

Transport for London

Rail and Underground Panel

Subject: Managing Director's Report – Rail and Underground

Date: 12 July 2013

1 Purpose

- 1.1 This report provides commentary on the performance of Rail and Underground and presents updates on the status and progress of major investment projects and items of special interest in periods 1 and 2 2013/14 (1 April to 25 May 2013).
- 1.2 The Panel is asked to note the report.

2 London Underground (LU) Performance

Passenger Numbers

- 2.1 LU demand exceeded budget in periods 1 and 2 with 188.9 million passenger journeys. This was a rise of 2.8 per cent compared with the corresponding period last year.

Service Performance

- 2.2 Excess journey time averaged 4.90 minutes over the first two periods of the year (better than target by 0.47 minutes). The percentage of schedule operated was 97.9 per cent, surpassing the target by 0.7 per cent and last year by 1.0 per cent.
- 2.3 The continuing trend of long-term improvement means LU is on track to meet the Mayor's commitment of reducing delays by a further 30 per cent by 2015. Additionally, over the last five years the reliability of LU's assets (trains, track and signalling) has improved faster than any other European or North American metro.
- 2.4 The combined LU and London Rail (LR) moving annual total rate for Accidental Major Injuries is 0.32 Major Injuries per Million Hours on LU/LR Infrastructure. This is worse than the target of 0.27 and is due to an increase in accidental customer injuries. There were two Accidental Major Injuries to employees in periods 1 and 2 and 34 Accidental Major Injuries to customers – over 50 per cent were slips, trips and falls on either stairs or escalators.
- 2.5 To strengthen the investigation of major accidents to customers, the successful 'go-look-see' approach already used for staff accidents is being extended. In the Capital Programmes area, to reduce accidents amongst staff and contractors best practice in accident and incident investigation will be shared to identify root causes and thus effective remedial measures.

LU150 Programme

- 2.7 As part of the continuing LU150 Programme, an Underground History was screened on the BBC, which explored the development of LU from its

conception to its construction, from the first 'cut and cover' excavations on the Metropolitan line to today's large urban network.

- 2.8 To celebrate the 150th anniversary five LEGO Tube maps, ranging from the early pre-Beck map where the lines follow their geographical position to a future map showing 2020, including Crossrail will be displayed at stations.
- 2.9 A series of new posters, which will be displayed at four sites on the LU network, have been created by 15 leading international artists. This project (15 for 150) commissioned by Art on the Underground is part of this year's celebrations of LU's 150th anniversary.

3 London Rail Performance

London Overground (LO)

- 3.1 LO passenger journeys continue to grow and are 8.1 per cent better than budget at 20.6 million for the year to date. LO's operational performance was 96.4 per cent for the year versus a target of 95.8 per cent for the public performance reliability measure.
- 3.2 A Passenger Focus report published on 19 June revealed that passengers have again voted LO as one of the best rail services in the south-east region and achieved a customer satisfaction of 92 per cent. This compares with an average of 81 per cent for services across the rest of the region.
- 3.3 Latest figures for punctuality from Network Rail's Public Performance Measure show LO's annual moving annual average score is 96.6 making it the second most punctual service in the UK (after c2c).
- 3.4 The aggregate London Rail overall major injury rate is better than target at 0.26.
- 3.5 An £88m order placed with Bombardier Trains in Derby will enable existing Class 378 electric trains to be increased from four to five carriages on all Overground routes by December 2014 (except the Gospel Oak to Barking route which is currently diesel powered).

Docklands Light Railway (DLR)

- 3.6 There were 15.5 million passenger journeys in periods 1 and 2, 0.3 million ahead of target and 0.9 per cent higher than last year. The percentage of scheduled kilometres operated was 1.4 per cent ahead of target at 99.5 per cent.
- 3.7 There was one Accidental Major Injury to an employee and none to customers in periods 1 and 2.
- 3.8 On 17 April 2013 the names of the four companies shortlisted to bid for the new franchise, which is due to commence on 14 September 2014, were announced. The companies are:
 - (a) Stagecoach Rail Projects Ltd;
 - (b) Keolis (UK) Ltd / Amey Rail Ltd;
 - (c) Go Ahead PLC / Colas Rail Ltd; and
 - (d) Serco Ltd.

This shortlist is as a result of the pre qualification process undertaken following the publication of a notice in the Official Journal of the European Union. The Invitation to Tender will be issued to these companies within the next few weeks.

London Tramlink

- 3.10 Tram passenger journeys, at 4.8 million for the year to date, are 0.1 million above target and 5.9 per cent higher than the same period last year with the percentage of scheduled services operated 0.3 per cent better than target.
- 3.11 There were no Accidental Major Injuries to employees or customers in periods 1 or 2.

Emirates Air Line (EAL)

- 3.12 EAL carried 0.3 million passengers in periods 1 and 2, which is 0.1 per cent better than target with an operational availability of 96.7 per cent exceeding target by 0.2 per cent.
- 3.13 There were no Accidental Major Injuries to employees or customers in periods 1 or 2.
- 3.14 A fare has been introduced of £1 per pupil when in a school group. The objective of the scheme is to increase passenger volume during term time and increase awareness of the Emirates Air Line with schools and families. It also provides the opportunity for teachers to have lessons in a cabin or include a visit to the cable car as part of a school trip to the area.

4 Capital programmes

Sub Surface Railway (SSR)

- 4.1 There are now nine new air-conditioned S Stock trains in peak service operating on the Hammersmith & City line. The next stage of the roll out will be additional new trains operating on the full Circle line service, which remains on schedule for September 2013. This will be a significant step towards the successful achievement of the Department for Transport (DfT) milestone to complete the roll-out of the new trains on the Circle and Hammersmith & City lines by September 2014.
- 4.2 Other progress includes the immunisation of old signalling from electro-magnetic interference from the new trains which is now being progressed to an agreed schedule. This activity remains on schedule to achieve the DfT milestone to complete roll out of new trains on the District line by 2016.

Northern Line Upgrade

- 4.3 The new Transmission Based Train Control signalling system was introduced into full passenger service on 24 June from West Finchley to Highgate. Trains already successfully use the new signalling at the north end of the line between High Barnet and West Finchley.
- 4.4 System testing on central sections of the Northern line including Camden Town and Kennington continues in July.
- 4.5 The Northern line mid life fleet refurbishment has seen the first train complete on programme, with trains two and three now in fit out. The rate of conversion will then accelerate.

Major Stations Improvements

- 4.6 The Tottenham Court Road Station project is on programme and budget. Work to the basement of the new ticket hall is progressing well and the base slab steelwork at the Goslett Yard site was completed ahead of plan. The main contractors, Vinci and Bam Nuttall, are finalising plans to achieve a sustained uplift in site production to allow the proposed 2015 closure of Central line platforms to begin on time.
- 4.7 The Bond Street Stations project has been awarded a gold award in the Considerate Contractor Scheme for the second year running. Activities in the project have been re-sequenced to run concurrently to save further time on the schedule. The start of tunnelling has been re-sequenced to start in the summer to allow work to escalators six, seven and eight to commence early and mitigate a significant project risk. The residual delay to the start of tunnelling has now been fully mitigated.
- 4.8 The Victoria Station project remains on schedule and within authority. The installation of load bearing columns to the south ticket hall is complete which will allow further construction work to continue. Allington Street has re-opened for two way construction, in line with the agreement with Land Securities. The jet grouting columns have been installed which makes the ground more suitable for tunnelling safely. The excavation of the north ticket hall paid area links is progressing to programme, and excavation for the northbound cross passage has commenced.
- 4.9 A £36m contract for major improvements at Vauxhall station has been awarded to Bechtel Ltd. Construction will begin in early 2014 and be completed by late 2015. The project will make the station step-free, give passengers more space and make journeys through the station quicker and more pleasant. The work forms part of wider investment designed to support the growth and regeneration of the surrounding area.

Northern line extension

- 4.10 A Transport and Works Act Order application was submitted to the Secretary of State for Transport on 30 April 2013. This marks the start of a seven week statutory process during which individuals or organisations can make representations to Government with their views on the proposal. Results from three public consultations on plans to extend the Northern line have confirmed strong support for this potential new Tube link.

Tube improvement plan survey

- 4.11 The results of the Tube Improvement Plan survey demonstrate increased support of the investment programme than has previously been observed; and increased belief that LU is both making progress and working hard to do so. A recently introduced question showed that a quarter of Londoners have seen or heard something positive about LU this month.

5 Rail Planning

Spending review announcements

- 5.1 TfL welcomed the Government's decision to allow TfL to take over some West Anglia train services running between Liverpool Street Station and Hertfordshire.
- 5.2 The Government's decision to progress the electrification of LO's Gospel Oak to Barking line was also welcomed. This will allow the introduction of longer,

electric trains to reducing congestion and improve local air quality. Details are still to be worked out but it is hoped that the work will be completed within the next five years.

- 5.3 The DfT has advised that there are no plans to transfer the South Eastern rail franchise to TfL at this time.

Operation of Crossrail

- 5.4 On 25 June, the names of the companies shortlisted to bid to run the Crossrail services were announced. The bidders are:

- (a) Arriva Crossrail Limited;
- (b) Keolis/Go Ahead;
- (c) MTR Corporation (Crossrail) Limited; and
- (d) National Express Group PLC

- 5.5 The Invitation to Tender is due to be issued in September and an operator will be appointed at the end of 2014. The successful train operator will start running the first services from May 2015 between Liverpool Street and Shenfield, taking over the stopping services currently operated by Greater Anglia. The route through Canary Wharf, the City and the West End will open in late 2018, with the full route running in 2019.

Industry Liaison

- 5.6 Senior level meetings were held with Network Rail (NR) and ATOC in April and June 2013. Main agenda items at the meetings were the NR strategic business plan, joint work on travel demand management at London Bridge, Crossrail timetables and the forthcoming joint consultation on Crossrail 2. As part of its long term planning process, Network Rail published demand forecasts for London and South East routes to 2043.
- 5.7 Network Rail has published draft access charges for Control Period Five starting in April 2014. TfL and LOROL met with Network Rail to understand changes to LOROL's Fixed Track Access Charges.

6 Accessibility

LU wide accessible gates

- 6.1 In order to help wheelchair and guide dog users, parents with buggies and passengers with luggage a further batch of wide accessible gates have been installed making a total of 348 gates at LU stations.
- 6.2 Now 180 LU stations – two thirds of the entire Tube network – have these gates installed, these gates are passenger-operated, giving customers more independence and quicker journeys.
- 6.3 In turn staff can dedicate more time to help passengers in a variety of other ways; at ticket machines, by directing them to the correct platforms, or by guiding visually impaired people.

LU Boarding Ramps

- 6.4 Boarding ramps were first deployed for use during the Games in 2012. They were retained at 16 LU stations and will now be introduced at an additional 40 platforms at 19 stations by the end of summer 2013.

- 6.5 This will mean that, of the platforms currently step-free from the street to the platform, 76 per cent (149 out of 195) will now have level access onto the train.

LO Crystal Palace Lifts






- 6.6 Three new lifts with connecting glass walkways were opened at LO's Crystal Palace Station on 26 March 2013 to complete the refurbishment at the historic station.
- 6.7 The 11,000 passengers using the station each day will benefit not only from the lifts but also improved CCTV, customer information screens, a PA system and new signage which were delivered in September 2012 in the first stage of the refurbishment.
- 6.8 Four other LO stations, Hampstead Heath, Kensal Rise, South Tottenham and Blackhorse Road are also being made step-free following us securing funding from the DfT's 'Access for All' scheme.

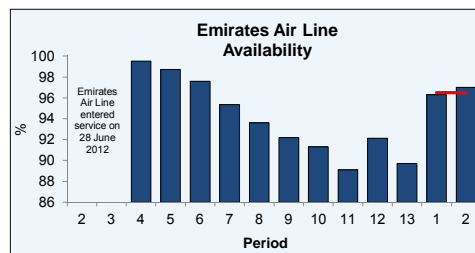
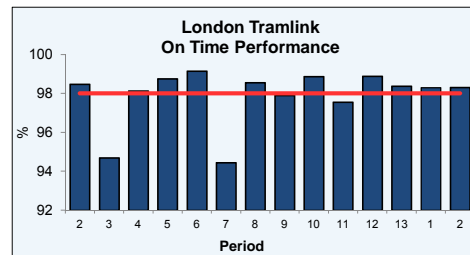
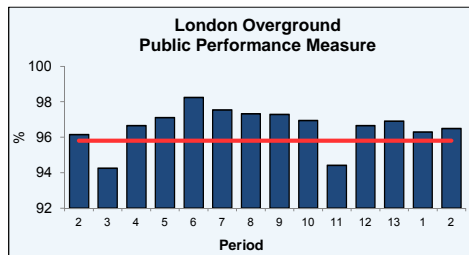
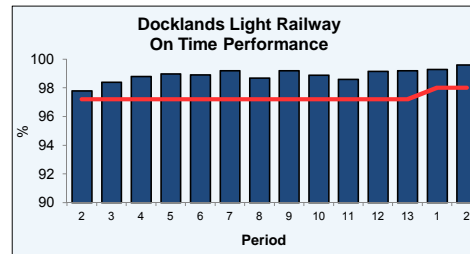
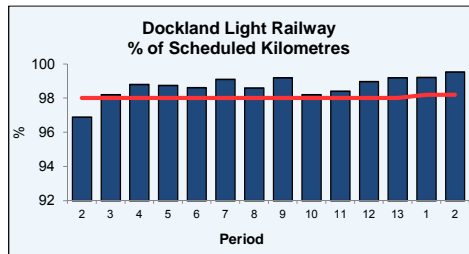
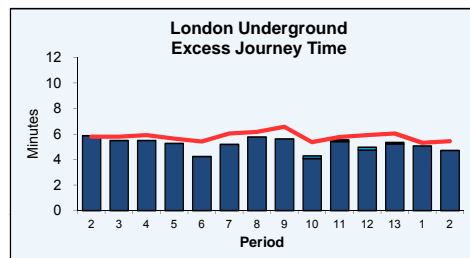
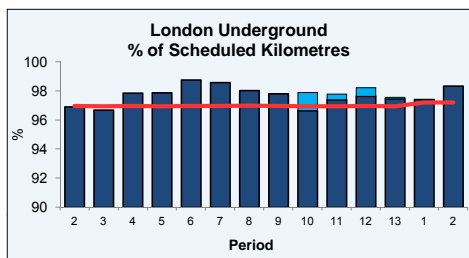
7 Recommendation



- 7.1 The Panel is asked to NOTE this report.

8 Contact

- 8.1 Contact Officer: Mike Brown, Managing Director, Rail and Underground
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London Rail and Underground Service Reliability - Period 2 2013/14					
			YTD		YTD Variance
 London Underground	% of Scheduled Kilometres	%	98.0	●	0.8
	Excess Journey Time	Minutes	4.84	●	0.55
 Docklands Light Railway	% of Schedule Operated	%	99.4	●	1.2
	On Time Performance	%	99.5	●	1.4
 London Overground	Public Performance Measure	%	96.4	●	0.6
 London Tramlink	On Time Performance	%	98.3	●	0.3
 Emirates Air Line	Availability	%	96.7	●	0.2

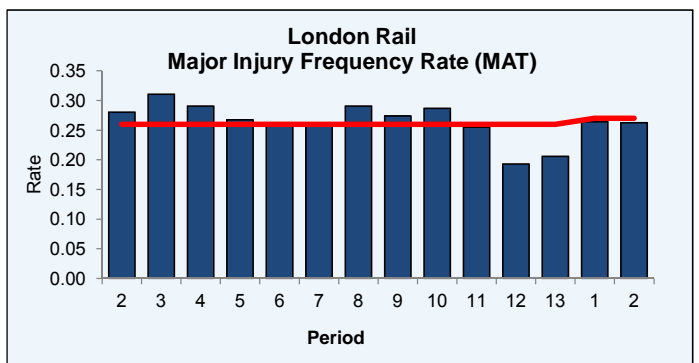
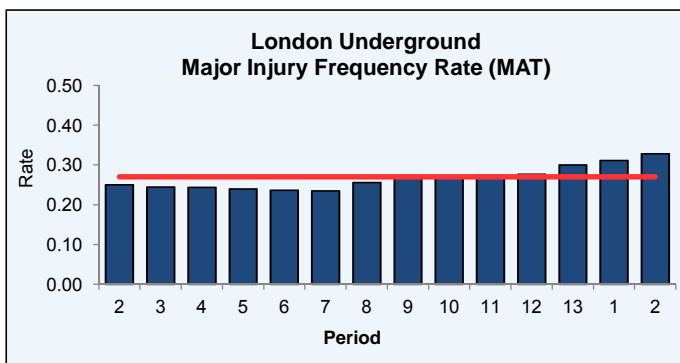


	Actual		Industrial Action		Target
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- Meeting or better than target
- ▲ Worse than target but within defined tolerance: 2% for Excess Journey Time, 1 percentage point for all others
- Worse than target and outside defined tolerance

London Rail and Underground Safety Performance - Period 2 2013/14

			<i>Actual</i>	<i>Target</i>		<i>Variance</i>
 London Underground	Major Injury Frequency Rate (MAT)	Rate	0.33	0.27	■	(0.06)
London Rail	London Rail Safety Indicator	Rate	0.26	0.27	●	0.01

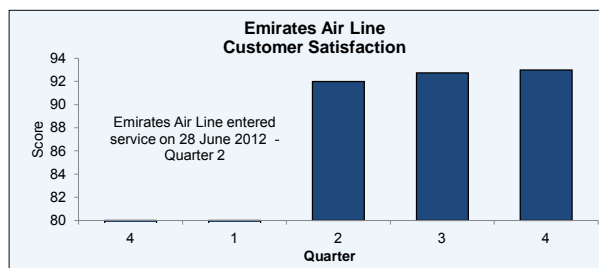
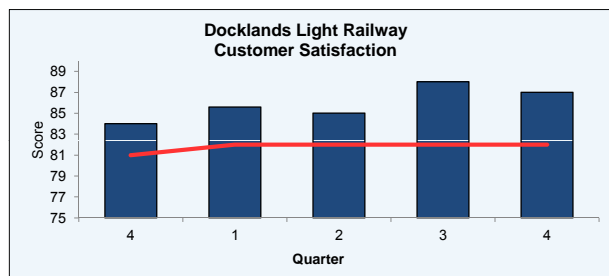


- Meeting or better than target
- ▲ Worse than target but within defined tolerance: 5% for Major Injury Frequency Rate (MAT)
- Worse than target and outside defined tolerance

The red status of the LU metric is due to a rise in the number of LU customer major injuries in the latter part of last year and also in period 1 and 2 of this year. The main causes of the injuries were slips, trips and falls on stairs and escalators. There were also a number of platform train interface incidents. A customer awareness poster campaign and communications on board trains and at stations is in place, to highlight the potential risks whilst boarding/alighting. A higher number of incidents have been reported on the Metropolitan Line, and site-specific risk assessments are being reviewed to consider if further mitigation is required to reduce likelihood/severity of incidents. To strengthen the investigation of major accidents to customers, the successful "go-look-see" approach already used for staff accidents is being extended. In the Capital Programmes Directorate to reduce accidents among staff in the supply chain, LU is proposing to run master classes to share best practice in accident and incident investigation to get to root causes and thus effective remedial measures.






London Rail and Underground
Customer Performance - Period 13 2012/13

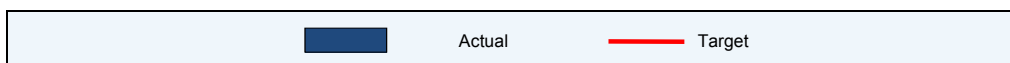
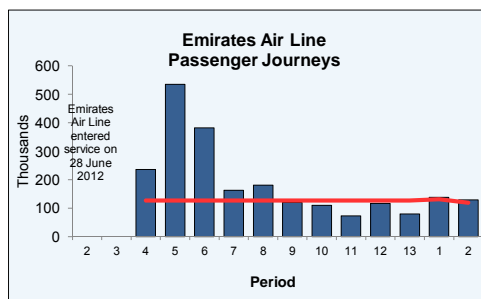
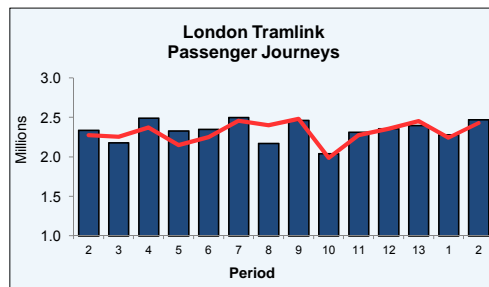
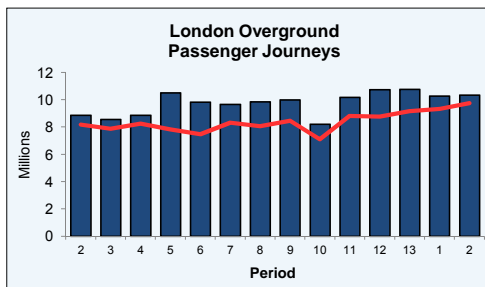
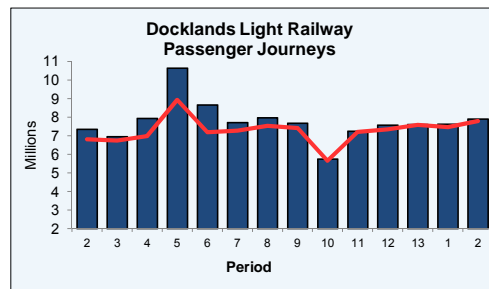
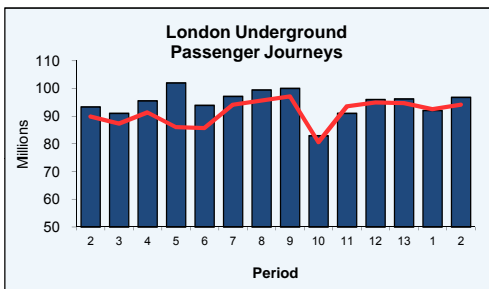
			Quarter 4 2012/13		2012/13 Target	Full Year 2012/13		Full Year Variance
 London Underground	Customer Satisfaction	Score	84	●	80	83	●	3
 Docklands Light Railway	Customer Satisfaction	Score	87	●	82	87	●	5
 London Overground	Customer Satisfaction	Score	82	●	80	82	●	2
 London Tramlink	Customer Satisfaction	Score	89	●	86	89	●	3
 Emirates Air Line	Customer Satisfaction	Score	93		N/A	93		N/A



- Meeting or better than target
- ▲ Worse than target by up to 2 points
- Worse than target by more than 2 points

CSS scores above refer to the most recent figures - Quarter 4 of 2012/13. The next scores will be published in Quarter 1 (Period 3) of this year.

London Rail and Underground Customer Demand - Period 2 2013/14					
			YTD		YTD Variance
 London Underground	Passenger Journeys	Million	284.7	●	5.9
 Docklands Light Railway	Passenger Journeys	Million	15.5	●	0.3
 London Overground	Passenger Journeys	Million	20.6	●	1.5
 London Tramlink	Passenger Journeys	Million	4.8	●	0.1
 Emirates Air Line	Passenger Numbers	Thousand	267.0	●	16.9

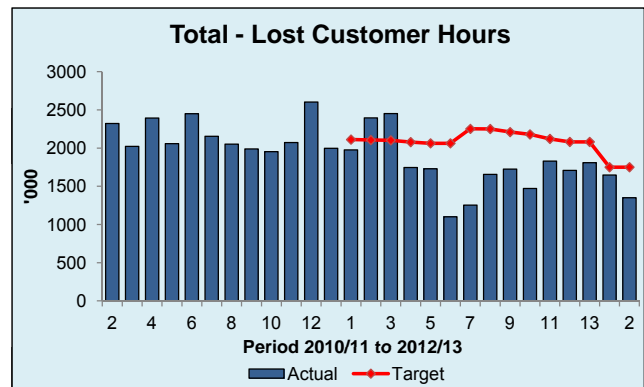
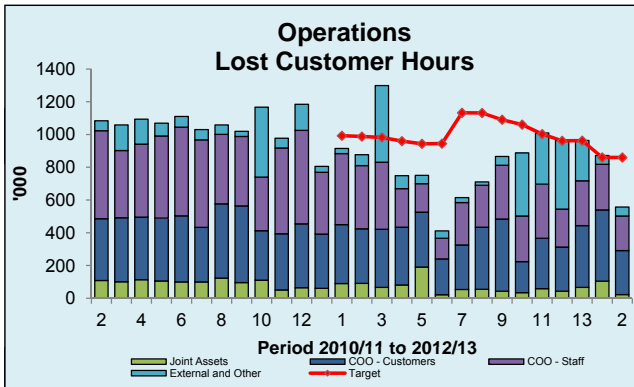
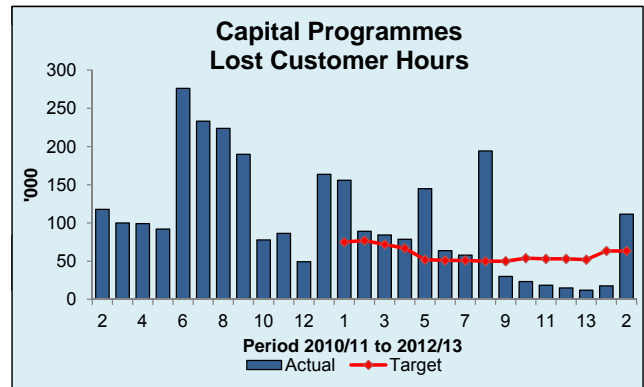
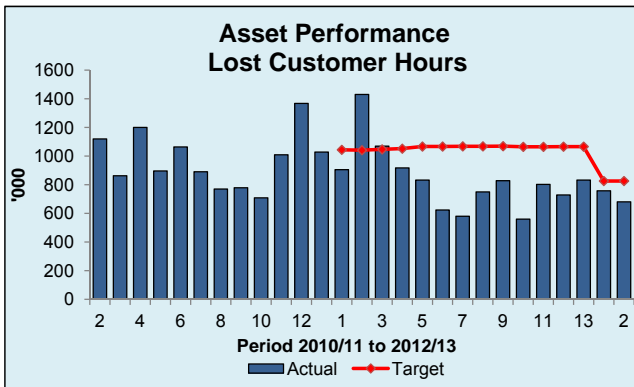


- Meeting or better than target
- ▲ Worse than target by up to 2%
- Worse than target by more than 2%

Passenger Journeys across all modes was boosted by the Olympic and Paralympic Games in periods 5 and 6 of last year, with performance for the current year to date also ahead of target.

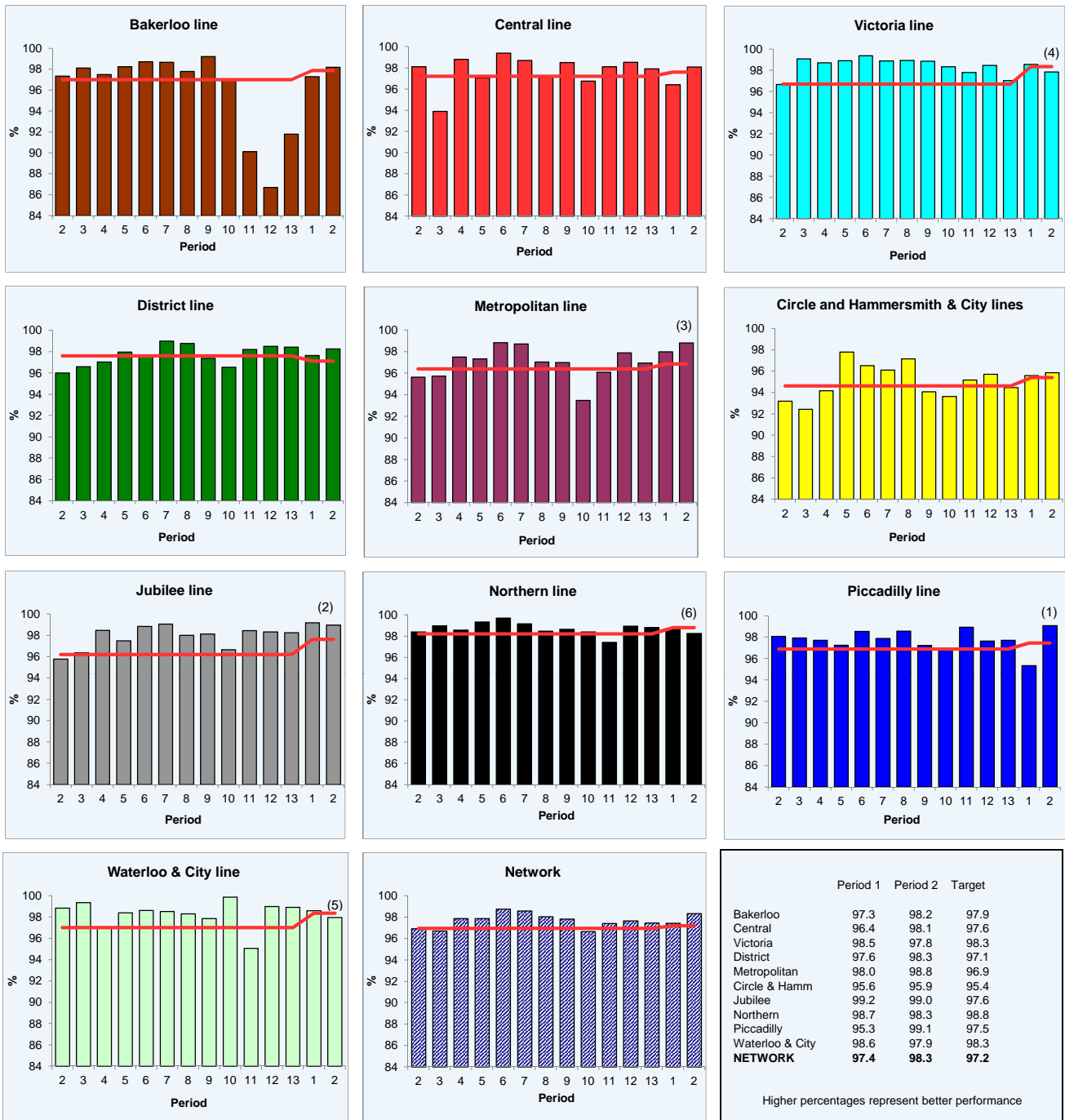
London Underground Lost Customer Hours - Period 2 2013/14

	YTD Actual '000		YTD Variance '000
Asset Performance	1,438	●	215
Capital Programmes	129	▲	(2)
Operations	1,429	●	291
Total	2,995	●	505



Year-to-date CPD narrowly missed target due to an incident on the Central resulting in over 87k LCH in Period 2. A poorly positioned chair replaced during the previous nights reconditioning programme caused a track circuit failure on 4 May.

London Underground Line Performance Trends Percentage of Scheduled Kilometres Operated



Actual (line colour)
 Target

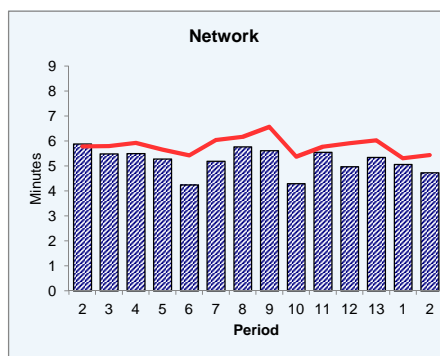
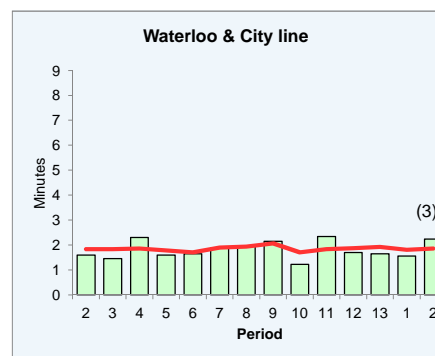
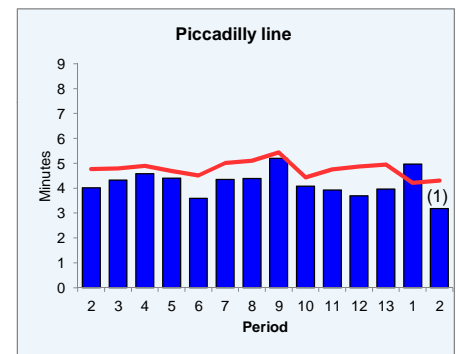
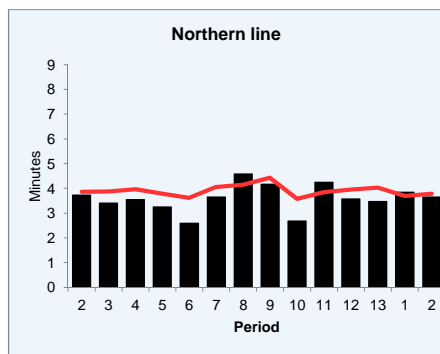
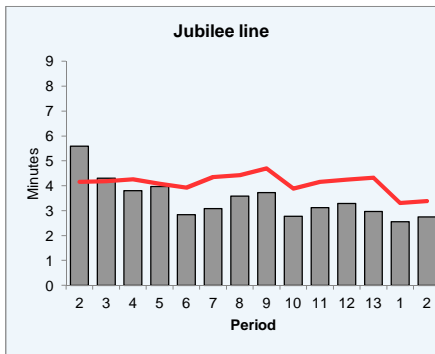
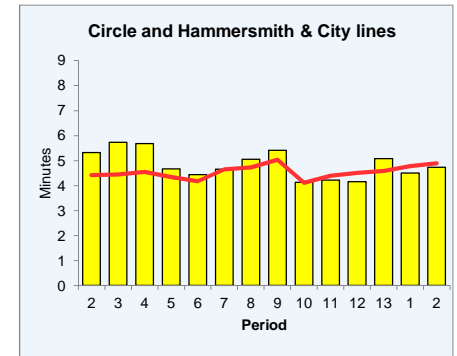
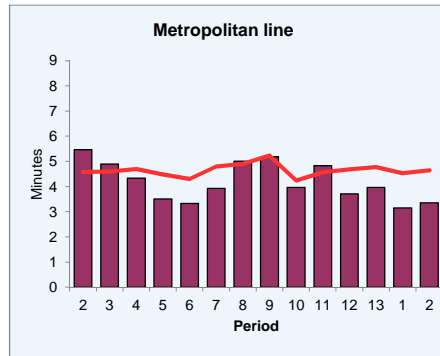
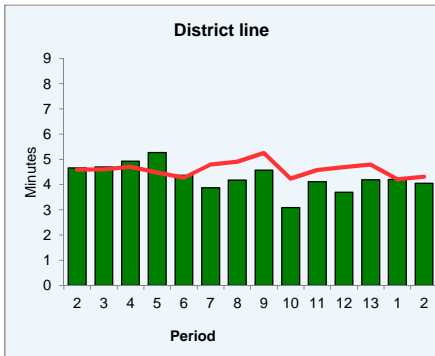
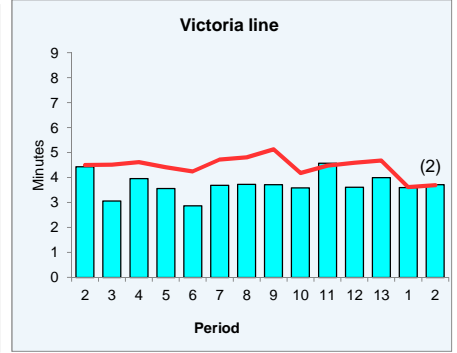
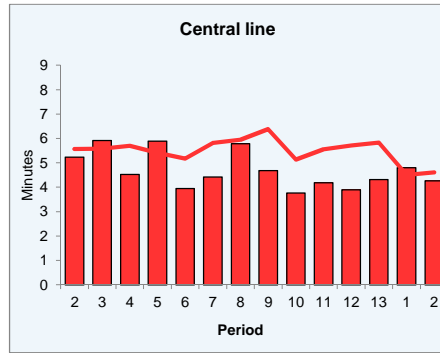
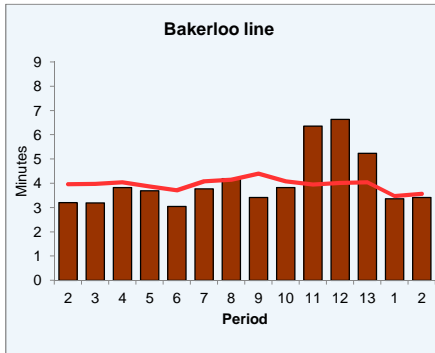
The graphs show the percentage of scheduled kilometres operated by trains in passenger service on each line. Scheduled kilometres are the distances timetabled to be run, adjusted for planned engineering works and special events

Network Percentage of Schedule kilometres operated, at 98.3% increased to its highest level since Period 7 of last year and bettered the target of 97.2%.

The Piccadilly line (1) achieved 99.2% of schedule operated this Period, the best since 1995. The Jubilee line (2) maintained in excess of 99.0% for the second successive period, despite a dip in performance following the discovery of a cracked wing rail at Wembley Park on 22 May. The Metropolitan line (3), at 98.8% of schedule operated was at its highest level since Period 7 of last year.

The Victoria, Waterloo & City and Northern lines failed to beat their respective targets this Period. The Victoria line (4) was impacted by a signal failure at Seven Sisters on 11 May and a person under a train incident on 14 May. The Waterloo & City line (5) operated under 80% of its schedule on 14 May following a stalled train, whilst Northern line (6) services were disrupted on 29 April due to a positive earth at Clapham North and a points failure at High Barnet on 23 May.

London Underground Line Performance Trends Excess Journey Time



	Period 1	Period 2	Target
Bakerloo	3.36	3.41	3.56
Central	4.80	4.26	4.61
Victoria	3.60	3.71	3.69
District	4.21	4.05	4.31
Metropolitan	3.15	3.35	4.64
Circle & Hamm	4.50	4.73	4.89
Jubilee	2.56	2.75	3.38
Northern	3.85	3.65	3.79
Piccadilly	4.97	3.18	4.31
Waterloo & City	1.56	2.24	1.86
NETWORK	5.06	4.73	5.43

Lower numbers represent better performance

Actual (line colour)
 Target

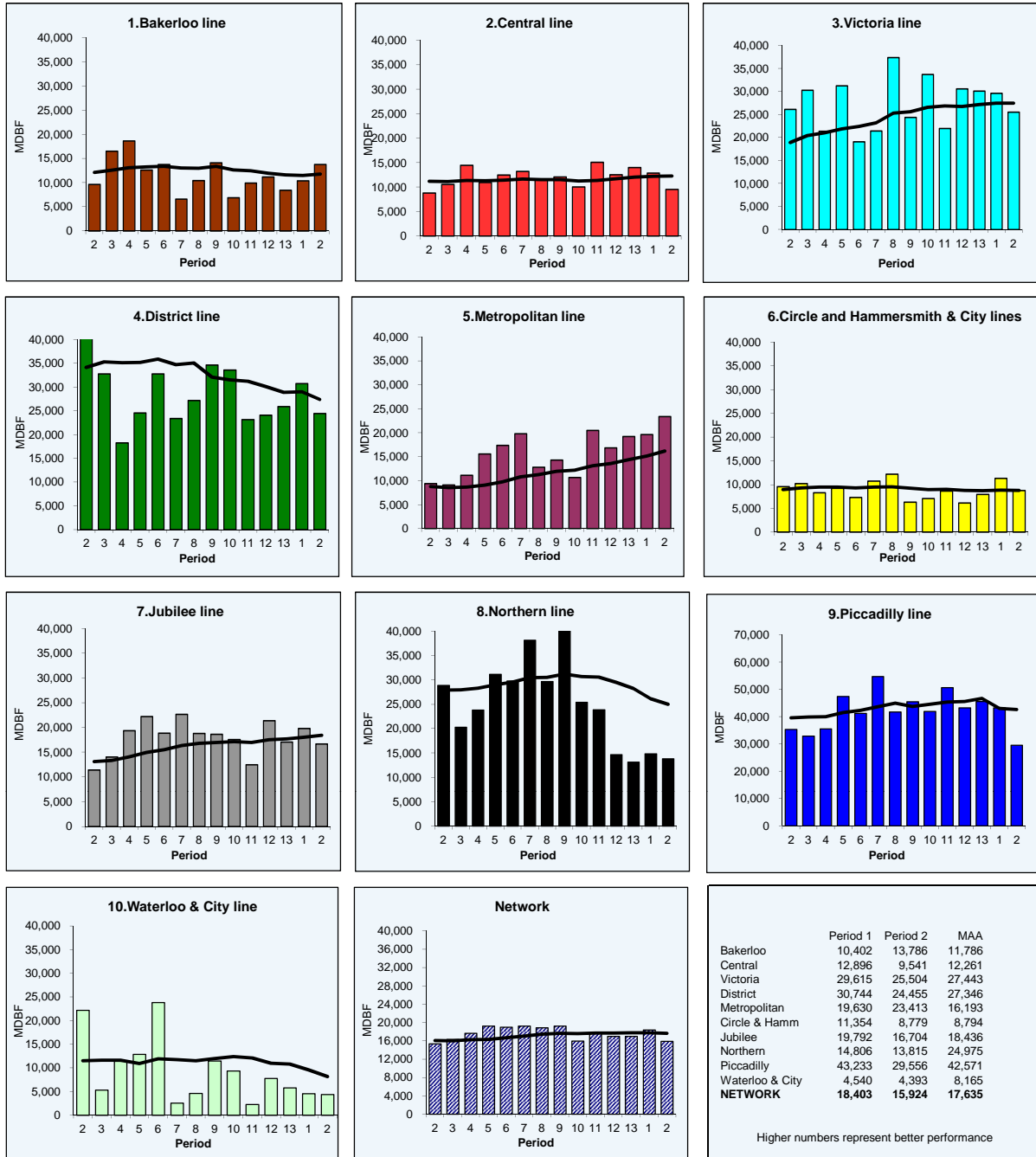
The time in minutes to complete an average journey on the network over and above the expected time, weighted by customer time values. The calculation includes the impact of planned closures.

Excess journey time improved by 0.33 minutes this Period compared with last and, at 4.73 minutes, is the third best result on record. The improvement in excess time consisted of a 0.45 minute fall in trains excess and a 0.06 minute rise in both stations and planned closures excess. The improvement in trains excess time was due to a fall in the impact of train service disruption: signals & track, staff absence / shortage and customer related incidents. Stations excess time increased due to a rise in L&E downtime and customer demand levels whilst there was also an increase in the impact of the planned engineering works.

The Piccadilly line (1) excess journey time of 3.18 minutes was at its lowest level since this measure was introduced over 15 years ago.

The Victoria line (2) narrowly missed its target this Period due to a rise in AEI times caused by planned escalator works at Vauxhall and Highbury & Islington. The Waterloo & City line (3) excess journey time rose compared with last Period due to the impact of a defective train on 14th May which also led to its below target performance in Period 2.

London Underground Line Performance Trends 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. Subsequent agreement of attribution could therefore give rise to retrospective changes. Where new stock is being or has been introduced, e.g. on the Metropolitan line, the MDBF trends shown reflect the combined performance of both A and S stocks as this is what is reflected in the train service performance shown earlier in this report.

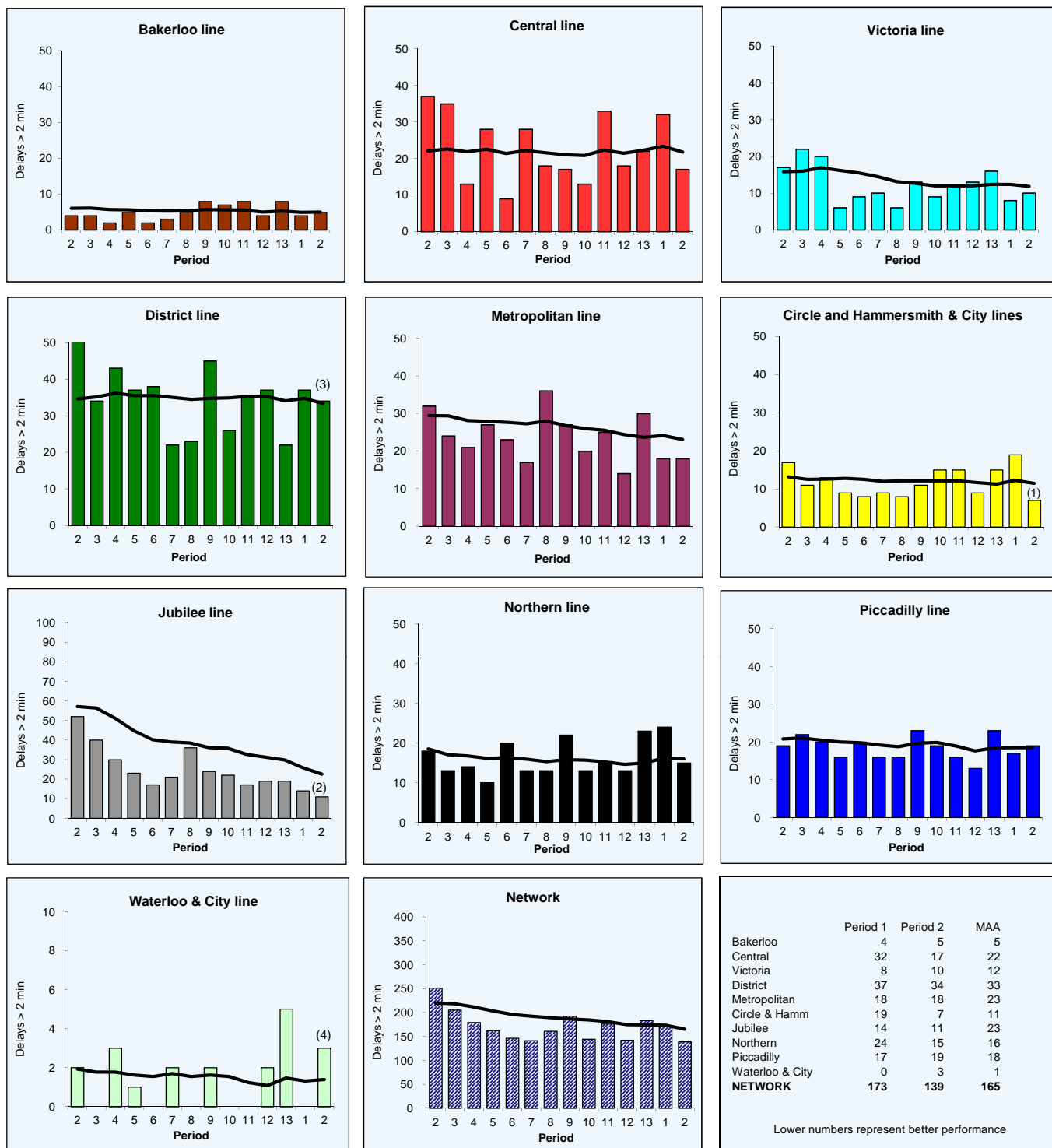
Overall Network MDBF was worse than last Period and also compared adversely versus the Moving Annual Average.

The Bakerloo line (1) recorded a period-on-period improvement. All lines with the exception of the Bakerloo and Metropolitan recorded a worsening performance. There were 94 rolling stock defects on the Central line (2) in Period 2. Root cause analysis is underway to select faults that could be addressed under new initiatives within the reliability programme. The Victoria line (3) was impacted by 19 defects in period 2, a rise of 2 although there was no single underlying cause. In period 11 last year, there were high instances of ATP/ATO related defects. There were 25 defects impacting on the District line (4) D Stock trains this Period, an increase of 5 compared with last Period. The main causes of rolling stock defects were auxiliary system, PA and door related. The Metropolitan line (5) recorded 3 successive period-on-period improvements, with fleet reliability at it highest level for over a year. There were 36 defects recorded on the Circle & Hammersmith line (6) C stock trains. The majority were due to brake and door faults. 46 defects were recorded on the Jubilee Line (7) with key work streams in place to improve MDBF performance.

There were 63 defects recorded on the Northern Line (8). The implementation of Transmission based train control (TBTC) is impacting on the fleets reliability with actions by London Underground and the Alstom management team in place to improve software reliability. 21 defects were recorded on the Piccadilly line (9). Assessments of each failure mode are being carried out to produce short, medium and long term solutions. Short term solutions will include additional routine checks to prevent common failure causes across the fleet, with longer term solutions being incorporated into the life extension project.

The Waterloo & City line (10) was impacted by 5 rolling stock defects in Period 2, the same number as last Period. There were 3 door related defects faults this Period leading to a MDBF result of 4,393kms.

London Underground Line Performance Trends Signal and Point Related Delays >2 minutes

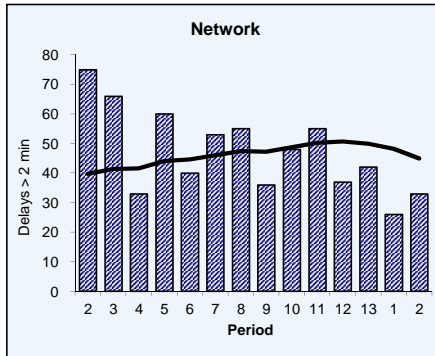
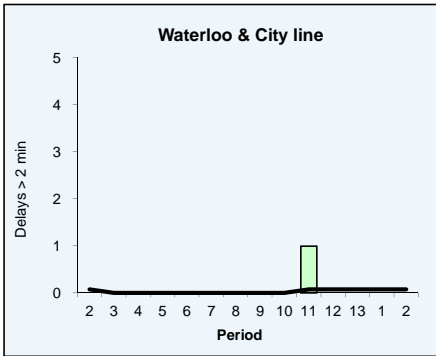
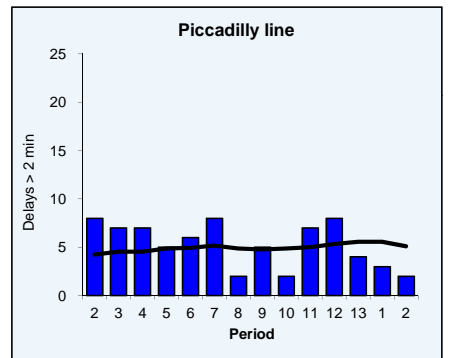
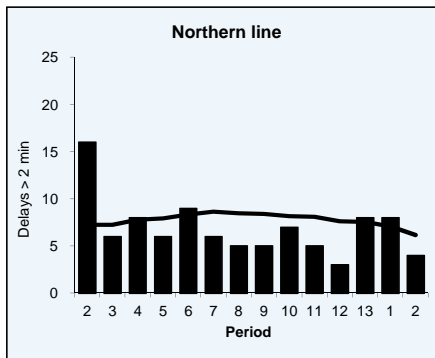
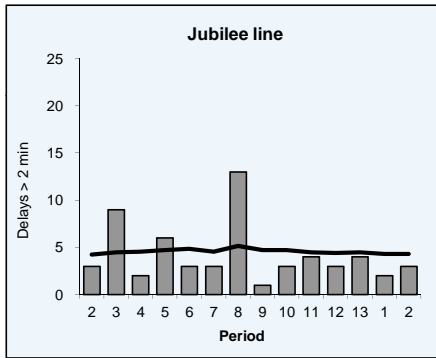
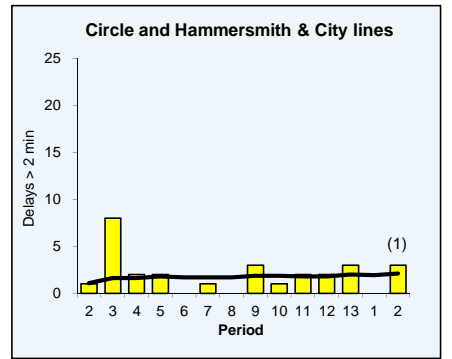
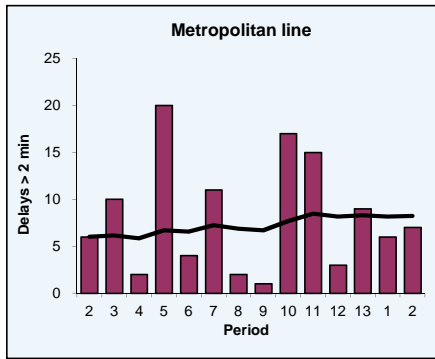
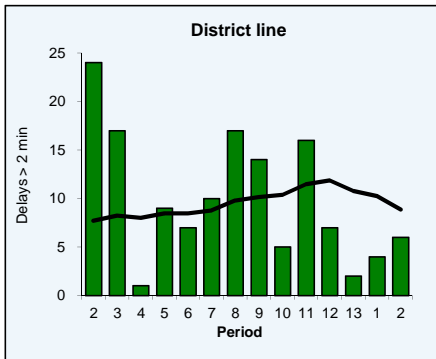
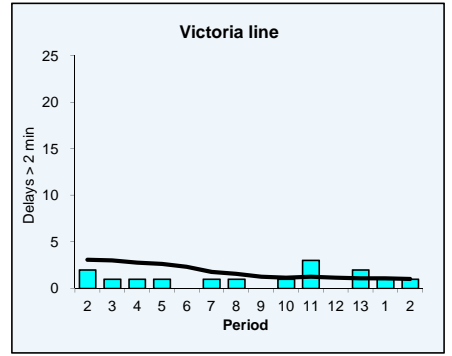
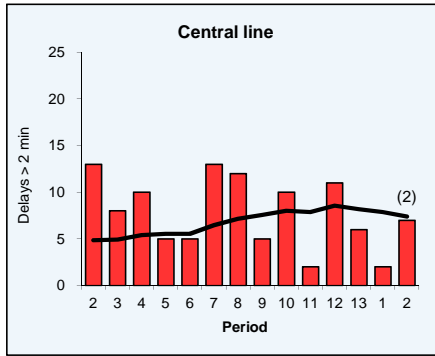
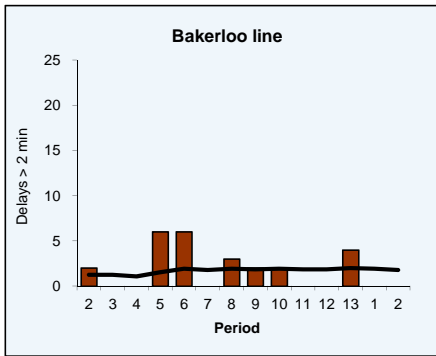


Actual
 Moving Annual Average

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 number of signalling related delays, at 139, were at the lowest recorded for over 3 years. Notable improvements were reported on the Central, Circle & Hammersmith and Northern lines. The Circle & Hammersmith line **(1)** was impacted by 7 signalling related delays this Period, the lowest for over a year, whilst the Jubilee line **(2)** recorded its lowest number of delays for 3 years. The District line **(3)** recorded 34 signal related disruption incidents with train detection and train describer faults being the main cause of defects. The Waterloo & City line **(4)** was impacted by 3 defects with a failure on 20 May being particularly disruptive. In period 1, the Central line **(5)** was impacted by a high number relay and indication faults, whilst the Northern line **(6)** was affected by a high number of signal and point related defects in periods 13 of last year and period 1 of this.

London Underground Line Performance Trends Track Related Delays >2 minutes



	Period 1	Period 2	MAA
Bakerloo	0	0	2
Central	2	7	7
Victoria	1	1	1
District	4	6	9
Metropolitan	6	7	8
Circle & Hamm	0	3	2
Jubilee	2	3	4
Northern	8	4	6
Piccadilly	3	2	5
Waterloo & City	0	0	0
NETWORK	26	33	45

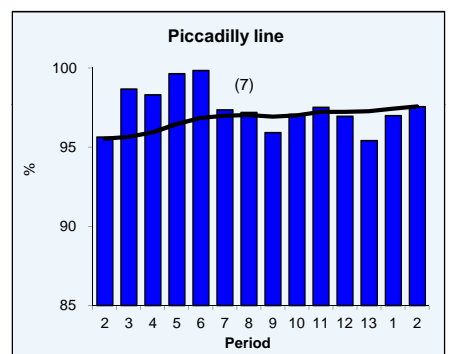
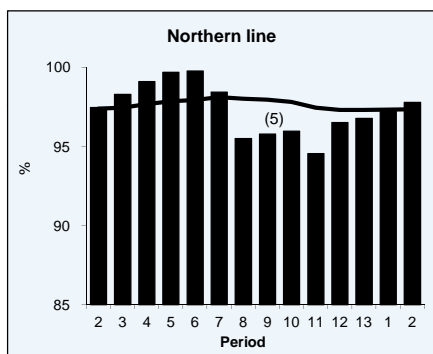
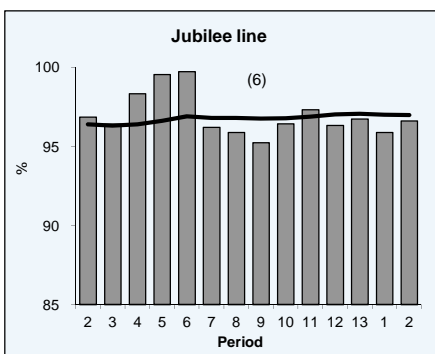
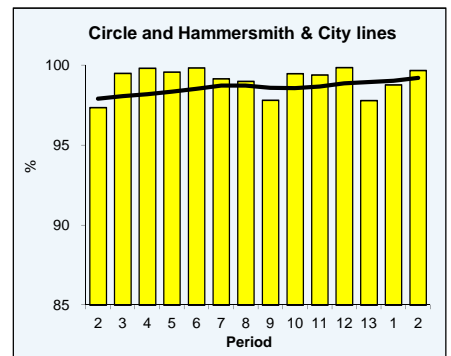
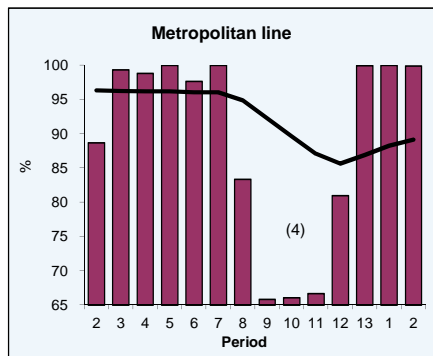
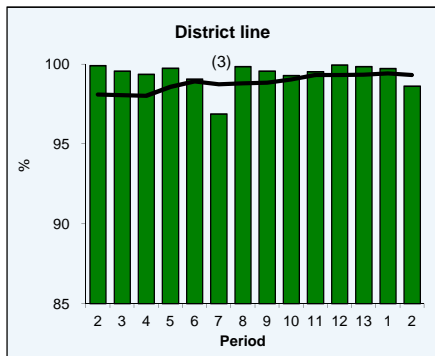
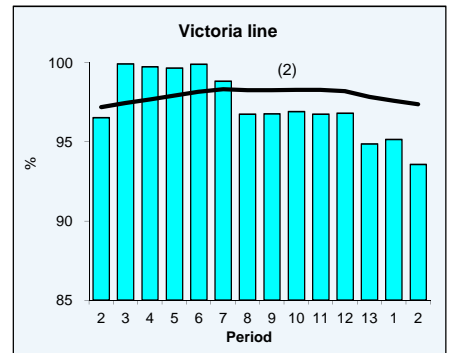
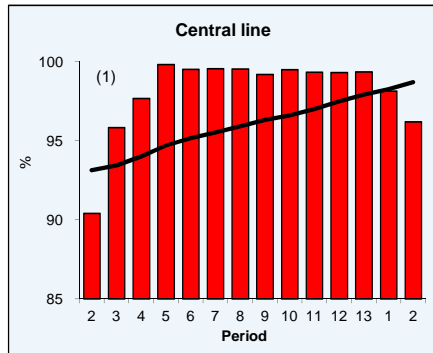
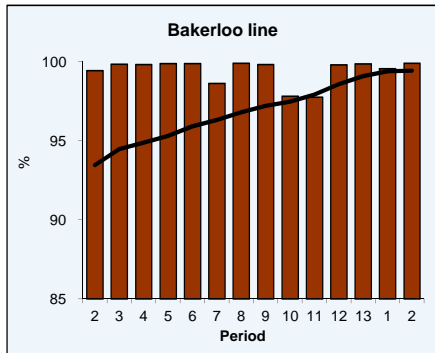
Lower numbers represent better performance



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.

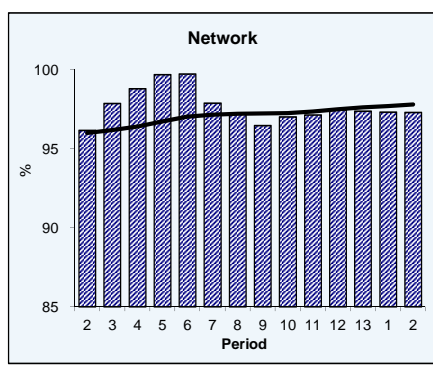
The number of track related delays, at 33, rose by 7 this Period but compared favourable versus the MAA. All lines with exception of the Circle & Hammersmith matched or bettered the MAA, with the Circle & Hammersmith line (1) impacted by 3 delays due to points failures at Barking. The Central line (2) recorded 7 delays mainly as a result of temporary speed restrictions in place following track defects.

London Underground Line Performance Trends Escalator Availability



Waterloo & City line

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



	Period 1	Period 2	MAA
Bakerloo	99.6	99.9	99.4
Central	98.1	96.2	98.7
Victoria	95.2	93.6	97.4
District	99.7	98.6	99.3
Metropolitan	100.0	99.9	99.1
Circle & Hamm	98.8	99.7	99.2
Jubilee	95.9	96.6	97.0
Northern	97.3	97.8	97.3
Piccadilly	97.0	97.6	97.6
Waterloo & City	n/a	n/a	n/a
NETWORK	97.3	97.3	97.8

Higher percentages represent better performance

Actual
 Moving Annual Average (MAA)

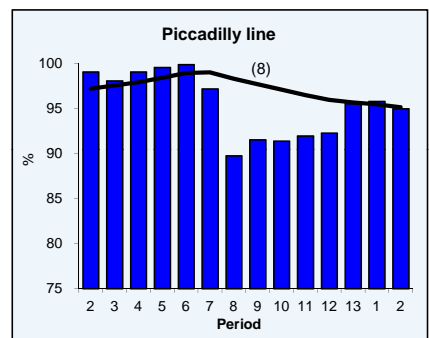
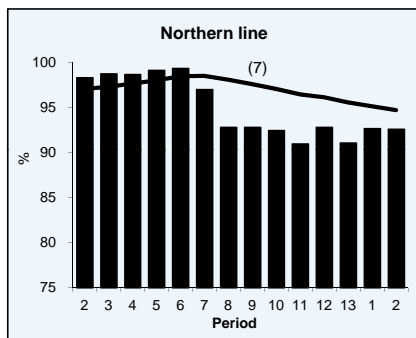
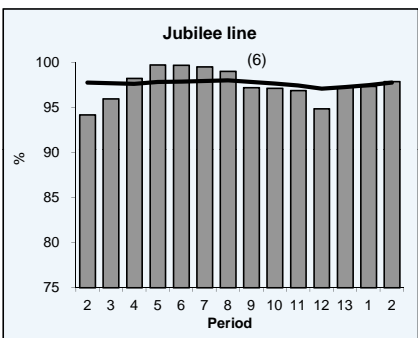
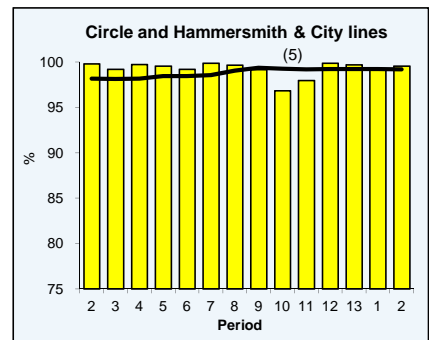
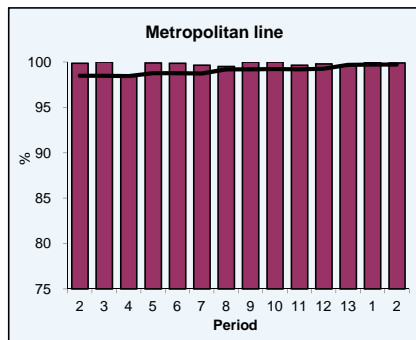
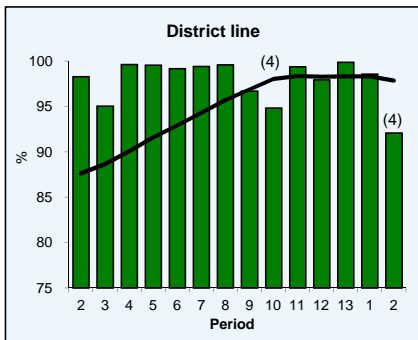
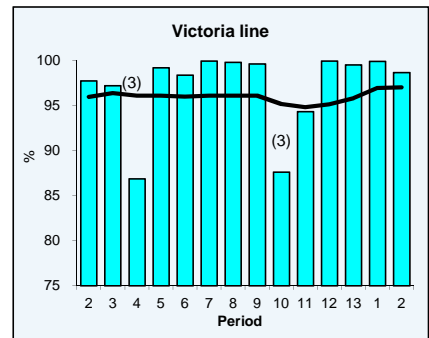
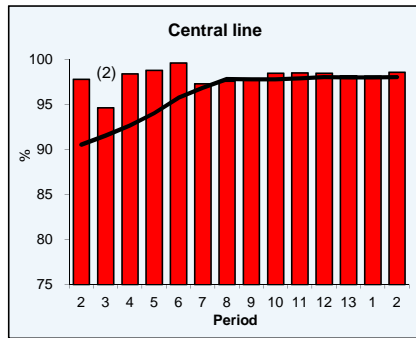
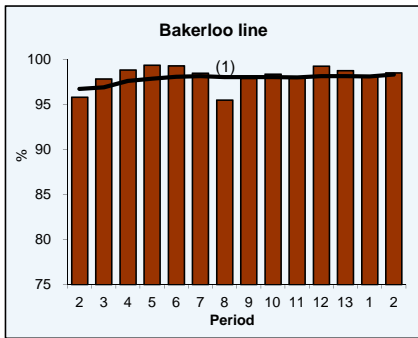
The total hours escalators were working, or available to work if required, as a percentage of total scheduled service hours. Results include the impact of planned works.

Network escalator availability remained at 97.3% (99.7% excluding planned work). Planned escalator work was carried out on the Central, Victoria, District, Jubilee, Northern and Piccadilly lines in the Period.

Central line availability (1) in Periods 2, 3 and 4 of last year was affected by planned refurbishment works at escalators at Bond Street, Holborn, St. Paul's and Bank. Planned works were carried out several escalators at Victoria throughout last year on the Victoria Line (2). District line (3) availability in Period 7 of last year was affected by a defect on Escalator 6 at Embankment. Planned refurbishment work at Baker Street numbers 1 and 2 was completed on 19 February 2013 (Period 12) improving availability on the Metropolitan line (4) following works since Period 8 2012/13. The Northern line (5) was affected by planned works at Highgate and Clapham South impacting on availability between Periods 7 to 13 of last year.

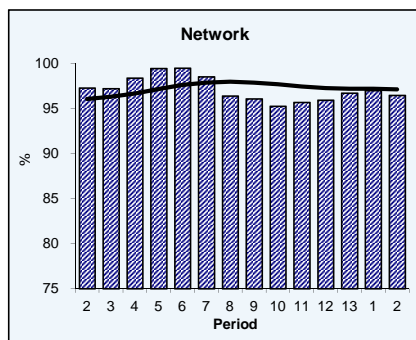
There were also planned works on various escalators throughout last year on the Jubilee (6) and Piccadilly lines (7).

London Underground Line Performance Trends Lift Availability



Waterloo & City line

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



	Period 1	Period 2	MAA
Bakerloo	98.2	98.5	98.3
Central	98.2	98.6	98.1
Victoria	99.9	98.7	97.0
District	98.6	92.1	97.8
Metropolitan	99.9	99.9	99.7
Circle & Hamm	99.3	99.5	99.2
Jubilee	97.4	97.9	97.8
Northern	92.7	92.6	94.7
Piccadilly	95.8	95.0	95.2
Waterloo & City	n/a	n/a	n/a
NETWORK	97.0	96.5	97.1

Higher percentages represent better performance

Actual
 Moving Annual Average (MAA)

The total hours lifts were working, or available to work if required, as a percentage of total scheduled service hours. Results include the impact of planned works.

Network lift availability dipped to 96.5% (98.8% excluding planned work). Planned work was carried out on the District (4), Northern and Piccadilly lines during the Period.

Bakerloo line (1) availability in Period 8 of last year was impacted by defects at Lambeth North lift number 2 whilst faults at Queensway number 2 and Bank number 5 affected Period 2 performance on the Central line (2). On the Victoria line (3), in Period 4 2012/13, availability was affected by a failure at Walthamstow Central whilst in Periods 10 and 11, availability was affected by a hydraulic fault, again at Walthamstow Central.

The dip in Period 10 2012/13 on the District line (4) was as a result of a defect at Earl's Court number 6 lift. Circle & Hammersmith line (5) availability was affected by faults with Kings Cross lift number 5 in Periods 10 and 11 2012/13. There were planned works on various lifts throughout last year on the Jubilee (6), Northern (7) and Piccadilly lines (8).