

Performance report

Period 6 2011/12
(21 August – 17 September 2011)



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LONDON UNDERGROUND

PERFORMANCE REPORT

PERIOD 6 2011-12 (21 AUGUST – 17 SEPTEMBER 2011)



INTRODUCTION

This report presents London Underground's performance during the four-week period ended on 17 September 2011 along with trends over the last year. It contains a series of performance measures designed to reflect customers' experiences of travelling on the Tube. A glossary explaining these measures is provided on pages 23 to 25.

CONTEXT

London Underground trains serve 269 stations (this excludes Blackfriars which is currently closed) over a traffic day from approximately 05:00 to 01:00 (shorter on Sundays).

London Underground is responsible for maintaining 426 passenger escalators and 159 passenger lifts.

At 09:00 on Mondays to Fridays, 530 trains are scheduled to be in service on the network which covers 400 route kilometres.

In the last financial year, ended on 31 March 2011, London Underground trains ran 68.9 million kilometres and carried 1,107 million passengers.

PERIOD 6 PERFORMANCE

Customer Satisfaction

The second quarter's overall evaluation score was 79, the same as in each of the previous three quarters.

Passenger Journeys

Passenger Journeys in the period were 84.1 million, taking the total for the year to date to 523.9 million which is 2.7 per cent higher than over the first six periods of last year.

Journey Time

Excess journey time increased by 0.15 minutes to 5.38 minutes this period. This was due to a higher number of signal and track related incidents.

Network scheduled journey time reduced by 0.34 minutes due to the completion of the High Street Kensington - Edgware Road blockade and the first full period of new timetable operation on the Jubilee line.

Train Service

The network percentage of the scheduled kms that were operated, at 96.8%, maintained the trend of being better than target in each period so far this year. This result comprised 96% of service in the Monday to Friday peaks and 97.1% in the off-peak.

Weekend engineering works reduced the level of service over the four weekends and August Bank Holiday Monday to 82.2% of the timetable.

This was the first full four week period of the Jubilee line's first post-upgrade timetable, introduced on 31 July.

By the end of the period 16 of the new air-conditioned 'S' stock trains had been delivered to London, of which 13 were scheduled for running in passenger service on the Metropolitan line.

Station Service

There were 55 unplanned station closures in the period, with a total duration of 42 hours which represents just 0.03% of scheduled station opening hours. The most significant causes of station closures this period were Staff Absence / Shortage (19); Customer Action (11) and Lift & Escalator Failures (9).

Network escalator availability was 95.8% (98.8% excluding planned works) and lift availability was 93.7% (98.8% excluding planned works).

Green Park station, a key Olympic interchange, is now step free one year ahead of the start of the Paralympic Games. It became the 63rd station on the Underground network to provide step free access from the street to all platforms at the station following the introduction of three new lifts on 29 August.

At Stratford station the northern ticket hall opened on 13 September. As well as providing direct access to the Westfield Stratford City shopping centre, which opened on the same day, the northern ticket hall will also be the primary route through to the Olympic Park during next year's Games. It also opens up direct pedestrian interchange with Stratford International station.

Service Disruption - Lost Customer Hours

The number of lost customer hours (LCH) increased from 2.1 million in period 5 to 2.6 million in period 6. Incidents on the Jubilee line caused by fallen tunnel telephone wires and points failures as well as some bedding in issues with the new signalling, and problems with a track circuit on the Victoria line following works over the August Bank Holiday weekend, contributed to this increase. The five incidents with the highest LCH values on each line are listed on pages 21 and 22.

London Underground Performance Report - Period 6 2011/12

Network Performance Summary

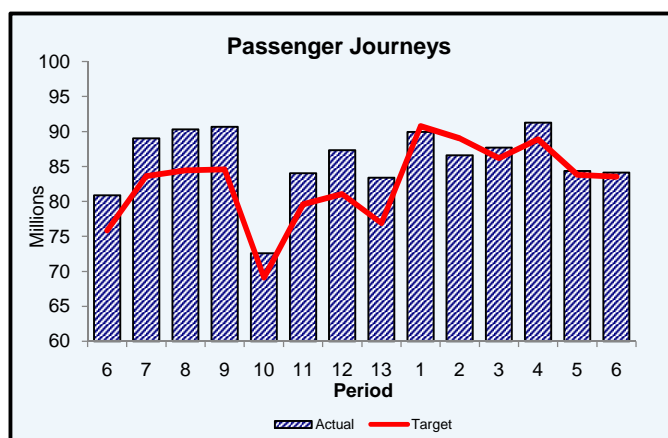


Targeted Measures	Unit	Year Ago	Last Period	This Period	Target	Trend Chart(s)
Customer Satisfaction - Overall Evaluation ^{(1) (2)}	Score	80	79	79	80	Page 5
Passenger Journeys ⁽²⁾	Millions	80.9	84.3	84.1	83.5	Page 5
Percentage of Schedule	%	94.9	97.1	96.8	96.7	Page 6
Excess Journey Time	Minutes	6.66	5.23	5.38	5.77	Page 7

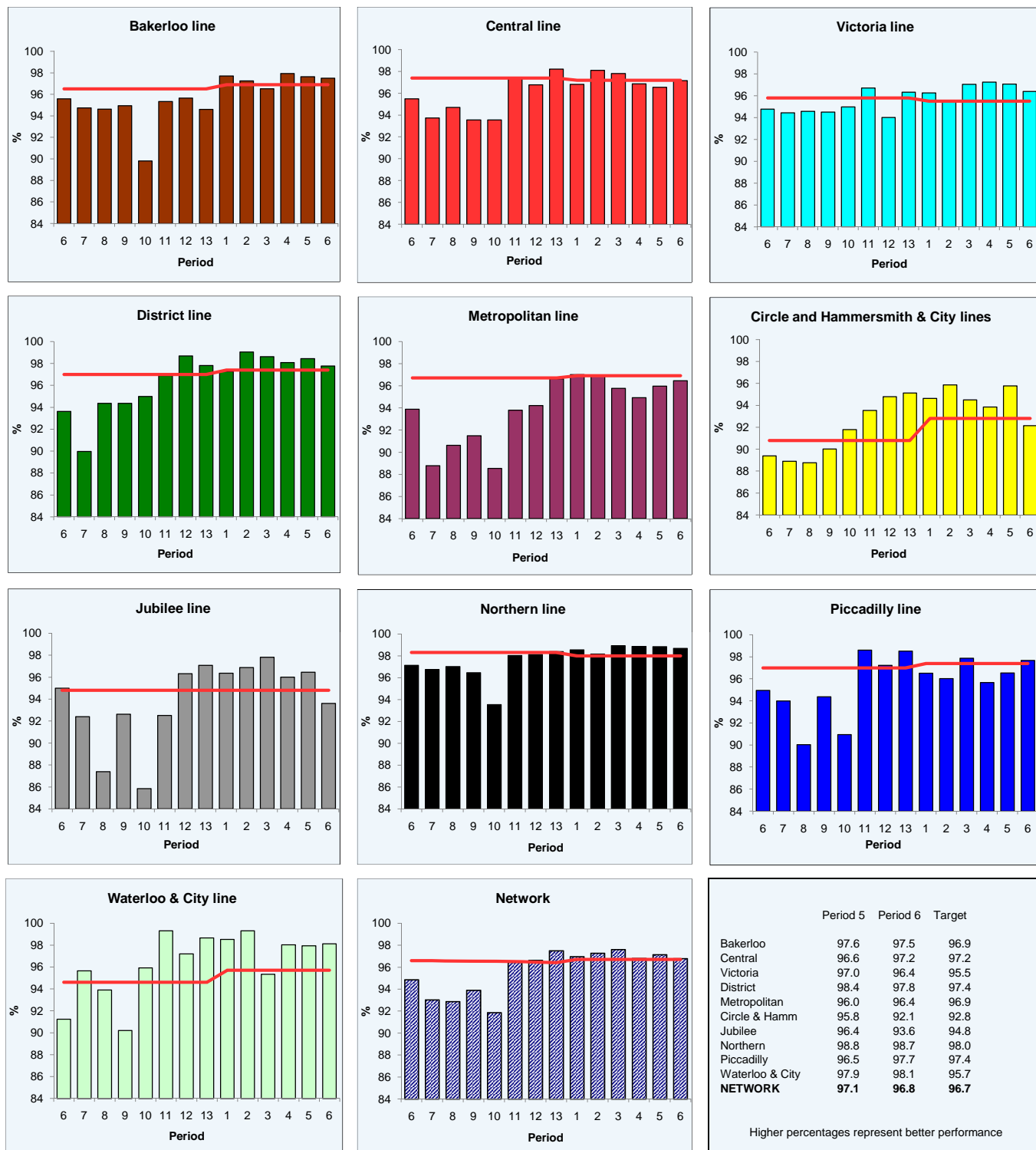
Other Measures	Unit	Year Ago	Last Period	This Period	Moving Annual Av	Trend Chart(s)
Total Journey Time	Minutes	44.76	43.68	43.48	44.60	Page 8
Percentage of Schedule (Peak)	%	93.2	96.7	96.0	-	Page 9
Percentage of Schedule (Offpeak)	%	95.5	97.3	97.1	-	Page 9
Percentage of timetable (weekdays)	%	93.3	96.4	96.5	-	Page 10
Percentage of timetable (weekends)	%	75.7	85.2	82.2	-	Page 10
Station Closures	Number	200	72	55	107	Page 11
Escalator Availability	%	95.4	95.3	95.8	96.0	Page 12
Lift Availability	%	98.3	92.8	93.7	95.3	Page 13
Rolling Stock Mean Distance Between Failures	Kilometres	16,085	15,081	13,405	14,638	Page 15
Signal & Points Related Delays > 2 minutes	Number	174	257	224	241	Page 16
Track Related Delays > 2 minutes	Number	39	25	33	38	Page 17
Lost Customer Hours	000	3,773	2,134	2,609	2,971	Page 18

⁽¹⁾ Customer Satisfaction is measured quarterly, so the figures shown in 'this period' and 'last period' columns are for the most recent and previous quarters.

⁽²⁾ These results are reported at Network level only. All other measures in this table are reported by line in the following pages.



London Underground Performance Report - Period 6 2011/12 Percentage of Scheduled Kilometres Operated - All Day, Every Day



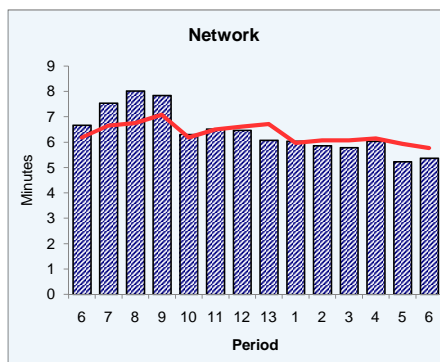
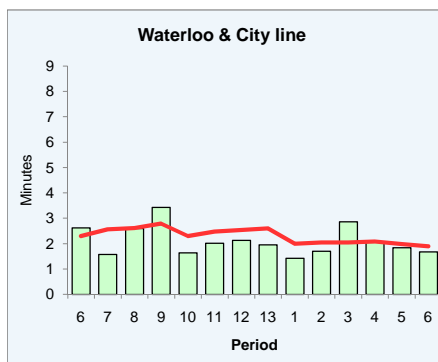
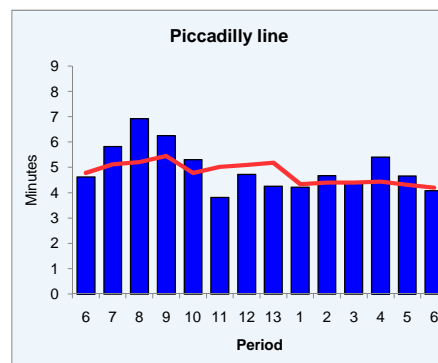
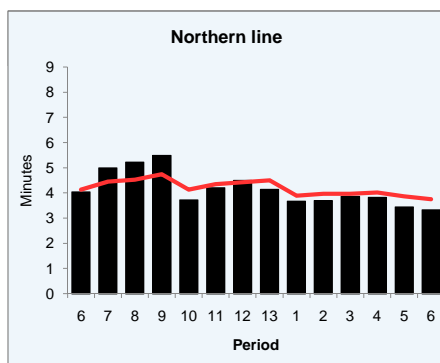
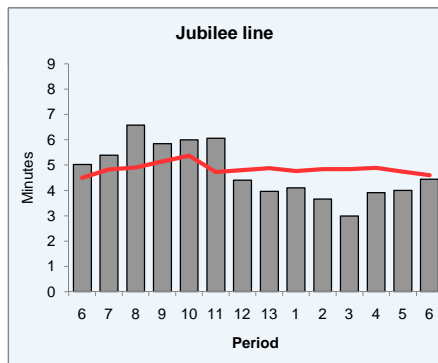
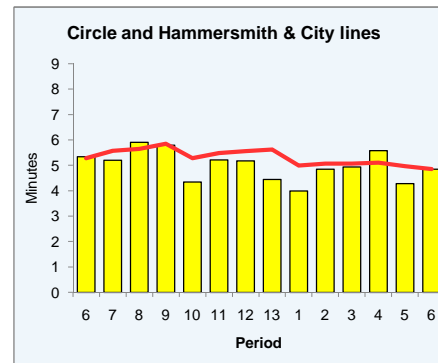
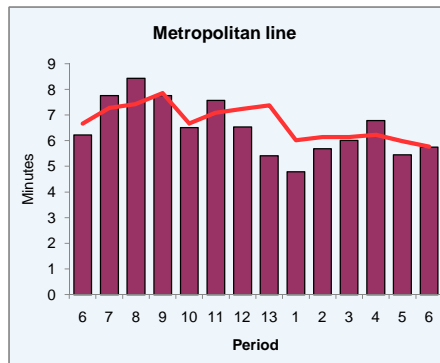
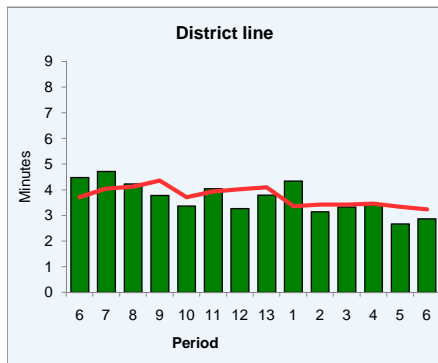
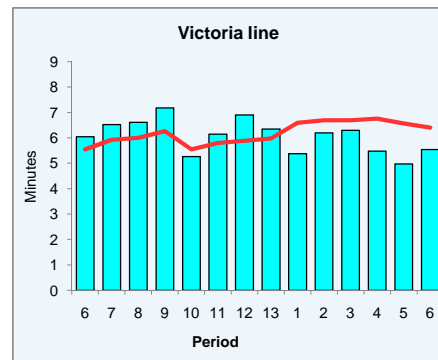
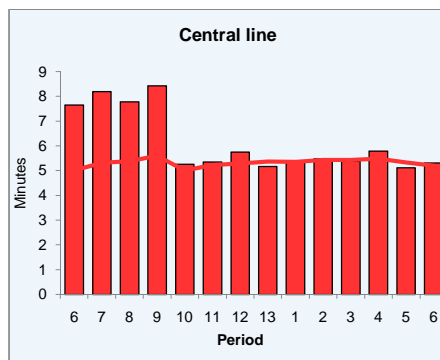
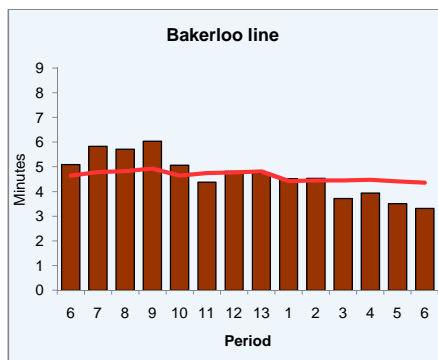
Actual (line colour) Target

The graphs show the percentage of scheduled kilometres operated by trains in passenger service on each line. Scheduled kilometres are the distances timetabled to be run, adjusted for planned engineering works.

The Jubilee line was severely disrupted on 15 September when an early morning points problem at Stanmore was followed by loss of traction current in the Baker Street area where tunnel telephone wires had come down, causing a lengthy service suspension through the central area and reducing the day's percentage of schedule to less than 50%. Other incidents that significantly affected the line's performance included a points failure at Willesden Green on 16 September and a signal failure at Wembley Park on 24 August. On 6 September a track circuit failure in the Finchley Road area caused suspension of the Metropolitan line service south of Wembley Park for several hours, with consequent severe disruption to the C&H. A points failure at Praed Street Junction on 10 September also severely disrupted the C&H, with lesser impacts on the Metropolitan and District lines.

London Underground Performance Report - Period 6 2011/12

Excess Journey Time



	Period 5	Period 6	Target
Bakerloo	3.51	3.32	4.37
Central	5.11	5.31	5.19
Victoria	4.98	5.55	6.40
District	2.67	2.87	3.23
Metropolitan	5.45	5.75	5.77
Circle & Hamm	4.27	4.84	4.86
Jubilee	3.99	4.44	4.60
Northern	3.44	3.33	3.76
Piccadilly	4.66	4.08	4.20
Waterloo & City	1.85	1.68	1.89
NETWORK	5.23	5.38	5.77

Lower numbers represent better performance

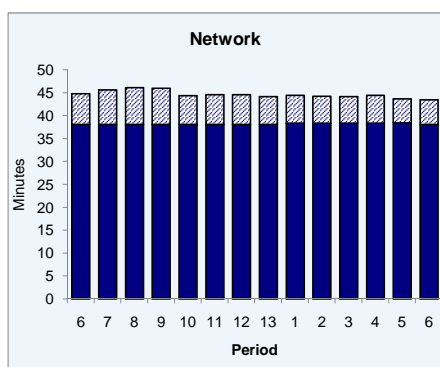
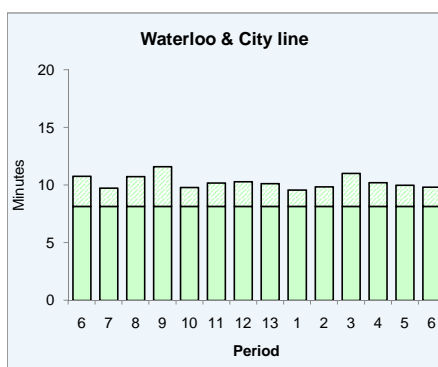
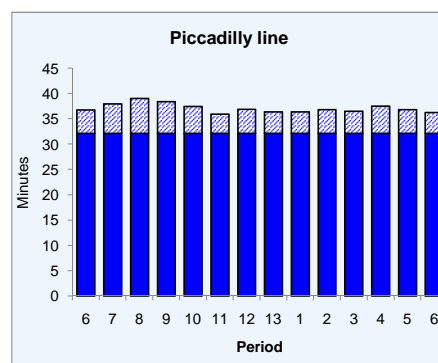
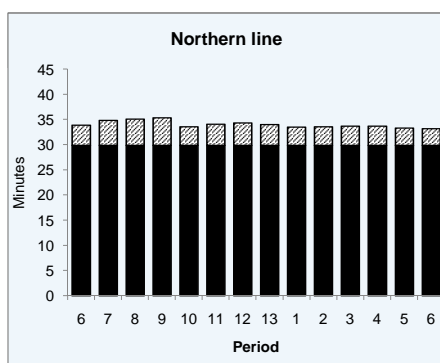
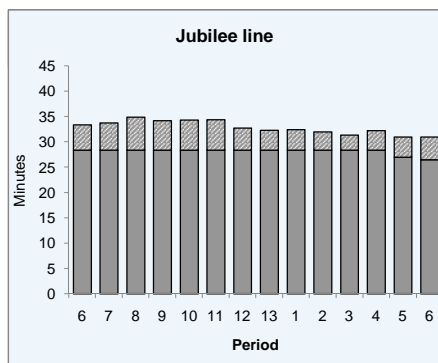
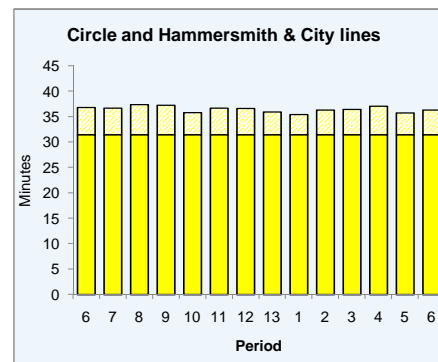
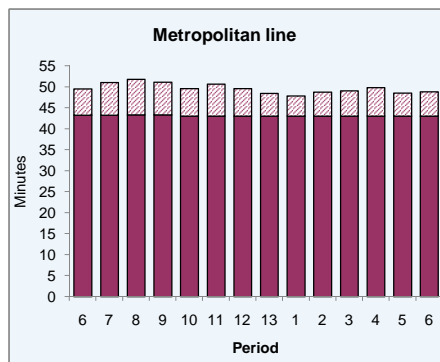
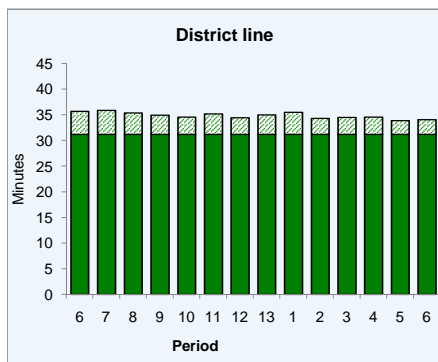
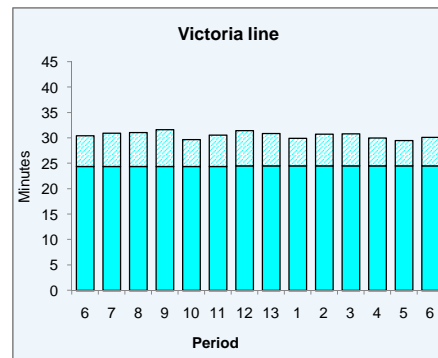
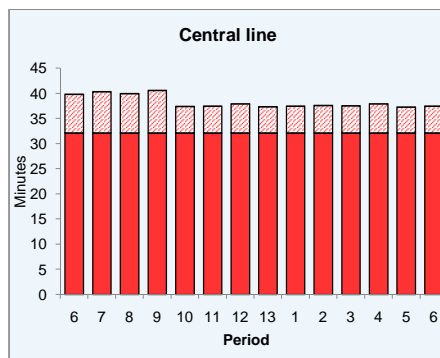
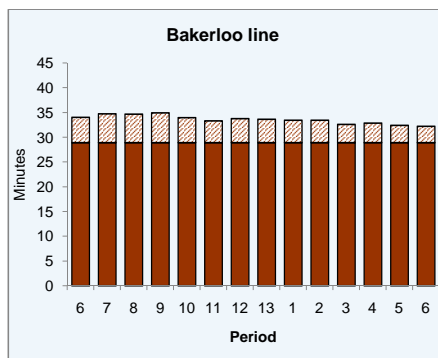
Actual (line colour) Target

The time in minutes to complete an average journey on the network over and above the expected time, weighted by customer time values. The calculation includes the impact of planned closures.

Excess journey time increased by 0.15 minutes to 5.38 minutes due to a higher number of signal and track related incidents.

London Underground Performance Report - Period 6 2011/12

Total Journey Time



Period 6			
	Schedule	Excess	Total
Bakerloo	28.92	3.32	32.23
Central	32.15	5.31	37.46
Victoria	24.57	5.55	30.12
District	31.20	2.87	34.06
Metropolitan	43.07	5.75	48.82
Circle & Hamm	31.47	4.84	36.31
Jubilee	26.50	4.44	30.94
Northern	29.86	3.33	33.20
Piccadilly	32.16	4.08	36.24
Waterloo & City	8.15	1.68	9.83
NETWORK	38.10	5.38	43.48

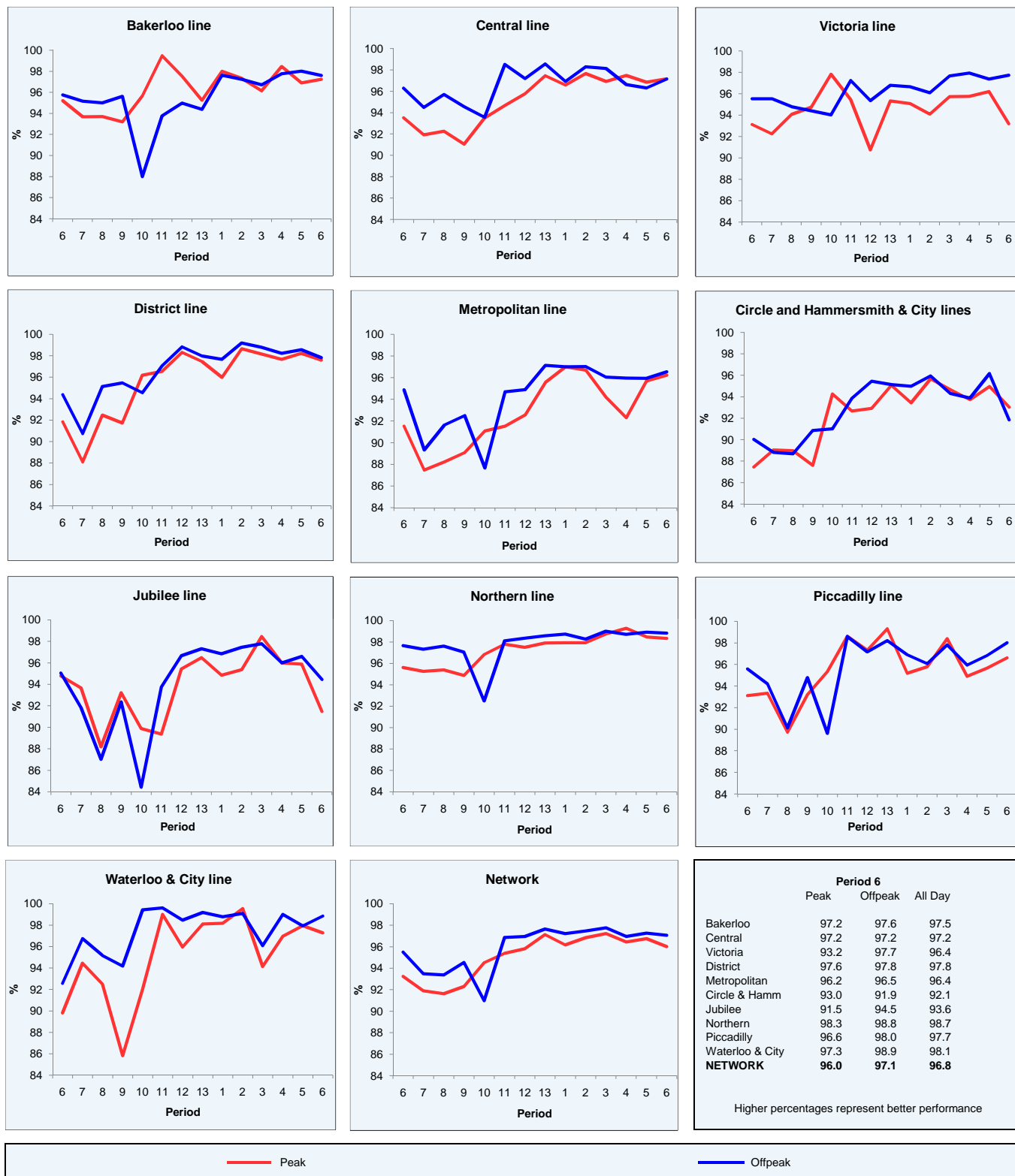
Lower numbers represent better performance



The time in minutes to complete an average journey on the network, weighted by customer time values (see page 21).

Network scheduled journey time improved (i.e. reduced) by 0.34 minutes due to the completion of the High Street Kensington - Edgware Road blockade and the first full period of new timetable operation on the Jubilee line.

London Underground Performance Report - Period 6 2011/12
Percentage of Scheduled Kilometres Operated - Peak & Offpeak

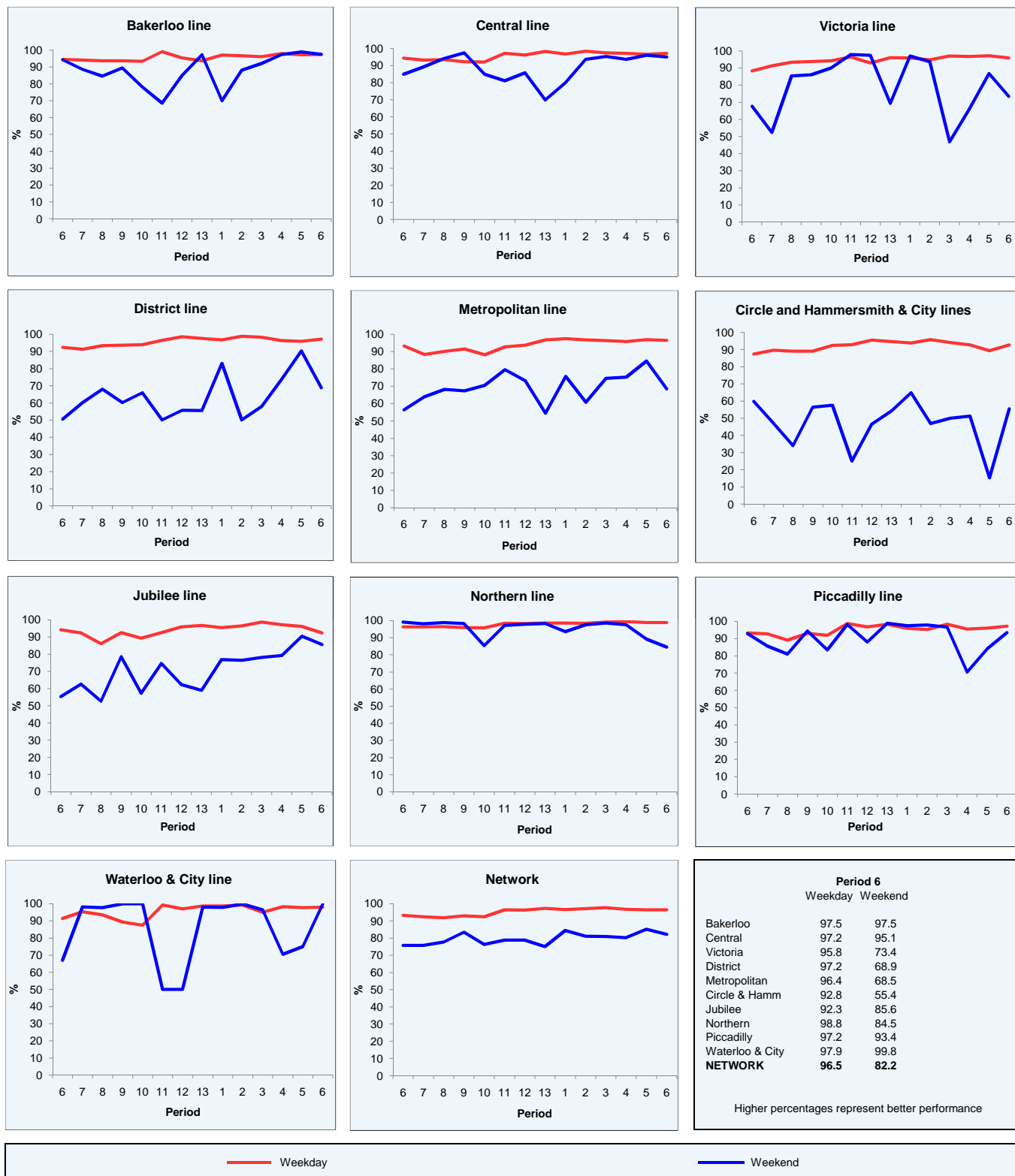


The graphs show the percentage of scheduled kilometres operated by trains in passenger service on each line during peak and offpeak periods. Peak is defined as Monday to Friday 07:00 to 10:00 and 16:00 to 19:00, excluding public holidays. Scheduled kilometres are as defined on page 21.

Peak percentage is usually lower than offpeak as the more intensive service levels operated during peak times means that any disruption causes a larger loss of service than at less busy times of day. At network level, the exception in period 10 of last year was due to industrial action on Boxing Day.

London Underground Performance Report - Period 6 2011/12

Percentage of Timetable Operated - Weekdays and Weekends



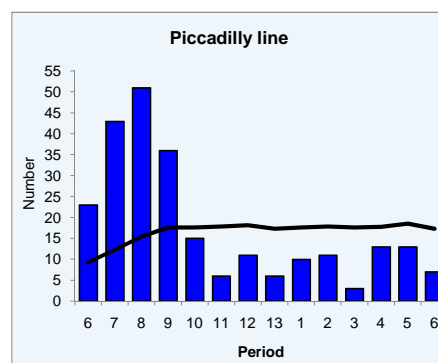
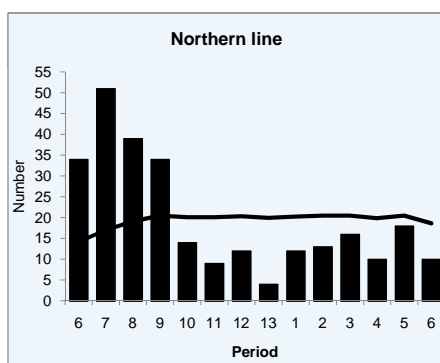
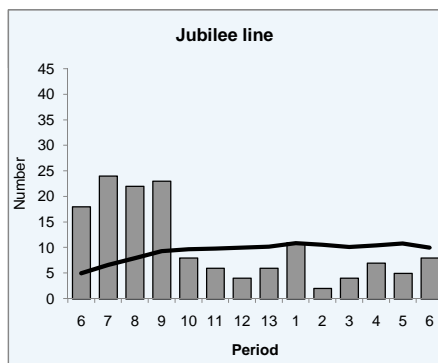
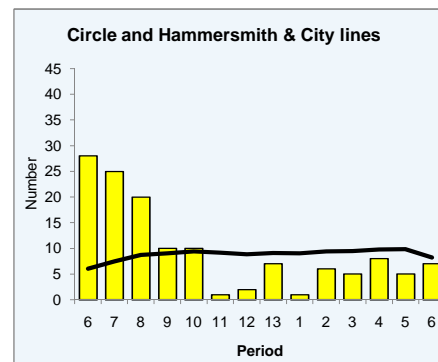
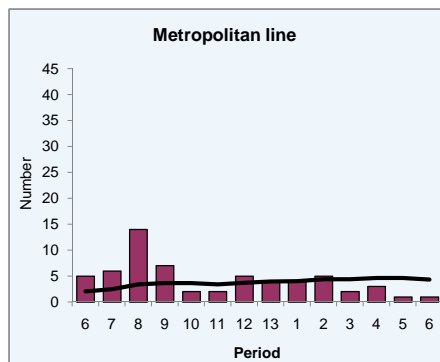
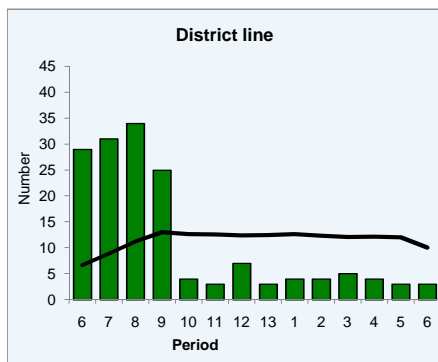
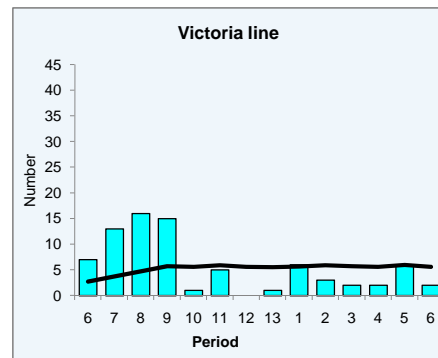
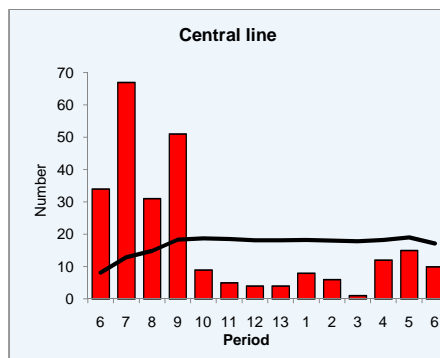
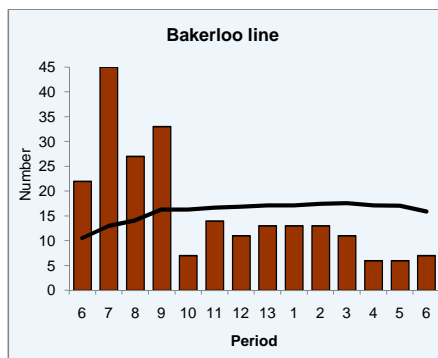
The graphs show the percentage of timetabled kilometres operated by trains in passenger service on weekdays and weekends (inc. Bank Holidays) and illustrate the impact of weekend engineering works on service output.

The graphs show that the biggest impact of engineering work has been on the Sub surface lines (District, Metropolitan, Circle and Hammersmith & City) as part of the SSR upgrade. The Circle and Hammersmith & City lines in particular had extensive works in period 5 as the 32-day block closure between High Street Kensington and Edgware Road was extended to also include other sections of the line at weekends.

The progressive reduction in weekend work on the Jubilee line over the past year is also evident.

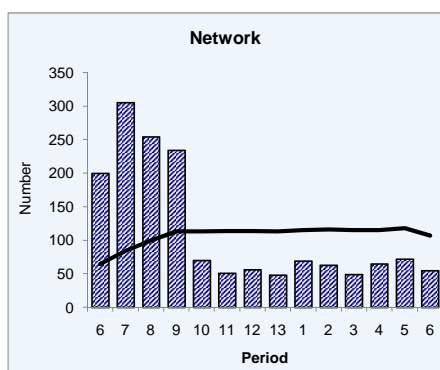
London Underground Performance Report - Period 6 2011/12

Station Closures



Waterloo & City line

The stations served by the Waterloo & City line are managed by the Jubilee line (Waterloo) and the Central line (Bank)



	Period 5	Period 6	MAA
Bakerloo	6	7	16
Central	15	10	17
Victoria	6	2	6
District	3	3	10
Metropolitan	1	1	4
Circle & Hamm	5	7	8
Jubilee	5	8	10
Northern	18	10	19
Piccadilly	13	7	17
Waterloo & City	0	0	0
NETWORK	72	55	107

Lower numbers represent better performance

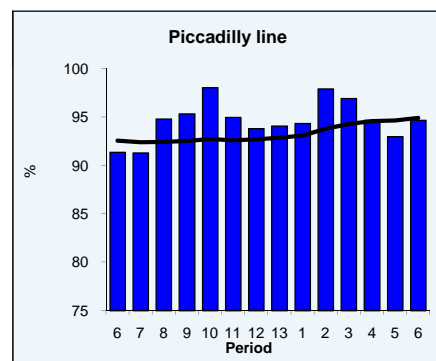
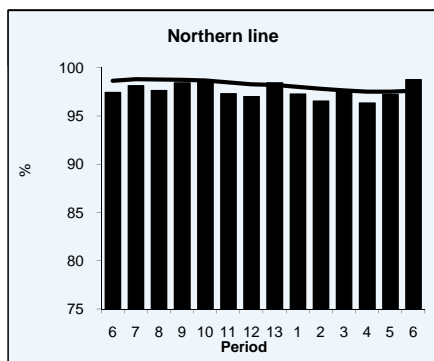
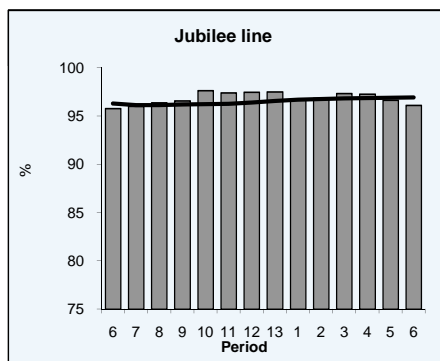
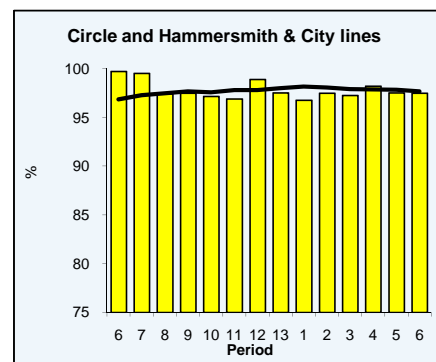
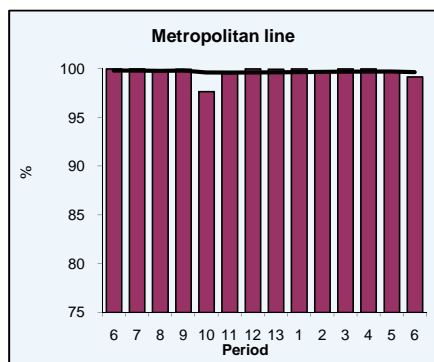
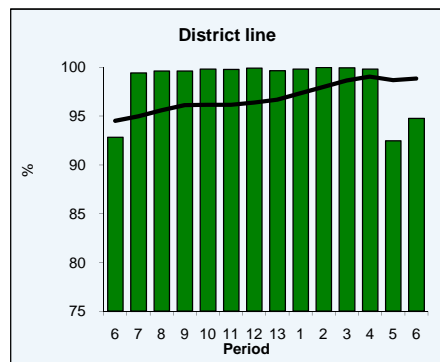
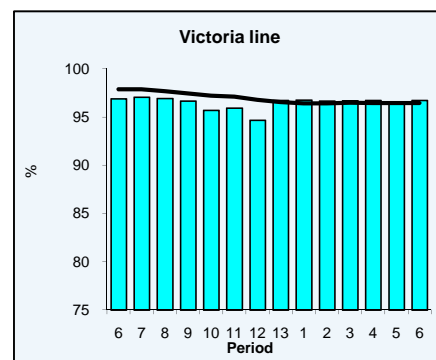
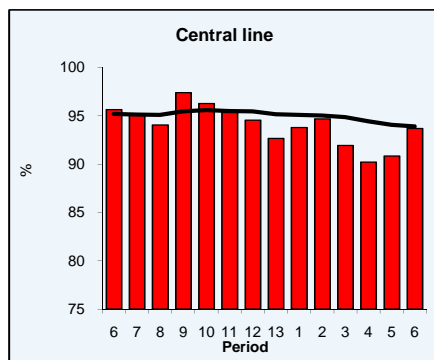
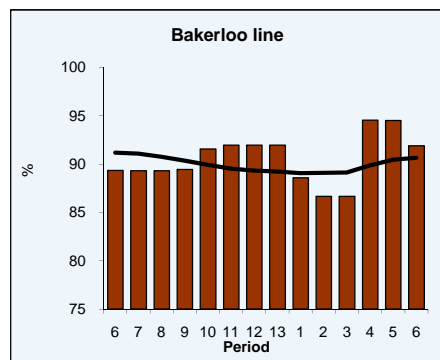


The total number of unplanned full station closures measured throughout the whole of each service day. For a full station closure, all station entry and exits must be closed and trains non-stopping.

LU trains currently serve 269 stations (Blackfriars is temporarily closed). The 55 closures reported above had a total duration of 42 hours, which represents just 0.03% of scheduled station opening hours.

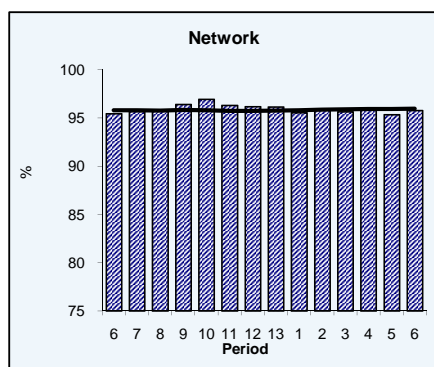
The most significant causes of station closures this period were Staff Absence / Shortage (19); Customer Action (11) and Lift & Escalator Failures (9). The high numbers in periods 6-9 of last year were due to industrial action.

London Underground Performance Report - Period 6 2011/12 Escalator Availability (including planned works)



Waterloo & City line

The stations served by the Waterloo & City line are managed by the Jubilee line (Waterloo) and the Central line (Bank)



	Period 5	Period 6	MAA
Bakerloo	94.5	91.9	90.7
Central	90.9	93.7	93.9
Victoria	96.5	96.7	96.4
District	92.5	94.8	98.8
Metropolitan	99.8	99.2	99.7
Circle & Hamm	97.5	97.5	97.7
Jubilee	96.7	96.1	96.9
Northern	97.2	98.8	97.6
Piccadilly	93.0	94.7	94.9
Waterloo & City	n/a	n/a	n/a
NETWORK	95.3	95.8	96.0

Higher percentages represent better performance

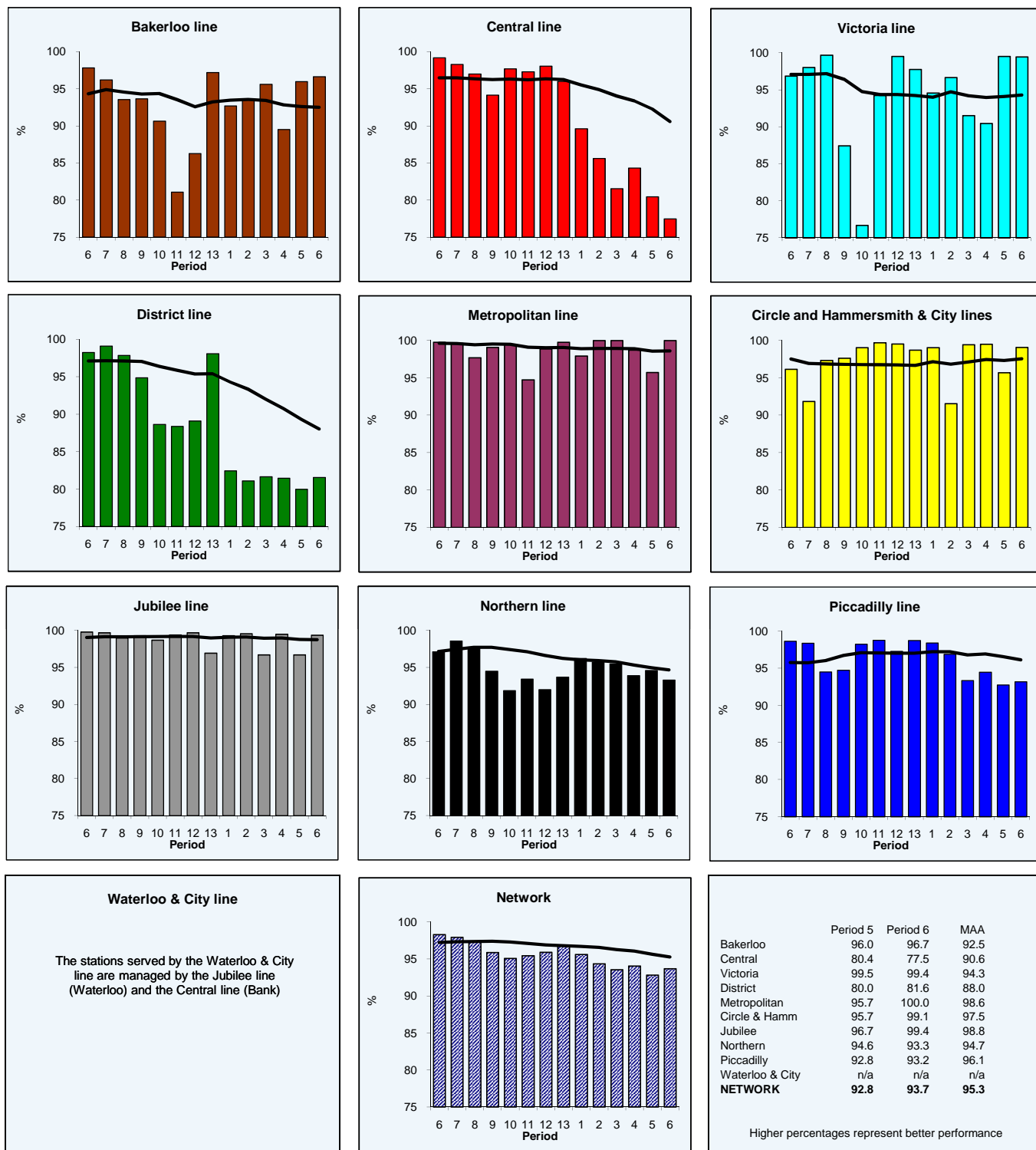
Actual — Moving Annual Average (MAA)

The total hours escalators were working, or available to work if required, as a percentage of total scheduled service hours.

Network escalator availability was 95.8% (98.8% excluding planned works). Details of escalators out of service for planned works are given on page 14

London Underground Performance Report - Period 6 2011/12

Lift Availability (including planned works)



The total hours lifts were working, or available to work if required, as a percentage of total scheduled service hours

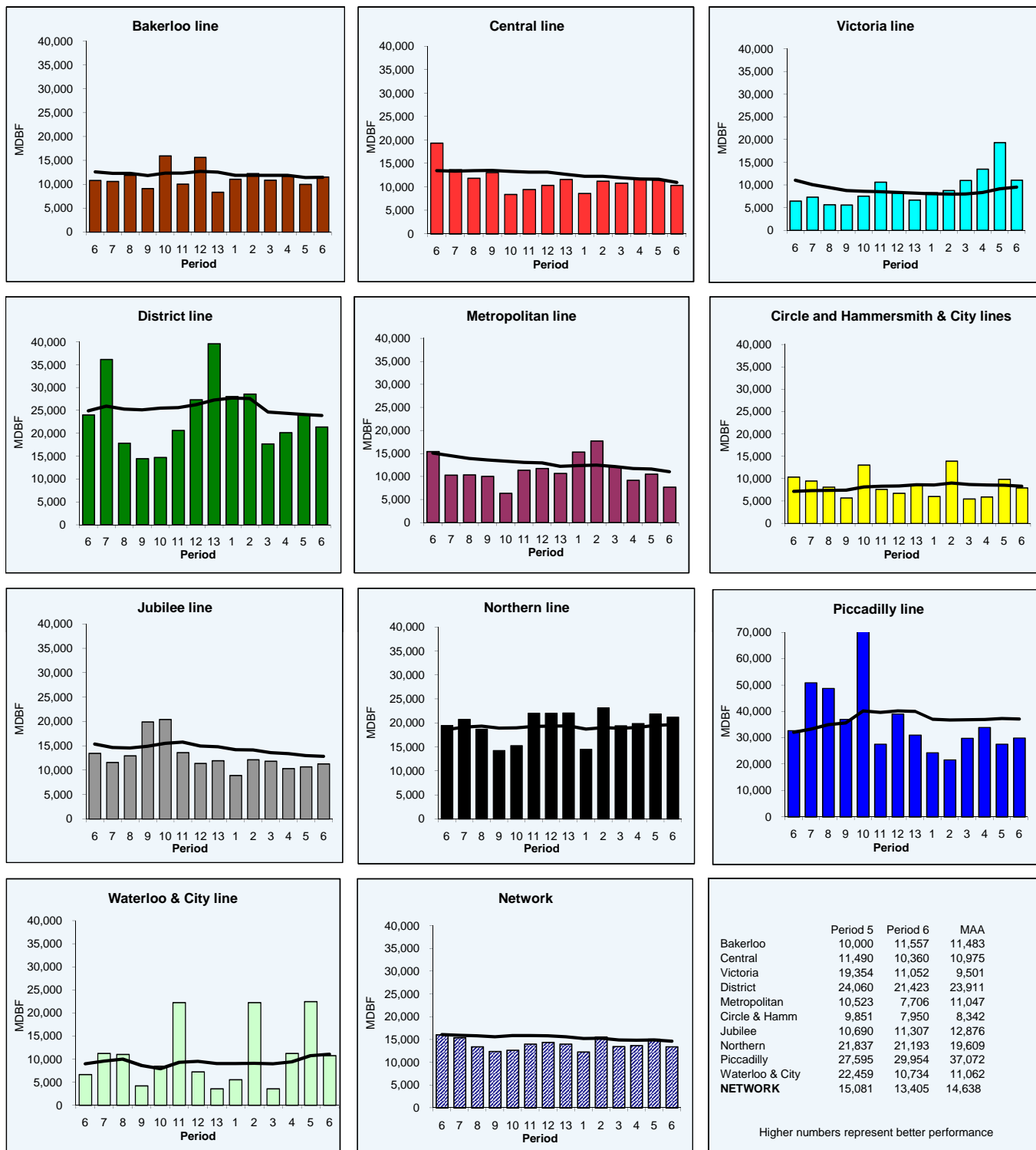
Network lift availability was 93.7% (98.8% excluding planned works). Details of lifts out of service for planned works are given on page 14. Planned works have been taking place on the two lifts at Earl's Court (District line) since early April; as there are 11 lifts in total in District line stations this reduces availability by 18%. Similarly on the Central line, which has 15 lifts, two machines at Bank have been undergoing planned refurbishment since mid-April and current period availability has been further reduced by planned work at Holland Park and Lancaster Gate.

London Underground Performance Report - Period 6
Escalators & Lifts undergoing planned works in the period

Line	Station	Type	Number	Description of Work	Start	End
Bakerloo	Charing Cross	Esc	1	Replacement	18/4/2011	30/04/2012
Bakerloo	Charing Cross	Esc	3	Replacement	18/04/2011	30/04/2012
Bakerloo	Oxford Circus	Esc	14	Step chain and wheel replacement	21/08/2011	23/09/2011
Central	Bank	Esc	3	Refurbishment	13/05/2011	31/08/2011
Central	Bank	Lift	6	Refurbishment	15/04/2011	07/12/2011
Central	Bank	Lift	7	Refurbishment	15/04/2011	07/12/2011
Central	Bank	Esc	6	Replacement	28/07/2011	25/12/2011
Central	Bond Street	Esc	1	Replacement	03/06/2011	31/03/2012
Central	Bond Street	Esc	2	Replacement	03/06/2011	31/03/2012
Central	Holland Park	Lift	1	Replacement of travelling cables and doors and motor upgrade	14/08/2011	29/08/2011
Central	Lancaster Gate	Lift	1	Replacement of travelling cables and doors	31/07/2011	19/09/2011
Central	Holborn	Esc	1	Step chain and wheel replacement	10/09/2011	09/10/2011
Circle & Hamm	Kings Cross	Esc	4	Refurbishment	05/07/2011	27/10/2011
District	Earls Court	Lift	3	Lift Replacement	03/04/2011	31/03/2012
District	Earls Court	Lift	4	Hydraulic Upgrade	03/04/2011	31/03/2012
District	Embankment	Esc	5	Chain replacement	30/07/2011	25/08/2011
Jubilee	West Ham	Esc	3	Refurbishment Mod 3	31/05/2011	04/10/2011
Jubilee	Southwark	Esc	4	Refurbishment Mod 3	23/08/2011	19/12/2011
Northern	Hampstead	Lift	3	Upgrade works	03/08/2011	16/09/2011
Northern	Tufnell Park	Lift	1	Planned repair	31/08/2011	16/09/2011
Piccadilly	Green Park	Esc	1	New step chain	27/06/2011	03/10/2011
Piccadilly	Leicester Square	Esc	2	Refurbishment	31/05/2011	26/09/2011
Piccadilly	Holloway Road	Lift	3	Sheath and rope replacement	25/08/2011	28/09/2011
Victoria	Victoria	Esc	1	Refurbishment	21/07/2011	25/10/2011

London Underground Performance Report - Period 6 2011/12

Rolling Stock Mean Distance Between Failures



Actual Train Kilometres between Failures



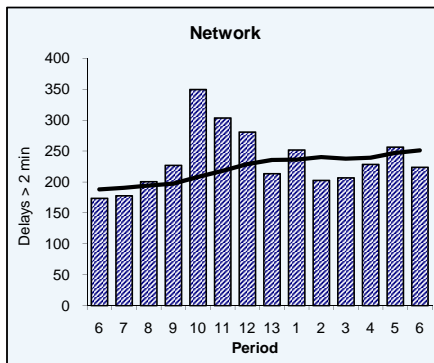
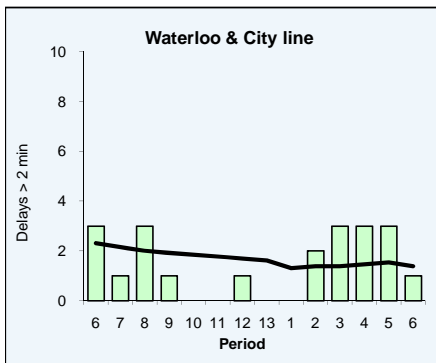
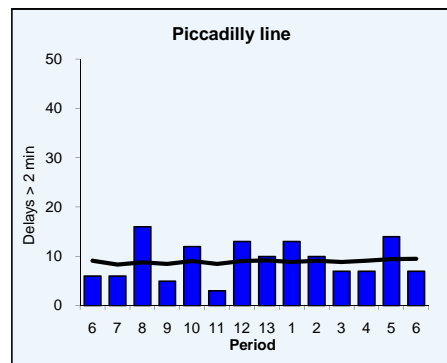
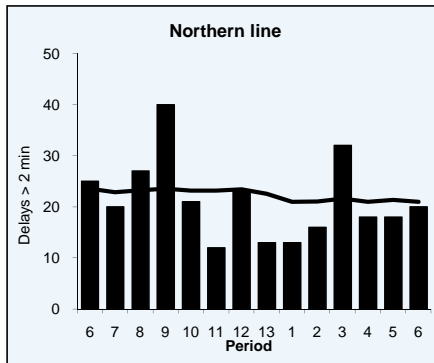
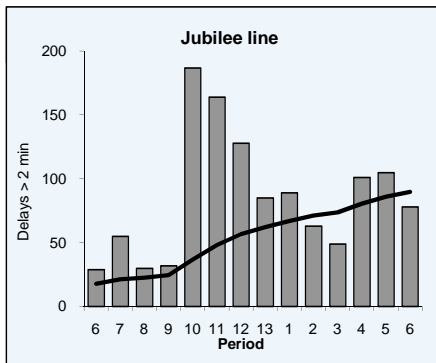
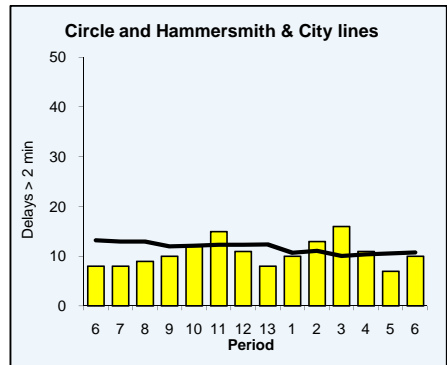
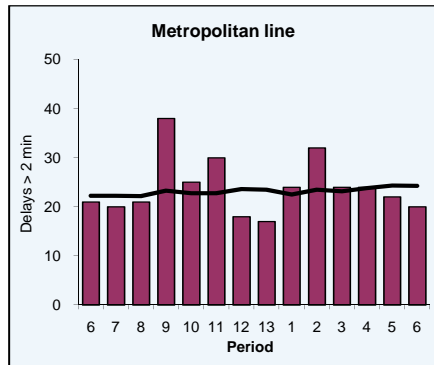
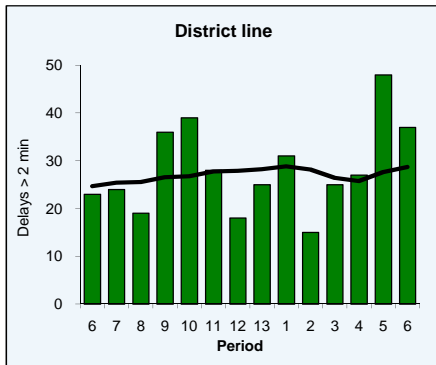
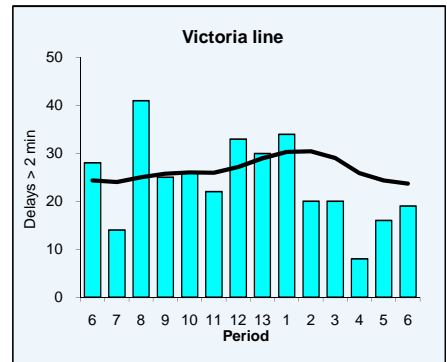
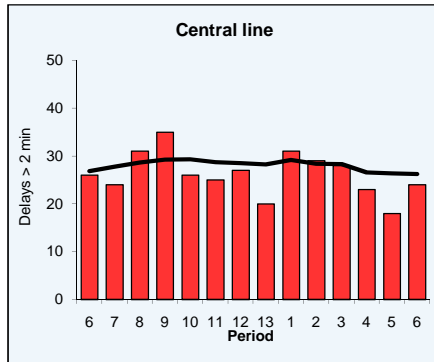
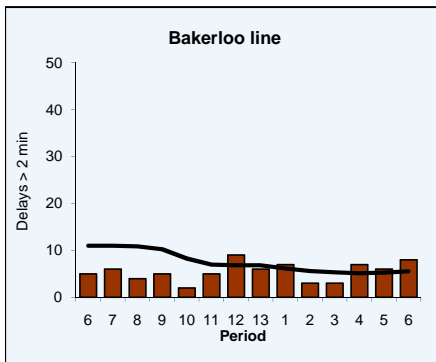
Moving Annual Average

The number of train kilometres operated in customer service divided by the number of asset-related service disruptions of 2 minutes or more, including items that are attributed but still in abeyance to be agreed. Subsequent agreement of attribution could therefore give rise to retrospective changes.

Where new stock is being or has been introduced, as on the Victoria and Metropolitan lines, the MDBF trends shown reflect the combined performance of both stock types as this is what is reflected in the train service performance trends shown earlier in this report.

London Underground Performance Report - Period 6 2011/12

Signal and Point Related Delays >2 minutes



	Period 5	Period 6	MAA
Bakerloo	6	8	5
Central	18	24	26
Victoria	16	19	24
District	48	37	29
Metropolitan	22	20	24
Circle & Hamm	7	10	11
Jubilee	105	78	90
Northern	18	20	21
Piccadilly	14	7	9
Waterloo & City	3	1	1
NETWORK	257	224	241

Lower numbers represent better performance

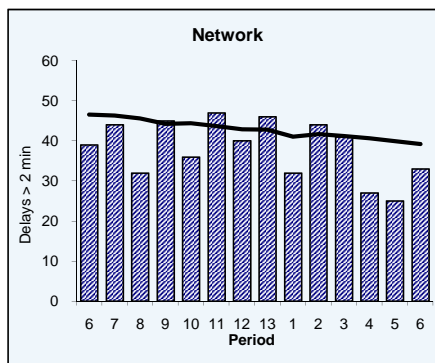
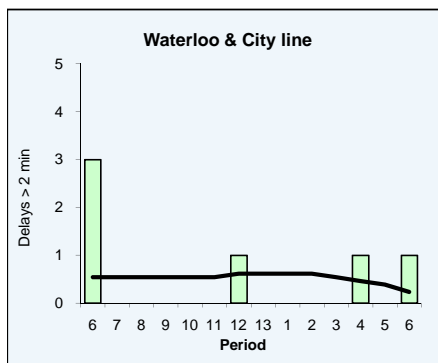
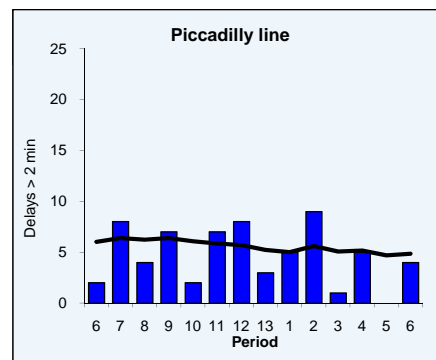
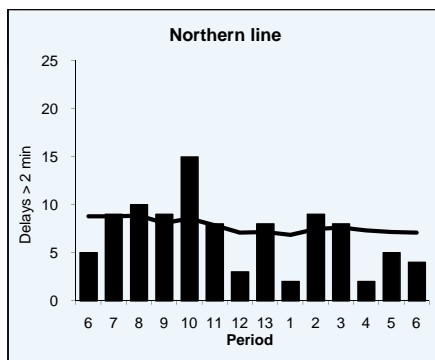
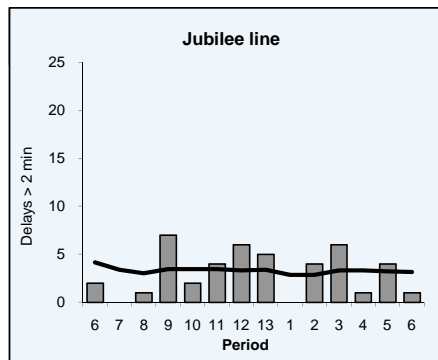
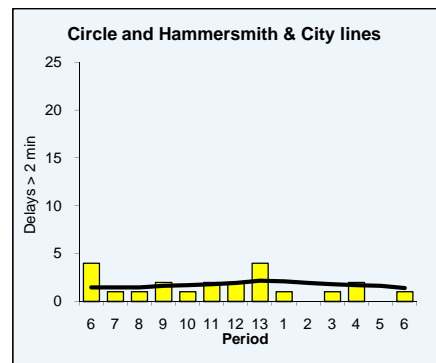
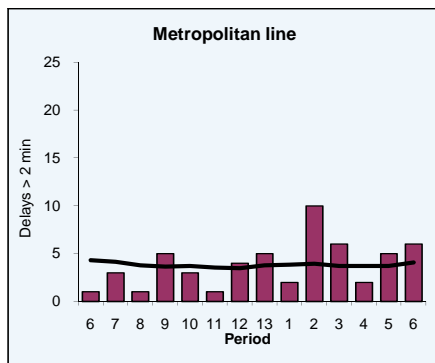
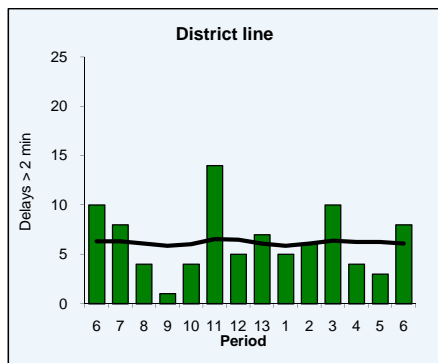
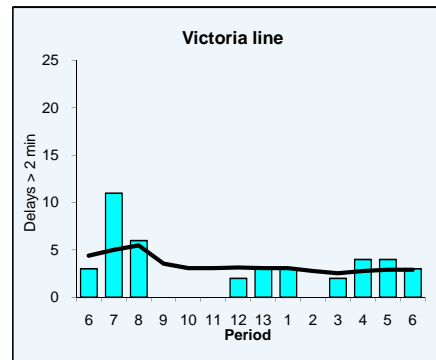
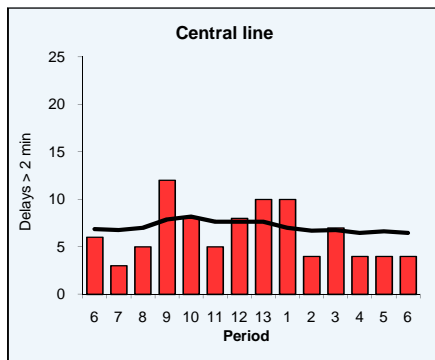
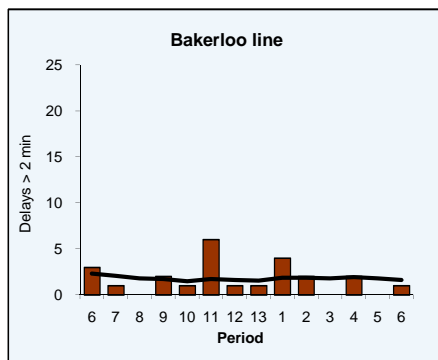
Actual Moving Annual Average

The number of train control asset-related service disruptions of 2 minutes or more including items that are attributed but still in abeyance to be agreed. Subsequent agreement of attribution could therefore give rise to retrospective changes.

The Jubilee line was severely disrupted on 15 September when an early morning points problem at Stanmore was followed by loss of traction current in the Baker Street area where tunnel telephone wires had come down, causing a lengthy service suspension through the central area and reducing the day's percentage of schedule to less than 50%. A points failure at Willesden Green on 16 September and a signal failure at Wembley Park on 24 August also affected the line's performance during the period. On 6 September a track circuit failure in the Finchley Road area caused suspension of the Metropolitan line service south of Wembley Park for several hours, with consequent severe disruption to the C&H. A points failure at Praed Street Junction on 10 September also severely disrupted the C&H, with lesser impacts on the Metropolitan and District lines.

London Underground Performance Report - Period 6 2011/12

Track Related Delays >2 minutes



	Period 5	Period 6	MAA
Bakerloo	0	1	2
Central	4	4	6
Victoria	4	3	3
District	3	8	6
Metropolitan	5	6	4
Circle & Hamm	0	1	1
Jubilee	4	1	3
Northern	5	4	7
Piccadilly	0	4	5
Waterloo & City	0	1	0
NETWORK	25	33	38

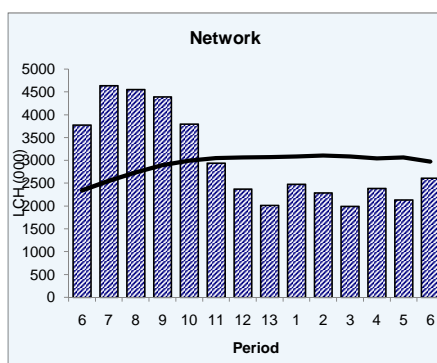
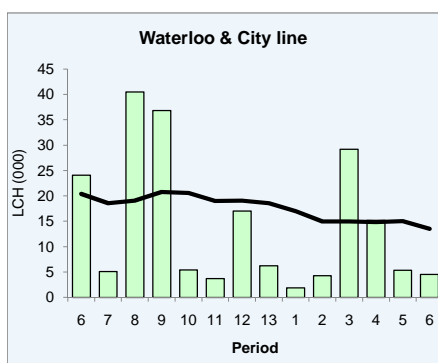
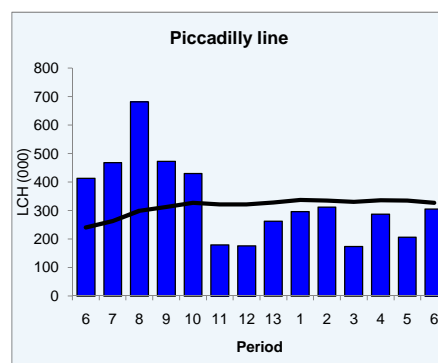
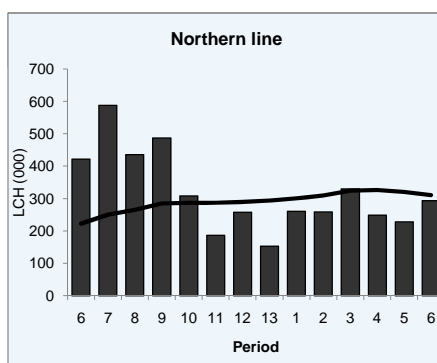
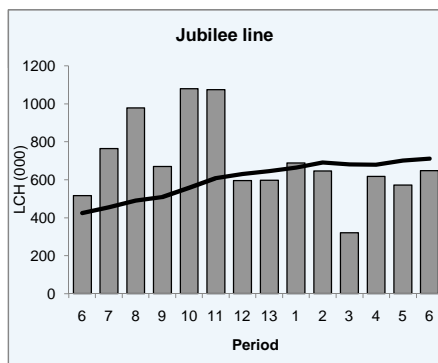
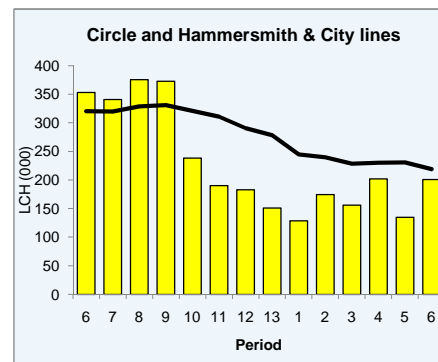
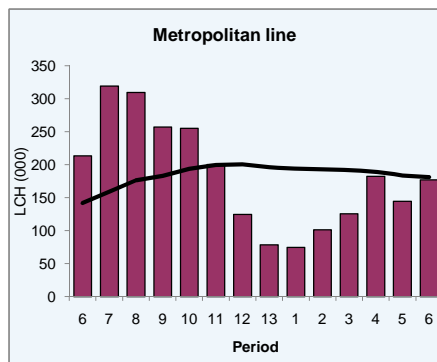
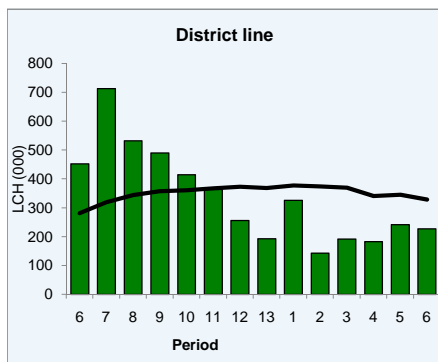
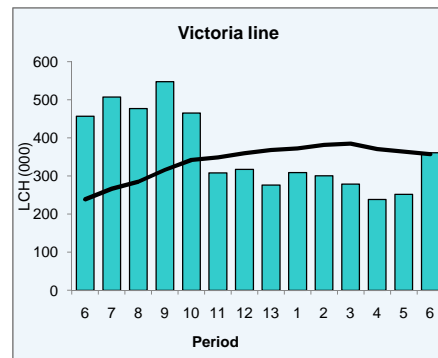
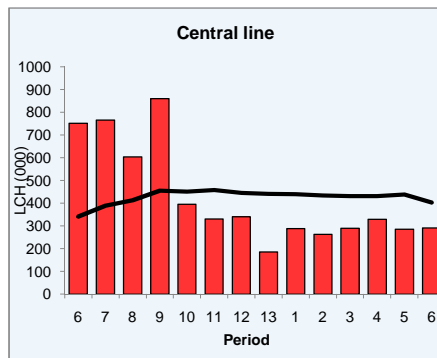
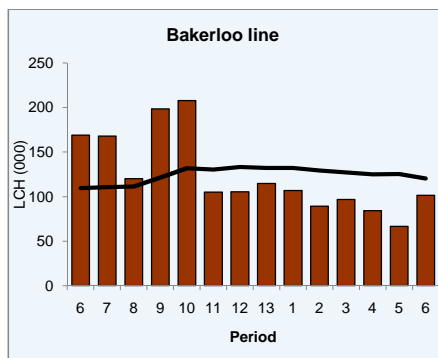
Lower numbers represent better performance



The number of track asset-related service disruptions of 2 minutes or more including items that are attributed but still in abeyance to be agreed. Subsequent agreement of attribution could therefore give rise to retrospective changes.

Despite a small increase on some lines this period, across all lines the moving annual average shows a continuing decrease in the number of track related delays .

London Underground Performance Report - Period 6 2011/12 Total Lost Customer Hours (000) - All Causes



	Period 5 (000)	Period 6 (000)	MAA (000)
Bakerloo	66	101	120
Central	286	291	402
Victoria	252	361	357
District	241	227	329
Metropolitan	144	177	181
Circle & Hamm	135	201	219
Jubilee	571	646	711
Northern	228	294	311
Piccadilly	206	306	327
Waterloo & City	5	5	13
NETWORK	2134	2609	2971

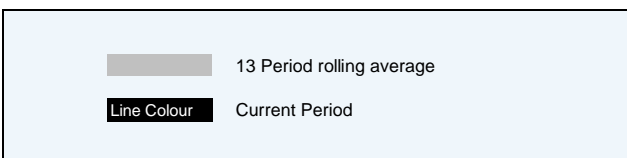
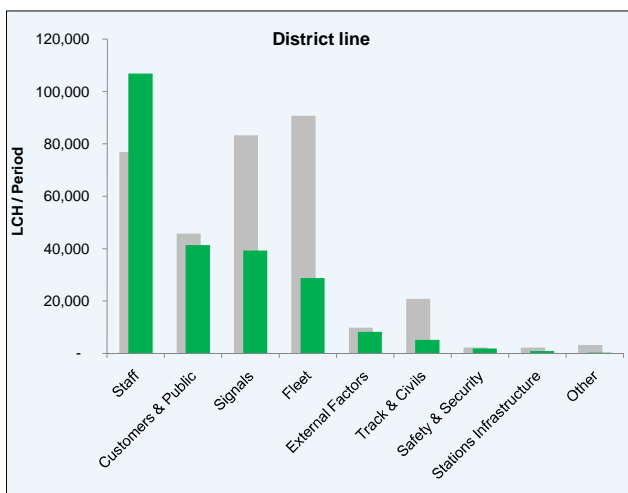
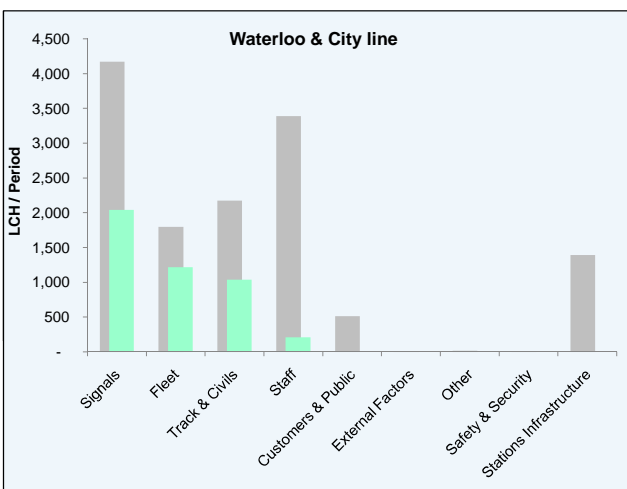
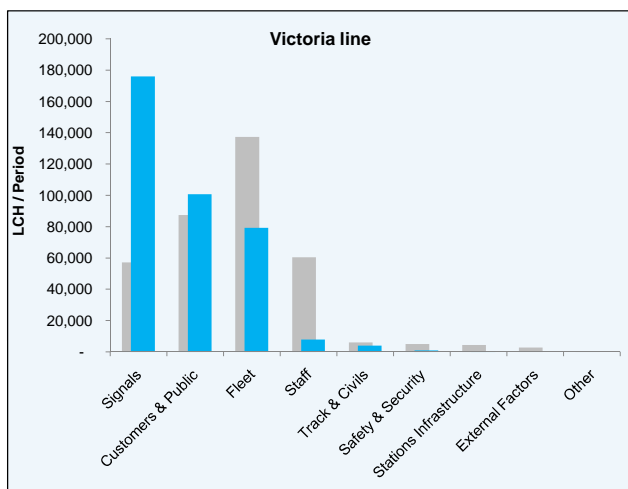
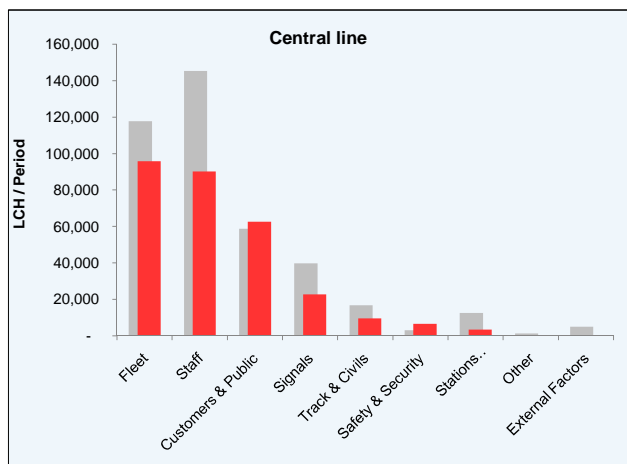
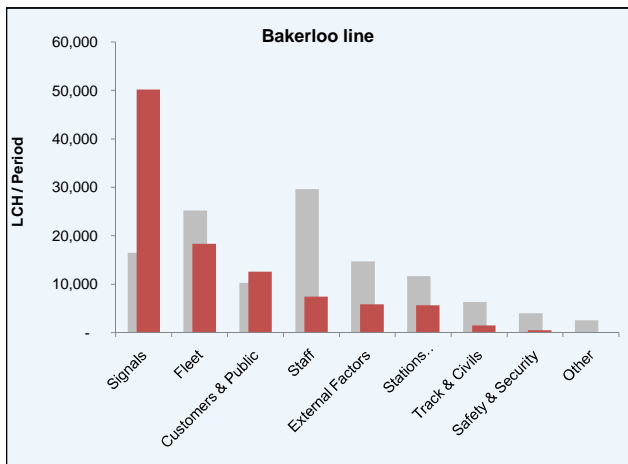
Lower numbers represent better performance



Total lost customer hours resulting from all service disruption incidents of 2 minutes or more, due to all causes including those outside LU's direct control but **EXCLUDING** lost customer hours due to planned works. Analysis by cause is provided overleaf.

The Jubilee line was severely disrupted on 15 September when an early morning points problem at Stanmore was followed by loss of traction current in the Baker Street area where tunnel telephone wires had come down, causing a lengthy service suspension through the central area and reducing the day's percentage of schedule to less than 50%. Other incidents that significantly affected the line's performance included a points failure at Willesden Green on 16 September and a signal failure at Wembley Park on 24 August. On 6 September a track circuit failure in the Finchley Road area caused suspension of the Metropolitan line service south of Wembley Park for several hours, with consequent severe disruption to the C&H. A points failure at Praed Street Junction on 10 September also severely disrupted the C&H, with lesser impacts on the Metropolitan and District lines.

London Underground Performance Report - Period 6 2011/12
Lost Customer Hours (Ranked by Cause) in the Period

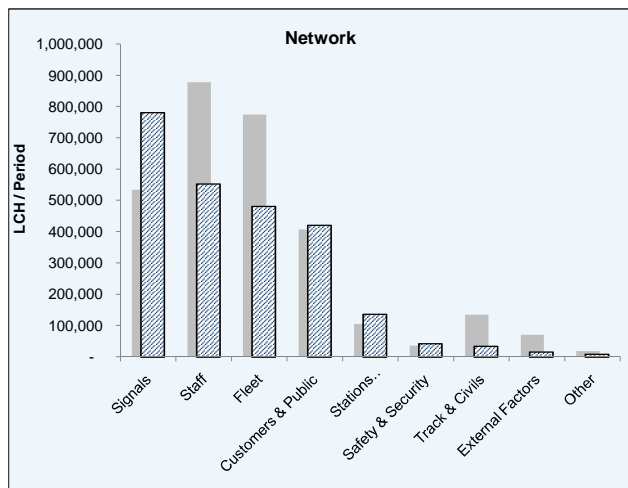
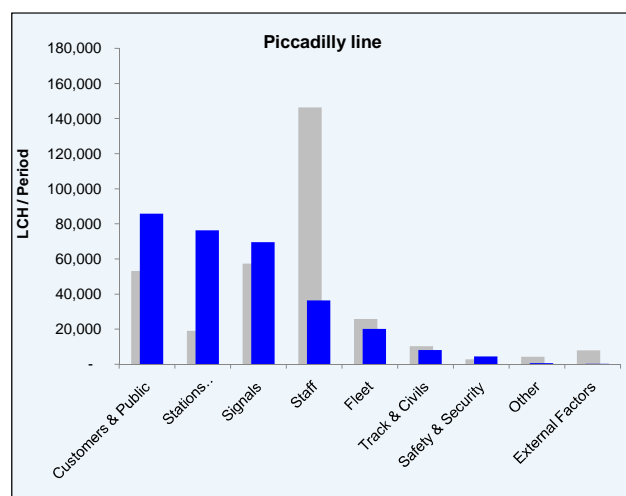
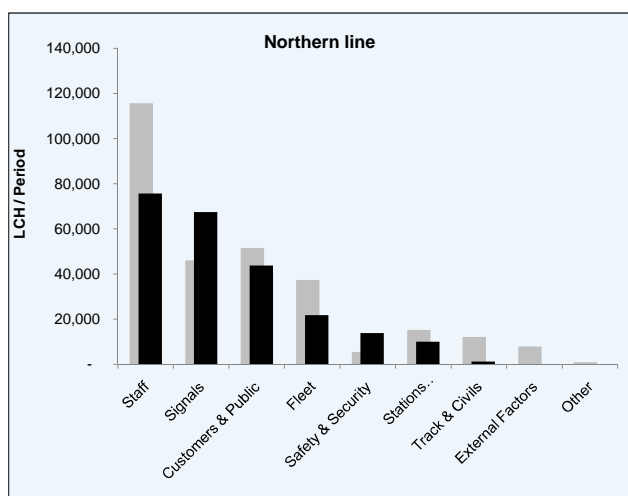
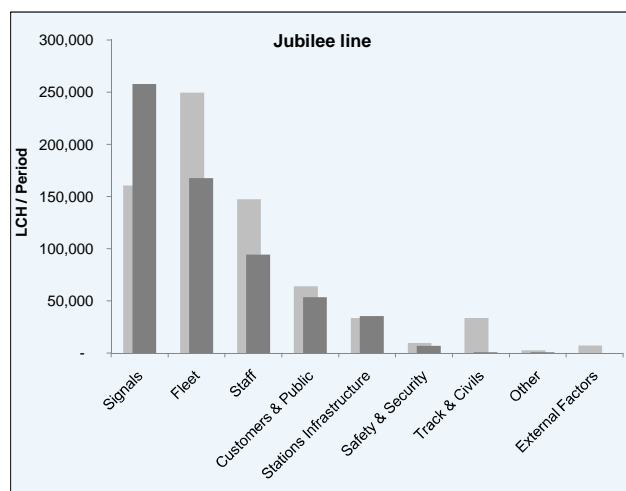
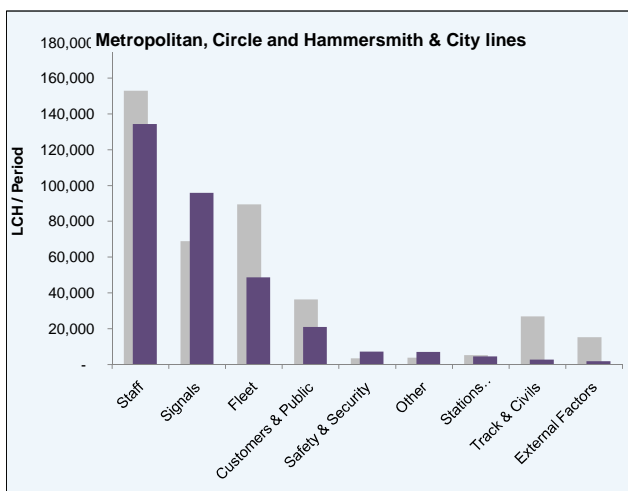


As well as attracting a Lost Customer Hour (LCH) value, all incidents that cause service disruptions are ascribed a cause code. The graphs on this page summarise the LCH values by the principal cause code groupings and compare current period performance with average performance over the last year (13 periods) . The results are ranked for each line and the network according to the current period values.

Explanation of the cause code groupings is provided in the glossary on page 23.

The Bakerloo line was affected by track circuit failures at the northern end of the line on 26 August and 7 September. The Central line was most severely affected by an incident on 23 August when a passenger was taken ill on a train at Stratford. Problems with a track circuit following works over the August Bank Holiday weekend resulted in the biggest loss on the Victoria line. The biggest single delay on the District line was due to a person under a train at Mile End on 15 September.

London Underground Performance Report - Period 6 2011/12
Lost Customer Hours (Ranked by Cause) in the Period



13 Period rolling average
 Line Colour Current Period

As well as attracting a Lost Customer Hour (LCH) value, all incidents that cause service disruptions are ascribed a cause code. The graphs on this page summarise the LCH values by the principal cause code groupings and compare current period performance with average performance over the last year (13 periods). The results are ranked for each line and the network according to the current period values.

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The Jubilee line was severely disrupted on 15 September when an early morning points problem at Stanmore was followed by loss of traction current in the Baker Street area where tunnel telephone wires had come down. Other incidents that significantly affected the Jubilee line's performance included a points failure at Willesden Green on 16 September and a signal failure at Wembley Park on 24 August. On 6 September a track circuit failure in the Finchley Road area caused suspension of the Metropolitan line with consequent severe disruption to the C&H. Essential maintenance works on an escalator at Earl's Court - completed in a much shorter time than expected - were the biggest cause of LCH on the Piccadilly line. Signals at Golders Green failing to clear at Golders Green on 9 September were the largest cause of LCH on the Northern line.

London Underground Performance Report - Period 6

'Top 5' highest Lost Customer Hour (LCH) incidents per line

Line	Location	Date	LCH	Cause
Bakerloo	Queens Park	07 Sep	26,510	Signals - Lineside, Signal or Control System
Bakerloo	Queens Park	26 Aug	21,812	Signals - Lineside, Signal or Control System
Bakerloo	Embankment	01 Sep	5,106	Customers & Public
Bakerloo	Marylebone	09 Sep	3,358	Fleet - Defective In Service
Bakerloo	Maida Vale	03 Sep	2,339	External Factors

Central	Stratford	23 Aug	40,909	Customers & Public
Central	Chancery Lane	06 Sep	12,266	Signals - Lineside, Signal or Control System
Central	North Acton	15 Sep	9,076	Track & Civils - Track, Track Fire
Central	Stratford	23 Aug	6,872	Fleet - Defective In Service
Central	Bank And Monument	26 Aug	6,584	Fleet - Defective In Service

Victoria	Seven Sisters	30 Aug	125,500	Signals - Lineside, Signal or Control System
Victoria	Warren Street	12 Sep	20,413	Customers & Public
Victoria	Euston	31 Aug	20,015	Customers & Public
Victoria	Victoria	08 Sep	13,696	Fleet - Defective In Service
Victoria	Highbury & Islington	23 Aug	12,339	Signals - Lineside, Signal or Control System

Waterloo & City	Full Line Suspension	12 Sep	2,041	Signals - Lineside, Signal or Control System
Waterloo & City	Bank And Monument	21 Aug	988	Track & Civils - Track, Track Defect
Waterloo & City	Waterloo	16 Sep	594	Fleet - Defective In Service
Waterloo & City	Waterloo	01 Sep	378	Fleet - Defective In Service
Waterloo & City	Waterloo	09 Sep	212	Fleet - Defective In Service

District	Mile End	15 Sep	17,545	Customers & Public
District	Whitechapel	23 Aug	10,691	Signals - Lineside, Signal or Control System
District	West Kensington	02 Sep	9,512	Staff - Error
District	East Ham	15 Sep	6,843	Signals - Lineside, Tripcock Tester
District	Turnham Green	06 Sep	6,008	External

London Underground Performance Report - Period 6

'Top 5' highest Lost Customer Hour (LCH) incidents per line

Line	Location	Date	LCH	Cause
Met, Circle & H&C	Finchley Road	06 Sep	35,514	Signals - Lineside, Signal or Control System
Met, Circle & H&C	Aldgate	02 Sep	18,700	Signals - Lineside, Points
Met, Circle & H&C	Edgware Road (C&H)	10 Sep	17,695	Signals - Lineside, Points
Met, Circle & H&C	Paddington	05 Sep	9,267	Signals - Lineside, Points
Met, Circle & H&C	Aldgate East	30 Aug	8,404	Signals - Lineside, Signal or Control System

Jubilee	Stratford	02 Sep	64,127	Signals - Lineside, Points
Jubilee	West Hampstead	16 Sep	61,336	Signals - Lineside, Points
Jubilee	Bond Street	15 Sep	49,158	Signals - Lineside, Tunnel Telephone
Jubilee	Wembley Park	15 Sep	39,609	Signals - Lineside, Points
Jubilee	Wembley Park	30 Aug	17,136	Fleet - Defective In Service

Northern	Golders Green	09 Sep	23,732	Signals - Lineside, Signal or Control System
Northern	Elephant & Castle	08 Sep	19,885	Signals - Lineside, Signal or Control System
Northern	Angel	09 Sep	10,542	Signals - Lineside, Signal or Control System
Northern	Tooting Broadway	01 Sep	6,230	Customers & Public
Northern	Borough	30 Aug	3,713	Signals - Lineside, Signal or Control System

Piccadilly	Earls Court	14 Sep	67,728	Stations Infrastructure - L&E
Piccadilly	South Ealing	24 Aug	48,252	Signals - Lineside, Points
Piccadilly	Acton Town	22 Aug	40,049	Customers & Public
Piccadilly	Russell Square	13 Sep	10,899	Customers & Public
Piccadilly	Sudbury Town	08 Sep	5,495	Customers & Public

London Underground Performance Report

Glossary of Measures and Terms

Customer Satisfaction

This is measured by means of a continuous face-to-face survey designed to measure the level of customer satisfaction with the service provided by London Underground. An external market research company is contracted to undertake approximately 2,500 interviews every quarter. Customers are asked to rate their level of satisfaction with the service they experienced at their station of origin and last line travelled on. The ratings are scored on a scale of 0 to 10 for 19 specific measures covering 8 train and 11 station attributes, and also for one single overall evaluation question. Results are presented as the average mark out of ten, multiplied by ten and rounded to the nearest integer value.

Passenger Journeys

The number of journeys undertaken by fare-paying passengers (including holders of Freedom Passes) on the Underground network.

Percentage of Scheduled Kilometres Operated

This is a measure of LU's performance in operating the train service that is scheduled to operate in passenger service. It is measured over the whole of the traffic day, seven days per week, and takes account of trains that are turned short of their intended destination as well as trains that are cancelled. *Actual* kilometres operated are expressed as a percentage of *scheduled* kilometres which are the distances *timetabled* to be run, as adjusted for any planned short-term changes to the timetable such as weekend engineering works.

Excess Journey Time

The Journey Time Metric captures service performance, related to demand, and expresses the information as average passenger journey time. For the purposes of the Journey Time Metric, each journey is broken down into its constituent parts namely access from station entrance to platform, ticket queuing & purchase time, platform wait time, on train time, platform to platform interchange and egress from platform to station exit. Each component has a 'perfect' or 'scheduled' value which states how long a particular journey would take if everything went as planned. Each period actual journey times are measured and then compared to the schedule. The differential between the two is the measure of lateness - referred to as excess journey time. Excess journey time is therefore a measure of how efficiently LU is providing its scheduled or 'stated' service, the more reliable the service the lower the excess. The calculation includes the impact of planned closures. Each Journey Time Metric component or activity has a Value of Time (VOT) weighting associated with it. These weights vary according to how the customers perceive the activity e.g. a perceived time weight of 2 is applied to platform wait time as customers regard waiting as an unattractive aspect of their journey.

Total Journey Time

The sum of the expected or scheduled journey time and the excess as defined above.

Percentage of Schedule (Peak/Off-peak)

This is a sub-analysis of the Percentage of Schedule as defined above which splits the measure between peak times (defined as 07:00 – 10:00 and 16:00 – 19:00 Mondays to Fridays excluding public holidays) and off-peak (all other times). The purpose is to separately measure performance when demand on the system is at its highest in terms of passenger numbers and number of trains in service.

Percentage of Timetable (weekdays/weekends)

These measures show how much of LU's *timetabled* service operates on weekdays (Mon-Fri exc. Public Holidays) and weekends (Sat/Sun and Public Holidays). The purpose is to illustrate the impact that weekend engineering works have on LU's service output volume. The measure consequently gives a more representative illustration of the level of service offered to the customer.

Station Closures

The number of unplanned full station closures measured throughout the whole of each service day. For a full station closure, all station entry and exits must be closed and trains non-stopping. Examples of causes of station closures include absence or shortage of staff; failure of lifts or escalators (usually

the former); security alerts; customer action; fire alert; police request; external factors (e.g. incidents in close proximity to the station).

For management purposes each station on the network is allocated to an “owning” line and closures are reported accordingly.

Escalator Availability

The total hours escalators were working, or available to work if required, as a percentage of total scheduled service hours. Unavailable time includes that due to planned works in addition to time out of service due to faults. Machines switched off during off-peak times for reasons of energy conservation are deemed to be available (i.e. they would work if required to be switched on).

Reporting of escalator performance by line reflects line “ownership” of the station in which the escalator is installed, rather than the line to which it provides access. So for example failure of an escalator that provides access to the Northern line platforms at King’s Cross station will be recorded in the results for the Circle & Hammersmith line which is responsible for management of the station.

Lift Availability

The total hours lifts were working, or available to work if required, as a percentage of total scheduled service hours. Unavailable time includes that due to planned works in addition to time out of service due to faults. The measure includes all passenger service lifts i.e. those that provide the principal means of access to platforms for all passengers and those that are provided as secondary means of access for passengers for whom use of stairs or escalators is impractical.

Reporting by line follows the same principle as for escalators above.

Rolling Stock Mean Distance Between Failures (MDBF)

The number of train kilometres operated in customer service divided by the number of rolling stock asset-related service disruptions of 2 minutes or more, including items that are attributed but still in abeyance to be agreed. The incident attribution process means that some incidents initially classified as asset faults may be subsequently agreed as being caused by other factors, for example staff error or customer action. In such cases agreement of attribution could give rise to retrospective changes to the data.

Signal & Points Related Delays > 2 minutes

The number of signal & points (train control) asset-related service disruptions of 2 minutes or more including items that are attributed but still in abeyance to be agreed. As with MDBF above, subsequent agreement of attribution for items in abeyance could give rise to retrospective changes to the data.

Track Related Delays > 2 minutes

The number of track asset-related service disruptions of 2 minutes or more including items that are attributed but still in abeyance to be agreed. As with MDBF above, subsequent agreement of attribution for items in abeyance could give rise to retrospective changes to the data.

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 with durations of two minutes or more. Hence an incident at Oxford Circus during a Mon-Fri peak will give rise to a much higher LCH value than an incident of the same duration in Zone 6 on a Sunday morning. There can be retrospective changes to LCH values as incidents are reviewed and agreed.

Service Disruption

Disruption occurs where an incident causes the train service or the station service to be interrupted.

Cause Code Categories

As well as attracting a Lost Customer Hour (LCH) value, all incidents that cause service disruptions are ascribed a cause. LU uses more than 300 cause codes to analyse causes of service disruption,

but for the purpose of the graphs on pages 17 and 18 of this report these have been summarised into principal groupings defined as follows:

- **Customers & Public:** Setting off alarms (malicious or spurious), robbery/theft, accidental track obstruction, suicide attempt, trespass on railway, vandalism, drunks, lost children, crowding, altercations/fights between customers, customers holding doors open, customer injury boarding/alighting trains, person ill on train.
- **External Factors:** Incidents caused by external parties or factors outside LU's control, including for example bridge strikes, fire in premises adjacent to the railway, local power supply failure, police request etc.
- **Fleet:** Trains defective in service or which are not available to enter service from the depot when required.
- **Safety & Security:** Fire and security alerts (e.g. unattended bags, fire alarms set off) station evacuations including exercises. Note that defects of Fire/Safety equipment are included under Stations Infrastructure.
- **Signals:** Failures of signal equipment, control systems for signals and points, tunnel telephones, and tripcock testers, including overruns of works to these assets.
- **Staff:** Absence, shortage, illness, accident, errors, staff taxi delays, refusal to work on health and safety grounds, industrial action.
- **Stations Infrastructure:** Failure of stations equipment (e.g. escalators, lifts, lighting, fire equipment etc), also overrun of stations project works.
- **Track & Civils:** Defects of Track, Bridges and Earth Structures and Drainage, Track fires, Track obstructions and vegetation impacts, overruns of Track/Civils work.
- **Other:** Any other causes not included above.

Reporting Periods

In common with the rest of the rail industry LU has thirteen 28-day reporting periods per year, from April to March. The lengths of Periods 1 and 13 may however vary to align with the Financial Year End of 31 March. The dates of the reporting periods for the financial years 2010/11 and 2011/12 are provided overleaf.

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Reporting Periods

Period	Year 2010/11	Year 2011/12
1	1 April - 1 May 2010	1 April - 30 April 2011
2	2 May - 29 May 2010	1 May - 28 May 2011
3	30 May - 26 June 2010	29 May - 25 June 2011
4	27 June - 24 July 2010	26 June - 23 July 2011
5	25 July - 21 August 2010	24 July - 20 August 2011
6	22 August - 18 September 2010	21 August - 17 September 2011
7	19 September - 16 October 2010	18 September - 15 October 2011
8	17 October - 13 November 2010	16 October - 12 November 2011
9	14 November - 11 December 2010	13 November - 10 December 2011
10	12 December 2010 - 8 January 2011	11 December 2011 - 7 January 2012
11	9 January - 5 February 2011	8 January - 4 February 2012
12	6 February - 5 March 2011	5 February - 3 March 2012
13	6 March - 31 March 2011	4 March - 31 March 2012