

**TRANSPORT FOR LONDON**

**FINANCE COMMITTEE**

**SUBJECT: TfL INVESTMENT PROGRAMME REPORT –  
FOURTH QUARTER 2008/09**

**DATE: 2 JUNE 2009**

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**1 PURPOSE AND DECISION REQUIRED**

- 1.1 The Investment Programme report for the fourth quarter of 2008/09 (07 December 2008 – 31 March 2009) is attached to inform the Finance Committee of Transport for London's Investment Programme performance.
- 1.2 This report will be considered by the Board at its meeting on 24 June 2009.

**2 RECOMMENDATION**

- 2.1 The Committee is asked to NOTE the contents of this report.

**3 CONTACT**

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# Investment Programme Report

## Fourth Quarter, 2008/09

# Transport for London

## Investment Programme Report

Fourth Quarter, 2008/09 (7 December 2008 – 31 March 2009)

### 1. Programme Highlights

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The key highlights from the fourth Quarter of 2008/09 were:

- First S stock train delivered to Old Dalby test track and commenced dynamic testing;
- Marble Arch and Notting Hill Gate station modernisation started on site; and
- Main works on Southfields station step-free access started on site.
- Tower Gateway DLR Station re-opened for passenger service.
- DLR Woolwich Arsenal extension opened for passenger service.

Post Quarter events include:

- East London Line – Operational building complex was made available for use on 30 April;
- DLR Railcars - the 24th vehicle was delivered on 8 April, and the 1st vehicle for the Stratford International extension on 22 April;
- iBus – all vehicles (8,208) were fitted with the system by 21 April; and
- Revised closure plan agreed with Tube Lines to enable completion of Jubilee Line Upgrade.

Cover picture: 'S' Stock pre-production Train 2 on the test track at Old Dalby. This train will be the first train to arrive in London (forecast for 2 September 2009).

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

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

This report covers discrete projects with a total cost greater than £50m and programmes over £10m per annum. For each project, key milestones are given with a forecast date compared against the March 2008 baseline, and if appropriate, additional milestones from the 2008/09 Budget Deliverables document. For the Quarter 1 2009/10 report, further milestones will be added from the 2009/10 Budget Deliverables document

Key to RAG status:

	Discrete Projects	Annualised Programmes
●	Within 1 month of target	100% of target achieved
▲	Between 1 - 3 month delay	>75% of target achieved
■	Greater than 3 month delay	<75% of target achieved

This report focuses on delivery of investment projects. For a discussion on financial performance see the Quarter 4 Operational and Financial Report.

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

## London Underground

### LU line Upgrade – BCV

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Victoria line upgrade: Second pre-production train delivered	09-07-2008	11-07-2008	Completed
Victoria line upgrade: Full overlay available	17-07-2008	17-07-2008	Completed
Victoria line upgrade: Start Testing the New Service Control Centre (in Engineering Hours)	30-11-2008	06-10-2008	Completed
Victoria line upgrade: Start Testing T1/T2 in traffic hours without passengers	26-01-2009	31-05-2009	■
Victoria line upgrade : Approval to trial signalling control in passenger hours	22-03-2009	06-07-2009	■
Full Journey Time Capability	31-08-2013*	18-05-2012	●

\*PPP Contract Date

The Victoria line is the first major line upgrade on the Bakerloo, Central and Victoria lines (BCV) network. The works include new rolling stock, signalling, control equipment, depot and track.

Software development remains on the critical path for the overall programme. The signalling contractor has now committed to a reliability growth plan in order to achieve the upgrade completion date. The start of testing Train 1 and Train 2 in traffic hours has slipped by a further two weeks since the Quarter 3 report to 31 May 2009. The rolling stock delays reported in the Quarter 3 report have not improved, but a range of mitigating actions has eliminated further delay. The first production train (T3) is planned for delivery to London in September 2009.

Despite these rolling stock and signalling issues, the completion date of May 2012 for the Journey Time Capability (JTC) remains ahead of the PPP contractual date of August 2013.

## LU line Upgrade – PPP JNP

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Jubilee line – Transmission Base Train Control (TBTC) Rolling Stock – Delivery of Train 59	26-10-2008	01-10-2008	Completed
Jubilee line – Jubilee line Section 1 (JLS1) - Maturity Level 3 Testing	27-11-2008	07-06-2009	■
Jubilee line – JLS2 - Maturity Level 3 Testing	13-03-2009	30-05-2009	▲
Jubilee line – TBTC Contract - J2/3 - Ready for Revenue Service	16-03-2009	07-09-2009	■
Jubilee line full journey time capability	31-12-2009	31-12-2009	●
Northern line full journey time capability	31-12-2011	31-12-2011	●
Piccadilly line Upgrade – new fleet contract award	10-01-2009	01-06-2010	■

The PPP contractual date for the Jubilee line upgrade to achieve full journey time capability is 31 December 2009. Tube Lines Ltd (TLL) has confirmed that they will be unable to commission J2/3 in June as previously planned. Although TLL's remedial works to replace the concentric cable with newly installed multi-core cable have progressed well, it has delayed the start of Maturity Level (ML3) testing by 3 months to 1 May 2009. As a result, the schedule of line closures booked by TLL for installation and testing of the new signalling is out of step with the revised programme. LU has granted additional closures during July and August to support the commissioning of J2/3 in mid-August. With these additional closures, TLL has confirmed that despite being behind the target programme, they will achieve the journey time capability by the end of the year.

For the Northern line, the programme is suffering from the focus of TLL resources on the Jubilee line. The full journey time capability milestone remains targeted at December 2011, but the programme is now considerably compressed. The period of time between the commissioning of the first section (N1) and the final section (N6) is now reduced from twelve to six months.

The train conversion programme was suspended in Quarter 2, pending a second design configuration. Train conversion recommenced in January. Each train conversion is currently taking six weeks – the conversion of the full fleet by July 2010 assumes a reduction of the cycle time to sixteen days by Train 8.

For the Piccadilly line upgrade, TLL has further revised the programme, putting back the contract award for the new rolling stock fleet a further six months to June 2010. Delivery of the trains is still planned to begin in January 2013 and complete in December 2014. The financing of the new fleet is required to be confirmed by September 2009 to support the current schedule.

### LU line Upgrade – Sub-Surface Railway

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Complete delivery into service of refurbished D-Stock fleet	01-07-2008	01-04-2008	Completed
Review and accept the Design Compliance Report for new trains	28-08-2008	29-10-2008	Completed
Issue Programme Assurance Plan for approval	29-08-2008	20-06-2008	Completed
T1 S-Stock train delivered to Old Dalby	13-04-2009	26-02-2009	Completed
Train Delivery – First train delivered to London depot	01-11-2009	02-09-2009	●
Signalling – Phase 1a Immunisation works – Baker St northwards	26-11-2009	17-09-2009	●
T1 ready for operation in Engineering Hours	30-04-2010	05-10-2009	●

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

The new rolling stock and related enabling works are progressing to plan. The first S-Stock train was delivered to the test track at Old Dalby in February 2009 and commenced dynamic testing on 23 March. Testing on the network during engineering hours is planned to commence in October 2009.

Procurement for the new signalling contract is underway and the ITT is planned to be issued by August 2009, subject to approval from the Finance Committee and TfL Board.

Improvement works to the Neasden Depot will need to be reconfigured because the current design does not provide the space and facilities for the maintenance of the new 8-car S-Stock trains. The initial cost estimate indicates some pressure on the existing project budget.

### Channel Tunnel Rail Link at King's Cross

Spend to end of Q4 (£m)	EFC (£m)
786.2	883.6

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Handover roof slab to NR	01-09-2008	01-09-2008	Completed
Handover the site known as the bomb gap to NR	30-09-2008	19-09-2008	Completed
PFI power complete installation of LUL power supply	07-01-2009	03-11-2008	Completed
Open Northern Ticket Hall	28-02-2010	01-12-2009	●

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

Phase 1 included refurbishment of the Metropolitan and Circle line platforms and was completed on 10 December 2006.

Phase 2 is well advanced on site. During Quarter 4, the major milestone of handover of the Northern Ticket Hall roof structure to Network Rail was achieved on programme, and progress included substantial escalator and lift installation, tunnel lining and commencement of fit out of the Northern Ticket Hall. The programme has been accelerated to allow opening of the Northern Ticket Hall in December 2009 to coincide with the introduction of Kent commuter services into St Pancras. The key focus now is on the completion of architectural, mechanical and electrical works. The commissioning and handover is now in detailed planning.

#### Bond Street Congestion Relief

Spend to end of Q4 (£m)	EFC (£m)
11.2	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Stage D Design Complete	30-01-2009	31-10-2008	Completed
Completion	29-09-2016	29-09-2016	●

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

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

The RIBA Stage D design was completed ahead of plan on 31 October 2008. During Quarter 4, an asbestos removal trial in two non-public areas was completed.

Briefings have been held with contractors who have expressed an interest in the main works contract.

### Paddington (Hammersmith & City) Congestion Relief

Spend to end of Q4 (£m)	EFC (£m)
3.1	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Outline / Scheme Design approved RIBA C/D	30-04-2009	18-12-2009	■
Completion	25-11-2013	18-08-2014	■

Paddington (Hammersmith & City line) station is amongst LU's top priorities for congestion relief because of demand growth associated with local area redevelopment and the Sub-Surface line Upgrade. The project seeks to deliver congestion relief and step free access benefits and ensure the continued safe operation of the station. There are interfaces with Network Rail and Crossrail, who require part of the adjoining "Triangle Site" for a re-located taxi access to the main line station.

The Network Rail, Crossrail and LU project components are now combined into the Paddington Integrated Project with a joint project steering board. As a consequence of this, the programme has been re-structured with delay to the design.

In Quarter 4, Westminster Council also accepted the proposed Paddington Integrated Project planning strategy of submitting the entire scheme under Crossrail Act Schedule 7 consents mechanism.

The revised delivery strategy has also been determined to allow for the early introduction of the Extended Circle line service in December 2009. The first critical construction milestone is delivery of the Crossrail taxi ramp in March 2011. Crossrail will take responsibility for the delivery of the station box, with the fit-out of the station to be completed by LU.

### Finsbury Park Congestion Relief

Spend to end of Q4 (£m)	EFC (£m)
4.6	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Complete Stages E-G (SFA scheme)	31-03-2009	31-03-2009	Completed
Spiral staircases start on site	31-07-2009	Deferred	N/A

During Quarter 4, following completion of the design, the project was deferred. All stakeholders have been informed and archiving of the project is underway.

### Victoria Station Upgrade

Spend to end of Q4 (£m)	EFC (£m)
60.4	695.5

Milestones	Current Plan Date	Actual / F'cast Date	RAG
ITT main works implementation	29-09-2008	02-09-2008	Completed
Main Works ITT return	23-04-2009	23-12-2008	Completed
Asbestos removal – practical completion	26-05-2009	29-01-2009	Completed
Stage 2 Main Works contract instructed	04-02-2010	23-02-2010	▲
Completion	02-08-2018	12-07-2018	●

With 80 million people passing through it each year, Victoria is one of the most congested stations on the Underground network. Temporary station closures are regularly used to manage congestion, particularly during the morning peak. This project will provide a significant increase in passenger circulation space in key congested areas of the station and step free access from street to platform for the Victoria line.

The Transport and Works Act Order (TWAO) Public Inquiry was completed on 23 January 2009, when all significant objections to the scheme were removed by negotiation. The tenders for the main works were returned on 23 December 2008. However, due to budgetary constraints and other commitments from the TWAO Agreements, this has required a re-pricing of certain tender elements and delayed the Stage 1 Contract Award from March 2009 to August 2009. The re-priced tenders were returned in April 2009 and are currently under review. Contract award for the Stage 2 main works is scheduled for February 2010.

The enabling works have continued to plan, with the removal of asbestos completed ahead of plan in January 2009.

### Tottenham Court Road Congestion Relief

Spend to end of Q4 (£m)	EFC (£m)
105.3	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Completion of Stage E design	28-02-2008	31-05-2008	Completed
Contract award – demolition	16-01-2009	19-12-2008	Completed
Detailed design RIBA stage F complete	30-01-2009	26-01-2009	Completed
Site handover to demolition contractor	30-06-2009	19-01-2009	Completed
Completion	15-08-2016	03-08-2016	●

Tottenham Court Road station is currently operating in excess of its capacity and suffers from significant congestion. Demand at the station is forecast to increase further with Crossrail.

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

During the Quarter, detailed design was completed on 26 January 2009. Property takeover began on 19 January with physical demolition beginning in June. Local stakeholders are being engaged and a Pedestrian Forum has been established.

The design of the station and associated urban realm had a successful passage through the Commission for Architecture and the Built Environment process. Utilities diversions are continuing in the area with associated traffic management in place. The subsequent disruption to traffic is being closely managed with the London Boroughs of Westminster and Camden. The main works are planned to begin in January 2010.

#### Bank Congestion Relief

Spend to end of Q4 (£m)	EFC (£m)
6.4	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Bank (Walbrook Sq) – Complete design of tunnel breakthrough	28-02-2009	28-02-2009	Completed
Review of Stage B feasibility report complete	30-04-2009	21-04-2009	Completed

The Bank project consists of two workstreams:

Bank- Walbrook Square aims to provide more convenient access to streets south and south-west of the station, reduce congestion on the Waterloo & City (W&C) line platforms, and provide step free access to the W&C line. LU will fund the construction of the station box shell which will be delivered by the developer. Thereafter, LU will fit out the station box to complete the new entrance. There may be a delay to the start of construction due to a change of leasing arrangements for the Legal and General building.

Bank - Congestion Relief aims to relieve current and expected congestion in Bank station, which would lead to increasingly frequent station closures (notably of the Northern line/DLR area) if nothing is done. There are two options under feasibility/engineering review and one will be progressed. The design is continuing, with the feasibility report completed on 21 April 2009. Work from Quarter 1 2009/10 will focus on development of the single design option that relocates the southbound running tunnel of the Northern line. This option provides greater benefit, reduced disruption to the service during construction and a reduced overall cost.

Olympic Works (Station Accessibility)

Station	Spend to end of Q4 (£m)	EFC (£m)
Green Park	5.7	94.7
Southfields	2.9	16.9

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Southfields contract award – detailed design	17-09-2008	24-06-2008	Completed
Southfields Delivery into Service	01-10-2010	06-08-2010	●
Green Park Delivery into Service	17-12-2011	01-09-2011	●

This programme provides step free access at two stations critical to the Games: Southfields and Green Park.

**Southfields** – The project scope now includes the stations refurbishment works. The design and build contract has been let, and detailed design was completed and approved by the target date of 13 March 2009 and enabling works have commenced.

**Green Park** – The programme is currently on target to meet the Olympic delivery date. During Quarter 4, negotiations between the Royal Parks, English Heritage and LU concluded that the planning application for the station works should be separated from the cafe works. Subsequently, the Royal Parks have decided not to proceed with the cafe, which removes the objection from English Heritage. The pavement canopy on Piccadilly is now being re-designed and a separate application will then be made to Westminster Council. The design and construction contract was awarded to TLL, with the tunnelling contract subsequently let to Gallaghers. The occupation licence has been agreed with the Royal Parks and works have commenced with hoardings erected.

**Baker Street** – The project has been deferred. All stakeholders have been informed and archiving of the project is underway.

### Stations Accessibility Works (2010 target)

Station	Spend to end of Q4 (£m)	EFC (£m)
Amersham SFA	0.9	*
Greenford SFA	0.9	*
Newbury Park SFA	0.9	*
West Kensington SFA	1.7	*
Osterley SFA	1.0	*
Kingsbury SFA	1.7	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Amersham SFA Delivery Into Service	23-12-2010	28-10-2010	●
Greenford SFA Delivery Into Service	23-12-2010	28-10-2010	●
Newbury Park SFA Delivery Into Service	23-12-2010	28-10-2010	●
West Kensington SFA Delivery Into Service	23-12-2010	28-10-2010	●
Osterley SFA Delivery Into Service	23-12-2010	28-10-2010	●
Kingsbury SFA Delivery Into Service	31-12-2010	05-11-2010	●

These projects will contribute to the 25 per cent 2010 DfT accessibility target. Detailed design is underway on all the stations. Enabling works are planned to commence in Summer 2009, following further funding approval.

### Cooling the Tube

Spend to end of Q4 (£m)	EFC (£m)
95.0	700.1

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Portable fan rollout summer 2008	31-08-2008	18-07-2008	Completed
Central services tunnel – Royal Institute of British Architects (RIBA) C approval	15-09-2008	15-09-2008	Completed
Victoria line – Start on site MTV 1	01-10-2008	29-09-2008	Completed
Decommissioning of portable fans	31-01-2009	05-01-2009	Completed
All Mid Tunnel Vents commissioned (Victoria line)	31-07-2012	31-07-2012	●

This is a long term programme to control ambient temperatures, which are already high, and without intervention could rise to unacceptable levels as more energy is used within the tunnels to provide the line Upgrade train service capability. Planned mitigation measures include improved energy efficiency, increased ventilation, and selected station cooling systems.

Due to budgetary pressures, only the works to support the Victoria line Upgrade are being progressed. These comprise two main parts – refurbishment and upgrading of thirteen mid-tunnel vents, and station cooling works at two major stations (Green Park and Euston).

Work is on site for the first tranche of the mid-tunnel vents, including removal of the old fans and structural work to the shafts before new (higher capacity) fans are installed. The contract for the second tranche was awarded on 27 March.

The station works are at the design stage. Further design work at Victoria and Oxford Circus will be deferred once the RIBA Stage D design is completed. The designs for Green Park and Euston will continue and the procurement for the next stage, RIBA E, has begun.

Operational Accommodation (OAIP)

Spend to end of Q4 (£m)	EFC (£m)
44.1	104.8

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Brixton Train Crew Accommodation (TCA) - Start on Site – Main Works	15-05-2008	04-04-2008	Completed
High Barnet TCA - Tender Award Completed	21-06-2008	20-06-2008	Completed
High Barnet - Start on Site	31-07-2008	31-07-2008	Completed
Edgware TCA - Commence Stage D-G	31-08-2008	29-08-2008	Completed
Brixton TCA - Practical Completion	30-06-2009	14-05-2009	●
High Barnet TCA – practical completion	25-09-2009	31-07-2009	●

This programme is to improve the condition, ambience, and capacity of staff accommodation.

- Brixton Train Crew accommodation – Work began on site in April 2008. Completion has slipped slightly to 14 May 2009, but remains ahead of the target date of 30 June 2009.
- High Barnet – The main works contract commenced on site on 31 July 2008 with completion forecast for July 2009.

### Connect Airwave

Spend to end of Q4 (£m)	EFC (£m)
42.3	*

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Upgrade Enhanced Base Transceiver System (EBTS) to new airwave components – Batch 7	02-09-2008	16-05-2008	Completed
Upgrade EBTS to new airwave components – Batch 9	24-11-2008	18-08-2008	Completed

This project enhances the emergency services' communication system on the Underground by expanding coverage and capacity. The contract was awarded in January 2007 and work has progressed to an accelerated plan. The one hundred and twenty-five stations required are now fully commissioned and in service. Airwave Phase 2, including an extension of coverage to Stratford, has now been agreed with the National Police Information Authority (NPIA). The design and installation for coverage in an additional fifteen tunnels is now being priced by the contractor. Further design work to provide increased capacity at thirty-nine stations has also begun.

### Connect Works

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Connect – 4 lines Radio Systems Go-Live	29-02-2008	29-02-2008	Completed
Central line Radio – Commencement of train cutover	26-05-2008	14-07-2008	Completed
Northern line Radio – Commencement of train cutover	22-09-2008	27-11-2008	Completed
Phase 2 – Bakerloo line	01-12-2008	01-12-2008	Completed
Video cutover – first Metronet batch delivered (25 stations)	28-02-2009	27-01-2009	Completed
Radio resilience – present long term resilience plan	31-05-2009	29-05-2009	●
Video cutover – first TLL batch delivered (20 stations)	30-06-2009	02-06-2009	●

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

Phase 2 is now underway, which provides increased functionality on the new equipment and improved video capability. The first video cutover for BCV/SSL Batch 1 was completed in January 2009.

Outages on the system have required further work to improve system resilience. A revised resilience strategy is now in place.

## Power Works

Milestones	Current Plan Date	Actual / F'cast Date	RAG
SSL Met line DD&B issue of Invitation to Tender (ITT)	07-07-2008	04-09-2008	Completed
Jubilee line Power Upgrade – Award Finchley Rd & Neasden design and build contract	01-08-2008	05-05-2008	Completed
Piccadilly – Provisional Concept Design Complete	18-08-2008	18-08-2008	Completed
SSL Power Upgrade – S&D package 1 staged project life end	30-09-2008	03-10-2008	Completed
VLU Power Upgrade – Full completion of 22kV power cable	12-12-2008	27-03-2009	Completed
SSL Power Upgrade – Award Met line design and build contract	01-03-2009	27-03-2009	Completed
VLU Power Upgrade – Civil works complete	25-03-2009	25-03-2009	Completed
Jubilee line Power Upgrade – Power On	16-08-2009	06-08-2009	●
VLU Power Upgrade – overall completion (Milestone 41)	08-12-2009	08-12-2009	●

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

The delivery phase of the Victoria line power upgrade remains on programme with final forecast for December 2009. The remaining section of the 22kV power cable was laid on 27 March 2009, following delays resulting from emergency gas works. Progress remains on target, with the effective power-on date remaining June 2009, in line with the requirements of the line upgrade.

The Sub-Surface power upgrade is progressing from scoping and development to detailed design and build. The design and build for the first two packages (1A and 1B) was awarded on 20 March 2009. Packages 2, 3 and 4 are being prepared for tender, with award planned for later in 2009.

For the Northern line power upgrade, LUL's 630v conceptual design has been formally accepted by TLL. The scope of the power works for the Piccadilly line is now minimal.

On the Jubilee line power upgrade, power-on remains planned for 6 August 2009. During Quarter 4, the detailed design was completed for most sites and work has begun at the Alaska Street site in Waterloo. Work at North Greenwich is due to commence in Quarter 1 of 2009/10.

For the Piccadilly line power upgrade, the current delivery programme and budget is based on a 630V specification rather than on 750V. 750V offers greater operating efficiency and a new programme and cost is under development. Further development work has been halted until the traction voltage has been formally agreed with TLL. Scoping and development needs to begin by the end of Quarter 1 in order to prevent significant delay to the overall programme.

## London Rail

### East London Line Extension

Spend to end of Q4 (£m)	EFC (£m)
720.5	993.5

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Main contractor occupancy of ELL Track way and Stations	31-03-2008	01-03-2008	Completed
Completion of the launch of bridge GE19	31-05-2008	05-05-2008	Completed
Completion of main span New Cross Gate	31-05-2008	11-05-2008	Completed
Handover of bulk supply point to EDF	31-08-2008	31-08-2008	Completed
Operational building complex available for use by employer	31-12-2008	30-04-2009	Completed
Test running	31-01-2010	30-10-2009	●
Trains in service	30-06-2010	30-06-2010	●

The upgraded and extended East London Line is planned to open in 2010 with TfL as the passenger service operator through a joint East London Line / North London Railway concession with London Overground Rail Operations Ltd. This project is an Olympic deliverable.

During this quarter, several key short term milestones were met, including the completion of the central section track-slab on 23 February. This did not meet the 23 December 2008 target date due to soft ground conditions but the delay has been accommodated into the overall track programme.

Balfour Beatty Carillion has submitted a total of 557 designs for assurance acceptance against a target 568. There are now just eleven designs remaining to be submitted as part of the core works. The Independent Technical Certifier has approved 495 designs against the 517 target.

The last Network Rail possession is scheduled for May 2009 when the on-network works are expected to be completed. However, there is an interface issue with Balfour Beatty Carillion, where a delay to the main works has resulted in a delay to the commissioning of Network Rail infrastructure until later in the year.

The Operational building complex was made available for use on 30 April. This had been rescheduled to enable resources to be concentrated on works on the critical path. Test running commencement is the next major milestone, which has slipped by two months to October 2009.

The project remains on schedule for the June 2010 service commencement.

## London Rail Concession Rolling Stock

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

Milestones	Current Plan Date	Actual / F'cast Date	RAG
First NLR unit accepted	31-10-2008	31-05-2009	■
First East London Rail unit delivered for NR test track	31-12-2008	31-07-2009	■
Trains in Service – North London Railway	31-12-2008	30-06-2009	■
Last NLL unit accepted	14-01-2009	31-12-2009	■
Last ELL unit accepted	14-08-2009	14-11-2009	▲
Trains in Service – East London Line	30-06-2010	30-06-2010	●

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

The acceptance of the first unit was delayed further from 3 January and is still yet to be accepted as there are some outstanding tests and mileage to be completed. This is now expected at the end of May. Slippage was due to the availability of parts from suppliers to Bombardier during construction. This has delayed the trains in service milestones for the North London Railway from the Quarter 3 date of 10 March 2009 to the end of June. The last units accepted milestones in have moved to December for the North London Line and November for the East London Line.

Delivery of the first East London unit has slipped from 31 March 2009 to 31 July, however train production is not currently on the critical path for the East London Line Project, so the delay will not affect the date of service commencement.

## DLR Bank-Lewisham 3 Car Infrastructure

Spend to end of Q4 (£m)	EFC (£m)
176.3	266.6

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Westferry platform units installed	17-08-2008	13-03-2009	Completed
Sectional completion package 2	05-01-2009	05-01-2009	Completed
Sectional completion – Cable Street viaduct	31-01-2009	30-01-2009	Completed
Sectional completion – Stepney causeway	13-03-2009	13-03-2009	Completed
Construction/track work/signalling complete	31-01-2010	31-01-2010	●
Service operational	31-01-2010	31-01-2010	●

This project will deliver the structural works necessary for 3 car operation on the DLR from Bank and Tower Gateway to Lewisham.

On Package 1 (Bank – Crossharbour), Tower Gateway station re-opened for passenger service seven weeks ahead of schedule on 2 March. Sectional completion of Cable Street viaduct was completed on schedule at the end of January and Stepney causeway in mid-March. However, the installation of precast platform units at Westferry occurred seven months late on 13 March following earlier design delays. On Package 2 (Lewisham Extension), all work was complete by 5 January.

On Package 7 at Canning Town the superstructure construction is complete and work has commenced on track works. Twenty-four hour working was instigated and this has reduced the programme slippage reported in Quarter 3. Enabling work for the May blockade are now in place.

#### DLR Woolwich Arsenal Extension

This project was delivered under a Private Finance Initiative. No direct costs are reported.

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Completion of station	27-08-2008	30-09-2008	Completed
Systems testing complete	31-12-2008	31-12-2008	Completed
Project completion	28-02-2009	10-01-2009	Completed

This project delivered the extension of the DLR from King George V station to Woolwich Arsenal through a PFI contract. This now provides a link under the Thames from South Eastern Trains to the City Airport and Canning Town.

This scheme was opened to passengers on 10 January, seven weeks ahead of the contractual opening date. This was made possible by accelerating the works schedule. Passenger use has been higher than forecast and additional services came on stream when Tower Gateway station re-opened on 2 March.

#### DLR Stratford International Extension

Spend to end of Q4 (£m)	EFC (£m)
114.5	192.7

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Stratford Int. Station - Completion of new platform structure	18-07-2008	06-10-2008	Completed
Stratford Int. Station - Completion of main platform canopy and finishes	03-11-2008	03-11-2008	Completed
Completion of construction of Star Lane platform, canopies and signalling equipment room	19-02-2009	13-07-2009	■
Complete works on Package 6	30-06-2010	30-06-2010	●
Service operational	30-07-2010	30-07-2010	●

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

The planned Christmas blockade and commissioning work at Stratford Regional station did not take place due to a number of issues not being resolved in time by the contractor, culminating

in Network Rail not granting the possession. The blockade was subsequently rescheduled for Easter and has now been successfully completed.

The completion of the construction of the Star Lane Platform, Canopies and Equipment Rooms slipped by an additional four months. The delay was due to late designs, material delays and the cancellation of the Christmas possession; however, there is no impact on the overall completion date.

At Canning Town, a complete re-design has been carried out following the failure of the lower concrete base slab. Slab works have re-commenced and the overall programme is being assessed, but early indications are a slippage of between eight and twelve weeks on the service operational date, which is not yet reflected in the forecast date.

#### DLR Railcars

Spend to end of Q4 (£m)	EFC (£m)
21.3	56.0

Milestones	Current Plan Date	Actual / F'cast Date	RAG
18 <sup>th</sup> vehicle delivered	18-09-2008	14-01-2009	Completed
18 <sup>th</sup> vehicle in service	18-10-2008	15-04-2009	Completed
24 <sup>th</sup> vehicle delivered	16-12-2008	08-04-2009	Completed
1 <sup>st</sup> railcar delivered for Stratford Int. Extension	09-01-2009	22-04-2009	Completed
24 <sup>th</sup> vehicle in service	16-01-2009	24-06-2009	■
All 55 vehicles in service	31-12-2009	04-10-2009	●

This project covers the provision of twenty-four extra DLR railcars for 3-car operation and the Woolwich Arsenal extension, nine for the Stratford International extension and twenty-two for the Games.

Delivery and commissioning of new vehicles continues with good progress being made, slightly ahead of the agreed programme.

The 18<sup>th</sup> vehicle was delivered on 14 January and was in service slightly ahead of the revised programme on 15 April. Since the Quarter 3 report, Bombardier has recovered four weeks on the 24<sup>th</sup> vehicle in service milestone, which is expected on 24 June; however, this is still a five month delay on the original programme. The first railcar was delivered for the Stratford International extension on 22 April, two months ahead of the revised programme.

The delays are as a result of earlier problems in approving the first cars following testing. Production and deliveries could not continue until these issues had been resolved.

The expected final cost has fallen by £2.6m from the Quarter 3 forecast of £58.6m, because of the inclusion of liquidated damages.

## North London Railway Infrastructure Project

Spend to end of Q4 (£m)	EFC (£m)
32.9	240.1

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Completion of preliminary (GRIP4) design	30-09-2008	30-09-2008	Completed
Prime contract award	31-10-2008	27-03-2009	Completed
Project completion	31-01-2011	31-01-2011	●

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

Contracts were awarded by Network Rail to Atkins Rail for signalling and Carillion for core infrastructure works (the prime contract) on 27 March, superseding the letters of intent which have covered work to date. The contractors are continuing to mobilise their teams at the current project offices in Old Broad Street while works commenced to prepare the new project offices at Chalk Farm for a move in May 2009.

Invitations to tender were issued to five tenderers for the railway systems and the power works during March.

The signalling scheme plan and signal siting has been approved by both Network Rail and Transport for London. Preliminary designs for track and systems works is now starting to progress, the focus being on completing and approving all documentation required for issue to tenderers. The detailed design for the Dalston Western Curve civil engineering works is now slightly ahead of programme.

## Surface Transport

### iBus

Spend to end of Q4 (£m)	EFC (£m)
72.9	81.8

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Roll out of 3,300 buses	29-07-2008	25-06-2008	Completed
Roll out of new technology to fleet substantially complete (7,300 buses)	28-02-2009	04-02-2009	Completed
All vehicles in fleet (8,208) installed with iBus	30-04-2009	21-04-2009	●
Old system decommissioned and all operations transferred to new system	28-02-2009	30-06-2009	■

The iBus project is to procure and implement a radio communication and Automatic Vehicle Location system. This will improve quality of information to customers, both on-bus (through audio-visual next stop information), and at bus stops and reduce the current risk of a system failure.

During this quarter the “substantially complete” milestone of rolling out the new technology to 7,300 vehicles was achieved on 4 February. The rollout to the entire fleet of 8,208 vehicles was achieved on 21 April. The decommissioning of the old system is still forecast to be delivered four months behind schedule at the end of June 2009, due to the earlier delays in rollout of the new system; however, this is not affecting the operational performance of the iBus system.

### Congestion Charging Re-Let

Spend to end of Q4 (£m)	EFC (£m)
69.5	98.5

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Selection of retail service providers	29-08-2008	30-09-2008	Completed
Release 1 – go-live of new contract for extended zone	01-11-2009	30-11-2009	▲
Completion of delivery stage (release 1)	30-11-2009	30-11-2009	●
Financial close (release 1)	28-03-2010	28-03-2010	●
Release 2 – go live of account based charging using ANPR or DSRC enforcement technology	01-11-2010	01-11-2010	●

The Congestion Charging Re-Let project is to establish new contracts for the operation of the zone and to operate the Low Emission Zone. The re-let will allow the introduction of customer accounts and new detection technology to facilitate more flexible charging options.

Progress continues on the Build and Transition streams of this project, but system testing remains an area of concern and continues to be closely monitored by the project team. IBM continues to take all necessary action to resolve issues and remains confident that systems integration testing will commence on schedule in May. The core IT / retail interface has now been agreed and e-pay have completed the majority of the unit testing required before the system test phase at Easter. The bailiff procurement was delayed due to a legal challenge from an unsuccessful bidder, which has since been withdrawn. Contracts were signed with the four successful bidders on 8 April.

The project is working to a revised schedule with the Release 1 – go-live of new contract, moved back by a month to the end of November 2009.

The expected final cost for this project has fallen by £1.2m since Quarter 3 as a result of IT changes associated with the planned removal of the Western Extension.

#### Greenwich Waterfront Transit

Spend to end of Q4 (£m)	EFC (£m)
6.2	6.7

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Detailed design submitted for approval	12-08-2008	02-09-2008	Completed
Complete preparation of Orders and Planning Applications	06-10-2008	11-02-2009	Completed

It has been announced that this scheme will no longer be implemented. TfL has written to the London Boroughs of Greenwich and Bexley, withdrawing the planning application and has written to the Secretary of State advising that TfL no longer wish to pursue the Compulsory Purchase Order and Side Road Orders.

The project is now being closed down.

## TLRN Capital Renewal

This is an “annualised programme”, where minor schemes are delivered on a rolling basis. Costs are based on a yearly budget.

Spend to end of Q4 (£m)	2008/9 Budget (£m)
48.2	51.4

Milestones	Current Plan Date	Actual / F'cast Date	RAG
Q1 Target of 14 Capital Renewal schemes to achieve Gate 2 approval	20-06-2008	12-09-2008	Completed
Q2 Target of 60 (cumulative) Capital Renewal schemes to achieve Gate 2 approval	12-09-2008	07-11-2008	Completed
Q3 Target of 144 (cumulative) Capital Renewal schemes to achieve Gate 2 approval	05-12-2008	04-03-2009	Completed
Q4 Target of 200 (cumulative) Capital Renewal schemes to achieve Gate 2 approval	31-03-2009	31-03-2009	Completed

The Transport for London Road Network (TLRN) Capital Renewal Programme involves the reconstruction and resurfacing of carriageways and footpaths to improve their condition and safety, and the renewal, upgrading and improvements to bridges, tunnels, lighting and other equipment.

The Quarter 3 target of 144 schemes gaining Gate 2 sign off was achieved three months late on 4 March. The pace of delivery had substantially increased by that stage and a total of 254 schemes achieved Gate 2 sign-off by year end, so the Quarter 4 target has been exceeded. This was achieved through a combination of a ramp up in the resources and clearing Gate 2 sign offs overhanging from previous periods.

There has been an underspend of £3m compared with the 2008/09 budget for TLRN Capital Renewal, which as well as the 2008/9 budget deliverables, covers the completion of the 2007/8 programme, preparation for 2009/10 and sums for additional work not recorded in the budget deliverable milestones.

For 2009/10 the budget deliverable milestones are moving to output based measures rather than the process based Gate 2 measures. A more linear delivery profile is expected through the year as work is measured by physical output rather than by Gate 2 sign off. These measures are set out in the table below.

Description	Units	Target
Area of carriageway resurfaced	m <sup>2</sup>	255,000
Area of footways resurfaced	m <sup>2</sup>	60,000
Number of lighting units replaced	No.	1,000
Number of schemes to achieve a reduction in the total number of structures with special measures	No.	32
Removal of Pedestrian Guard Railing	Km	35

### Accident Reduction Road Safety

Spend to end of Q4 (£m)	2008/9 Budget (£m)
5.4	7.7

Milestones	Current Plan Date	Actual / F'cast Date	RAG
6 cumulative LRSU Gate 2 sign offs at Q2	12-09-2008	02-01-2009	Completed
38 cumulative LRSU Gate 2 sign offs at Q4	31-03-2009	18-05-2009	▲

The Accident Reduction Road Safety Plan involves making changes to the physical road layout of Borough roads at selected locations, road surfaces, signing and other changes as required for each road safety remedial measure.

The Quarter 2 target of six schemes reaching a Gate 2 sign off was achieved in Period 10. By year-end, ninety-five per cent of the thirty-eight Quarter 4 target schemes had achieved Gate 2 sign off. The remaining two are expected to be achieved by 18 May.

There has been an underspend of £2.3m compared with the 2008/09 budget for Accident Reduction Road Safety, which as well as the reported 2008/09 programme, covers completion of the 20087/08 programme, preparation for the 2009/10 programme and additional works deemed necessary throughout the year.

### TLRN Cycling Capacity

Spend to end of Q4 (£m)	2008/9 Budget (£m)
8.4	8.8

Milestones	Current Plan Date	Actual / F'cast Date	RAG
8 cumulative schemes have Gate 2 sign off at Q2	12-09-2008	31-01-2009	Completed
55 cumulative schemes have Gate 2 sign off at Q4	31-03-2009	30-11-2009	▲

The TLRN Cycling Capacity programme delivers new or upgraded assets including cycle advance areas, new crossings, on-highway priority measures, secure parking, access at major junctions, safety improvements, traffic-free areas, green routes through parks and along waterways.

The Quarter 2 target of eight schemes achieving Gate 2 sign off was achieved in Period 11. By year-end, seventy-eight per cent of the target fifty-five Gate 2's had been achieved and four schemes had been stopped at the feasibility stage, including some at the request of Boroughs. The remaining twelve schemes are now expected to pass Gate 2 by the end of November, which is 2 months later than predicted at Quarter 3.

The programme spent £8.4m in 2008/9 which is £0.3m less than forecast at Quarter 3.