

Date: 18 December 2014

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 2 of the 2014/15 Planning 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

Contact Officer: Martin Brown, Head of HSE Rail and Corporate
Number: 020 7027 8904
Email: Martinbrown@tfl.gov.uk

Rail and Underground

Quarterly Health, Safety and Environment Report

1 Summary

What went well

- 1.1 The safety environment and health performance indicators are made up from 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 exceptions of those noted below.
- 1.2 The LU Supplier HSE web site and Handbook was launched on the TfL internet. <http://www.tfl.gov.uk/info-for/suppliers-and-contractors/>. The site contains information aimed at helping suppliers work safely on the TfL network and promote sharing of good practice.
- 1.3 LOROL was presented with the 'Safety Award' at the National Rail awards for reducing passenger accidents on the London Overground by 70 per cent since 2010. Judges applauded LOROL for its committed and proactive approach that has significantly reduced passenger slips, trips and falls on the London Overground. There has been one major or reportable injury on the London Overground network for 6 Periods as explained in paragraph 2.2 below.
- 1.4 The number of signals passed at danger (SPAD) on LU due to train operator error continued to reduce (from an average of 40 per period to 35 per period), contributing factors are an improving performance on the District and Metropolitan lines and conversion of the Northern line to a full Transmission Based Train Control (TBTC) signalling system. There were two aggravated SPADs recorded during the quarter where a train continued without authority. The train continued at caution speed.
- 1.5 There were two LOROL SPADs, both due to driver inattention. However the year or year total remains below last year's figure, and the increased training and briefing efforts appears to be having a positive impact.
- 1.6 The rate of LU customer significant injuries, as defined by the Reporting of Diseases and Dangerous Occurrences Regulations (RIDDOR) remains stable and has significantly reduced over the last year (from around 80 per period to around 15 per period). These incidents were formerly classified as customer major incidents, however the regulatory definition was revised and this metric has also changed in line with the regulatory measure. Slips, trips and falls continue to be the main cause at 77 per cent of incidents, caught in

or trapped by equipment e.g. train doors are the next significant contributor at 11 per cent of incidents). All significant customer injuries are investigated to identify root causes and identify mitigating measures. Customer safety awareness campaigns continue to run across the LU/LR network aimed at reducing rushing, late boarding/alighting of trains and taking care on escalators. The locations where these campaigns are run are also being reviewed to ensure maximum effectiveness.

- 1.7 At quarter end, there had been seven consecutive periods without a RIDDOR Dangerous Occurrence in DLR. London Overground's project work had no major injuries in the quarter. During this quarter there were no major injuries to staff, passengers or members of the public in Trams. A member of Trams staff may have developed occupational dermatitis, and this is subject to further investigation with TfL Occupational Health.
- 1.8 All safety tours and planned general inspections scheduled in the quarter were completed.
- 1.9 The LU Capital Programmes directorate lost time injury (LTI) rate continued to fall this quarter and is down to 0.24 from 0.28 LTIs/100,000hrs over the past year. Improvements have been seen over the last four quarters. The main causes of incidents are failure to follow procedures and lack of hazard identification. Contributions to this reduction include focusing on a smaller number of key items; continuing to focus on improving hazard perception and identification through further training and coaching. Overall improvements in the safety culture are being pursued through increase staff and supplier engagement via HSE Forums and Site Person in Charge Forums. Although the trends are improving further work is required as they remain above our overall aim of 0.2 LTI/100,000 hrs.
- 1.10 The London Overground Behavioural Safety Strategy continues to embed across the supply chain. At New Cross Gate Depot, C Spencer has adopted a weekly safety award which has resulted in improved safe behaviours and awareness across the workforce. Other suppliers across London Overground have subsequently adopted similar initiatives.
- 1.11 The LU 'Step It Up' physical activity health promotion pilot continued. The pilot's key message is to undertake 150 minutes of exercise per week. Over 1000 employees in the main office buildings have signed up to the programme. The key theme for this quarter was cycling with a London by bike seminar for novice and experienced cyclists and a cycle to work day held. Other 'Step It Up' activities included a boot camp and promoting stair use at Palestra, rather than the lifts.
- 1.12 The annual 'flu vaccination programme began and continues until to 23 December.
- 1.13 LU are participating in the Health and Safety Executive's Otoacoustic Emissions (OAE) research. The hearing loss that can occur in response to excessive exposure to noise in the workplace is permanent. Therefore, health

surveillance has an important role in trying to prevent this. The standard technique for monitoring hearing as part of health surveillance, (puretone audiometry), only detects changes once hearing loss has occurred. The measurement of OAE from the ear is a simple, quick technique that may be useful in picking up early changes in hearing function before hearing loss occurs. Detection of early markers of hearing damage may be more useful in preventing permanent irreversible effects. Twenty two apprentices have volunteered to take part in the study, which will monitor their hearing using OAE via hearing health surveillance checks.

- 1.14 Hand arm vibration health questionnaires were distributed to those working with vibration tools in LU's Track Delivery Unit and Maintenance Infrastructure Services. All hand held vibrating equipment was fitted with Reactec monitors which calculate individual staff exposure. Follow up visits are planned to help develop the vibration reduction strategy.
- 1.15 LU again recycled and recovered 99 per cent of station and depot waste. This exceeds the 2014/15 recycling target of 96 per cent. LU recycled 75 per cent of hazardous waste which is close to the 77 per cent achieved in 2013/14. The Construction and Demolition recycling rate was 95 per cent.
- 1.16 Studies to examine the feasibility of installing additional generation capacity 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 now progressing with the GLA and Royal Borough of Greenwich to develop the heat network which will use the heat supplied from Greenwich.
- 1.17 TFL has appointed a supplier under the RE:FIT framework. Work is now underway to develop and agree energy conservation measures at the head office, LU and Surface Transport buildings within scope, with on site works scheduled for early 2015.
- 1.18 LU's 2014/15 "Noise and Vibration complaints - works" target is 0.65 complaints per 100,000 hours worked. The noise complaint rate this quarter is 0.47 complaints per 100,000 hours worked, which is within target. Work is continuing via tool box talks, safety hours and special noise reduction briefings in affected work areas to reduce these further. In addition there were only seven complaint related to noise from station PA announcements. This is a significant reduction on 17 received last quarter. Extensive noise monitoring in relation to S-Stock deliveries to station leading to the need for implementation of noise barriers at West Ruislip station were completed.

Areas for improvement

- 1.19 There was one significant environmental incident due to non-conformance of water testing at BCV/SSL depots where zinc entered the drainage system. The results from the latest discharge consents monitoring are awaited to confirm the issue is resolved. Observations of cleaning tasks are on-going at

Upminster and Stratford depots to identify potential reduction of zinc entering drainage. In the meantime a long-term solution of use of filters is being sourced.

- 1.20 LU was served with an enforcement notice regarding nuisance from pigeons at East Acton Road Bridge. Liaison took place with authorities for an extension to the notice to allow repairs to take place.
- 1.21 There were three customer suicides in the quarter.
- 1.22 The number of LU platform train interface PTI incidents reduced over the last two periods of the quarter. The reduction was as a result of a reduction in falls between the platform and person caught in train doors. The majority of incidents continue to be as a result of persons caught in train doors as they board or alight the trains, (57 per cent of incidents). Customer awareness campaigns and PA announcements aimed at reducing rushing continue. Overall the number of falls between the train and platform has increased due to the changing Platform Train Interface profile on the sub-surface railway as a result of the legislative requirement to introduce new level access rolling stock, (31 per cent of incidents). Short term staffing mitigations continue to be implemented, with a longer term programme of nosing stone and track adjustments identified.
- 1.23 There were three employee and two contractor specified injuries in the quarter across LR/LU, a reduction of four compared to last quarter. Go Look See investigations are scheduled where the incident is reviewed and action taken to prevent reoccurrence.
- 1.24 A purlin (roof support beam) slipped from a fibre sling and fell approximately seven metres at the Beckton Depot extension site. This followed an unauthorised change in the lifting arrangements, and a single sling rather than a double sling was used for the lift. A number of recommendations have been implemented by the Principal Contractor.
- 1.25 143 objects dropped onto the track were reported in the quarter involving a mobile phone, contributing to 34 per cent of the overall objects dropped onto the track. Roll out of the tool to safely remove mobile phones from the track continues.
- 1.26 The number of Lost Time Injuries attributable to LU operations increased in the quarter. The majority were as a result of work-related violence (34 per cent) or witnessing a traumatic incident (23 per cent). Support from the Occupational health department is provided and actions to mitigate incidents are as described above. The number of lost time injuries as a result of slips, trips and falls has increased over the last year. Go Look See investigations are undertaken to review root causes and identify further mitigation.
- 1.27 LU's CO₂ emissions from electricity were 140k tonnes, 14 per cent higher than the equivalent period of 13/14. As with last quarter this is largely driven

by increased carbon intensity of national grid electricity in this reporting year. Normalised CO2 emissions for the quarter were 57.8 g.

- 1.28 There were 156 environmental complaints compared to 120 in quarter 2 last year. The main causes were asset and contractor noise and vibration (53 per cent).
- 1.29 The number of staff not attending medical advisory appointments is improving but further work remains to be done. Levels of non attendance range between 5 and 13 per cent of appointments, with an overall aim of 10 per cent. This improvement has resulted from the occupational health team working more closely with the business to understand the impact of non attendance and issuing more regular reports detailing non attendance.

Key deliverables in the next quarter

- 1.30 There were two attempted cable theft robberies at the Trams Therapia Lane Depot. The police have increased patrols around the vicinity of the Depot, security reminders have been given to staff and the security at Tramlink House has been increased.
- 1.31 The benchmarking exercise undertaken by LU into how other organisations (rail and non-rail) manage common safety incidents such as slips, trips and falls will be completed.
- 1.32 To assist employees who are absent due to mental illness a trial of “mindfulness” started in the quarter. This approach helps people to think differently about experiences which reduces stress and anxiety. The results of this trial will be evaluated next quarter with a view to embed the approach as part of resilience building work.
- 1.33 The trial of occupational health night clinics will be completed and evaluated to confirm whether they will become business as usual from 2015/16.
- 1.34 An initial report will be produced into the research into fatigue caused by shift work, which TfL has been leading in conjunction with the supplier for the Bank redevelopment and Crossrail.
- 1.35 The focus in DLR in Q3 will be the continued preparation for the mobilisation of the new franchisee, Keolis-Amey Docklands (KAD), and the hand-back of the current franchise from a safety, security and environmental perspective, which will be on 7th December. The current arrangements for internal project assurance will be subject to a review. Further strengthening of the existing processes for managing activities on the railway will be undertaken.
- 1.36 The London Rail businesses will be finalising their annual Safety Improvement Plan for 2015, as the plans run in line with the Calendar year to align with the National Rail plans. LU will be developing theirs too, though finalisation will be later.

- 1.37 London Overground and LU will begin working on a review project to align station emergency evacuation and control plans at all stations where both services call. This will allow better communications between the stations and relevant line controllers in emergencies and to ensure that the plans are both well understood by staff and are capable of being put into operation rapidly and with minimum customer disruption.
- 1.38 During period 6, Trams announced its intention to transfer the responsibilities for tram maintenance from the existing contractor into TfL. Trams will be carrying out a programme of works and checks to ensure that this takes place with as little change to working procedures as possible. The change will be preceded by a period of 'transition running' where Trams will be working alongside the existing contractor. A series of independent assurance checks will take place during that period to ensure all safety related controls are in place prior to the transfer on 7 December 2014.
- 1.39 Following a Human Factors review of the positioning of door buttons on the new Stadler trams, work is due to commence on modifications to reduce the likelihood of operators opening the doors on the wrong side, by repositioning the buttons.

2 Major Incidents

- 2.1 There were no major incidents on LU in the quarter.
- 2.2 There was one customer fatality at Hampstead Heath London Overground station. A customer rushing for a train, which was about to leave, tripped down the stairs and hit his head on the central handrail. The customer suffered a head injury and died several days later. The Coroner's report is awaited.

Surface Transport

Quarterly Health, Safety and Environment Report

1 Summary

- 1.1 The Quarterly Health, Safety and Environment Report summarises: what went well, areas for improvement for the last quarter and key deliverables for next quarter in Surface Transport.

What went well

Road Safety

- 1.2 Provisional data for quarter two of 2014/15 shows that 527 people were killed or seriously injured (KSI) on London's roads. This is 40.9 per cent below the 2005-2009 baseline for quarter two and the lowest level of KSIs on record for quarter two. The full year forecast for 2014/15 is a reduction in KSIs of 38.7 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.
- 1.3 Despite positive reductions in KSIs on London's roads, future increases in traffic, the number of journeys cycled and walked, and increases in London's population mean that sustaining this level of safety improvement over the period to 2020 remains an ambitious challenge.
- 1.4 In July, TfL hosted a joint road safety conference with the London Road Safety Council entitled Safer Streets: Our Shared Journey. The successful conference included presentations from Stephen Hammond MP, Deputy Mayor for Transport, Isabel Dedring and the Managing Director of Surface Transport, TfL, Leon Daniels.
- 1.5 The event also marked the publication date of the Pedestrian Safety Action Plan (PSAP). The PSAP was made available for public comment on 31 March, for a period of six weeks. TfL received over 100 comments on the draft document which have been reflected in the final version.
- 1.6 Recent work to collect and verify speed limit information across London has enabled a digital speed limit map to be published on the TfL website, making the full speed limit dataset available to developers and mapping providers. GPS device manufacturers are being encouraged to take full advantage of this resource, which will help to improve road safety in the Capital. This is part of TfL's open approach to data provision, to ensure easier access to the latest information on collisions and casualties in London.
- 1.7 TfL has also been able to introduce 20mph speed limits on two corridors on the TLRN in the City of London in July 2014. The two corridors – incorporating both London Bridge and Blackfriars Bridge – have been introduced on an 18 month trial basis.

- 1.8 A new “Share the Road” television campaign encouraging greater empathy between road users was launched. This campaign is intended to make a significant contribution to changing road user behaviour in London. The campaign was conducted in two parts; the first part over the summer period was predominately a television and social media campaign, the second campaign in the autumn also including cinema showings, the three social media channels alone generated considerable interest Facebook registered 2.8 million views with Twitter hitting 1 million views and BuzzFeed a further 82,000 views.
- 1.9 TfL ran a non-statutory consultation on the Safer Lorries Scheme from 29 July to 22 September. The scheme will require every vehicle in London over 3.5 tonnes to be fitted with side guards and Class V and VI mirrors, giving the driver a better view of cyclists and pedestrians around their vehicle and further improve road safety.

Operational Safety

- 1.10 A feedback session with key stakeholders through the Vulnerable Person Working Group shows that the implementation of cash-free operation on buses has not caused any significant issues and commended TfL for the way the transition was handled. The overall conclusion from the detailed review and from key stakeholders was that the transition to cash-free operation had gone remarkably smoothly with very little negative comment or impact. The Cash-free Implementation Project was the runner-up, with a Sliver Award, for the Innovation Category at the UK Bus Awards on 18 November.
- 1.11 A new Health and Safety Scorecard was introduced aimed at providing additional monitoring capabilities on progress towards the principal strategic outcomes from a health and safety perspective. The scorecard metrics are drawn from activities identified as enabling strategic outcomes and other areas where further improvements are being actively sought. Directorate level scorecards which will augment the Surface H&S scorecards and further enhance H&S performance monitoring are being finalised.
- 1.12 The Surface Transport Health and Safety Scorecard includes leading and lagging indicators which are aligned with the four TfL Pillars (People, Value, Customer and Delivery), and consist of 27 metrics. The Surface Board monitors the organisation’s strategic performance at the end of each period and individual directorates will undertake similar monitoring at an operational level once directorate scorecards are fully implemented during quarter three.
- 1.13 The 2014/15 assurance audit programme continues with 31 per cent completed against a plan of 32 per cent at the end of quarter two. The programme which includes all bus operators seeks to fulfil over 350 checking activities with significant ones forming part of the TfL Integrated Assurance Plan. To date, the programme has not identified any major concerns internally and within the Surface Transport supply chain.
- 1.14 At the end of the quarter, the rolling 13 periods shows that 99.6 per cent of Category 1 defects on the Transport for London Road Network (TLRN) were made safe within 24 hours compared with a target of 98 per cent. Category 1

safety defects are those defects identified on the TLRN that pose an immediate risk to our customers and TfL is required to make-safe or temporarily repair those defects within 24 hours of identification.

- 1.15 The trial of optical and radar technology on buses in collaboration with two providers and bus operators was completed in October. TfL await the final report from the Transport Research Laboratory

Enforcement, Safety and Security

- 1.16 The Commercial Vehicle Unit and Industrial HGV Task Force (IHTF) continue to work to combat the threat of non-compliant and dangerous commercial vehicles by undertaking targeted roadside enforcement activities. Since the beginning of operations in October 2013 the IHTF has stopped over 3,400 vehicles resulting in a 'satisfactory' stop rate of 26 per cent. This means that 74 per cent of vehicles stopped by the IHTF were found to be non-compliant. 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. HGVs make over 2.5 million km of journeys on London's roads every day. TfL is working with Driver Vehicle Standards Agency and the MPS to better identify compliance rates amongst the wider freight population.

Occupational Health

- 1.17 At the end of the quarter, a total of 6,009 working days were lost to employee sickness. This is equivalent to an average of 1.75 per employee, a level broadly consistent with the previous quarter when it was 1.79 and the corresponding quarter of 2013/14 when the average was 1.78. However, Surface Transport is monitoring an increase in recent periods through the pan-TfL Health Improvement Plan (HIP) meeting process.

Transport Accessibility

- 1.18 The number of bus stops which are fully accessible is now at 78.6 per cent. This achievement puts TfL on track to meet a target of 81.9 per cent for all stops being accessible by March 2015. The bus stop improvements are being funded through the Bus Stop Accessibility programme, which will see £18m invested across London to make 95 per cent of bus stops fully accessible by the end of 2016.
- 1.19 The introduction of a new Safety Code for Street Works and Road Work has strengthened TfL's monitoring of works being undertaken on Transport for London's Road Network (TLRN) which includes the use of CCTV and on-site inspection. This will ensure that those undertaking works take into account the needs of children, older people and disabled people, having particular regard for visually impaired people. The new mandatory code requires the provision of a suitable barrier system that safely separates pedestrians from hazards and provides a safe route suitable for people using wheelchairs, mobility scooters, prams or pushchairs.

Environment

- 1.20 The London Low Emission Zone (LEZ) Phase 4 sees 96.7 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 per cent of larger vans and minibuses compliant compared with a target of 95 per cent.
- 1.21 A project to trial all-electric single-deck buses in London has seen the number of electric buses increased from two to six following the deployment of four Optare MetroCity vehicles on route H98. A further two Optare electric buses are scheduled to come into service on route 312 in quarter three.
- 1.22 As part of a second demonstration project, TfL has placed a contract to demonstrate high-power inductive-charging for three range-extended diesel-electric hybrid buses in east London. The new Alexander Dennis E400 buses will operate on route 69 between Canning Town and Walthamstow bus stations and be specially fitted with equipment that enables on-board batteries to receive a rapid charge at bus stands. The potential of the buses to operate in all-electric mode for a significant period of passenger service time will then be assessed in conjunction with all-electric bus options. The capital and maintenance costs are part funded by the European Commission.

Areas for Improvement

Operational Safety

- 1.23 There was a rate rise in employee assaults, from 13.18 assaults per thousand employees to 13.84. The increase has been attributed to the rise in reported verbal abuse in the quarter following work to encourage frontline staff to report all cases of aggression towards them. Efforts to monitor these incidents and provide target interventions in Buses and Enforcement and On-Street Operations departments continue. The Workplace Violence Unit continues to work with the Metropolitan Police to detect and prosecute people who attack transport workers.
- 1.24 The number of public transport passengers (mainly buses) reporting injuries which require hospital attendance (including as a precaution) increased slightly from 0.37 incidents per million passenger journeys to 0.40. A total of 333 incidents were recorded in the quarter, up from 310. Most injuries were due to bus passenger falls. A bus safety campaign aimed at reducing falls on the buses was restarted in August 2014 using roadside locations and visible information materials inside buses.
- 1.25 The covert Driver Quality Monitoring (DQM) on the bus network in September shows a network score of 7.78, a figure marginally above the year to date average of 7.73 (a low score is better). Buses will continue to monitor the trend which has been stabilising following a fundamental change to the monitoring process in April 2014. The results of DQM are provided to individual bus operators who take corrective actions as appropriate.

Transport Accessibility

- 1.26 The Mobility Aid Recognition Scheme enables users of suitable mobility scooters to access the bus service. In quarter two, 33 enquiries were received about the Scheme and a total of 24 Mobility Aid Recognition Cards were issued. TfL plans to use targeted promotion of the scheme in the coming quarters to further increase take up of the scheme.
- 1.27 Bus routes 234 and 284 currently include hail and ride sections, which cause difficulties for mobility impaired passengers (disabled and parents with young children) due to the buses not being able to pull up next to a suitable section of kerb. Work is therefore due to commence this year and completed in 2015/16 to replace the hail and ride sections for these two routes with fixed stops, which meet TfL's accessibility criteria, thereby ensuring the services are easy to use for everyone.

Key Deliverables in Quarter 3

Road Safety

- 1.28 Provisional road safety casualty statistics for quarter two of 2014 will be published on TfL's website in quarter three. Finalised casualty figures for 2014 are scheduled for publication in spring 2015.
- 1.29 The Road Safety Annual Report will be published in the quarter. The report will include detailed casualty statistics from 2013. It will also report 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.
- 1.30 The Cycle Safety Action Plan (CSAP) is due to be published in the quarter, following public consultation over the summer. Its publication will follow that of the Pedestrian Safety Action Plan and Motorcycle Safety Action Plan earlier this year, to complete the suite of vulnerable road user safety.
- 1.31 Following the closure of the consultation for a Safer Lorries Scheme, TfL and London Councils will undertake a statutory consultation on the draft Traffic Order Regulation (TOR) required to enable the implementation of the scheme

Operational Safety

- 1.32 The work to develop and roll out an awareness training resource for bus drivers on vulnerable road users continues. The additional resource will include a series of short films showing driver behaviour and human factors. The main objective is to create a lasting safety culture through self awareness, self policing and a shared desire to reduce road traffic incidents. The training has been produced using published psychological research and established conclusions about driver behaviour.

2 Major Incidents

- 2.1 The driver of a private car was fatally injured in collision with a route 130 on 3 August on Homestead Way, Croydon. A preliminary investigation has not attributed any blame to the bus driver. The incident continues under investigation.
- 2.2 The investigation of the previously reported fatal incident where a route 410 bus collided with a male cyclist pedestrian in November 2013 on Cherry Orchard Road, Croydon, revealed that the cyclist fell from his bike when its wheel got caught in tram tracks embedded in the roadway before falling from the bike and into the path of the bus. The investigation has not attributed any blame to the bus driver. The Coroner's Inquest has recorded a verdict of 'road traffic collision' and recommended that Croydon Council undertakes a comprehensive review of the provision for cyclists at the junction of Cherry Orchard Road and Addiscombe Road and on the tram system.

Crossrail

Quarterly Health, Safety and Environment Report

1 What went well

- 1.1 There was good progress against our Health and Safety Objectives for 2014/15.
- 1.2 17 contracts out of 18 (94 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 quarter, exceeding our associated corporate objective of 85 per cent.
- 1.3 At the end of the quarter, the RIDDOR Major Injury Accident Frequency Rate (AFR) was 0.07. This is an improvement of 50 per cent on the end of year (Period 13) rate of 0.14.
- 1.4 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.
- 1.5 The Lost Time Case (LTC) AFR was 0.31 at the end of the quarter. This equated to a 37 per cent reduction on the Period 13 (2013/2014) rate of 0.49 and is therefore on track to meet the corporate objective for 2014/15 of a 40 per cent reduction (target rate of 0.30).
- 1.6 The Crossrail 'Have Your Say Survey' was rolled out during Period 6. This survey provided all who work on Crossrail the opportunity to express their views on health and safety in their work environment. There were 4,320 responses received. The results will be used to review our current health and safety arrangements and drive future improvements.
- 1.7 Reviews were undertaken to identify future risks and required controls for the railway and station fit-out works. This included a provisional review of the Crossrail Golden Rules which will be updated and re-launched to reflect the risks identified.
- 1.8 The Fatigue Research collaboration with TfL continues, with data gathered on two Crossrail contracts. The final report is expected in Quarter 3.
- 1.9 Dust and Diesel Engine Exhaust Emissions (DEEE) research continued in the tunneling environment with sample collection scheduled to be complete by the end of the calendar year.
- 1.10 Eighteen Health and Safety Audits were carried out during the quarter, in accordance with the Health and Safety Assurance audit schedule. No audits

were overdue. Audit topics in the past quarter included management of plant and equipment, management of work equipment and HAVS (Hand Arm Vibration Syndrome), electrical safety, lifting operations and lifting equipment, pressure systems and compliance with BS6164 “Code of Practice for Health and Safety in Tunneling”. All CARs raised in the period were closed on time.

- 1.11 The programme of Assurance Assessments, (previously referred to as Surveillance Checks) continued in the quarter. A series of Assurance Assessments covering Behavioural Based Safety was carried out on 9 Principal Contractors. All Contractors were able to demonstrate the existence of Behavioural Based Safety programmes and many good practices were observed.
- 1.12 One Business Continuity desktop emergency exercise was completed in Quarter 2. This was selected with the project teams to simulate significant unplanned incidents and formulate appropriate response arrangements. An emergency exercise involving the wider Crossrail Gold Response Team, “Operation Dragon”, is scheduled to take place in Quarter 3.
- 1.13 CDM verification activities have continued to be carried out across the project to ensure continued compliance with CDM regulations. No major concerns were identified. In addition, assurance assessments were carried out on Canary Wharf Group, Thames Water Ltd, Network Rail and London Underground who are acting on behalf of Crossrail as CDM Elected Clients on various aspects of Crossrail works. All assessments showed compliance with CDM requirements.
- 1.14 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.
- 1.15 Supplier environmental performance appraisals were completed. There was an overall improvement in performance, with more contractors entering the “beyond expectations” level of performance. There was also an increase in the number of contractors showing areas where their performance was achieving world class levels (e.g. in air quality, waste management, energy management, noise management, and training and awareness of staff). There were very few areas of non-compliance.
- 1.16 Improvement in noise management has been an area of focus for the last 6 months. A detailed matrix which sets expectations for world class noise and vibration performance was prepared and contractors were encouraged to implement improvement plans. Three contractors demonstrated they were achieving world class performance in the supplier performance process.
- 1.17 There has been a significant improvement in the performance of contractors against the construction energy target of 8 per cent reduction, with 16 contractors now providing robust models and an overall predicted energy reduction of 9.9 per cent by the end of the programme.

2 Areas for Improvement in the quarter

- 2.1 An upgrade of the project's Smartwaste tool for collecting data on waste and excavated material is being undertaken. The upgrade will make it easier to provide updated information and reporting on the destination of Crossrail's excavated material. The upgrade will also make it easier to report on the destinations for reuse and recycling of construction waste.

3 Key Deliverables in the next Quarter (Q3 – 2014/15)

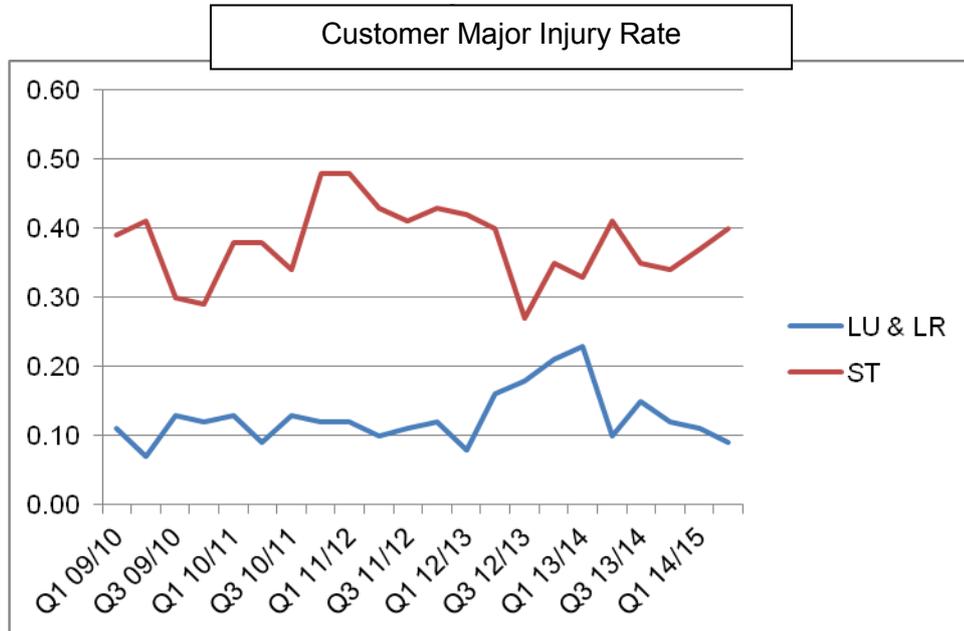
- 3.1 Crossrail Stepping Up Week 4 will take place from 13th – 17th October 2014. The programme includes 27 bespoke health and safety schedules, each containing a 'Leadership Message' at the start and end of the week and activities focused on site-specific risk areas and improvement opportunities.
- 3.2 The analysis of the Crossrail 'Have Your Say' survey will be undertaken and communicated across the programme. Crossrail-wide and site specific reports will be used in planning activities and Leadership messages for Stepping Up Week 4 and targeted action plans for each area will be produced.
- 3.3 The Crossrail Golden Rules will be developed to ensure their relevance for the next phase of works and to ensure they are communicated throughout the programme and engrained for all levels at all locations. The target for implementation of the new rules is January 2015.
- 3.4 A common, generic Crossrail induction will be developed for the next phase of the programme to target the changing risks and communicate Crossrail's health and safety expectations to the new operatives. The new induction will be launched in the final quarter of the year.
- 3.5 The final report on the Fatigue research will be published and further monitoring will be undertaken as part of the Dust and DEEE research.
- 3.6 Crossrail will continue to roll out the Green Line Recognition Scheme for positive environmental behaviour. A number of contractors will be working towards a commendation under the scheme and it is likely that the first commendation will be awarded in Quarter 3.

4 Major Incidents

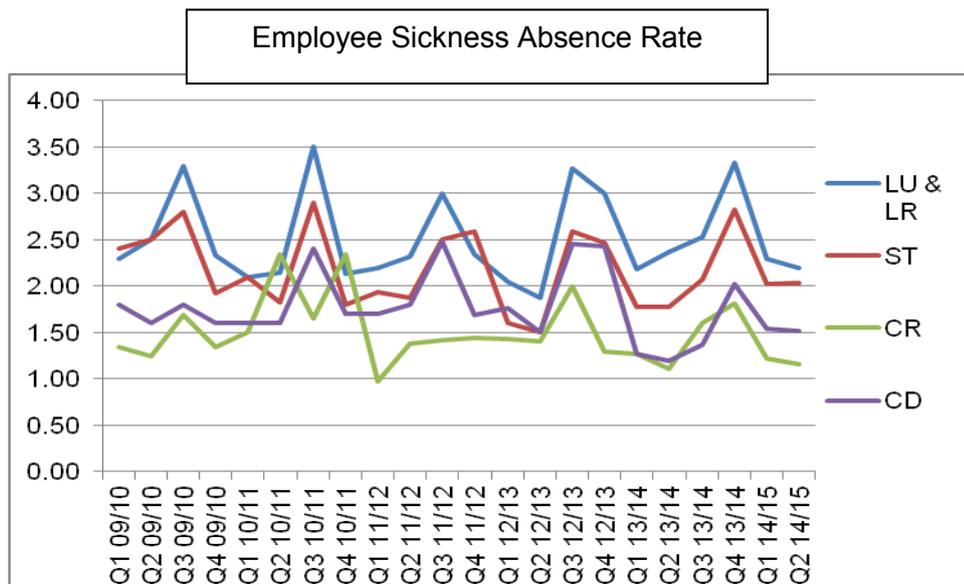
- 4.1 There were no major incidents in Q2.

Statistical Appendix

Quarterly Health, Safety and Environment Report

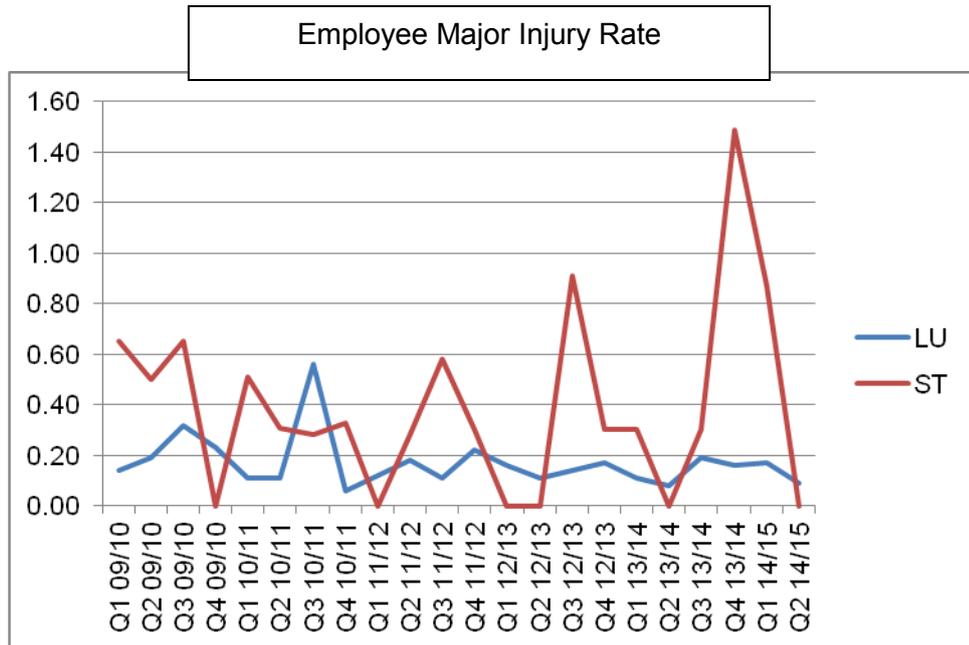


This chart provides the rates for Customer Major Injuries in Rail and Underground and Surface Transport, per million customer journeys. Customer Major Injuries on LU/LR and ST have continued to fall this quarter; slips, trips and falls continue to be the most significant element, and these are the focus of specific improvement actions, as part of the Safety Improvement Plans for 2014/5.

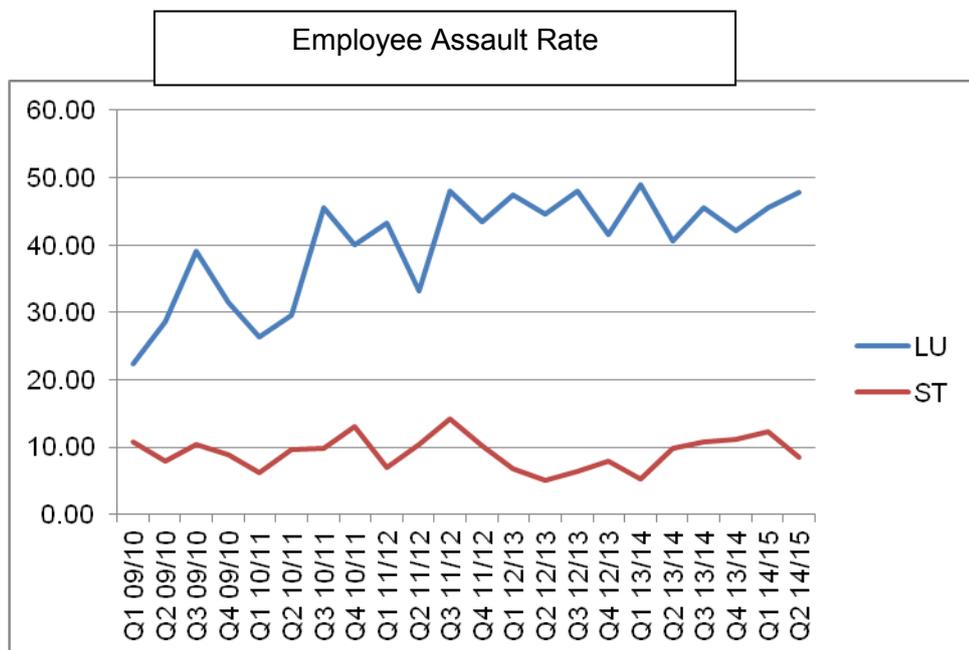


This chart provides the details of sickness absence per 1000 employees. As has been the case for a number of years there is clear seasonal pattern. The rates within the 4 businesses

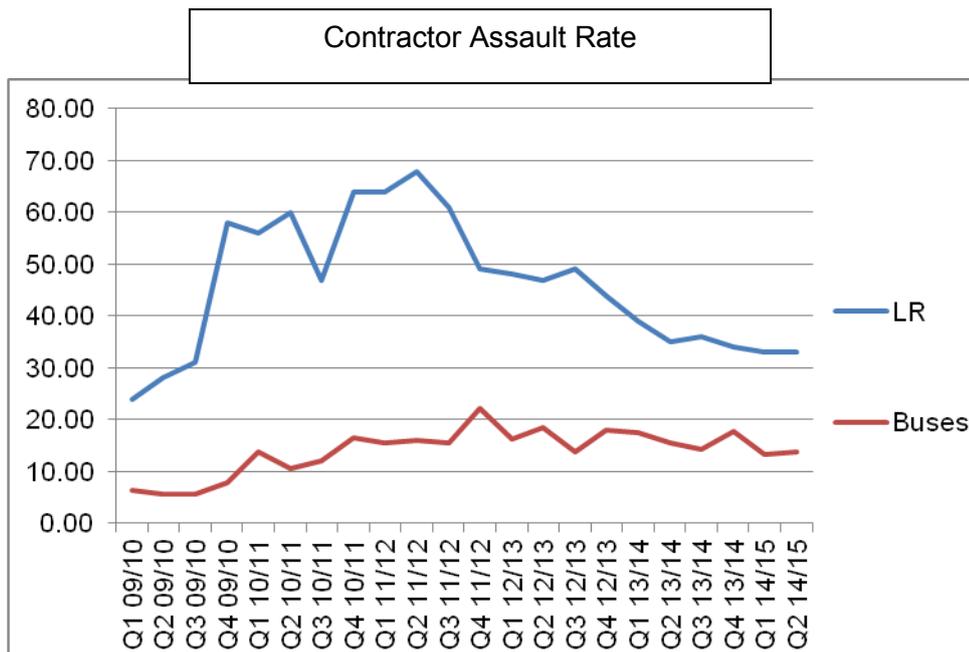
show a relatively consistent rank order too. The most common causes of staff sickness absence were Coughs and Colds, Gastrointestinal and Musculoskeletal.



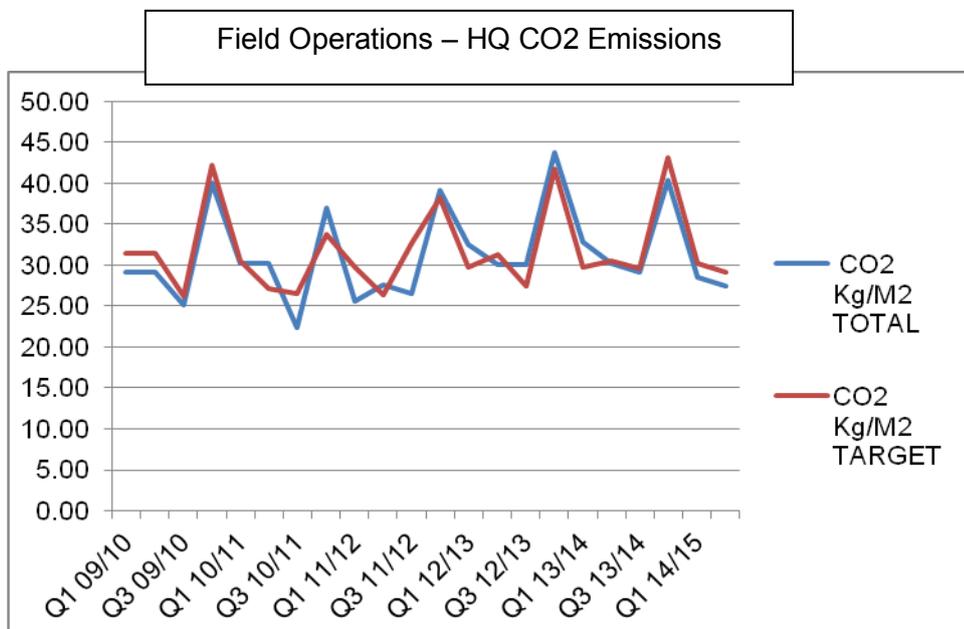
This chart provides the rate of major Injuries per 1000 employees. This is a rate per quarter, and is not a moving average. As can be seen where there are no Major Injuries in a quarter there is a zero rate. As the employee numbers are smaller in ST, there is a greater volatility. The previous quarter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



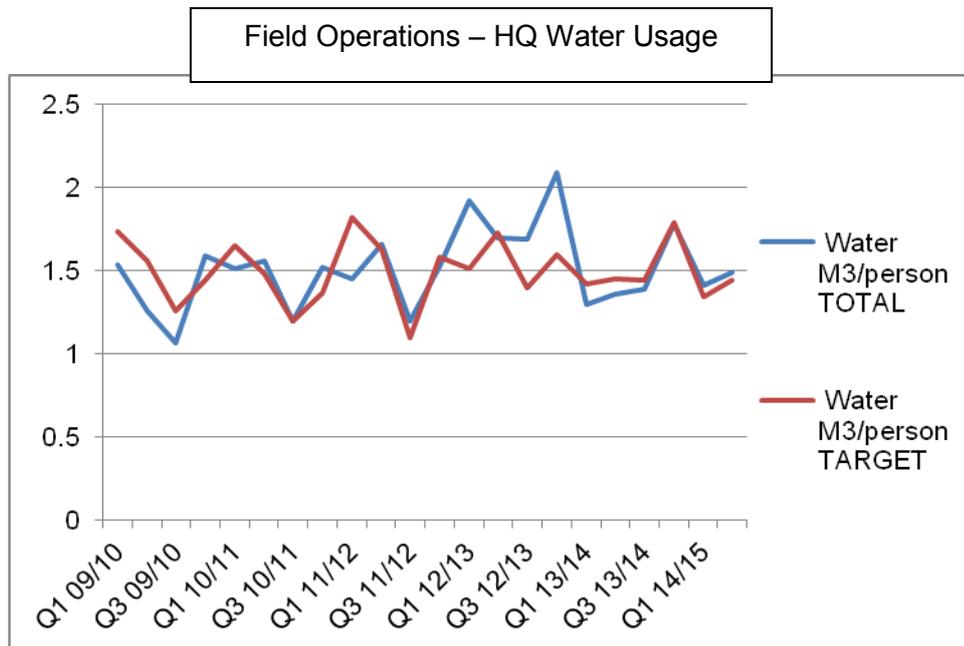
This chart shows employee assault rates per 1000 staff, for Surface Transport and London Underground. The main difference in the rates is explained by a significantly higher rate reporting of verbal assaults in LU. The more recent trend for LU has shown a small rising trend; this period ST fell.



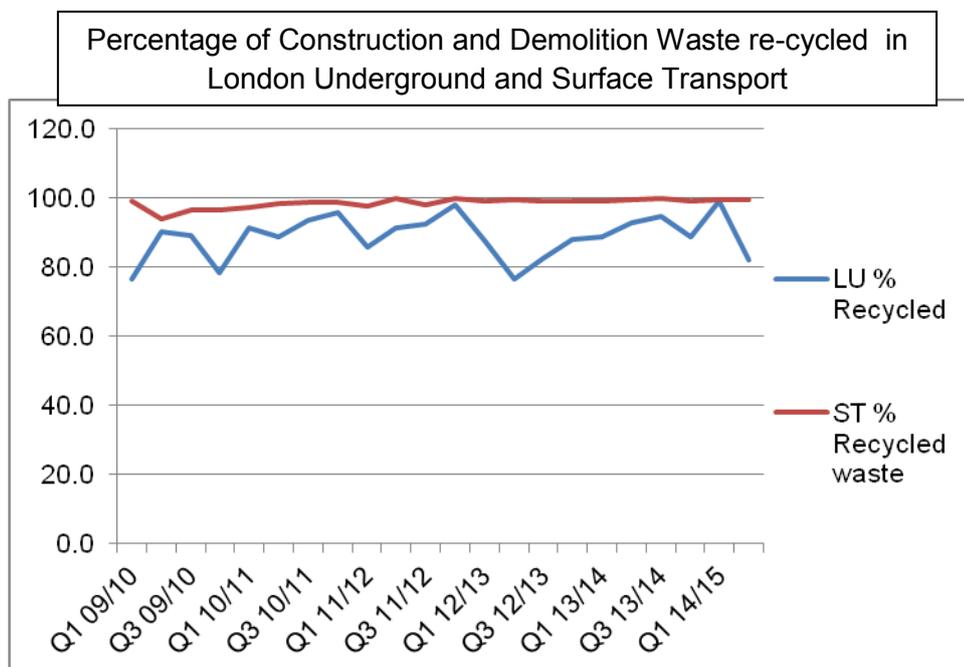
This chart shows the rates for Assaults (both physical and verbal) per 1000 Contractors. These staff are primarily those in London Rail (with those involved in revenue protection a significant proportion) and London Buses (primarily the Bus Operators), where most customer facing staff are contractor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



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 fifth quarter running the actual emissions were below target.

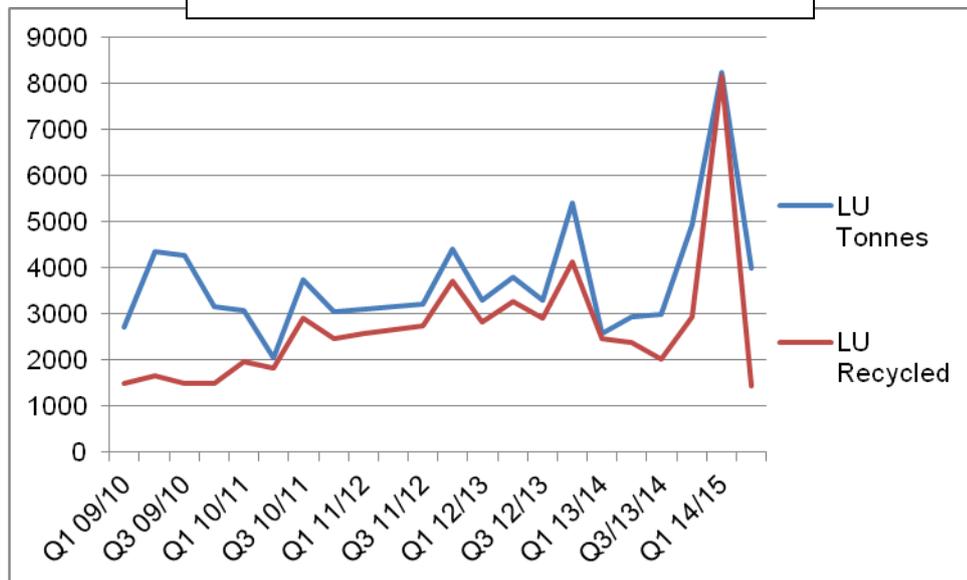


This chart shows the water usage measured in cubic metres measured against the numbers of persons in the various TfL HQ buildings over which we have control. The targets which have been set are also shown, and in the quarter actual water use per person was above the target



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 have fallen this period. ST remains high.

Commercial and Industrial Waste in LU



This chart shows the tonnage of Commercial and Industrial waste produced and recycled and reused in London Underground in Tonnes. LU has produced significant increases in past two quarters, but this quarter the tonnage had dropped and the amount of recycling has fallen too. This fall seems to be linked to changes in the legislation and government guidance on the on the operation of recycling MRF's means that the Companies operating MRF will only accept material from dedicated Dry Mixed Recycling Collection where the waste is segregated at source (our waste was not segregated) and this is currently being reviewed.