

TRANSPORT FOR LONDON

SAFETY, HEALTH AND ENVIRONMENT ASSURANCE COMMITTEE

**SUBJECT: QUARTERLY HEALTH, SAFETY AND ENVIRONMENT
PERFORMANCE REPORTS – QUARTER 2 2011/12**

DATE: 15 DECEMBER 2011

1 PURPOSE AND DECISION REQUIRED

- 1.1 To inform the Committee of the key Health, Safety and Environment matters during Quarter 2 2011/12. The Committee is asked to note the reports.

2 BACKGROUND

- 2.1 Full reports on Health, Safety and Environmental performance are produced annually. These quarterly reports are to update the Committee on any significant matters from the previous quarter.

3 INFORMATION

- 3.1 The Quarter 2 2011/12 Health, Safety and Environment performance reports for each business area are attached as follows:

Appendix 1	London Underground
Appendix 2	Surface Transport
Appendix 3	London Rail
Appendix 4	Crossrail
Appendix 5	Corporate Directorates
Appendix 6	Health and Safety performance data summary

4 RECOMMENDATION

- 4.1 The Committee is asked to NOTE the reports.

5 CONTACT

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LONDON UNDERGROUND

QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

1 SUMMARY**What went well**

- 1.1 The majority of safety, environmental and health performance indicators remain stable or improving with some exceptions noted below.
- 1.2 The recycling targets for commercial and industrial (C&I) waste (77 per cent) and construction and demolition (C&D) waste (70 per cent) were exceeded with 84 per cent and 91 per cent of waste recycled respectively. Excellent recycling rates continued to be delivered by the sub-surface railway team (97 per cent waste recycling) and the power and cooling team (99 per cent waste recycling).
- 1.3 The amount of time lost through employees' absence due to stress, anxiety and depression was less this quarter (an average of 1,663 days per period) compared to the same quarter last year (1,693 days per period).
- 1.4 The sub-surface railway upgrade team was 'highly commended' in the safety category at the National Rail Awards for its approach of turning around a disappointing safety record to achieve an accident-free year in its busiest year to date.
- 1.5 Tube Lines has now implemented the new approach to escalator dust tray cleaning, allowing longer frequencies between cleaning. London Underground will be following this approach in the coming quarter. The London Fire Brigade is content with the revised approach, and has briefed their staff accordingly. A review process has been put into place to check cleaning performance every three months, with the potential to change the frequencies if local conditions require this.

Areas for improvement

- 1.6 Although the number of incidents of work-related violence decreased by 2.7 per cent compared to the same quarter last year, ticket disputes continue to be the main contributor to these incidents. The workplace violence reduction unit is implementing a strategy over the next 12 months aimed at reducing these.

Significant plans for next quarter

- 1.7 A safety awareness campaign to caution customers about the hazards of becoming caught in train doors will be implemented with stickers to be placed on train doors visible both from the interior and exterior of the train.
- 1.8 The Chief Operating Officer's directorate's safety climate survey will commence and the initial analysis of the capital programme directorate survey will be available.
- 1.9 The contract for the design and build of a new energy efficient heating system (with combined heat and power technology) at Northumberland Park Depot will be awarded.

2 PROGRESS AGAINST HSE PLAN

- 2.1 The Rail and Underground Board monitors progress of programmes in the HSE plan every four weeks. All programmes continue to be delivered to target with the exception of the project to install automated electricity meter readings at 150 stations. Work is complete at 126 stations. The lack of a clear process for carrying out a station power shutdown and a lack of up to date station wiring diagrams caused the delay. Work will now complete by 31 December 2011.

3 STATUS OF HSE MANAGEMENT SYSTEM

- 3.1 The audit team monitors compliance with London Underground's Health, Safety and Environmental Management System (HSEMS), which is part of London Underground's overall management system. Progress against the 2011/12 audit programme is to programme. Improvements in the management of overtime in the possession planning and protection team were identified and are being implemented.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 38,666 working days lost to sickness absence in Quarter 2, representing an average of 2.3 days per employee. For comparison, in the previous quarter there were 2.2 days of absence per employee and in the same quarter last year there were also 2.2 days absence per employee. The top three categories of sickness absence in Quarter 2 were gastrointestinal, musculoskeletal and coughs and colds. These categories have remained the top three categories over the last three years.

Days lost	Q2 2011/12	Q1 2011/12	Q2 2010/11
Sickness absence	38,666	36,901	37,547
Average/employee	2.32	2.20	2.15

- 4.2 On average, 153 employees were absent in Quarter 2 due to stress, anxiety and depression compared to 144 in the same quarter last year. The number of working days of non attendance decreased with an average of 1,663 days non attendance in the quarter compared to an average of 1,698 in the same quarter last year.
- 4.3 On average, 172 employees in Quarter 2 were absent as a result of back pain compared to 149 the same time last year. The number of working days of non attendance increased to an average of 1,362 compared to an average of 1,089 per period in the same quarter last year.

Safety

- 4.4 There were no accidental customer fatalities or employee fatalities in Quarter 2. There was one medical and seven suicide customer fatalities.
- 4.5 There were 26 customer major injuries in Quarter 2 (0.10 per million customer journeys). For comparison, there were 33 customer major injuries in the previous quarter (0.12 per million customer journeys) and 22 (0.09 per million customer journeys) in the same quarter last year. The overall trend remains statistically stable.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Customer major injuries	26	33	22
Rate/million customer journeys	0.10	0.12	0.09

- 4.6 There were three employee major injuries in Quarter 2. For comparison, there were two employee major injuries in the previous quarter and two in the same quarter last year.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Employee major injuries	3	2	2
Rate/1000 employees	0.18	0.12	0.11

- 4.7 There were 106 physical assaults on employees in Quarter 2. For comparison, there were 110 physical assaults on employees in the previous quarter and 114 physical assaults on employees in the same quarter last year.
- 4.8 There were 249 verbal assaults on employees in Quarter 2. This compares to 312 in the previous quarter and 220 verbal assaults in the same period last year.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Employee physical assaults	106	110	114
Employee verbal abuse	249	312	220
TOTAL	355	422	334
Rate/1000 employees*	33.17	43.29	29.49
Physical assault rate/1000 employees	9.90	11.28	10.06
Physical assault rate/million customer journeys	0.41	0.42	0.45

*number of employees only includes Chief Operating Officer's employees

- 4.9 Ticket related disputes continue to be the main contributor to work related violence incidents. A number of actions have been identified aimed at reducing the incidents of work related violence. These are longer term actions that will be implemented in the remainder of this year and will form part of the 2012/13 safety improvement programme.
- 4.10 The trend in the number of SPADs for all categories remains stable with an average of 55 occurring per period. There were 171 SPADs in total (all categories) during Quarter 2, of which 146 (85 per cent) were Category A (Train operator error) and 25 (15 per cent) were Category B (19 due to either signal equipment malfunction or train equipment and six attributable to service control).
- 4.11 There were 148 Platform Train Interface (PTI) incidents reported during Quarter 2. 111 incidents (75 per cent) were persons caught in/struck by doors, 26 (18 per cent) were persons falling between the train and platform gap, four (three per cent) were contact between person and train and there were seven (five per cent) falls from platforms.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Platform train interface incidents	148	153	126
Rate/million customer journeys	0.57	0.56	0.50

4.12 There were 305 tests for drugs and alcohol in the quarter, 221 unannounced, three for cause, 63 routine monitoring and 18 post incident tests. There were no positive tests.

5 ENVIRONMENT PERFORMANCE

Carbon and energy management

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Total electricity consumption (MWh)	257,894	276,429	250,666
Total traction electricity (MWh)	221,571	232,348	210,885
Traction energy efficiency (MWh/million passenger journeys)	858	886	844
Total CO ₂ (tonnes)	135,296	145,020	135,485
Normalised CO ₂ (g/passenger km)	64.00	69.00	68.00

5.1 Energy consumption in Quarter 2 2011/12 was two per cent higher than in Quarter 2 2010/11. The traction energy efficiency rate was better in Quarter 2 2011/12 compared to Quarter 1 2011/12 due to low energy consumption in Quarter 2 coupled with a lower level of passenger journeys. The total passenger kilometres in Quarters 1 and 2 this year remained the same, the total CO₂ emissions and normalised CO₂ /passenger km both improved due to lower energy consumption in Quarter 2 overall.

5.2 Seven companies responded to the power sourcing project procurement process, with opportunities for delivering low and zero carbon energy directly into LU's power network. Some of these proposals have good business cases and discussions are now in progress with the relevant potential suppliers

Recycling and waste management

	Q2011/12	Q12011/12	Q22010/11
Commercial and industrial waste (tonnes)	3,177	3,121	2,509
Commercial and industrial waste recycled (tonnes)	2,662	2,587	1,841
Commercial and industrial waste recycled (per cent)	84	83	73
Construction and demolition waste (tonnes)	67,344	38,508	43,525
Construction and demolition waste recycled (tonnes)	61,554	33,050	38,661
Construction and demolition waste recycled (per cent)	91	86	89

- 5.3 The amount of Commercial and Industrial (station and depot) waste collected in Quarter 2 (3,177 tonnes) was slightly higher than that collected in Quarter 1 (3,121 tonnes). The recycling rate for Commercial and Industrial (C&I) waste for Quarter 2 was 84 per cent. This exceeded the 2011/12 recycling target for C&I waste (70 per cent). This has been achieved through implementation of the Total Package Services contract, where mixed waste collected from stations and depots is separated into recyclable and non-recyclable material at the recycling centre.
- 5.4 The amount of Construction and Demolition (C&D) waste generated in Quarter 2 was higher (67,554 tonnes) than the previous quarter (38,508 tonnes). The proportion of C&D waste recycled in the quarter was 91 per cent. This exceeded the 2011/12 recycling target of 77 per cent for the quarter. Excellent recycling rates continued to be delivered by the Sub-Surface Railway team (97 per cent waste recycling) and the Power and Cooling team (99 per cent waste recycling).

6 MAJOR INCIDENTS

- 6.1 A fatality occurred to an LU employee in the Redeployment Pool at TfL's Pier Walk office on 4 November 2011. The person was involved in a significant fall from height. An internal investigation is in progress.
- 6.2 There were no major incidents in Quarter 2.
- 6.3 All recommendations arising from the Rail Accident Investigation Branch's (RAIB) investigation into the Northern line runaway grinder unit incident are complete. Formal closure is awaited from the Office of Rail Regulation.

SURFACE TRANSPORT

QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

1 SUMMARY**What went well**

- 1.1 The provisional road casualty figures for the 12 months to the end of July 2011 show that the overall number of people killed or seriously injured (KSI) fell by 14 percent to 2,652 compared to the corresponding 12 months in the previous year where there were 3,072.
- 1.2 Since publication of the Budget, Surface Transport has been reviewing the target for the reduction in KSIs on London's roads. This follows the publication of the Department for Transport's (DfT's) National Strategic Framework for Road Safety in May 2011, which introduced a national forecast for a 40 per cent reduction in the number of KSIs by 2020 against a baseline of 2005-09.
- 1.3 In light of the current review, the 2011 target has been revised to be consistent with the DfT's National Strategic Framework. The new projection is for a 22.4 per cent reduction from the revised 2005-09 baseline, compared to the previous target of a 4.7 reduction from a 2004-08 baseline. This represents a projected 2.5 per cent reduction in KSIs on London's roads in 2011. The new target is more challenging, but is achievable given the reduction in KSIs already seen in the year to date. At its meeting on 23 November 2011 the Finance and Policy Committee approved the updated 2011/12 budget target for the reduction in KSIs on London's roads.
- 1.4 A web based 'Report It' campaign was launched in the quarter for reporting roadwork problems. The initiative means TfL and London boroughs will better be able to monitor contractor performance with particular regards to the safety of road users and pedestrians affected by traffic management, segregation, operative activities and site tidiness.
- 1.5 Streets Highways Maintenance Works Contractors (HMWCs) are contributing to efforts to reduce cyclist/HGV conflicts by fitting side facing closed circuit television cameras and audio-visual proximity alert systems to their heavy goods vehicles. The HMWCs are also working with their partners to extend the initiative through their supply chains.
- 1.6 As part of the electric vehicle charging programme, the Source London scheme increased its branded and operational charge points to 218 in the quarter from 160. The scheme has an ongoing retrofit and installation programme for 1,300 charge points by 2013. A significant number of Source London charge points will be provided to support the 200 strong electric vehicle fleet for the 2012 Games.
- 1.7 TfL had a presence at the EcoVelocity motoring Festival which took place at Battersea power station in September. During this time, a special promotion was run on Source London membership, which helped to triple the number of members. Registration for Source London can be completed via the internet and anyone who owns an electric vehicle is eligible to register.

- 1.8 TfL is working closely with other cities and regions and the Department for Transport's (DfT) office for low emission vehicles on integrating Source London with the other charging networks. The aim is to allow Source London members to access charge points across the country.
- 1.9 The Cycle Superhighway Routes 2 (Bow to Aldgate) and 8 (Wandsworth to Westminster) opened in July.
- 1.10 Two suppliers were appointed for a biodiesel trial following a competitive tendering exercise. The pilot will involve trialling 30 and 100 per cent blends of bio-diesel on 12 Dial-a-Ride vehicles. A new fuel tank has been installed at the Southall depot.
- 1.11 As part of the River Concordat, TfL and operators of river services approved the environmental action plan, which includes actions such as eco-driving for boat operators.
- 1.12 The final vessel of the Woolwich Ferry service was converted to use ultra-low sulphur fuel in September. Work now continues to fit particulate filters to the fleet, which will significantly reduce emission of particulate matter.
- 1.13 TfL participated in a DfT consultation on the possibility of allowing an increase in the length of articulated lorries. The consultation closed in June. A comprehensive response was submitted to DfT within which TfL recommended that regulatory changes in the sector should not compromise cyclist and pedestrian safety while also recognising the benefits likely to arise from longer articulated lorries. TfL's response identified a number of safety concerns while also recommending possible mitigations. The recommendations include physical measures (Fresnel mirrors, cyclist detection/nearside proximity sensors); extra conditions to vehicle special orders; vehicular design (such as reducing tail swing and improved cab design); permitting highway authorities to ban longer articulated lorries from using certain roads on good safety grounds; encouragement of hauliers to join best practice schemes such as the Freight Operator Recognition Scheme (FORS) and improving training for drivers and managers.

Areas for improvement

- 1.14 A review of the rate rise in customer major injuries (98 per cent are bus passengers) was undertaken with the managing directors of bus operating companies through the Bus operators' forum, safety sub group in October. The review identified a rise in slips, trips and falls on buses and corresponding rise in people taken to hospital (normally as a precautionary measure) from the scene of the incident as factors contributing to the rise. Additional work is underway to understand further the broader factors behind the rise and ways of addressing the issue.
- 1.15 In conjunction with safety colleagues from other parts of TfL, Surface Transport is contributing towards the development of a TfL-wide safety training programme for middle managers. The initiative aims to supplement the existing safety training programme and will ensure that all staff at all levels undertake appropriate safety training.

Significant plans for next quarter

- 1.16 In the wake of the two recent cycle fatalities, further actions to address cycle safety in London have been initiated. This is in addition to the substantial programme of activity already underway as a result of the Mayor's cycle safety action plan:
- (a) specifically, a review of the Bow roundabout to identify whether any further changes are needed to its design or operation will be undertaken. In addition, a review of all major TLRN junction schemes currently in design and Cycle Superhighways junctions will be undertaken, to confirm that sufficient measures for cyclists have been included;
 - (b) further, TfL will commission an independent review of construction industry vehicles' operations and driver standards to examine what can be done to make their operations safer for all road users; and
 - (c) finally, TfL will pursue further road safety campaigns to increase HGV drivers' awareness of cyclists and pedestrians, and the responsibility of all road users to be alert and aware of their surroundings, and of other road users.

Progress on these actions will be reported regularly to TfL's cycle safety working group, which includes representatives from within TfL, the Metropolitan and City Police, London boroughs and stakeholder groups.

- 1.17 TfL held a seminar with key stakeholders during October to discuss the future of road safety in London and hopes to consult shortly on the draft London road safety plan.
- 1.18 The Streets Directorate is working towards a London-wide model for traffic management (TM). As part of this, a review of the guidance for cyclists at roadworks has been undertaken. The guidance provides advice on the design of TM that may be installed to give cyclists safe access through and around roadworks. In addition, three trials in each of the HMWC areas on TM designs are currently being undertaken. London boroughs will be engaged with the output of the review and trials accordingly in December.
- 1.19 Surface Transport engaged key stakeholders and human factor specialists in conceptualising the safe operation of the New Bus for London (NBfL). This was done through various means including workshop events. These events have culminated in the identification of operational hazards, controls and residual risks, which have been submitted to the NBfL project board. Recommendations from the events have been captured in a register and are being tracked through the implementation phase by the operations work stream.

2 PROGRESS AGAINST HSE PLAN

- 2.1 The Surface Transport business areas worked towards specific objectives and actions in line with identified health and safety priorities and plans. Local HSE governance meetings monitored progress against agreed actions.

3 STATUS OF HSE MANAGEMENT SYSTEM

- 3.1 Compliance with respective health, safety and environment management systems is being monitored through programmes of audits. Of the audits completed during Quarter 2, there were no significant compliance issues identified.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 6,332 working days lost due to sickness absence in Quarter 2, representing an average of 1.88 per employee. For comparison, the previous quarter's average was 1.94 days absence per employee and the corresponding quarter of last year was 1.83. The top three categories of sickness absence were musculoskeletal, mental health and gastrointestinal.

Days lost	Q2 2011/12	Q1 2011/12	Q2 2010/11
Sickness absence	6,332	6,475	6,436
Average/employee	1.88	1.94	1.83

Safety

- 4.2 The number of accidental customer major injuries in Quarter 2 was 224 (0.43 per million customer journeys). For comparison, there were 240 accidental customer major injuries in the previous quarter (0.48 per million customer journeys) and 200 (0.38 per million customer journeys) in the same quarter last year.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Customer major injuries	224	240	200
Rate/10 ⁶ customer journeys	0.43	0.48	0.38

- 4.3 There was one accidental employee major injury in Quarter 2. For comparison, there was none in the previous quarter but there was one in the same quarter last year.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Employee major injuries	1	0	1
Rate/1000 employees	0.28	0	0.31

- 4.4 There were 24 physical assaults on employees in Quarter 2. For comparison, there were 23 physical assaults on employees in the previous quarter and 24 in the same quarter last year. There were 13 reported verbal assaults on employees in the quarter. For comparison, there were four verbal assaults on employees in the previous quarter and seven in the same quarter last year.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Employee physical assaults	24	23	24
Employee verbal assaults	13	4	7
Rate/1000 employees	10.41	7.03	9.58

- 4.5 There were 390 assaults (physical and verbal combined) on contractors in Quarter 2. For comparison, there were 398 assaults on contractors in the previous quarter and 258 in the corresponding quarter of last year.

- 4.6 Of the 390 contractor assaults, 384 (16 per 1,000 bus drivers) were on bus drivers, compared to 372 in Quarter1 (also equivalent to 16 per 1,000 bus drivers). This represents an increase on the corresponding period of 2010/11, which was 255 at a

rate of 11 incidents per 1,000 bus drivers. The rise in Quarter 2 of 2011/12 is partly attributed to a 75 per cent increase in reported verbal abuse.

5 ENVIRONMENTAL PERFORMANCE

Waste and recycled materials

- 5.1 HMWCs recycled and reused 99.9 and 99.4 per cent of excavated and non-excavated materials respectively in Quarter 2, against a target of 94 per cent for 2011/12. They procured 13.4 per cent of recycled and green material in the period against a target of 15 per cent for the year.

HMWC waste and recycled materials	Q2 2011/12	Q1 2011/12	Q2 2010/11
Waste recycled and reused against total tonnes of waste excavated	17,618	17,269	13,379
Per cent	99.9	97.9	98.3
Non-excavated waste recycled and reused against tonnes of excavated	628.9	833	1,035
Per cent	99.4	96.5	97.2
Recycled and green material procured against total volume in tonnes	1,877	908	4,246
Per cent	13.4	23.0	16.9

- 5.2 In Quarter 2, the traffic control equipment maintenance and related services (TCMS) contractors recycled 59.7 per cent of generated waste.

TCMS waste and recycled materials	Q2 2011/12	Q1 2011/12	Q2 2010/11
Waste recycled against total volume in tonnes	25	39	11
Percentage	59.7	49.8	59.8

6 MAJOR INCIDENTS

- 6.1 A contractor staff member operating on Woolwich Free Ferry died when he fell from a ferry in August. The incident is under investigation by the Marine Accident Investigation Branch, who will be reporting in late December.
- 6.2 An elderly bus passenger later died from injuries he sustained in a fall in June and a further two fatal incidents between buses and other road users were also recorded in the quarter. These resulted from collisions with a pedestrian in September and a cyclist in August. The incidents are under investigation.

- 6.3 Investigations into three previous fatal incidents involving buses were concluded in the quarter and no recommendations were made by the Coroner's court for TfL or any of the bus contractors involved. The incidents were:
- (a) November 2009, a road traffic collision between a route 98 bus and a cyclist at Vernon Place, WC1. The bus driver was later cleared of causing death by driving without due care and attention;
 - (b) October 2009, a road traffic collision between a route 73 bus and a pedestrian at Vere Street, W1. The investigation showed the woman looked the wrong way as she stepped into the path of the bus. The Coroner returned a verdict of accidental death; and
 - (c) March 2011, a road traffic collision between a route 68 bus and a pedestrian at Herne Hill, SE24. The investigation revealed that the 12 year old child ran into the path of the bus from between parked cars. The Coroner returned a verdict of accidental death.

LONDON RAIL

QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

1 SUMMARY**What went well**

- 1.1 Docklands Light Railway (DLR) commissioned a review of its Safety Management System against the Office of Rail Regulation's Railway Management Maturity Model. A comprehensive report has now been issued and the findings are favourable showing that DLR has an organisation with "standardised, consistent processes".
- 1.2 Construction work on the Emirates AirLine project is progressing safely with no reported accidents. MACE, the Principal Contractor for the works, is working closely with DLR to ensure that best practice environmental management is in place.
- 1.3 The London Overground Infrastructure Manager Accident Frequency Rate (AFR) continues at zero. Performance is closely monitored to ensure that if there are any accidents they are properly recorded.
- 1.4 Construction work on Phase Two of the London Overground extension project is progressing safely with no reported accidents. This is the final phase of the project and will see the introduction of a rail link between Surrey Quays and Clapham Junction.
- 1.5 London Overground Rail Operations Limited's (LOROL) target to reduce the rate of injuries to passengers caused by slips, trips or falls on LOROL's stations by at least 10 per cent is on target. Careful analysis of incident data has led to a number of interventions to improve rates. For example, at Willesden Junction an 'incident hot spot', several measures have been implemented including anti-slip surfaces, highlighting with yellow lines gradient change in the subway and enhanced warning signs about not running.
- 1.6 For the fourth year in a row, London Rail has been taking part in the Global Corporate Challenge. Six teams successfully took part in this occupational health improvement initiative, which is designed to promote a healthier life style through walking. The DLR team came top of the London Rail league, second in the world transportation league and 551st out of 18,000 in the world.
- 1.7 The increased number of noise complaints on London Overground reported in the last quarter has dropped significantly. These were mainly associated with public address announcements. Careful tracking of the situation has seen swift responses to identified problems.

Areas for improvement

- 1.8 The DLR safety index (a composite of a number of safety indicators) has shown variable safety performance this quarter – it recorded both the highest and lowest

scores since its inception. It should be noted that the lowest score still remained within the tolerable region of the indicator.

- 1.9 On London Overground, there were a number of operational incidents including five Category 'A' SPADs and seven irregular door release incidents. There is no proposed change in management control of SPADs from that explained at the last meeting and LOROL continues to give SPAD management a high priority. It should be noted that the irregular door release incidents did not lead to actual door openings, but were incidents in which the door controls had been momentarily engaged in error by the driver. Each incident has been investigated and a number of recommendations is being progressed to deal with each area of concern. London Overground is reviewing aspects of its training and has examined various human factor issues. These incidents tend to occur where drivers have stopped their trains to change from alternating current to direct current traction (and vice versa). Proposals to allow a change of traction on the move are now well advanced. This should reduce the opportunity for human error.
- 1.10 Despite completing a number of work streams, instances of graffiti and fly tipping (and to a lesser extent stone throwing) on the core section of the East London Railway has continued through Quarter 2. Further incident analysis is being carried out and work is ongoing with colleagues in London Underground, British Transport Police (BTP) and Network Rail to understand how best to tackle the problem. Some funding has been secured to build barriers on bridge abutments and to install more fencing at Island Gardens; this should help reduce incidents at particular hotspots.

Significant plans for the next quarter

- 1.11 An independent audit of the London Overground Safety Management System and London Overground safety authorisation will be taking place in the next quarter.
- 1.12 The annual independent audit of the DLR Safety Management System audit will be taking place in the next quarter.
- 1.13 On the DLR, Serco will be preparing for the three yearly re-certification of the ISO 14001 accreditation, which is due to take place in December.
- 1.14 London Tramlink will be entering a very busy period within the next quarter. After evaluating a number of tendering submissions, construction work will be starting on an extension to the current tram shed. Modifications will be taking place to tram stops and the first of six new trams is scheduled for delivery at the end of December.
- 1.15 London Tramlink will be developing and rolling out a public safety campaign to help raise the safety profile of tram movements in street sections. The rate of major road traffic accidents is levelling out and remains at a fairly low level, but the rates of minor incidents are slowly increasing.

2 PROGRESS AGAINST HSE PLAN

- 2.1 All parts of the London Rail business reported good performance against objectives.

3 STATUS OF HSE MANAGEMENT SYSTEM(S)

- 3.1 The DLR and London Overground have established safety management systems in place. The transfer of the maintenance function from Carillion to London Tramlink has meant that certain aspects of the Management System had to be revised to accommodate changes in procedures and organisation. Work on revising these changes in practice and arranging further briefings is now underway.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 134 working days lost due to sickness absence in Quarter 2 by employees of London Rail. This represented an average of 0.66 days per employee. For comparison, in the previous quarter, there were 110 days lost equating to 0.55 days absence per employee and in the same quarter last year there were 151 days lost, equating to 0.74 days absence per employee. The top three categories of sickness absence in Quarter 2 were accidents (only one incident work related), Coughs and Colds and Gastrointestinal. Overall absence rates remain low in London Rail.

Days lost	Q2 2011/12	Q1 2011/12	Q2 2010/11
Sickness absence	134	110	151
Average/employees	0.66	0.55	0.74

Safety

- 4.2 There were no employee major injuries this quarter in London Rail.
- 4.3 There was one accidental customer major injury on DLR in Quarter 2 (19 million customer journeys). A customer fell on an escalator as she tried to catch some fallen luggage dislocating her shoulder. For comparison, there were no accidental customer major injuries in the previous quarter or the same quarter last year.

DLR	Q2 2011/12	Q1 2011/12	Q2 2010/11
Customer major injuries	1	0	0
Rate/million customer journeys	0.05	0	0

- 4.4 There were no TfL employee assaults this quarter on DLR. The number of employees of our franchisee Serco (and their contractors), who suffered workplace assaults in Quarter 2, was nine for physical and 38 for verbal. The overall rates are just greater than the previous quarter. All assault incidents continue to be reviewed by the Assaults Working Group; the majority are directly related to revenue protection issues. The BTP continue to work with Serco to address these issues.

DLR	Q2 2011/12	Q1 2011/12	Q2 2010/11
Physical assaults	9	10	9
Verbal assaults	38	34	28
Total	47	44	37
Rate/1000 employees	68	64	60

- 4.5 There was one accidental customer major injury on London Overground in Quarter 2 (in 22.4 million journeys). For comparison, there were two in the previous quarter and two in the same quarter last year.

London Overground	Q2 2011/12	Q1 2011/12	Q2 2010/11
Customer major injuries	1	2	2
Rate/million customer journeys	0.04	0.11	0.16

- 4.6 There were no TfL employee assaults this quarter on London Overground. The number of LOROL employees, who suffered workplace physical and verbal assaults in Quarter 2 was nine and 28 respectively. For comparison, there were seven and 37 in the previous quarter. Analysis has revealed that most assaults are associated with service disruptions and revenue collection. LOROL is working with the BTP to target specific locations. Most of the incidents of physical assault are 'minor' ie. pushing or spitting.

LOROL	Q2 2011/12	Q1 2011/12	Q2 2010/11
Physical assaults	9	7	5
Verbal assaults	28	37	18
Total	37	42	23
Rate/1000 employees	32	38	20

- 4.7 There were no accidental customer major injuries on London Tramlink in Quarter 2 (6.3 million customer journeys). For comparison, there were none in the previous quarter or in the same quarter last year.

Tramlink	Q2 2011/12	Q1 2011/12	Q2 2010/11
Customer major injuries	0	0	0
Rate/million customer journeys	0	0	0

- 4.8 In London Tramlink, there were no TfL employee assaults this quarter. The number of workforce physical and verbal assaults in Quarter 2 for our contractor Tram Operations Limited (TOL) on London Tramlink was four (physical) and eight (verbal). For comparison, there were two physical and 13 verbal assaults in the previous quarter and five and ten in the same quarter last year. The rate is relatively consistent. TOL is continuing to work with the BTP to target particular hotspots and times of the day. TOL employs a relatively small amount of staff therefore the rate per 1000 employee figures needs to be treated with caution.

TOL	Q2 2011/12	Q1 2011/12	Q2 2010/11
Physical assaults	4	2	5
Verbal assaults	8	13	5
Total	12	15	10
Rate/1000 employees	75	95	62

- 4.9 On London Overground Infrastructure, there were no contractor RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) reportable accidents

during the quarter. The 13 period rolling accident frequency rate is 0.21 per 100,000 hours. If this trend continues, the accident frequency rate will be 0 in the next quarter.

- 4.10 On DLR major projects, there was one contractor RIDDOR accident in Quarter 2. A contractor working on installing cabling on a lift sustained a cut to his hand after using a knife incorrectly and not wearing protective gloves. He was absent from work for more than three days. The 13 period rolling accident frequency rate is 0.31 per 100,000 hours worked at the end of the quarter. This is a small increase since the last quarter. It should be noted that there has been a significant drop in hours worked as projects come close to completion.

5 ENVIRONMENT PERFORMANCE

Carbon and energy management/Carbon emissions

- 5.1 The CO₂ emissions for Quarter 2 are set out below. The emission rates have been relatively stable during previous quarters. This quarter shows an improvement against the same quarter last year but a slight dip in performance since the previous quarter this year. The dip can be attributed to a lower number of passenger journeys.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Total CO ₂ (Tonnes)	17,107.43	16,435.26	14,440.30
Normalised CO ₂ (g/passengers km)	57.69	54.32	60.79

Waste Management

- 5.2 DLR has now received the site waste management plans from MACE, the contractor for the Emirates AirLine project. The overall waste key performance indicator for the project is to reuse, recycle or recover at least 90 per cent of all construction waste.
- 5.3 At the end of Quarter 2 on the DLR, Serco had increased the total amount of commercial waste recycled from the 39 per cent in the previous year to 46 per cent so far this year. The annual target is to reduce waste to landfill by five per cent and to increase the total amount of waste recycled by five per cent. Serco has met this target for the previous two years.
- 5.4 At the end of Quarter 2, just over 50 per cent of all LOROL station waste was being recycled. Performance has stabilised around this level for the last year. LOROL will need to improve its efforts if the target of 60 per cent for next year is to be met. The figures for depot waste were not available this quarter.
- 5.5 Implementation of the Tramlink depot waste management plan will be taking place in the next quarter. The plan is focusing initially on segregation and recycling of depot waste, before moving on to the collection and recycling of all network waste.
- 5.6 On the London Overground phase two project during Quarter 2, 89 per cent of all waste removed from site was recycled. If the 7,400 tonnes of material that was processed on site for re-use is included, this rises to an overall recycle/reuse rate in the period of 99.5 per cent.

Other environmental items

- 5.7 On the London Overground phase two project, environmental monitoring (of noise, vibration and dust) continues to be undertaken by the civils contractor. Occasional exceedances of the trigger levels agreed with the London Borough of Lewisham have been recorded and these have been investigated and where practicable, corrective actions put in place.
- 5.8 A review of the measures available to control wheel squeal noise and the use of Best Practicable Means on the East London Railway has taken place. As a result, consideration is now being given to modifying the lubrication arrangements at the New Cross Gate flyover and to trialling lubrication products from an alternative supplier.
- 5.9 Testing of the water discharge at Wapping station is continuing. The purpose being to assess compliance with internally set limits. A trial of a pre-treatment option will be progressing. This is a system that automatically releases daily doses of bacteria that digest the coal tar residues in the track drainage before water is pumped back into the Thames.

6 MAJOR INCIDENTS

- 6.1 There were no major incidents in London Rail in Quarter 2.

CROSSRAIL**QUARTERLY SAFETY, HEALTH, ENVIRONMENT REPORT****1 SUMMARY****What went well**

- 1.1 The first wave of the Target Zero campaign 'How do you do Target Zero?' was successful. This campaign features posters and videos of a cross section of Crossrail staff showing what makes the Target Zero campaign personal for them.
- 1.2 The user requirement review of Crossrail's incident management system, RIVO Safeguard, continued through the quarter, with positive advancement including more onsite training for users and workshops being provided to help with areas of the system that users are not so confident with.
- 1.3 A tunnelling safety forum was held and discussed safety issues of working in a tunnel environment. The forum led to the development of three further work streams: guarding requirements on drill rigs underground; blue light services coordination; and occupational health in the tunnel environment.
- 1.4 The design and information contained within the dashboard has been reviewed successfully; it has now become more of a management tool than a reporting tool allowing the health and safety data collected to be integrated into management systems more effectively.
- 1.5 A special edition of On-Site magazine focussing on environmental issues was distributed to all sites as part of stepping up to the Green Line work and influencing contractor environmental behaviour. The Crossrail Environment Awards for contractors were launched.
- 1.6 The review and update of procedures for the Environmental Management System for the integrated organisation was completed.

Areas for improvement

- 1.7 There is a Programme wide effort to simplify the Works Information, titled Project Simplify. As part of this, a full review of the health and safety section is being conducted.
- 1.8 A review is to be undertaken to streamline the audit and occupational health service provider acceptance process, while still maintaining the high standard that Crossrail requires.
- 1.9 Training will be rolled out to Crossrail staff at all sites on environmental requirements and environmental incidents.

Significant plans for the next quarter

- 1.10 The current system that is in place to deal with risk and recognition is disjointed and needs to be improved. During the next quarter, there will be a move towards a more integrated programme interfacing with the existing Crossrail organisational development team.
- 1.11 A key risk identified through a number of recent incidents is protection of the general public. A workstream has been set up for the next quarter, to address the issue of public interface management.
- 1.12 The release of the next Target Zero campaign, which will focus on the safety of vehicle and plant movement and be targeted on engagement of our Tier 1 contractors to promote best practice.
- 1.13 Ongoing review of RIVO Safeguard to continue to improve the system for ease of input and extraction of data.
- 1.14 The organisation of an occupational health tunnelling forum with involvement from Crossrail, Principal Contractors and third parties.
- 1.15 The re-organisation of the health and safety department to align with the current delivery model so that those supporting the delivery directorate will report directly into the area delivery director rather than the health and safety director. They will continue to receive functional support from the health and safety directorate.
- 1.16 The appointment of an interim health and safety director until a permanent candidate fills the position.
- 1.17 Lloyd's Register Quality Assurance will be undertaking a surveillance audit in November 2011; this will be the first audit of the integrated system.

2 PROGRESS AGAINST HEALTH AND SAFETY PLANS

- 2.1 Work has now started on the objectives set for 2011/12 with targets consistently met.

3 STATUS OF HEALTH AND SAFETY MANAGEMENT SYSTEM

- 3.1 A review of the Health and Safety Management System was conducted with delivery director and area directors in attendance. Key observations are listed below.
- 3.2 The post April 2011 operating model required numerous documents to be updated. As part of this update, where possible, procedures and policies were incorporated into three documents: the health and safety manual; the incident response manual; and the health, safety and environmental – contractors and industry partners standard.
- 3.3 The assurance process has also been updated with the introduction of the 'Golden Rules Observation Form', used to monitor contractors' management of the key risks areas identified by Crossrail. There has also been the introduction of a monitoring form for the health and safety advisers to maintain traceable records of engagement

with contractors and health and surveillance activity undertaken by the assurance team.

- 3.4 The health and safety audits and surveillance activity during the review period has confirmed that Crossrail continues to comply with its legal and other requirement obligations.
- 3.5 Regular communication and liaison meetings with the Health and Safety Executive, Office of Rail Regulation and London Fire Brigade have been held during the review period.
- 3.6 As part of the development of the new operating model in Crossrail, a review of competence requirements had been undertaken by line managers and the human resource teams. Action plans have been produced to deliver the required training in accordance with agreed priorities.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 405 working days lost due to sickness absence in Quarter 2, which represents an average of 1.38 days per employee. The top three categories of sickness absence in Quarter 2 were mental health, cancers and musculoskeletal.

Days lost	Q2 2011/12	Q1 2011/12	Q2 2010/11
Sickness absence	405	268	672
Average/employees	1.38	0.97	2.35

Safety

- 4.2 There were no employee major injuries in Crossrail reported in Quarter 2.
- 4.3 There were no contractor major injuries reported in Quarter 2. For comparison, there were none in the previous quarter and none in the same quarter last year.

	Q2 2011/12	Q1 2011/12	Q2 2010/11
Contractor major injuries	0	0	0
Rate/1000 contractor employees	0	0	0

Note: London Underground major injuries associated with the Crossrail Programme are not included to avoid duplication.

- 4.4 There were no physical and verbal assaults to employees in Quarter 2. For comparison, there were none in the previous quarter and none in the same quarter last year.

5 ENVIRONMENT PERFORMANCE

Carbon and Energy Management

- 5.1 Energy use on site for the quarter shows an increase due to an increase in fuel on construction sites. This reflects an increase in construction activity.
- 5.2 Office energy use from the Crossrail head office at Canary Wharf was 404,667 kWh.

Construction Activities	Q2 2011/12*	Q1 2011/12*	Q2 2010/11
Site electricity and gas consumption (kWh)	706,201	896,297	669,098
Site fuel consumption (litres)	315,542	233,516	232,413
Total CO ₂ (tonnes)	1,215	1,101	973

Office Activities	Q2 2011/12	Q1 2011/12	Q2 2010/11
Office electricity consumption (kWh)	404,667	389,651	439,314
Total CO ₂ (tonnes)	219	211	238

Notes: *Canary Wharf data provided up to and including July 2011.

Recycling and Waste Management

- 5.3 Of the 6,397 tonnes of construction and demolition waste recorded over the second quarter, 96 per cent of this waste was reused or recycled which is above the 90 per cent target and the 95 per cent stretch target. The cumulative recovery rate for construction and demolition waste (i.e. the amount of waste reused or recycled over the whole of the project life) is 96 per cent.
- 5.4 Of the excavated material arising during the quarter 97 per cent was recovered. The cumulative recovery rate for excavated material is 97 per cent, which is above Crossrail's target of 95 per cent.

Construction Activities	Q2 2011/12	Q1 2011/12	Q2 2010/11
Construction and demolition waste produced (tonnes)	6,397	11,728	25,928
Construction and demolition waste recovered (tonnes)	6,149	11,033	25,715
Construction and demolition waste recovered this quarter (per cent)	96	94	99
Cumulative construction and demolition waste recovered (per cent) (ITD)	96	96	96
Excavated material (tonnes)	75,329	87,545	18,920
Excavated material recovered (tonnes)	73,428	84,913	18,628
Percentage excavated material recovered this quarter (per cent)	97	97	98
Cumulative excavated material recovered (per cent) (ITD)	97	97	98

6 MAJOR INCIDENTS

6.1 There were no major incidents in Crossrail in Quarter 2.

CORPORATE DIRECTORATES**QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT****1 SUMMARY****What went well**

- 1.1 RSIGuard, the repetitive-strain-injury risk control software, underwent end user acceptance testing and has been successfully rolled out to staff.
- 1.2 The online display screen equipment risk assessment tool, Dseasy, was rolled out to Tramlink staff. The new system enables direct links to the Corporate Directorates DSE assessors, the occupational health advice and Group Facilities for the application of swift control measures. Dseasy replaces Tramlink's paper based system.
- 1.3 Group HSE, together with TfL Streets and Planning, contributed to a number of discussions regarding street lighting initiated by the Greater London Authority (GLA) and the Clinton Climate Initiative (CCI). TfL is already applying whole life costing analysis to street lighting options and presented this work to the GLA and CCI.
- 1.4 The TfL 'grey fleet' online driving licence check and driver risk profiling system was implemented. Over 750 staff were provided with risk assessment access and training.
- 1.5 The first set of outcomes and recommendations from the TfL internal audit on Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) reporting have been addressed and closed out.
- 1.6 Group HSE coordinated TfL's response to the London Assembly Environment Committee's Inquiry into the management of trackside vegetation. They also hosted a visit of Assembly Members Darren Johnson and Roger Evans to see a recent project site at North Harrow and discuss the issues with TfL colleagues.
- 1.7 The UK Government's Carbon Reduction Commitment Energy Efficiency Scheme is a mandatory carbon emissions reporting and pricing scheme to cover all organisations using more than 6,000MWh per year of electricity (equivalent to an annual electricity bill of about £500,000). TfL has completed a mandatory independent audit of its reporting activities. The work has been carried out by TfL internal audit (internal audits are permissible) and will be finalised next quarter.

Areas for improvement

- 1.8 Work to deliver an improved approach to HSE training for managers in Corporate Directorates is being consulted with LU, as part of aligning training requirements with the TfL group HSE competency framework.
- 1.9 The final recommendations from the TfL internal audit on RIDDOR reporting are in the process of being addressed and closed out.

Significant plans for the next quarter

- 1.10 An HSE competency audit will be performed at Cubic Transportation Systems Park Royal office, as part of the support provided by Corporate HSE to Fares and Ticketing.
- 1.11 The development of a group wide agreed set of Health, Safety and Environment key specific indicators addressing both activity and outcome indicators.
- 1.12 Development of a TfL group home working risk assessment procedure for the group HSEMS.

2 PROGRESS AGAINST HSE PLAN

- 2.1 Corporate Directorates' HSE Management System (HSEMS):
 - (a) HSE Priorities and Plans for 2012/13 are in place; and
 - (b) a programme of planned general inspections (PGIs) across the Corporate Directorates' building portfolio is being implemented.
- 2.2 Specific areas of risk:
 - (a) hazardous waste management arrangements and additional risk control measures have been instituted at the Lost Property Office; and
 - (b) increased levels of Display Screen Equipment (DSE) risk assessment review work will be maintained during the current organisational change.

3 STATUS OF HSE MANAGEMENT SYSTEM(S)

- 3.1 Amendments to the Corporate Directorates HSEMS, arising from changes made to Group HSE Management System Standards, were completed during 2010/11.
- 3.2 A review of the risk assessment standards and associated proformas within the Corporate Directorates HSEMS is continuing into Quarter 3.

4 HEALTH AND SAFETY PERFORMANCE

- 4.1 There were 4,043 working days lost to sickness absence in Quarter 2, representing an average of 1.8 days per employee. This represents a small increase over the previous quarter and a 12.5 per cent increase over Quarter 2 2010/11. The top three sickness absence categories were mental health, musculo-skeletal and gastrointestinal.

Days lost	Q2 2011/12	Q1 2011/12	Q2 2010/11
Sickness absence	4,043	3,890	3,930
Average/employee	1.78	1.67	1.64

Safety

- 4.2 There were no accidental customer major injuries, employee major accidental injuries or any physical assaults on employees during Quarter 2 or during the same quarter last year. The Corporate Directorates consist mainly of nonoperational staff. Periodic

risk assessments and the implementation of adequate controls help to maintain this low risk environment.

5 ENVIRONMENT PERFORMANCE

Carbon emissions

- 5.1 Year to date performance shows a five per cent improvement against target CO₂ emissions. The success of the RE:FIT project, ongoing works through the Environmental Improvement Programme and the Property Care Programme are all contributing towards increased performance and reduced emissions. Staff engagement and actions identified as part of our 10:10 participation are also reducing the CO₂ emissions of the head office portfolio. The Quarter 2 performance is slightly above target due to seasonal phasing and reporting a cumulative target in a non-cumulative fashion. Performance is on track to meet year end targets.

CO ₂ kg/m ²	Q22011/12	Q12011/12	YTD
Target	26.4	29.8	56.2
Emissions	27.6	25.6	53.2

Water consumption

- 5.2 Year to date performance shows a 2 per cent improvement against target water consumption at head offices. Consumption has decreased by 3.5 per cent on last quarter and is on track to meet the year end target of 6.47m³ per person in line with the Department for Environment, Food and Rural Affairs' best practice figure. Improvements in water efficiency are due to ongoing works through the environmental improvement and property care programmes.

Water use (m ³ /person)	Q2 2011/12	Q12011/12	YTD
Target	1.63	1.82	3.45
Performance	1.66	1.45	3.38

6 MAJOR INCIDENTS

- 6.1 There were no major incidents in the Corporate Directorates in Quarter 2.

QUARTER 2 2011/12 HEALTH AND SAFETY– DATA SUMMARY

LU – London Underground; ST – Surface Transport; LR – London Rail;
 CR – Crossrail; CD – Corporate Directorates; DLR – Docklands Light Railway;
 LO – London Overground, TRAM –London Tramlink.

Health

	Sickness absence days lost			Average days lost/employee		
	Q2 2011/12	Q1 2011/12	Q2 2010/11	Q2 2011/12	Q1 2011/12	Q2 2010/11
LU	38,666	36,901	37,547	2.32	2.20	2.15
ST	6,332	6,475	6,436	1.88	1.94	1.83
LR	134	110	151	0.66	0.55	0.74
CR	405	268	672	1.38	0.97	2.35
CD	4,043	3,890	3,930	1.80	1.70	1.60

Customer major injuries

	Customer major injuries			Rate/10 ⁶ customer journeys		
	Q2 2011/12	Q1 2011/12	Q2 2010/11	Q2 2011/12	Q1 2011/12	Q2 2010/11
LU	26	33	22	0.10	0.12	0.09
ST	224	240	200	0.43	0.48	0.38
DLR	1	0	0	0.05	0	0
LO	1	2	2	0.04	0.11	0.16
TRAM	0	0	0	0	0	0

Employee major injuries

	Employee major injuries			Rate/1000 employees		
	Q2 2011/12	Q1 2011/12	Q2 2010/11	Q2 2011/12	Q1 2011/12	Q2 2010/11
LU	3	2	2	0.18	0.12	0.11
ST	1	0	1	0.28	0	0.31
LR	0	0	0	0	0	0
CR	0	0	0	0	0	0
CD	0	0	0	0	0	0

Employee assaults (total, physical and verbal)

Employee assaults				Rate/1000employees		
	Q2 2011/12	Q1 2011/12	Q2 2010/11	Q2 2011/12	Q1 2011/12	Q2 2010/11
LU	355	422	334	33.17	43.29	29.49
ST	37	27	31	10.41	7.03	9.58
LR	0	0	0	0	0	0
CR	0	0	0	0	0	0
CD	0	0	0	0	0	0

Contractor staff assaults (total, physical and verbal)

Contractor staff assaults				Rate/1000 contractor staff		
	Q2 2011/12	Q1 2011/12	Q2 2010/11	Q2 2011/12	Q1 2011/12	Q2 2010/11
BUSES	384	372	325	16	16	11
LOROL	37	42	23	32	38	20
Serco DLR	47	44	37	68	64	60
TOL	12	15	10	75	95	62