

Date: 16 October 2015

Item: Managing Director's Report – Rail and Underground

This paper will be considered in public

1 Purpose

1.1 This paper comments on the performance of London Underground (LU) and London Rail (LR), and on the status of major investment projects and items of special interest, particularly in 2015/16 periods:

- (a) 4, 28 June to 25 July;
- (b) 5, 26 July to 22 August; and
- (c) 6, 23 August to 19 September – interim highlights (see the Summary on this page).

2 Recommendation

2.1 The Panel is asked to note the report.

3 Summary

Customers

3.1 In Quarter 1 (Q1) of 2015/16 LU matched its best ever customer satisfaction score (CSS) of 85, first achieved in Quarter 4 last year.

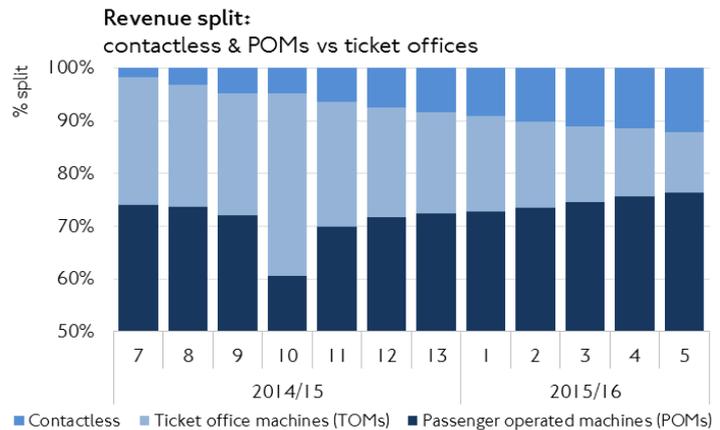
Delivery

- 3.2 The strike and overtime ban in Periods 4 and 5 impacted LU performance, though underlying lost customer hours (LCH) and excess journey time (EJT) remain better than target. In Period 6, underlying LCH was just off target and underlying EJT continued on target.
- 3.3 London Overground (LO) recorded a good public performance measure (PPM) score in Period 5. In Period 6, it was just off target.
- 3.4 In Periods 4 and 5, performance on TfL Rail continued to exceed the pre-takeover performance levels on these services.
- 3.5 After a brief dip in Period 3, Docklands Light Railway (DLR) performance bounced back in Periods 4 and 5, and continued on target in Period 6.
- 3.6 Significant injury rates at the end of Period 5 continued to be better than target on both LU (0.24) and LR (0.18).

Value

Rising demand

- 3.7 Passenger demand continues to rise, with 38 million or eight per cent more journeys made on LU to the end of Period 5 than last year. Approximately half of this increase was due to Period 1 being longer this year. Year to date demand for LO and DLR is also higher, by 31 per cent and 14 per cent respectively. On a calendar year to date comparison, LU passenger journeys to the end of Period 6 are up on last year by 26.1 million, or 4.4 per cent, excluding industrial action.



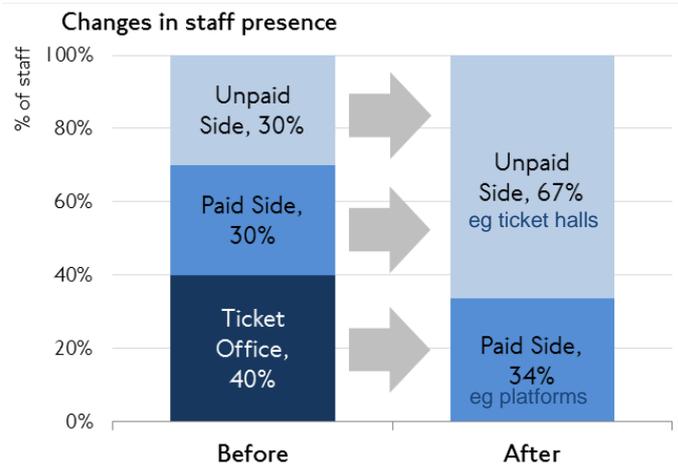
Changing sales

- 3.8 Sales by ticket vending machines (also known as passenger operated machines, or POMs) and contactless sales have risen as ticket office sales have declined with our changes to station service (see item 3.9).
- 3.9 Apple Pay has become the latest payment method we have made available to our customers, following the arrival of Barclaycard's bPay in early July. Usage of contactless devices continues to grow week on week, and hit a new high at the end of Period 6, with more than 13,000 Rail and Underground journeys made on Friday 18 September.

People

Changing service

- 3.10 The modernisation of LU station service continues. By the end of Period 6, 3,034 members of staff had received the new customer service training.
- 3.11 Forty per cent of staff have been moved from the ticket office to other areas. The biggest increase is in the number of staff now on the 'unpaid' side of the gateline, helping customers.
- 3.12 Across the network, 187 ticket offices are closed, and 157 stations operate without a ticket office. For first time and infrequent visitors to London, we are opening new and modernised Visitor Information Centres (see page 11).



4 London Underground (LU)

LU performance

		2015/16 Period 5 YTD	Variance to target	Variance to target excl. IA
Lost customer hours (LCH)	Millions	14.28	7.04 ▲	-0.40 ▼
Excess journey time (EJT)	Minutes	4.67	0.30 ▲	-0.32 ▼
Passenger journeys	Millions	517.4	0.9 ▲	11.2 ▲
Significant injuries per million hours (moving annual average - MAA)	Rate	0.24	-0.16 ▼	n/a

- 4.1 LU performance to the end of Period 5 was affected by strike action on 8/9 July and 5/6 August, and an overtime ban by fleet maintenance staff, which together accounted for 7.4m LCH. Excluding industrial action, LU's year to date service performance measured in LCH to Period 5 is on target at 6.8m, and its performance in Period 5 was on target at 1.3m. With industrial action excluded, EJT was better than target in the year to the end of Period 5.
- 4.2 There were 517 million passenger journeys to the end of Period 5. This was 38 million or eight per cent more journeys made on LU to the end of Period 5 than last year. Approximately half of this increase was due to Period 1 being longer this year. In the year to date, industrial action has resulted in 10.3 million fewer journeys than forecast.
- 4.3 LU's Quarter 1 CSS score was 85, matching its highest ever score achieved in Quarter 4 last year. There was an increase of one point (to 84) in the score for the helpfulness of station staff.
- 4.4 LU safety performance, measured as significant injuries per million hours moving annual average (MAA), was better than target, better than last year, and is the lowest since this measure was introduced at the start of 2014/15.

Industrial relations

- 4.5 The last LU pay settlement ended on the 31 March 2015. LU opened discussions with the trade unions on this, inclusive of Night Tube. In May the trade unions announced a dispute on this matter, leading to industrial action in July / August. However further action has been suspended by the trade unions while constructive talks continue. Discussions are continuing at ACAS to try and reach a resolution, and agree a fair, affordable, sustainable settlement, which also secures the delivery of Night Tube.

LU investment

Baker Street to Bond Street tunnel relining

- 4.6 We have successfully completed the Baker Street to Bond Street tunnel relining, marking the end of a remarkable project. In 2009, we found that precast



concrete rings in the southbound Jubilee line tunnel were deteriorating. It was clear we needed a long term solution. In 2010 partial ring replacement using spheroidal graphite iron segments was successfully trialled at Charing Cross in a disused section of the Jubilee line constructed in the same way as the tunnel between Baker Street and Bond Street.

- 4.7 In the past a project like this would have involved closing the line for an extended period, but this time trains started running again each morning on schedule. All 359 new rings, replacing 215 metres of tunnel lining, were delivered ahead of schedule. The two year project has been so successful it is now up for a number of industry awards.

Walthamstow blockade

- 4.8 The northern section of the Victoria line was closed for three weeks in August whilst works to raise capacity on the line were carried out. The work was completed two days ahead of schedule.
- 4.9 Services were suspended between Seven Sisters and Walthamstow Central from 8 August to 29 August whilst the crossover outside Walthamstow Central station was rebuilt.
- 4.10 The previous crossover limited the number of trains that could run north of Seven Sisters to 24 per hour, and the work will enable LU to run 36 trains per hour along the whole line. This equates to a train every 100 seconds in peak hours, the highest frequency in the UK, and among the most frequent in the world.
- 4.11 A presentation highlighting the works undertaken during the blockade is included on the agenda for this meeting.

Four Lines Modernisation: contract for signalling and train control

- 4.12 Thales has been awarded the contract for the signalling and train control system on the Circle, District, Metropolitan and Hammersmith & City lines.
- 4.13 This next major phase of the Underground's modernisation will bring faster, more frequent and more reliable journeys to millions of passengers who use the four lines.
- 4.14 LU has been successfully partnering with Thales for a number of years,



including the recent delivery of the Northern and Jubilee line modernisations. The overall budget for the modernisation of the four lines has been confirmed as £5.41bn, which represents a reduction of £131m compared to an earlier estimate announced in March 2015. The modernisation includes 191 new trains, built in the UK, many of which have already been rolled out across the four lines.

- 4.15 The improvements will all be delivered within the existing TfL Business Plan and the programme is expected to have a benefit-cost ratio of around 4.7 to 1. So for every one pound invested,

London gets £4.70 back in social benefits.

S7 trains now arriving

- 4.16 We are ahead of schedule in delivering new S7 trains to the District line. The S stock trains are more reliable than the retiring D stock, and their increased capacity and air conditioning are real benefits to customers. The delivery of a further 49 S7 trains will continue between now and December 2016.

Innovative track thinking

- 4.17 We have renewed track and drainage on the south side of the Circle line between Monument and Sloane Square, and delivered a further 350 metres of new track between Sloane Square and South Kensington.
- 4.18 The work also involved another first for LU – installing new padded concrete sleepers, closer together. We have used padded sleepers previously from time to time to address local noise and vibration problems, but this is a fundamental change in approach. Spacing the sleepers more closely reduces the force on the ballast from train movements by spreading it over a wider area. This results in reduced wear and deterioration, and should mean that there will be no need for a mid life re-ballast, saving money and preventing the need for closures in 20 to 30 years' time.

The hottest line cools

- 4.19 Customers and staff are feeling cooler at St Paul's due to a fan chiller system which pumps cool air onto the platform. The innovation comes from LU's cooling team who designed and built the system in record time to beat the summer heat. Typically a project like this takes 18 to 24 months. By completing the design in house, undertaking early contractor engagement, increasing resource levels, and working collaboratively with suppliers, the LU team delivered it in less than eight months.
- 4.20 The Central line is LU's hottest, and has been difficult to cool in the past, as traditional systems have proved to be expensive and hard to install. The team had to find an entirely new approach, using existing assets to reduce costs and delivery times. At the heart of the system is a fan that pulls 1,800 cubic metres of air (a volume equivalent to 25 Central line carriages of air) every minute from the street and blows it onto the eastbound platform. The big difference at St Paul's is an innovative water chiller, which pumps 16 litres of cold water every second through pipes in the ventilation shaft, cooling the street air by 8°C before it enters the platform.



Increasing capacity at Victoria station

- 4.21 Victoria station currently sees more than 82 million passengers each year, and by 2020 that is forecast to rise to 100 million. We are currently modernising the whole station, adding a new ticket hall and doubling the size of the existing ticket hall. We are easing congestion by improving entries, exits and passenger flows, adding step free access, nine new escalators and eight new lifts. Adding over 300 metres of new tunnels in challenging ground

conditions has required innovative and award winning engineering solutions. We have worked closely with the busy area's many stakeholders, including Network Rail, theatres and other local businesses, to minimise disruption.

- 4.22 To do all this with the station continuing to operate and while keeping cost and time to a minimum, has required complex project management capabilities. The modernisation is due for completion in 2018.
- 4.23 A presentation on the Victoria Station Upgrade project is included on the agenda for this meeting.

Escalator teams on the up

- 4.24 Three escalator refurbishments on the Jubilee line have been finished early. Projects at Canning Town, North Greenwich and one escalator at Southwark were finished respectively 13 days, 10 days and three days ahead of schedule. (Work has since begun on a second escalator at Southwark.)
- 4.25 As well as delivering the projects early, the team has also been recognised with LU Beacon Awards for maintaining exemplary health and safety standards.
- 4.26 Close working between LU project management, station staff and the suppliers KONE enabled us to achieve efficiencies through innovative approaches, such as moving materials through the station during traffic hours at Canning Town.
- 4.27 These successful escalator refurbishments continue LU's drive to limit the duration of works and minimise disruption to the travelling public.

Otis pan TfL escalator contract

- 4.28 TfL and Crossrail's combined contract for escalators with Otis is delivering cost savings and performance improvements.
- 4.29 Under the contract, escalators at King's Cross were replaced at a 56 per cent cost reduction compared to previously specified escalators.
- 4.30 LU is supporting Crossrail in agreeing delivery programmes for escalators with their tier one contractors and Otis is advance manufacturing Crossrail escalators to assist in de-risking installation programmes.
- 4.31 Along with these advantages in costs and planning, the new escalators installed under this contract perform in service above a 99.6 per cent availability threshold.

Work at Arsenal finishes nine weeks ahead of schedule

- 4.32 Replacing the floor at Arsenal finished nine weeks ahead of schedule thanks to working at the station during the day, and to close collaboration between teams.



- 4.33 The flooring at the station, which covers 500 square metres, needed to be removed and replaced to improve its condition. To achieve this at night in engineering hours would have taken around 4,000

extra man hours – including setting up and restoring a usable floor on every shift. By liaising with station staff to work in daytime (traffic hours), the team put in 12 hour shifts, giving much more time on tools and keeping customer disruption to a minimum.

Bond Street modernisation reaches key milestone

- 4.34 Tunnelling at Bond Street has reached a key milestone with the breakthrough from LU’s station modernisation into the new Crossrail station. The first LU tunnellers arrived having excavated the final passageway between the expanded Tube station and the new Crossrail station. Over 550 metres of new tunnels have now been constructed, and works will now begin on the new lifts and escalators and the fit out of the tunnels. Because of the constraints of the job, much of the tunnelling has been completed by hand.
- 4.35 Over 173,000 passengers use Bond Street station every day and numbers are set to rise to over 225,000 when Crossrail arrives in 2018.

5 London Rail (LR)

London Overground (LO) performance

		Period 5 YTD	YTD variance to target
Passenger journeys	Millions	68.6	5.6 ▲
Public performance measure (MAA)	Per cent	94.4	-0.1 ▼

- 5.1 By the end of Period 5, London Overground (LO) had carried 68.6 million people, which is 31 per cent (16.4 million) more than the corresponding periods in 2014/15, and nine per cent more than budget. Fewer weekend closures than last year, the introduction of five car trains, and the LU strike have lifted the number of LO journeys.
- 5.2 Despite the challenge of high passenger numbers caused by the LU strike and a Victoria line closure, LO’s operational performance (including West Anglia), as measured by the public performance measure (PPM) moving annual average (MAA) improved from the two preceding periods to 94.4 per cent at the end of Period 5. This is 0.1 below target. LO was in fourth place in the national PPM league at the end of Period 5.
- 5.3 Improved performance on both West Anglia and the East London Line (ELL) in Period 5 played a part in this.
- 5.4 LO achieved its highest ever CSS score of 85, three points better than target, with a number of improved scores for stations, trains and journeys. Customers of West Anglia services were not surveyed as part of the Quarter 1 process as we began operating services only from Period 3, but will be included from Quarter 2.

Docklands Light Railway (DLR) performance

		Period 5 YTD	YTD variance to target
Passenger journeys	Millions	46.1	-0.2 ▼
On time departures	Per cent	99.1	0.1 ▲

- 5.5 DLR passenger numbers in the year to date were 46.1 million, 0.2 million lower than budget but 13.7 per cent higher than the same position last year.
- 5.6 DLR departures and service reliability performance for the year to date is 99.1 per cent, or 0.1 per cent better than target.
- 5.7 DLR's Quarter 1 CSS score of 89 has been bettered only once before, in Quarter 2 last year.

London Tramlink performance

		Period 5 YTD	YTD variance to target
Passenger journeys	Millions	10.8	-0.7 ▼
Percentage of scheduled kilometres operated	Per cent	99.1	1.1 ▲

- 5.8 Current year London Tramlink passenger journeys were 10.8 million, six per cent lower than budget.
- 5.9 The year to date scheduled kilometres operated measure was 99.1 per cent, 1.1 per cent better than target.
- 5.10 London Tramlink's Quarter 1 CSS score was 90, matching its highest score (first achieved in Q1 2012/13) since 2003/4.

Emirates Air Line (EAL) performance

		Period 5 YTD	YTD Variance to target
Passenger journeys	Millions	0.8	0.0 ▲
Availability	Per cent	97.5	2.5 ▲

- 5.11 Year to date demand on EAL was 0.8 million passenger journeys. This was 12 per cent more than last year.
- 5.12 Full year availability is 97.5 per cent, which is 2.5 per cent better than target.
- 5.13 The Quarter 1 CSS score of 93 was a slight fall from the preceding quarter, but remains on target.

LR investment

Hackney Interchange

- 5.14 LO customers can now travel between Hackney Downs and Hackney Central stations using a new interchange. The 200 metre-long covered walkway, funded by TfL, the London Borough of Hackney and Network Rail, includes lifts, monitored CCTV and bright lighting – making journeys quicker, safer and more accessible. Additionally, passengers with wheelchairs or pushchairs can now access platform 1 at Hackney Downs.



- 5.15 Hackney Interchange will provide thousands of customers with a direct route between two local stations, now both part of the LO network, saving them time and money. Passengers at Hackney Central can access trains to North London or to Liverpool Street via Hackney Downs, and those at Hackney Downs can access trains to Stratford or Highbury & Islington via Hackney Central. Previously, passengers had to travel into Zone 1 or walk around 600m along Amhurst Road and Dalston Lane to change lines.

New Overground operators shortlisted

- 5.16 We have shortlisted four bidders to run LO from November 2016, when the contract with the current operator LOROL expires. They are:
- (a) Arriva Rail London;
 - (b) LoKeGo (a joint venture between Keolis (UK) and Go-Ahead Holdings);
 - (c) Metroliner Rail; and
 - (d) MTR Corporation
- 5.17 Under the new concession, customers are set to get a series of improvements, including more walk-through air-conditioned trains, more frequent services and modernised stations. Frequency on the Overground Richmond / Clapham Junction to Stratford line will also be boosted by 25 per cent, from eight to ten trains per hour.
- 5.18 The concession will include all routes, including those we recently took over from Liverpool Street station to Enfield Town, Cheshunt and Chingford, as well as services between Romford and Upminster. The contract will include options to introduce an all-night service at weekends from 2017 and will cover the operation of services on the proposed Overground extension to Barking Riverside. The new operator will also be expected to continue improving performance levels, building on what has been achieved since TfL took responsibility for LO routes in 2007.
- 5.19 A fleet of 45 new trains will be introduced from 2018 on the Liverpool Street to Enfield Town, Cheshunt and Chingford routes, as well as on the routes between Barking and Gospel Oak and between Romford and Upminster. The new trains, to be built by Bombardier, will have air conditioning, charging points for mobile devices, and be wi-fi compatible. They will transform the

service experienced by customers and support hundreds of UK jobs and more than 20 apprenticeships.

DLR goes lengthwise

- 5.20 The seats in 22 of the 55 B2007 vehicles on the DLR now run lengthwise. This project creates a more open environment that encourages standing customers to move away from the crowded doorways.
- 5.21 The plan is to achieve a two and a half day turn around in converting each vehicle, meaning rapid progress in the next few months. The existing sideways seats are being rotated to provide lengthwise seating, whilst keeping the same numbers. We are also removing some draught screens to open up extra room for standing.
- 5.22 The project will reduce crowding and make a positive impact on journey times. Customer satisfaction will increase, with journeys being more comfortable as space is better used without loss of seating, and more customers are carried on each service during peak hours and for major events.



Broadening Beckton

- 5.23 The expanded DLR Beckton depot has entered operational service, becoming the latest facility to be upgraded to support growing customer demand. The DLR fleet has expanded significantly in the past few years, but maintenance capacity had not grown at the same rate. The depot, built in 1996, was still largely in its original form and meant that the capacity for heavy maintenance tasks was significantly lower than at other depots.
- 5.24 This project, which started in August 2013, increased floor space by approximately 1,000 square metres by extending the shed on the east end of the existing building. This extra space means that engineering teams will now be able to work on three-car trains without having to uncouple the carriages – something that wasn't possible with the old setup. This improved process will save time and reduce the risk of damage to vehicle couplers, avoiding trains being taken out of service and impacting customer service.

6 TfL Rail

- 6.1 In Period 3, TfL took control of services running from Liverpool Street to Shenfield, the Great Eastern lines, which will form part of Crossrail. In the meantime, this service is known as TfL Rail.

TfL Rail performance

		Period 5 YTD	YTD Variance to target
Passenger journeys	Millions	10.1	1.4 ▲
Public performance measure (MAA)	Per cent	92.3	0.3 ▲

- 6.2 Year to date demand (from Period 3) on TfL Rail was 10.1 million passenger journeys.
- 6.3 Period 5 was the third period since TfL Rail took control of services running from Liverpool Street to Shenfield. The period PPM performance continued at the best level since the beginning of 2014/15, and the PPM MAA rose above target.

7 Customers

Night Tube

- 7.1 The Night Tube will transform night time journeys across London for millions of people. Journey times will be cut by an average of 20 minutes, with some cut by more than an hour. London's night-time economy will be opened up to a host of new opportunities, with the Night Tube supporting around 2,000 permanent jobs and boosting the economy by £360m.
- 7.2 Practical arrangements are in place. However, the launch of Night Tube has been deferred by LU to allow a successful conclusion of talks with the trade unions. This includes reaching an agreement on rosters and working practices that is affordable, sustainable and fair.

Visitor Centres open for business

- 7.3 Ensuring that first time and infrequent visitors to London have the best possible customer experience, this spring and summer we've been converting Travel Information Centres into Visitor Centres. Modernised centres at Euston, King's Cross, Piccadilly Circus, Liverpool Street and Victoria are now open for business. We have also introduced new centres at Gatwick and Paddington. An expanded and modernised centre at Heathrow's Terminal 1, 2, 3 opens in late September.



New train timetable benefits for our customers

- 7.4 New train timetables have recently been introduced to support the introduction of S stock trains onto the network.
- 7.5 As more of the new S7 trains enter service, train maintenance on the Hammersmith & City line is switching away from its traditional home at Hammersmith to modernised depots at Ealing Common and Upminster. Three Hammersmith & City trains now start from Upminster depot each day and two from Ealing Common. This enables earlier first and later last trains for customers between Liverpool Street and Barking, as well as those between Earl's Court and Edgware Road. In addition, because the trains run in service from the depots, customers at intermediate stations are able to board and alight.
- 7.6 A new timetable has also been introduced on the Bakerloo line which has increased the central area service by nearly 10 per cent to a three minute frequency on Monday to Saturday evenings and Saturday mornings.

8 People

Managing Director

- 8.1 Mike Brown was appointed as Commissioner for Transport on 24 September in succession to Sir Peter Hendy. Nick Brown continues in the role of Managing Director of LU and LR. He has filled this role since 11 July 2015.
- 8.2 Nick has worked with LU since the end of last year as Chief Operating Officer. He has 34 years' experience in the rail and wider transport and infrastructure sectors, having started his career with British Rail in 1981 and progressed through roles in the public and privatised rail industry.

New Tube for London wins IDSA International Design Excellence Award

- 8.3 LU and its design partner PriestmanGoode received a Silver award at the International Design Excellence Awards of the Industrial Designers Society of America (IDSA). The award, in the Automotive & Transportation category, was given for the New Tube for London (NTfL) train design. Over 1,700 projects from around the world enter the annual competition.

Secure Stop award for London Tramlink

- 8.4 London Tramlink has achieved national accreditation for its measures to improve safety and security for customers at its stops. The Secure Station Scheme, run jointly by the British Transport Police (BTP) and the Department for Transport (DfT), is awarded to stations or stops that have reached high standards of design and management.
- 8.5 BTP examined all 39 stops served by London Tramlink to ensure they were bright and welcoming, with help points and CCTV to reduce crime and discourage anti-social behaviour.



Winning teamwork at the National Rail Awards

- 8.6 At the National Rail Awards, the award for Outstanding Teamwork has gone to the Network Incident Response Team, a collaboration between LU and BTP. Developed two years ago, the Network Incident Response team comprises seven LU incident response managers and six BTP medics.
- 8.7 LO also received a Highly Commended recognition in the Medium Station of the Year category for its restoration of Crystal Palace Station. The station has been transformed through investment in numerous lifts and additional canopies.
- 8.8 Also shortlisted for awards were the London Overground Capacity Improvement Programme (LOCIP), and the Victoria line traction inverter technology team, whose inverter at the Cloudesley Road substation captures energy from braking trains and recycles it, to be used again either as traction current or to provide energy for stations.

The kids are alright

- 8.9 Pupils from the Fairchildes Academy in Croydon got their own private tour of the London Tramlink depot after winning an art competition to illustrate their vision of what they thought the future Croydon would look like.
- 8.10 The primary school pupils from Croydon Heritage Festival Future competition, organised by the Whitgift Foundation, not only got to go behind the scenes at the depot, but will also have their work displayed inside the trams across the network, bringing their work to a wider audience.

Design Work Leisure – the way for all

- 8.11 Artist Giles Round has been invited by Art on the Underground to develop a project in partnership with the William Morris Gallery, which is just a short walk from Walthamstow Central station.



- 8.12 Design Work Leisure is a design studio inspired by the vision and values of William Morris, the artist and designer, whose legacy influenced the creation of the LU roundel, Harry Beck Tube map and Johnston typeface under Managing Director Frank Pick, and later the original Victoria line designs by Sir Misha Black's Design Research Unit.

- 8.13 Over the coming year Giles will create a number of prototype objects, including tiles and decorative patterns for Victoria line stations.

List of appendices to this report

Appendix 1: Performance Charts

List of background papers

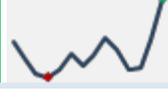
None

Contact Officer: Nick Brown, Managing Director, London Underground and London Rail
Number: 020 3054 4308
Email: nickbrown@tfl.gov.uk

London Rail and Underground

Period 5 2015/16 Performance

Appendix 1

		Target	YTD Actual & Variance	Trend*
Service Reliability				
 London Underground	Excess Journey Time (minutes)	4.37	4.67 +0.3	
 London Overground	Public Performance Measure (MAA) (per cent)	94.5	94.4 -0.1	
 Docklands Light Railway	Scheduled departures operated (per cent)	99.0	99.1 +0.1	
 London Tramlink	Scheduled kilometres operated (per cent)	98.0	99.1 +1.1	
 Emirates Air Line	Availability (per cent)	95.0	97.5 +2.5	
 Tfl Rail	Public Performance Measure (MAA) (per cent)	92.0	92.3 +0.3	

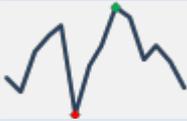
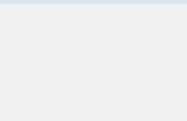
Safety Performance				
 London Underground	Significant injuries per million hours (MAA)	0.40	0.24 -0.16	
 London Rail   		0.25	0.18 -0.07	

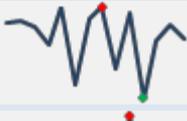
Customer Satisfaction (Overall Evaluation Score)				
 London Underground	Customer satisfaction survey: overall evaluation (score)	84	85 +1	
 London Overground		82	85 +3	
 Docklands Light Railway		88	89 +1	
 London Tramlink		88	90 +2	
 Emirates Air Line		93	93 +0	
 Tfl Rail		Reported from Q2, 2015/16		

*Trend is last 14 periods with the red point indicating worst periodic performance, and the green point indicating the best performance

London Rail and Underground

Period 5 2015/16 Performance

		YTD Target	YTD Actual & Variance	Trend*
Demand				
 London Underground	Passenger journeys (millions)	516.5	517.4 +0.9	
 London Overground		63.0	68.6 +5.6	
 Docklands Light Railway		46.3	46.1 -0.2	
 London Tramlink		11.5	10.8 -0.7	
 Emirates Air Line		0.8	0.8 -0.0	
 TFL Rail		8.7	10.1 +1.4	

Lost Customer Hours (000s)				
 London Underground	Asset Performance	3,439	3,505 +66	
	Capital Programmes	415	374 -41	
	Operations (including industrial action)	3,387	10,404 +7017	
	Total (including industrial action)	7,241	14,283 +7042	
	Operations (excluding industrial action)	3,387	2,964 -423	
	Total (excluding industrial action)	7,241	6,843 -398	

*Trend is last 14 periods with the red point indicating worst periodic performance, and the green point indicating the best performance