

Date: 17 March 2015

Item 5: Quarterly Health, Safety and Environment Performance Reports

This paper will be considered in public

1 Summary

1.1 This paper informs the Panel about key elements of performance in Quarter 3 of the 2014/15 year across TfL.

2 Recommendation

2.1 **The Panel is asked to note the Report.**

List of appendices to this report:

Appendix 1 : Rail and Underground Performance Report
Appendix 2 : Surface Transport Performance Report
Appendix 3 : Crossrail Performance Report
Appendix 4 : Statistical Appendix

List of Background Papers:

None

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Rail and Underground

Quarterly Health, Safety and Environment Report

1 Summary

What went well

- 1.1 The safety, environment and health performance indicators comprise a suite of leading and lagging indicators. Some of these are simple outcomes measures and others are precursors in the major accident risk models. During the Quarter these have remained stable or are improving, with the exception of those noted below.
- 1.2 There were no London Overground (LO) nor London Tramlink project major injuries in the Quarter.
- 1.3 Incidents at the Platform Train Interface on London Underground (LU) are within target for the first time in nine periods. Improvement work at hotspot locations to reduce the gap between the platform and train continues and contributes to this. Customer safety awareness campaigns continue.
- 1.4 There were no 'poorly controlled' audits in the Quarter.
- 1.5 A stress reduction workshop for LU managers is nearing completion. This will help managers to identify problems at an early stage and support employees with mental health problems. The workshops will be available from the next quarter.
- 1.6 TfL has signed up to the Institute of Occupational Health's campaign to reduce Occupational Cancers. The campaign calls for a collaboration of government and employers to take action to cut the number of deaths caused by exposure to dangerous carcinogens in the workplace. TfL is leading the diesel exhaust element of this campaign.
- 1.7 A 'flu vaccination programme ran from October to December with 70 sites visited and 3159 flu vaccines administered.
- 1.8 LU and London Overground Rail Operations Limited (LOROL) staff successfully prevented a number of attempted suicides in the quarter. LU and all LOROL staff have completed the suicide prevention training developed with the Samaritans. BTP have also been involved in this programme.
- 1.9 The new Docklands Light Railway (DLR) franchise mobilised successfully on 7 December 2014. The safety, security, quality and environmental conditions precedent were all met and are now being actively managed by the new franchisee and monitored by DLR.
- 1.10 During the quarter, detailed planning, a safety assurance work stream and an independent intrusive audit took place to ensure London Tramlink was ready for the transfer of tram fleet maintenance activities from Bombardier

Transportation. The transfer to London Tramlink took place on the first day of Quarter 4 after a period of transition running.

- 1.11 A human factors review took place to consider improving the positioning of tram controls in the driver's cab. The review identified a number of opportunities for improvement. These improvements will be rolled out over the coming year.
- 1.12 All safety tours and planned general inspections scheduled in the Quarter were completed.
- 1.13 The 'Step It Up' physical activity health promotion pilot continued across TfL. The key message to staff is to undertake 150 minutes of exercise per week.
- 1.14 Studies to examine the feasibility of installing additional generation at Greenwich Power Station have been undertaken. These have shown that a project to install gas engines, using a modular build up to meet the heat loads, would be technically and financially possible. The outline project would see an initial 4.3MW plant installed, increasing to 28MW by 2035. Work is continuing with the GLA and Royal Borough of Greenwich to develop the heat network which will use the heat supplied from Greenwich Power Station.

Areas for improvement

- 1.15 Three Prohibition Notices were served on LU. LU has complied with all three Notices. Three safety alerts all concerned with working at height were issued.
- 1.16 The upward trend in non-reportable injuries on LU levelled out in the quarter. The majority of incidents were a result of slips, trips and falls, with customer behaviour a contributory factor. Trials of different ways of highlighting the boundaries of stairs and escalators are under way on LU and will continue into 2015/16. These aim to reduce slips, trips and falls. Falls down stairs remains the highest customer risk area across the LO network and LOROL's Safety Review Group is reviewing all stations to determine whether improvements to the stairs might be effective.
- 1.17 There were seven employee/contractor significant injuries in the quarter. All are under investigation with actions aimed at preventing reoccurrence.
- 1.18 The overall lost time injury rate in LU continued to increase. Trauma and assault incidents are the main contributors to this increase. However incidents of slips, trips and falls have also increased during the year. There were 14 lost time injuries reported by the Capital Programmes Directorate (CPD). The overall capital programme lost time injury rate increased to 0.29 lost time injuries per 100,000 hours worked. There were six lost time injuries on the Stations and Crossrail Programme. This was the primary cause of the increase in the overall CPD rate.
- 1.19 The overall long term trend in work-related violence on LU continues to increase. This has been an increasing trend over the last two years. This is as a result of an increase in the number of reported verbal abuse incidents, with revenue issues a main contributor. All improvement programmes are currently under review.

- 1.20 The number of work-related violence incidents is increasing across the LO network, the majority remain verbal assaults or physical assaults without injury. LOROL strongly encourage their staff to report all assaults and a member of their security team speaks to every staff member who has reported an assault. Almost all assaults on LOROL staff are due to revenue protection, ticket issues, Ticket Vending Machine (TVM) faults or are alcohol related (or combinations thereof).
- 1.21 Four CIRAS (the confidential reporting system used by TfL) reports were received by LU. Three are closed and one is with CIRAS awaiting closure.
- 1.22 The overall percentage of days lost due to sickness absence increased slightly in the quarter. The main contributors to this were absence of LU maintenance staff and capital programme staff. LU Occupational Health continues to work with line managers to reduce the number of days lost.
- 1.23 There were two positive tests for drugs during unannounced testing. Company Disciplinary hearings are being arranged. There was one positive test for drugs under the 'For Cause' testing. The employee resigned.
- 1.24 Three LOROL Signals Passed at Danger (SPAD) occurred in the quarter. All were due to driver inattention. The yearly total remains below that of last year and LOROL remain on target to meet their objective of a 17 per cent reduction in SPADs. One of these SPADs was the fourth at this signal (EL3006 in New Cross Gate Depot). Rail for London is leading the formal investigation.
- 1.25 Proactive management of outstanding safety actions is taking place on London Tramlink. A single data base will be developed to unify a number of action trackers so that reports of outstanding actions or recommendations can be run each period.

Key deliverables in the next quarter

- 1.26 Platform nosing stone realignment works start on LU infrastructure to reduce/eliminate the gap between the train and platform on the subsurface railway. Finchley Road and Farringdon stations are amongst the first where this work will take place.
- 1.27 The three London Rail businesses (DLR, London Overground and Tramlink) are developing a programme of work to improve the management of construction site safety; detailed actions for the three businesses are being developed. The health, safety and environment improvement programmes for 2015/16 will be agreed, with project milestones in place.
- 1.28 All existing work-related violence improvement programmes are to be reviewed jointly by LU and the British Transport Police to ensure robust, structured and targeted programmes are developed for delivery in 2015/16.
- 1.29 Further work to understand the impact that different shift patterns have on fatigue will be commissioned by LU, following the results of the initial LU led study. This work will build on the work involving LU and Crossrail tunnelling staff and will widen the study to consider other types of shift work.
- 1.30 London Rail's work towards adoption of Sentinel is progressing well. The hardware for the e-learning centre has been prepared and software testing

commences mid-February, with a view to running a pilot this Industry Common Induction(ICI) course by the end of February before entering full production in early March. LO is developing its induction training and hopes to roll out the use of Sentinel towards the end of the year.

- 1.31 The LO management system will be subject to an independent review by Interfleet. This will use the Office of Rail Regulation's RM3 model as its basis and will also enable benchmarking of the previous LO RM3 assessment against an independent view.
- 1.32 London Tramlink has developed a vinyl tram wrap to highlight the presence of a tram to increase awareness. The wrap is black and yellow featuring TfL standard safety illustrations. A tram with the new vinyl will be in service in Quarter 4.
- 1.33 A new phase of improvement works to crossings on the tram network will start.

2 Major Incidents

- 2.1 There were no major incidents in the quarter.

Surface Transport

Quarterly Health, Safety and Environment Report

1 Summary

What went well

Road Safety

- 1.1 Provisional data for Quarter 3 of 2014 shows that the number of people killed or seriously injured (KSI) on London's roads is 44.1 per cent below the 2005-2009 baseline for Quarter 3. At a figure of 527 people, this is the lowest level of KSIs on record for the third Quarter. The full year forecast for 2014/15 is a reduction in KSIs of 38.3 per cent from the 2005-09 baselines. This compares to a full year target reduction of 35.1 per cent against the baseline. The full year performance is, therefore, ahead of target meaning that TfL is on track to meet its long-term target of a 40 per cent reduction in KSIs by 2020.
- 1.2 However, despite positive reductions in KSIs on London's roads in the Quarter, future increases in traffic on London's roads, the number of journeys cycled and walked, and increases in London's population mean that achieving a yearly 40 per cent reduction in KSIs to 2020 remains an ambitious challenge.
- 1.3 The Road Safety Annual Report was published in October. The report includes detailed casualty statistics from 2013. It also reports progress in delivering the actions set out in the road safety action plan 'Safe Streets for London' which was published in June 2013. Much has already been achieved by TfL and its delivery partners including the Metropolitan and City of London Police Services, London's borough councils and private sector partners.
- 1.4 In November, TfL published a revised Cycle Safety Action Plan, which builds on the success of the original plan that was published in 2010. The plan sets out new actions to improve cycle safety across London, not only through improved infrastructure, but also through education, training and enforcement.
- 1.5 The second annual TfL Road Safety Conference, 'Working together to save lives on London's roads', took place in February. The conference focused on delivering in partnership and was well attended by borough officers and key road safety stakeholders.
- 1.6 Seven complimentary road safety campaigns were commenced. The ongoing campaigns are targeted at changing the behaviour of all road users to improve the safety of the most vulnerable. The campaigns are as follows:
 - (a) Share the Road: September – October, targeting all London road users via TV, social media, PR and stakeholder endorsement;

- (b) Cycle Safety Tips: September (bus shelter posters only) and October-November, via outdoor posters, bus rears, press and digital adverts and TfL website;
 - (c) Teen pedestrians: September – November, targeting 11-14 year olds via outdoor posters, bus panel posters and YouTube;
 - (d) Older pedestrians: June –November, targeting adults 65+ via doctor's surgeries and leaflet distribution across London;
 - (e) Motorists: September – October, targeting all London motorists via outdoor posters at hotspot junction and radio;
 - (f) Young car drivers: September – November, targeting 17-25 year old car drivers via cinema advert, video on demand and behind-the-scenes film on YouTube; and
 - (g) Motorcyclists: September – November, targeting Motorcyclists via cinema advert, video on demand, radio adverts and social media promotion.
- 1.7 The Safer Lorries Scheme has been announced as the Traffic Regulation Orders necessary for the scheme were made and published at the end of January. From 1 September 2015, every vehicle in London weighing more than 3.5 tonnes (with a small number of exemptions) is required to be fitted with side guards and class V and VI mirrors. The Metropolitan Police, City of London Police and the DVSA through their role in the Industrial HGV Task Force will enforce the scheme.
- 1.8 This scheme, designed to improve cyclist and pedestrian safety, is the result of collaboration between TfL, London Councils and Heathrow Airport, which has allowed coverage across all roads managed by these authorities. 'Safer HGV Zone' signs are being installed at the Low Emission Zone boundary, and extensive communications are beginning with the freight industry and the general public.

Operational Safety

- 1.9 At the end of the Quarter (reporting period 9), the Surface Health and Safety Scorecard provided indications that good progress was made against key performance areas with some exceptions which are included in the section below. The scorecard comprises leading and lagging indicators which are aligned with the four TfL Pillars (People, value, Customers and Delivery).
- 1.10 The number of public transport passengers (mainly buses) reporting injuries which require hospital attendance reduced from 0.40 incidents per million passenger journeys at the end of Quarter2 to 0.39 at the end of the Quarter3. A total of 354 incidents were recorded in the Quarter of which 340 were bus passengers.
- 1.11 A Surface-wide SharePoint site which makes it easier for all staff to access Health and Safety information and tools they require to carry out their work safely was implemented. Most notably, the site provides an electronic Accident/Incident reporting facility which is making it easier to manage incidents and track investigations.

- 1.12 Surface Transport and other parts of TfL collaborated with four of the UK's leading utility companies to create a Joint Safety Charter at the Institution of Civil Engineers (ICE). The charter which was endorsed by Peter Hansford, UK Government Chief Construction Advisor and the new ICE President Professor David Balmforth and has been developed to improve the working relationships between TfL and the utility companies and sets out the following objectives:
- (a) to achieve Zero Harm;
 - (b) Joint Structure and Leadership;
 - (c) produce a Multi-Utility Plan for each project;
 - (d) clearly define the CDM responsibilities for each Project / Work Site;
 - (e) deploy competent teams & resources (Right people/Right time/Right place);
 - (f) share future planning and develop strategic schedules to facilitate utility works planning;
 - (g) to share the best available data and best practice; and
 - (h) Use PAS 128 – Level D to A
- 1.13 Surface Transport is delivering £4bn worth of improvement schemes including Cycle Super Highway (CSH), Better Junctions, Bus Priority and Growth projects. The requirements of the charter must be adopted on all relevant Surface Transport Schemes.

Environment

- 1.14 The London Low Emission Zone (LEZ) Phase 4 sees 96.4 per cent of HGVs, buses and coaches compliant compared with a target of 92 per cent. The London Low Emission Zone (LEZ) Phase 3 sees 99.2 per cent of larger vans and minibuses compliant compared with a target of 95 per cent.
- 1.15 A project to trial all-electric single-deck buses in London has seen the number of electric buses increased from six to eight following the deployment of a further two Optare MetroCity electric buses on route 312 in Quarter 3.
- 1.16 Oxford Street and other parts of London are already benefiting from concerted work to reduce bus fleet nitrogen oxides (NOx) while TfL delivers 6.5 million passenger journeys a day and is facing greater demand for services from rising population. NOx exhaust emissions from buses are falling in Oxford Street compared to several years ago. TfL has achieved the current position by retrofitting older Euro III generation buses such as those on route 159, which serve Oxford Street, with selective catalytic reduction equipment which reduces tailpipe NOx by up to 88 per cent.

- 1.17 TfL has also reduced the busiest bus flows in Oxford Street, particularly its western section, by 20 per cent in recent years. It has been deploying the New Routemaster – which emits half the NOx of a comparable Euro V hybrid double deck – to routes 390, 148, 10 and 8 which pass through Oxford Street, Oxford Circus or Marble Arch – and will be raising the overall proportion of hybrid buses in the Oxford Street area at rush hour to around 65 per cent this year.
- 1.18 TfL has so far introduced more than 300 new buses with the new ultra-low emission Euro VI engine which cuts exhaust NOx by up to 95 per cent compared to an un-retrofitted Euro III double decker. As part of wider emission plans for London, all Euro III buses are being upgraded or replaced by the end of 2015 to bring about a 20 per cent reduction in nitrogen oxides from the fleet compared to 2012 levels. So far, 1,100 out of a planned 1,800 have been upgraded with selective catalytic reduction equipment.
- 1.19 The overall number of hybrid buses in London is to rise from 1,200 to 1,800 by 2016 and continue rising rapidly to more than 3,000 by 2020. TfL is also exploring the potential of zero-emission all electric vehicles with eight in service to date and a further seven planned for 2015 and will be trialling rapid-induction charging and range-extended hybrids that could operate up to 80 per cent of service time in all-electric mode – offering more significant emission reduction in the short term.

Enforcement, Safety and Security

- 1.20 The Industrial HGV Task Force (IHTF), part of the new Metropolitan Police Service Roads and Transport Policing Command (RTPC) continues to target the most non-compliant vehicles, drivers and operators on London's roads. Between October 2013, when the IHTF commenced operations, and January 2015 the IHTF stopped and checked 4,226 vehicles resulting in a 'satisfactory' stop rate of 26 per cent (no offences detected). However, due to the targeted nature of the team's activities this figure must not be seen as being representative of the wider London freight population. The IHTF issued 1,051 fixed penalty notices and seized 51 vehicles over this period. The excellent work of the IHTF has been recognised by the Worshipful Company of Carmen with the team winning the Carmen Royal Logistic Corp Safety Award.
- 1.21 The RTPC also mobilised hundreds of officers for a six week intensive Operation Safeway which started on 16 February. Operation Safeway, a road safety initiative, aims to reduce risk to cyclists and other vulnerable road users by engaging with and educating all road users as well as undertaking balanced enforcement tackling risk and danger. This phase of Operation Safeway highlights the benefits of the MPS RTPC – a highly skilled, flexible Command of over 2,300 officers who can be quickly mobilised to meet the policing needs of London's road and surface transport network.

Areas for improvement

- 1.22 Although 78 per cent of the Health, Safety and Improvement Plan actions due in Quarter 3 were fully completed, and significant progress has been made in respect of a further 12 per cent to enable full completion in the early part of Quarter 4; a number, remain outstanding. To conclude this final 10 per cent of actions, the safety team is working closely with the business to deliver effective contractor incident reporting, revamp the Training Needs Analysis tool and ensure effective monitoring arrangements are fully established for all areas.
- 1.23 There was a rate rise in Surface Transport employee assaults, from 8.49 assaults per thousand employees to 10.30 at the end of the Quarter. The increase has been attributed to the rise in reported verbal abuse following work to encourage frontline staff to report all cases of aggression towards them. A review has identified a need to refresh the personal safety in the workplace training course materials. Consequently, external training providers have been engaged on the development of a bespoke course for operational staff in the areas of conflict avoidance and de-escalation techniques. The Workplace Violence Unit continues to work with the Metropolitan Police to detect and prosecute people who attack transport workers.
- 1.24 There was also a rate rise in the number of bus drivers assaulted from 13.84 assaults per thousand drivers in Quarter 2 to 15.92 and the end of Quarter 3. To tackle this and also aggression towards Revenue Protection Inspectors (RPIs), the standard TfL workplace violence campaign that has been traditionally used on the tube network has been extended to include bus drivers and RPIs. The campaign aim is to highlight the issue and in the process influence behaviours.
- 1.25 Despite the network wide safety campaign in 2014 encouraging passengers to use handrails when moving within buses, there was a 6 per cent rise in the number of injuries sustained in slips/trips/falls at the end 2014 compared with 2013. The campaign is now being refreshed and will continue in 2015 to complement local initiatives by individual bus companies.
- 1.26 Road traffic collisions (RTCs) involving London buses show an upward trend with an average of 1,871 RTCs recorded per reporting period. The Safety Team is in discussions with bus operators and other stakeholders to understand the factors influencing collisions in order to identify ways of tackling this trend.
- 1.27 So far this year, 33 underground utility services were struck during excavations (none resulted in injuries). To address this, Surface Transport is working with its in-house teams and across its supply chain to embed the requirements of PAS 128 which applies to the detection of underground utility infrastructure. Additionally, the Pre-works Utility Services Appraisal procedure is being reviewed to ensure due diligence is exercised in appraising the effect of changes to highway configuration or asset replacement.

Occupational Safety

- 1.28 At the end of the Quarter, a total of 6,975 working days were lost to employee sickness, equivalent to an average of 2.00 per employee, a rate higher than previous Quarter when it was 1.7 and the corresponding Quarter of 2013/14 when the average was 1.78. Surface Transport is monitoring an increase in recent periods through the pan-TfL Health Improvement Plan meeting process.

Transport Accessibility

- 1.29 The Mobility Aid Recognition Scheme enables users of suitable mobility scooters to access the bus service. In Quarter 3, 24 enquiries were received about the Scheme and a total of 12 Mobility Aid Recognition Cards were issued. In response to customer and bus driver feedback a review to consider a number of aspects of the Scheme including the look and feel of the cards is currently underway, due for completion by Quarter 4. Following implementation of the review's recommendations, TfL plans to use targeted promotion to further increase take up of the scheme.

Key deliverables in Quarter 4

Road Safety

- 1.30 TfL will continue the trialling of 20mph speed limits on two corridors on the TLRN in the City of London with an initial evaluation expected in Spring 2015.
- 1.31 A new advertising campaign focused on teen pedestrian safety will be launched in March 2015. The channel mix will include online film formats and video on-demand, posters and social media.
- 1.32 TfL will be publishing a report on last year's pedestrian and cyclist detection technology trial on buses in the Spring.

Operational Safety

- 1.33 The 2014/15 assurance activity programme will be continued with 55 per cent completed against a plan of 57 per cent at the end of Quarter 3. Surface Transport contractors/suppliers are included in the programme which seeks to fulfil over 378 checking activities with significant ones forming part of the TfL Integrated Audit Plan. To date, the programme has not identified any major concerns internally and within the Surface Transport supply chain.
- 1.34 The assurance activity programme includes 76 senior manager safety tours of which 42 have been completed. The remainder will be completed in Quarter 4.
- 1.35 Surface Transport will coordinate a safety management system maturity assessment using a tool adapted from the rail industry. The output from the exercise will form an integral part of objectives setting for the following year.

2 Major incidents

2.1 Four accidental fatalities were recorded in Quarter 3, they include:

- (a) A motorcyclist was fatally injured in a road traffic collision involving a route 141 bus on October 18 on Green Lane, N4. The incident occurred after the motorcyclist collided with a traffic island before striking the bus. The investigation remains open but initial indication shows that bus was progressing normally at the time of the incident;
- (b) A youth was fatally injured in a collision with a route 177 bus on October 31 on Eynsham Drive, SE2. The person was seen running into the path of the bus leaving the driver with no time to take evasive action. The investigation remains open;
- (c) A pedestrian was fatally injured in a collision with a route 57 bus on November 28 on Ambleside Avenue, SW16. The ongoing investigation is considering CCTV evidence which indicates the bus driver's action did not contribute to the incident; and
- (d) A pedestrian was fatally injured in a collision with a route 326 bus on November 29 on Barnet High Street, EN5. The ongoing investigation shows that the pedestrian entered the road from between parked cars into the path of the bus.

2.2 The inquests into four previously reported fatal incidents were concluded as follows:

- (a) A private car driver collided with a route 313 bus in August 2013 on The Ridgeway, EN2, when it swerved into the path of the bus. The car driver was using a mobile phone when they lost control of his vehicle. The coroner recorded a verdict of accidental death;
- (b) A private hire vehicle collided with a route N29 bus in August 2013 on Green Lane N13 after it had collided with a speeding car forcing the private hire vehicle into the path of the bus and the death of its driver. The coroner recorded a verdict of accidental death;
- (c) A route 131 bus collided with a pedestrian in December 2013 on Tooting High Street, SW17, when the pedestrian who was blind in one eye stepped into the path of the bus that as it proceeded through green traffic lights. The coroner recorded a verdict of accidental death; and
- (d) A route 253 bus collided with a pedestrian (an off duty TfL employee) in March 2014 on the entrance to Euston Bus Station, NW1, after the pedestrian slipped and fell as the bus proceeded into the station. The investigation showed the driver could not have avoided the collision. As a result of the incident, changes were made to re-align the kerb to improve pedestrian safety in the area. The coroner recorded a verdict of accidental death.

There are no recommendations made for TfL or bus operators regarding the above inquests.

Crossrail

Quarterly Health, Safety and Environment Report

1 What went well

- 1.1 There was good progress against our H&S Objectives for 2014/15.
- 1.2 15 contracts out of 17 (88 per cent) achieved a Health and Safety Performance Index (HSPI) score of 2.00 (scale of 0 to 3 with 1.0 reflecting contractual compliance) or above at the end of the Quarter, exceeding our associated corporate objective of 85 per cent.
- 1.3 The RIDDOR (including 3+ day lost time case) AFR was 0.20 at the end of the Quarter. This equates to a 40 per cent reduction on the Period 13 (2013/2014) rate of 0.33, meeting the corporate objective for 2014/15.
- 1.4 The Lost Time Case (LTC) AFR was 0.35 at the end of the Quarter. This equated to a 29 per cent reduction on the Period 13 (2013/2014) rate of 0.49. The corporate objective for 2014/15 is a 40 per cent reduction (target rate of 0.30).
- 1.5 Over 4,300 responded to the 2014 Health and Safety 'Have Your Say' survey which closed in September. Crossrail-wide and site specific reports have been produced and communicated to all sites, which used the findings in Leadership messages and workshops during the third Stepping Up Week (a week-long series of focussed health and safety activities, held twice per year across all contracts).
- 1.6 The survey found there had been a substantial improvement in culture relating to the reporting of incidents compared to last year. Other positives related to the perception of incident investigations (felt to be useful) and procedures, which Crossrail workers believed were in place to 'protect everyone's health and safety' and were found to be straightforward to follow. Action plans will be delivered by each contract.
- 1.7 The third Stepping Up Week took place between 13 and 17 October 2014. The programme included over 30 'Target Zero Leaders' (those co-ordinating the events on site) who had produced 27 bespoke schedules. Each schedule contained a 'Leadership Message' at the start and end of the week and activities focused on site-specific risk areas and improvement opportunities.
- 1.8 A pilot for a new, Incident Investigation Training Course, took place on 29 September. Feedback from the pilot Incident Investigation Training course has now been provided to the supplier. The course was modified in the light of the

pilot and further development will take place before the final product is launched later in 2015.

- 1.9 Following an increasing trend in slips, trips and falls, work commenced on a targeted campaign. This launched in December and ran until the middle of January 2015, during which time all sites were expected to increase the workforces' awareness of slips, trips and falls hazards, and how to prevent incidents.
- 1.10 Crossrail conducted a review of the current Target Zero program. This involved a series of supervisor workshops and reviews to discuss what was working well and opportunities for improvement. As a result, Target Zero and the Crossrail Golden Rules will be updated to reflect the future risk profile of the programme and will be cognisant of the feedback from the workshops.
- 1.11 The Fatigue Research collaboration with TfL was completed in the Quarter and the final report produced. Crossrail are currently working with TfL to identify how this work can be utilised and what, if any additional research may be undertaken to further enhance understanding and improve management of fatigue.
- 1.12 Data collection for the Dust and Diesel Engine Exhaust Emissions (DEEE) research was completed in the Quarter. The final report is expected in March 2015.
- 1.13 Eighteen H&S Audits were carried out during the Quarter, in accordance with the Health and Safety Assurance audit schedule. No audits were overdue. All audit Corrective Action Requests (CARs) raised in the period were closed on time.
- 1.14 An emergency exercise (Operation Dragon) involving the Crossrail Directors (the Gold Response Team) was run to test how the Crossrail plan would be put into operation. The exercise simulated the response to successive major incidents occurring at the same time on 2 contracts.
- 1.15 CDM verification activities have continued to be carried out across the project to ensure continued compliance with CDM regulations. No major concerns were identified. A programme of briefings is being delivered by the CDM Integrator for Project managers and their teams on the changes to the CDM Regulations.
- 1.16 The Frontline Leadership Programme (FLP) continues to recruit supervisors and appropriate mentors from the Principal Contractor population to improve their leadership skills. A target of an additional 100 individuals has been set for this year and it remains on target to be achieved. At the end of November 2014 an additional 85 delegates had been enrolled for this year with 77 already commenced.
- 1.17 An Environment Health Subgroup was held where an overview of the Crossrail Supplier Performance Assurance (SPA) programme was provided

focusing on its links to construction noise and vibration management and 'world class performance'. SPA provides a platform for contractors to differentiate themselves in terms of innovation, sharing of good practice and generating a legacy for improved performance and there were presentations from some of Crossrail's contractors, setting out the measures they have put in place.

- 1.18 There has been a further improvement in the performance of contractors against the construction energy target of 8 per cent reduction increasing from 9.9 per cent in Quarter 2 to 12.5 per cent this Quarter.

Areas for Improvement in the Quarter

- 1.19 There will remain a continued focus on noise management, including encouraging contractors to achieve "world class" levels of noise management as defined in the supplier performance process. Noise management remains an important issue during 2014/15 because of the use of extended hours and night time working at some locations.
- 1.20 The upgrade of the project's Smartwaste tool for collecting data on waste and excavated material is continuing. This will make it easier to report on the destinations for reuse and recycling of construction waste.
- 1.21 An improvement in incident figures relating to slips, trips and falls is expected following the focus on them in this Quarter.
- 1.22 A common, generic Crossrail induction is currently in development. This will be aligned to the revised Target Zero program and Golden Rules. This will be launched at the start of April 2015.
- 1.23 A schedule of Assurance Assessments covering Drugs and Alcohol testing of lorry drivers by contractors will be delivered. This will include the testing arrangements, action to be taken in the event of a failure and awareness of the Drugs and Alcohol Policy by hauliers.
- 1.24 Assurance Assessments on Fire Safety Arrangements of Principal Contractors will commence in Quarter 4. The assessments will be carried out by the London Fire Brigade Crossrail Liaison Officer and will continue into year 2015/16. The Crossrail Fire Safety Best Practice Guide will be issued in the Quarter to all project teams and contractors.
- 1.25 The final report on the Dust and DEEE research will be published.
- 1.26 Dates for the submission of designs for Bond Street, Farringdon and Woolwich stations for BREEAM assessment to be confirmed.

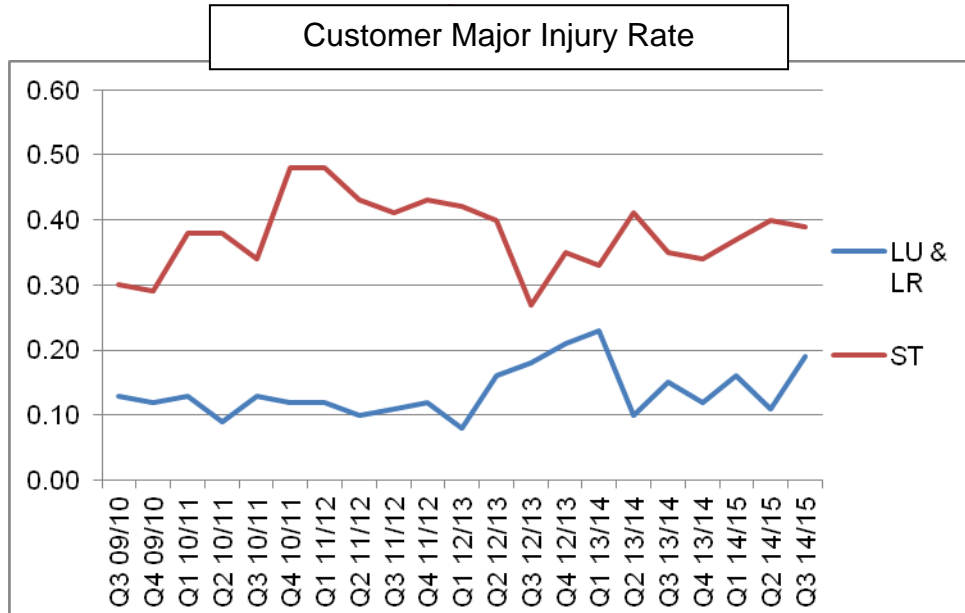
2 Major Incidents

2.1 There were no major incidents in Quarter3.

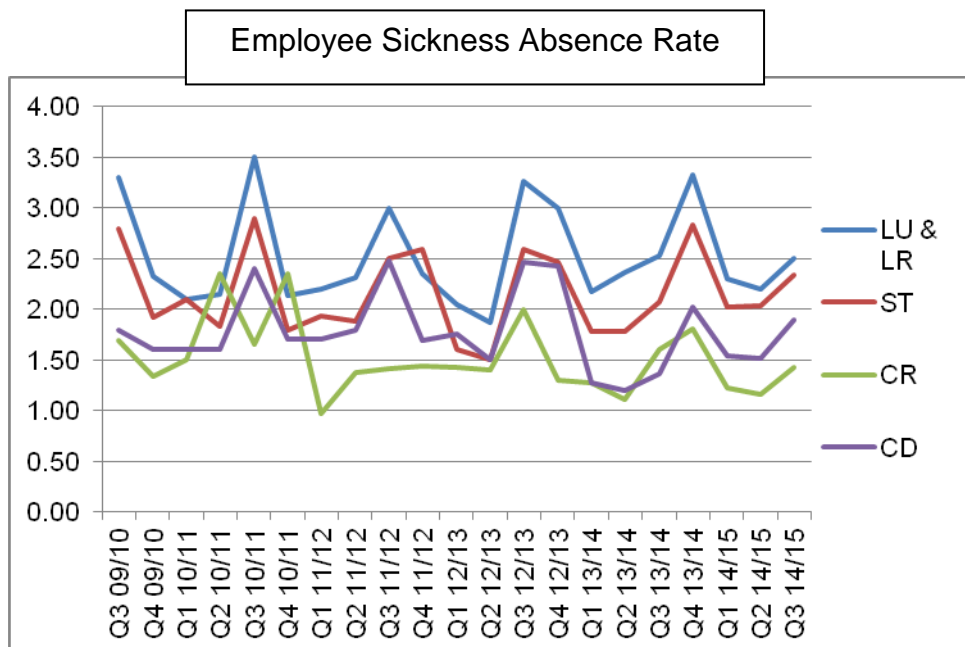
2.3 Outside of the reporting period, the Coroner's inquest into the fatality of a concrete sprayer (Rene Tkacik) that occurred on 7 March 2014 at the Crossrail Fisher Street site took place on 23 February 2015. The jury ruled that the death of Rene Tkacik was accidental. The Coroner would not be issuing a Prevention of Future Death Report.

Statistical Appendix

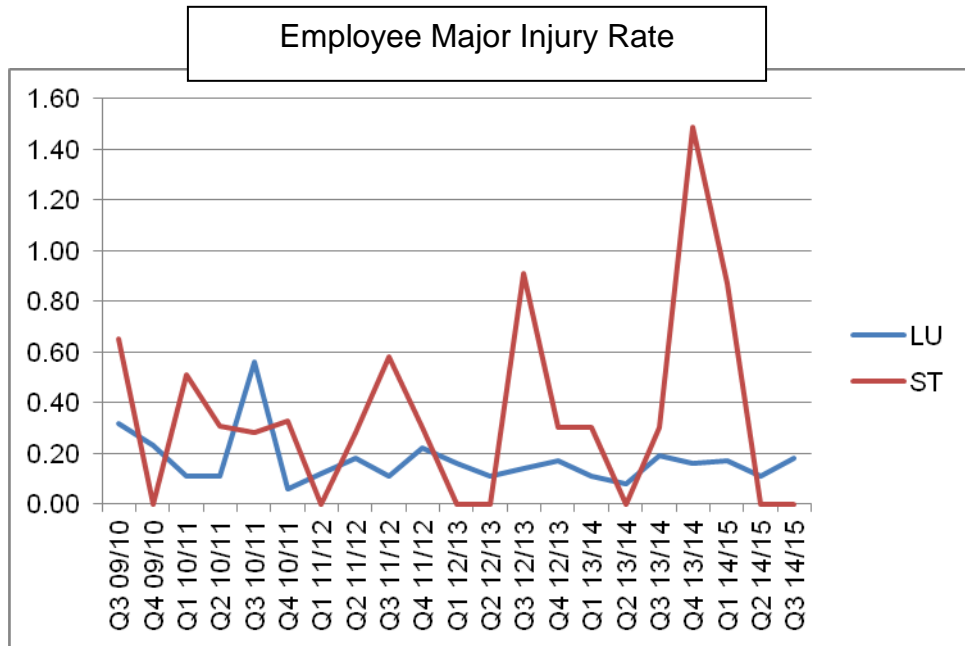
Quarterly Health, Safety and Environment Report 2014/5 Q3



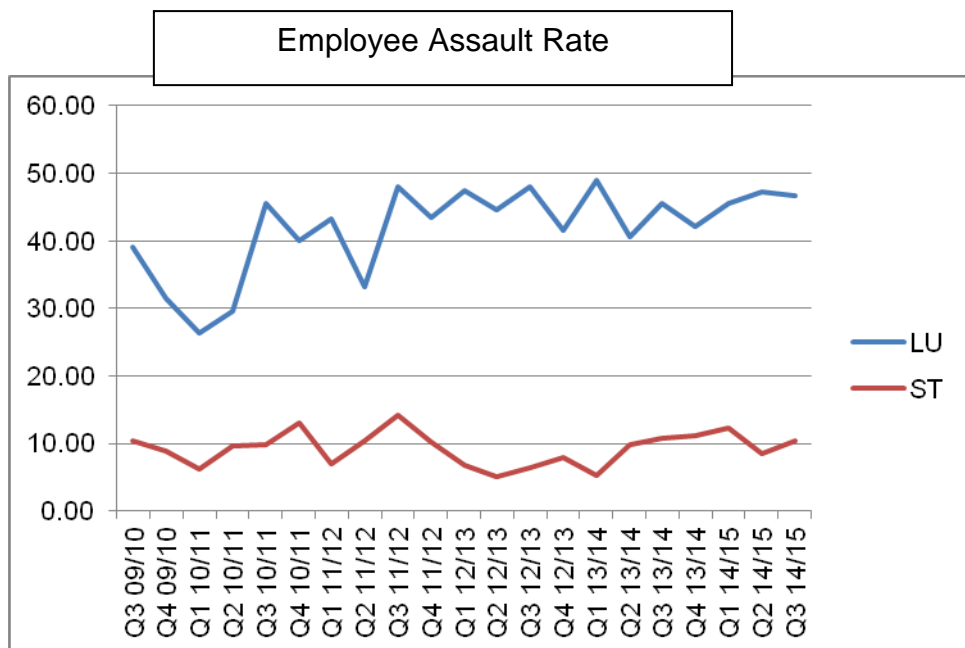
This chart provides the rates for Customer Major Injuries in Rail and Underground and Surface Transport, per million customer journeys. There is a slight drop for ST, but a larger rise on LU; there is no particular trend.



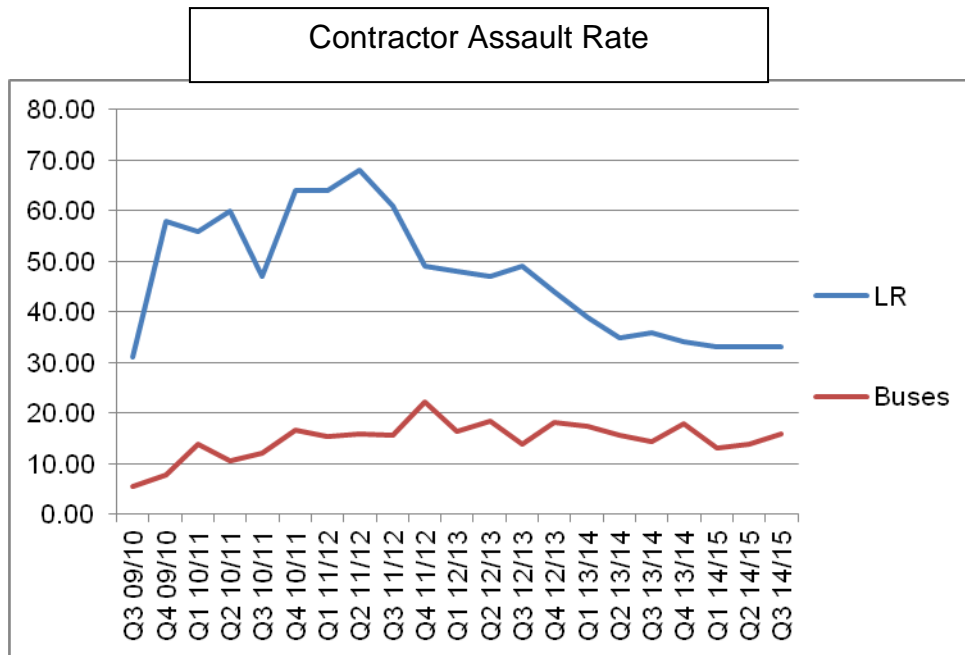
This chart provides the details of sickness absence per 1000 employees. As has been the case for a number of years there is clear seasonal pattern. The rates within the 4 businesses show a relatively consistent rank order too. The most common causes of staff sickness absence were Coughs and Colds, Gastrointestinal and Musculoskeletal.



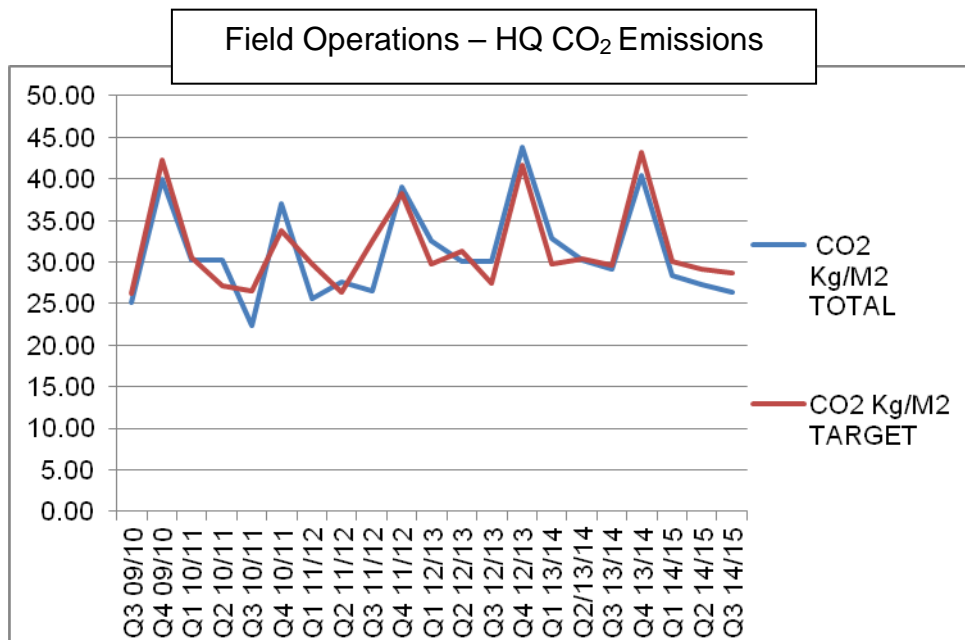
This chart provides the rate of major Injuries per 1000 employees. This is a rate per Quarter, and is not a moving average. As can be seen where there are no Major Injuries in a Quarter 3 is a zero rate. As the employee numbers are smaller in ST, there is a greater volatility. The previous Quarter saw a particular rise in ST, but this has seen a significant drop. LU remains relatively constant.



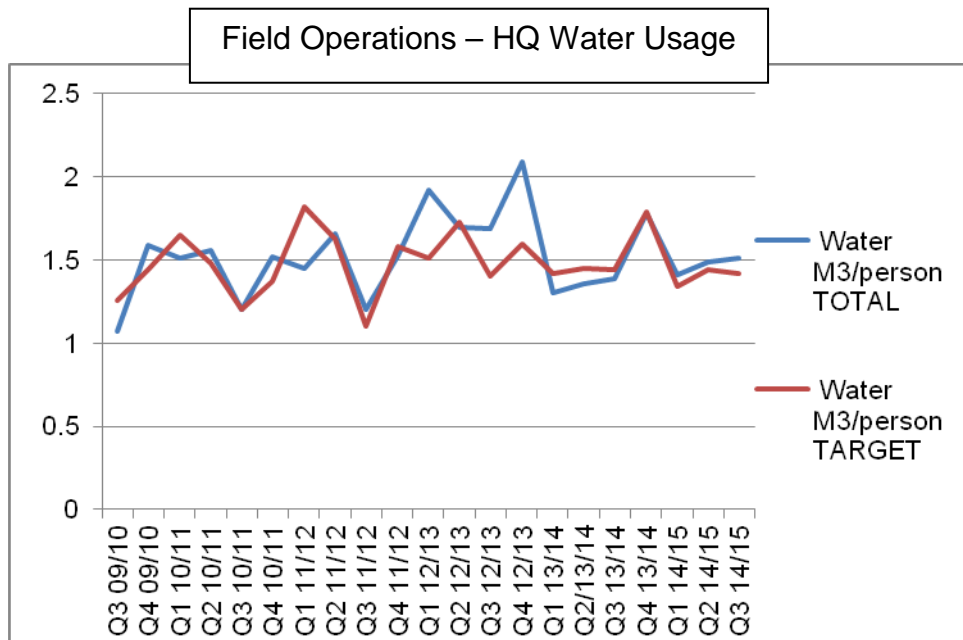
This chart shows employee assault rates per 1000 staff, for Surface Transport and London Underground. The main difference in the rates is explained by a significantly higher rate reporting of verbal assaults in LU. The more recent trend for LU has shown a small rising trend, with a slight drop this Quarter, ST showed a slight rise.



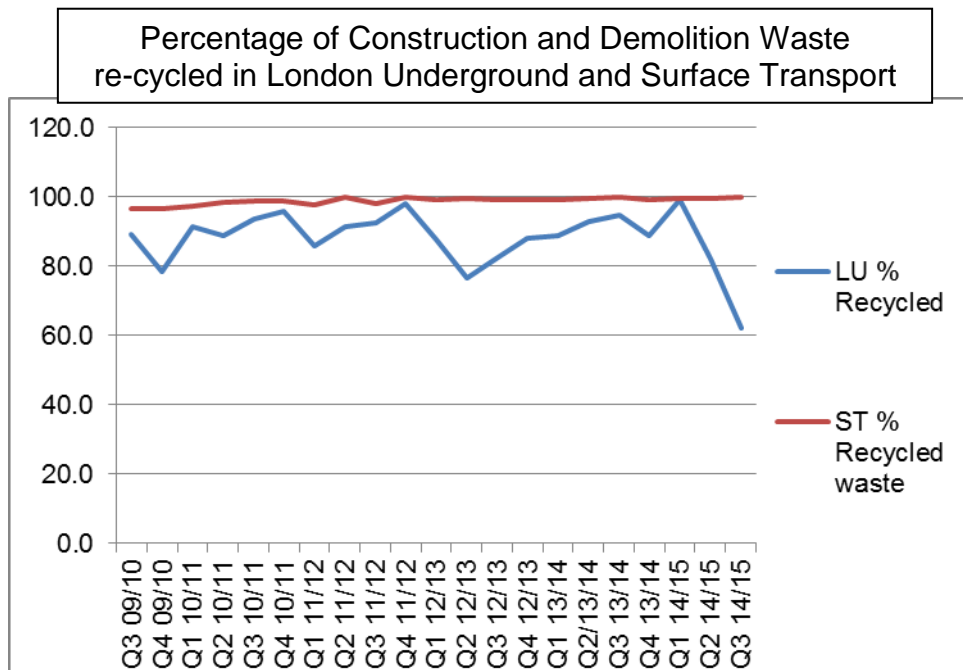
This chart shows the rates for Assaults (both physical and verbal) per 1000 Contractors. These staff are primarily those in London Rail (with those involved in revenue protection a significant proportion) and London Buses (primarily the Bus Operators), where most customer facing staff are contractor staff. The reporting of verbal assaults is known to be much higher in London Rail businesses, than it is in Surface Transport. LR is steady, while ST shows a slight rise.



This chart shows the carbon emissions at the HQ buildings that make up the TfL estate, and over which we have direct control. They are measured in Kg of CO₂ per square metre. As might be expected there is a clear seasonal trend. The targets are also shown, and for the sixth Quarter running the actual emissions were below target.



This chart shows the water usage measured in cubic metres measured against the numbers of persons in the various TfL HQ buildings over which we have control. The targets which have been set are also shown, and in the Quarter actual water use per person was above the target for the third period



This chart shows the percentage of construction and demolition waste recycled in London Underground and Surface Transport. The amount can vary significantly depending on the nature of the work undertaken in the quarter, so the rate of recycling has been provided. Recycling rates in LU show a further significant fall this quarter. This is in part due to legal changes in what can be recycled which we reported before, and in part due to lower level of C and D waste this quarter which are normally a significant proportion of the total wastes.