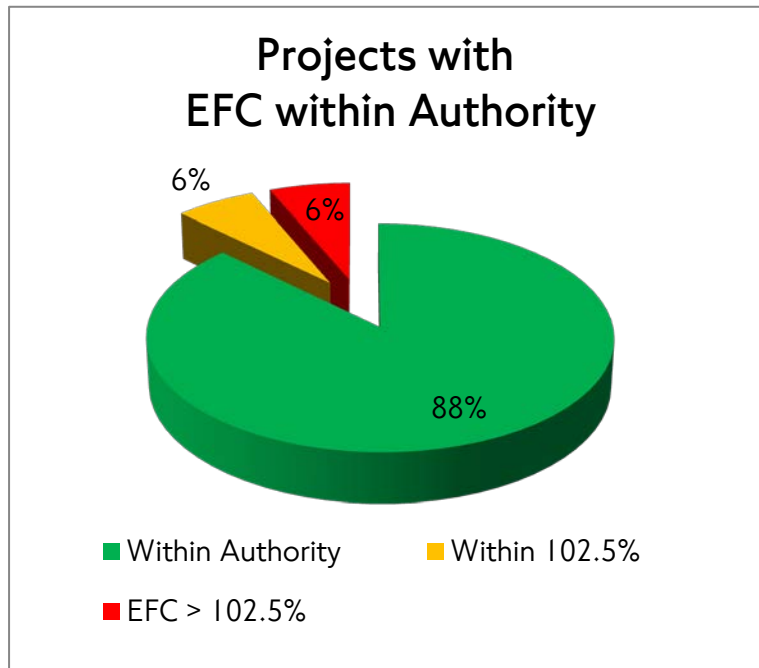
DELIVERY - COST

Projects with EFC within Authority

Projects and programmes must obtain the appropriate authorities before they spend money, incur a financial liability or make a binding contractual commitment for the purchase of goods, services, land or works.

This section compares the project's approved authority against its current EFC. 88 per cent of all projects have an EFC within authority. Details of projects with EFC exceeding authority are provided in the Cost and Schedule Variance Analysis Section.

Those outside authority will be required to resubmit authority requests to appropriate board governance.

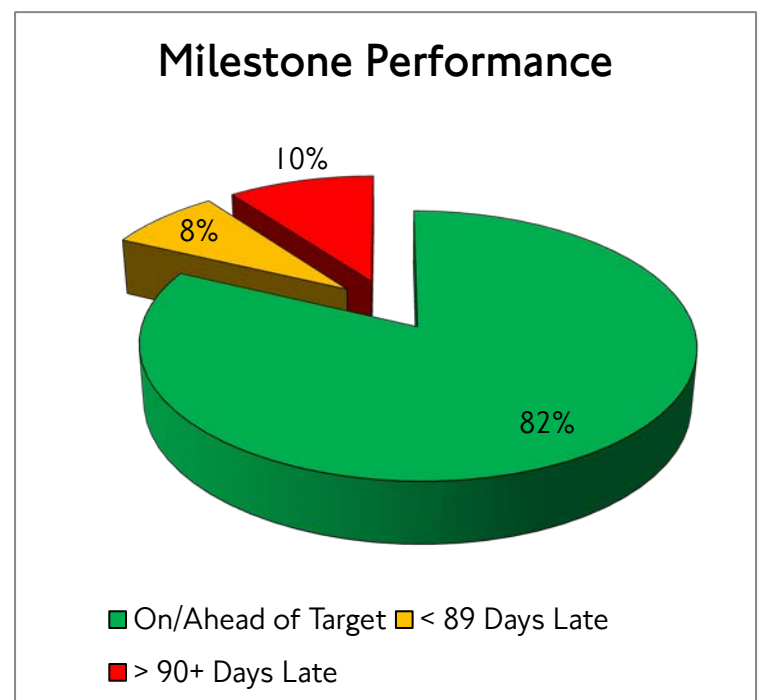


DELIVERY - SCHEDULE

Milestone performance

Each year the programme and project teams publish which milestones their progress will be reported and monitored against. 82 per cent of the milestones reported in the detailed pages are on or ahead of target.

Details of late milestones are provided in the Cost and Schedule Variance Analysis Section.



Programme Headlines

The main body of this report (Detailed Programme 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 2013 baseline. If appropriate, milestones listed as deliverables for the year in the 2013/14 Budget document are included.

Sub-Surface Railway Upgrade Programme (SUP)

24 of the 58 S8 trains have now been through the enhancement programme.

The supply of new seven-car S Stock trains (S7) continues and the number now delivered to London is 39. The roll out of S7 trains into operational service has increased by another ten in the quarter, bringing the total to 27. This number will eventually rise to 133 S7 trains in total.



First trial S stock on the District line

All significant close-out activities have now been completed on the new lifting and maintenance facility at Neasden and three of the five berths are in use.

Enabling the depot yard at Ealing Common to accept S stock has been completed and the North sidings at Upminster have been brought into use.

SUP Automatic Train Control (ATC): Following several months of intensive senior level discussions with Bombardier on the significant challenges to delivery of the ATC signalling system within programme schedule, it has become apparent that, for the work to be completed within or close to the planned deadline, TfL must do so with another signalling contractor. TfL is seeking expressions of interest from other signalling contractors and at this stage there is no change to the original delivery timetable of 2018.

Programme Headlines

SSR Power

Three major milestones have been achieved in the quarter: availability of power to run trains in ATC mode on the Metropolitan line north of Baker Street, completion of the new Bulk Supply Point at Edgware Road, and the provision of power capacity to support the provision of 57 S7 trains to Upminster.

Infrastructure Track Renewals

The Track Partnership (TP) delivered five kilometres (750 metres above the programme) of Ballasted Track Renewal (BTR) which included innovative overnight re-ballast works during mid-week, never undertaken on the LU network previously.

The Track Partnership also achieved 3.5 kilometres of drainage improvement works (approximately 1.2 kilometres more than originally planned).

The Track Delivery Unit (TDU) achieved over two kilometres (93 metres above plan) of Deep Tube Renewal (DTR) in the quarter and maximised opportunity works during other programmes' possessions to complete over 48 kilometres of rail grinding (14 kilometres more than initially planned).



Track work on the Metropolitan line

Crossrail & LU Works

LU advised Crossrail (CRL) that piling was unnecessary for Barbican station platform strengthening, thereby saving CRL approximately £250k and removing the need for a ten week platform closure.

Programme Headlines

Station Developments and Upgrades

Tottenham Court Road Station: The critical elements of the Goslett Yard box were successfully handed over to Crossrail on 26 November as planned, which safeguarded the programme for Crossrail's Spray Concrete lined (SCL) tunnelling in this area.



Victoria Station plunge column being installed

Bond Street Station: Re-sequencing of the construction schedule has mitigated delay to future tunnelling activities which were impacted by delays to the over site development concrete frame.

Victoria Station Upgrade: The North Ticket Hall piling is complete and the site is being configured for roof slab construction. A recent ingress of foam concrete into the Signalling Equipment Room caused a line closure, but remedial works throughout the night meant that the service could resume the following morning.

Bank Waterloo & City Entrance: The developer (which is constructing the station box on LU's behalf) is suffering engineering challenges on the development and these continue to result in delay, which is now estimated to be in excess of 12 months. LU's fit-out contract has been delayed as a result.

Northern Line Upgrade

Northern Migration Area 3 (Camden Town area) entered revenue service on 26 October, six months ahead of programme.

Programme Headlines

Jubilee & Northern Lines Mid-life refurbishment

Successful completion of the refurbishment of Northern line trains 10 to 16 in the quarter, with 17 to 20 completed by calendar year end. (This has increased to 23 by early February.)

Barclays Cycle Hire Expansion and intensification (CHEI)

CHEI was launched successfully on 13 December taking Cycle Hire to south-west London into parts of Wandsworth, Hammersmith & Fulham and additional areas of Lambeth and Kensington & Chelsea. This added more than 2000 new bikes and 5000 additional docking points to the scheme.



Mayor of London at south-west expansion launch site

Barclays Cycle Hire Phase 2

The final core stage of the system improvements went live in September, improving customer usability and billing.

New Bus for London Vehicle Purchase



Training run for Route 9 at Marble Arch

There are now four full route conversions to New Bus for London in operation (three achieved in the Quarter) with a total of 114 buses in service.

An aerial photograph of a construction site in a city. A tall, white lattice crane stands prominently in the center. To the left, a busy street with red double-decker buses and pedestrians is visible. To the right, there are several multi-story brick buildings with many windows. The ground is a mix of dirt, construction materials, and workers in orange safety gear. The sky is overcast and grey.

Detailed Programme Report

Detailed Investment Programme Report

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For reasons of commercial confidentiality some Authority and EFC values have been removed from the report and marked thus, *.



Sub-Surface Railway (SSR) Upgrade

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
2806.0	4259.1	4258.9

The first phase of the upgrade (SUP) of Sub-Surface Railway (consisting of the Circle, District, Hammersmith & City and Metropolitan lines) is to replace the rolling stock on all lines, which provides new, longer air-conditioned through-carriage trains (S Stock). This will be completed by 2016. The second phase of the upgrade will increase capacity (32 trains per hour) and reduce journey times through implementation of a new automated train control signalling system (ATC) and associated control centre, revised track layouts at key junctions, and increased electrical power supply. These benefits will be delivered by 2018.

Train roll-out

The Metropolitan line train fleet has already been replaced with 58 new eight-car S Stock trains (S8) and the associated infrastructure works completed, apart from minor snagging and recovery of redundant assets. The S8 stock is undergoing a train enhancement programme to improve the interior aesthetics of the passenger saloon and drivers cab as well as modifying some components to improve their longevity; 24 trains have now been completed.

The supply of new seven-car S Stock trains (S7) for the Hammersmith & City and Circle lines has continued this quarter putting the number now delivered to London at 39. The roll out of S7 trains into operational service has increased by another ten, bringing the total to 27. The start of S Stock passenger service on the Wimbledon to Edgware Road, District line service remains on forecast for Quarter 4 2013/14. This will leave only the remainder of the District line to enable for S Stock use.

There is a focus to continually improve the reliability of the S stock and particularly to reduce faults associated with the One Person Operation (OPO) system, which accounts for the highest number of train failures.



S Stock on the Circle line



Two new S7's at Hammersmith

Depots

Work on the depots to support train roll-out include enhancements to Neasden, Ealing Common, Upminster, and Hammersmith depots that will enable stabling and maintenance of the new longer trains. All significant close-out activities have now been completed on the new lifting and maintenance facility at Neasden and three of the five berths are in use. In addition, enabling the depot yard at Ealing Common to accept S stock has been completed and the North sidings at Upminster have been brought into use. The condition of some of the existing assets and utility services at depots has been particularly poor, adding cost and schedule pressure to these projects and causing a number of milestones (including those for Neasden depot winterisation and the overall sub programme completion) to be forecast as late, but this does not impact the DfT milestone dates to complete replacement of C and D stock.

To enable operation of the new S Stock trains on the Sub-Surface Railway (SSR) network, work is required to immunise LU and Network Rail track circuits and other signalling equipment from electro-magnetic interference from the new trains. Completion of these works has been delayed in three Network Rail inter-running areas (Wimbledon Branch, Richmond Branch and the east end of the District line) due to design issues. The work on the Wimbledon Branch has been completed and the work on the Richmond branch is scheduled to be completed next quarter. Whilst immunisation is on the critical path, confidence is high that the 2016 DfT date to complete replacement D stock is not compromised, and further mitigation actions are planned to minimise the impact of the delay.

Due to S Stock being longer than legacy stock and having different station stopping positions, a large number of station infrastructure and existing signalling modifications are required to roll-out the trains, as well as a number of platforms lengthened (which have now all been completed). At the end of this quarter, most of the infrastructure work had been completed to run S Stock trains in service on the District line between Wimbledon and Edgware Road.

Automatic Train Control

Post quarter update: following several months of intensive senior level discussions with Bombardier on the significant challenges to delivery of the Automatic Train Control (ATC) signalling system within programme schedule and cost, it has become apparent to both parties that, for the work to be completed within or close to the planned deadline and budget, it must be delivered with another signalling contractor. LU are seeking expressions of interest from other signalling contractors and at this stage there is no change to the original delivery timetable of 2018.

Croxley

The Croxley Rail Link is the proposed extension of the London Underground Metropolitan line from Croxley to Watford Junction via Watford High Street. The scheme is being led by Hertfordshire County Council (HCC) with their principal contractor Vinci, and supported by London Underground. In December 2011, the Department for Transport (DfT) announced funding of £76m, towards a total project cost of £117m. However, this commitment is contingent on HCC demonstrating that the delivery schedule for the line opening in 2016 is viable. The LU costs included in this total are understood to be £30m, and are fully recoverable.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Hammersmith to Barking (Wembley Park Sidings) approval to operate in passenger service	17-May-13	17-May-13	Complete
Extended Circle approval to operate in passenger service	30-Aug-13	30-Aug-13	Complete
Roll out of new air-conditioned trains on the Circle, Hammersmith & City Lines complete	31-Dec-14	31-Dec-14	●
Roll out of new air-conditioned trains on the District Line complete	31-Dec-16	31-Dec-16	●
Sub-Surface Upgrade complete delivering 33% capacity increase	31-Dec-18	31-Dec-18	●
Full signalling upgrade across the Sub-Surface network complete (Annex B:2018)	31-Dec-18	31-Dec-18	●
Depots	Current Plan Date	Actual/Forecast Date	RAG
Upminster Depot North Sidings Signalling Brought into Use	22-Jun-13	15-Dec-13	Complete
Upminster Depot Yard Enabling Brought into Use	01-Sep-13	01-Sep-13	Complete
Neasden Depot Winterisation Works Complete	31-Oct-13	27-Jun-14	■
Ealing Common Depot Yard Enabling Brought into Use	14-Nov-13	07-Dec-13	Complete
Neasden Depot Heavy Maintenance Facility Concept Design Complete	04-Jan-14	20-Dec-13	Complete
SUP Depots Sub-programme Completion	31-Mar-15	22-Sep-16	■



Automatic Train Control	Current Plan Date	Actual/Forecast Date	RAG
DC Traction ETE – Electrical Traction Equipment - Feeder Cable Plaistow – Finish on Site	21-Aug-13	14-Jun-13	Complete
ATC Signalling – Complete retrospective documentation of VATCRATP product software baseline	29-Sep-13	06-Dec-13	Complete
ESTL RUB approval of End State Track Layout Closure Programme	13-Dec-13	15-Oct-13	Complete
ATC Signalling – Service Control Centre – Concept layout complete	25-Dec-13	11-Dec-13	Complete
ATC Signalling – Old Dalby Test Track – S Stock S8 Onboard equipment Installed at Test Track location	12-Jan-14	02-Sep-13	Complete

All future ATC milestones and any impact on EFC have been removed from this section as they are to be subject to a programme re-scheduling exercise once the contract for these works is re-let.

Rolling Stock	Current Plan Date	Actual/Forecast Date	RAG
17 th S7-Stock Contractual Acceptance for Service (AFS)	19-Jul-13	26-Apr-13	Complete
Vehicle Maintenance Instructions accepted from BTUK	14-Sep-13	27-Sep-13	Complete
22 nd S7-Stock Contractual Acceptance for Service (AFS)	27-Sep-13	25-Mar-13	Complete
27 th S7-Stock Contractual Acceptance for Service (AFS)	01-Nov-13	04-Jun-13	Complete
Modification Workbank Package Complete	28-Feb-14	18-Mar-14	▲
S7 28 day integrated train reliability achieves 15,000km mean distance between failures	28-Feb-14	11-Oct-13	Complete
SUP Rolling Stock Sub-programme Completion	31-Mar-19	24-Dec-15	●
Signal Immunisation	Current Plan Date	Actual/Forecast Date	RAG
Wimbledon Branch Immunisation Restriction (R214) lifted.	04-Jan-14	31-Jul-13	Complete
SUP Signalling Immunisation Sub-programme Completion	30-Jun-14	06-Feb-15	■
Infrastructure Other	Current Plan Date	Actual/Forecast Date	RAG
Block 14 Earls Court - Ready For Integration Test	22-Jun-13	14-May-13	Complete
Extended Circle – Completion of Integration & Testing	03-Aug-13	02-Aug-13	Complete
Hammersmith to Barking – Infrastructure Full Completion	14-Sep-13	13-Sep-13	Complete
Baker Street to Wembley Park Sidings – Infrastructure Full Completion	14-Sep-13	13-Sep-13	Complete

Infrastructure Other	Current Plan Date	Actual/Forecast Date	RAG
Wimbledon to Edgware Road – Completion of Integration Testing	10-Jan-14	08-Jan-14	●
SUP Enabling Other Sub-programme Completion	31-Dec-17	31-Dec-17	●
Croxley	Current Plan Date	Actual/Forecast Date	RAG
Croxley Rail Link – LU formal submission of Development Agreement to HCC for sign off	15-May-13	17-Apr-13	Complete

Track Renewal

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
120.8	188.2	188.2

Track Programme

The programme remit is to deliver track, drainage and points and crossing renewals to a five year schedule of work. By 2018 the target is that 25 per cent of track on Bakerloo, Central, Victoria and sub surface lines will have been replaced. Jubilee, Northern and Piccadilly lines will deliver to work-bank, budget and contractual commitments.

Track Partnership

During quarter three, the Track Partnership (TP) delivered five kilometres of Ballasted Track Renewal (BTR). This included innovative overnight re-ballast works during mid-week, never undertaken on the LU network previously; this assisted in TP achieving 750 metres above the quarter three baseline programme.

The Track Partnership also achieved 3.5 kilometres of drainage improvement works (approximately 1.2 kilometres more than originally planned), this was an exceptional delivery amount.

Also in the quarter the Track Partnership completed the planned renewal of four points and crossings units, two at Leytonstone and two particularly complex points at Acton Town.

Track Delivery Unit:

The Track Delivery Unit (TDU) achieved over two kilometres (93 metres above plan) of Deep Tube Renewal (DTR) in quarter three.

TDU were also instrumental in the successful installation and commissioning of a new crossover at Upminster sidings.

The TDU maximised opportunity works during other programmes' possessions to complete over 48 kilometres of rail grinding, this quarterly total of rail grinding was 14 kilometres more than initially planned.

The extensive delivery completed in quarter three saw TDU achieve two programme milestones for track life extension works and also track reconditioning metreage. These milestones were met several months before the target dates.



The remodelling and installation of a critical section of the network at Acton Town

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Completion of 4000 Metres of UV Lining (Drainage)	30-Mar-14	30-Mar-14	●
18,018m of Track replaced (total 8 per cent replaced)	31-Mar-14	31-Mar-14	●
Deep Tube Class I Renewal – Achieve 3,510m P13	31-Mar-14	31-Mar-14	●
Points & Crossings – Achieve 14 units P13	31-Mar-14	03-Mar-14	●
Ballasted Track Replacement & Re-ballast Metres – Achieve 15,279m P13	31-Mar-14	03-Mar-14	●
Complete 1750 Metres of Track reconditioning (full year)	31-Mar-14	25-Nov-13	Complete
Complete 3600 Metres of Track life extension (full year)	31-Mar-14	07-Nov-13	Complete
Track Drainage – Replace 8,232m replaced P13	31-Mar-14	03-Mar-14	●

Civils (BCV/SSR)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
18.3	35.5	25.4

The programme involves the strengthening, renewal and refurbishment of the Bridges and Structures and Earth Structures assets. The works are required to reduce asset risk, lower whole life costs and to extend residual asset life.

A TFL milestone was achieved in December with the successful project completion of embankment stabilisation between Chalfont & Latimer to Chesham. This work was carried out efficiently by piggy-backing a track possession.

Practical Completion of embankment stabilisation was achieved as scheduled between Barkingside to Newbury Park to deliver an LU milestone.

Practical Completion was completed on scour works on a bridge over the River Gade near Rickmansworth in December on schedule. This was a complex and difficult project requiring the diversion of a river to expose the shallow foundations and bolster its structure below the waterline. In addition to the complex physical and logistical works there were many stakeholders actively engaged, including local fishing clubs, the Environment Agency and Natural England whose different requirements needed to be recognised, respected and remediated. The project was completed on programme and to all stakeholder satisfaction, without any accident, incident or injury.

Civils (BCV/SSL)



Diversion of River Gade for bridge scour works



Installation of reinforcement bars before concrete pour



Concrete pour complete and settling prior to diverting the river to flow as normal

Civils (BCV/SSL)

Programme level	Current Plan Date	Actual/Forecast Date	RAG
M074 EM1 & EM2 Harrow on the Hill North Harrow (Practical Completion)	27-Apr-13	19-Apr-13	Complete
Start on Site MLNE7,9,10 – (Budgetary PAM)	25-May-13	25-May-13	Complete
M032 CTS8 & CTS13 Chalfont & Latimer to Chesham (Practical Completion)	17-Aug-13	16-Aug-13	Complete
Practical Completion (PCR) (CTS1 & CTS2A & B Barkingside to Newbury Park)	24-Aug-13	23-Aug-13	Complete
MR61 – Detail Design – Parapet and Bridge approaches replacement.	14-Sep-13	16-Aug-13	Complete
M032 EM10 Chalfont & Latimer to Chesham (Project Completion)	07-Dec-13	06-Dec-13	Complete
Covered Way Strengthening of CW101 (Practical Completion)	01-Mar-14	01-Mar-14	●

Cooling the Tube Programme

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
173.8	184.8	189.5

This is a long term programme to control ambient temperatures on the Underground to stop them increasing as the train service increases. Without intervention, temperatures will rise as more energy is dissipated within the tunnels due to increased train service capability delivered by the deep-tube line upgrades.

Since the start of the programme, the investment in cooling and ventilation infrastructure has acted as an enabler for the upgrade of the Victoria line, allowing for a 30 per cent increase in train services without impacting platform and tunnel temperatures. While the line upgrade is due to implement full train service capacity in 2014, platform temperatures are currently assessed to be around two degrees centigrade below their pre-line upgrade conditions.

The Cooling the Tube Programme, in collaboration with the Railway Systems Group, continues this work developing cost effective, targeted, cooling and ventilation solutions as the enablers to allow other deep tube programmes to increase service levels and implement new rolling stock to meet ever increasing customer expectations.

Work progressed to programme this quarter. Following the award of contract for further out-of-service fans, conceptual design statements have now been received from the contractor Mansell for Quick Wins Fans, and site visits are in progress for Complex Fans. The design for Complex Fans will be undertaken internally within LU, which will achieve cost efficiencies without affecting the delivery date. The new Centralised Cooling Control System, which enables real-time monitoring of fan conditions across the network in order that remedial works can be carried out quickly when required, is now in the user-testing phase

The Estimated Final Cost (EFC) exceeds authority due to an increase in scope and new authority will be sought as and when required for Out of Service fans and existing fan renewals.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Reinstatement of Out of Service Fans – Issue ITT for final design contract for next phase of fan upgrades	24-Jun-13	12-Apr-13	Complete
Complex Fans: Award design contract	06-Dec-13	18-Oct-13	Complete
Central Cooling System Virtualisation complete (beneficial use)	31-Dec-13	13-Dec-13	Complete
Quick Win Fans Beneficial Use	13-Oct-14	01-Sep-14	●



SSR Major Power Works (Signalling)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
8.9	43.9	37.3

This project will provide the main power supplies for the SSR signalling (local distribution of signalling power is covered elsewhere) and associated station lighting mains.

Progress this quarter has been to programme. All transformer room civils and bases and all cabling route enabling works have been completed. Plant has been delivered at all Transformer room sites and Glass-Reinforced Plastic (GRP) enclosures installed at all six sites, having made cost savings through using innovative lifting methods.

The programme is on track to deliver all the Sub-Surface Upgrade Programme requirements on time.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Start of Construction – Cable Route and Transformer Rooms	29-Jul-13	10-Jun-13	Complete
Section 1 Substantial Completion (Part 8)	30-May-14	07-Apr-14	●
Section 2 Substantial Completion (Part 8)	28-Jul-14	10-Jun-14	●
Section 3 Practical Completion (Stepney Green Part 8)	28-Oct-14	13-Aug-14	●
Finish on Site – Cable Route & Transformer Rooms – All Sites	20-Nov-14	23-Oct-14	●
Project Financial Close	31-Mar-18	01-Mar-18	●

SSR Major Power Works (Traction)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
360.9	521.4	507.4

This programme will deliver the upgraded power supply capacity to support the entire SSR line upgrade. Capacity is in place to support the entire S8 fleet in pre-ATC mode. Work is now underway to support the introduction of the S7 fleet and the move to full performance under ATC.

Three major milestones have been achieved in the quarter: availability of power to run trains in ATC mode on the Metropolitan Line north of Baker Street (all main power equipment is now energised and in service for the Metropolitan line project), completion of the new Bulk Supply Point at Edgware Road, and the provision of power capacity to support the provision of 57 S7D trains to Upminster. Contracts have been awarded for the last of the packages comprised within this programme, the 132kV grid connection from Neasden to Willesden Bulk Supply Point, to the contractors Murphy, Freedom and Siemens.

The programme is on track to deliver all the Sub-Surface Upgrade Programme requirements on time.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Issue ITT for 132kV Cable Route to Neasden Bulk Supply Point	02-Apr-13	02-Apr-13	Complete
West Ham (New) – Building Brickwork Complete	08-Jul-13	17-May-13	Complete
Power Capacity to support Full S7 Fleet (pre-ATC) on Circle + Paddington – Hammersmith	30-Jul-13	19-Jun-13	Complete
Power Available for ATC mode north of Baker Street	20-Nov-13	20-Nov-13	Complete
Provision of (Firm) Power capacity to support 57 S7D to Upminster	06-Dec-13	22-Nov-13	Complete
New Bulk Supply Point at Edgware Road	01-Mar-14	08-Nov-13	Complete
Power available to support full S7 stabling of trains (Ealing Common Depot).	05-Mar-14	11-Feb-14	●
Programme Stage Gate 6 Review (SSR PU Programme Close)	15-Jun-18	04-May-18	●

World Class Capacity

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
1.0	*	*

Victoria

A feasibility study to define the scope, cost and business case for delivering world class levels of capacity on the Victoria Line. Gate B was achieved on 4 December. A concept and detail design funding paper was submitted to the Rail & Underground Board on 7 January 2014 .

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Stage Gate B Review	19-Nov-13	04-Dec-13	Complete

Jubilee

The final feasibility study is progressing to plan while delivery mobilisation plans continue in parallel.

The specification for modern day equivalent of the 96 tube stock is complete as a first draft. Discussions continue to ensure the opportunity of further innovation is not lost as the procurement process develops.

Legacy Train Systems

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
116.4	N/A	N/A

This is a portfolio of projects to upgrade and improve rolling stock, signalling systems and other train system assets that are not covered by the line upgrades. It would be misleading to quote an EFC or Authority for this unrelated portfolio of works.

'92 Tube Stock Refresh

691 body ends complete against a period target of 689 and a total of 795.

Automatic Track Monitoring System – ATMS

72 tube stock design work complete.

New Tunnel Cleaning Train (TCT)

The scoping of tunnel infrastructure works has commenced. The TfL milestone for the Motive Power Unit was achieved on target 15 November.

Battery Loco Life Extension

Locomotives 9 and 10 are in work at Acton and are on target.

Central Line Bogie Modifications

Gearbox overhauls and associated bearing replacement work progressing to programme at an enhanced rate of 20 per week with completion of 1,943 gearboxes by January 2016.

72ts life extension (weld repairs)

Validating fleet repair pre-production modifications and carrying out survey and design of enabling works for sheds AC 10 & 15 at the Railway Engineering Works (REW) in Acton in preparation for the implementation programme.



'92 tube stock cab end replacement in progress

Legacy Train Systems

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Inner Inter Car Barriers – Bring In To Beneficial Use (Central & W&C Line)	09-May-13	09-May-13	Complete
Battery Loco Refurbishment – 7 th Loco Complete	09-Aug-13	24-Jun-13	Complete
ATMS – In Service Audio Visual & Noise & Vibration	20-Sep-13	20-Sep-13	Complete
TCT – Motive Power Unit Ready for Railway Trials (Consent to Test in Acton Works)	15-Nov-13	15-Nov-13	Complete
ATMS – Acceptance of Automatic Track Monitoring System on Bakerloo Line	07-Feb-14	07-Feb-14	●
Battery Loco Refurbishment – Loco 9 Complete	10-Mar-14	27-Jan-14	●
92 Tube Stock Refresh – Finish on Site 218 CarBody Ends	31-Mar-14	31-Mar-14	●

New Tube for London

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
16.7	*	*

As a co-ordinated series of line upgrades for the Piccadilly, Central, Bakerloo and Waterloo & City lines, the New Tube for London programme will form the next generation of line upgrades and aims to deliver asset renewals in a more comprehensive, consistent and systematic manner.

The programme provides a unique opportunity for Rail and Underground to deliver long-term business transformation through the introduction of more efficient maintenance models and higher levels of automation. Technology-enabled change and asset renewals will enhance the customer experience and improve the operating and maintenance model of the 'Deep Tube' lines, creating a paradigm shift for the future operating and business model of LU.

During the quarter, the programme completed the main elements of the Feasibility programme and successfully passed Stage Gate B and the Integrated Assurance Review in October. In addition to progressing the governance and funding process (Finance & Policy Committee on 23 January 2014) for the next 24 months of design work, work-stream activities being progressed include benchmarking visits, the inverting substation trial design, unattended train operation obstacle detection trials and hybrid air cooling design. The issues around Piccadilly/SSR upgrade interfaces are also being worked through in more detail. Staff recruitment for mobilisation of the NTfL Design and Specification phase has commenced. To mark the transition to the commercial phase of contractor engagement, a week of Rolling Stock supplier familiarisation activities took place.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Proof of Concept Study for Saloon Air-Cooling in a Deep Tube Train Application – Complete	26-Jul-13	28-May-13	Complete
Commencement of the First Obstacle Detection Trial	19-Aug-13	18-Apr-13	Complete
Programme Feasibility Complete (Programme Gate B)	22-Oct-13	10-Oct-13	Complete
TfL to issue ITT for the first phase of a new generation of low-energy, high-capacity deep tube rolling stock which would ultimately be applicable to the Bakerloo, Piccadilly and Central lines	29-Dec-15	09-Dec-15	●

Crossrail London Underground Works

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
202.7	225.1	285.5

This project provides LU delivery capability and support, as well as infrastructure protection to the Crossrail Programme delivered by Crossrail Limited (CRL). The vast majority of the expenditure is reimbursed by CRL.

Tunnel Drive X (Royal Oak to Farringdon) is scheduled to be complete in January 2014. Tunnel Boring Machines have passed through LU Zones of Influence with no adverse impact on LU infrastructure.

CRL has issued an instruction to LU to proceed with Phase I of the Paddington Bakerloo Line Link.

Barbican station platform strengthening – LU advised CRL that piling was unnecessary, thereby saving CRL approximately £250,000 and removing the need for a ten-week platform closure.

The handover of critical elements of CRL's Goslett Yard Box was completed on the agreed date. The complete handover of this site is due in January 2014.

The Final Design Statement for Farringdon and Whitechapel has been approved by LU. The Final Design Statement for Liverpool Street is expected to be approved early 2014.

A Whitechapel 'Oversight Panel' has been established to oversee improvement of compliance with procedures and protocols for CRL works on LU assets.

The EFC exceeds current authority due to the inclusion of future uncommitted expenditure not yet instructed by a Crossrail purchase order.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
LU Support Complete for Crossrail Trial Running Stations (Central Section)	28-Feb-19	31-Dec-18	●

Station Developments

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
1227.2	2330.8	1328.0

Optimising opportunities to work with third parties (property developers, business interest groups and local authorities) to identify opportunities for investment in station access and capacity. The aim is to be pro-active in seeking collaborative partnerships which both unlock investment and ensure operational objectives are effectively considered.

55 Broadway: design works have now commenced following the award of design packages to two successful tenderers.

Elephant and Castle: the strategy group have agreed to look at over-site development (OSD) proposals to help strengthen the business case.

Finsbury Park spiral staircases: work is progressing to plan and the Station Works Improvement Programme (SWIP) is proceeding with rectification work as agreed with Network Rail.

Bromley-by-Bow: the architect has not delivered the design as envisaged and the commission has been concluded. The design is to be re-tendered.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Bromley-by-Bow Step Free Access (SFA) – Commence Detailed Design	27-Jan-14	30-Jul-14	■
Gunnelsbury Station Refurbishment – Bring into Beneficial Use	08-Nov-13	28-Oct-13	Complete

Vauxhall Station Upgrade

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
3.2	35.1	35.1

The aim of the project is to reduce congestion and queuing at Vauxhall station through increased station capacity and reduce the risk of unplanned station closures. The project delivers additional gate line and ticket hall capacity and step-free access from ticket hall to platform level.

The third party surveyor is preparing a schedule of adjoining owners who will require legal notices. The asbestos survey report has been received and asbestos removal activities have been aligned with the construction sequence. Work has begun to establish the site compound on the area of derelict land between Wandsworth Road and the Bondway (close to Vauxhall bus station) following approval of road closures. Design is now fully complete for the Congestion relief element of the scheme and 80 per cent complete for the step-free element. Construction work on the station will commence in early January.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Vauxhall Station Capacity & SFA – Bring Into Use (SFA Lift and Stairs)	23-Oct-15	01-Sep-15	●

Stations Stabilisation Programme

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
26.7	176.2	459.0

LU's station Stabilisation programme will undertake station-wide asset stabilisation for 74 LU stations across BCV/SSR, providing interventions to; ensure station assets are brought up to a "fair for ten years" condition; prevent degradation of the assets; and ensure safety critical systems are in full working/compliant order.

Work Progresses to plan at Baker Street station where the new STAKE arrangements have been cited as an example of best practice by Infrastructure UK. (STAKE engages directly at trade contractor level avoiding the need for tier 1 and 2 contractors). Work has also commenced on site at South Kensington, Embankment, Paddington and Earl's Court stations. Detailed design has commenced at St James's Park, and Harrow-on-the-Hill. Financial approval has been received for the second phase of Farringdon train shed roof.

The EFC exceeds Authority because the Stations Stabilisation Programme is authorised in phases; EFC matches authority for the current phase. Future works will be submitted for authorisation as required.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Earls Court Station Commence Detailed Design	12-Jun-13	16-Apr-13	Complete
South Kensington Station Start On Site	28-Oct-13	28-Oct-13	Complete
Paddington Station Start On Site	15-Nov-13	21-Sep-13	Complete
Earls Court Station Start On Site	23-Dec-13	25-Nov-13	Complete

LU Lifts and Escalators

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
32.5	*	*

The lift and escalator portfolio delivers the cyclical renewal of lifts and escalators to:

- Ensure safety critical systems are functional and compliant with standards and legislation; and
- Prevent the degradation of assets through whole life asset management decisions and modelling.

Escalators were brought into use (on or ahead of plan) at London Bridge, Old Street, Highgate, Highbury & Islington, Waterloo and Bank.

The Primary Means of Vertical Transportation (PMVT) Lift replacement programme has received financial approval.

The reprioritisation of the Kone escalator programme across Old Street, Waterloo, Angel, and Tottenham Court Road stations to meet operational requirements has resulted in a minor delay to the completion of Old Street escalator no. 3.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Bank Start On Site – (Closure)	28-May-13	18-Apr-13	Complete
Bring Into Use (BIU) Canary Wharf escalator 13	06-Sep-13	23-Aug-13	Complete
Bring Into Use Westminster escalator 4	28-Sep-13	30-Aug-13	Complete
Greenford PAM Phase 1 – Escalator Start on Site	02-Oct-13	04-Sep-13	Complete
Bring Into Use Waterloo escalator 10	28-Oct-13	14-Oct-13	Complete
Highbury & Islington escalator 3 Return To Service (RTS)	02-Nov-13	08-Oct-13	Complete
Edgware Road Station Lift No. 1 & 2 Refurbishment – Bring into Beneficial Use (Return to Service (RTS))	18-Jan-14	20-Dec-13	Complete
Bring Into Use (BIU) Old Street escalator E3	21-Mar-14	03-Jul-14	■

Tottenham Court Road Station Upgrade

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
330.9	538.0	485.0

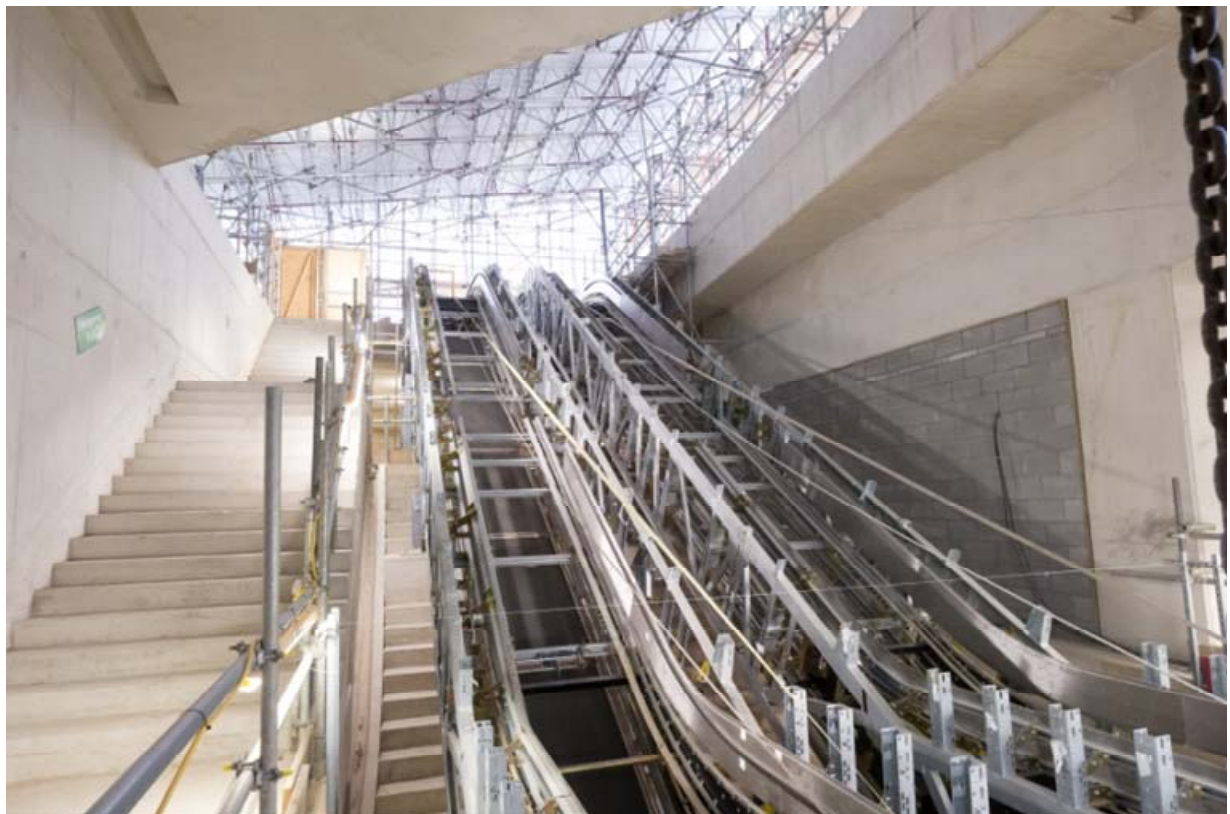
The project will provide:

- a new ticket hall (six times larger than the existing);
- three new escalators serving the Northern line;
- improved access from street to ticket hall and from ticket hall to platform level (five new lifts);
- provision for a new public square at St. Giles Circus; and
- a significant portion of the structural works for the new Crossrail station (by LU).

All major tunnelling work on the has been successfully completed and the project has moved to the fit-out stage.

The critical elements of the Goslett Yard box were successfully handed over to Crossrail on 26 November as planned, which safeguarded the programme for Crossrail's Spray Concrete lined (SCL) tunnelling in this area.

The installation of weather protection scaffolding over escalators 10 and 11 has been completed and escalator installation is progressing to plan. The Northern line tunnels have been handed over for fit-out, and the painting of walls in the new Ticket Hall has commenced.



Southern plaza escalator installation



Northern line passage linking through to Crossrail

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Section 1 Completion (Handover part Astoria site)	09-Oct-13	03-Jun-13	Complete
Start NL Concourse Fit Out	25-Nov-13	22-Nov-13	Complete
Completion of Goslett Yard Box	13-Feb-14	06-Jan-14	●
Section 3 Completion (Consolidated Piling)	19-Sep-14	25-Jul-14	●
Completion of Phase 1 (Partial Opening of the New Plaza Ticket Hall)	31-Mar-15	09-Jan-15	●
TCR – New Passenger Facilities Open – (Annex B: 2016)	20-Nov-16	06-Sep-16	●

Paddington Station Upgrade

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
51.1	62.2	53.3

Paddington (Hammersmith & City line) station is one of LU's top priorities for congestion relief due to demand growth associated with local area redevelopment and the Sub-Surface Railway upgrade. The project will provide:

- a new ticket hall;
- significantly enlarged passenger concourse with three staircases to platform level;
- provision of new step-free access from street to platform level (H&C platforms); and
- the East and West Plazas have now been brought into use.

Fit-out works continue to progress ahead of programme and the scheme is expected to be delivered early in the spring of 2014, considerably ahead of target.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Lifts 3 & 4 Installed	02-Aug-13	19-Jun-13	Complete
Acceptance of Mandatory Asset Information Deliverables (MAID) by LU	08-Oct-14	30-Apr-14	●
LU Fit Out Work Complete (Annex B:2014)	01-Nov-14	10-Mar-14	●
Paddington (H&C) Congestion Relief – Final Fit Out BIU (Practical Completion)	28-Jul-14	24-Feb-14	●

Bond Street Station Upgrade

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
171.5	298.8	291.9

Bond Street station is a key interchange between the Jubilee and Central lines. Long term demand and congestion are forecast to increase further as a result of growth in employment and leisure travel and the completion of Crossrail in 2018. 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 platforms on both the Central and Jubilee lines; and
- a step-free route to Crossrail.

Re-sequencing of the construction schedule has mitigated delay to future tunnelling activities and the project end date, and as a result the tunnelling set-up decommissioning is no longer a critical path activity. 75 per cent (of 97) grouting tubes have been successfully installed. Excavation for the new electrical sub-station has commenced. The project has received a considerate contractor scheme score of 44/50 which reflects the reputation the project has with the public.



Substation piling broken down



Substation silo steelwork-lower platform



View over site

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Demolition of sub-structure Complete	02-Feb-13	03-May-13	Complete
Start of main tunnelling operations (Annex B:2013)	14-Oct-13	05-Jul-13	Complete
Close escalators 1 & 2 for tunnelling	28-Apr-14	01-Feb-14	●
Early hand back Jubilee Line Platforms, Escs 6,7,&8, 3,4,&5, 4/092 into public use	02-May-15	02-Mar-15	●
Tunnelling Set Up Decommissioned	28-Sep-15	07-Apr-16	■
SC03 OSD Frame to be handover to Developer – Planned Date	06-May-16	13-May-16	▲
Bond St Station Upgrade – Practical completion (Annex B:2017)	28-Apr-17	20-Mar-17	●

Bank Waterloo & City

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
17.0	*	*

The Bank (Bloomberg Place) project will provide easier 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 (Bloomberg). LU will fit out the station box to complete the new entrance. The project schedule is highly dependent on the developer.

The developer (who is constructing the station box on LU's behalf at a considerably lower cost than LU could deliver independently) is suffering engineering challenges on the development and has recently advised of a substantial delay to their programme. The programme remains ill defined. LU has instigated a schedule risk review and a peer review which is due to start imminently. The uncertainty around the delays and the potential for further delays makes the eventual impact on the completion date for the scheme uncertain. This has led to the deferral of the award of the Implementation Contract.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Contract Award for Implementation Works	03-Feb-14	TBC	■
Bank Stn (W&C) – Bring Into Use (Stage 5) (Annex B:2015)	31-Dec-15	TBC	■

Victoria Station Upgrade

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
295.1	677.4	603.1

The Victoria Station Upgrade project will deliver:

- a new underground north ticket hall at the junction of Bressenden Place and Victoria Street, with an entrance at street level;
- a capacity increase in the existing Victoria line ticket hall (south ticket hall);
- nine new escalators;
- a new interchange tunnel connecting the two ticket halls;
- new lifts providing step-free access between street, ticket hall and Victoria line platform levels;
- new lifts providing interchange between the Victoria line and District and Circle lines platforms; and
- improved access and new lifts between the National Rail and Underground stations.

In the North Ticket Hall all secant piles, bearing piles and plunge columns have been completed and the site is being configured for roof slab construction (the minor delay to the London Fire and Emergency Planning Authority [LFEPA] shaft in 2016 is expected to be recovered). Jet grouting is 88 per cent complete (1926 of 2,200 columns).

Changes to the method of working on the South Ticket Hall (craning in of the piling rig rather than construction of an access ramp) has saved four weeks on the programme. The protection deck has been successfully erected in the South Ticket Hall and the demolition contractor is clearing the site ahead of main piling. District and Circle refurbishment proposals have received funding approval.

A recent ingress of foam concrete into the Signalling Equipment Room caused a line closure, but remedial works throughout the night involving the project team, operational staff and the contractor meant that the service could resume the following morning.

Victoria Station Upgrade

Protection decking being installed for architectural domes

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Complete PAL 1618 Squarework Tunnelling	12-Jul-13	28-Jun-13	Complete
Commence South Ticket Hall Demolition	07-Aug-13	08-Jul-13	Complete
Complete North Ticket Hall Piling	06-Dec-13	21-Nov-13	Complete
Shaft 29 (Allington Street) complete	13-May-14	21-Oct-13	Complete
Ground Treatment Complete	11-Nov-14	15-Aug-14	●
North Ticket Hall Civils Complete (inc removal of Traffic Management)	13-Mar-15	21-Jan-15	●
North Ticket Hall, access to Vic Line, LFEPA Shaft (Sectional Completion S1) – DIS (Annex B:2016)	23-Oct-16	31-Dec-16	▲
VSU – South Ticket Hall and remainder of VSU works (Sectional completion S4) – DIS (Annex B:2018)	04-Jun-18	04-Sept-17	●

Bank Station Capacity

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
76.7	177.5	562.9

The Bank Northern line congestion relief project will relieve current and expected congestion in Bank station, by having a new southbound running tunnel and platform with the existing platform utilised as a concourse area. By mitigating increasingly frequent congestion of the Northern line/DLR area, station closures will be reduced.

The public consultation on the plans for the re-development of the station closed on 8 November with over 500 responses received with the vast majority positive. A memorandum of understanding has been signed by the Bishop of London, on behalf of the Diocese of London and TfL, to work to support the Transport and Works Act Order (TWAO) for the Station.

The project has been shortlisted in the Engineering Business Excellence Category at the 2013 Rail Business Awards.

The project is currently only authorised for its current phase but the Estimated Final Cost encompasses the whole project and reflects the substantial cost savings achieved through the Innovative Contractor Engagement procurement approach.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Submit for Transport & Works Act Order (TWAO)	27-Aug-14	16-Jul-14	●
TWAO Grant of Powers	15-Jun-16	21-Apr-16	●
Completion of all designs to Compliance to S1538	23-Feb-16	23-Feb-16	●
Start on Site	16-Jun-16	21-Apr-16	●
New Ticket Hall Open to Public	14-Sep-21	25-Aug-21	●
Works to relieve station congestion on the Northern Line at Bank Complete (Annex B:2021)	31-Dec-21	31-Dec-21	●

Jubilee Line Upgrade (JNP)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
53.9	77.6	70.1

To upgrade the Jubilee line with new signalling systems and other asset improvements to provide faster journey times for customers, enabling a 30 trains per hour peak service.

Transmission Based Train Control (TBTC) reliability on the Jubilee line continued around four minutes delay against a target of two minutes delay per day. Solutions to further improve reliability include a software fix (ready for testing) which corrects a rare engineering vehicle operating scenario and the relocation of the heads of the axle counter at Stanmore.

Decommissioning activities continue as part of the final close out of the Jubilee Line Upgrade.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Complete Axle Counter Block modification	30-Nov-13	30-Sep-13	Complete
Decommissioning and removal of old assets	30-Jun-14	30-Jun-14	●

Northern Line Upgrade (JNP)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
230.5	464.4	400.9

The Northern line Upgrade 1 (NLUI) involves the replacement of life-expired signalling assets that date back to the 1960s. As well as re-signalling the line with a moving-block Automatic Train Control (ATC) signalling system, the programme also includes the replacement of some conductor rail and track.

Northern Migration Area 3 (Camden Town area) entered revenue service on 26 October, six months ahead of programme. This will now be followed by the two Central London branches.

Building on this success the remainder of the Upgrade is on programme for completion at the end of April, seven months ahead of programme.

Reliability in the combined Northern Migration Areas NMA1 (High Barnet to West Finchley), NMA2 (High Barnet Branch) and NMA3 (Camden Town) has been within the 12 minutes delay/day target. New software was introduced during the quarter to remove a number of localised failure modes, with further improvements planned in January.

Fleet Mean Distance between Failures (MDBF) continues to be around the 25,000 kilometres target.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Commence ML3 System Testing NMA4 (Old Street/Euston to Oval)	12-Jul-13	12-Jul-13	Complete
Commence ML3 System Testing NMA5 (Stockwell to Morden)	19-Jul-13	18-Jul-13	Complete
Ready for Operational Proving NMA2 (Mill Hill East to Highgate)	27-Jul-13	12-May-13	Complete
Commence ML3 System Testing NMA6 (Edgware to Belsize Park)	02-Oct-13	02-Oct-13	Complete
In Revenue Service NMA2 (Mill Hill East to Highgate)	25-Nov-13	23-Jun-13	Complete
Ready for Operational Proving NMA3 (Archway/Chalk Farm to Angel/Euston)	30-Nov-13	20-Sep-13	Complete
Ready for Operational Proving NMA4 (Old Street/Euston to Oval)	08-March-14	17-Jan-14	●
Northern line upgrade complete, delivering 20% increase in capacity (Annex B: 2014)	31-Dec-14	31-Dec-14	●

Jubilee and Northern Lines Mid Life Refurbishment (JNP)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
5.9	67.0	57.0

This Project will deliver the Mid Life Refurbishment of the 63 Trains on the Jubilee line and 106 Trains on the Northern line. The Mid-life refurbishment is required to preserve fleet saloon condition and to meet residual life, performance (ambience) and Rail Vehicle Access Regulations (RVAR) 2010 requirements.

Within the quarter Alstom successfully completed the refurbishment of Northern line trains 10 to 16, with 17 to 20 completed by calendar year end.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Northern Line Mid-life refurbishments complete	31-Dec-14	31-Dec-14	●
Jubilee Line Mid-life refurbishments complete	05-Feb-17	05-Feb-17	●

Bond Street to Baker Street Tunnel Lining (JNP)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
16.3	34.4	39.5

To remediate 215 metre length of concrete tunnel lining rings that are showing signs of deterioration on the Jubilee line between Bond Street and Baker Street.

In total there are 359 rings to be replaced over 215 metres in the Baker Street to Bond Street tunnel section. Since the physical site works commenced in June 2013, a total of 30 rings have been replaced. In addition a second segment removal vehicle has been manufactured which is now operational, thus allowing concurrent working in the tunnel section which will improve productivity.

Despite a challenging period caused by known but difficult ground conditions, the project has continued with its high level of safety performance with no impact on passenger service.

EFC is greater than Authority due to the increase in risk to include the unavailability of Transplant (engineering) trains and further additional works for Charing Cross trials. Additional funding will be sought.



Gauging survey following ring installation



Post installation of 15 rings

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Start on Site (SOS) Specialised Segment Removal Plant – Baker Street to Bond Street Tunnel Relining	16-Jun-13	16-Jun-13	Complete
Replace 25 No of Baker Street to Bond Street Tunnel rings (mid year)	15-Nov-13	25-Dec-13	Complete
Replace 50 No of Baker Street to Bond Street Tunnel rings (full year)	30-Mar-14	30-Mar-14	●

Northern Line Extension (JNP)

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
20.0	*	*

The Northern Line Extension (NLE) will extend the Northern line Charing Cross branch from Kennington to a new southern terminus within the Battersea Power Station site with an intermediate station within south Lambeth.

The public inquiry commenced on 19 November and is planned to complete on 20 December 2013. Post Quarter update: the public inquiry sat for 16 days, closing on Friday 20 December 2013. The inspector will now write his reports to the Secretaries of State for Transport and Communities and Local Government and a decision on the Transport and Works Act Order (TWAO) is expected in summer 2014.

The Invitation to Tender (ITT) documentation for the main design and build works was issued on 9 December 2013, following extensive internal and external reviews.

The TfL milestone for 'Define the delivery model for non-civil works' was achieved on 11 December, ahead of programme. The model will be a combination of variations to existing contracts and PFIs, programme managed by LU and will include key work streams such as TBTC Signalling, additional Rolling Stock, PFI works (Connect, prestige etc.), Kennington loop and cross passageway enabling works.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Define Programme Management methodology	30-Apr-13	30-Apr-13	Complete
Issue Invitation to Tender (ITT) for Innovation Contractor Engagement contract	30-Sep-13	09-Dec-13	Complete
Define Delivery Model for non-civils works	20-Dec-13	11-Dec-13	Complete

London Tramlink Wimbledon Line Enhancements

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
3.6	30.0	30.0

The London Tramlink Wimbledon Line Enhancement Programme is a programme of works to address congestion on services between Therapia Lane and Wimbledon. To provide these improvements, the programme comprises three work streams:

- twin tracking of existing single track sections of the Tramlink network between Beddington Lane and Mitcham Junction and associated infrastructure enhancements;
- delivery of an additional platform and new tram infrastructure at Wimbledon Station, including extension of running rights at the station; and
- procurement of four additional trams to facilitate the increased services into Wimbledon Station.

South West Trains have agreed and accepted the Wimbledon Station Change application. This approval is the last of the statutory approvals required for the programme.

The infrastructure tender returns were received on 3 December 2013 and the tender review process is progressing well and will be complete by the end of the year. Post quarter update: the tender reviews have been completed and clarification questions sent back to respective contractors. The evaluation and recommendation report is being drafted and on programme for review on 27 January 2014.

The systems and signal contract has been signed with Thales. The outline design will be the first deliverable under this contract prior to Christmas.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Issue Invitation to Tender for twin tracking	10-Dec-13	24-Sep-13	Complete
Place order for additional trams complete	31-Mar-14	02-Aug-13	Complete

London Overground Capacity Improvement

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
30.3	174.7	174.7

The London Overground Capacity Improvement Programme is a programme of works addressing the increasing demand on the London Overground network. It includes conversion of the existing fleet of 57 London Overground Class 378 four car trains to five car trains on all routes. To achieve this increase in capacity, a series of infrastructure enhancements are required including:

- additional stabling at Silwood Triangle and Willesden and the associated connections to the network;
- reconfiguration of New Cross Gate Depot and Willesden Train Maintenance Depot to enable maintenance of the five car fleet;
- platform extensions, signalling and associated systems works;
- infrastructure changes to support additional capacity (including enhancement of existing turn-back sidings); and
- procurement of 57 new Class 378 rolling stock cars to extend the existing four-car units to five-car units plus potentially two additional five-car units to increase peak service frequency.

In readiness for the Christmas closure, significant progress has been made at Silwood sidings and in implementing the design approval process for platform extension work at Highbury & Islington, Canonbury, Canada Water and Surrey Quays. Post quarter update : Installation of the track crossover at Silwood sidings and the planned platform extension works were successfully completed during the Christmas possession and the railway handed back to operational use on schedule.

At New Cross Gate Depot, installation of the two temporary berths is complete with just minor snagging remaining.

The North London Line Platform Extensions contract has been awarded to Dyer & Butler and the detailed design stage is underway. Tenders for the North London Line signalling contract, and the Willesden stabling work have been received and the evaluation process is ongoing.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Award ELL Stabling infrastructure contract	01-Oct-13	28-Jun-13	Complete
Completion of ELL Stabling enabling works	01-Nov-13	18-Oct-13	Complete
Completion of ELL Depot enabling works	01-Mar-14	03-Feb-14	●

Integrated Transport Smartcard Organisation

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
62.3	67.2	65.9

ITSO (Integrated Transport Smartcard Organisation) is the smartcard specification mandated by the 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 processing both Oyster and ITSO tickets, establishment of a Head Office Processing System (HOPS), new and upgraded communications links and other system changes. The project is responsible for the technical changes required to support ITSO acceptance on the TfL controlled reader estate but a live operational system is dependent on Train Operating Companies (TOCs) being capable of integrating with the system and appropriate commercial agreements. The project is being funded by the DfT under an agreement with TfL dated 28 May 2009.

The TfL HOPS is working in the live environment and is successfully communicating with the Southern HOPS. A customer launch at six stations within London took place on 21 October.

Stage 3 formal certification is two months later than originally planned, this activity is planned for completion for 20 December, and the delay in this area has not impacted the completion date. Post quarter update: witness testing with the DfT was completed successfully on 20 December. The project will now be closed.

Rights functionality has been agreed as removed from scope of the project.

The project has engaged with other parties and the DfT to discuss deployment options across the rail industry once the project is complete. Central to delivery of live operational schemes is agreement of the Commercial Agreements that are being progressed by the Department for Transport outside the scope of this project.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Reader hardware rollout complete	30-Apr-13	01-Nov-13	Complete
ITSO on Prestige (IoP+) Stage 3 certification	30-Sep-13	20-Dec-13	▲
ITSO on Prestige Project Complete	24-Dec-13	24-Dec-13	●



Future Ticketing Project

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
53.0	67.1	68.5

The Future Ticketing Programme introduces the acceptance of contactless bank cards and compatible devices as payment for travel, improving customer convenience and enabling cost savings for TfL through reduced card issuance and commission costs.

Phase 1, acceptance of contactless payment cards for single journeys on TfL bus services, was successfully launched on 13 December 2012.

Phase 2 – the system has been switched on at all Tube, Docklands Light Railway, and London Overground stations, tram stops and National Rail stations where Oyster is currently accepted. TfL has been working with the payment card industry from early November to prove the system using a limited set of live credit, debit and charge cards. This has demonstrated correct billing and daily and seven day capping of charges. The public launch for up to 5,000 staff, key stakeholders and members of the public will now take place after the January 2014 annual fares and ticketing updates. This is expected to be followed by a full rollout, incorporating bus travel, to give full multi-modal capping, from end March 2014.

Estimated Final Cost exceeds authority as £380k of existing authority relates to phase 3 of the project and will be reassigned shortly, meaning true authority is £66,756k.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Phase 2 - start of integration of TfL and 3rd party back office systems	14-Jun-13	14-Jun-13	Complete
Phase 2 - introduction of contactless bank card acceptance for multi-modal daily travel, with daily and 7 day capping (Annex B: 2014)	31-Jan-14	11-Dec-13	Complete



Cycle Superhighways

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
33.3	37.8	136.5

The Cycle Superhighways programme is delivering radial cycle commuter routes from outer to central London. The first four routes (CS2, CS3, CS7, and CS8) were opened in 2010 and 2011.

CS2 Extension, from Bow to Stratford, was opened for service on 31 October. CS5 is under construction, although potential additional scope to be defined and agreed.



*CS2 Extension, from Bow to Stratford –
opened for service on 31 October*

Concept design has commenced for the upgrades to the existing route 2 and for routes 1, 4, 5 Inner, 5 Extension and 11. A number of new routes are also planned to be delivered during the current mayoral term and feasibility has commenced for east-west and north-south routes.

Route 5 construction complete milestone forecast completion date extended to capture additional green surfacing requirement.

The EFC now includes the cost of the upgrades, plus increased cost and scope on route 2 Extension.

Cycle Superhighways

Programme level	Current Plan Date	Actual/Forecast Date	RAG
CS Route 2 Extension – preliminary design complete	31-Jan-13	07-Jan-13	Complete
CS Route 2 Extension – detailed design complete	30-Apr-13	13-Sep-13	Complete
CS Route 2 Extension – route open	31-Aug-13	31-Oct-13	Complete
CS Route 5 – construction started	31-May-13	01-July-13	Complete
CS Route 5 – construction complete	31-Oct-13	01-Apr-14	■

Barclays Cycle Hire Scheme

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
128.2	157.1	136.8

The Barclays Cycle Hire scheme launched successfully to registered members on 30 July 2010 and was opened up to all users on 3 December 2010. The scheme costs annual members less than 25 pence per day, as the vast majority of their trips are less than 30 minutes. This is a low-cost and convenient alternative for many travellers.

Phase 1 – launched in July 2010 and the project formally concluded on 4 July 2012.

Phase 2 – geographic expansion launched on time in March 2012, increasing the number of bicycles to 8,333. Major system improvements were delivered in stages; with the final stage going live in September 2013, improving customer usability and billing. The two project closure milestones have been reforecast to mid 2014 to align with the contractual milestones agreed with Serco.

Cycle Hire Expansion and Intensification (CHEI) – successful launch on 13 December 2013, taking Cycle Hire to southwest London into parts of Wandsworth, Hammersmith and Fulham, and additional areas of Lambeth, and Kensington and Chelsea. The expansion added more than 2,000 new bikes and approximately 5,000 additional docking points to the scheme. Planning permissions are being sought for remaining sites to improve the network in some areas, with completion of all sites planned for spring 2014.

Barclays Cycle Hire Scheme

Programme level	Current Plan Date	Actual/Forecast Date	RAG
CHEI: Contract variation signed	15-May-13	09-May-13	Complete
CHEI: Start of construction programme	03-Jun-13	04-Apr-13	Complete
CHEI: Start of installation programme	30-Aug-13	19-Aug-13	Complete
CHEI: Operational commencement	13-Dec-13	13-Dec-13	Complete
Phase 2: Start of Phase 2 Close (Gate 2)	20-Jan-14	30-Jun-14	■
CHEI: All sites complete	31-Mar-14	31-Mar-14	●
Phase 2: End of Phase 2 Close (Gate E)	30-Apr-14	30-Sep-14	■
CHEI: Project closure approved	31-Jul-14	31-Jul-14	●



Mayor of London at southwest expansion launch site

Transport for London Road Network Capital Renewal Programme

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
30.0	54.9	57.5

The annual budget for the Transport for London Road Network (TLRN) Capital Renewals Programme is based on long-term asset investment modelling and an objective risk-based assessment of the renewals required to deliver a safe and reliable network.

Capital Renewals is a rolling programme of schemes that maintain the physical infrastructure of the TLRN, including carriageways, footways, structures, tunnels, lighting, drainage, green estate and street furniture. The programme consists of 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. £4.1m additional DfT funding has been received for carriageway resurfacing for which authority will be sought.

Schemes are identified, prioritised and programmed using a risk-based approach. An additional 10 per cent of schemes were identified from the forward programme to act as reserves. The reserves create flexibility that caters for unplanned scheme deferrals, caused by factors such as adverse weather (impacting asset deterioration and deliverability), permit refusals, and utility and other works.

Programme outputs

Output	Unit	Annual target	YTD actual	YTD forecast **	Commentary
Carriageway resurfacing	m ²	650,000	411,780	341,063	63 per cent of annual target achieved - on course to achieve full year target.
Footway resurfacing	m ²	58,000	8,303	6,947	14 per cent of annual target achieved - on course to achieve full year target.
Lighting columns	Nr.	900	2	182	0 per cent of annual target achieved - the delivery of Q1 schemes was deferred so they could be designed to the new British Standard which allows lower lighting levels for the TLRN. Designs are progressing and delivery will start in Q4. On course to achieve full year targets.
Vehicle restraint barriers	m	5,000	640	640	13 per cent of annual target achieved - on course to achieve full year target.
Pumping station upgrades	Nr.	7	0	0	0 per cent of annual target achieved - sites identified and investigations progressing; designs started in Q2 with delivery planned to start in Q4. On course to achieve full year targets.
Expansion joints replaced	Nr.	6	0	0	0 per cent of annual target achieved - sites identified and designs progressing; delivery planned to start in Q4. On course to achieve full year targets.

**The forecasts were set prior to the appointment of the delivery contractors.

Although a number of the deliverables are behind the original forecasts, they remain on plan to achieve the full year targets. On review, the forecasts were optimistic and reflected the delivery profile of a mature contract rather than the first year of a major new contract, the London Highways Alliance Contract (LoHAC).



Completed resurfacing works on the A406 North Circular Road / Gunnersbury Avenue

New Bus for London (NBFL) Vehicle Purchase

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
43.7	219.9	220.1

This programme will deliver 600 NBFL buses into London by the end of April 2016. The buses are being built by Wrightbus in Ballymena, Northern Ireland, to the same generic design as the prototypes that were introduced onto route 38 in February 2012.

The fixed price contract with Wrightbus is for £212.7m equating to an average price per vehicle throughout the contract of £354,500. This price includes upgrade requirements to Euro VI engines during 2014.

There are now four full route conversions in operation with a total 114 buses in service. The first route to be converted was route 24 on 22 June 2013, operated by Metroline with the second route, route 11 operated by Go Ahead, converted on 21 September as planned. Route 9 operated by London United converted on 26 October and route 390 operated by Metroline converted on 7 December. The next route is the 148 operated by London United scheduled for February 2014. Other routes are being evaluated and negotiations are taking place with a number of operators. Further routes for conversion will be announced in due course.



A training run for route 9 at Marble Arch

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Conversion of first route completed	30-Jun-13	22-Jun-13	Complete
Conversion of second route completed	31-Oct-13	21-Sep-13	Complete
Delivery of 600 buses into service	30-Apr-16	30-Apr-16	●

New Investment SCOOT

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
17.1	27.4	17.2

The Split Cycle Offset Optimisation Technique (SCOOT) programme will upgrade traffic signal technology to help meet the Mayoral objective of smoothing traffic flow. Costs shown are for the New SCOOT Investment project, which will deliver 528 sites of a planned 1,000 sites. The remaining sites are funded and delivered by business-as-usual activities across Surface Transport.

Under the New SCOOT Investment project, 240 sites were planned to be installed in the 2011/12 financial year, bringing the total to 413 sites of the 528 the project will contribute towards the planned 1,000 total. These sites were delivered by the end of May 2012.

The remaining 115 sites have been installed in the 2012/13 financial year, taking the total to the full 1,000 sites. At the end of the fourth quarter, 115 design briefs had been completed, 115 detailed designs completed, 115 civil engineering sites completed, 115 SCOOT loops installed and 115 sites commissioned. These sites have been enabled and a total of 1000 were enabled as planned by 31 July 2013.

*A change request has been approved to move the 'Project closure approved' milestone date from December 2013 to July 2014 to allow for full financial closure to be completed.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
240 Sites commissioned onto UTC (FY 11/12) 413 Cumulative	30-May-12	30-May-12	Complete
115 UTC Design Briefs complete (FY 12/13)	08-Dec-12	08-Dec-12	Complete
115 Sites civil engineering complete (FY 12/13)	01-Mar-13	01-Mar-13	Complete
115 Sites SCOOT Loops installed (FY 12/13)	18-Mar-13	18-Mar-13	Complete
115 sites commissioned onto UTC (FY 12/13) 528 cumulative	31-Mar-13	31-Mar-13	Complete
115 Sites infrastructure installed (FY 12/13)	31-Mar-13	31-Mar-13	Complete
Final signal technology enabling completed (Annex B: 2015)	31-Jul-13	24-Jul-13	Complete
Project closure approved	31-Jul-14*	31-Jul-14	●

Road Space Management SCOOT

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
0.5	21.1	57.1

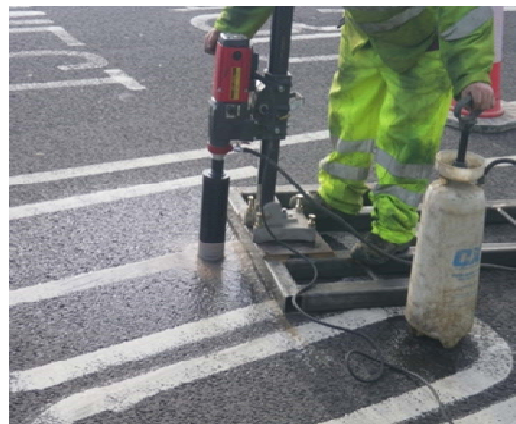
The Road Space Management SCOOT delivery portfolio will upgrade the traffic signal technology at a further 1,500 sites. This will allow TfL to manage traffic in a more policy responsive manner.

Due to a slight delay in commencement the commissioning of 150 sites will be achieved by 31 March 2014 and the milestone for 200 sites commissioned by 31 May 2014.

New Traffic Signal Vehicle Detection Technology



Access point which receives the vehicle, detected from the in-road magnetometer



Drilling a hole in the carriageway for an in-road magnetometer



A magnetometer in the carriageway



Protective sealant applied

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Feasibility approved	30-Jul-13	18-Jul-13	Complete
200 sites commissioned	31-Mar-14	31-May-14	▲

Hammersmith Flyover Phase 2

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
7.6	76.8	76.8

The Hammersmith Flyover project is part of a portfolio investment in eight specific road tunnels and structures on the Transport for London Road Network (TLRN) that have been identified as requiring capital investment in order to improve road network safety, network resilience and stability, and reduce the whole-life costs.

The first phase of works, addressing immediate risks to the safety of the structure, was completed in May 2012. The second and final phase of works, developing and implementing a long-term strengthening solution, commenced shortly thereafter and design activities have been progressed following the appointment of the designer, Ramboll, in October 2012.

Following successful completion of the tender process and evaluation results in March 2013 the contractor has been awarded the Framework Agreement for Early Contractor Involvement. The contractor is engaged through a call-off contract and has worked with the designer to progress concept and detailed design phases to allow the possession of site to be taken on 28 October 2013.



Site establishment with erection of hoarding and scaffolding to access the flyover from underneath



Hoarding design – ready to be erected

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Designer appointed	25-Oct-12	25-Oct-12	Complete
Award of framework agreement or contract	31-Mar-13	28-Mar-13	Complete
Approval of concept design (design stage 2)	28-Jun-13	28-Jun-13	Complete
Approval of detailed design (design stage 3)	03-Sep-13	18-Oct-13	Complete
Approval to Award Design and Build Work Package	17-Oct-13	17-Oct-13	Complete
Possession of site	04-Nov-13	28-Oct-13	Complete
Construction complete	21-Apr-15	21-Apr-15	●
Project close	09-Oct-15	09-Oct-15	●

Better Junctions

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
10.8	16.5	95.0

The programme comprises a set of high-profile junctions which are recognised barriers to cycling, and where substantial changes could be made to improve vulnerable road user safety and utility. The junctions are typically complex with either high cyclist/pedestrian flows or recognised as having negative effects on cycling, and walking.

The below targets are not achievable due to a change in strategy – the programme was reviewed following the Mayor’s Cycling Vision and a revised programme of 33 junctions has been agreed with the Cycling Commissioner.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Top 100 reviews completed	31-Dec-13	Under review	■
First 50 schemes delivered	31-Dec-13	Under review	■

London Road User Charging and Traffic Enforcement Notice Processing Contract re-let Project

Spend to end Q3 2013/14 £m	Authority £m	EFC £m
2.6	15.2	72.2

The upcoming expiry of both the London Road User Charging (LRUC) and Traffic Enforcement Notice Processing (TENP) contracts provides TfL with an opportunity to maximise efficiency by grouping common activities while enhancing customer satisfaction. These contracts contribute to smoothing traffic flows and improving bus journey time reliability on the Transport for London Road Network (TLRN). LRUC includes the central London Congestion Charging and Greater London Low Emission Zone and TENP provides the notice processing services for decriminalised traffic offences on the TLRN.

In order to align the LRUC and TENP contracts, the current LRUC contract with IBM has been extended by 12 months to October 2015. A procurement process is underway with the objective of the new services having a staggered go-live in 2015, with the new TENP service coming on line in June 2015 and the LRUC service in November 2015.

All milestones remain on track. The Preferred Supplier was agreed at Invitation to Submit (ITS) Decision Panel on 15 October. The project successfully underwent a Contract Award Integrated Assurance Review (IAR) and received TfL Board approval for contract award and additional project authority to deliver the project to completion on 11 December. The Preferred Supplier has been informed. Standstill ended on 23 December. Contract confirmation and finalisation work has started ahead of signing (scheduled for mid January 2014). A formal press announcement is planned at contract signature.

The EFC has revised from £99.4m at Q2 to incorporate significant savings recognised as a result of the commercial off-the-shelf-based solution and lower risk base of the successful bidder. Future authority submissions will be made as the project requires.

Programme level	Current Plan Date	Actual/Forecast Date	RAG
Invitation to Participate issued	18-Feb-13	18-Feb-13	Complete
Invitation to Submit issued	20-Aug-13	20-Aug-13	Complete
Evaluation of ITS bids complete	23-Oct-13	15-Oct-13	Complete
Approval to award contract	19-Nov-13	25-Oct-13	Complete
Contract signed	13-Jan-14	13-Jan-14	Complete
Traffic Enforcement Notice Processing go-live	21-Jun-15	21-Jun-15	●
Business Operations service go-live	01-Nov-15	01-Nov-15	●
Enforcement Operations service go-live	01-Nov-15	01-Nov-15	●



Cost and Schedule Variance Analysis

Newly installed power cables on the Metropolitan line

Cost and Schedule Variance Analysis

87 per cent of all projects have an Estimated Final Cost (EFC) within authority and 82 per cent of milestones reported in the detailed pages are on or ahead of target.

There are three fully authorised projects where EFC exceeds authority by more than 2.5 per cent. Projects that are only partially authorised, e.g. feasibility stage only, or those where EFC has increased with additional scope, are not classified as being in excess of authority.

EFC exceeds authority by more than 2.5 per cent

Project Name	RAG	% over	Variance Commentary
SSR Upgrade - Depots	■	7	SUP in total remains within authority. EFC is £23.7m in excess of sub-programme authority due to cost increases from asset condition, prolongation and emerging issues during detailed design and construction at Ealing and Upminster Depots. Potential offsetting savings elsewhere in the programme are being reviewed.
SSR Upgrade - Infrastructure Other	■	4	The EFC is £9.2m above authority for this sub-programme increasing costs in installing One Person Operation CCTV and stopping systems at stations and prolongation due to signalling immunisation issues. The sub-programme is exploring risk mitigation opportunities.
Bank Waterloo & City	■	8	The delay to the developer's basement work will delay the LU fit-out contract. This mounting delay pressure has currently led to an increase of £4.6m in forecast EFC (considerably less than the savings being made by the development approach). Work is underway to challenge the assumptions that have led to this increase and to develop options to mitigate. The developer is delivering the station box at a considerably lower cost than LU could deliver independently.

Significant changes in EFC this quarter

Projects contained in this report, with an EFC that has changed by more than 2% in the quarter, are included in the table with variance commentary to explain. A negative in the % change column indicates a reduction in EFC. For reasons of commercial confidentiality some items are marked as *.

Project Name	EFC (£m)	% change	Variance Commentary
London Road User Charging and Traffic Enforcement Notice Processing Contract re-let	72	-27	EFC revised down to incorporate significant savings recognised as a result of the commercial off-the-shelf based solution and lower risk base of the successful bidder.
Cycle Hire Expansion and Intensification	20	-26	£3.6m Civil construction, asset infrastructure and site installations and risk savings of £3.3m.
Civils (BCV/SSL)	25	-16	The main reason for the reduction is due to re-phasing £-1.3m and re-scoping of works £-1.9m on Bridges and Structures.
Cycle Hire Phase 2	9	-6	Savings due to milestone, construction and risk savings.
Paddington Station Upgrade	53	-5	Savings achieved across all three LU/CRL contracts.
London Overground Capacity Improvement	175	-4	Following the Baseline 2 exercise, EFC has been brought back in line with authority and this is reflected in the Q3 forecast numbers.
Jubilee Line Upgrade	70	-4	The £2.6m decrease is due to a risk reduction of £1m following a review and transfer of costs to the Northern Line Upgrade and reduced costs on JL works.
Lifts and Escalators (L&E)	*	-4	Jubilee, Northern and Piccadilly lines L&E - unbudgeted escalator interventions have been postponed to minimise impact on Central line closure at Tottenham Court Road.
Victoria Station Upgrade	603	2	Following TfL Board approval of District & Circle platform works, power supply upgrades and ventilation works are now included. EFC remains within authority.
Crossrail	285	4	Moorgate Asset Stabilisation scope transferred to Station Works Improvement Programme. Tottenham Court Road Goslett Yard additional mitigation.
Northern Line Extension	1,017	5	Revised property forecast and increase in escalation and risk. EFC increase following risk review – EFC remains within authority.
Track	188	9	The main reasons for the increase relates to new works on the Rail Defect Programme £+7.1m, additional drainage at Uxbridge £+7.7m, introduction of overnight Ballast Track Renewals (BTR) and BTR at Earls Court £+3.0m.



Significant changes in EFC this quarter

Project Name	EFC (£m)	% change	Variance Commentary
Bank Waterloo & City	*	9	The delay to the developer's basement work will delay the LU fit-out contract. This mounting delay pressure has currently led to an increase in forecast EFC. Work is underway to challenge the assumptions that have led to this increase and to develop options to mitigate. The developer is delivering the station box at a considerably lower cost than LU could independently.
Bond Street to Baker Street Tunnel Lining	39	11	Variance is due to the increase in risk to include the unavailability of Transplant trains and further additional works for Charing Cross trials.
Legacy Train Systems	*	48	EFC has increased since the budget was set as a result of provisions for life extension works, including funds transferred from New Tube for London for Bakerloo Extension of Life
New Tube for London	*	164	The EFC has been increased to now cover works planned through to March 2016.

Year End Forecast v Budget

The Budget is an agreed funding of annual expenditure for specified works which is established around period 9 of the previous financial year and forms part of the TfL Group Budget. Variances greater than £5m (+/-) are included.

Project Name	Year Forecast (£m)	Year Budget (£m)	Variance	Variance Commentary
SSR Upgrade - Rolling Stock	280	323	-43	Budget decrease is due to accelerated payments brought forward to 2012/13.*
Legacy Train Systems	23	44	-21	Rephasing due to suspension of tunnel cleaning and Track Monitoring & Evaluating Systems.*
London Overground Capacity Improvement	53	73	-20	Reduced 2013/14 Q3 forecast reflecting lower spend to date and lower expected activity on North London line this year. No impact to overall programme.
Stations Stabilisation Programme	27	42	-15	Rephasing of expenditure into future years due to design delays, the largest being the Baker Street station stabilisation project.*
Hammersmith Flyover Phase 2	20	34	-14	Rephasing of £14m expenditure into future years, following contractor appointment after the Budget was set.*
Cycle Superhighways	14	27	-13	£13.3m has been carried forward to future routes as a result of changes in the Mayor's Vision for Cycling.
Civils (BCV/SSL)	25	36	-11	The main reasons for the reduction is a reduction in scope of Earth Structures and Bridges and Structures £-7.1m and a transfer of works to Asset Performance £-2.4m.
SSR Power	61	70	-9	The main reasons for the reduction is due to works now planned to be delivered next year £-6.4m and savings on the programme £-2.7m.
Cycle Hire Expansion and Intensification (CHEI)	17	24	-7	Savings of £7m have been realised on the Barclays Cycle Hire Expansion and Intensification project equipment, construction and contract variation.*

* Some text in this section was amended after initial publication, to provide greater clarity.

Year End Forecast v Budget

Project Name	Year Forecast (£m)	Year Budget (£m)	Variance	Variance Commentary
London Tramlink Wimbledon Line Enhancements	5	11	-6	Programme of works extended since the Budget set resulting in works and costs moving from current to future years (no change to current end date).
London Road User Charging and Traffic Enforcement Notice Processing Contract re-let	3	9	-6	(£5.2m) Lower Implementation costs and savings attributed to legal costs has resulted in a lower forecast in year.
SSR Upgrade – Depots	45	33	12	Due to risk exposure on asset condition, prolongation and emerging issues during detailed design and construction at Ealing Common and Upminster depots.
New Bus for London Vehicle Purchase	68	56	12	£10.5m brought forward from future years in the Q1 forecast based on the contractual Wrightbus delivery plan. £1.4m carried forward from 2012/13 for four buses.
Northern Line Extension	17	0	17	Driven by the reclassification of Northern Line Extension (NLE) developers' contributions, which will now be received directly from the Greater London Authority (GLA) as grant funding. This funding has also been re-phased to future years, with payments expected from 2014/15. The total level of funding for the NLE remains the same as assumed in the Budget, but will now be received in later years. £3m of expenditure has been re-phased to future years.*
Northern Line Upgrade	102	81	21	Variance is due to £15m new works not in the budget or Quarter 2 forecast, acceleration of Northern Migration Area 4 & 5 testing and transfer from Jubilee line to Northern line track works.

* Some text in this section was amended after initial publication, to provide greater clarity.



Actual v Budget Variance (in year)

London Underground

Type of Variance:	YTD Bud Var £m
Acceleration	20.9
Additional scope	25.0
Release of over programming (provision for schedule slippage)	81.3
Sub Total Increases	127.2
Commercial leverage	-47.4
Re-phasing	-2.1
Schedule slippage	-68.9
Savings	-21.7
Sub Total Decreases	-140.1
*Net Budget underspend	-12.9

*Net Investment expenditure was £12.9m less than budget year to date.

Acceleration is mainly due to SSR Upgrade £13.2m acceleration in the Bombardier Trains and Bombardier signalling supply contracts and Stations Bank Congestion with the recently appointed main contractor for stage 1 works.

Additional scope is driven by the reclassification of £15m of Northern Line Extension (NLE) developers' contributions, which will now be received directly from the Greater London Authority (GLA) as grant funding. This funding has also been rephased to future years, with payments expected from 2014/15. The total level of funding for the NLE remains the same as assumed in the Budget, but will now be received in later years. In addition, there has been a £10m cost increase in Track Partnership due to a programme change and increased unit rates from the impact of more complex works.*

Over Programming £81.3m released in the year to date.

Commercial leverage is mainly due to the advance payment to Bombardier made last year under the rolling stock contract as part of a commercial negotiation.

Re-phasing Infrastructure Renewals (under by £2.1m) mainly caused by SSR Power £1.5m due to Contractor not adhering to programme and Civils £0.6m work re-phased to avoid winter weather and associated risks.

* Some text in this section was amended after initial publication, to provide greater clarity.



Re-phasing due to schedule slippage includes a variance on the SSR Upgrade (under spent by £18.9m) mainly as a result of the Bombardier train milestone for maintenance manuals not being met. Other slippage variances are Legacy Train Systems (£17.1m under) as tunnel cleaning train on hold due to design issues and Automatic Train Monitoring System (ATMS) delay in materials from suppliers and delays to unapproved works.

Savings includes £13m savings from the Victoria Line Upgrade risk provision, for events which have either not materialised or been mitigated (included in the Q1 forecast). Vauxhall Station Upgrade £2.1m saving following the contract award to Bechtel, the EFC has been reduced in line with Procurement/Tendering authority. Infrastructure Renewals (under by £4.5m) due to Civils £3m after detailed asset physical condition and risk review, works have been de-scoped from the Earth Structures Programme as cost saving and SSR Power £1.5m cost reduction, now embedded as efficiencies.

London Rail

Type of Variance:	YTD Bud Var £m
London Tramlink Wimbledon Line Enhancements – re-phasing	-1.0
London Overground Capacity Improvement – programme change	-13.9
*Net Budget underspend	-14.9

*This table represents variances on major capital delivery projects only. It excludes closed projects such as the ELL which is the majority of the total LR budget underspend. It also excludes other minor capital projects.

London Tramlink: Year to date (YTD) underspend due to re-phasing of Wimbledon Enhancement costs into 2014/15 due to earlier slippage that has no overall impact on the delivery of the project.

London Overground Capacity Improvement Programme: YTD underspend due to a programme change since production of the budget as no contract programmes were available at that time (mainly reflecting delays to Silwood finishing works and slower commencement of Willesden depot works). The project is still expected to deliver on schedule.

Actual v Budget Variance (in year)

TfL Surface

Type of Variance:	YTD Bud Var £m
Re-phasing – in-year slippage	-20.2
Re-phasing – slippage into future years	-36.9
Re-phasing – across year acceleration	9.0
Savings	-13.1
Other	-0.7
*Net Budget Underspend	-61.9

*The above variance is made up of £58.7m Capital expenditure and £3.1m Operating Expenditure. Investment Programme expenditure is gross of income and third party contributions.

Re-phasing in-year slippage (-£20.2m) – includes £16m Transport for London Road Network (TLRN) Capital Renewals rescheduling. Of this, £9m relates to delivery works rescheduled following mobilisation of the new London Highways Alliance Contracts (LoHAC) and £7m as a result of network access issues, delays in lighting design and as a requirement to coordinate activity with other street works.

Further in-year slippage of £19m includes; £3m for the Barclays Cycle Hire phase 2 new finance and billing system following successful implementation in September, £3m for the energy efficient street lighting programme following delay in the contract award and £3m due to the slight delay to commencement of the Road Space Management Split Cycle Offset Optimisation Technique (SCOOT) programme for traffic signal technology upgrade.

These were partly offset by £15m of in-year accelerated spend on Local Implementation Plan (LIP) and Borough programme works (£12m) and the Tottenham Hale Gyratory (£3m).

Re-phasing slippage into future years (-£36.9m) includes £17m for Barclays Cycle Superhighways and Better Junctions following the finalisation of the Mayor's Cycling Vision and £14m for new projects added to the 2012 TfL Business Plan, such as road capacity, road safety, cycling and bus pinch point activities, where delivery plans are being refined. There was also re-profiling of £9m for Hammersmith Flyover Phase 2 following development of the detailed construction programme, £6m for Electronic Ticket Machine (ETM) replacement and £6m for the Safety Camera Replacement Project

due to contract award delays (at the tendering stage). Slippages were partially offset by over programming.

Re-phasing across year acceleration £9.0m was due to the revision of the New Bus for London schedule, which led to the earlier delivery of vehicles.

Savings (-£13.1m) – were mainly due to £8m Cycle Hire Enhancement and Intensification realised on Barclays Cycle Hire equipment, construction and contract variation and £3m on the removal of the Congestion Charge retail channel following consultation in January 2013.

Significant Late Milestones

All programme milestones in the detailed report with a variance of 90 days or more outside the scheduled target date are included in the table (future ATC milestones are excluded pending the re-schedule which will be part of the re-let contract).

Project Name	Milestone Description	Target Date	Milestone Bud Var (Days)	Milestone Commentary
SSR Upgrade – Depots	SUP Depots Sub-programme Completion	31-Mar-15	-541	Milestone target date set in July 2012 on the basis of the Ealing Common and Upminster Depots modification contract dates. The condition of some of the existing assets and utility services at depots has been particularly poor (with no safety risk), adding cost and schedule pressure to these projects and causing a number of milestones to be forecast as late, but this does not impact the DfT milestone dates to complete replacement of C and D stock.
SSR Upgrade - Signal Immunisation	SUP Signalling Immunisation Sub-programme Completion	30-Jun-14	-221	Milestone target date set in July 2012 when a swift resolution to the signalling immunisation design issue was anticipated. As identified on page 4 of the Detailed Programme Report “to enable operation of the new S Stock trains on the Sub-Surface Railway (SSR) network, work is required to immunise LU and Network Rail track circuits and other signalling equipment from electromagnetic interference from the new trains. Completion of these works has been delayed in three Network Rail inter-running areas (Wimbledon Branch, Richmond Branch and the east end of the District line) due to design issues. The work on the Wimbledon Branch has been completed and the work on the Richmond branch is scheduled to be completed next quarter. While immunisation is on the critical path, confidence is high that the 2016 DfT date to complete replacement D stock is not compromised, and further mitigation actions are planned to minimise the impact of the delay.

Significant Late Milestones

Project Name	Milestone Description	Target Date	Milestone Bud Var (Days)	Milestone Commentary
Civils	Bridge Replacement D76b - Possession	29-Mar-14	-261	A value management approach has delivered reduced time and cost savings by avoiding a total bridge replacement.
SSR Upgrade – Depots	Neasden Depot Winterisation Works Complete	31-Oct-13	-239	The aim was to complete these works before winter 2013/14. Design issues have delayed the installation works, so these have been re-scheduled for summer 2014.
SSR Upgrade – Depots	Upminster Depot North Sidings Signalling Brought into Use	22-Jun-13	-176	Although the sidings have been brought into use, issues with the design and restrictions on availability of depot access have delayed the commissioning of the signalling.
Station Developments	Bromley-by-Bow Step Free Access (SFA) - Commence Detailed Design	27-Jan-14	-184	Architect has not delivered the design as envisaged and commission has been concluded. Design to be re-tendered.
Lifts and Escalators	Bring Into Use (BIU) Old Street escalator E3	21-Mar-14	-104	The reprioritisation of the Kone escalator programme across Old Street, Waterloo, Angel, and Tottenham Court Road stations has resulted in a minor delay to the completion of Old Street escalator no. 3. No operational impacts are foreseen.
Bond Street	Tunnelling Set Up Decommissioned	28-Sep-15	-192	Re-sequenced due to earlier delays to tunnelling. No longer a critical activity.
Bank Waterloo & City	Bank Stn (W&C) - Bring Into Use (Stage 5) (Annex B:2015)	TBC		The delay to the developer's basement work will delay the LU fit-out contract. This mounting delay pressure will impact the completion date for the scheme. The completion date cannot be accurately forecast currently.
Bank Waterloo & City	Contract Award for Implementation Works	TBC		The delay to the developer's basement work has delayed the award of the LU fit-out contract. The date cannot be accurately forecast currently.
Integrated Transport Smartcard Org.	Reader hardware rollout complete	30-Apr-13	-185	Revised timescales due to access issues on the DLR and Train Operating Company estate.
Cycle Superhighways	CS2 Extension - detailed design complete	30-Apr-13	-136	Finalisation of concept design delayed to accommodate additions to scope. Reflects the current programme following mobilisation of the LoHaC contractor.

Significant Late Milestones

Project Name	Milestone Description	Target Date	Milestone Bud Var (Days)	Milestone Commentary
Cycle Superhighways	CS2 Extension - service commences	02-Aug-13	-90	Completion of detailed design delayed due to scope changes and unidentified service diversions resulting in late completion of the detailed design and late start on site for construction. Reflects the rebaselined milestone as agreed with the Sponsor.
Cycle Superhighways	Route 5 construction complete	31-Oct-13	-152	Forecast completion date extended to capture additional green surfacing.
Cycle Superhighways	Cycle Superhighway Route 5 (Phase 1) - route open	31-Dec-13	-121	Forecast completion date extended to capture additional green surfacing.
Cycle Hire Phase 2	Phase 2 Start of Phase 2 Close (Gate 2)	20-Jan-14	-161	Start of Close now 30.06.14 after completion of final Phase 2 contractual milestone in May 2014.
Cycle Hire Phase 2	Phase 2 End of Phase 2 (Close)	30-Apr-14	-153	End of Close now 30.09.14 following change to Start of Close. Agreement made to change target dates to reflect forecast dates. Action required to formalise.

Significant quarterly milestone movements

Q3 milestone forecast dates that have significantly moved (greater than 60 days) since Q2 are included in the table. A positive movement indicates an improvement in the forecast.

Project Name	Milestone Description	Target Date	Q3 Forecast Date	Movement since last Qtr (Days)	Movement Commentary
SSR Upgrade - Rolling Stock	S7 28 day integrated train reliability achieves 15,000km mean distance between failures	28-Feb-14 ●	11-Oct-13	140	Performance level achieved earlier than previously forecast due to S Stock modifications to improve reliability.
SSR Upgrade – Depots	Ealing Common Depot Yard Enabling Brought into Use	14-Nov-13 ▲	07-Dec-13	122	Successful close out of design issues resulted in significant recovery to complete earlier than previously forecast.
SSR Power	New Bulk Supply Point at Edgware Road	01-Mar-14 ●	08-Nov-13	112	Milestone achieved ahead of target due to use of late notice engineering trains, weekend working to avoid Christmas shut down, undertaking some cabling works during Traffic Hours instead of Engineering Hours, and allowing two existing HV feeders to be out of service concurrently instead of one.
Road Space Management SCOOT	200 sites commissioned	31-Mar-14 ▲	31-May-14	-61	Amber status as a result of resource procurement issues.
Victoria Station Upgrade	Ground Treatment Complete	11-Nov-14 ●	15-Aug-14	-63	Slippage due to some minor re-prioritisation of the grouting sequence but still significantly ahead of programme.

Significant quarterly milestone movements

Project Name	Milestone Description	Target Date	Q3 Forecast Date	Movement since last Qtr (Days)	Movement Commentary
SSR Upgrade – ATC	ATC Signalling - Complete retrospective documentation of Vehicle Automatic Train Protection/Region Automatic Train Protection product software baseline	29-Sep-13 ▲	06-Dec-13	-68	Delayed due to further schedule slippage by Bombardier, before decision to re-let ATC signalling contract.
Northern Line Extension (JNP)	Issue Invitation to Tender (ITT) for Innovation Contractor Engagement contract	30-Sep-13 ▲	09-Dec-13	-70	RUB and the NLE Programme Board agreed to extend the duration for completing the ITT which offered greater benefits with minimal negative effects. The ITT was issued on 9 December 2013.
Bond Street	Tunnelling Set Up Decommissioned	07-Apr-16 ●	07-Apr-16	-76	Re-sequenced as part of tunnelling programme mitigation strategy. Options to recover delay being reviewed.

Significant quarterly milestone movements

Project Name	Milestone Description	Target Date	Q3 Forecast date	Movement since last Qtr (Days)	Movement Commentary
SSR Upgrade - Signal Immunisation	SUP Signalling Immunisation Sub-programme Completion	30-Jun-14 ■	06-Feb-15	-101	Resolution of technical and commercial issues with the signalling immunisation has taken longer than previously forecast, and so the forecast to close out this work has been extended since the last Quarter.
Cycle Superhighways	Route 5 construction complete	31-Oct-13 ■	01-Apr-14	-113	Forecast completion date extended to capture additional green surfacing.
SSR Upgrade – Depots	Neasden Depot Winterisation Works Complete	31-Oct-13 ■	27-Jun-14	-164	The aim was to complete these works before winter 2013/14. Design issues have delayed the installation works, so these have been re-scheduled for summer 2014.
Cycle Superhighways	Cycle Superhighway Route 5 (Phase 1) - route open	31-Dec-13 ■	01-May-14	-164	Forecast completion date extended to capture additional green surfacing.

Future ATC milestones are not reported here pending the re-schedule which will be part of the re-let contract.

Key to milestone RAG status:

Status	Discrete Projects
●	On time or early
▲	Between 1 and 89 days late
■	Greater than 90 days late