

# PPP Performance

## Four weekly report

Period 13 2009/10

7 March 2010 – 31 March 2010



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## Foreword

This is the last four weekly report of the 2009/10 financial year. It has been an eventful year for London Underground (LU), with, once again, more than a billion passenger journeys made, and customer satisfaction sustained at its highest ever level. It has also been a particularly eventful year for the Public Private Partnership (PPP). The year has been punctuated by the progress of the Periodic Review of Tube Lines' contract, a process that was inexorably leading towards a painful conclusion involving deferral of crucial upgrade work in order to bridge the £600m funding gap that the PPP promised to bestow on London. However, as this report is published, we are moving towards completion of the acquisition by TfL of the shares of Tube Lines for £310m – a deal that would see Tube Lines become a wholly-owned subsidiary of TfL.

This would effectively mean the end of the PPP, and with it the looming funding gap for Tube Lines' second contract period, not to mention the divisive and draining culture of claims pursued by Tube Lines. Freed from the complexity of the PPP, LU will be able to focus on delivering the upgrades with minimum disruption and in a way that gives best value for money. Londoners will no longer be saddled with an arrangement where value for the customer was often overridden by the need to deliver value to shareholders. It is clear therefore that this is a good deal for London. We anticipate it will be completed by 30 June.

One thing that will not change is our commitment to transparency and to full reporting of costs, performance and progress with the upgrades. These four weekly reports will continue. Of course, the end of the financial year also means that our latest annual review will be published soon – in that document we will reflect fully on performance of the Tube in the past 12 months.

In these last four weeks of the year, overall performance remained steady, and in particular the Northern line recovered from a dip in its performance in the last period to once again hit a good standard of availability. We will look to the Victoria and District lines to do the same in the first period of 2010/11, as both had a disappointing end to this year.

**Mike Brown**  
**Managing Director**  
**London Underground**

## Explanation of performance measures

The thirty year Public Private Partnership (PPP) contracts, let in 2002/03 to address the Underground's significant asset investment backlog, outsourced the maintenance, renewal and enhancement of the system to two private sector infrastructure companies (known as 'Infracos'), with LU retaining responsibility for operations and, ultimately, safety.

The PPP contracts are output based, which means that LU sets performance targets and provides financial incentives for improvements, such as the line upgrades which will increase capacity and improve reliability, while leaving the technical solutions and associated risks with the Infracos. The Infracos are paid four-weekly via the Infrastructure Service Charge (ISC) which is adjusted for bonuses and abatements (financial adjustments for performance).

In July 2007 Metronet, responsible for two of the three contracts, collapsed and entered into Administration. TfL emerged as the sole bidder for the Metronet companies, which in May 2008 were transferred to TfL ownership. These two Infracos are now a fully integrated part of LU and the maintenance and renewal of the BCV (Bakerloo, Central, Victoria and Waterloo & City) and SSL (Circle, District, Hammersmith & City and Metropolitan) lines continues under this structure.

Under the PPP contracts Infraco performance is evaluated using three key measures:

- **Availability:** whether assets are available for service (day-to-day reliability)
- **Capability:** what the assets are capable of delivering in terms of capacity and reduced customer journey time
- **Ambience:** the quality of the travelling environment.

Each of these measures has a contractual benchmark, which sets a minimum, rather than a target, level of performance. The benchmarks were set after a period of shadow running before the PPP contracts went live. Bonuses are available for performance better than the benchmark and financial penalties (abatements) are charged if it is worse.

It is evident from the original PPP bids that the Infracos assumed they could deliver performance better than the contractual benchmarks, and while it is those measures that determine the level of payment due, their bids set expectations for performance and work volumes which provide another useful baseline to assess them against.

Other non-contractual measures, which are used to assess performance, include failure rates for rolling stock and asset renewal volumes. Also included in this report are details of maintenance costs and capital expenditure on renewals.

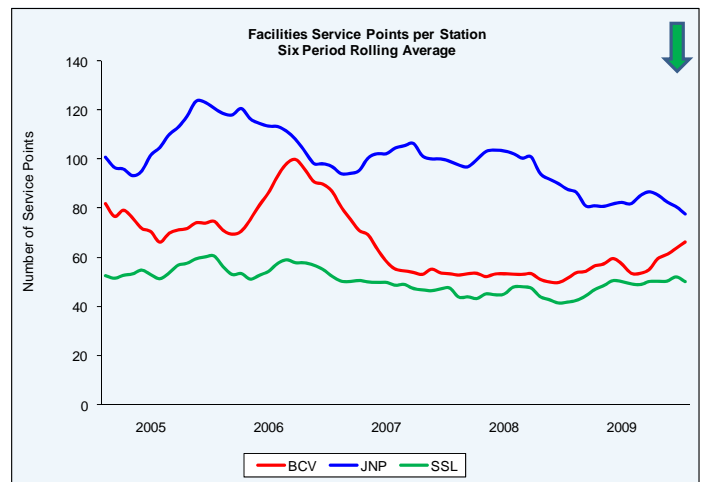
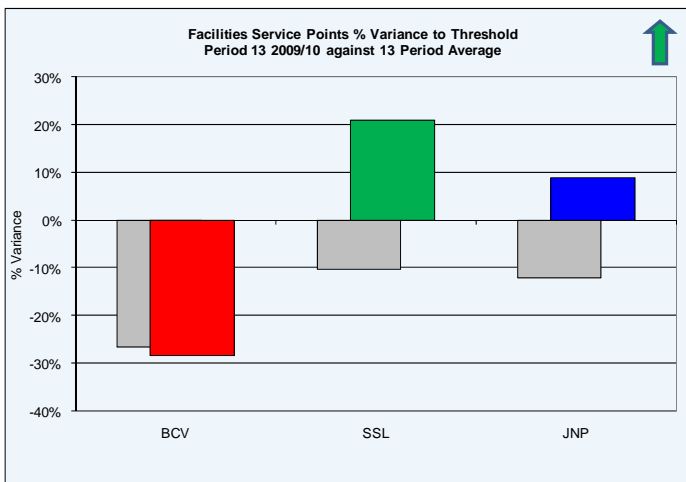
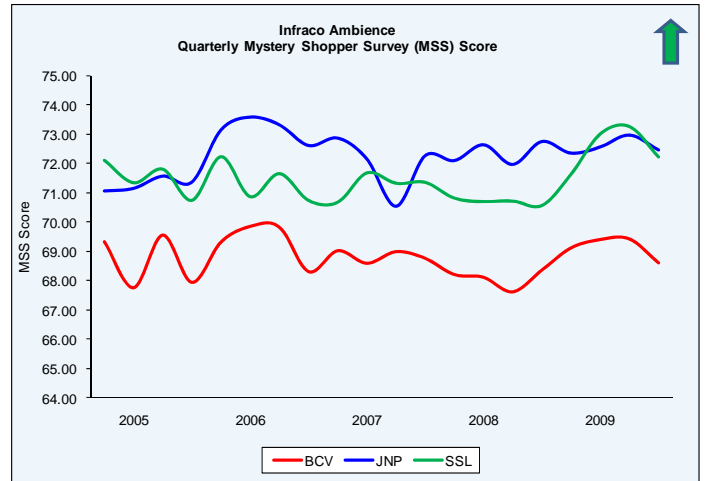
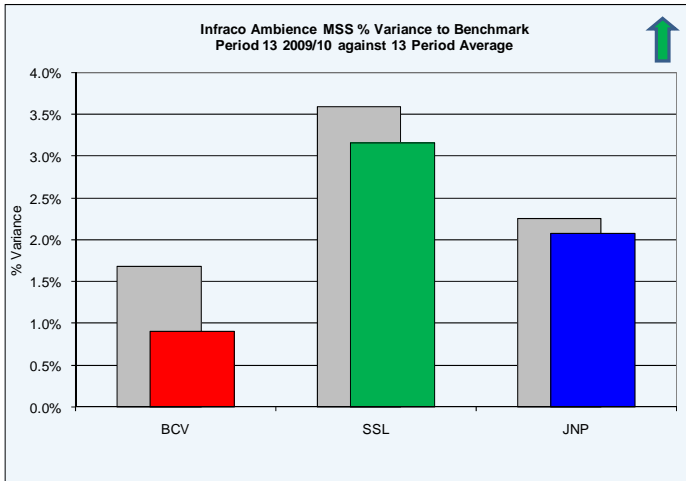
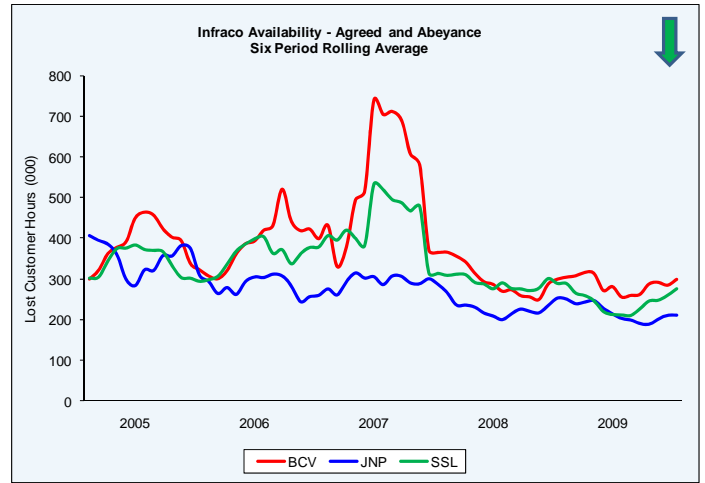
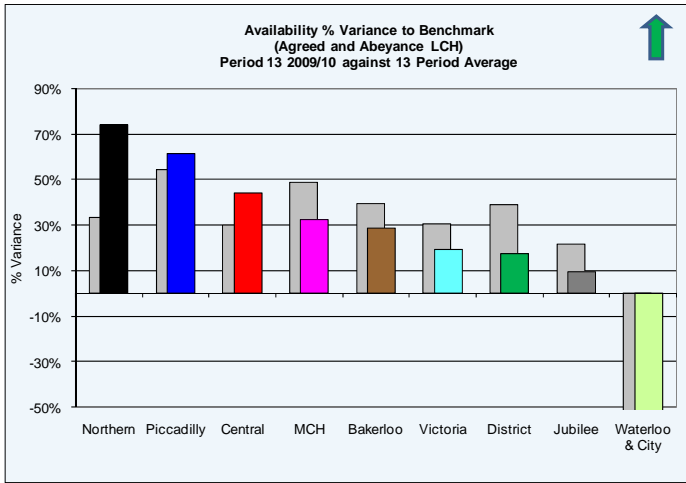
A full glossary of terms used is included at the back of the report.

## Explanation of convention for graphs and charts

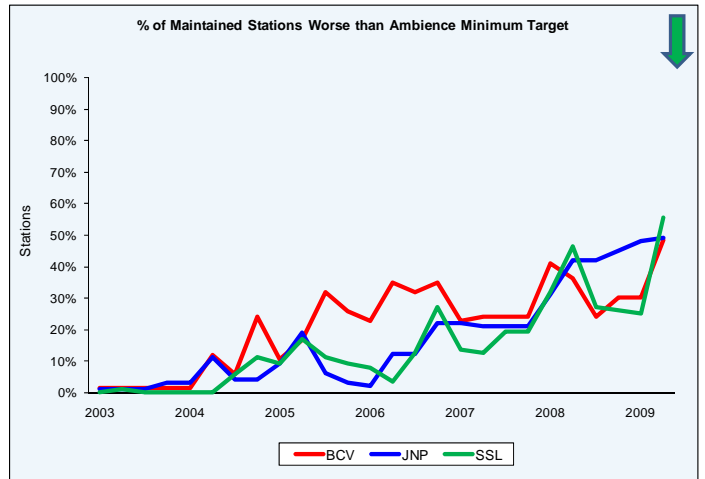
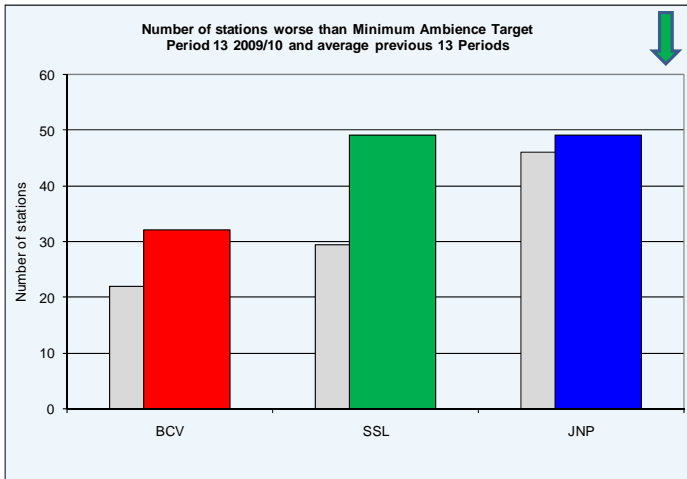
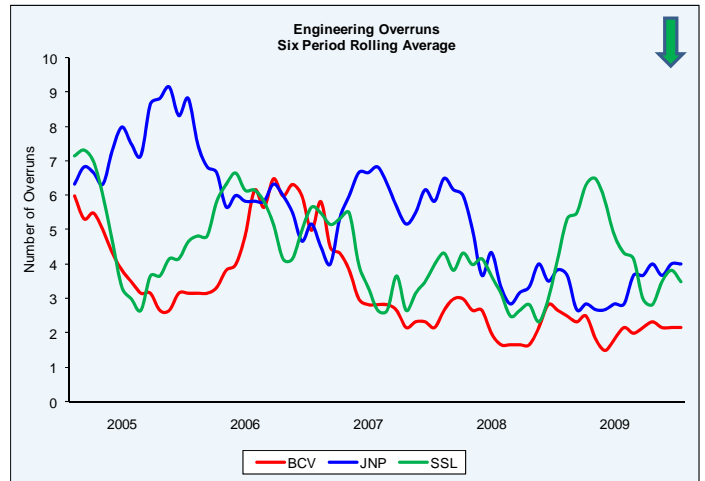
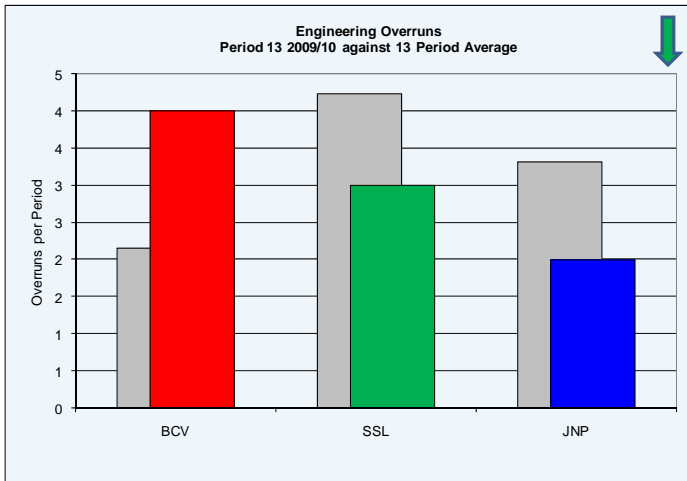
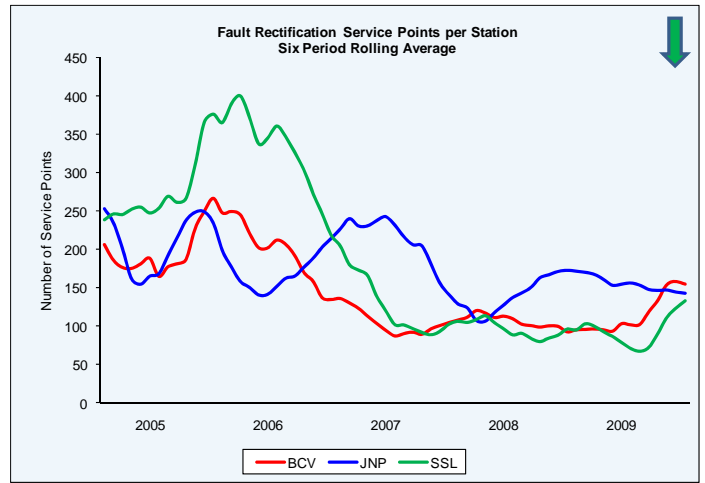
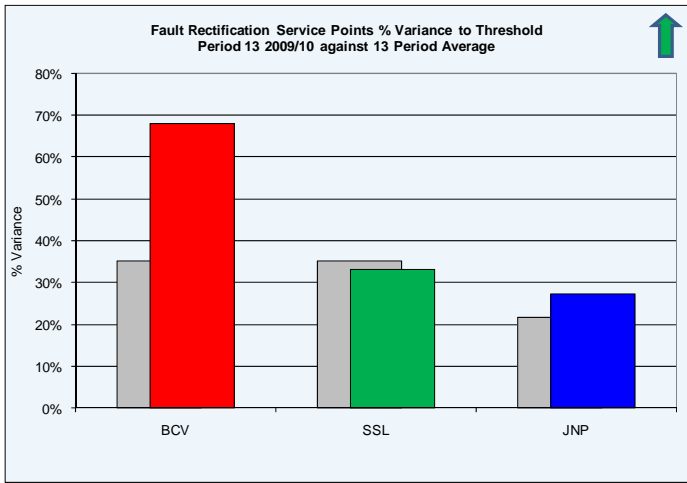
The green arrows (↑) in the graphs show which direction would constitute:

- better performance where there is comparison between lines (or Infracos) within the same performance or payment period;
- Improving performance where there is a trend, i.e. performance is shown over many periods.

## PPP Contractual performance (Period 13 2009/10)



PPP Contractual performance



# PPP Contractual performance

## ISC Performance Adjustments (Period 12 2009/10)

(One Period in arrears)



## PPP Contractual Performance

### BCV Availability

The **Bakerloo line** 2009/10 agreed availability is 41% better than benchmark. The peak in period 7 was largely due to signal failures at Baker Street and Lambeth North. In period 13 the largest agreed item was a train delayed and withdrawn at Waterloo (5,486 LCH), while the largest item in abeyance was a signal failure at Paddington (12,286 LCH).

The **Central line** 2009/10 agreed availability is 41% better than benchmark. In period 12 a full line suspension caused by a signal failure in the Liverpool Street area (181,137 LCH) remains in abeyance. In period 13 the largest agreed item was a defective train delayed and withdrawn at Chancery Lane (1,942 LCH), while the largest item in abeyance was a train delayed and withdrawn due to a main line air burst at Stratford (32,166 LCH).

The **Victoria line** 2009/10 agreed availability is 33% better than benchmark. In period 13 the largest item agreed was a signal failure at King's Cross St. Pancras (19,029 LCH) and the largest item in abeyance was a partial suspension due to a smell of burning at Stockwell (15,792 LCH).

The **Waterloo & City line** 2009/10 agreed availability is 108% worse than benchmark. In periods 9, 10 and 11 the largest items in abeyance were train cancellations caused by traction failure. These have since been agreed to Network Rail. In period 13 the largest item agreed was a defective train delayed and withdrawn at Waterloo (1,701 LCH) and the largest item in abeyance was a train cancellation at Waterloo (1,436 LCH).

### SSL Availability

The **District line** 2009/10 agreed availability is 45% better than benchmark. The largest incident agreed in period 13 was a signal failure in the Gloucester Road area (3,934 LCH) and the largest incident in abeyance was a train failure in the High Street Kensington area (43,013 LCH).

The **Metropolitan, Circle and Hammersmith & City lines** 2009/10 agreed availability is 56% better than benchmark. The largest incident agreed in period 13 was an incident on a train at Great Portland Street (19,741 LCH) and the largest incident in abeyance was a signal failure at Moorgate (22,008 LCH).

### JNP Availability

The **Jubilee line** 2009/10 agreed availability is 28% better than benchmark. In abeyance items from period 10 relate to incidents during inclement weather. In period 13 the largest agreed incident was due to a track failure in the Stanmore area (1,180 LCH). The largest incident in abeyance was due to a train failure at Green Park (16,819 LCH).

The **Northern line** 2009/10 agreed availability is 43% better than benchmark. In abeyance items from periods 10 and 11 mostly relate to incidents during inclement weather. In period 13 the largest agreed incident was a signal failure at Golders Green (1,285 LCH) and the largest incident in abeyance was a signal failure in the Camden area (2,402 LCH).

The **Piccadilly line** 2009/10 agreed availability is 61% better than benchmark. In abeyance items from periods 10 and 11 mostly relate to incidents during inclement weather. In period 13 the largest incident agreed was caused by a signal failure in the King's Cross St. Pancras area (23,480 LCH); the largest incident in abeyance was caused by a speed restriction in the Gloucester Road area (1,887 LCH).

### **Facilities**

#### **BCV Facilities**

Performance in 2009/10 YTD is 26% worse than threshold and this will worsen as more faults for period 13 are agreed. The highest agreed incident in Period 13 related to a DMI fault at Tottenham Court Road.

#### **SSL Facilities**

Performance for 2009/10 to date is 10% worse than threshold, and once all incidents for period 13 are agreed this is likely to worsen. The largest currently agreed incident for period 13 was a faulty train indicator board at Uxbridge.

#### **JNP Facilities**

YTD performance in 2009/10 is 9% worse than threshold. Performance in period 13 has improved relative to period 12 and is better than threshold, although fault volumes have risen for Clocks, Dot Matrix Indicators, and Toilets.

### **Ambience**

#### **BCV Ambience**

Scores for Q3 Mystery Shopper Survey (MSS) have dropped from 69.4 to 68.5. Provisional review of these figures indicates a fall in the Central and Bakerloo lines' train cleaning scores and a decrease

in the Bakerloo line scores for scratch graffiti.

#### **SSL Ambience**

Scores for Q3 have dropped from 73.2 to 72.2. Provisional review of these figures indicates a fall in District and Metropolitan Line Train and Station scores - particularly in the area of cleaning.

#### **JNP Ambience**

There has been a small decrease in 2009/10 Q3's scores to 72.9 but nevertheless this is a continuation of the trend of better than benchmark performance. For trains there is a better performance overall. The Northern line's scores have improved for all attributes except for condition of arm rests, external cleanliness, internal scratch and external scratch and non scratch graffiti. The Piccadilly line has done well across the range of train attributes with only internal non scratch graffiti and condition of arm rests seeing a reduction in scores. The Jubilee line has seen improved Litter scores but scores for all other attributes have declined. On stations scores for Cleanliness and Condition have improved for the Jubilee line but other attributes have seen a drop in their scores. On the Northern line scores have fallen for most attributes with some aspects of condition seeing an improvement. On the Piccadilly line graffiti and cleanliness have improved this quarter although litter and appearance scores have declined.

## Engineering Overruns

### BCV Engineering Overruns

Line	Location	SD Cat	Start	End
BAK	ELEPHANT & CASTLE	TDL	12/03 05:37	12/03 05:47
VIC	VICTORIA	PLS	20/03 05:26	20/03 06:34
CEN	WEST RUISLIP	TDL	28/03 06:41	28/03 07:09
CEN	MARBLE ARCH	PLS	31/03 05:18	31/03 05:47

### SSL Engineering Overruns

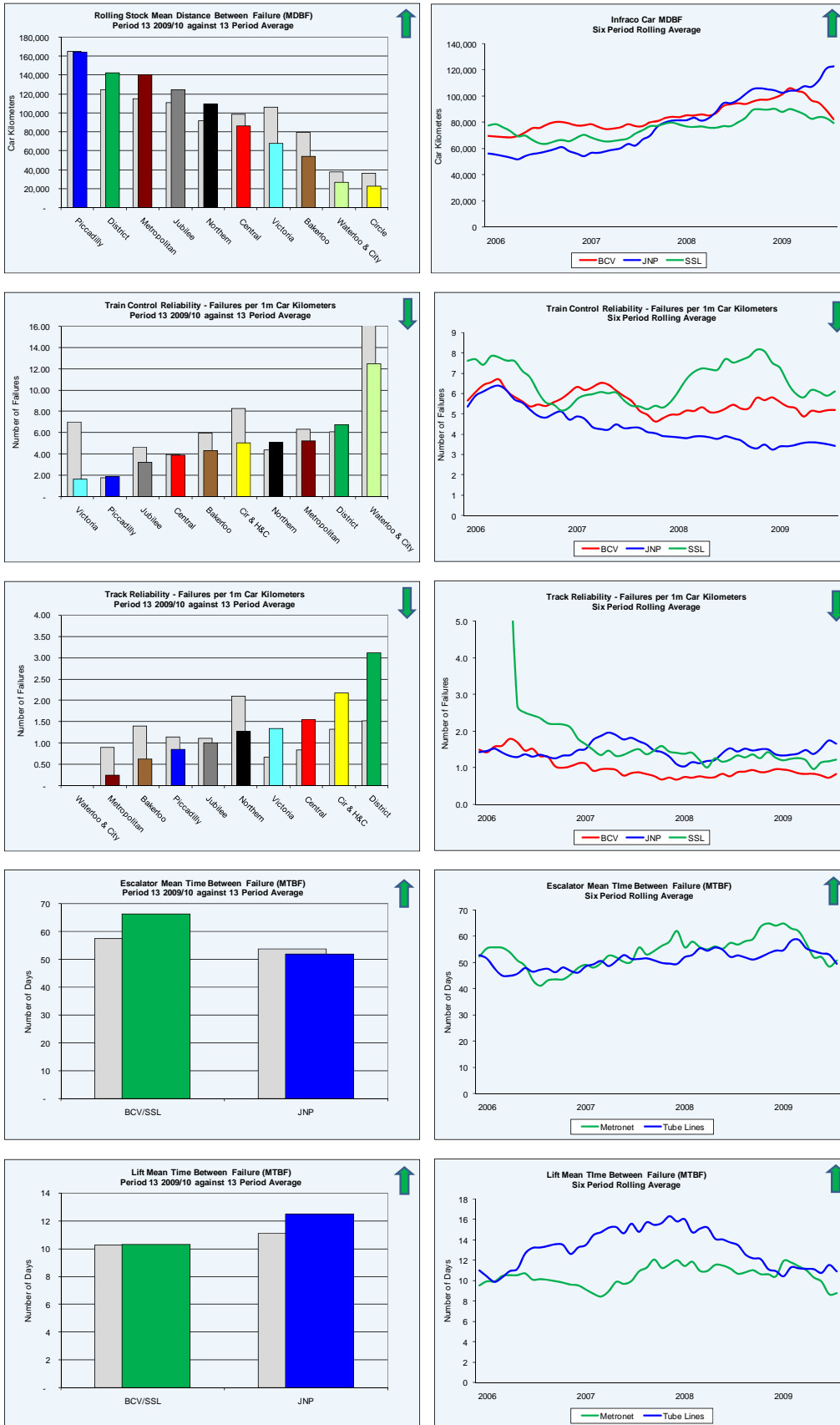
Line	Location	SD Cat	Start	End
DIS	PLAISTOW	TDL	07/03 06:04	07/03 06:49
MET/PIC	HARROW/UXBRIDGE	PLS	13/03 04:41	13/03 05:50
DIS	WIMBLEDON	PLS	23/03 04:31	23/03 05:06

### JNP Engineering Overruns

Line	Location	SD Cat	Start	End
MET/JUB	WEMBLEY PARK	PLS	23/03 04:49	23/03 05:42
PIC	HAMMERSMITH (D & P)	TDL	30/03 05:53	30/03 06:03

*(Incidents where attribution has not been agreed are highlighted in yellow)*

## Asset performance (Period 13 2009/10)



## Asset Performance

### Rolling Stock

#### Bakerloo line

A worsening mean distance between failures (MDBF) result with 30 incidents recorded. Seven were due to door problems including two for door interlocks, loss of closed visual and pilot light issues. There were seven motor related incidents including a stuck cam and two intermittent losses of traction. Other faults include three instances of audible warnings, two air leaks and two defective speedometers.

#### Central line

A slightly improved MDBF result with 75 incidents recorded, however, still below target. There were ten door incidents, four failing to open, others include loss of closed visuals, loose panelling and a faulty relay. Eight were reports of unusual noise, most from under the train including faulty shoe gear and worn bearings. Seven incidents involved traction faults or loss of forward movement. Other incidents include three occurrences of water ingress, three burning smells and three radio faults.

#### Victoria line

This period saw a slightly worse MDBF result with 44 reported incidents. Seventeen were for '09 stock, eleven for loss of ATO or ATP and three problems with spurious sensitive edge alarms. For '67 Stock there were four door related incidents, four air leaks including a leak from the spring applied parking brake, two losses of car lighting due to defective motor alternators and four communications faults including two for the public address system.

#### Waterloo & City line

MDBF improved with 3 incidents recorded. The incidents were a graffiti attack on a stabled train, loss of door closed visuals and a round train circuit fault caused by an incorrectly stowed traction brake controller.

#### Metropolitan line

An excellent MDBF result with 30 incidents recorded, better than target. There were five reported defects with windscreen wipers. Four incidents were due to Connect radio equipment. Other incidents include three for defective operator's seat, three door related incidents, four for the braking system - two for defective brake handles and two instances of spurious audible warning alarms.

#### District line

MDBF improved with 27 incidents reported, on target. Seven were due to motor/traction problems, two where the overloads were dropping out. Five were door related with doors failing to open or close and an allegation of a door opening between stations. Other faults include two occurrences of audible warning alarms not resetting, two brake failures and a stalled train due to suspected track out of gauge.

#### Circle & Hammersmith line

MDBF worsened with 60 incidents reported. Eighteen were due to motor or traction faults. There were six door failures, six radio faults and five incidents involving problems with the traction brake controller, some of which were stiff and required stripping, greasing and re-assembling. Other incidents include five reports of flats and two for locked wheels.

### **Jubilee line**

Reliability has remained good. The main cause of failures this period has been due to drivers' and saloon seats. Currently this is being dealt with on a 'fix on failure' basis, however work is being carried out on an alternative design to prevent the failure mode in future. Other main causes of failures were the doors and TMS systems; however there have been very few multiple failures of the same type of equipment.

### **Northern line**

The line's train reliability trend remains very positive. Track to Train CCTV and TMS are the highest causes for failure, however miscellaneous failures of the non-major systems are the highest overall. This is increasing as the reliability increases and improvements are made to the previously unreliable components.

### **Piccadilly line**

This was another good period of reliability with MDBF above 30,000km for the third consecutive period. Work has starting on environmental testing of alternative door valves for a fleet replacement of the door valve that caused the recent door irregularity.

## **Train Control**

### **Bakerloo line**

An improvement to seven incidents; two were points failures, no 12 points at Queens Park had an earth fault and 26B points at Elephant & Castle had a defective locking bar. Other faults included a faulty track receiver, signals bobbing, a defective train stop and a track circuit

failure due to third party scaffolding at Paddington.

### **Central line**

An improvement with 25 incidents reported. Eight incidents involved points, five for 6406 points at Newbury Park failing to reverse due to motor/circuit issues, 1105 points at West Ruislip were sticking, 2717 at White City failed to normalise and 2407 at North Acton failed to reverse. Other incidents include four track circuit failures, five PLC alarms, three intermittent losses of ATP and a relay failure.

### **Victoria line**

An excellent result with five reported incidents. Two were defective brake spots, one a relay and the other a defective proving unit. Other incidents were a system alarm in the control room, a defective track relay and a dry joint on a track feed box.

### **Waterloo & City line**

An improving trend was maintained with one incident reported for a loss of signalling control.

### **Metropolitan line**

There was an increase to 22 incidents. Six were track circuit failures, one due to low voltage, one a faulty receiver and one due to loose bolts. There were six relay failures in the period and two points failures; 8 points at Aldgate failed to reverse and 217 moveable angles at Harrow failed to normalise. Other failures include a faulty tuning unit, a defective site computer host card, a blown signal fuse, two cable faults and a faulty shunt signal.

### **District line**

An increase to 26 incidents included five due to signals failing due to contaminated block joints. There were three relay failures, three instances of wrong signal lowered or train descriptions, three trainstop failures and two spurious activations of the tunnel telephone. Other failures include contaminated contacts on levers in the IMR, stuck lever in the IMR, loss of signalling control due to a loose connection and a faulty programme machine.

### **Circle / Hammersmith & City lines**

A good result with seven incidents recorded. Two were logged for 31 points at Moorgate, one a train held for repairs. Two track circuit failures, one was bobbing, and the other was due to a defective cable. One fault each for wrong descriptions, a defective relay and a faulty trainstop valve.

### **Jubilee line**

The number of agreed failures was better than last period due to a decrease in "signals" failures. The six-period moving average has risen slightly, and the total number of faults in the last three periods are still higher than previous periods. Over the past 13 periods the top three failure root causes are Trainborne (providing Correct Side Door Enable and Platform Edge Door functionality), Signals (lamps/no defect found) and Train Detection. Trainborne failure rates continue to decrease.

### **Northern line**

There was a further increase in agreed failures compared to period 12 due to increases in tripcock tester and control system failures, however the six-period moving average continues to decrease. Over the last 13 periods the top three

failure root causes are Control Systems, Trainstops and Train Detection. The trend in trainstop failures is worsening and will be discussed with Tube Lines. The large number of failures previously reported as 'in abeyance' for period 12 has been accepted by Tube Lines and the graph now shows that performance was not as good as noted in this report last period.

### **Piccadilly line**

Agreed failures were slightly worse than the previous period due to a small increase in Control System failures but the six-period moving average continues to decrease. Over the last 13 periods the top three failure root causes are Control Systems, Relays and Train Detection. The trend in Relay faults is worsening slightly; this will be discussed with Tube Lines.

## **Track**

### **Bakerloo line**

The improving trend continued with one reported incident which was due to third party scaffolding which had to be removed from the track at Paddington.

### **Central line**

An increase to ten incidents included seven temporary speed restrictions, two for defects on 2101 points at Ealing Broadway, four others for rail defects and one for a defect on points at West Ruislip. The other incidents were for a gapped train, a train reporting poor adhesion and a PLC alarm caused by vibrations from an Engineering train.

### **Victoria line**

There was an increase to four incidents. Three were recorded for a cracked splice

rail on 4a points at Walthamstow and one was for an inspection on the points on the following day. The other incident was for a spliced rail on 6b points at Victoria.

### **Waterloo & City line**

No reported incidents, items from earlier periods relating to traction current problems have now been accepted by Network Rail.

### **Metropolitan line**

An excellent result with only one recorded incident which was a speed restriction imposed for a dip in the track near Wembley Park.

### **District line**

An increase to 13 reported incidents. Five temporary speed restrictions were imposed, four for rail defects and one for a cracked rail. Of two block joint faults, one was caused by a loose plate and the other was due to rail burring. There was one report of a kink in the track, a faulty points locking and detection box, a defective rail joint and a suspected current rail out of gauge causing a train to stall. There was one overrun of planned work due to discovery of a defect in the running rail.

### **Circle / Hammersmith & City lines**

There was an increase to three incidents. A train tripped on a faulty temporary tripcock tester, a basketball was removed from the track and track staff were required to access track to gauge the current rails following the stalled train mentioned in the District line incidents.

### **Jubilee line**

There were four track related delays reported this period. Two were trains tripped for reasons unknown and two were

track circuit failures caused by block joint defects.

### **Northern line**

There were six track related incidents this period. Two were electrical earth faults, one was due to track condition, one was a cracked block joint, one was a set of points not throwing properly and one was a train tripped for reason unknown.

### **Piccadilly line**

There were four track related delay incidents recorded this period; three were rail defects and one was an electrical earth.

## **Escalators**

### **BCV Escalators**

Availability, excluding planned works was 99.42%, improved since last period. Bank had eight calls including two for a faulty brake wear switch. Oxford Circus had six calls, three for step defects. Piccadilly Circus had six calls including hydraulic fluid requiring replenishing. Chancery Lane had five calls including two comb defects and Bond Street and Holborn had four calls each.

### **SSL Escalators**

Availability excluding planned works was 97.08%, worse than last period. Liverpool Street had six calls; two were for chewing gum stuck in the entry guard. King's Cross St. Pancras had five calls, Escalator 1 remains out of service requiring major repairs. Earl's Court had five calls including two for faulty relays.

## JNP Escalators

Availability excluding planned works improved slightly to 99.1%, while planned works reduced availability by 3.6%. Leicester Square E4 returned to service having been unavailable since late December due to a major fault with its drive chain mechanism. Green Park E1 also re-entered service following rectification of a gearbox fault but subsequently suffered several short duration handrail faults. Planned Work continued on Swiss Cottage E1, Waterloo E7 and E8, Heathrow T123 E1 and E2 and London Bridge E11 and E20. Canary Wharf E18 was out for three weeks for planned works, following which work commenced on E20.

affecting Gloucester Road lifts mentioned above. King's Cross St. Pancras had five calls from faulty sensors in the shaft, overloading and a floor requiring replacement. Hammersmith had four calls, two requiring resets.

## JNP Lifts

Availability was 99.2% with no service losses due to planned works. Waterloo L2 was out of service for the last three days of the period requiring a new hydraulic pump and motor.

## Lifts

### BCV Lifts

Availability was 98%, improved since last period. Elephant & Castle had twenty calls, fourteen for doors most of which were rectified by clearing door tracks and cleaning safety edges. Queensway had sixteen calls, four requiring the circuit breakers to be reset. Holland Park had thirteen calls, mostly doors including a faulty drive belt and contaminated door tracks. Brixton MIP had seven calls, most fixed by resetting the controller and one lighting defect.

### SSL Lifts

Availability was 99%, improved since last period. Earl's Court 2&3 had twelve calls, mostly doors failing to close or out of alignment. Gloucester Road had six calls, two due to power surge in the area. Earl's Court mobility lifts had five calls, two suffered from the same power surge

## **PPP Programme delivery performance - Line Upgrades**

### **Victoria Line Upgrade**

The VLU remains on target and on budget. Train production quality along with signalling reliability remains a primary focus however there have been demonstrable signs of improvement. There has also been a reduction in time between train delivery and acceptance into service. Five production trains have been delivered to Northumberland Park Depot with four trains now offered for service, and these have commenced running in the morning peak.

### **SSR Upgrade**

The programme remains on track to achieve the target date for the introduction of S Stock into passenger service at the north end of the Metropolitan line in summer 2010 and also to achieve the target date of late 2010 for the award of the Automatic Train Control contract. A construction contract has been awarded for the Service Control Centre at Hammersmith, which through the use of second tier suppliers has been reduced to 60% of the original forecast cost and is significantly below the comparable cost for Tube Lines.

### **Jubilee Line Upgrade**

A four day full line closure took place during Easter with Tube Lines (TLL) able to provide the system to LU for trial operations during the final two days of the closure as planned. However, out of the 260 planned runs between Stratford and Waterloo only 90 were able to be completed due to late start up and system faults. The Trial Operations were conducted with a number of Operational Restrictions in place for the train and

signal operators and the reliability of the system during the weekend would not have been sufficient for a revenue service. Tube Lines have an updated version of the software due for release at the end of April which is intended to provide additional functionality and improve reliability.

### **Northern Line Upgrade**

LU and TLL are working on a programme that reduces the overall number of closures, and their impact. The first series of closures, for installation, has commenced at the southern end of the line.

### **Piccadilly Line Upgrade**

TfL and Tube Lines are working towards concluding the selection of the rolling stock supplier.

## Line Upgrade Milestones

Project	Milestone	Approved Target	Current Forecast	Current Status	Comment
Victoria Line Upgrade	Power supply Upgrade Complete (Existing Scope)	16/06/2009	16/06/2009	Achieved	
Victoria Line Upgrade	Start Running T2 In Traffic Hours With Passengers (V2.2)	14/10/2009	21/07/2009	Achieved	
Victoria Line Upgrade	Full Approval To Operate Production Trains On The Victoria Line (V2.3)	27/11/2009	27/11/2009	Achieved	
Victoria Line Upgrade	All Track Works complete (Track Quality Improvement Works / Low Loss Conductor Rail)	14/01/2010	14/01/2010	Achieved	
SSR Upgrade	Signalling - Phase 1a Immunisation Works (incl. Deltas) - Baker Street northwards (Key Date 1&2)	26/11/2009	13/09/2009	Achieved	
SSR Upgrade	Train Delivery - First train delivered to London Depot	01/11/2009	21/10/2009	Achieved	
SSR Upgrade	Issue the SSL Automatic Train Control ITT	31/08/2009	16/07/2009	Achieved	
Jubilee Line Upgrade	J2/3 Ready for Revenue Service - Seltrac PM Mode	06/09/2009	TBC		
Jubilee Line Upgrade	JTC Delivery - TLL current forecast vs Contract Date	31/12/2009	TBC		
Piccadilly Line Upgrade	Select Rolling Stock Supplier	31/12/2009	03/03/2010		TfL and Tube Lines are working towards concluding the selection of the rolling stock supplier.
Northern Line Upgrade	50% of Trains Converted	31/01/2010	28/04/2010		

## Programme delivery performance

### Station Upgrades

#### BCV Stations

2009/10 Stations	Contract date	LU PM Forecast date	Movement from previous forecast (weeks)	Status
Hainault ( M )	11/01/10	19/05/09	0	Complete
Brixton (M)	15/11/09	16/04/10	1	Construction
Wanstead (R )	27/04/10	26/11/09	0	Complete
Oxford Circus (M)	25/05/09	25/01/10	0	Declared
Mile End (M)	28/04/10	28/05/10	0	Construction

#### SSL Stations

2009/10 Stations	Contract date	LU PM Forecast date	Movement from previous forecast (weeks)	Status
Aldgate East ( M )	27/06/10	01/07/10	0	Construction
Earl's Court (M)	28/12/09	17/07/09	0	Complete

#### JNP Stations

2009/10 Stations	Contract date	Actual / Forecast date	Movement from previous forecast (weeks)	Status
Canons Park (R )	30/05/09	27/01/09	0	Complete
Green Park (M)	23/10/09	23/10/09	0	Declared
Hounslow West (ER)	30/05/09	30/01/09	0	Complete
Osterley (ER)	30/05/09	11/02/09	0	Complete
Queensbury (ER)	30/05/09	07/12/08	0	Complete
Russell Square (ER)	30/05/09	22/01/09	0	Complete
Waterloo (M)	30/05/09	30/05/09	0	Declared

2010/11 Stations	Contract date	Actual / Forecast date	Movement from previous forecast (weeks)	Status
West Finchley (ER)	29/05/10	11/11/08	0	Complete
Edgware (ER)	29/05/10	15/06/09	0	Complete
Covent Garden (M)	29/05/10	06/05/09	0	Complete
Balham (R)	29/05/10	11/12/09	0	Complete
Bermondsey (R)	29/05/10	15/12/09	0	Complete
North Greenwich (R)	29/05/10	15/12/09	0	Complete
Hatton Cross (ER)	29/05/10	04/03/10	0	Construction
Clapham Common (R)	29/05/10	31/07/09	0	Complete
Clapham North (R)	29/05/10	18/03/10	0	Declared
Oval (R)	29/05/10	31/07/09	0	Complete
Tooting Broadway (ER)	29/05/10	20/11/09	0	Complete
London Bridge (R)	29/05/10	18/11/09	0	Complete
Southwark	29/05/10	25/11/09	0	Complete
High Barnet (R)	29/05/10	02/11/09	0	Complete
Hyde Park Comer (R)	29/05/10	11/12/09	0	Declared
Goodge Street (M)	29/05/10	25/11/09	0	Declared
Canada Water (R)	29/05/10	19/02/10	0	Declared
Canary Wharf (R)	29/05/10	05/03/10	0	Declared
Wood Green (R)	29/05/10	30/01/10	0	Declared
Stanmore (ER)	29/05/10	01/04/09	0	Complete

*'Declared' – means work complete but still subject to formal sign-off*

## Programme delivery performance

### Lifts & Escalators

#### BCV and SSL Lifts and Escalators

2009/10 Stations	Booked Access	Actual / Forecast date	Movement from previous forecast (weeks)	Status
Bank/Monument E4	31/2/2010	28/01/10	0	RTS
Bank/Monument E6	25/02/10	03/03/10	0	RTS
Bank/Monument E5	24/05/09	30/07/09	0	RTS
Bank/Monument E7	08/05/09	08/05/09	0	RTS
Bank/Monument E12	17/08/09	19/09/09	0	RTS
Bank/Monument E13	18/08/09	19/09/09	0	RTS
Bank/Monument E14	19/08/09	19/09/09	0	RTS
Bank/Monument E15	20/08/09	19/09/09	0	RTS
Tottenham Hale E3	06/10/09	14/10/09	0	RTS
Piccadilly Circus E2	19/11/09	05/12/09	0	RTS
Piccadilly Circus E8	02/07/09	25/07/09	0	RTS
Oxford Circus E4	15/12/09	14/12/09	0	RTS
Oxford Circus E5	19/04/10	19/04/10	0	OSS
Pimlico E1	23/08/09	08/09/09	0	RTS

2009/10 Stations	Booked Access	Actual / Forecast date	Movement from previous forecast (weeks)	Status
South Kensington E2 Refurb	20/08/2009	20/08/2009	0	RTS

#### JNP Lifts and Escalators

2009/10 Stations	Booked Access End	Actual / Forecast RTS date	Movement from previous forecast (weeks)	Status
Swiss Cottage E3	10/05/2009	25/06/2009	0	RTS
London Bridge E18	10/06/2009	12/06/2009	0	RTS
London Bridge E19	16/10/2009	13/01/2010	0	RTS
Heathrow T123 E3	17/08/2009	18/08/2009	0	RTS
Heathrow T123 E4	17/08/2009	18/08/2009	0	RTS
Kennington L2	15/06/2009	19/06/2009	0	RTS
Southgate E3	14/11/2009	12/10/2009	0	RTS
Canary Wharf E7	16/12/2009	18/12/2009	0	RTS
Camden Town E1	31/08/2009	18/10/2009	0	RTS
Euston E4	16/11/2009	16/11/2009	0	RTS
Southgate E1	14/11/2009	14/01/2010	0	RTS
Kennington L1	23/12/2009	23/12/2009	0	RTS
Swiss Cottage E1	14/06/2010	14/06/2010	0	RTS
Waterloo E3	01/02/2010	01/02/2010	0	OSS

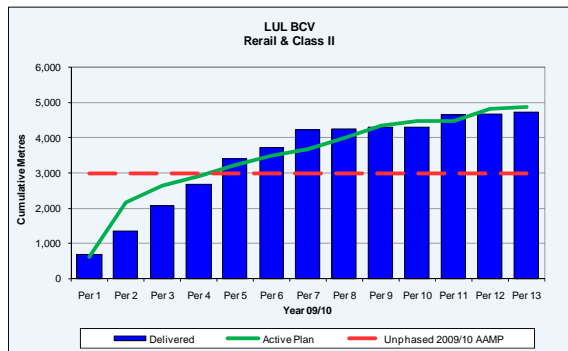
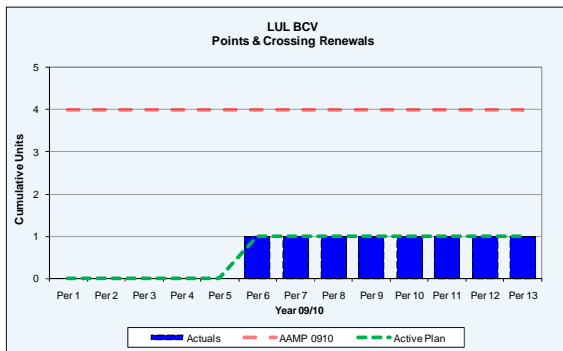
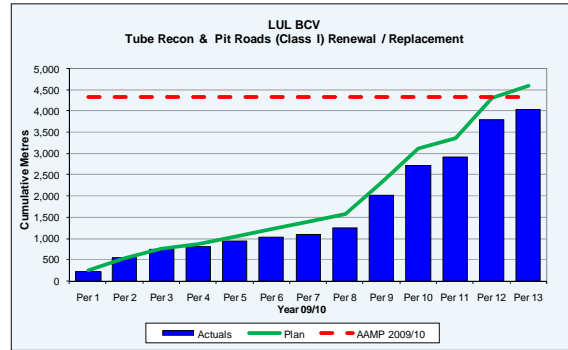
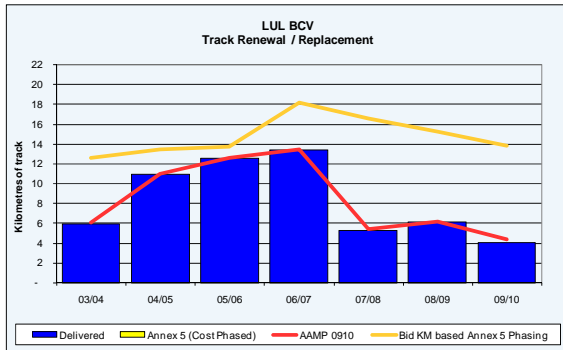
'RTS' – Returned to service

'OOS' – Out of service

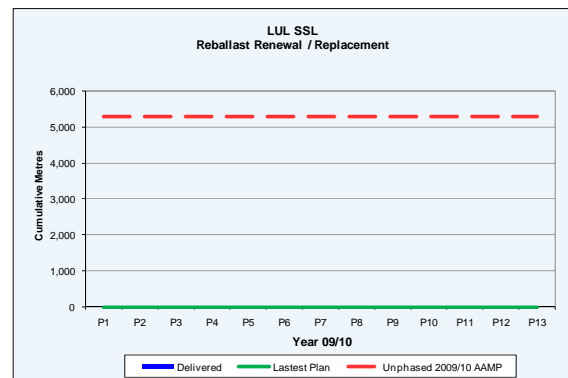
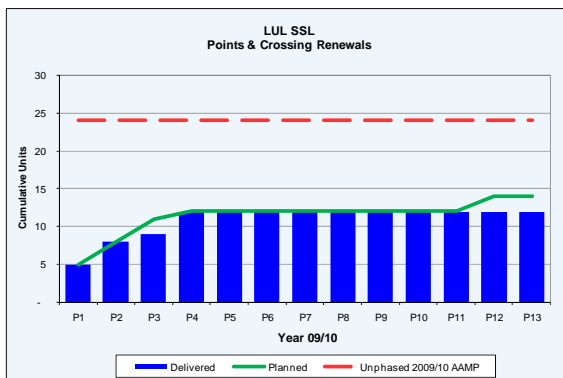
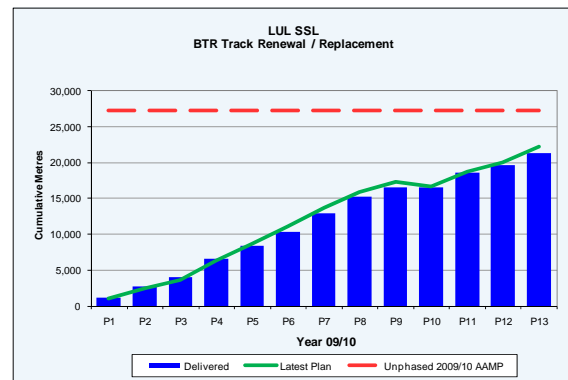
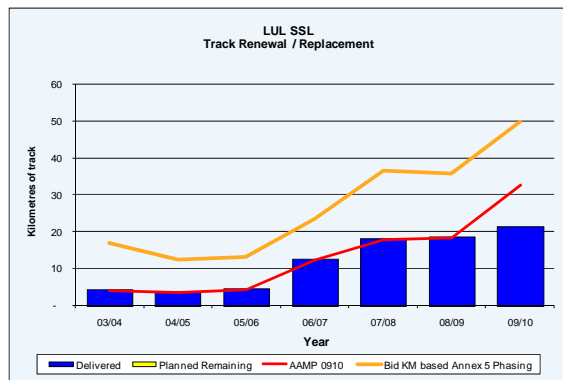
# Programme delivery performance

## Track

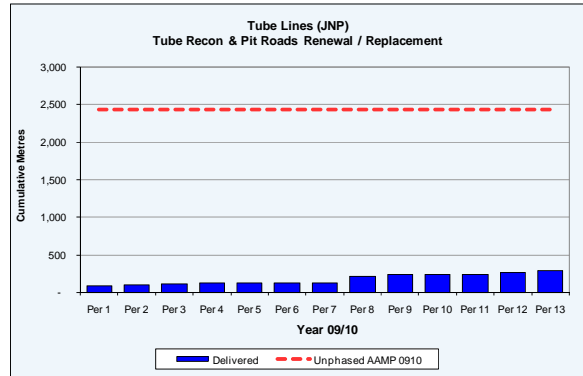
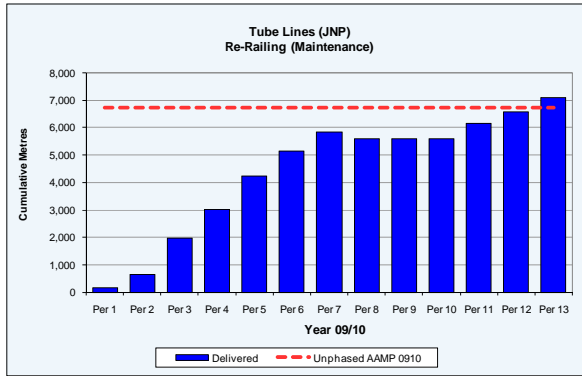
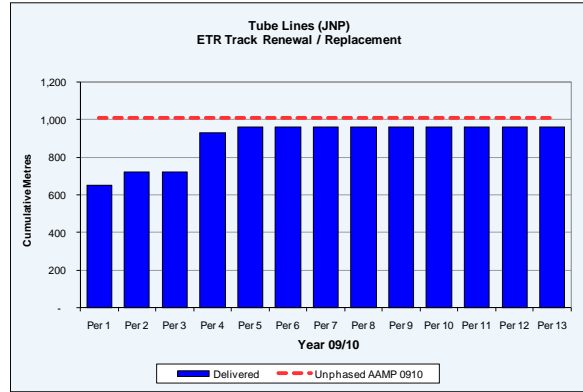
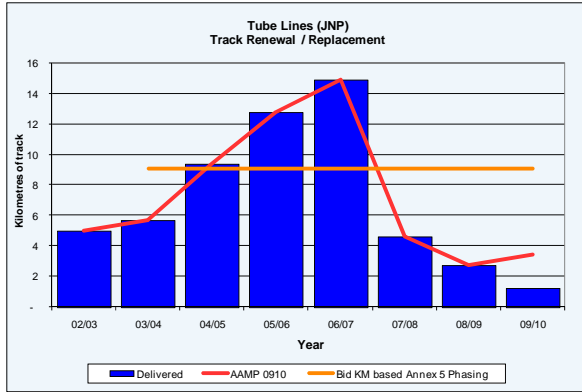
### BCV Track



### SSL Track



### JNP Track



## **BCV and SSL Maintenance Cost and Performance**

**BCV & SSL Maintenance Costs**

Period 13 2009/10

Activity	Current Period			Full Year		
	Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m
<b>Maintenance</b>						
Fleet - BCV	8.8	7.4	(1.4)	86.8	102.1	15.3
Fleet - SSL	3.3	3.3	0.1	45.6	47.8	2.3
Fleet - Trains	1.0	(0.5)	(1.5)	0.1	(6.7)	(6.8)
<b>Fleet - Total</b>	<b>13.0</b>	<b>10.3</b>	<b>(2.8)</b>	<b>132.5</b>	<b>143.3</b>	<b>10.8</b>
Track	8.2	7.2	(1.1)	85.3	88.8	3.4
Signals	3.2	4.2	1.0	50.1	58.7	8.5
ILU	0.3	(0.0)	(0.3)	0.5	(0.1)	(0.7)
MRIS	0.0	(0.0)	(0.0)	(0.9)	(0.1)	0.8
<b>Track &amp; Signals - Total</b>	<b>11.7</b>	<b>11.3</b>	<b>(0.4)</b>	<b>135.1</b>	<b>147.2</b>	<b>12.1</b>
Stations	9.4	6.7	(2.7)	88.4	87.6	(0.8)
Civils	1.7	2.4	0.7	19.1	30.9	11.7
<b>Stations &amp; Civils - Total</b>	<b>11.1</b>	<b>9.1</b>	<b>(2.0)</b>	<b>107.5</b>	<b>118.5</b>	<b>10.9</b>
<b>Central Departments - Total</b>	<b>2.4</b>	<b>0.9</b>	<b>(1.4)</b>	<b>25.6</b>	<b>18.7</b>	<b>(6.9)</b>
<b>TOTAL MAINTENANCE</b>	<b>38.1</b>	<b>31.6</b>	<b>6.6</b>	<b>400.8</b>	<b>427.7</b>	<b>(26.9)</b>

**Commentary**

**Fleet (including Trains Division):** Following a review of the current fleet contracts an accrual has been posted for the full contract values. This has resulted in an additional provision being posted in the period.

**Track & Signals:** The year's variance was due to lower headcount and training costs, reduced signal and track maintenance.

**Stations & Civils:** Civils was lower due to agreed reduced work volumes and provisions released from previous year.

**Central Departments:** Full year variance was mainly due to the budget including centrally held savings realised in other departments, unbudgeted Connect Income and Security Cost Savings.

(These costs include depreciation)

## BCV Fleet Maintenance Cost

### Period 13 2009/10

#### BCV Fleet

Period 13		
Actual	Budget	Var
£k	£k	£k

Full Year		
Actual	Budget	Var
£k	£k	£k

#### Operating Costs By Area

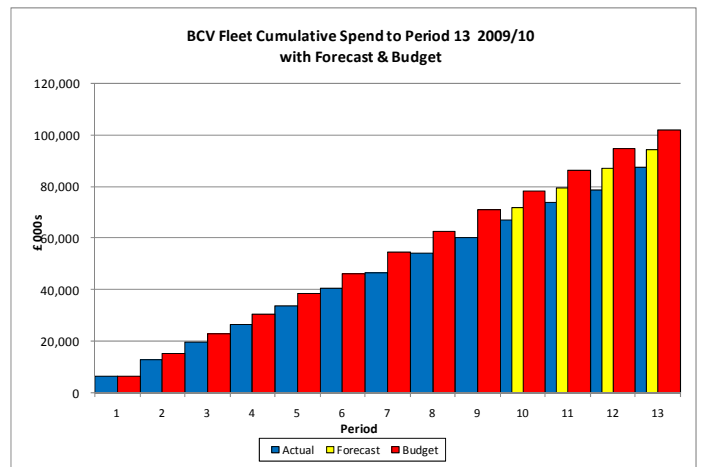
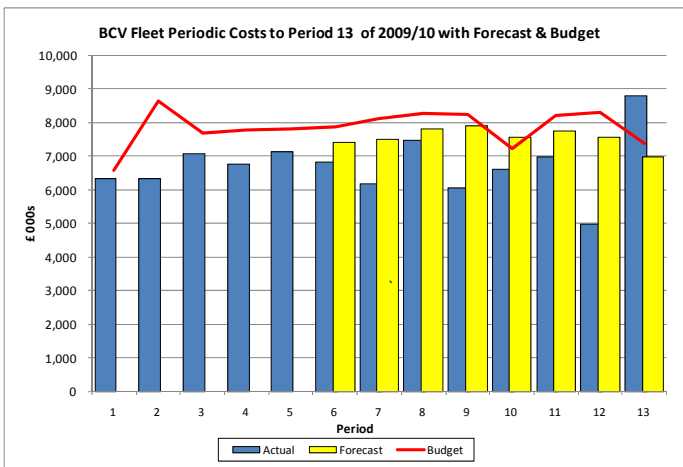
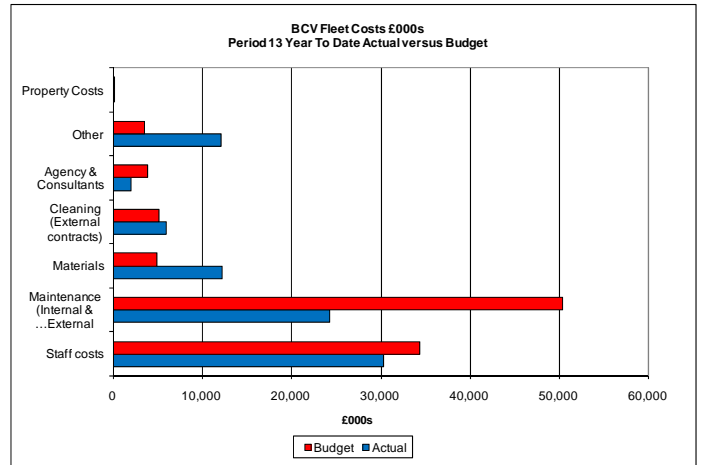
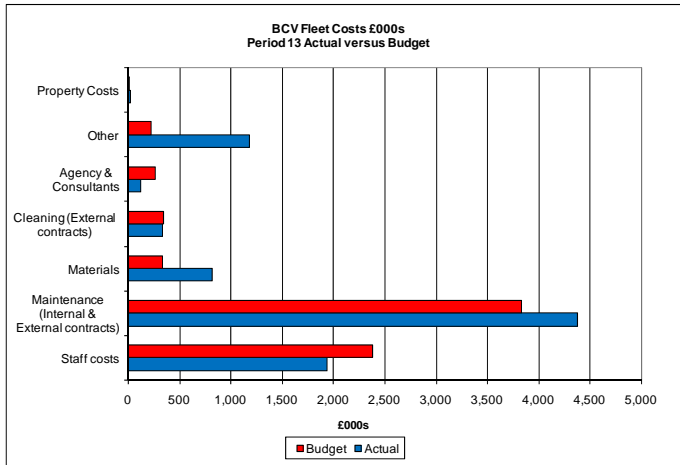
Bakerloo	1,083	1,186	103
Central	4,380	4,661	281
Victoria	3,091	1,222	(1,869)
Other	237	315	78
<b>Total</b>	<b>8,792</b>	<b>7,384</b>	<b>(1,408)</b>

Bakerloo	15,656	16,484	828
Central	51,639	64,968	13,330
Victoria	17,915	16,105	(1,811)
Other	1,589	4,555	2,965
<b>Total</b>	<b>86,800</b>	<b>102,112</b>	<b>15,312</b>

#### Operating Costs By Type

Staff costs	1,940	2,382	442
Maintenance (Internal & External contracts)	4,375	3,831	(544)
Materials	818	332	(485)
Cleaning (External contracts)	336	343	8
Agency & Consultants	124	261	137
Other	1,182	227	(955)
Property Costs	18	7	(11)
<b>Total</b>	<b>8,792</b>	<b>7,384</b>	<b>(1,408)</b>

Staff costs	30,293	34,386	4,093
Maintenance (Internal & External contracts)	24,230	50,418	26,188
Materials	12,187	4,915	(7,271)
Cleaning (External contracts)	5,932	5,120	(812)
Agency & Consultants	1,992	3,774	1,782
Other	12,041	3,446	(8,596)
Property Costs	125	52	(73)
<b>Total</b>	<b>86,800</b>	<b>102,112</b>	<b>15,312</b>



## SSL Fleet Maintenance Cost

### Period 13 2009/10

#### SSL Fleet

Period 13		
Actual £k	Budget £k	Var £k

Full Year		
Actual £k	Budget £k	Var £k

#### Operating Costs By Area

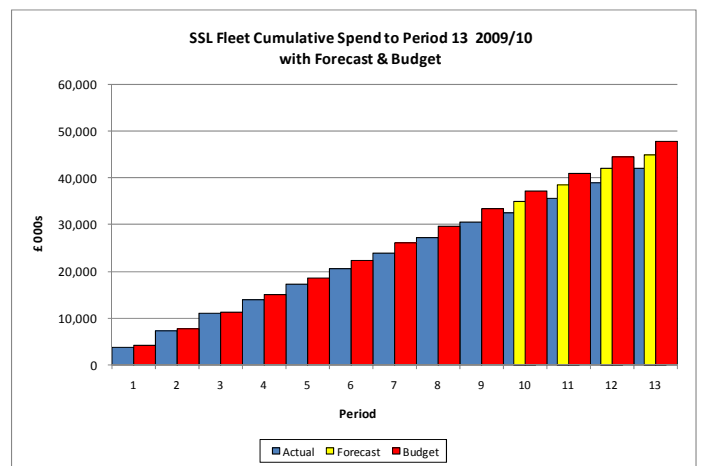
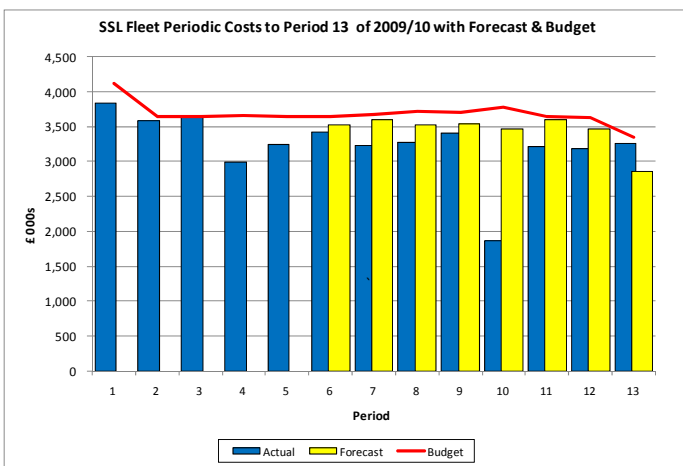
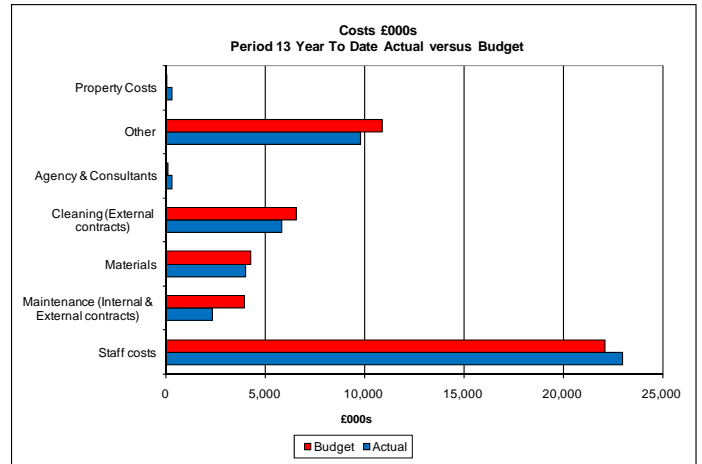
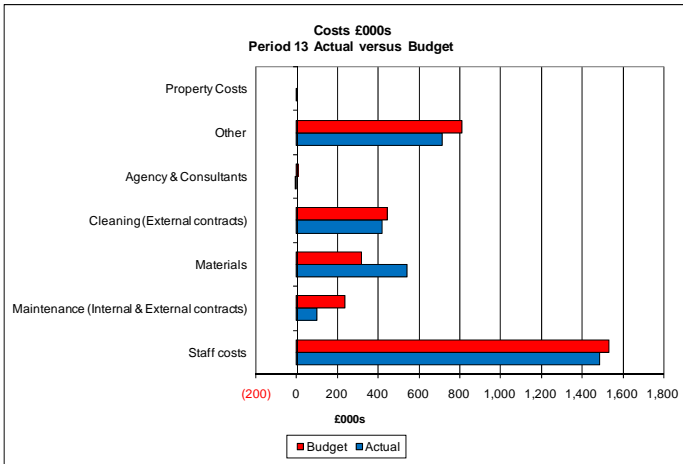
District	1,079	1,307	228
H&C/Circle	817	826	10
Metropolitan	1,209	1,213	4
Other	151	0	(151)
<b>Total</b>	<b>3,255</b>	<b>3,345</b>	<b>90</b>

District	16,935	18,509	1,574
H&C/Circle	11,126	11,857	731
Metropolitan	15,762	17,458	1,696
Other	1,745	0	(1,745)
<b>Total</b>	<b>45,568</b>	<b>47,824</b>	<b>2,255</b>

#### Operating Costs By Type

Staff costs	1,487	1,529	42
Maintenance (Internal & External contracts)	101	237	136
Materials	543	317	(226)
Cleaning (External contracts)	419	445	26
Agency & Consultants	(7)	8	15
Other	716	809	94
Property Costs	(3)	0	3
<b>Total</b>	<b>3,255</b>	<b>3,345</b>	<b>90</b>

Staff costs	22,982	22,098	(883)
Maintenance (Internal & External contracts)	2,355	3,950	1,595
Materials	4,018	4,252	234
Cleaning (External contracts)	5,822	6,550	728
Agency & Consultants	291	100	(191)
Other	9,800	10,863	1,063
Property Costs	300	10	(290)
<b>Total</b>	<b>45,568</b>	<b>47,824</b>	<b>2,255</b>



# Track Maintenance Cost

## Period 13 2009/10

**Track**

Period 13		
Actual	Budget	Var
£k	£k	£k

Full Year		
Actual	Budget	Var
£k	£k	£k

**Operating Costs By Area**

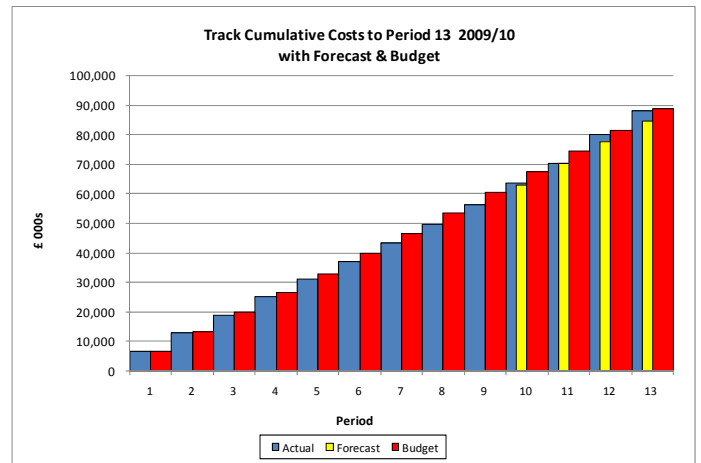
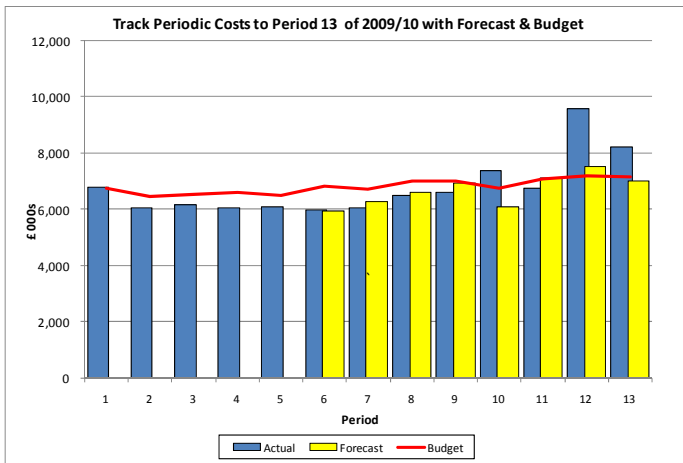
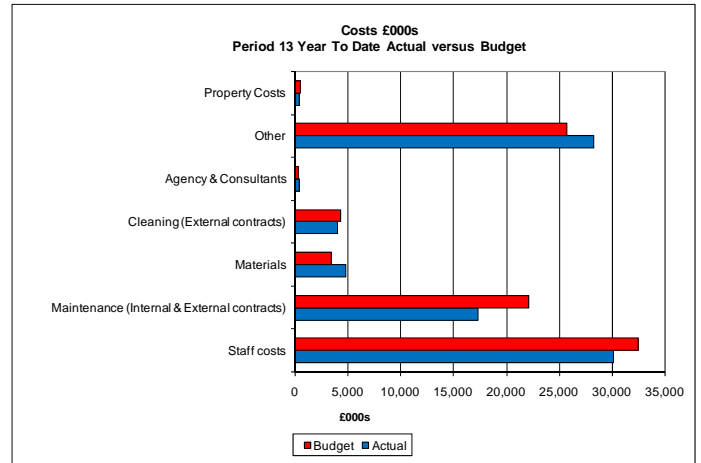
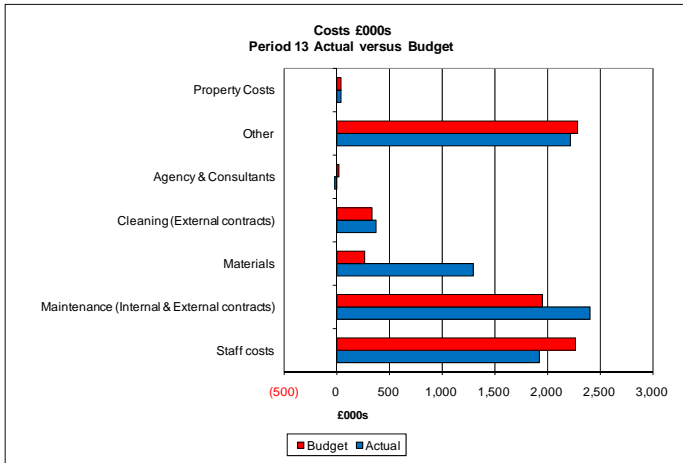
BCV Track	2,708	2,638	(70)
SSL Track	5,403	4,206	(1,196)
Other	124	314	189
<b>Total</b>	<b>8,235</b>	<b>7,158</b>	<b>(1,077)</b>

BCV Track	29,968	32,663	2,694
SSL Track	52,723	51,768	(954)
Other	2,644	4,344	1,699
<b>Total</b>	<b>85,335</b>	<b>88,775</b>	<b>3,439</b>

**Operating Costs By Type**

Staff costs	1,926	2,268	342
Maintenance (Internal & External contracts)	2,406	1,955	(451)
Materials	1,291	260	(1,031)
Cleaning (External contracts)	377	330	(47)
Agency & Consultants	(17)	23	40
Other	2,212	2,281	69
Property Costs	40	41	1
<b>Total</b>	<b>8,235</b>	<b>7,158</b>	<b>(1,077)</b>

Staff costs	30,157	32,457	2,299
Maintenance (Internal & External contracts)	17,309	22,089	4,780
Materials	4,808	3,379	(1,429)
Cleaning (External contracts)	4,031	4,284	253
Agency & Consultants	392	303	(89)
Other	28,212	25,733	(2,479)
Property Costs	426	530	104
<b>Total</b>	<b>85,335</b>	<b>88,775</b>	<b>3,439</b>



# Signals Maintenance Cost

## Period 13 2009/10

### Signals

Period 13		
Actual	Budget	Var
£k	£k	£k

Full Year		
Actual	Budget	Var
£k	£k	£k

### Operating Costs By Area

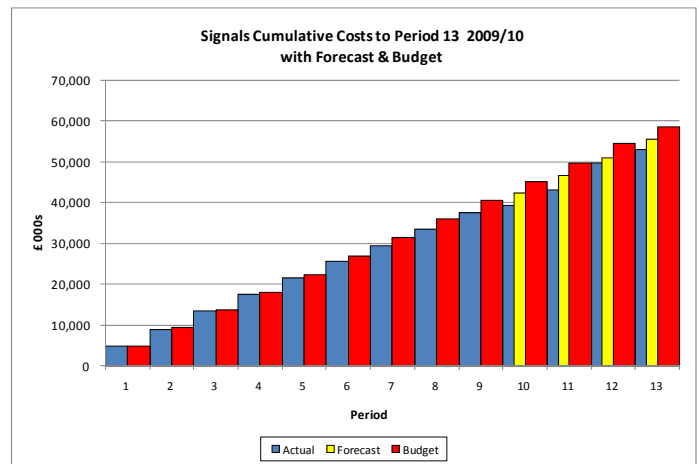
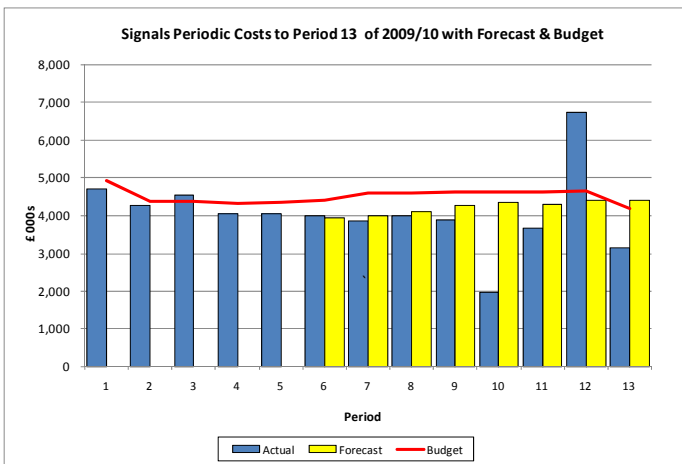
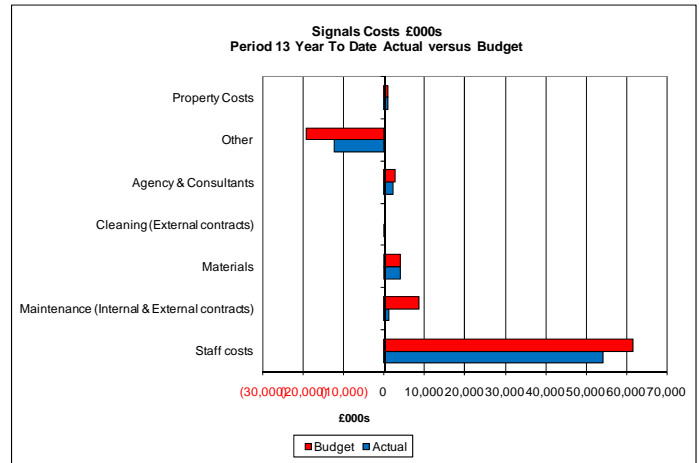
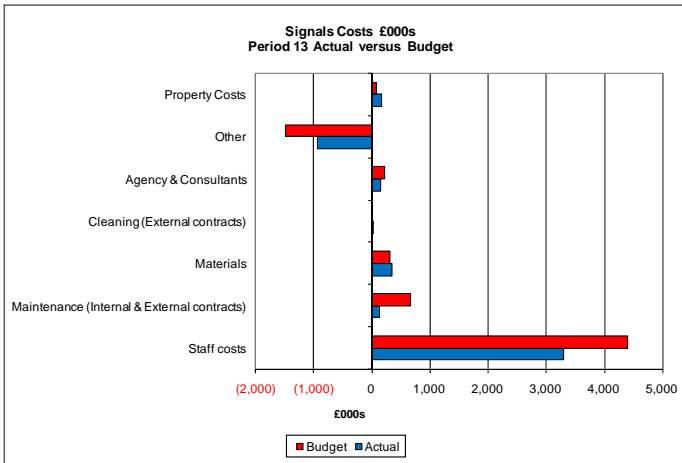
BCV Signals	887	1,592	704
SSL Signals	2,154	1,800	(355)
Signal Projects	(691)	392	1,083
Power Delivery	752	199	(554)
Other	55	207	152
<b>Total</b>	<b>3,158</b>	<b>4,189</b>	<b>1,031</b>

BCV Signals	18,179	21,692	3,513
SSL Signals	21,568	24,457	2,889
Signal Projects	2,932	6,395	3,463
Power Delivery	5,212	3,205	(2,007)
Other	2,247	2,903	656
<b>Total</b>	<b>50,138</b>	<b>58,652</b>	<b>8,514</b>

### Operating Costs By Type

Staff costs	3,303	4,405	1,102
Maintenance (Internal & External contracts)	135	662	527
Materials	344	312	(32)
Cleaning (External contracts)	2	0	(2)
Agency & Consultants	155	214	60
Other	(941)	(1,486)	(544)
Property Costs	160	81	(79)
<b>Total</b>	<b>3,158</b>	<b>4,189</b>	<b>1,031</b>

Staff costs	54,088	61,452	7,364
Maintenance (Internal & External contracts)	1,162	8,587	7,425
Materials	3,932	4,051	119
Cleaning (External contracts)	12	0	(12)
Agency & Consultants	2,255	2,794	539
Other	(12,337)	(19,285)	(6,948)
Property Costs	1,027	1,054	26
<b>Total</b>	<b>50,138</b>	<b>58,652</b>	<b>8,514</b>



# Stations Maintenance Cost

## Period 13 2009/10

### Stations

Period 13		
Actual	Budget	Var
£k	£k	£k

Full Year		
Actual	Budget	Var
£k	£k	£k

### Operating Costs By Area

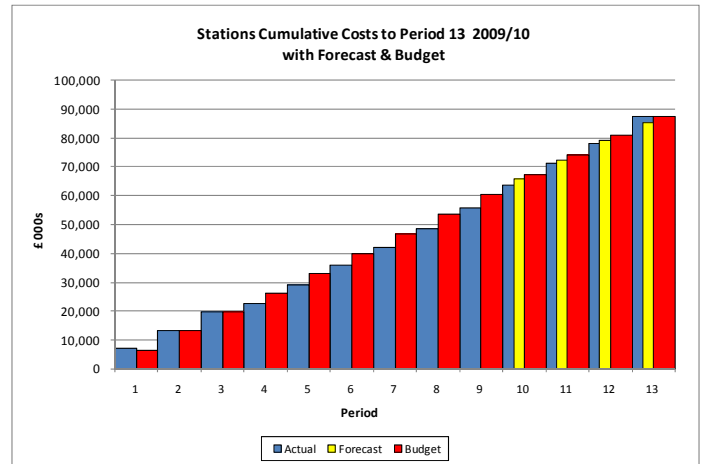
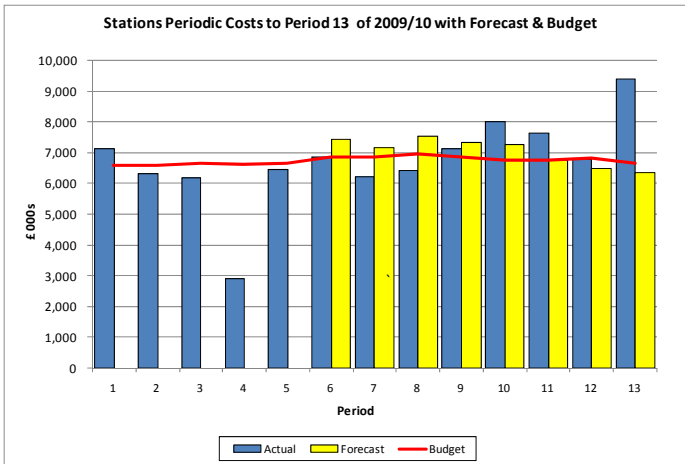
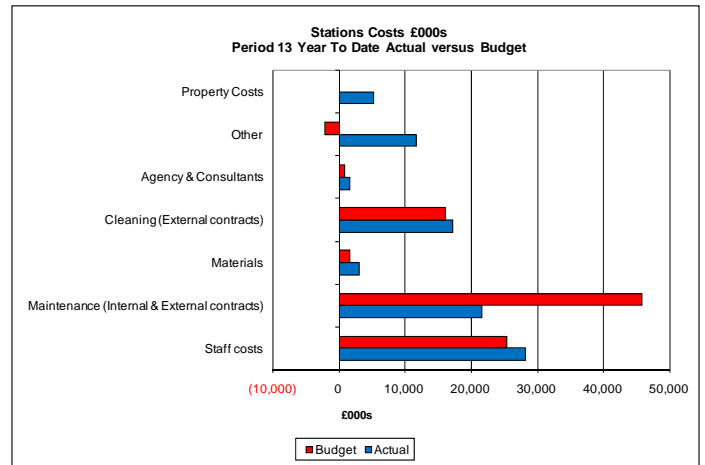
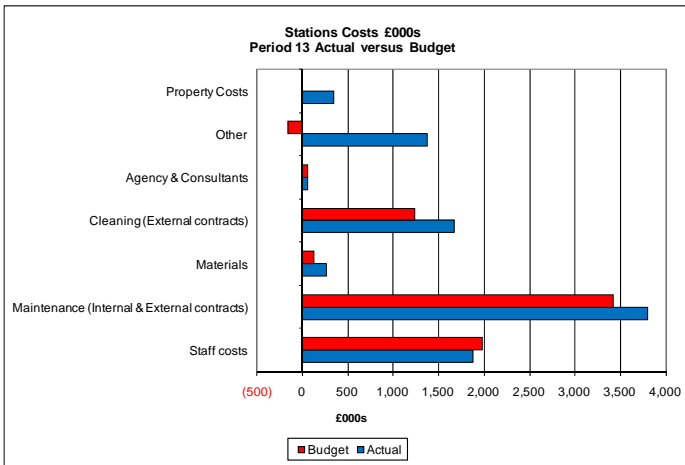
Premises & Structures	3,755	3,032	(723)
Station Equipment	130	1,397	1,267
Station Systems	1,528	1,586	58
Minor Works	1,101	563	(538)
LE&P DLO	1,504	8	(1,496)
Comms & Elec DLO	1,107	0	(1,107)
VP Stations & Civils	267	78	(189)
<b>Total</b>	<b>9,391</b>	<b>6,663</b>	<b>(2,728)</b>

Premises & Structures	36,739	39,203	2,464
Station Equipment	1,160	18,646	17,486
Station Systems	7,266	21,060	13,795
Minor Works	6,639	7,305	666
LE&P DLO	16,848	(56)	(16,904)
Comms & Elec DLO	18,302	0	(18,302)
VP Stations & Civils	1,438	1,431	(7)
<b>Total</b>	<b>88,392</b>	<b>87,589</b>	<b>(803)</b>

### Operating Costs By Type

Staff costs	1,878	1,977	99
Maintenance (Internal & External contracts)	3,795	3,412	(383)
Materials	264	131	(133)
Cleaning (External contracts)	1,675	1,240	(435)
Agency & Consultants	54	63	9
Other	1,375	(161)	(1,536)
Property Costs	350	0	(350)
<b>Total</b>	<b>9,391</b>	<b>6,663</b>	<b>(2,728)</b>

Staff costs	28,159	25,300	(2,859)
Maintenance (Internal & External contracts)	21,532	45,742	24,210
Materials	3,064	1,686	(1,378)
Cleaning (External contracts)	17,141	16,119	(1,022)
Agency & Consultants	1,590	825	(765)
Other	11,692	(2,083)	(13,775)
Property Costs	5,214	0	(5,214)
<b>Total</b>	<b>88,392</b>	<b>87,589</b>	<b>(803)</b>



# Civils Maintenance Cost

## Period 13 2009/10

### Civils

Period 13		
Actual £k	Budget £k	Var £k

Full Year		
Actual £k	Budget £k	Var £k

### Operating Costs By Area

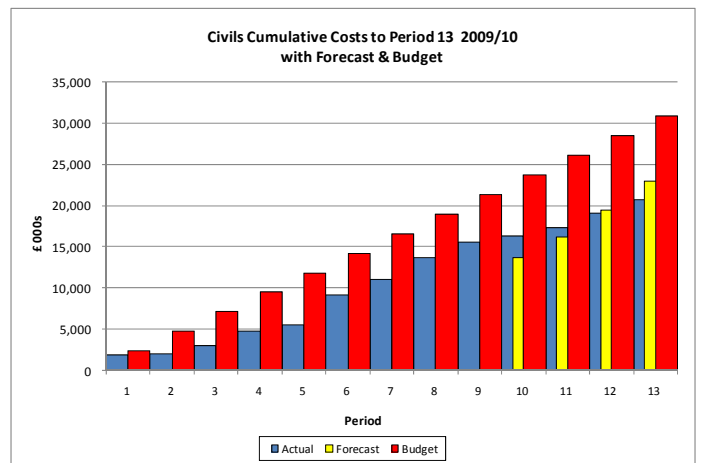
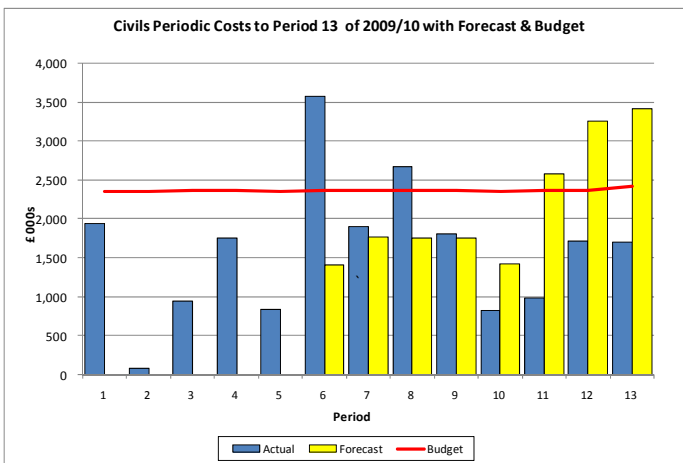
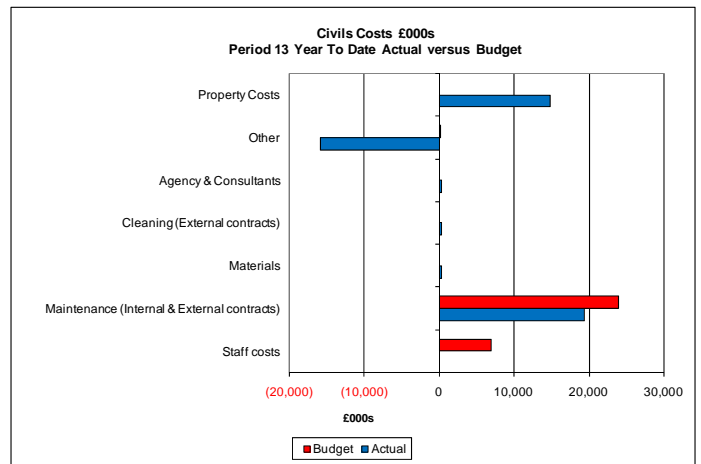
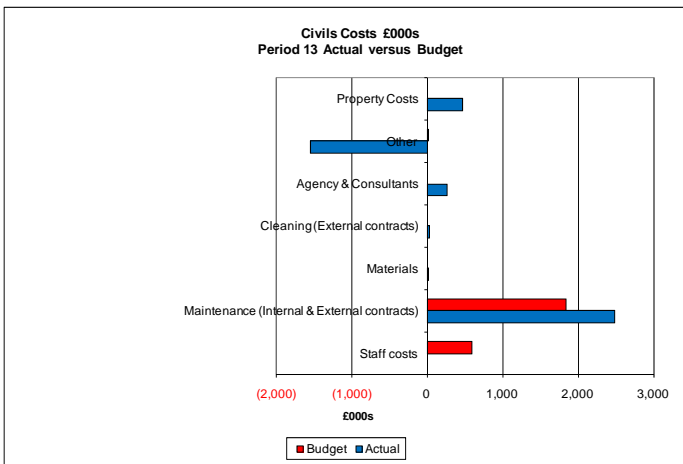
Civils	1,696	2,102	405
Civils Assess/Inspect	0	(6)	(6)
Civils Maintenance	0	332	332
Civils Management	0	0	0
Civils Projects	0	0	0
Civils Contractual Costs	0	0	0
<b>Total</b>	<b>1,696</b>	<b>2,429</b>	<b>732</b>

Civils	19,140	26,982	7,841
Civils Assess/Inspect	0	(56)	(56)
Civils Maintenance	0	3,954	3,954
Civils Management	0	0	0
Civils Projects	0	0	0
Civils Contractual Costs	0	0	0
<b>Total</b>	<b>19,140</b>	<b>30,880</b>	<b>11,739</b>

### Operating Costs By Type

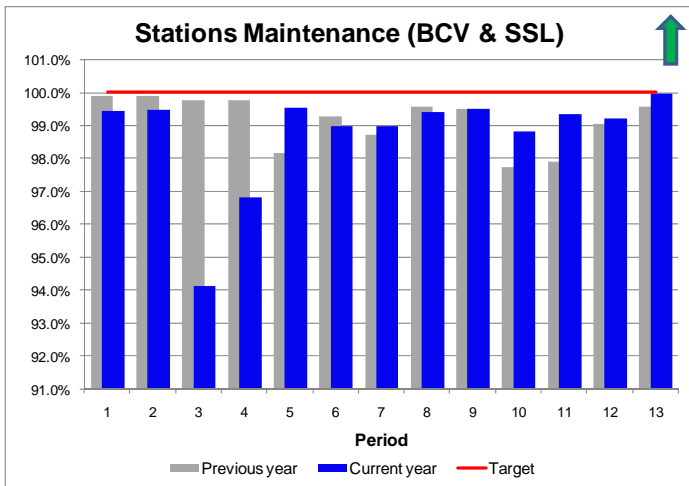
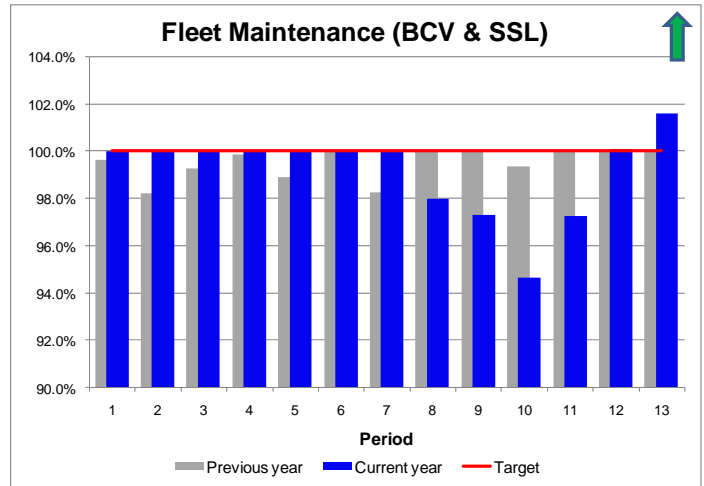
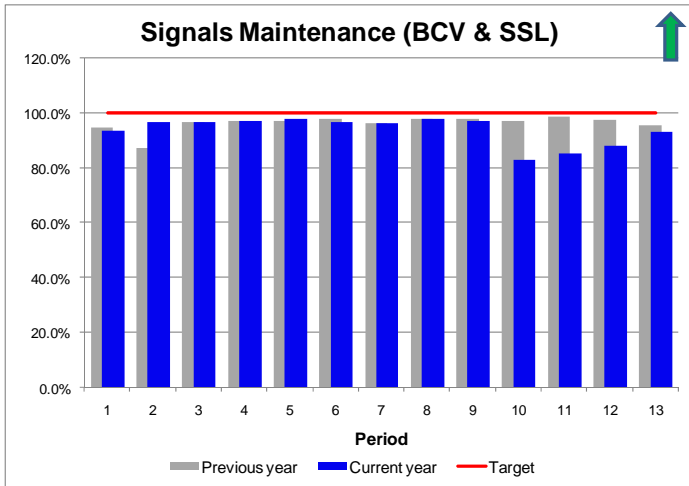
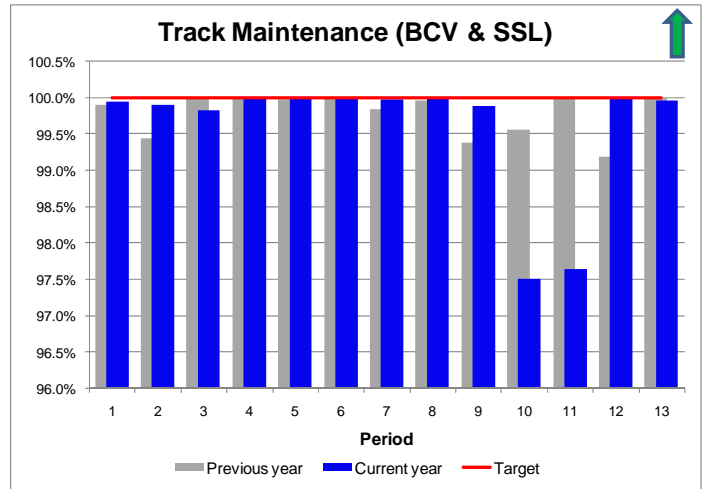
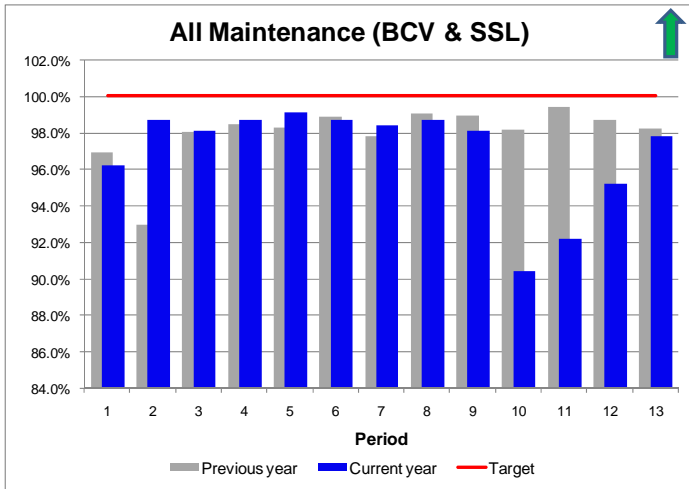
Staff costs	(0)	584	584
Maintenance (Internal & External contracts)	2,476	1,841	(635)
Materials	15	0	(15)
Cleaning (External contracts)	27	0	(27)
Agency & Consultants	263	0	(263)
Other	(1,550)	4	1,554
Property Costs	466	0	(466)
<b>Total</b>	<b>1,696</b>	<b>2,429</b>	<b>732</b>

Staff costs	(0)	6,884	6,884
Maintenance (Internal & External contracts)	19,348	23,942	4,594
Materials	258	0	(258)
Cleaning (External contracts)	309	0	(309)
Agency & Consultants	275	0	(275)
Other	(15,879)	53	15,932
Property Costs	14,829	0	(14,829)
<b>Total</b>	<b>19,140</b>	<b>30,880</b>	<b>11,739</b>



## % of Planned Maintenance Completed

Period 13 2009/10



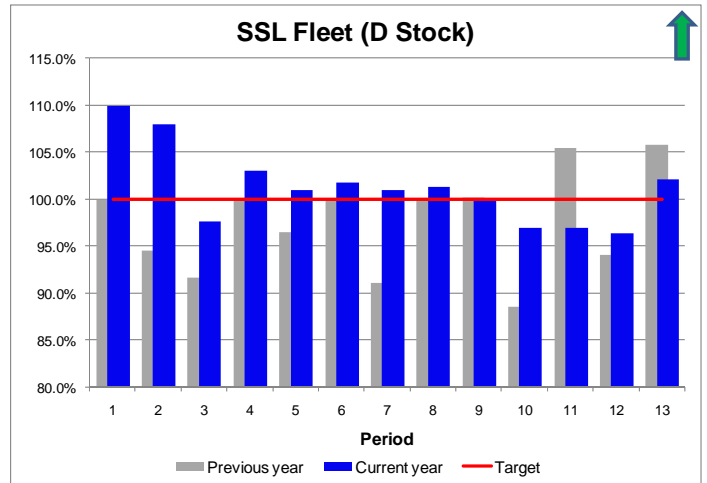
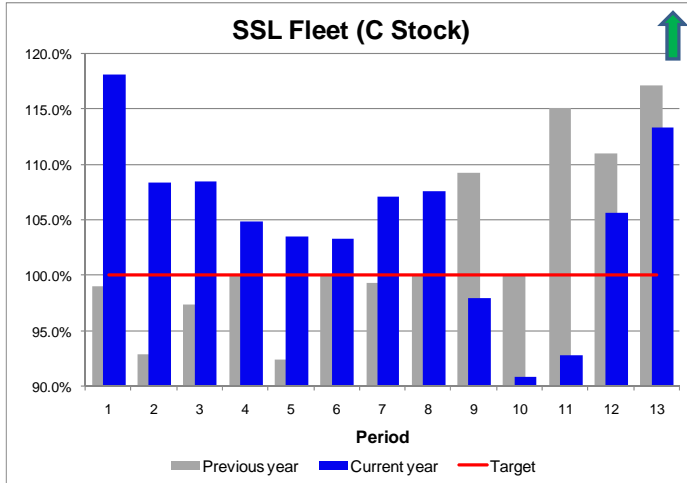
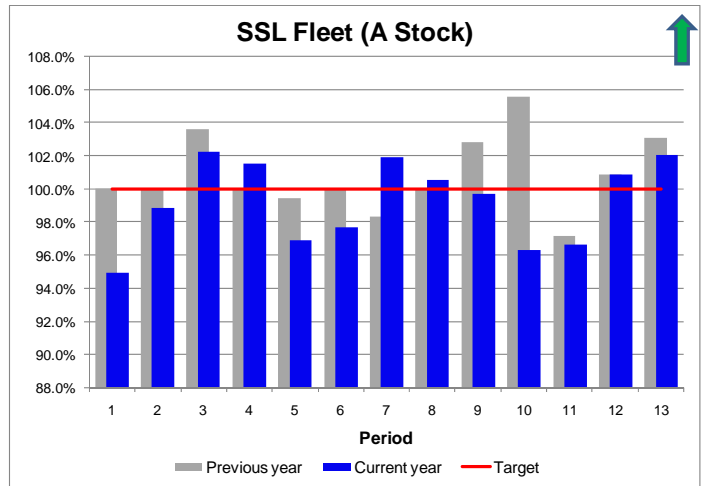
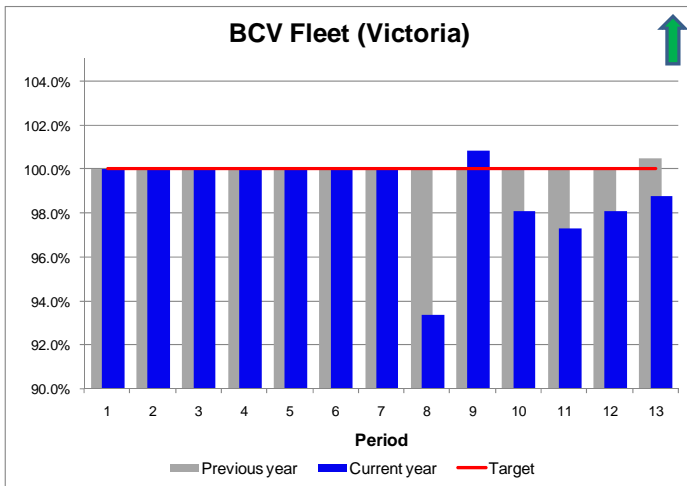
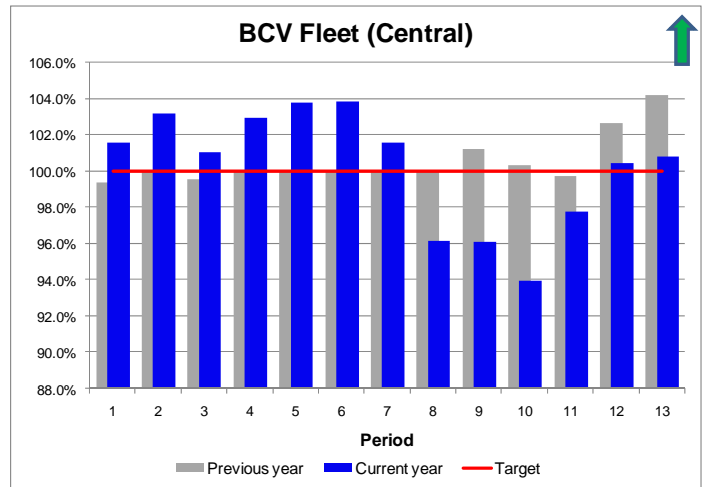
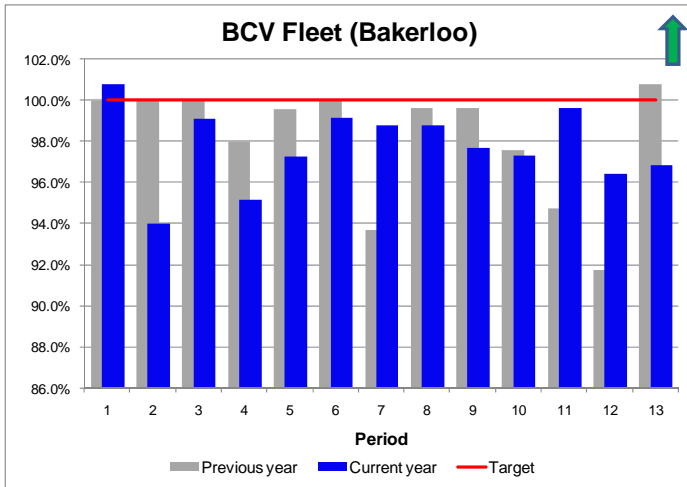
# % of Planned Maintenance Completed (Track and Signals)

## Period 13 2009/10



## % of Planned Maintenance Completed (Fleet)

Period 13 2009/10



## BCV &amp; SSL Capital Expenditure

Period 13 2009/10

System	Sub System	Period			Year to Date			Full Year Forecast		
		Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m
<b>Upgrades - Capex Projects</b>										
Train Systems	Rolling Stock	33.30	27.73	-5.57	238.99	261.11	22.12	238.99	261.11	22.12
	Signalling & Control	9.75	10.27	0.51	114.36	146.58	32.22	114.36	146.58	32.22
	Depots	5.40	1.64	-3.76	28.64	16.32	-12.32	28.64	16.32	-12.32
<b>Train Systems Total</b>		<b>48.45</b>	<b>39.64</b>	<b>-8.82</b>	<b>381.99</b>	<b>424.01</b>	<b>42.01</b>	<b>381.99</b>	<b>424.01</b>	<b>42.01</b>
Stations Systems	Accessibility	0.54	0.48	-0.05	5.23	6.17	0.95	5.23	6.17	0.95
	Station Improvements	0.00	-0.04	-0.04	0.00	-0.49	-0.49	0.00	-0.49	-0.49
	Stations Remodelling	3.75	0.88	-2.88	11.62	5.72	-5.90	11.62	5.72	-5.90
<b>Stations Systems Total</b>		<b>4.29</b>	<b>1.32</b>	<b>-2.97</b>	<b>16.85</b>	<b>11.40</b>	<b>-5.45</b>	<b>16.85</b>	<b>11.40</b>	<b>-5.45</b>
Infrastructure Systems	Bridges and Structures	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Track Remodelling	0.15	0.25	0.10	3.97	2.87	-1.10	3.97	2.87	-1.10
	Development	0.05	0.22	0.16	0.49	2.88	2.38	0.49	2.88	2.38
	Power	4.03	1.06	-2.97	33.49	19.80	-13.69	33.49	19.80	-13.69
<b>Infrastructure Systems Total</b>		<b>4.23</b>	<b>1.53</b>	<b>-2.70</b>	<b>37.95</b>	<b>25.54</b>	<b>-12.40</b>	<b>37.95</b>	<b>25.54</b>	<b>-12.40</b>
<b>BCVSSL Upgrades Total</b>		<b>56.98</b>	<b>42.49</b>	<b>-14.48</b>	<b>436.79</b>	<b>460.96</b>	<b>24.16</b>	<b>436.79</b>	<b>460.96</b>	<b>24.16</b>
<b>Non Upgrades - Capex Projects</b>										
Train Systems	Rolling Stock	0.16	0.23	0.07	2.93	5.00	2.07	2.93	5.00	2.07
	Signalling & Control	0.05	1.16	1.11	3.52	13.95	10.43	3.52	13.95	10.43
	Depots	0.21	0.32	0.12	0.44	3.30	2.86	0.44	3.30	2.86
<b>Train Systems Total</b>		<b>0.42</b>	<b>1.71</b>	<b>1.29</b>	<b>6.90</b>	<b>22.25</b>	<b>15.36</b>	<b>6.90</b>	<b>22.25</b>	<b>15.36</b>
Stations Systems	Future Stations	2.45	4.32	1.87	20.89	34.53	13.64	20.89	34.53	13.64
	Completion on Site	5.02	3.99	-1.04	71.20	61.34	-9.86	71.20	61.34	-9.86
	DIS Completion	0.35	0.07	-0.28	5.14	5.89	0.75	5.14	5.89	0.75
	Accessibility	0.54	0.00	-0.54	1.83	0.00	-1.83	1.83	0.00	-1.83
	Asset Stabilisation	2.78	3.71	0.93	16.06	25.62	9.56	16.06	25.62	9.56
	Station Improvements	0.00	0.00	0.00	0.14	0.00	-0.14	0.14	0.00	-0.14
	Other Non Stations Specific	0.26	0.69	0.43	3.51	4.67	1.16	3.51	4.67	1.16
	Escalators	1.55	2.45	0.89	18.58	28.38	9.80	18.58	28.38	9.80
	Lifts	-0.01	0.11	0.12	0.05	1.32	1.27	0.05	1.32	1.27
	Power	-0.50	0.23	0.73	4.43	5.14	0.71	4.43	5.14	0.71
	Management Costs	1.47	1.24	-0.23	16.84	16.64	-0.20	16.84	16.64	-0.20
<b>Stations Systems Total</b>		<b>13.92</b>	<b>16.80</b>	<b>2.88</b>	<b>158.66</b>	<b>183.53</b>	<b>24.86</b>	<b>158.66</b>	<b>183.53</b>	<b>24.86</b>
Infrastructure Systems	Bridges and Structures	0.15	0.31	0.16	2.42	3.94	1.52	2.42	3.94	1.52
	Earth Structures	2.83	0.68	-2.15	18.25	17.90	-0.35	18.25	17.90	-0.35
	Deep Tube Tunnel	2.54	2.65	0.11	25.10	34.50	9.40	25.10	34.50	9.40
	Pumps & Drainage	1.62	0.19	-1.44	15.03	14.49	-0.54	15.03	14.49	-0.54
	Points & Crossings	0.66	2.04	1.39	14.96	25.93	10.96	14.96	25.93	10.96
	Ballasted Track Renewal	5.92	5.13	-0.79	64.98	67.46	2.48	64.98	67.46	2.48
	Development	0.10	-0.12	-0.23	2.24	-1.22	-3.45	2.24	-1.22	-3.45
	Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Track Remodelling	0.32	-0.11	-0.43	1.20	-1.58	-2.78	1.20	-1.58	-2.78
	Depots	0.20	0.54	0.34	4.48	5.37	0.88	4.48	5.37	0.88
	Management Costs	1.31	0.12	-1.19	12.33	1.54	-10.79	12.33	1.54	-10.79
<b>Infrastructure Systems Total</b>		<b>15.66</b>	<b>11.43</b>	<b>-4.22</b>	<b>160.98</b>	<b>168.32</b>	<b>7.34</b>	<b>160.98</b>	<b>168.32</b>	<b>7.34</b>
Other Expenditure	Admin Projects	0.23	1.28	1.05	4.12	14.39	10.27	4.12	14.39	10.27
	Risk & Contingency	0.00	3.38	3.38	0.00	43.97	43.97	0.00	43.97	43.97
<b>Other Expenditure Total</b>		<b>0.23</b>	<b>4.66</b>	<b>4.43</b>	<b>4.12</b>	<b>58.36</b>	<b>54.24</b>	<b>4.12</b>	<b>58.36</b>	<b>54.24</b>
<b>Non Upgrade Total</b>		<b>30.23</b>	<b>34.60</b>	<b>4.38</b>	<b>330.66</b>	<b>432.46</b>	<b>101.81</b>	<b>330.66</b>	<b>432.46</b>	<b>101.81</b>
<b>Opex Projects</b>										
Train Systems	Rolling Stock, Depots & Signals	0.04	0.25	0.21	2.60	3.98	1.38	2.60	3.98	1.38
Stations Systems	Stations and L&E	0.05	0.32	0.27	4.82	4.73	-0.08	4.82	4.73	-0.08
Infrastructure Systems	Track & Civils	0.97	0.42	-0.55	4.64	4.69	0.04	4.64	4.69	0.04
<b>Opex Projects Total</b>		<b>1.06</b>	<b>0.99</b>	<b>-0.07</b>	<b>12.07</b>	<b>13.40</b>	<b>1.34</b>	<b>12.07</b>	<b>13.40</b>	<b>1.34</b>
<b>PPP Total</b>										
		<b>88.26</b>	<b>78.08</b>	<b>-10.18</b>	<b>779.51</b>	<b>906.82</b>	<b>127.31</b>	<b>779.51</b>	<b>906.82</b>	<b>127.31</b>

## BCV Capital Expenditure

Period 13 2009/10

System	Sub System	Period			Year to Date			Full Year Forecast		
		Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m
<b>Upgrades - Capex Projects</b>										
VLU	Train Systems	15.49	12.07	-3.42	105.07	131.26	26.18	105.07	131.26	26.18
	Rolling Stock	6.40	2.40	-4.00	45.04	50.08	5.05	45.04	50.08	5.05
	Signalling & Control	0.00	0.00	0.00	0.13	0.00	-0.13	0.13	0.00	-0.13
	Depots									
	<b>Train Systems Total</b>	<b>21.89</b>	<b>14.47</b>	<b>-7.42</b>	<b>150.23</b>	<b>181.34</b>	<b>31.11</b>	<b>150.23</b>	<b>181.34</b>	<b>31.11</b>
	Stations Systems	0.00	0.00	0.00	1.15	0.00	-1.15	1.15	0.00	-1.15
	Accessibility	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Station Improvements	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Stations Remodelling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Stations Systems Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>-1.15</b>	<b>1.15</b>	<b>0.00</b>	<b>-1.15</b>
	Infrastructure Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bridges and Structures	0.00	0.11	0.11	2.60	1.41	-1.19	2.60	1.41	-1.19
	Track Remodelling	0.05	0.22	0.16	0.49	2.88	2.38	0.49	2.88	2.38
	Development	1.14	0.46	-0.68	13.88	11.91	-1.97	13.88	11.91	-1.97
	Power									
	<b>Infrastructure Systems Total</b>	<b>1.19</b>	<b>0.78</b>	<b>-0.41</b>	<b>16.97</b>	<b>16.20</b>	<b>-0.77</b>	<b>16.97</b>	<b>16.20</b>	<b>-0.77</b>
	<b>Victoria Line Upgrade Total</b>	<b>23.08</b>	<b>15.26</b>	<b>-7.82</b>	<b>168.36</b>	<b>197.54</b>	<b>29.19</b>	<b>168.36</b>	<b>197.54</b>	<b>29.19</b>
<b>Non Upgrades - Capex Projects</b>										
	Train Systems	0.09	0.21	0.12	1.46	3.29	1.83	1.46	3.29	1.83
	Rolling Stock	0.03	0.56	0.53	1.25	7.51	6.26	1.25	7.51	6.26
	Signalling & Control	0.20	0.23	0.03	0.44	2.38	1.94	0.44	2.38	1.94
	Depots									
	<b>Train Systems Total</b>	<b>0.32</b>	<b>1.00</b>	<b>0.68</b>	<b>3.15</b>	<b>13.19</b>	<b>10.03</b>	<b>3.15</b>	<b>13.19</b>	<b>10.03</b>
	Stations Systems	0.09	0.18	0.09	0.06	2.88	2.81	0.06	2.88	2.81
	Future Stations	4.23	2.42	-1.81	57.43	47.26	-10.17	57.43	47.26	-10.17
	Completion on Site	0.43	0.07	-0.37	3.65	2.67	-0.98	3.65	2.67	-0.98
	Accessibility	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Asset Stabilisation	1.68	1.30	-0.39	8.88	10.11	1.23	8.88	10.11	1.23
	Station Improvements	0.00	0.00	0.00	0.10	0.00	-0.10	0.10	0.00	-0.10
	Other Non Stations Specific	0.11	0.53	0.42	1.53	3.70	2.17	1.53	3.70	2.17
	Escalators	1.39	1.93	0.54	16.68	24.74	8.07	16.68	24.74	8.07
	Lifts	-0.01	0.08	0.09	0.05	0.91	0.86	0.05	0.91	0.86
	Power	-0.50	0.23	0.73	4.43	5.14	0.71	4.43	5.14	0.71
	Management Costs	0.47	0.61	0.14	5.35	8.31	2.96	5.35	8.31	2.96
	<b>Stations Systems Total</b>	<b>7.90</b>	<b>7.34</b>	<b>-0.56</b>	<b>98.15</b>	<b>105.72</b>	<b>7.57</b>	<b>98.15</b>	<b>105.72</b>	<b>7.57</b>
	Infrastructure Systems	0.01	0.08	0.08	1.14	0.85	-0.29	1.14	0.85	-0.29
	Bridges and Structures	1.13	0.26	-0.87	9.02	10.01	0.99	9.02	10.01	0.99
	Earth Structures	2.54	2.65	0.11	25.10	34.50	9.40	25.10	34.50	9.40
	Deep Tube Tunnel	0.25	0.09	-0.16	0.64	2.15	1.52	0.64	2.15	1.52
	Pumps & Drainage	0.32	0.44	0.12	4.99	5.52	0.52	4.99	5.52	0.52
	Points & Crossings	-0.07	0.42	0.50	4.63	6.24	1.61	4.63	6.24	1.61
	Ballasted Track Renewal	0.07	-0.40	-0.47	0.17	-3.97	-4.14	0.17	-3.97	-4.14
	Development	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Power	0.08	0.11	0.02	0.91	1.05	0.14	0.91	1.05	0.14
	Track Remodelling	0.23	0.35	0.12	4.09	3.50	-0.59	4.09	3.50	-0.59
	Depots	0.99	0.05	-0.94	10.92	0.59	-10.34	10.92	0.59	-10.34
	Management Costs									
	<b>Infrastructure Systems Total</b>	<b>5.54</b>	<b>4.05</b>	<b>-1.49</b>	<b>61.61</b>	<b>60.44</b>	<b>-1.18</b>	<b>61.61</b>	<b>60.44</b>	<b>-1.18</b>
	Other Expenditure	0.20	0.79	0.59	2.27	9.06	6.79	2.27	9.06	6.79
	Admin Projects	0.00	1.36	1.36	0.00	17.71	17.71	0.00	17.71	17.71
	Risk & Contingency									
	<b>Other Expenditure Total</b>	<b>0.20</b>	<b>2.15</b>	<b>1.95</b>	<b>2.27</b>	<b>26.77</b>	<b>24.50</b>	<b>2.27</b>	<b>26.77</b>	<b>24.50</b>
	<b>Non Upgrade Total</b>	<b>13.96</b>	<b>14.54</b>	<b>0.58</b>	<b>165.19</b>	<b>206.11</b>	<b>40.92</b>	<b>165.19</b>	<b>206.11</b>	<b>40.92</b>
<b>Opex Projects</b>										
	Train Systems	0.04	0.07	0.03	1.02	0.97	-0.05	1.02	0.97	-0.05
	Rolling Stock, Depots & Signals	0.04	0.20	0.16	4.09	2.97	-1.12	4.09	2.97	-1.12
	Stations and L&E	0.87	0.17	-0.69	4.26	2.24	-2.03	4.26	2.24	-2.03
	Track & Civils									
	<b>Opex Projects Total</b>	<b>0.95</b>	<b>0.44</b>	<b>-0.51</b>	<b>9.38</b>	<b>6.18</b>	<b>-3.20</b>	<b>9.38</b>	<b>6.18</b>	<b>-3.20</b>
	<b>PPP Total</b>	<b>37.99</b>	<b>30.24</b>	<b>-7.75</b>	<b>342.92</b>	<b>409.83</b>	<b>66.91</b>	<b>342.92</b>	<b>409.83</b>	<b>66.91</b>

## SSL Capital Expenditure

Period 13 2009/10

System	Sub System	Period			Year to Date			Full Year Forecast		
		Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m	Actual £m	Budget £m	Variance £m
<b>Upgrades - Capex Projects</b>										
SUP	Train Systems	17.81	15.66	-2.15	133.92	129.85	-4.07	133.92	129.85	-4.07
	Rolling Stock									
	Signalling & Control	3.35	7.87	4.52	69.32	96.49	27.17	69.32	96.49	27.17
	Depots	5.40	1.64	-3.76	28.52	16.32	-12.20	28.52	16.32	-12.20
	<b>Train Systems Total</b>	<b>26.56</b>	<b>25.16</b>	<b>-1.40</b>	<b>231.76</b>	<b>242.67</b>	<b>10.90</b>	<b>231.76</b>	<b>242.67</b>	<b>10.90</b>
	Stations Systems	0.54	0.48	-0.06	4.08	6.17	2.10	4.08	6.17	2.10
	Accessibility									
	Station Improvements	0.00	-0.04	-0.04	0.00	-0.49	-0.49	0.00	-0.49	-0.49
	Stations Remodelling	3.75	0.88	-2.88	11.62	5.72	-5.90	11.62	5.72	-5.90
	<b>Stations Systems Total</b>	<b>4.29</b>	<b>1.32</b>	<b>-2.97</b>	<b>15.70</b>	<b>11.40</b>	<b>-4.30</b>	<b>15.70</b>	<b>11.40</b>	<b>-4.30</b>
	Infrastructure Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bridges and Structures									
	Track Remodelling	0.15	0.14	-0.01	1.37	1.46	0.09	1.37	1.46	0.09
	Development	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Power	2.89	0.61	-2.28	19.61	7.89	-11.72	19.61	7.89	-11.72
	<b>Infrastructure Systems Total</b>	<b>3.04</b>	<b>0.75</b>	<b>-2.29</b>	<b>20.98</b>	<b>9.34</b>	<b>-11.63</b>	<b>20.98</b>	<b>9.34</b>	<b>-11.63</b>
<b>SSL Upgrade Total</b>		<b>33.90</b>	<b>27.23</b>	<b>-6.66</b>	<b>268.43</b>	<b>263.41</b>	<b>-5.02</b>	<b>268.43</b>	<b>263.41</b>	<b>-5.02</b>
<b>Non Upgrades - Capex Projects</b>										
	Train Systems	0.08	0.02	-0.06	1.47	1.71	0.23	1.47	1.71	0.23
	Rolling Stock									
	Signalling & Control	0.02	0.60	0.58	2.27	6.44	4.17	2.27	6.44	4.17
	Depots	0.00	0.09	0.09	0.00	0.92	0.92	0.00	0.92	0.92
	<b>Train Systems Total</b>	<b>0.10</b>	<b>0.71</b>	<b>0.61</b>	<b>3.74</b>	<b>9.07</b>	<b>5.33</b>	<b>3.74</b>	<b>9.07</b>	<b>5.33</b>
	Stations Systems	2.36	4.14	1.78	20.83	31.66	10.83	20.83	31.66	10.83
	Future Stations									
	Completion on Site	0.79	1.56	0.77	13.77	14.08	0.31	13.77	14.08	0.31
	DIS Completion	-0.08	0.00	0.08	1.49	3.22	1.73	1.49	3.22	1.73
	Accessibility	0.54	0.00	-0.54	1.83	0.00	-1.83	1.83	0.00	-1.83
	Asset Stabilisation	1.10	2.41	1.32	7.19	15.52	8.33	7.19	15.52	8.33
	Station Improvements	0.00	0.00	0.00	0.05	0.00	-0.05	0.05	0.00	-0.05
	Other Non Stations Specific	0.15	0.16	0.01	1.97	0.97	-1.01	1.97	0.97	-1.01
	Escalators	0.16	0.52	0.36	1.90	3.64	1.73	1.90	3.64	1.73
	Lifts	0.00	0.03	0.03	0.00	0.41	0.41	0.00	0.41	0.41
	Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Management Costs	1.00	0.63	-0.37	11.48	8.33	-3.15	11.48	8.33	-3.15
	<b>Stations Systems Total</b>	<b>6.02</b>	<b>9.46</b>	<b>3.44</b>	<b>60.51</b>	<b>77.81</b>	<b>17.30</b>	<b>60.51</b>	<b>77.81</b>	<b>17.30</b>
	Infrastructure Systems	0.15	0.23	0.08	1.28	3.10	1.82	1.28	3.10	1.82
	Bridges and Structures									
	Earth Structures	1.70	0.42	-1.27	9.22	7.89	-1.33	9.22	7.89	-1.33
	Deep Tube Tunnel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Pumps & Drainage	1.38	0.10	-1.28	14.39	12.34	-2.06	14.39	12.34	-2.06
	Points & Crossings	0.34	1.61	1.27	9.97	20.41	10.44	9.97	20.41	10.44
	Ballasted Track Renewal	6.00	4.71	-1.29	60.35	61.22	0.87	60.35	61.22	0.87
	Development	0.03	0.27	0.24	2.07	2.75	0.68	2.07	2.75	0.68
	Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Track Remodelling	0.24	-0.21	-0.45	0.29	-2.63	-2.92	0.29	-2.63	-2.92
	Depots	-0.03	0.19	0.22	0.39	1.86	1.47	0.39	1.86	1.47
	Management Costs	0.32	0.07	-0.25	1.41	0.95	-0.46	1.41	0.95	-0.46
	<b>Infrastructure Systems Total</b>	<b>10.12</b>	<b>7.39</b>	<b>-2.73</b>	<b>99.37</b>	<b>107.88</b>	<b>8.52</b>	<b>99.37</b>	<b>107.88</b>	<b>8.52</b>
	Other Expenditure	0.03	0.49	0.46	1.84	5.33	3.48	1.84	5.33	3.48
	Admin Projects									
	Risk & Contingency	0.00	2.02	2.02	0.00	26.26	26.26	0.00	26.26	26.26
	<b>Other Expenditure Total</b>	<b>0.03</b>	<b>2.51</b>	<b>2.48</b>	<b>1.84</b>	<b>31.59</b>	<b>29.75</b>	<b>1.84</b>	<b>31.59</b>	<b>29.75</b>
<b>Non Upgrade Total</b>		<b>16.27</b>	<b>20.06</b>	<b>3.79</b>	<b>165.47</b>	<b>226.35</b>	<b>60.88</b>	<b>165.47</b>	<b>226.35</b>	<b>60.88</b>
<b>Opex Projects</b>										
	Train Systems	0.00	0.18	0.18	1.58	3.01	1.43	1.58	3.01	1.43
	Rolling Stock, Depots & Signals									
	Stations Systems	0.01	0.12	0.11	0.73	1.76	1.03	0.73	1.76	1.03
	Stations and L&E									
	Infrastructure Systems	0.10	0.25	0.15	0.38	2.45	2.07	0.38	2.45	2.07
	Track & Civils									
<b>Opex Projects Total</b>		<b>0.10</b>	<b>0.55</b>	<b>0.44</b>	<b>2.69</b>	<b>7.23</b>	<b>4.54</b>	<b>2.69</b>	<b>7.23</b>	<b>4.54</b>
<b>PPP Total</b>		<b>50.27</b>	<b>47.84</b>	<b>-2.42</b>	<b>436.59</b>	<b>496.99</b>	<b>60.40</b>	<b>436.59</b>	<b>496.99</b>	<b>60.40</b>

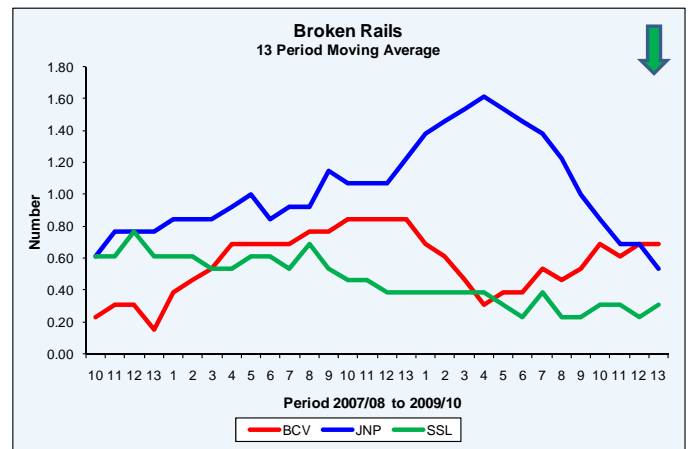
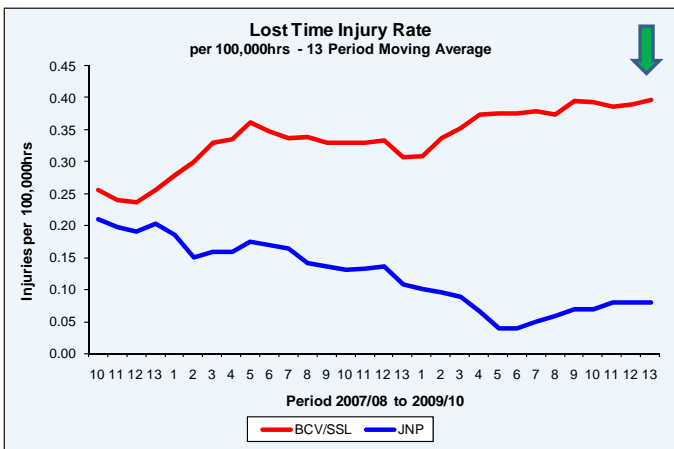
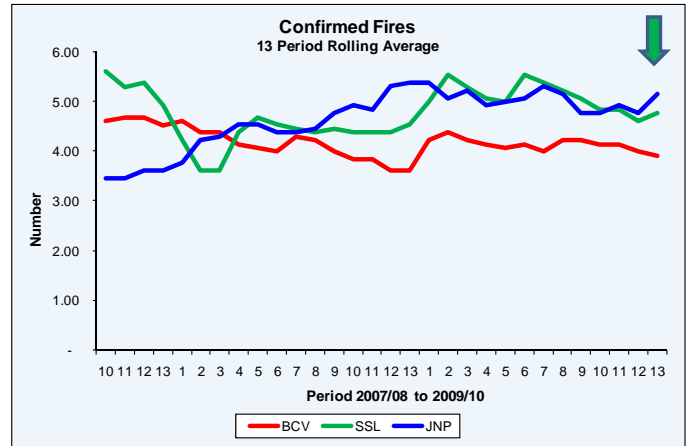
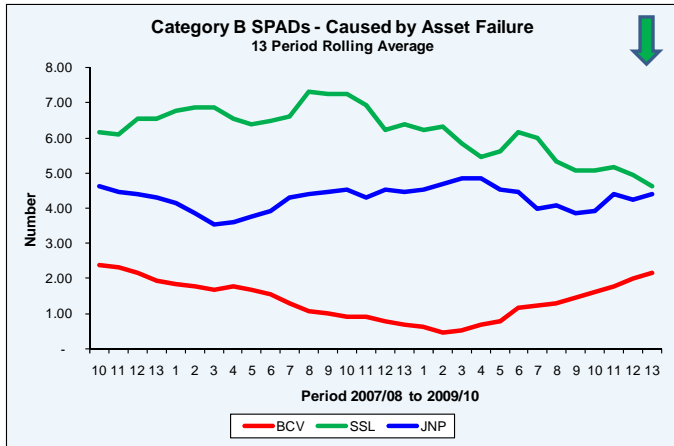
## BCV & SSL Capital Expenditure Variance Analysis

Period 13 2009/10

Projects Expenditure Variances - BCV & SSL P13 2009/10			Variances		
System	Period Variance Commentary	Full Year Variance Commentary	Period £m	Year to Date £m	Full Year Forecast £m
SUP	The variance was a result budget phasing issues in the period.	Baker Street Enabling faces potential increased costs due to higher than anticipated track alliance costs.	-6.66	-5.02	-5.02
VLU	The variance was a result budget phasing issues in the period.	With current performance on the BTUK contract being lower than that anticipated, LU have begun withholding part of the monthly sum each period until recovery of production is achieved.	-7.82	29.19	29.19
<b>Upgrade Total</b>			<b>-14.48</b>	<b>24.16</b>	<b>24.16</b>
<b>Train Systems Total</b>	Underspend is reflected mainly in Power and NPD Earthing projects as well as the SER Training facility project which has been rebaselined. In addition Signals Wire Degradation costs held in Track (Infrastructure Systems) and Budget in Signals (Trains Systems).	Underspend is reflected mainly in Power and NPD Earthing projects as well as the SER Training facility project which has been rebaselined. In addition Signals Wire Degradation costs held in Track (Infrastructure Systems) and Budget in Signals (Trains Systems).	1.29	15.36	15.36
<b>Stations Systems Total</b>	Underspend is largely in Asset Stabilisation where the programme has been reforecast in line with what Procurement and the project team can deliver within the current authority.	Majority of the underspend is in L&E, £10.8m owing to reprogramming of Bank, cancellation of Charing Cross and delay in obtaining authority for Hainault and Escalator Maint. Regime. This is partially offset by an overspend in Stations, mainly owing to rephased works at Oxford Circus and prolongation works at St. Pauls. Asset Stabilisation underspend of £6.5m is due to late hand over of the projects to the asset stabilisation team, these issues have pushed some spend into next year. RVAR for the Met Line is also shown in Asset Stabilisation where no budget has been allocated.	2.88	24.86	24.86
<b>Infrastructure Systems Total</b>	Overspend in period due to catch up over overall underspend in the year on Points & Crossings Works.	Underspend is owing to delays in Points & Crossings Works and Civils projects that were budgeted but not approved.	-4.22	7.34	7.34
<b>Other Expenditure Total</b>	Risk variance of £3.4m has arisen as there has not been a release of risk drawn down this period. Admin IT Projects underspend of £1.1m is reflected in PACE and some smaller IT projects.	Risk - The £44m variance is owing to forecast risk for the year has being reassessed by senior management. Admin IT and Change projects reflect a £10m underspend, £2m of the underspend is in PACE.	4.43	54.24	54.24
<b>Opex Projects</b>	Minor Opex projects variances.	Minor Opex projects variances.	-0.07	1.34	1.34
<b>Non Upgrades</b>			<b>4.31</b>	<b>103.14</b>	<b>103.14</b>
<b>TOTAL</b>			<b>-10.18</b>	<b>127.31</b>	<b>127.31</b>

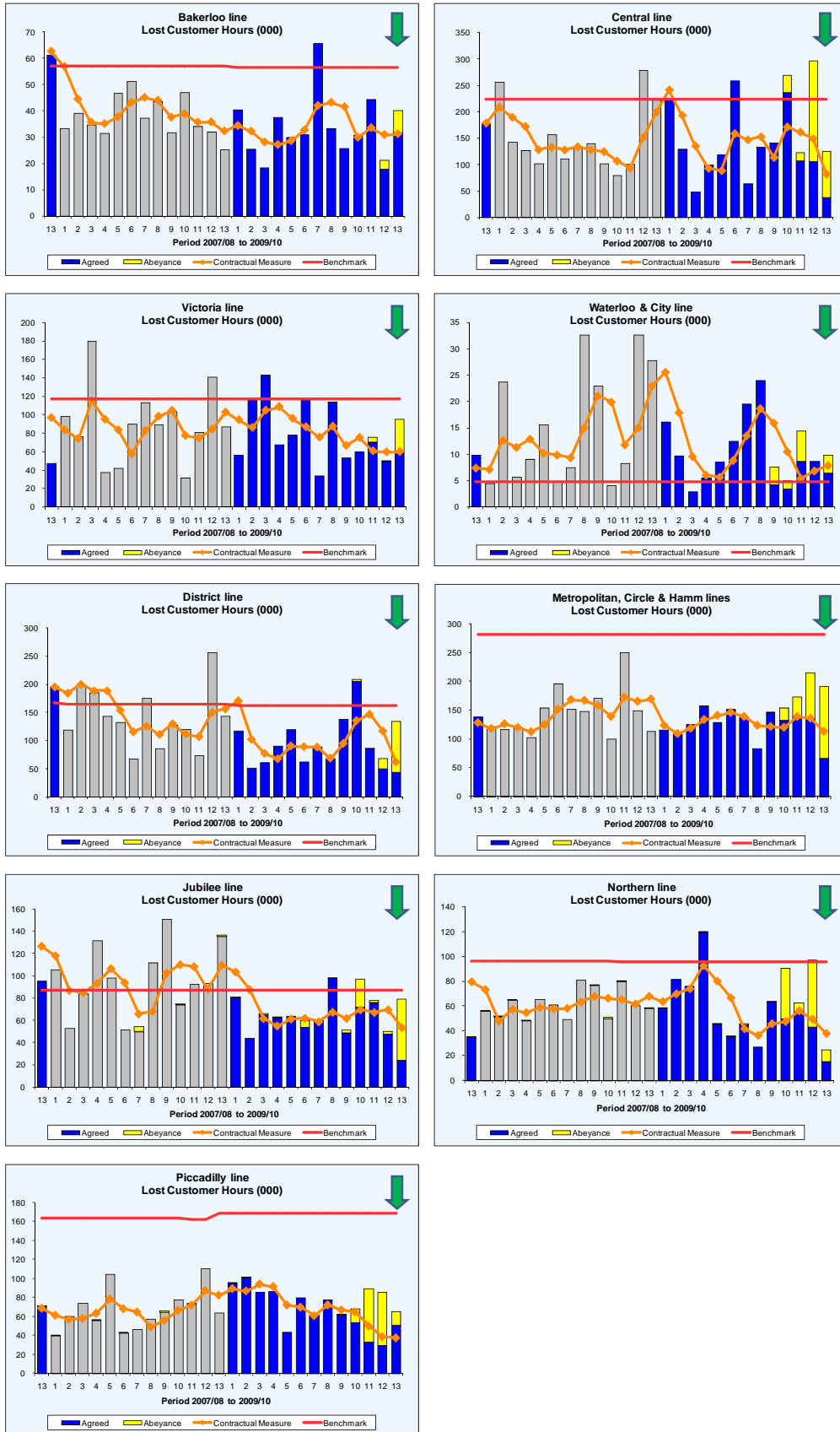
- Overspend  
+ Underspend

### Safety Performance



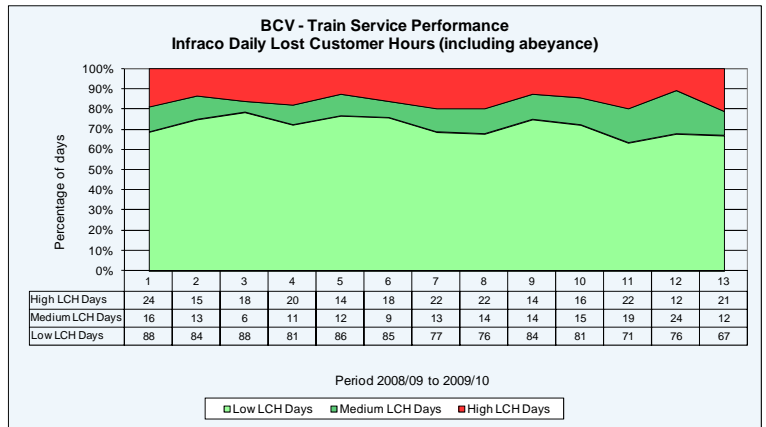
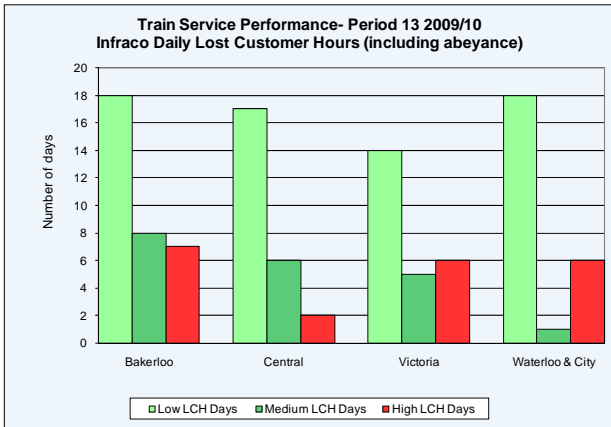
# Appendix

### Availability performance (by line)



# Infraco BCV Availability performance – Train service impacts

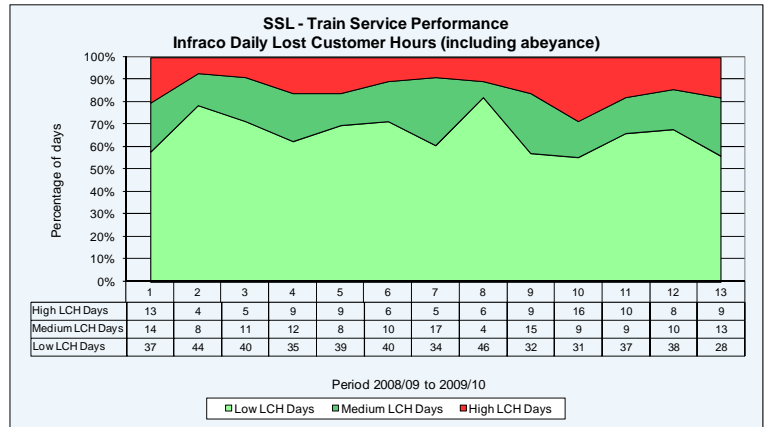
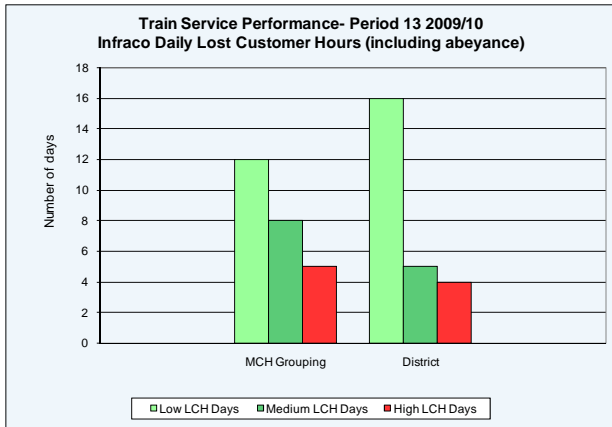
## Period 13 2009/10



Period 13 2009/10 - High LCH Days				
Line	Date	No. of incidents	LCH for day	Description of major incidents
Bakerloo	09/03/10	7	3,064	Signal remaining at danger due to track circuit failing - 1,832 LCH.
Bakerloo	10/03/10	3	6,298	Train withdrawn from service due to defective Control Governor Switch in car - 5,741 LCH.
Bakerloo	16/03/10	5	2,463	Train worked empty for a changeover due to a broken window - 1,600 LCH.
Bakerloo	17/03/10	5	12,613	Loss of train line air and subsequent track circuit failure at Paddington - 12,286 LCH.
Bakerloo	24/03/10	6	2,834	Train withdrawn from service due to defective door - 2,220 LCH.
Bakerloo	29/03/10	7	3,639	Train withdrawn from service due to defective pilot light - 2,756 LCH.
Bakerloo	31/03/10	7	3,588	Train withdrawn from service due to no forward movement - 2,703 LCH.
Central	19/03/10	6	34,260	Train withdrawn from service due to main line burst in leading cab - 32,406 LCH.
Central	23/03/10	15	10,296	Train delayed due to no forward movement - 2,749 LCH.
Victoria	11/03/10	2	10,090	Train withdrawn from service due to Automatic Train Operation (ATO) failure - 9,052 LCH.
Victoria	15/03/10	3	5,014	Train withdrawn from service due to ATO failure - 4,446 LCH.
Victoria	16/03/10	6	6,556	Train delayed arriving at Walthamstow Central due to a cracked splice rail on 4A points - 2,370 LCH.
Victoria	18/03/10	5	19,490	Train delay at Kings Cross due to signal remaining at danger with subsequent trains applying rule - 19,029 LCH.
Victoria	23/03/10	3	18,728	Train delay and subsequent service suspension due to brakes remaining applied - 17,926 LCH.
Victoria	24/03/10	6	5,566	Train delays due to defective signal relay - 3,224 LCH.
W&C	12/03/10	1	507	Train withdrawn from service due to soiled seat - 507 LCH.
W&C	15/03/10	1	1,494	Train cancelled due to graffiti - 1,494 LCH.
W&C	18/03/10	2	4,233	Train withdrawn from service due to door defects - 2,511 LCH.
W&C	22/03/10	1	1,436	Train cancelled due to no OK stock - 1,436 LCH.
W&C	25/03/10	1	1,312	Train withdrawn from service due to no forward movement - 1,312 LCH.
W&C	26/03/10	1	539	Main Fire Control Panel in Monument station control point activated in full evacuation mode - 539 LCH.

# Infraco SSL Availability performance – Train service impacts

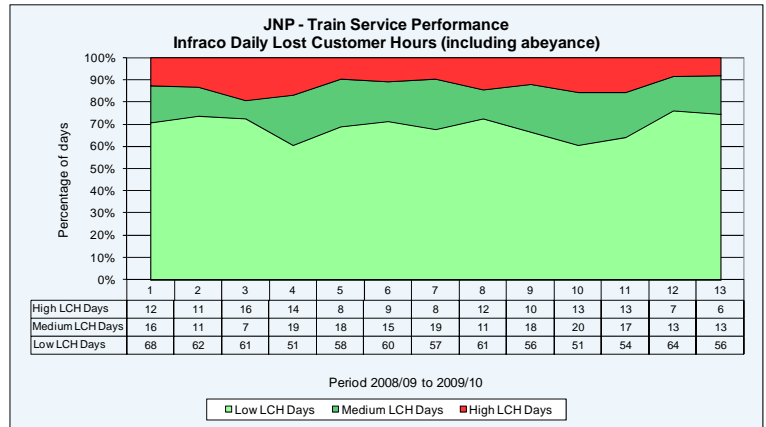
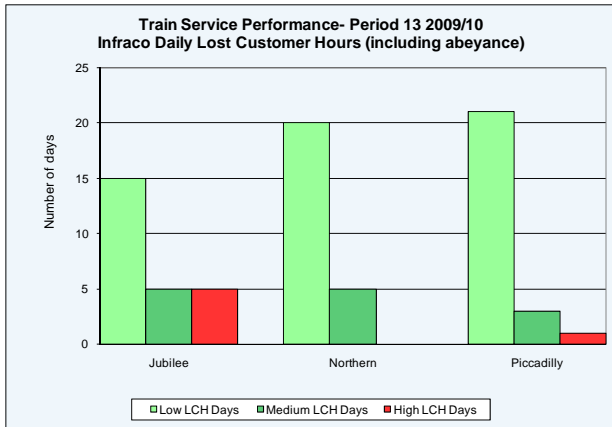
## Period 13 2009/10



Period 13 2009/10 - High LCH Days				
Line	Date	No. of incidents	LCH for day	Description of major incidents
District	19/03/10	4	7,535	Train delayed arriving at Gloucester Road due to signal failing to clear - 3,934 LCH.
District	20/03/10	7	8,979	Westbound Circle train 207 delayed departing South Kensington due to signal bobbing - 5,971 LCH.
District	25/03/10	8	48,975	Service suspension between Earl's Court and High Street Kensington due to stalled train - 43,013 LCH.
District	31/03/10	10	24,114	Train delayed departing Temple due to station starter signals failing to clear - 7,407 LCH.
Met, Cir, H&C	12/03/10	19	27,876	Train delayed arriving at Barbican due to signal remaining at danger - 18,824 LCH.
Met, Cir, H&C	26/03/10	10	20,649	Train delayed arriving at Farringdon due to signal remaining at danger - 13,882 LCH.
Met, Cir, H&C	29/03/10	3	16,848	Train delayed arriving at Edgware Road due to a signal track circuit failure - 16,523 LCH.
Met, Cir, H&C	30/03/10	7	23,814	Train delayed arriving at Moorgate due to multiple signal failures - 22,008 LCH.
Met, Cir, H&C	31/03/10	14	13,588	Train delayed arriving at Barbican due to signal remaining at danger - 3,824 LCH.

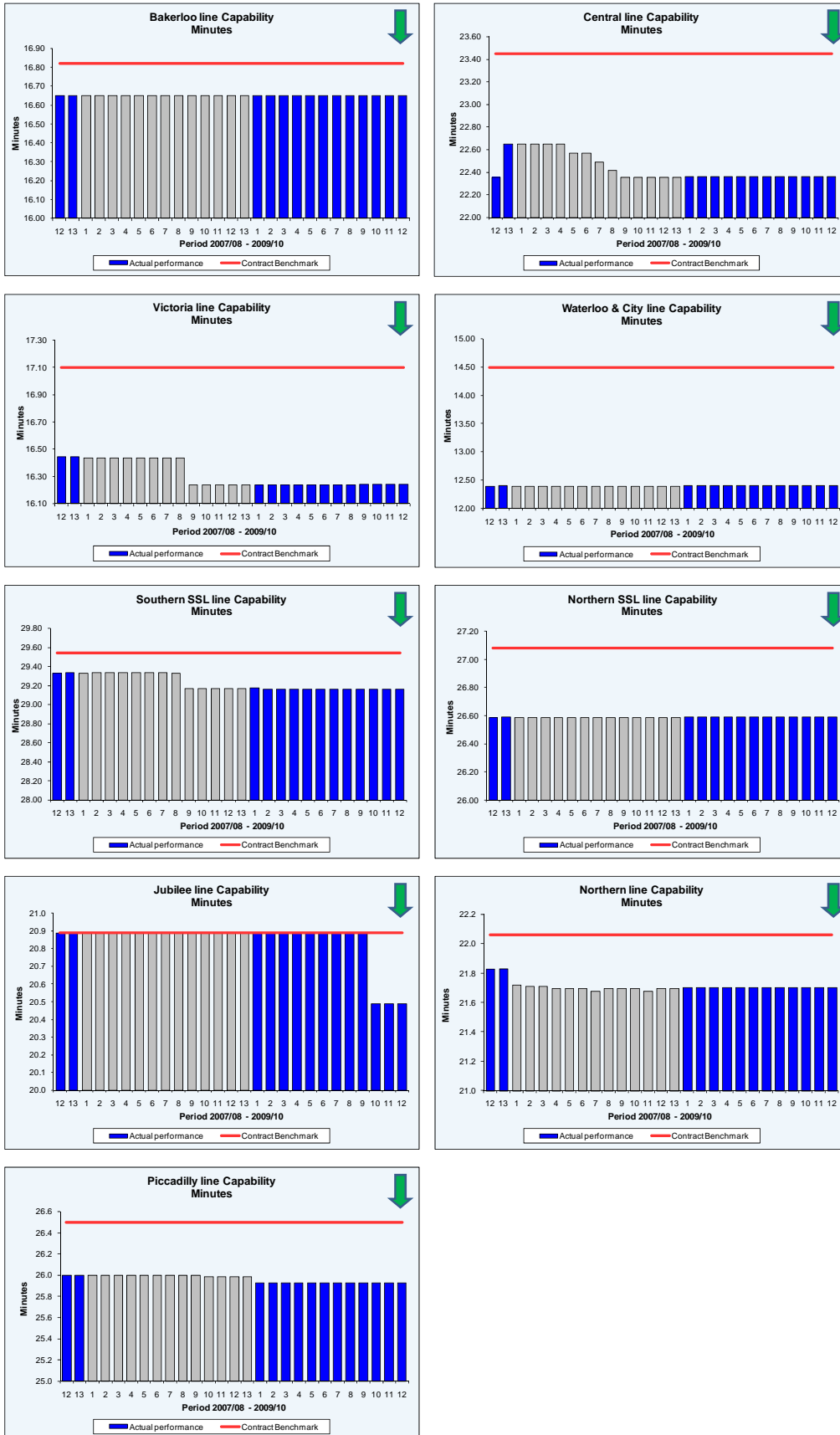
# Infraco JNP Availability performance – Train service impacts

## Period 13 2009/10

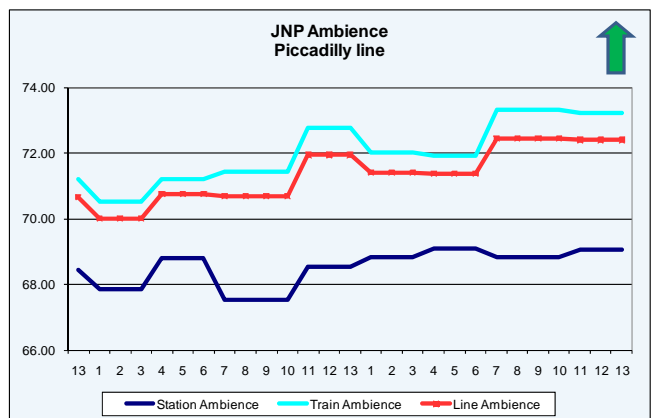
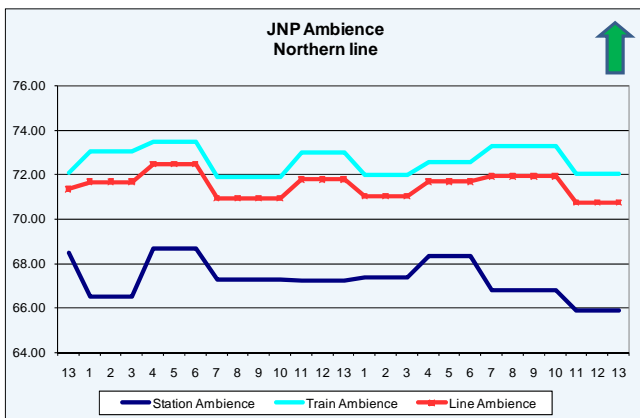
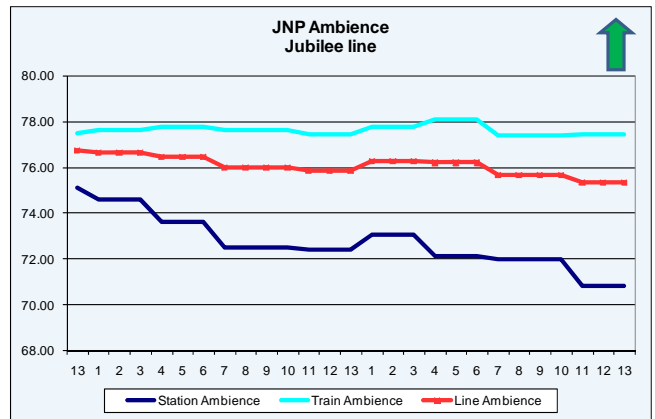
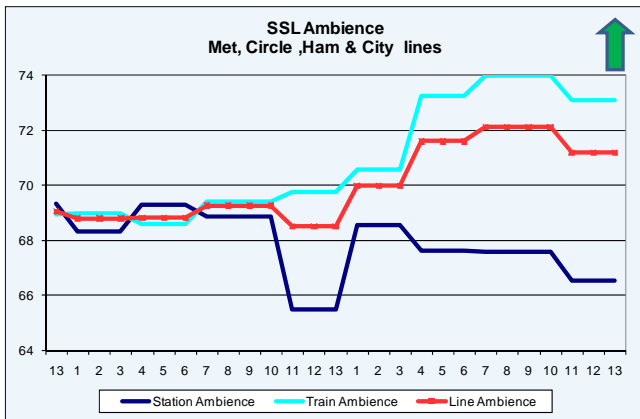
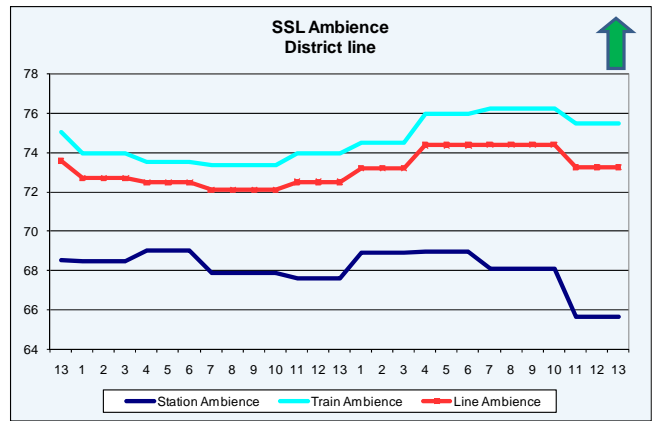
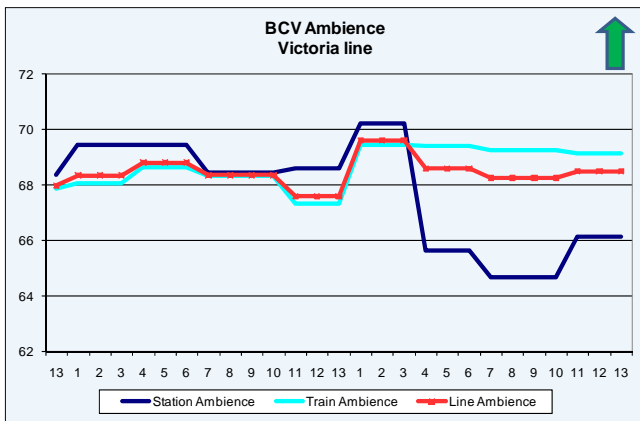
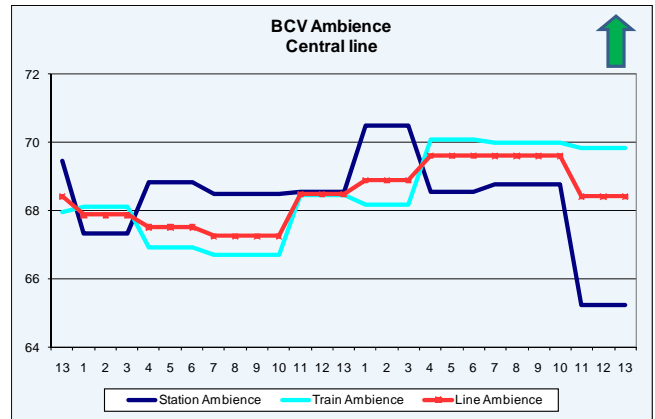
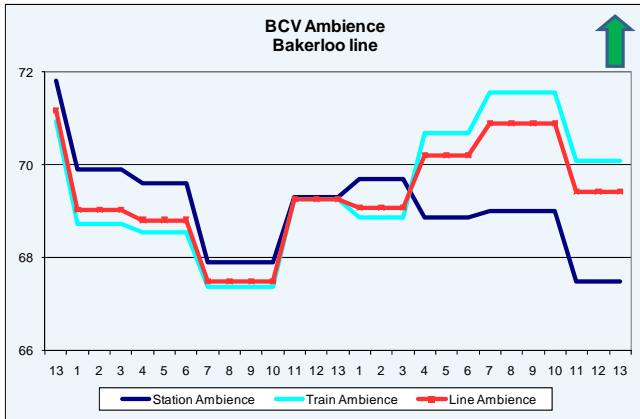


Period 13 2009/10 - High LCH Days				
Line	Date	No. of incidents	LCH for day	Description of major incidents
Jubilee	08/03/10	10	19,812	Service suspended between Finchley Road and Waterloo due to defective train brakes - 16,819 LCH.
Jubilee	15/03/10	6	3,500	Train withdrawn from service due to operator unable to get an accurate stop - 993 LCH.
Jubilee	19/03/10	9	17,539	Train delay at Swiss Cottage due to track circuit failure - 15,992 LCH.
Jubilee	24/03/10	5	5,289	Train delay due to activation of PEA at Westminster, operator unable to reset - 3,097 LCH.
Jubilee	31/03/10	8	10,296	Train delay to track circuit failure at Canary Wharf - 8,172 LCH.
Piccadilly	30/03/10	8	28,783	Service suspension between Kings Cross and Arnos Grove due to broken right hand running rail - 23,480 LCH.

### Capability performance (by line) (One Period in arrears)



### Ambience performance (by line)



## Station Ambience Minimum Targets

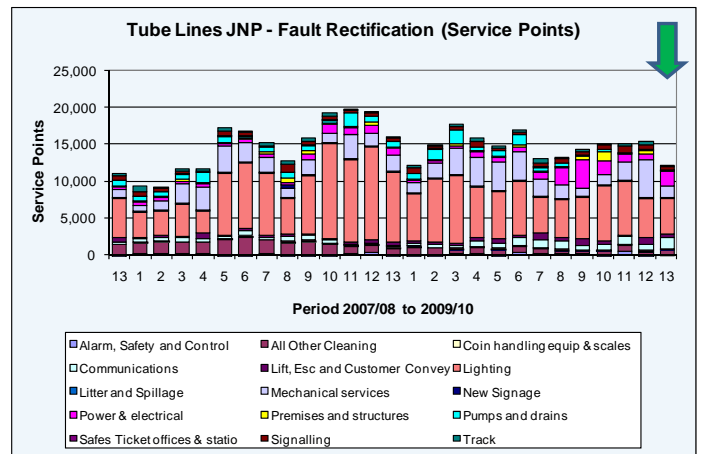
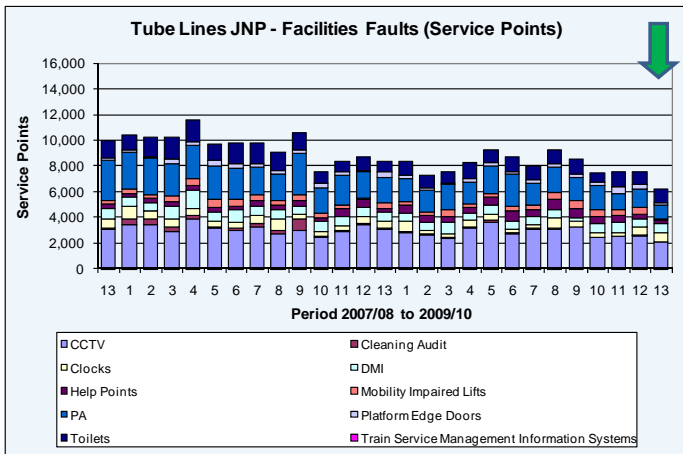
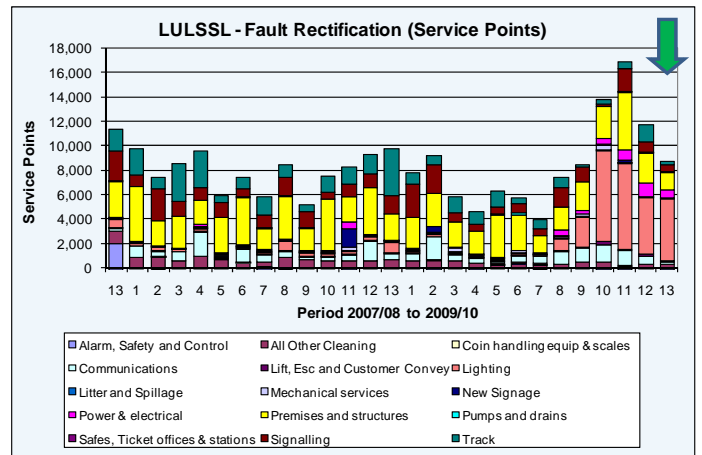
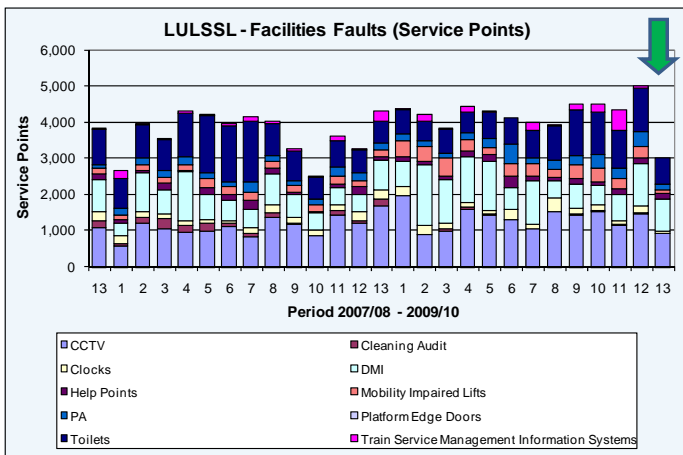
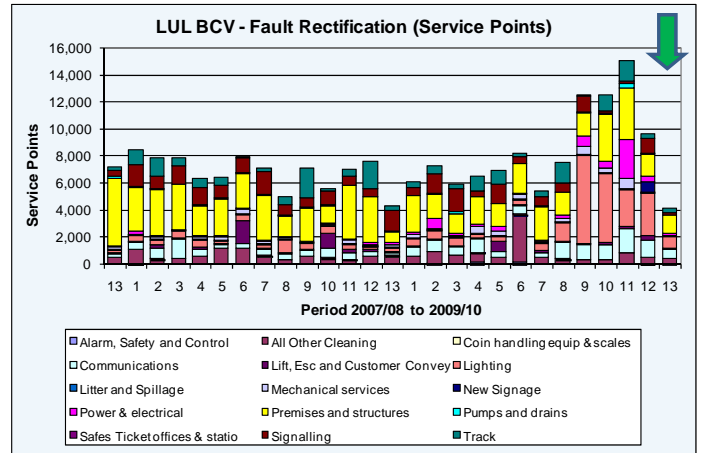
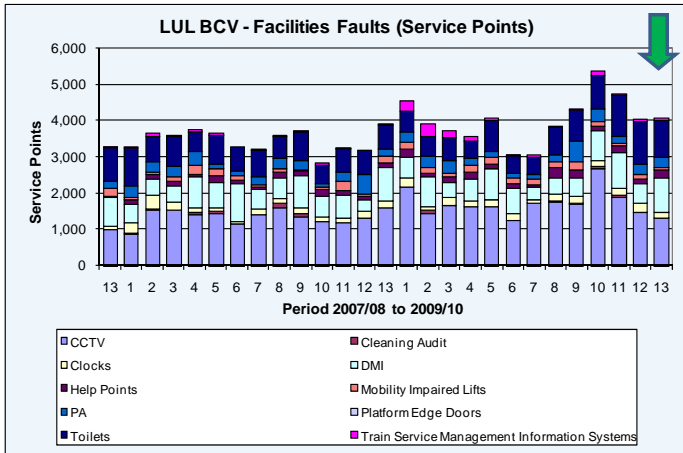
Stations where actual MSS score is greater than 5 MSS points below the Ambience Minimum Targets (As at MSS Quarter 3 2009/10)

BCV Stations					
Line	Station	MSS score	Target	Variance	Comment
Central	Mile End	53.0	74.0	-21.0	
Central	Oxford Circus	59.0	74.0	-15.0	
Central	Notting Hill Gate	61.0	74.0	-13.0	
Central	Holland Park	62.7	74.0	-11.3	
Central	Marble Arch	63.6	74.0	-10.4	
Central	Buckhurst Hill	56.8	67.0	-10.2	
Central	North Acton	60.4	70.0	-9.6	
Central	Leytonstone	62.5	70.0	-7.5	
Victoria	Highbury & Islington	68.1	74.0	-5.9	
Central	Woodford	64.2	70.0	-5.8	
Central	Newbury Park	56.4	62.0	-5.6	

SSL Stations					
Line	Station	MSS score	Target	Variance	Comment
District	Earls Court	59.4	74.0	-14.6	
District	Aldgate East	61.3	74.0	-12.7	
Metropolitan	Rayners Lane	59.6	70.0	-10.4	
Metropolitan	Hillingdon	60.6	71.0	-10.4	
Metropolitan	Chesham	62.2	72.0	-9.8	
Metropolitan	Euston Square	60.7	70.0	-9.3	
District	Parsons Green	57.3	66.0	-8.7	
Metropolitan	Farringdon	65.7	74.0	-8.3	
District	Barons Court	62.1	70.0	-7.9	
District	West Brompton	57.7	65.0	-7.3	
Metropolitan	Hammersmith (C & H)	62.7	70.0	-7.3	
Metropolitan	Latimer Road	58.9	66.0	-7.1	
Metropolitan	Ladbroke Grove	63.4	70.0	-6.6	
District	Southfields	58.4	65.0	-6.6	
District	Putney Bridge	68.5	74.0	-5.5	

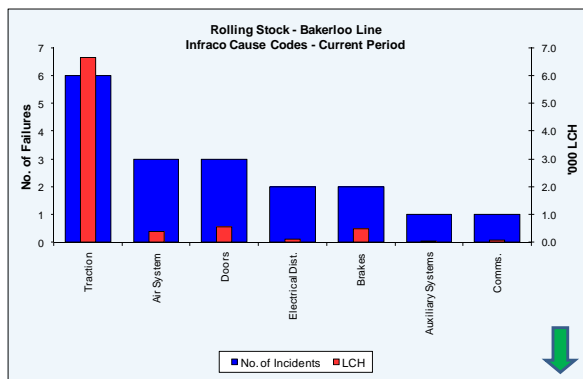
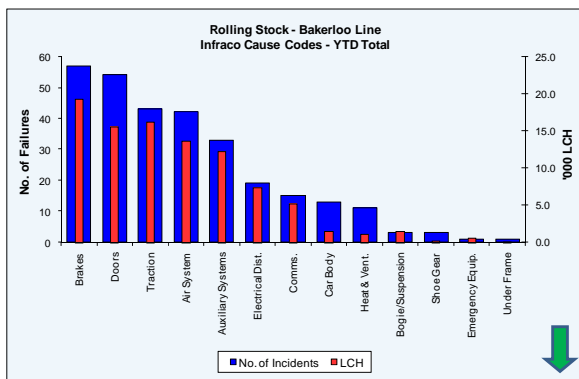
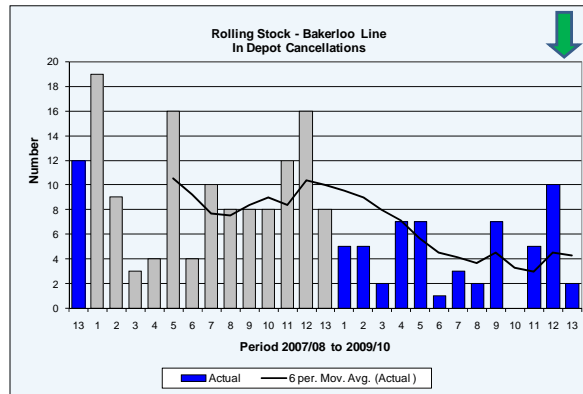
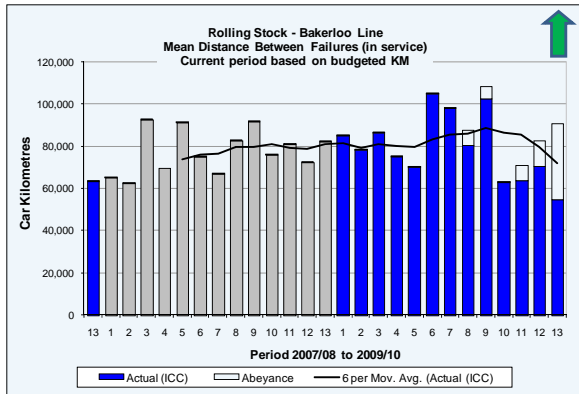
JNP Stations					
Line	Station	MSS score	Target	Variance	Comment
Northern	Archway	58.6	74.0	-15.4	<i>Contract date deferred by agreement. Target still needs to be realigned.</i>
Piccadilly	Finsbury Park	61.0	74.0	-13.0	
Northern	Old Street	59.1	70.0	-10.9	
Jubilee	Neasden	65.0	74.0	-9.0	
Northern	Kennington	65.6	74.0	-8.4	
Jubilee	Finchley Road	61.7	70.0	-8.3	
Piccadilly	Green Park	65.8	74.0	-8.2	
Northern	Euston	66.3	74.0	-7.7	
Northern	Camden Town	67.1	74.0	-6.9	
Northern	Hendon Central	63.2	70.0	-6.8	
Piccadilly	Manor House	67.3	74.0	-6.7	
Piccadilly	Acton Town	63.6	70.0	-6.4	
Northern	Kentish Town	67.7	74.0	-6.3	
Northern	Tottenham Court Road	61.0	67.0	-6.0	
Northern	Chalk Farm	68.3	74.0	-5.7	
Piccadilly	Leicester Square	68.5	74.0	-5.5	
Jubilee	St. Johns Wood	68.6	74.0	-5.4	
Jubilee	Wembley Park	68.6	74.0	-5.4	
Northern	Borough	68.9	74.0	-5.1	

# Service Point performance

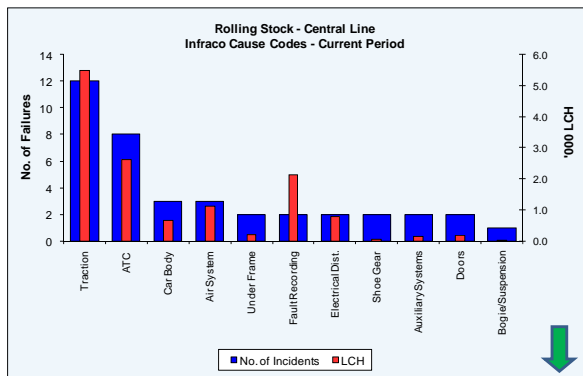
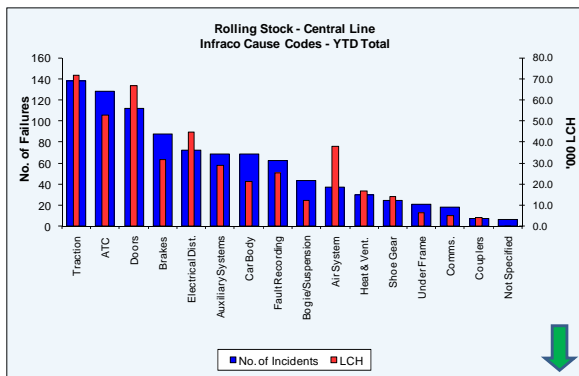
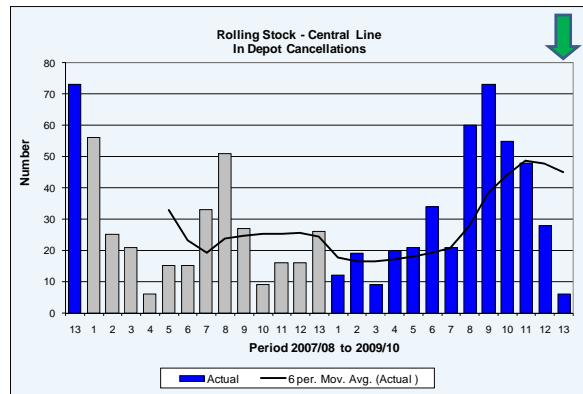
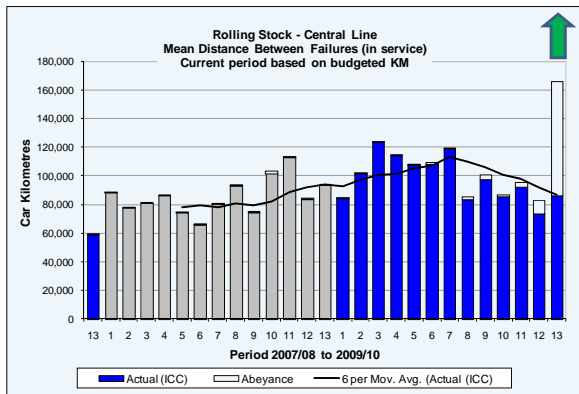


# Rolling stock reliability performance (by line)

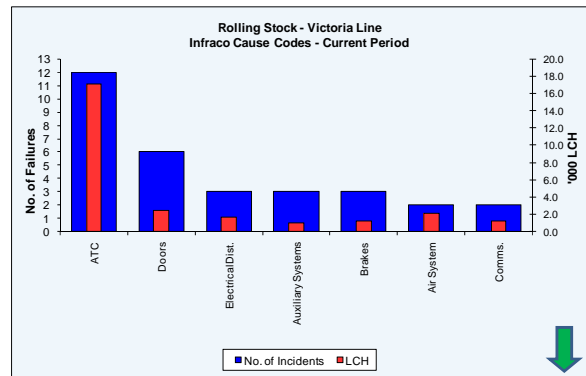
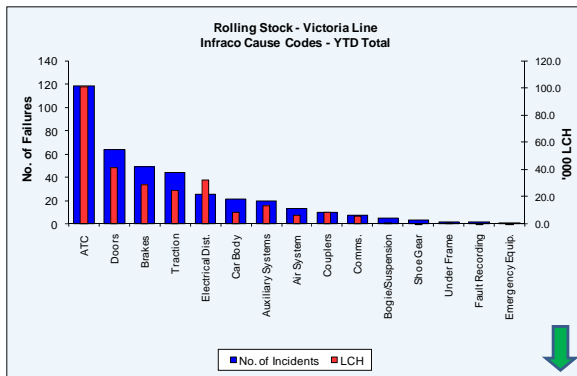
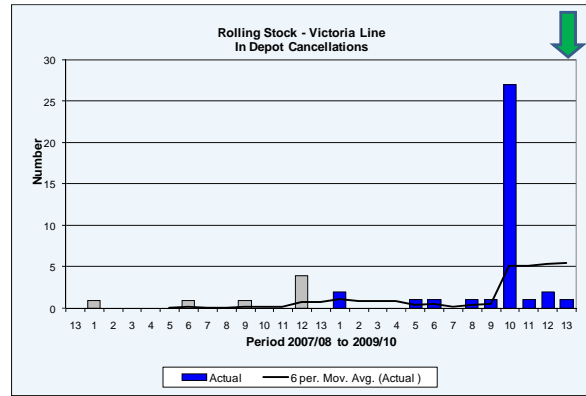
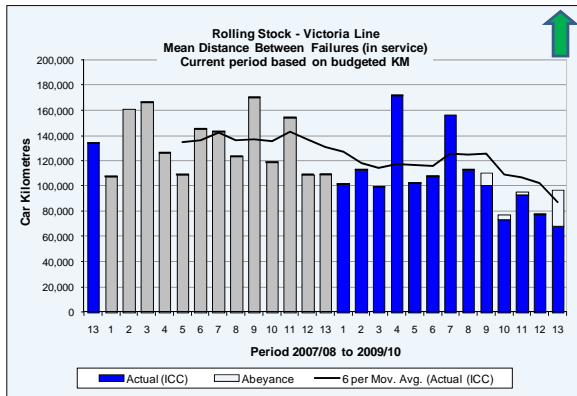
## Bakerloo line



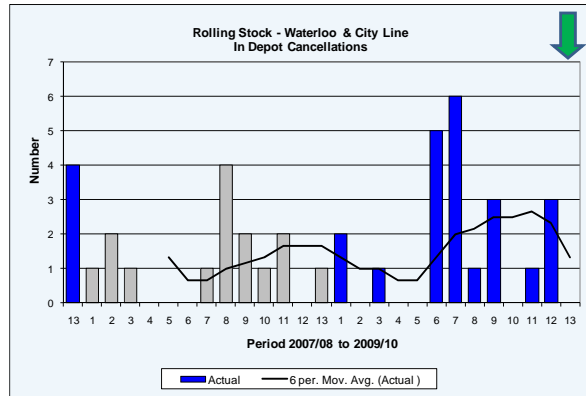
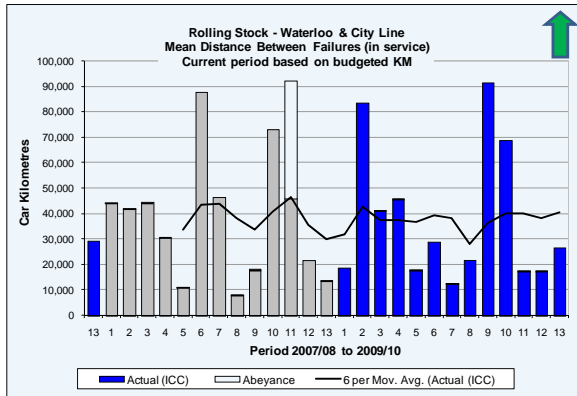
## Central line



### Victoria line

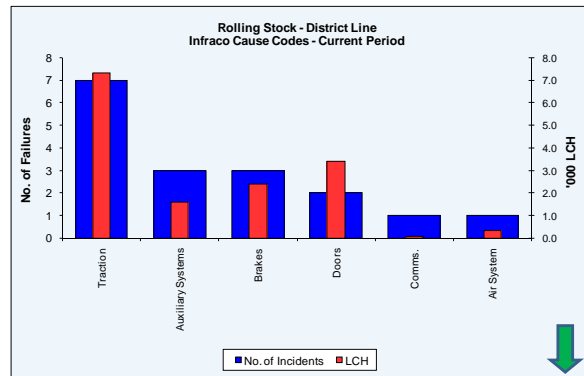
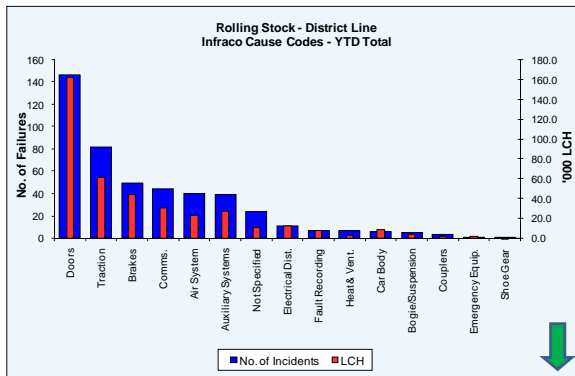
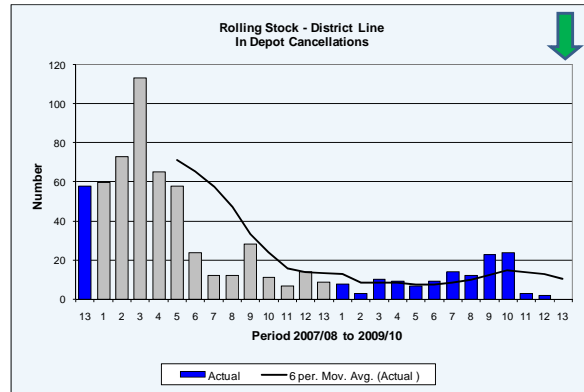
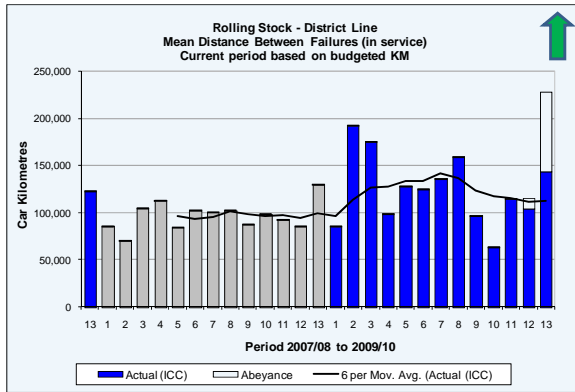


### Waterloo & City line

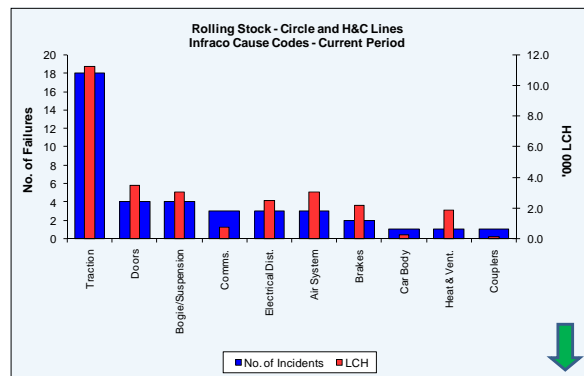
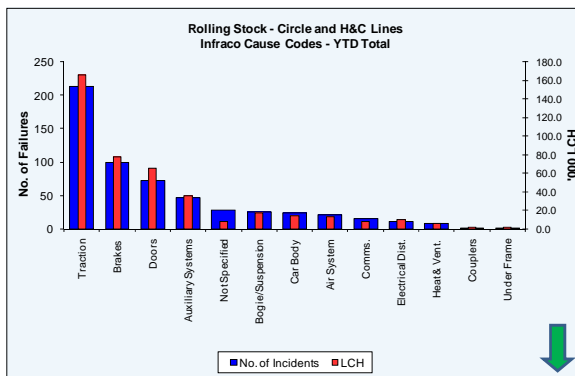
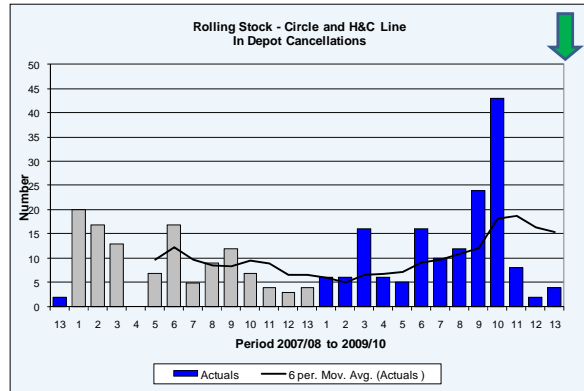
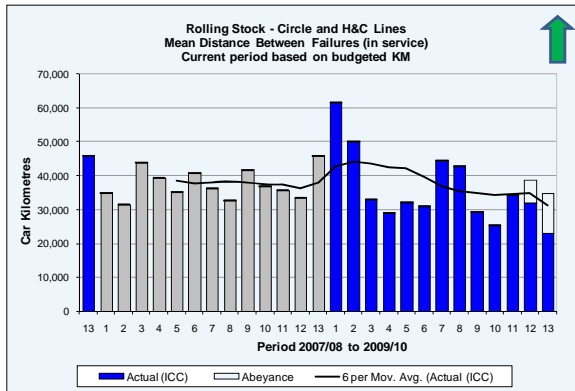


Note: Cause Codes for Waterloo & City line form part of reporting for Central Line stock

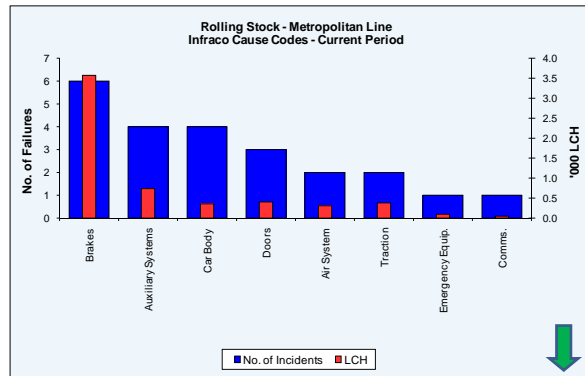
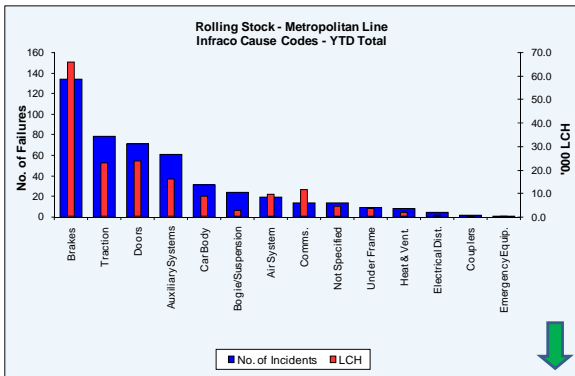
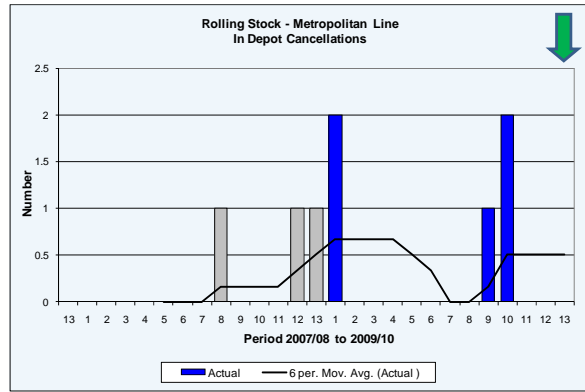
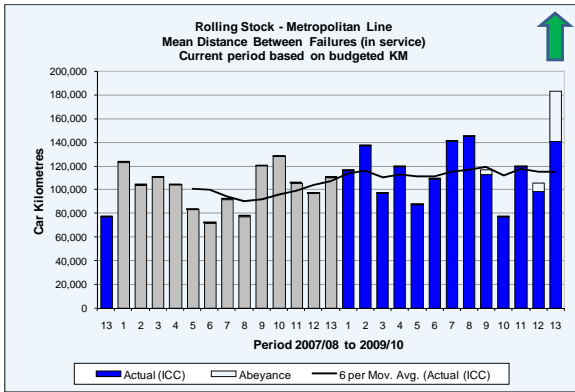
### District line



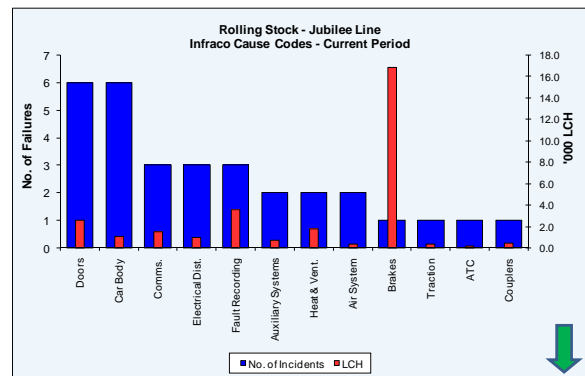
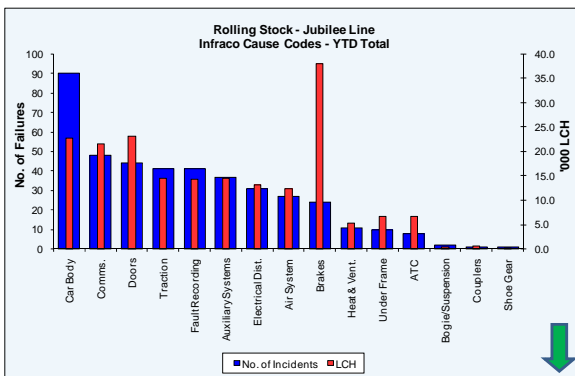
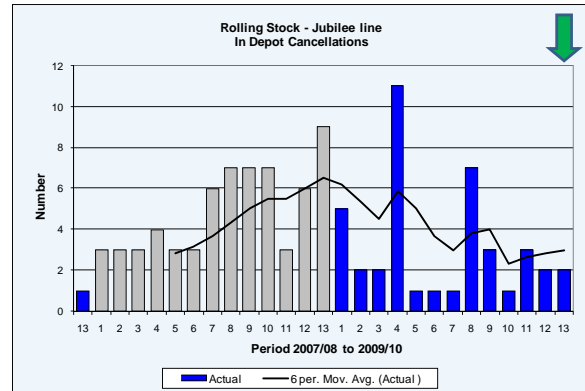
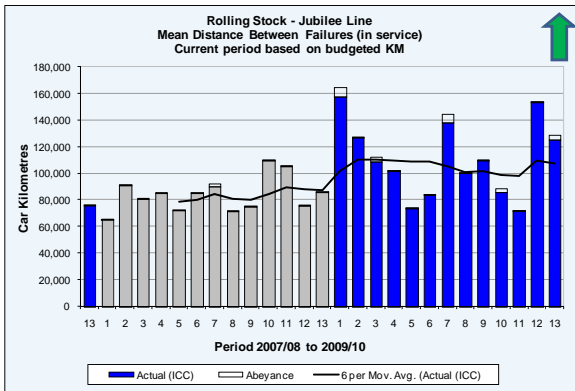
### Circle and H&C lines



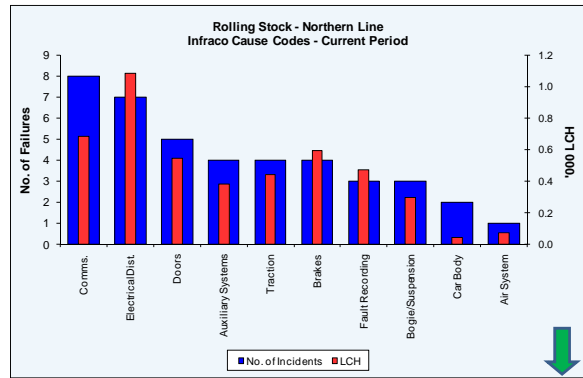
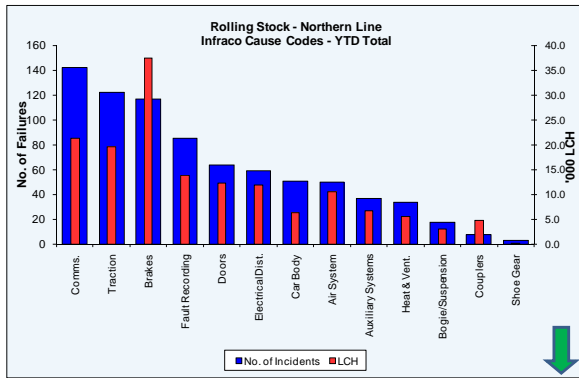
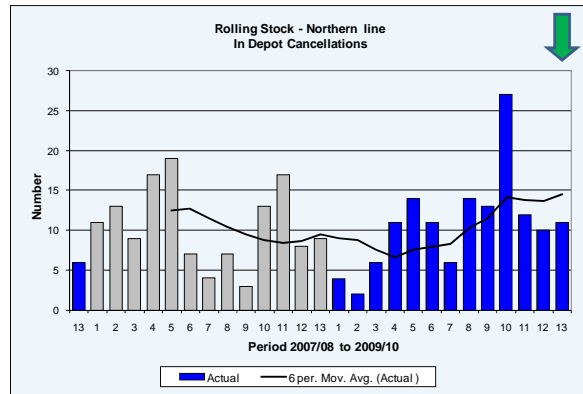
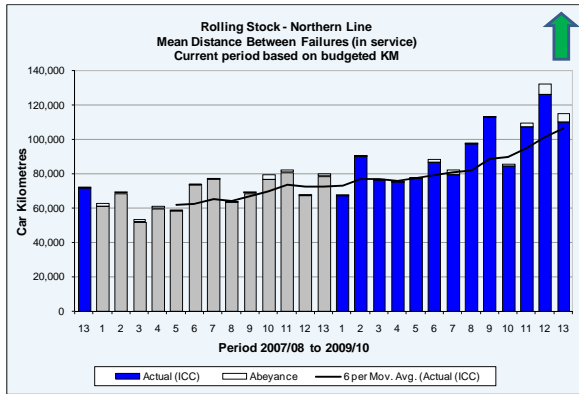
### Metropolitan line



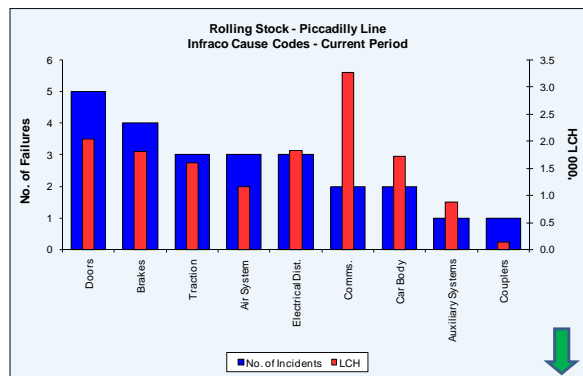
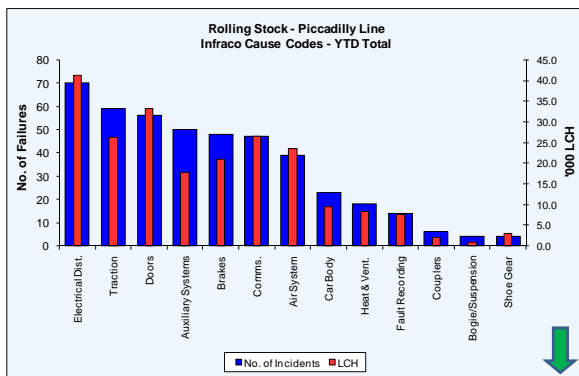
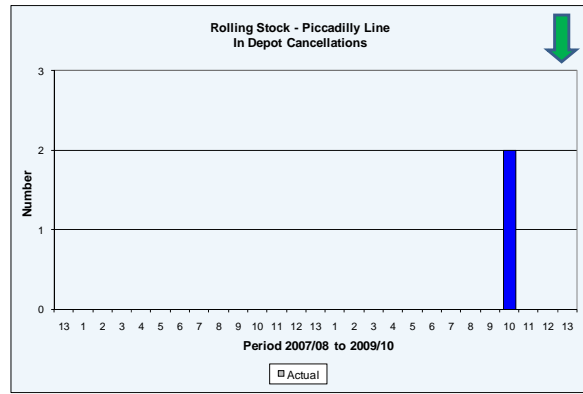
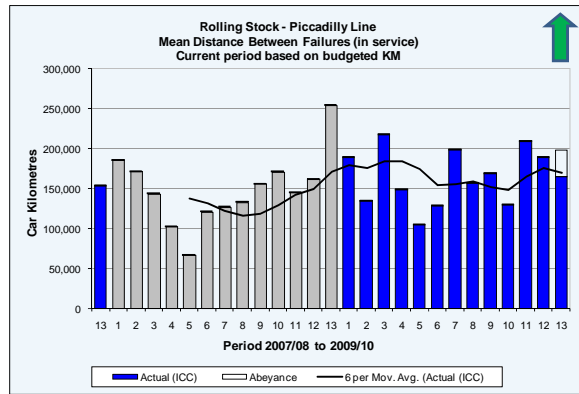
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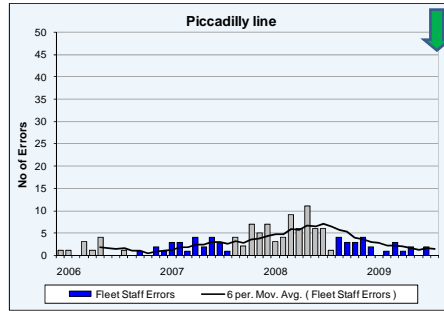
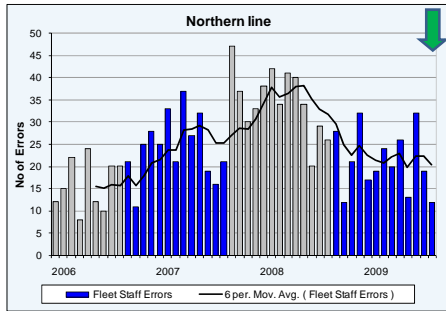
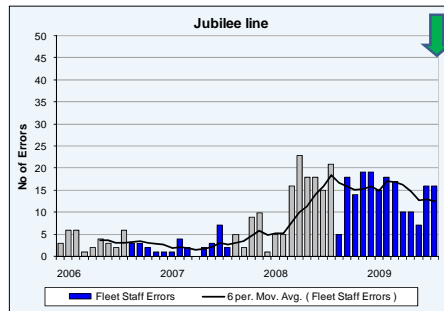
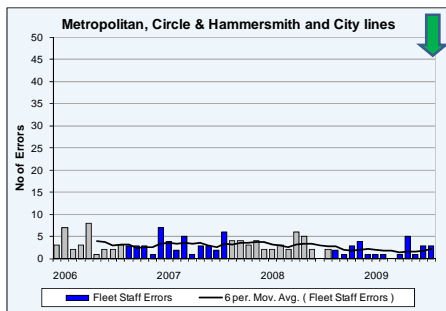
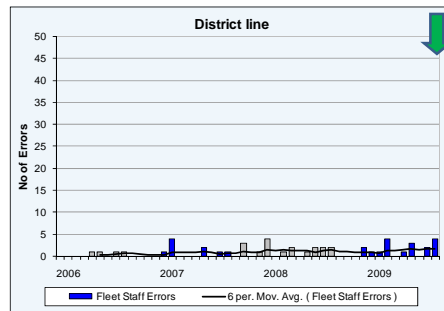
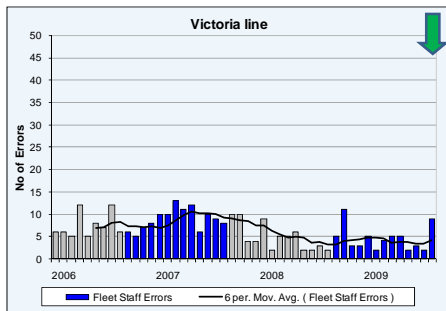
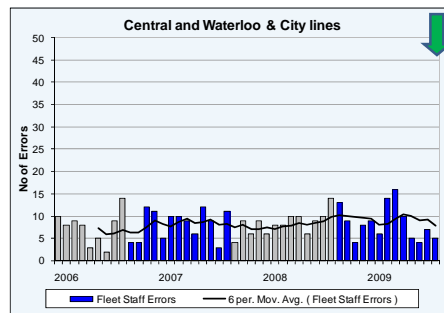
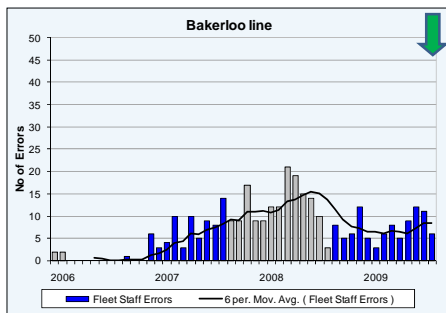
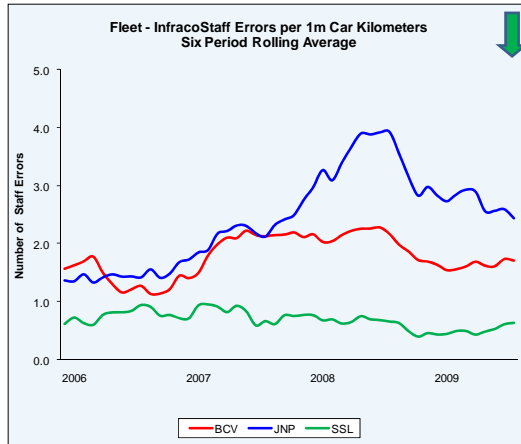
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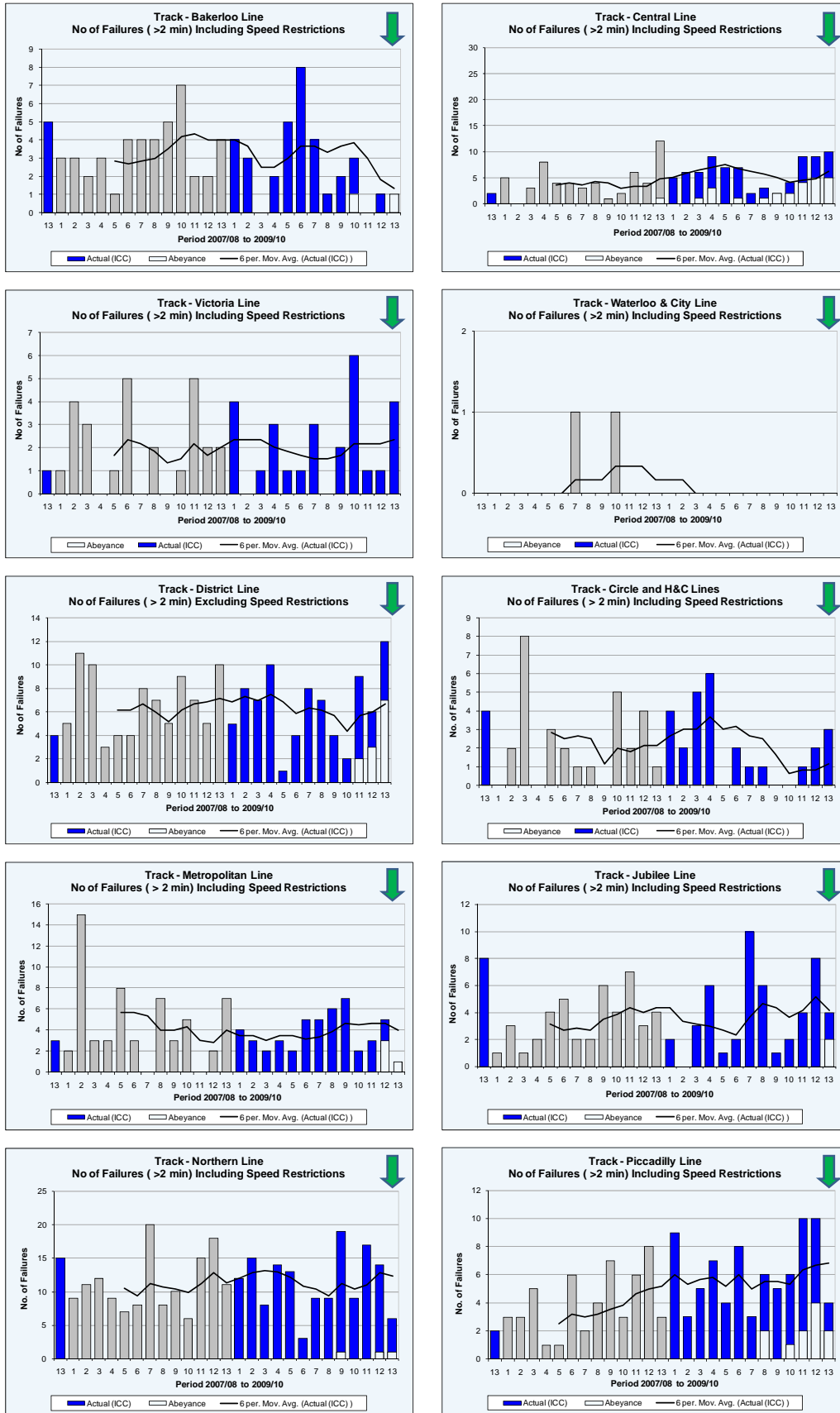
### Piccadilly line



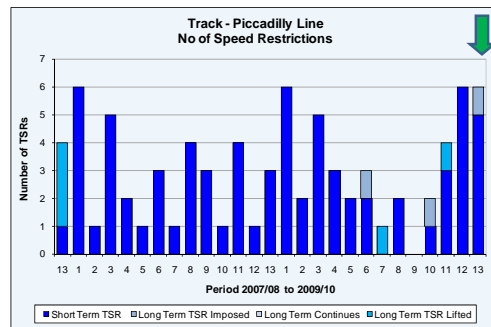
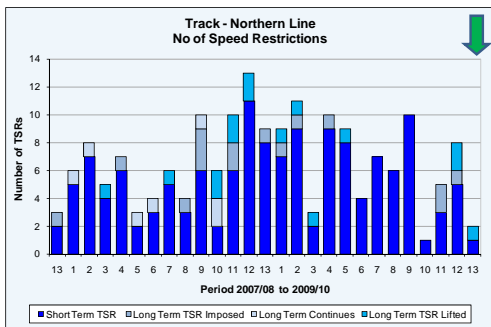
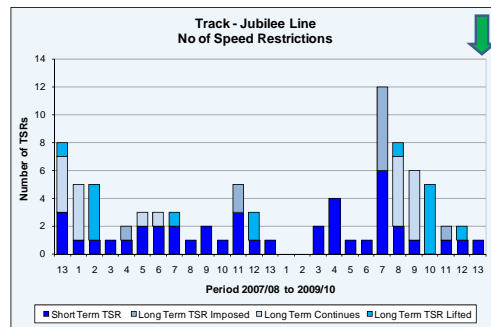
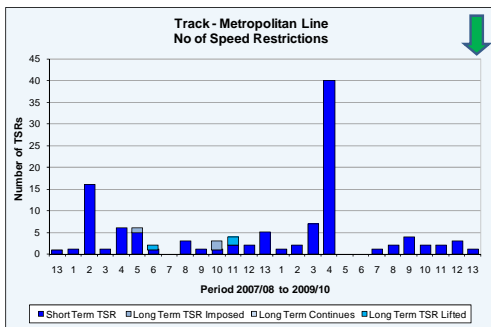
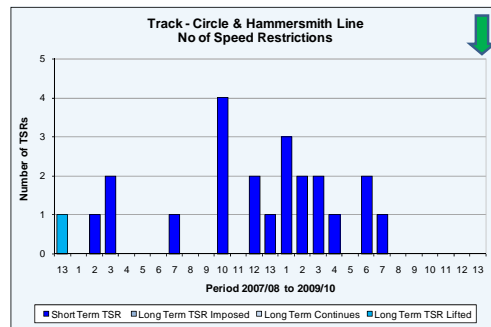
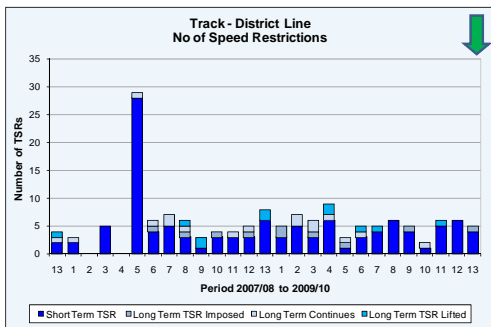
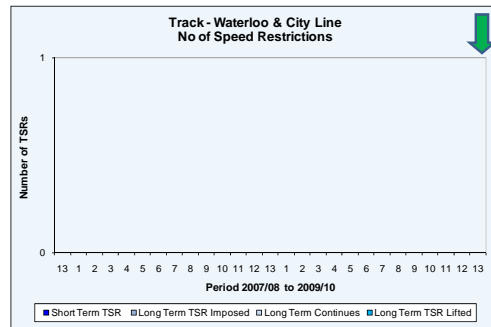
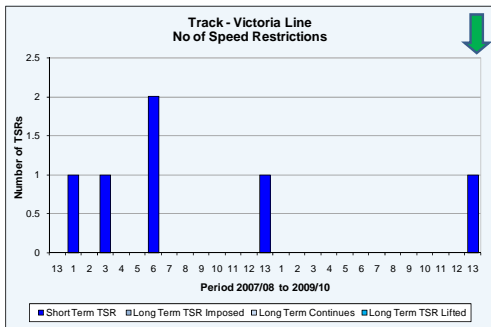
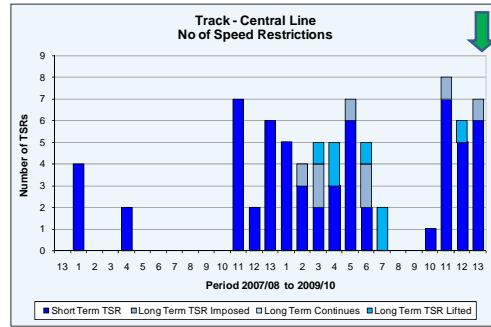
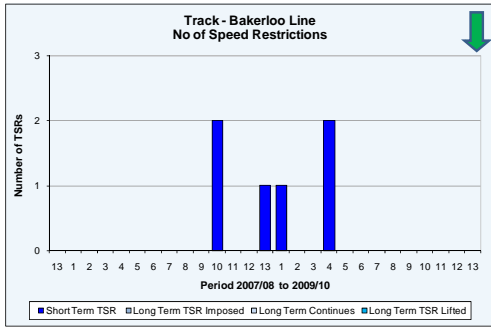
# Rolling stock - Staff Errors resulting in Service Disruptions



## Track reliability performance (by line)

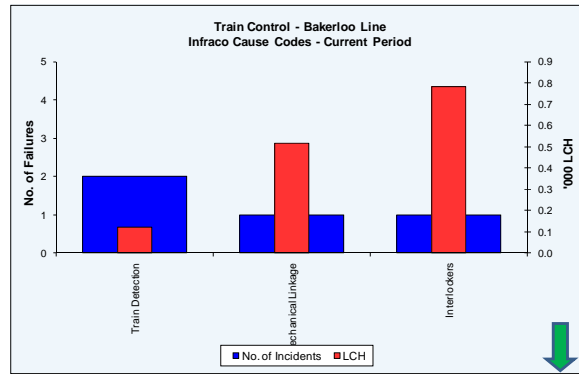
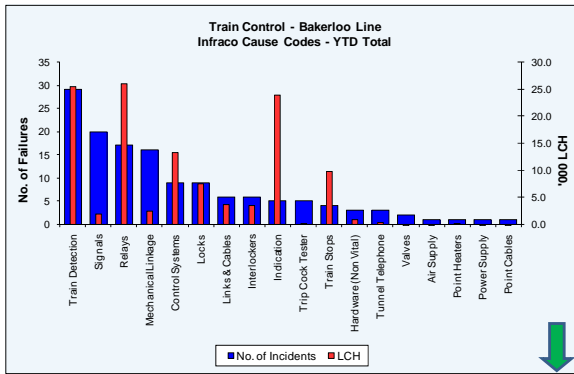
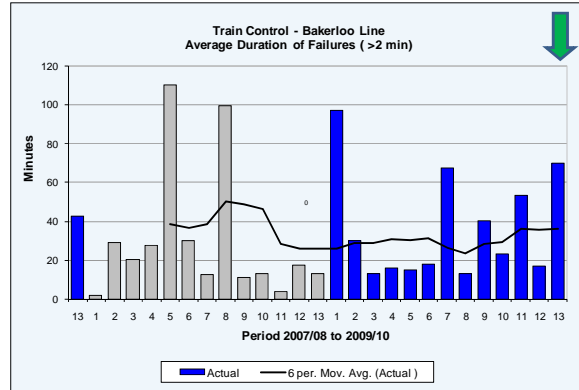
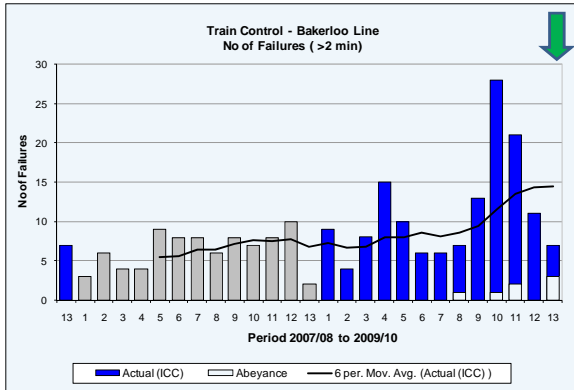


### Speed Restriction performance (by line)

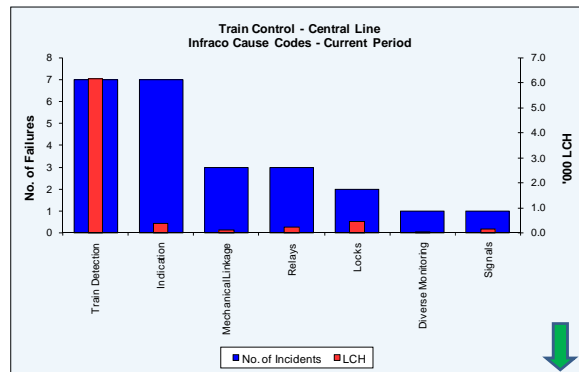
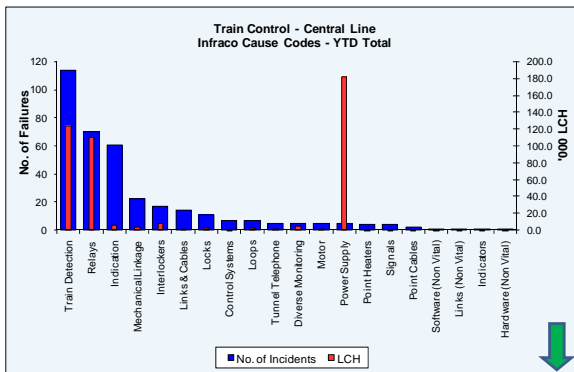
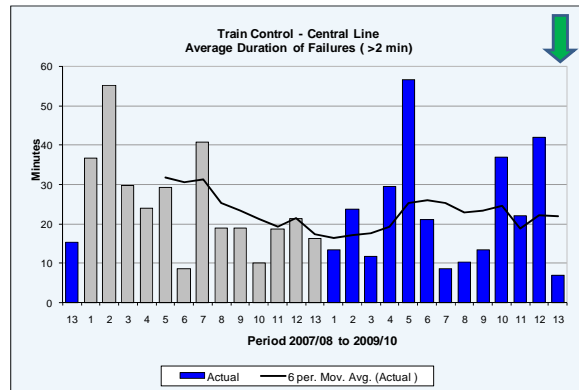
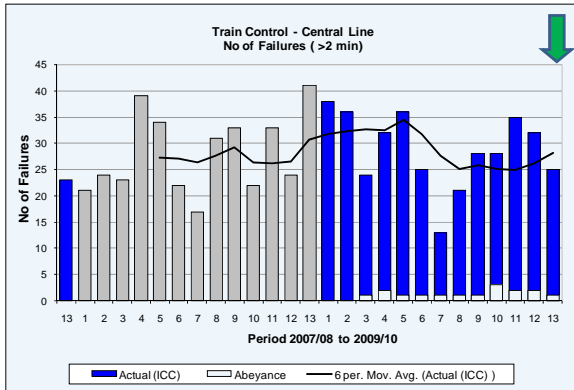


# Train control reliability performance (by line)

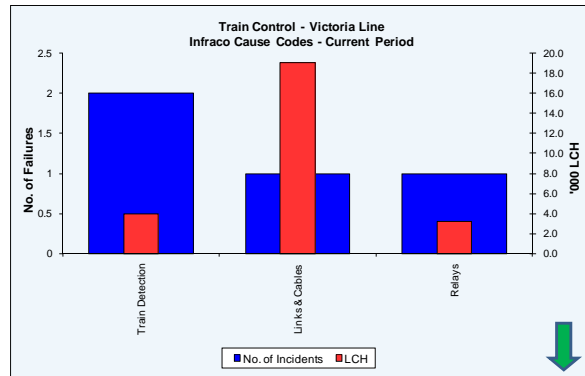
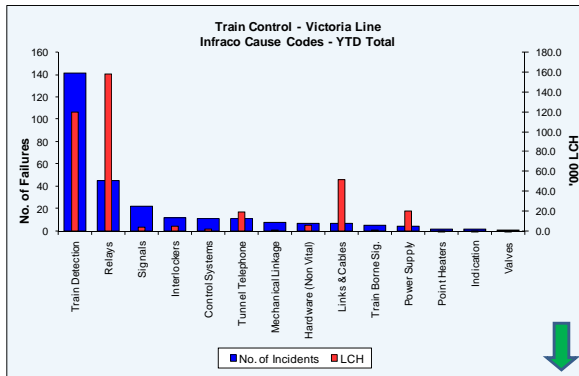
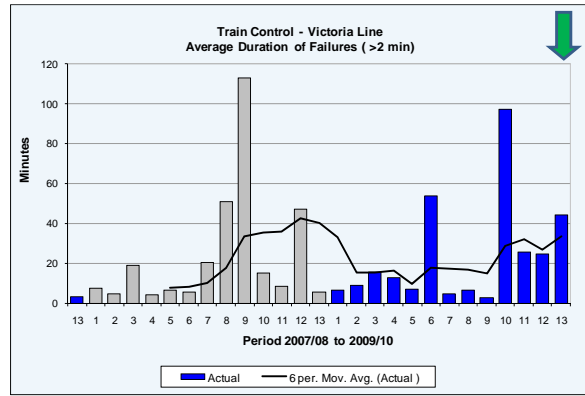
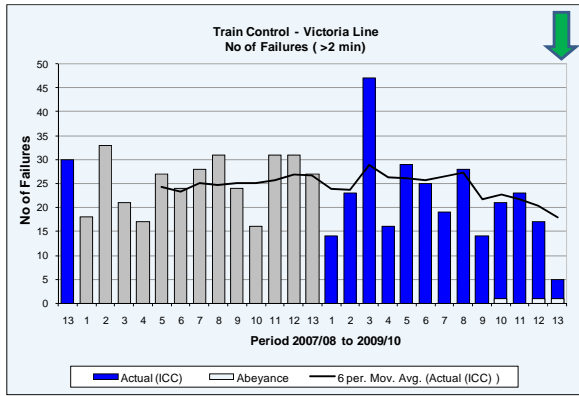
## Bakerloo line



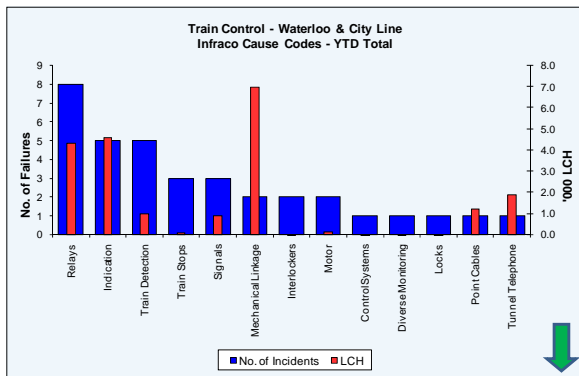
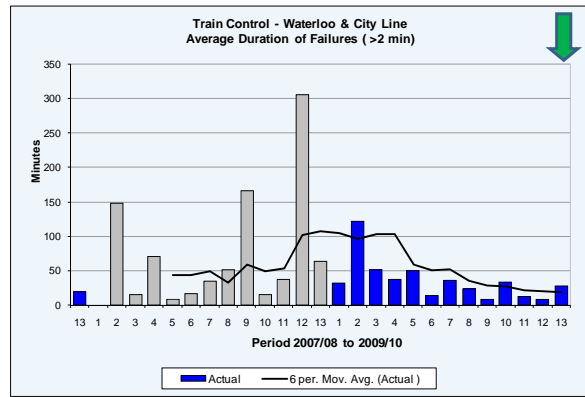
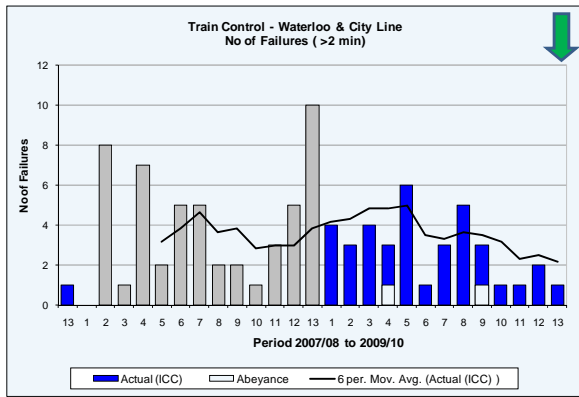
## Central line



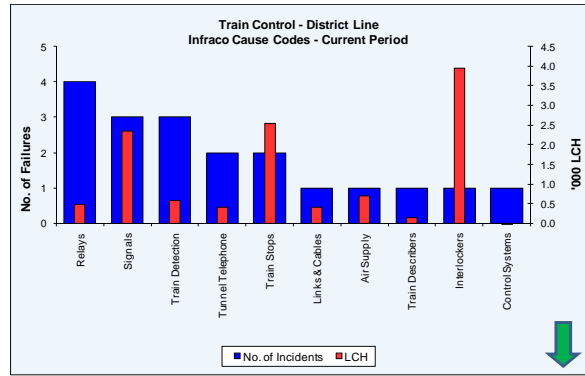
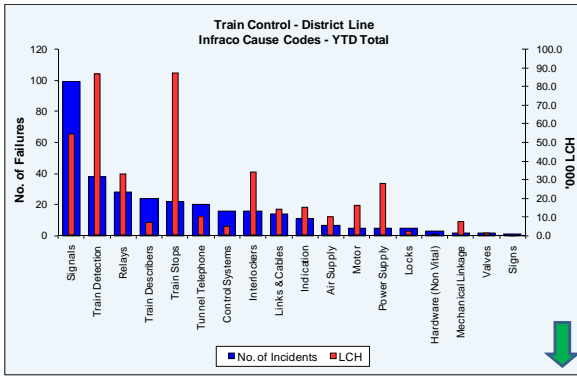
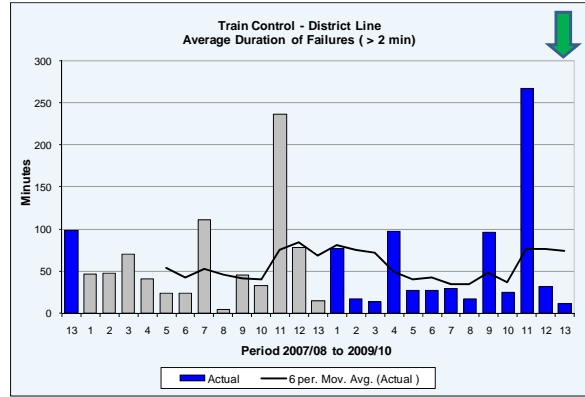
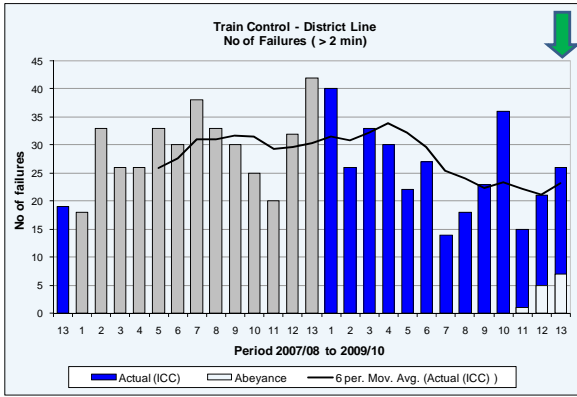
### Victoria line



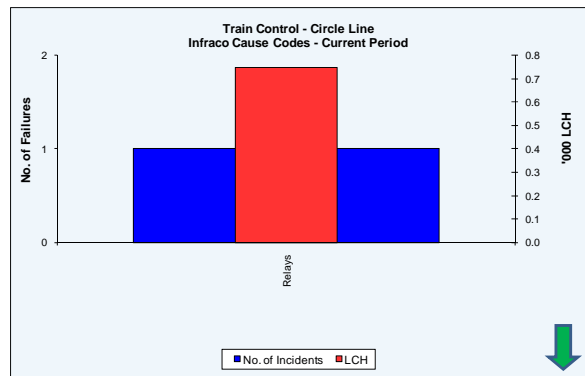
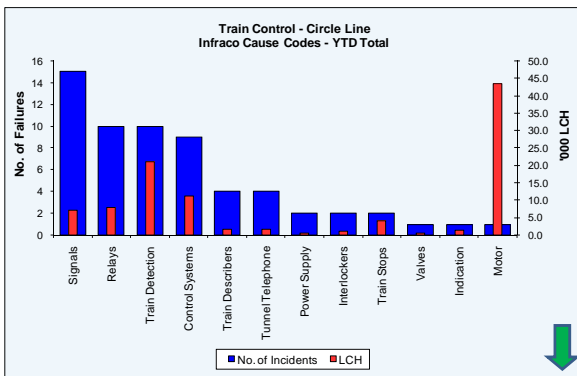
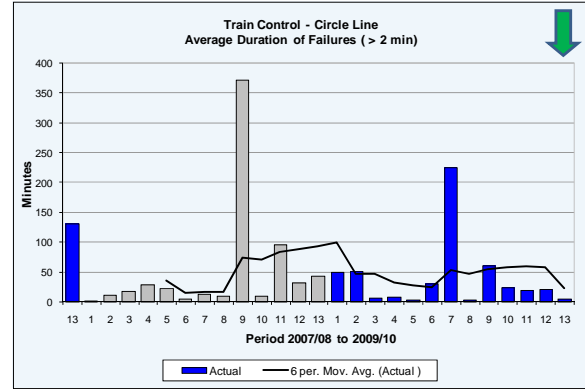
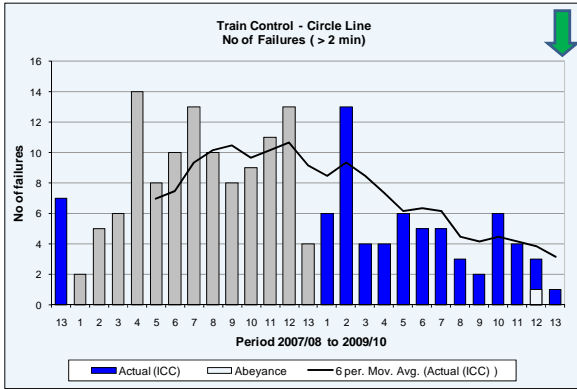
### Waterloo & City line



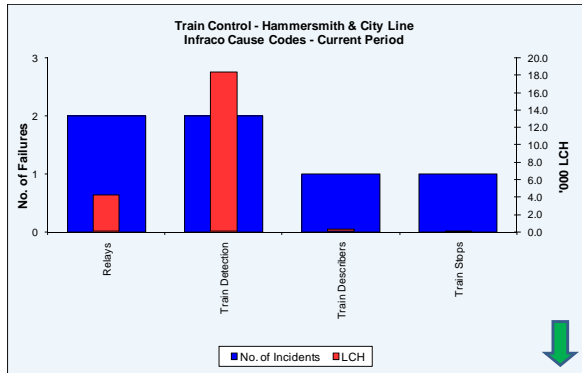
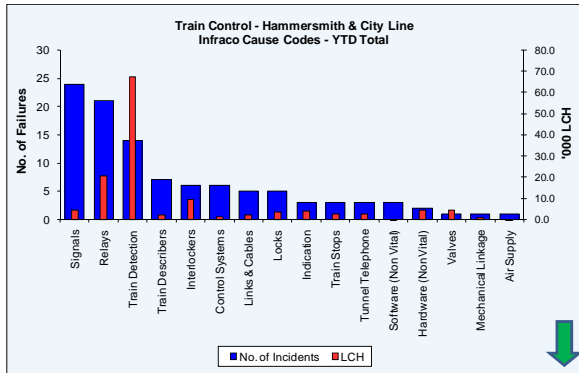
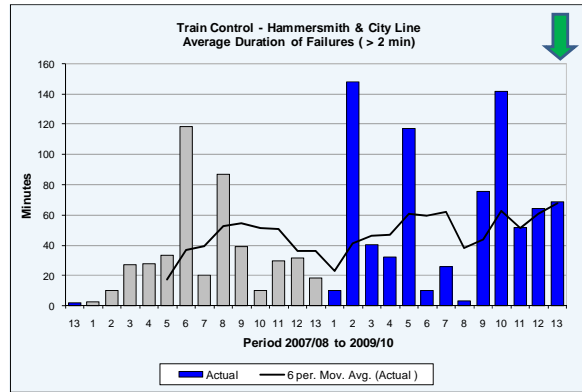
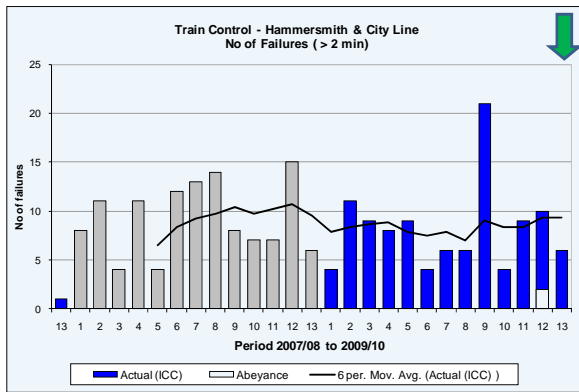
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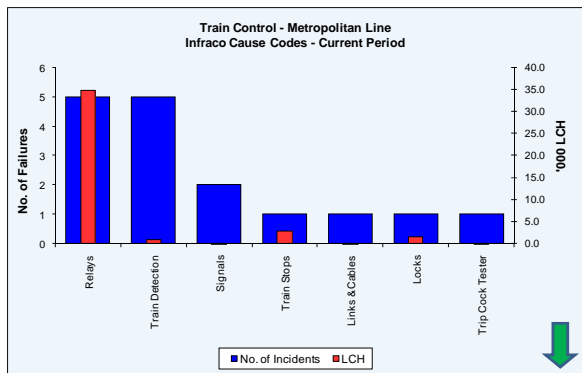
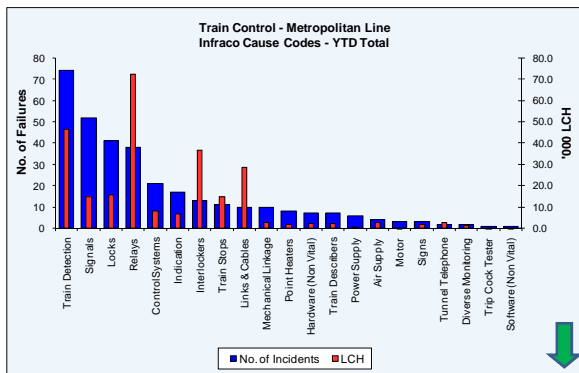
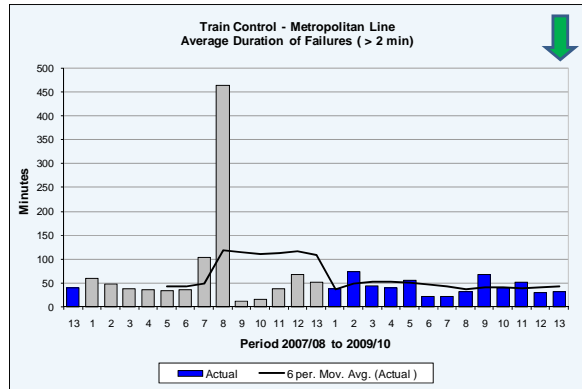
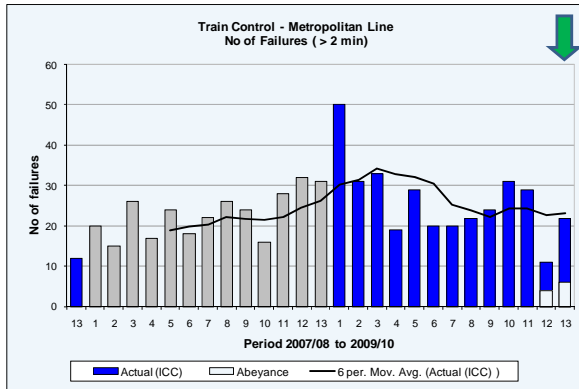
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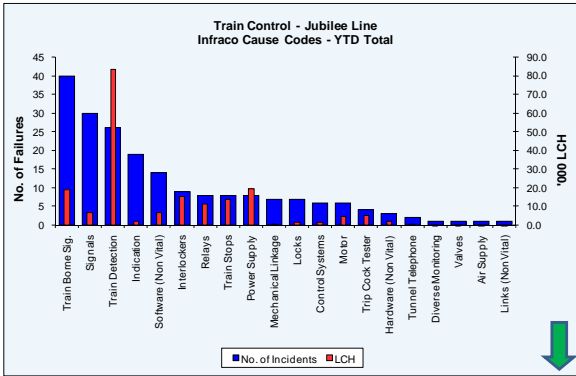
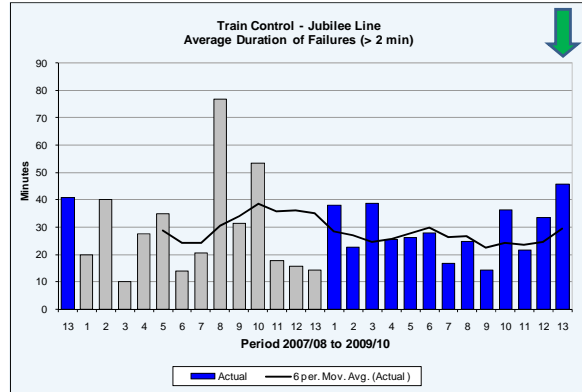
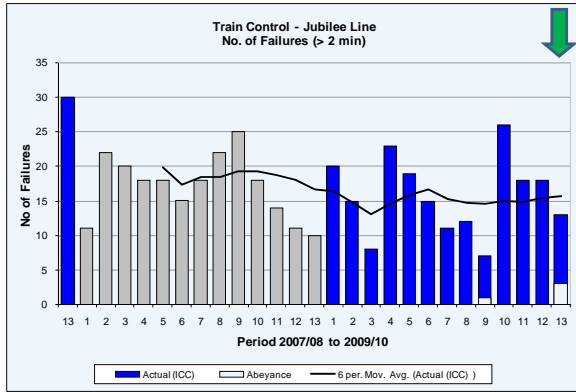
### Hammersmith & City line



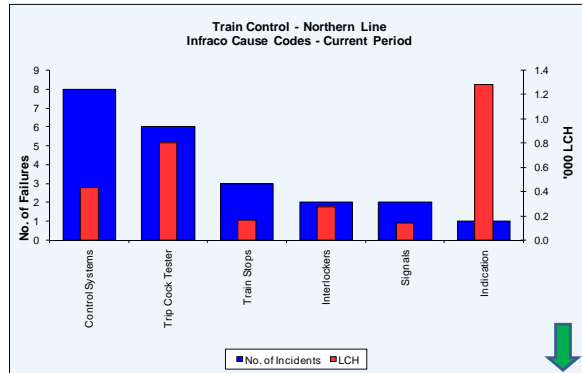
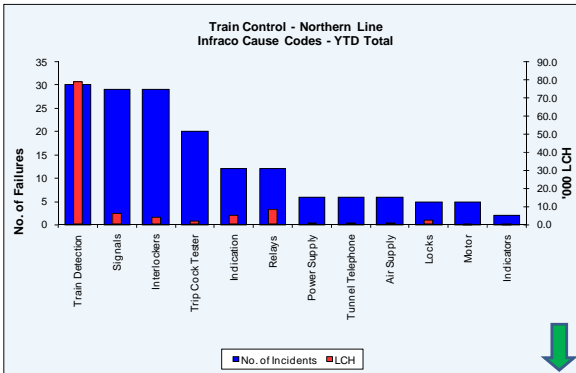
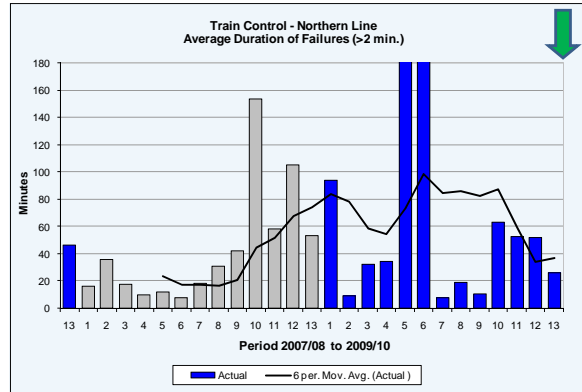
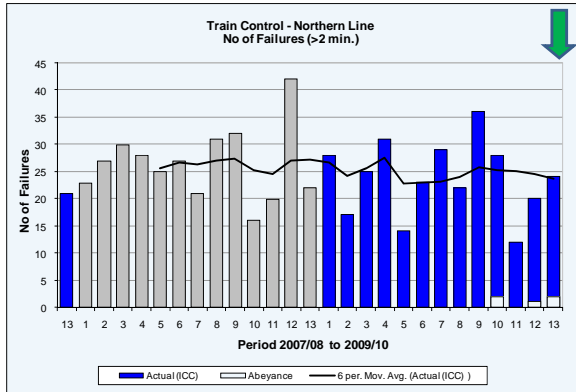
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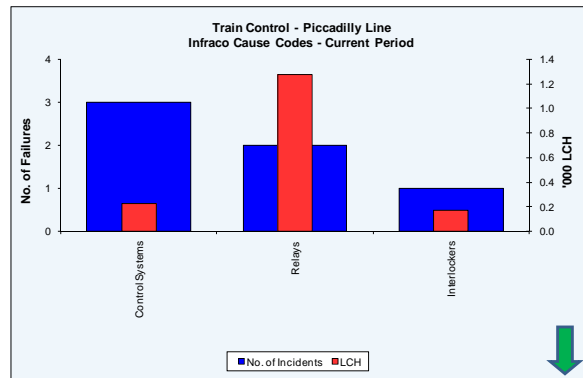
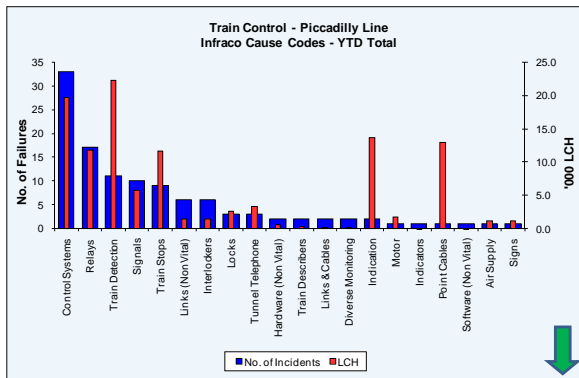
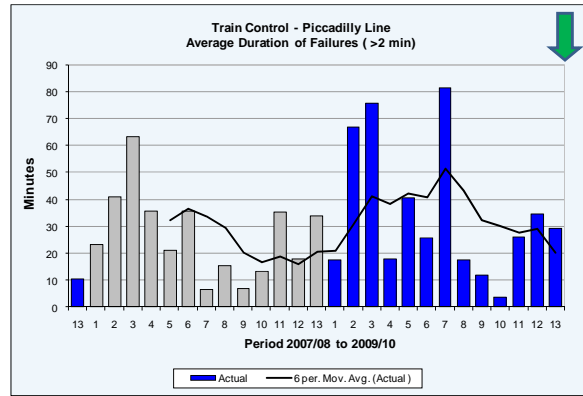
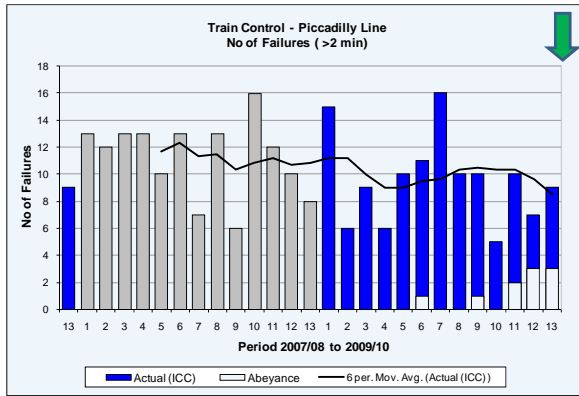
### Jubilee line



### Northern line

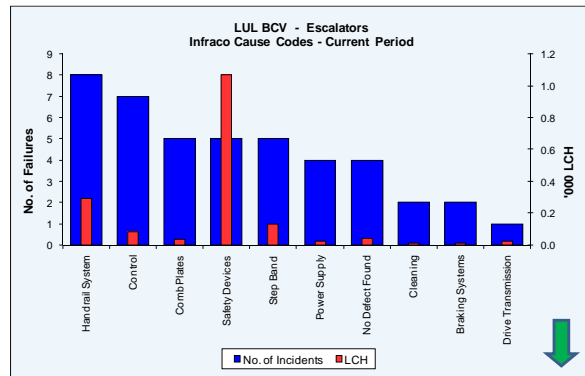
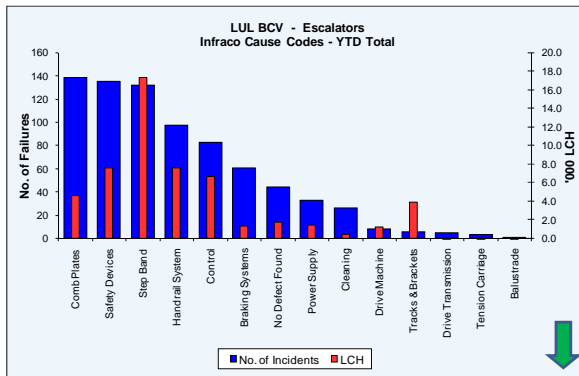
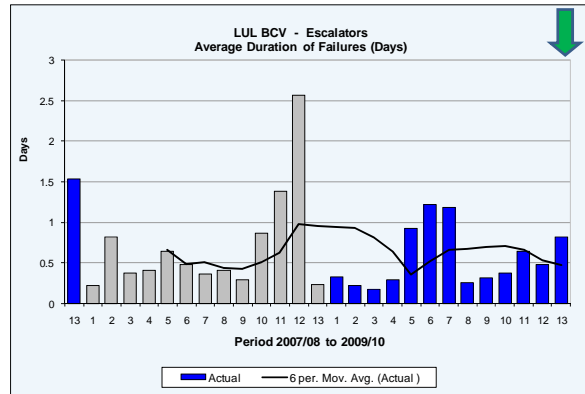
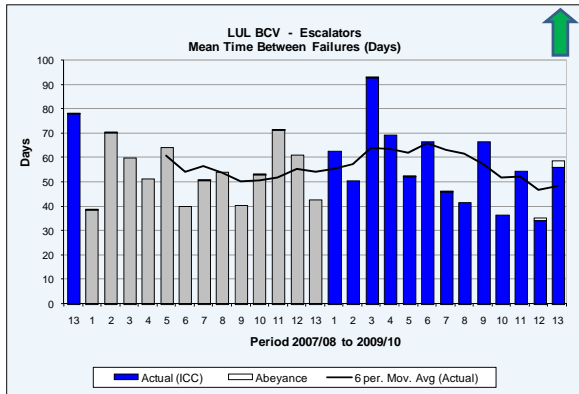


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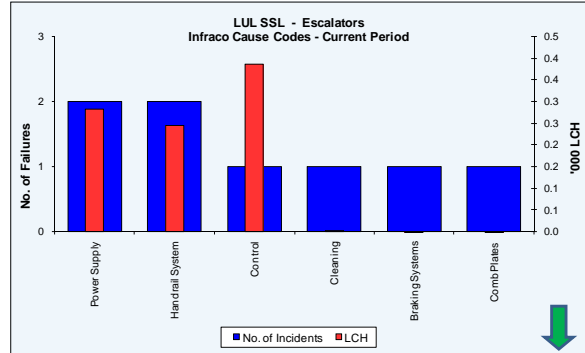
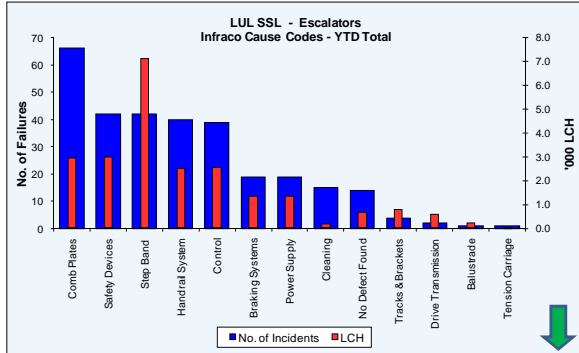
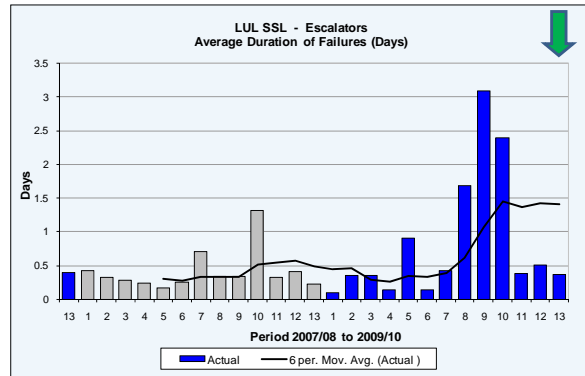
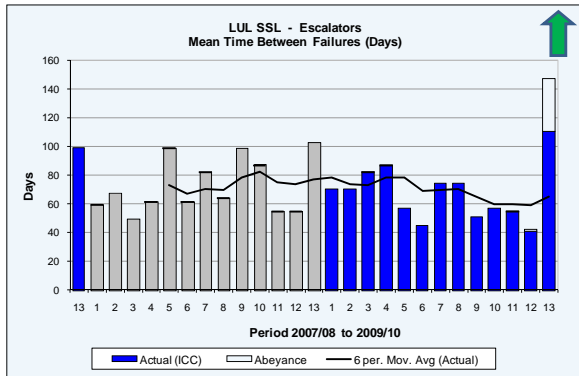


# Escalator reliability and fix time performance (by Infraco)

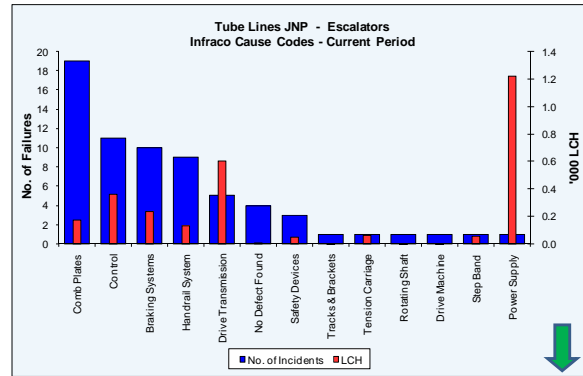
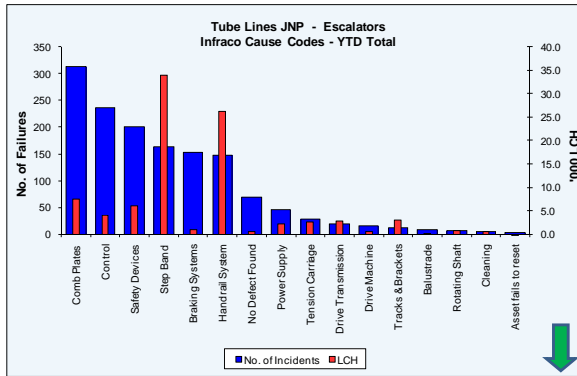
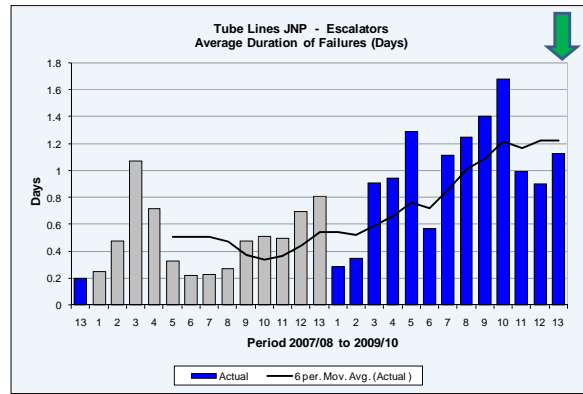
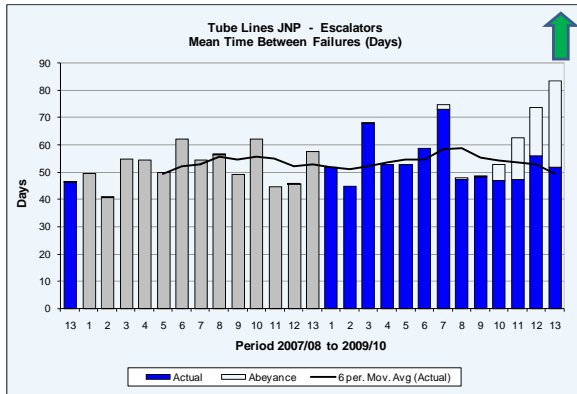
## Infraco BCV



## Infraco SSL

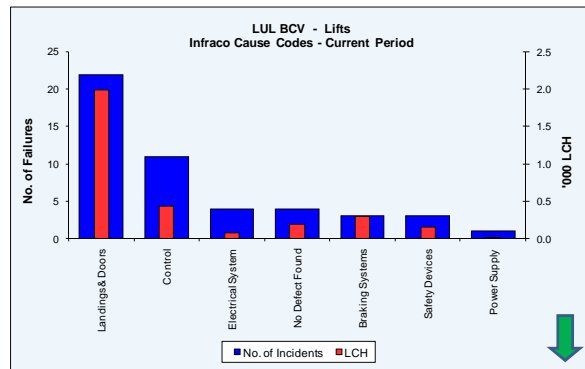
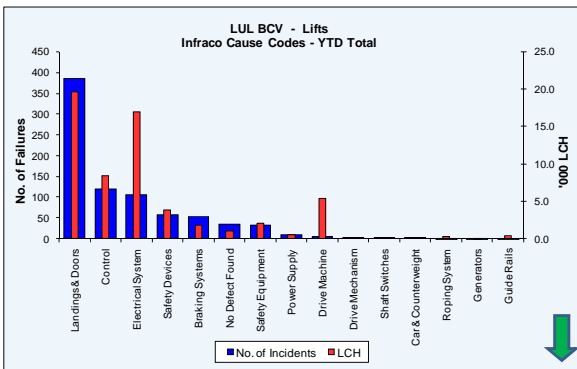
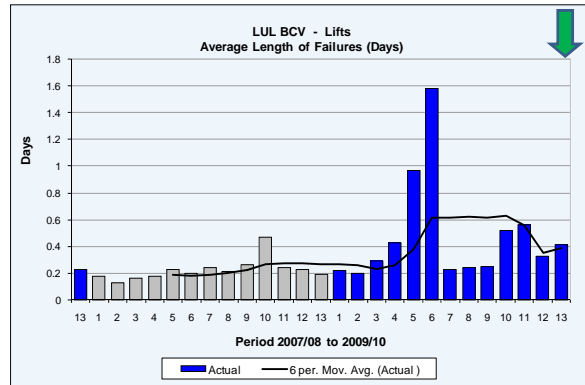
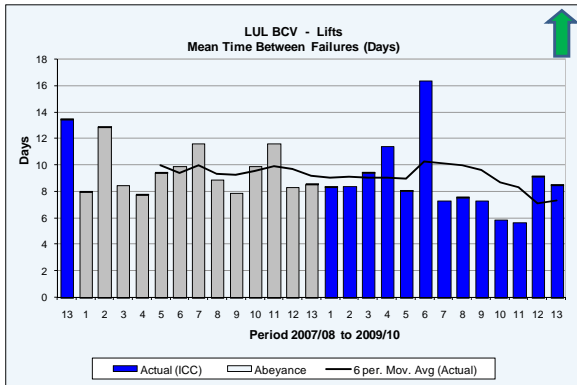


### Tube Lines JNP

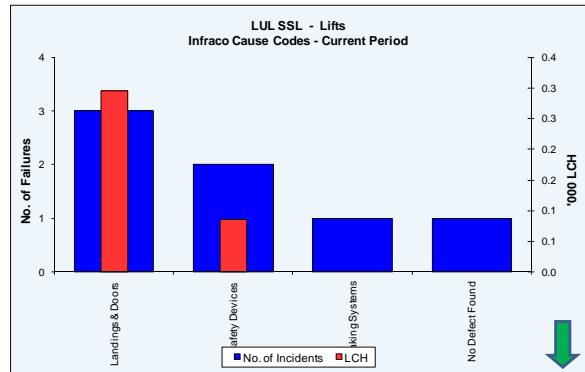
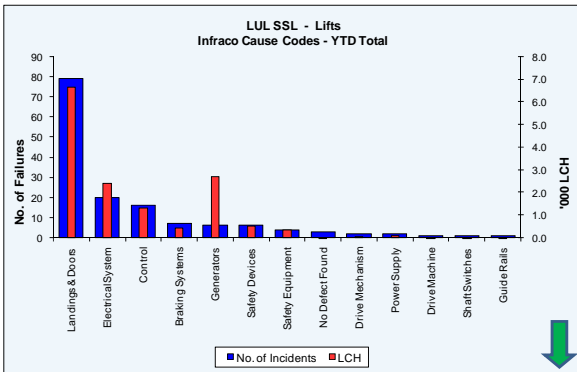
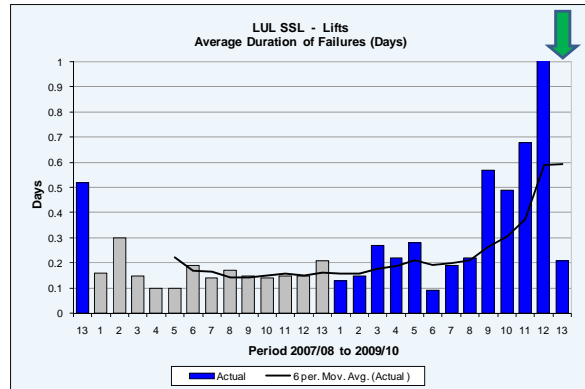
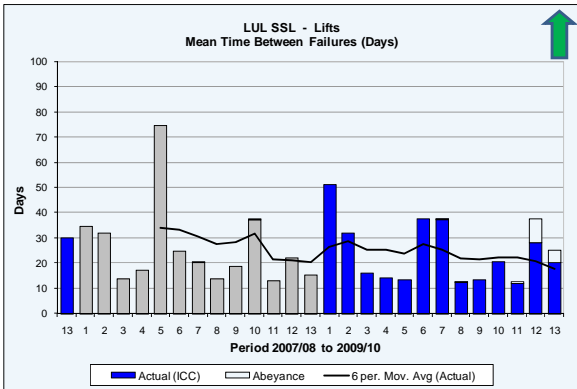


# Lift reliability and fix time performance (by Infraco)

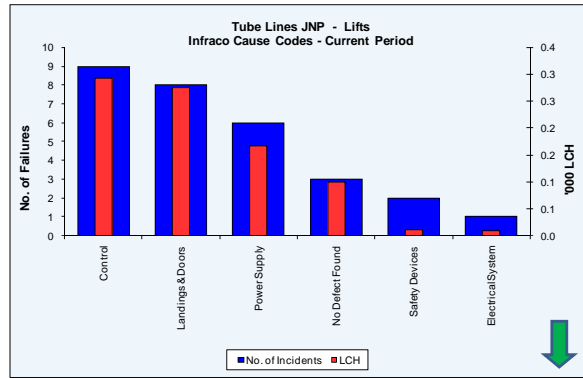
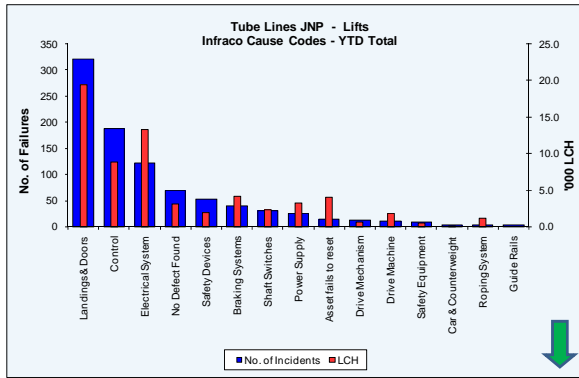
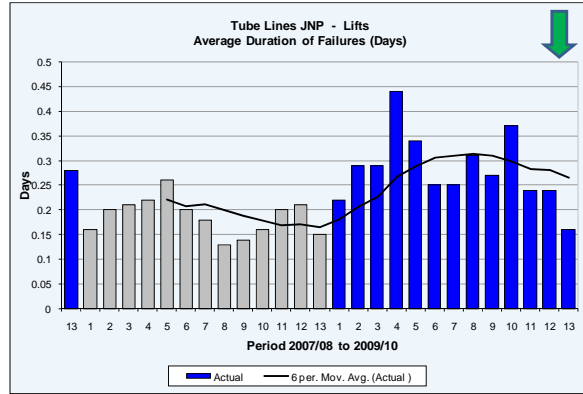
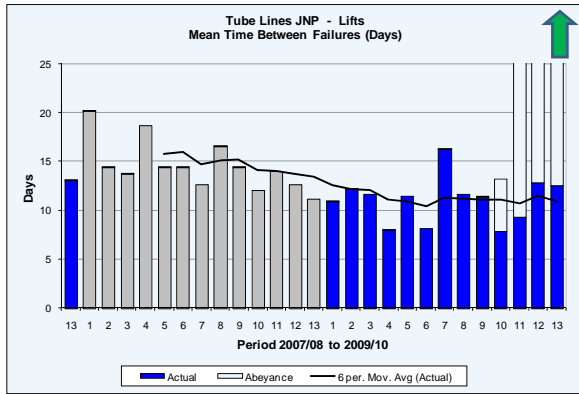
## Infraco BCV



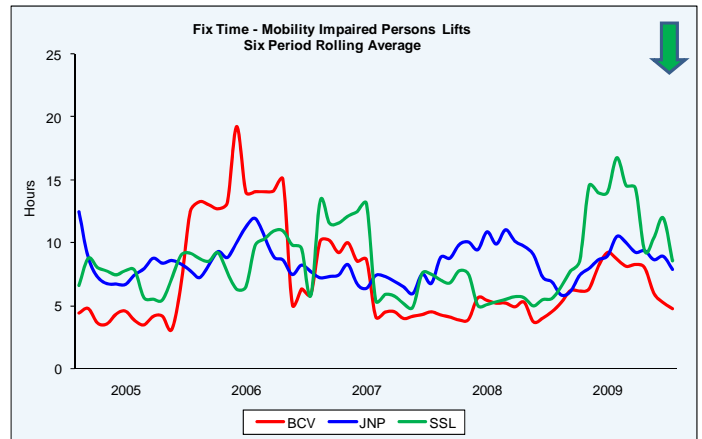
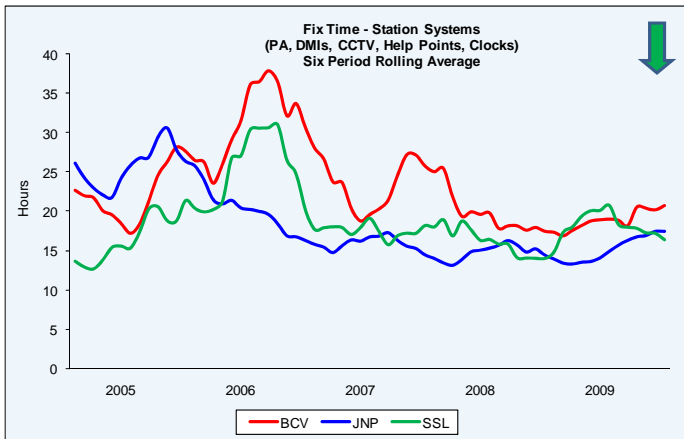
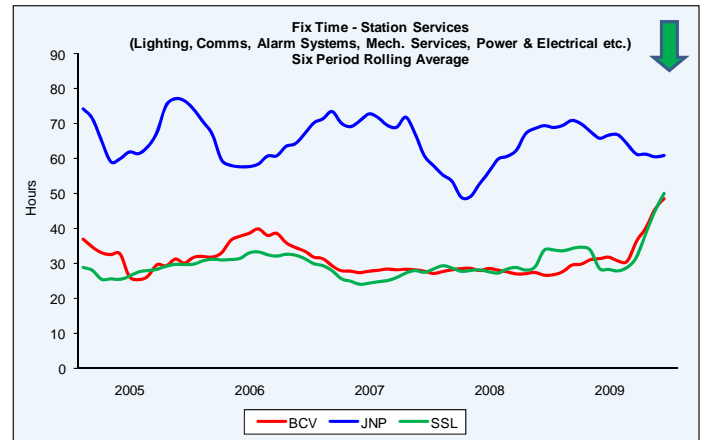
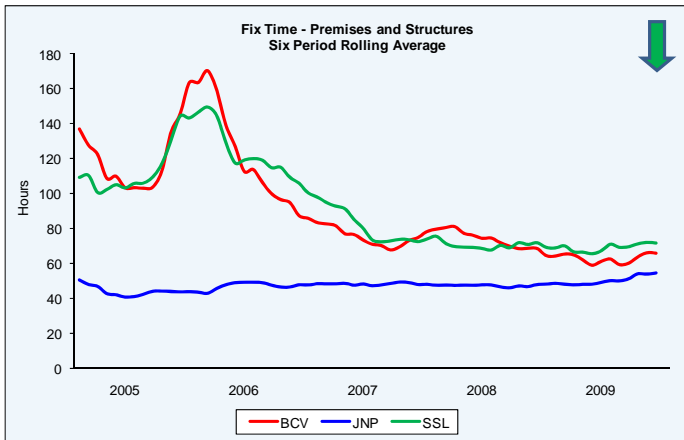
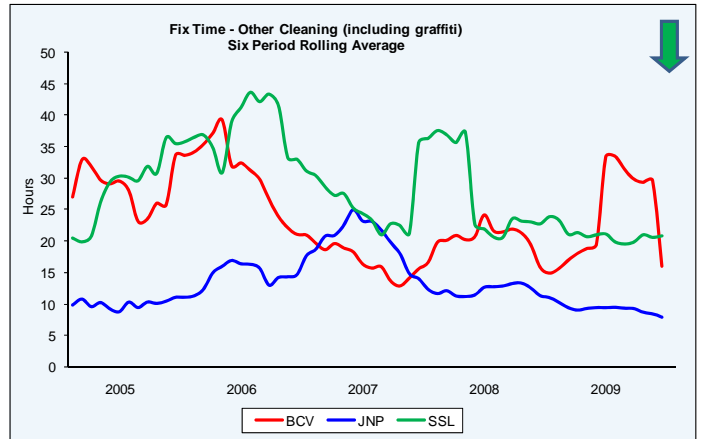
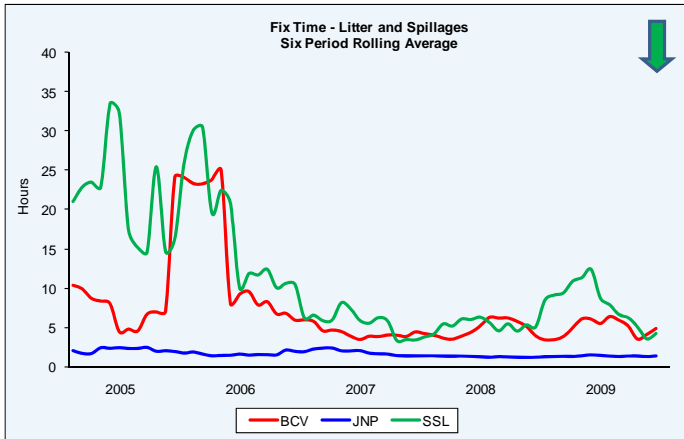
## Infraco SSL



### Tube Lines JNP



### Fault fix time performance (by Infraco)



## Glossary of metrics and terms

<b>Glossary of metrics and terms</b>	
<b>Metric / Term</b>	<b>Description</b>
Ambience	The Ambience measure reflects the value that customers place on their travel environment by measuring the quality of the travelling environment on Trains and in Stations. A quarterly Mystery Shopping Survey (MSS) conducted by an independent accredited survey organisation assesses various aspects of the service, including: the condition of train seats, cleanliness of surfaces and train exteriors, levels of litter and graffiti etc.
Availability	Availability is essentially a reliability measure reflecting whether Assets are Available for customer service. The measure counts all Service Disruptions lasting more than two minutes and takes into account the duration, location and time of day of the disruption to estimate the total cost in terms of customer time. This is expressed as 'Lost Customer Hours' (LCHs).
Broken rails	A running rail which is fractured through its full crosssection or has a piece broken out of it which renders it unserviceable.
Capability	Capability is a longer-term measure of the potential capacity of the Assets to reduce the journey time experienced by the customer. Improved Capability can be achieved through having more Trains, faster Trains (through train or signalling systems), and/or Trains with more capacity.
Category B Technical SPADs	A SPAD is any danger signal, as defined within Section F of the Reference Manual, passed without proper authority under the relevant procedure within Section F of the Reference Manual. Category B SPADs are caused by asset failures or defects.
Confirmed fires	Fire and Smoke related incidents on the operational railway which are confirmed as fires following the attendance of the London Fire Brigade (LFB)
Engineering overruns	Engineering Overruns: failure to return the railway for operational use on time following engineering work resulting in Service Disruption.
Escalator reliability (Mean time between failures)	The average number of service hours per Period between escalator Service Disruption incidents that are attributable to the Infraco and at least two minutes or longer, including 'no defect found' incidents.
Facilities faults	Facilities Faults: failure of customer-facing Assets such as CCTV, public address systems, train arrival indicators or help points. Infraco accrues Service Points for each Facilities Fault - based on the fact that it failed and the length of time it takes Infraco to rectify the failure.
Fault Rectification faults	Fault Rectification Faults: failure to fix certain problems such as litter and spillages, cleaning faults, broken tiles, failed light bulbs etc. Infraco accrues Service Points for Fault Rectification failures where they take longer than the contractual standard clearance time to rectify any failure.
Fleet reliability (Mean distance between failures)	The average number of train kilometres per Period between rolling stock related Service Disruption incidents that are attributable to the Infraco and at least two minutes or longer, including 'no defect found' incidents.
In depot cancellations (Rolling stock)	In depot train cancellation means where a Train does not enter scheduled service from a stabling location, resulting in Lost Customer Hours and attributable to the Infraco.
Infraco BCV	The LUL Nominee Company responsible for the infrastructure service provision and upgrade on the Bakerloo, Central, Victoria and Waterloo & City Lines.
Infraco Cause Codes (ICC)	Infraco Cause Codes are codes added by the Infracos that record the root cause of failures that are contractually attributed to the Infraco, and result in service disruptions.
Infraco SSL	The LUL Nominee Company responsible for the infrastructure service provision and upgrade on the District, Metropolitan, Circle as well as the Hammersmith & City Lines.
Lifts reliability (Mean time between failures)	The average number of service hours per Period between lift Service Disruption incidents that are attributable to the Infraco and at least two minutes or longer, including 'no defect found' incidents. (Does not include Mobility Impaired Lifts)
Line Upgrades	Line Upgrades mean upgrade projects resulting in a step change in Journey Time Capability through the introduction of more capacity and faster runtimes. These could be delivered through, for instance, introducing more trains or faster trains, signalling systems delivering shorter headways or a combination of the above. To be delivered by a contractual Latest Implementation Date.

Lost Customer Hours (LCH)	Lost Customer Hours means the total additional journey time, measured in hours, experienced by Customers using the Underground Network as a result of all Service Disruptions longer than two minutes.
Lost Time Injuries	Injuries arising at work, which cause the employee to be, absent for 1 or more shifts, or unable to carry out their normal duties for 1 or more shifts, after the shift in which the incident occurred.
Period	LUL has thirteen 28-day reporting Periods per year, from April to March. (The length of Period 1 and Period 13 may vary to align with the Financial Year End of 31st March).
Rolling stock - Staff error	Incidents, attributable to the Infracos, where an Infraco staff error has been identified as the root cause of a rolling stock incident or failure that subsequently resulted in a Service Disruption
Service Disruption	Disruption means where due to the occurrence of an Incident the Train Service or the Station Service is interrupted including Train Service Disruptions, Speed Restrictions, Platform Closure, Full Station Closure, Partial Station Closure, Full Line Suspension, Lift Downtimes, Escalator Downtimes and Customer Conveyor Downtimes.
Service Points	Service Points are allocated for failures by Infraco to meet certain contractual obligations. In some Service Points performance areas there are Thresholds with Infracos suffering financial abatements for performance worse than the Thresholds.
Speed Restrictions	Speed Restriction means an agreed speed restriction which is in force, resulting in extra running time between two (2) adjacent stations.
Station Ambience Minimum Targets	A contractual minimum Ambience (MSS) Target score for each station whereby, should performance be worse than the Target, an Infraco will accrue Service Points.
Station Upgrades	The refurbishment, enhancement and upgrade of stations to be delivered to a contractual Latest Completion Date.
Track reliability (Number of failures)	The average number of track related Service Disruption incidents per Period that are attributable to the Infraco and at least two minutes or longer, including 'no defect found' incidents.
Train control systems reliability (Number of failures)	The average number of train control related Service Disruption incidents per Period that are attributable to the Infraco and at least two minutes or longer, including 'no defect found' incidents.
Tube Lines (TLL)	The private sector Infraco responsible for the infrastructure service provision and upgrade on the Jubilee, Northern and Piccadilly Lines.