

TRANSPORT FOR LONDON

SAFETY, HEALTH AND ENVIRONMENT ASSURANCE COMMITTEE

**SUBJECT: QUARTERLY HEALTH, SAFETY AND ENVIRONMENT  
PERFORMANCE REPORTS – QUARTER 1 2011/12**

**DATE: 5 OCTOBER 2011**

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**1 PURPOSE AND DECISION REQUIRED**

- 1.1 To inform the Committee of the key Health, Safety and Environment matters during Quarter 1 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 1 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.

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## LONDON UNDERGROUND

### QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

#### 1 SUMMARY

##### What went well

- 1.1 Projects in the Health, Safety and Environmental (HSE) Improvement Plans continue to progress to target.
- 1.2 The majority of the HSE performance indicators remain stable or improved with some exceptions noted in section 4.
- 1.3 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 83 per cent and 86 per cent of waste recycled respectively.
- 1.4 The last in service derailment was 49 months ago, which exceeds the previous record of 37 months. The risk of in service derailments is now around 16 times lower than it was a decade ago.

##### Areas for improvement

- 1.5 The number of incidents of work related violence increased by 39 per cent compared to the same quarter last year. The workplace violence reduction unit is implementing a strategy to reduce these and is undertaking further analysis of root causes.
- 1.6 There were three positive drugs tests in the period, following unannounced (2) and 'for cause' testing (1). One employee resigned; one was summarily dismissed; one employee is undergoing a company disciplinary interview.

##### Significant plans for next quarter

- 1.7 Best practice for invasive weed species will be agreed and implemented across lines under London Underground (LU) control.
- 1.8 Work to optimise the regenerative braking capacity across existing and future rolling stock commences.
- 1.9 The development of a safety leadership course for senior managers.

#### 2 PROGRESS AGAINST HSE PLAN

- 2.1 The LU Executive Committee monitors progress every four weeks of programmes in the HSE plan. All programmes continue to be delivered to target.

### 3 STATUS OF HSE MANAGEMENT SYSTEM

- 3.1 The audit team monitors compliance with LU's Health, Safety and Environmental Management System (HSEMS), which is part of LU's overall management system. Progress against the 2011/12 audit programme is to plan, with no critical issues identified.

### 4 HEALTH AND SAFETY PERFORMANCE

#### Health

- 4.1 There were 36,901 working days lost to sickness absence in Quarter 1, representing an average of 2.2 days per employee. For comparison, in the previous quarter and in the same quarter last year there were 2.1 days absence per employee respectively. The top three categories of sickness absence in Quarter 1 were gastrointestinal, musculoskeletal and coughs and colds. These categories have remained the top three categories over the last three years.

Days lost	Q1 2011/12	Q4 2010/11	Q1 2010/11
Sickness absence	36,901	36,347	37,161
Average / employee	2.20	2.14	2.12

#### Safety

- 4.2 Two customer accidental fatalities occurred in Quarter 1, see details in section 6. This will reduce the Mean Time Between Major Incident (MTBMI) measure which reached 406 days at the end of 2010/11. A new MTBMI measure will be calculated at the end of 2011/12.
- 4.3 There were 33 customer major injuries in Quarter 1 (0.12 per million customer journeys). For comparison, there were 25 customer major injuries in the previous quarter (0.10 per million customer journeys) and 35 (0.13 per million customer journeys) in the same quarter last year. The overall trend remains statistically stable.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Customer major injuries	33	25	35
Rate/million customer journeys	0.12	0.10	0.13

- 4.4 There were two employee major injuries in Quarter 1. For comparison, there was one employee major injury in the previous quarter and two in the same quarter last year.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Employee major injuries	2	1	2
Rate/1000 employees	0.12	0.06	0.11

- 4.5 There were 110 physical assaults on employees in Quarter 1. For comparison, there were 130 physical assaults on employees in the previous quarter and 112 physical assaults on employees in the same quarter last year.

4.6 There were 312 verbal assaults on employees in Quarter 1. This compares to 284 in the previous quarter and 191 verbal assaults in the same period last year.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Employee physical assaults	110	130	112
Employee verbal abuse	312	284	191
Total	422	412	303
Rate/1000 employees*	43.29	39.96	26.31

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

4.7 Progress of actions in the 2011/12 work related violence action plan continues to programme. The increase in the reporting of verbal abuse correlates to improved reporting due the recent changes to the Chief Operating Officer's directorate. Further analysis for root causes of work related violence is ongoing. The conclusions of this work will be available next quarter.

4.8 The trend in the number of signals passed at danger (SPADs) for all categories remains stable with an average of 53 occurring per period. There were 159 SPADs in total (all categories) during Quarter 1, of which 109 (69 per cent) were Category A (train operator error) and 50 (31 per cent) were Category B (42 due to either signal equipment malfunction or train equipment and eight were attributable to service control).

4.9 There were 153 Platform Train Interface incidents reported during Quarter 1. 113 incidents (74 per cent) were persons caught in/struck by doors, 31 (20 per cent) were persons falling between the train and platform gap, six (four per cent) were contact between person and train and there were three (two per cent) falls from platforms.

4.10 There were 292 tests for drugs and alcohol in the quarter, 222 unannounced, four for cause, 45 routine monitoring and 21 post incident tests. There were three positive tests for drugs. One positive result following a 'for cause' test and two following unannounced testing. The employee who was 'for cause' tested resigned and one employee who tested positive following unannounced testing was summarily dismissed. The other employee is currently going through a company disciplinary interview.

## 5 ENVIRONMENT PERFORMANCE

### Carbon and energy management

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Total electricity consumption (MWh)	270,431*	284,759*	269,747
Total traction electricity (MWh)	232,348	238,131	222,973
Traction energy efficiency (MWh/million passenger journeys)	886	931	857
Total CO <sub>2</sub> (tonnes)	146,168	153,912	145,799
Normalised CO <sub>2</sub> (g/passenger km)	69.00	74.00	70.00

\*includes an estimate for non traction electricity consumption as final data not available.

5.1 Energy consumption in Quarter 1 2011/12 was 0.3 per cent higher than in Quarter 1 2010/11. The traction energy efficiency rate was higher in Quarter 1 2011/12 compared to Quarter 1 2010/11 due to low energy consumption in Period 3 2010/11 coupled with a high level of passenger journeys. CO<sub>2</sub> emissions were lower and traction energy efficiency was better in Quarter 1 2011/12 when compared to Quarter 4 2010/11.

5.2 A number of energy related actions were delivered in Quarter 1 including:

- (a) low carbon station technology implementation started on site at Leicester Square station. The milestone was achieved 11 days in advance of the target date;
- (b) Climate Change mitigation and adaptation measures have been incorporated within LU's asset group strategies;
- (c) full implementation of an automated meter reading solution at 150 stations is progressing, with 100 stations completed to date, the balance to be completed within the next quarter; and
- (d) Work has been started to optimise the use of regenerative braking capacity across the existing and future rolling stock.

### Recycling and waste management

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Commercial and industrial waste collected (tonnes)	3,121	3,057	3,068
Commercial and industrial waste recycled (tonnes)	2,587	2,480	1,955
Commercial and industrial waste recycled (per cent)	83	81	64
Construction and demolition waste produced (tonnes)	38,508	47,348	53,079
Construction and demolition waste recycled (tonnes)	33,050	45,439	48,493
Construction and demolition waste recycled (per cent )	86	96	91

5.3 The amount of C&I (station and depot) waste collected in Quarter 1 (3,121 tonnes) was slightly higher than that collected in Quarter 4 2010/11 (3,057 tonnes). The recycling rate for C&I waste for Quarter 1 was 83 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 C&D waste generated in Quarter 1 was lower (38,508 tonnes) than the previous quarter (47,348 tonnes). The proportion of C&D waste recycled in the quarter was 86 per cent. This exceeded the 2011/12 recycling target of 77 per cent for the quarter. Excellent recycling rates were delivered by the sub surface railway team (99 per cent waste recycling) and the power and cooling team (95 per cent waste recycling).

## **6 MAJOR INCIDENTS**

6.1 There were two major incidents in Quarter 1.

6.2 A customer accidental fatality occurred at Kentish Town station. A customer sitting on the escalator handrail fell off and suffered head injuries. Alcohol was a contributory factor. A customer awareness poster campaign to take care on escalators was put in place (on station poster boards and escalator moving advertising panels) and an article was included on the TfL page in the Metro newspaper.

6.3 A customer accidental fatality occurred at Chalfont and Latimer. A male customer fell between cars en route from Chorleywood. A formal incident investigation is ongoing.

## 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 April 2011 show that the overall number of people killed or seriously injured (KSI) fell by nine per cent to 2,795 compared to the corresponding 12 months in the previous year.
- 1.2 Following the completion of the first year of the Cycle Safety Action Plan, a review was undertaken and published in May. The review shows that good progress is being made by TfL and its partners in delivering the actions against the milestones in the plan.
- 1.3 Surface Transport (ST) has now implemented the TfL on line driving licence check and driver risk profiling system, which improves the identification of high risk drivers for additional intervention. The new system replaces a paper based system and reduces processing time.
- 1.4 TfL is the first highway authority in the UK to develop a risk based approach for setting bridge inspection intervals. The mechanics of a risk based approach are not defined in national guidance but the approach was permitted; ST undertook a study of this approach and completed a 12 month pilot that has resulted in improved targeting of inspections.
- 1.5 As part of the Electric Vehicles charging programme, the Source London scheme was successfully launched by the Mayor in May 2011 and to date has 160 branded and operational charge points. Following the successful launch, work has been progressing on the retrofitting of existing borough charge points with the first 13 charge points in the London Borough of Haringey, which has been chosen as the pilot borough, expected to join Source London by mid August. Work continues to get the remaining boroughs signed up to Source London as well as proactive engagement to bring additional private partners into the scheme.
- 1.6 Two suppliers were appointed for the NOx abatement pilot following a competitive tendering exercise. The pilot will involve fitting selective catalytic reduction technology to 18 buses to reduce NOx emissions. If the Low Emission Zone NOx standard is introduced in 2015, approximately 2,700 buses will need to be fitted with NOx abatement equipment, subject to funding being made available from Central Government.

## Areas for improvement

- 1.7 A ST risk profile, which will outline significant risks across the organisation, is to be developed. This development will detail mitigations and further improve the control of risks.

## Significant plans for next quarter

- 1.8 TfL officers are currently working on the draft London Road Safety Plan. It is intended that the plan will be submitted to a Mayoral meeting in November.
- 1.9 The Cycle Superhighway Routes 2 and 8 are to open, with the aim of encouraging modal shift.
- 1.10 Audits are planned to check that the Roads Directorate and highway contractors are following internal procedures correctly. This follows the receipt of a formal warning letter for drainage works carried out on Victoria Embankment without flood defence consent. Further environmental awareness sessions were delivered to Roads Directorate and the highway contractors and a memorandum of understanding with the Environment Agency (EA) is being developed.

## 2 PROGRESS AGAINST HSE PLAN

- 2.1 The ST business areas have developed specific objectives and actions in line with identified Health and Safety priorities and plans. Local HSE governance meetings are monitoring 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, there have been no significant compliance issues identified.

## 4 HEALTH AND SAFETY PERFORMANCE

### Health

- 4.1 There were 6,475 working days lost due to sickness absence in Quarter 1, representing an average of 1.94 per employee. For comparison, the previous quarter's average was 1.80 days absence per employee and the corresponding quarter of last year was 2.05. The top three categories of sickness absence were musculoskeletal, mental health and gastrointestinal.

Days lost	Q1 2011/12	Q4 2010/11	Q1 2010/11
Sickness absence	6,475	6,321	7,254
Average/employee	1.94	1.80	2.05

### Safety

- 4.2 The number of accidental customer major injuries in Quarter 1 was 240 (0.48 per million customer journeys). For comparison, there were 269 accidental

customer major injuries in the previous quarter (0.40 per million customer journeys) and 204 (0.38 per million customer journeys) in the same quarter last year.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Customer major injuries	240	269	204
Rate/10 <sup>6</sup> customer journeys	0.48	0.40	0.38

- 4.3 There was no accidental employee major injury in Quarter 1. For comparison, there was one employee major injury in the previous quarter and two in the same quarter last year.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Employee major injuries	0	1	2
Rate/1000 employees	0	0.33	0.51

- 4.4 There were 23 physical assaults on employees in Quarter 1. For comparison, there were 31 physical assaults on employees in the previous quarter and 22 in the same quarter last year. There were four reported verbal assaults on employees in the quarter. For comparison, there were eight verbal assaults on employees in the previous quarter and two in the same quarter last year.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Employee physical assaults	23	31	22
Employee verbal assaults	4	8	2
Rate/1000 employees	7.03	12.96	6.15

- 4.5 There were 398 assaults (physical and verbal combined) on contractors in Quarter 1. For comparison there were 401 assaults on contractors in the previous quarter and 336 in the corresponding quarter of last year.
- 4.6 Of the 398 contractor assaults, 372 (16 per 1,000 bus drivers) were on bus drivers, compared to 399 in Q4 (equivalent to 17 per 1,000 bus drivers). This represents an increase on the corresponding period for 2010/11, which was 334, at a rate of 15 per 1,000 bus drivers.

## 5 ENVIRONMENTAL PERFORMANCE

### Waste and recycled materials

- 5.1 The Highway Maintenance and Works Contractors (HMWCs) recycled and reused 97.9 and 96.5 per cent of excavated and non excavated materials respectively in Quarter 1, against a target of 94 per cent for 2011/12.
- 5.2 The HMWCs procured 23 per cent of recycled and green material in Quarter 1, against a target of 15 per cent for 2011/12.

<b>HMWC waste and recycled materials</b>	<b>Q1 2011/12</b>	<b>Q4 2010/11</b>	<b>Q1 2010/11</b>
Waste recycled and reused against total tonnes of waste excavated	(17,269 of 17,644)	(31,794 of 32,259)	(5,161 of 5,168)
Per cent	97.9	98.6	99.9
Non-excavated waste recycled and reused against tonnes of excavated	(833 of 863)	(815 of 855)	(811 of 855)
Per cent	96.5	95.3	94.0
Recycled and green material procured against total volume in tonnes	(908 of 3,945)	(6,558 of 38,845)	(1,592 of 8,934)
Per cent	23.0	16.9	17.8

- 5.3 In Quarter 1, the Traffic Control Equipment Maintenance and related Services (TCMS) contractors recycled 49.8 per cent of generated waste. One contractor failed to submit data for Quarter 1 so the data reported is from two of the three TCMS contractors (the third contractor has been required to provide this data).

<b>TCMS waste and recycled materials</b>	<b>Q1 2011/12</b>	<b>Q4 2010/11</b>	<b>Q1 2010/11</b>
Waste recycled against total volume	(3,925 of 7,885)	(10,358 of 14,028)	(7,210 of 10,876)
Percentage	49.8	73.8	66.3

## **MAJOR INCIDENTS**

- 5.4 A Woolwich Free Ferry operative was fatally injured following a fall from a ferry and was pronounced dead at the scene in August. The incident is under investigation by the Maritime Accident Investigation Board (MAIB) and internally by Serco (as the operator) and the Surface Safety Team. The Committee is asked to note that this incident occurred outside the Quarter 1 reporting parameters, but is recorded here due to its significance. Further detail will be provided in the Quarter 2 report.
- 5.5 There were four pedestrian and two third party fatalities in road traffic collisions with buses in the quarter. There was one in April, four in May and a further one in June. The incidents are under investigation.

- 5.6 The five hydrogen fuel cell buses operating on route RV1 were temporarily withdrawn from service following a fire in the rear of an out-of-service vehicle in June. The fire started in the low-voltage electrical system and was not related to the hydrogen system, which shut down as intended. A full third party investigation was undertaken on all vehicles. Following electrical upgrade works, four of the buses returned to service at the end of July. Repair work to the fire damaged bus is ongoing.
- 5.7 Investigations into six 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) March 2008 in a road traffic collision with a pedestrian. The investigation showed the pedestrian walked into the path of the bus. A verdict of accidental death was recorded by the Coroner;
  - (b) February 2009 in two separate road traffic collisions with pedestrians at different locations. The investigations found that there was no blame placed on the buses involved. Verdicts of accident death were recorded by the Coroner;
  - (c) April 2009 in a road traffic collision with a motorcyclist. The investigation showed that the cyclist encroached onto the path of the bus while overtaking another vehicle. A verdict of accidental death was recorded by the Coroner;
  - (d) October 2009 in a road traffic collision with a private hire driver. The investigation showed that the driver lost control of his vehicle before encroaching onto the path of the bus. A verdict of death by accident or misadventure was recorded by the Coroner; and
  - (e) November 2009 in a road traffic collision with a pedestrian. The bus driver was cleared of causing death by careless driving in a unanimous verdict in a criminal court. The Coroner accepted this verdict and closed the case file.

## LONDON RAIL

### QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

#### 1 SUMMARY

##### What went well

- 1.1 The Docklands Light Railway's (DLR) safety index (a comprehensive review of a number of lead and lag safety indicators) has shown continued improvement in safety performance this quarter.
- 1.2 This quarter has seen the inclusion of the cable car project in the DLR safety reporting arrangements. After much careful preparation and planning, work has now started on site, with piling in the Royal Victoria Dock and on the south side of the river at the North Greenwich station site. In addition MACE, the principal contractor for the works, will be working closely with DLR to ensure that best practice environmental management is in place.
- 1.3 In the last quarter, a Construction Design and Management (CDM) compliance audit was commissioned to review how DLR complies with its role as Client and how CDM Coordinators discharge their responsibilities. The audit has returned a favourable conclusion and has confirmed that DLR 'has a very robust system in place in relation to CDM compliance'.
- 1.4 Construction work has now started on Phase 2 of the London Overground extension project. This is the final phase of the project and will see the introduction of a rail link between Surrey Quays and Clapham Junction.

##### Areas for improvement

- 1.5 On London Overground, there were a number of operational incidents including two SPADs and a number of door release incidents where the door controls were momentarily engaged in error. Each incident has been investigated and a number of recommendations are being progressed. London Overground Rail Operations Limited (LOROL) is reviewing aspects of its training is also exploring the possibility of a technological solution.
- 1.6 Despite taking a number of actions, instances of graffiti and stone throwing on the core section of the East London Railway have continued during Quarter 1. Further incident analysis is being carried out and work is ongoing with colleagues in London Underground to understand better which tactics have been most successful in their recent initiatives on trespass and vandalism.
- 1.7 There have been a number of public complaints regarding noise levels on the London Overground. These mainly relate to wheel screech, fire alarms and the use of public address systems. Much work has already been carried out to resolve these issues and it is hoped that there will be a final resolution in the next quarter.

## **Significant plans for the next quarter**

- 1.8 During the next quarter, DLR will be carrying out a review using the Office of Rail Regulation management maturity model. The model provides a consistent way of evaluating the management arrangements required by the Railways and other Guided Transport Systems (Safety) Regulations 2006 (ROGS).
- 1.9 A mid-year review of the DLR Safety Performance Index is scheduled. This will include a focus on identifying actions within the direct control of stakeholders and where the result would have a direct and immediate improvement on safety performance.
- 1.10 Measures to address the irregular door release incidents on London Overground, as described in 1.5 above, will be taken forward.
- 1.11 LOROL will be considering its quality management system arrangements in preparation for achieving ISO9001:2008 (the International Standard for Quality Management Systems).
- 1.12 London Tramlink will be procuring six new trams and preparing for their introduction to the system. This will include preparing safety verification arrangements and making the necessary infrastructure changes.
- 1.13 The London Tramlink environmental compliance review has now been completed and the findings will be incorporated in to a long term action plan that will commence in Quarter 2.

## **2 PROGRESS AGAINST HSE PLAN**

- 2.1 All parts of the London Rail business reported satisfactory performance against objectives and milestones.

## **3 STATUS OF HSE MANAGEMENT SYSTEM(S)**

- 3.1 DLR and London Overground have established safety management systems in place. Revisions have been made to the Management System following the transfer of the maintenance function from Carillion to London Tramlink. Work continues to improve further and develop the system.

## **4 HEALTH AND SAFETY PERFORMANCE**

### **Health**

- 4.1 There were 110 working days lost due to sickness absence in Quarter 1 by employees of London Rail. This represented an average of 0.55 days per employee. For comparison, in the previous quarter there were 216 days lost, equating to 1.07 days absence per employee and in the same quarter last year there were 108 days lost, equating to 0.52 days absence per employee. The top three categories of sickness absence in Quarter 1 were accidents (only one incident work related), genitourinary/renal and gastrointestinal. Overall absence rates remain low in London Rail.

Days lost	Q1 2011/12	Q4 2010/11	Q1 2010/11
Sickness absence	110	216	108
Average/employees	0.55	1.07	0.52

## Safety

4.2 There were no employee major injuries this quarter in London Rail.

4.3 There were three accidental customer major injuries for London Overground in Quarter 1 (in 17.5 million journeys). For comparison, there were none in the previous quarter or the same quarter last year.

London Overground	Q1 2011/12	Q4 2010/11	Q1 2010/11
Customer major injuries	2	0	0
Rate/million customer journeys	0.11	0	0

4.4 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 1 was seven and 37 respectively. For comparison, there were five and 24 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.

LOROL	Q1 2011/12	Q4 2010/11	Q1 2010/11
Physical assaults	7	5	6
Verbal assaults	37	24	12
Rate/1000 employees	26	25	16

4.5 There were no accidental customer major injuries on DLR in Quarter 1 (18.8 million customer journeys). For comparison, there were no accidental customer major injuries in the previous quarter and one in the same quarter last year.

DLR	Q1 2011/12	Q4 2010/11	Q1 2010/11
Customer major injuries	0	0	1
Rate/million customer journeys	0	0	0.06

4.6 There were no TfL employee assaults this quarter on DLR. The number of employees of TfL's franchisee Serco who suffered workplace assaults in Quarter 1, was ten for physical and 34 for verbal respectively. The overall rates are slightly higher 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. BTP is working with Serco to see how these matters can be addressed further.

DLR	Q1 2011/12	Q4 2010/11	Q1 2010/11
Physical assaults	10	11	6
Verbal assaults	34	33	29
Rate/1000 employees	64	64	56

- 4.7 There were no accidental customer major injuries for London Tramlink in Quarter 1 (6.5 million customer journeys). For comparison, there were none in the previous quarter and none in same period last year.

Tramlink	Q1 2011/12	Q4 2010/11	Q1 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 1 for the contractor Tram Operations Limited (TOL) on London Tramlink was two (physical) and thirteen (verbal) respectively. For comparison, there were seven physical and nine verbal assaults in the previous quarter and three and 13 in the same quarter last year. The rate is relatively consistent and TOL is continuing to work with the BTP to target particular hotspots and times of the day. TOL employs a relatively small number of staff, so the rate per 1000 employee figures needs to be treated with caution.

TOL	Q1 2011/12	Q4 2010/11	Q1 2010/11
Physical assaults	2	7	3
Verbal assaults	13	9	13
Rate/1000 employees	95	98	99

- 4.9 On London Overground Infrastructure, there were no contractor RIDDOR reportable accidents during the quarter. The 13 period rolling accident frequency rate is 0.40 per 100,000 hours. This is a small increase from the last quarter. It should be noted that there has been a significant drop in hours since the completion of Phase 1(a) works.
- 4.10 On DLR Major Projects, there were no contractor RIDDOR reportable accidents during the quarter. The 13 period rolling accident frequency rate is 0.13 per 100,000 hours worked at the end of the quarter, which 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 CO<sub>2</sub> emissions for Quarter 1 are set out below. The emission rates have been relatively stable during previous quarters and this quarter is no exception. The previous quarter included an additional reporting period thus it is appropriate to compare it with Quarter 1 last year. This shows a slight improvement in emissions rates.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Total CO <sub>2</sub> (Tonnes)	16,435.26	19,563.31	12,628.49
Normalised CO <sub>2</sub> (g/passengers km)	54.32	60.02	55.18

## **Waste Management**

- 5.2 The DLR has now received the site waste management plans from MACE the contractor for the cable car project, which are currently being reviewed. London Overground has received the Site Waste Management Plan produced by the phase 2 civils contractor, which have been reviewed and accepted.
- 5.3 At the end of Quarter 1 on DLR, Serco had increased the total amount of commercial waste recycled from the 39 per cent in the previous year to 47 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 year on year. Serco has met this target for the previous two years.
- 5.4 At the end of Quarter 1, the rates for recycling commercial train waste and depot waste on LOROL were 67 per cent and 87 per cent respectively. A review of current arrangements and other options is currently underway to look at improving the proportion of waste that is recycled.

## **Other environmental items**

- 5.5 On London Overground, a scheme to introduce rainwater harvesting at Willesden Train Maintenance Depot to supply the train washer will be implemented in the next quarter.
- 5.6 On phase 2 of the London Overground extension, work is ongoing to discharge outstanding planning conditions related to environmental issues.
- 5.7 Environmental monitoring (of noise, vibration and dust) continues to be undertaken by the Phase 2 civils contractor. The installation of noise insulation has been completed within the nearby houses. Occasional exceedances of the noise trigger levels have been investigated and corrective actions have been taken as appropriate.

## **6 MAJOR INCIDENTS**

- 6.1 There were no major incidents in London Rail in Quarter 1.

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

- 1.1 The new Target Zero and occupational health campaign on fatigue was implemented and well received.
- 1.2 A ninth Crossrail (CR) design contract carried out under the Civil Engineering Environmental Quality and Assessment Award Scheme (CEEQUAL) has achieved an interim award of “Excellent”. All nine contracts have now achieved an “excellent” award.
- 1.3 Construction Design and Management Regulations (CDM) training on the new CDM procedure and process has been delivered with more training planned in the next quarter; the feedback from the sessions has been excellent. The recent CDM audit has shown good progress with CDM compliance.
- 1.4 Crossrail is working with TfL to source construction sites to take part in a trial of dust suppressants. In addition, CR and TfL are working together to investigate the potential for hoarding to have green screens (plants such as ivy that are grown up the hoarding) as a mechanism for reducing PM10.
- 1.5 An exercise was conducted in Quarter 1 to assess and develop the coordination between head office and site teams when dealing with a major incident. The exercise went well and identified several areas for improvement, all of which are being actioned.
- 1.6 There was a successful archaeological remediation of human remains found in a buried cemetery at Liverpool Street.

**Areas for improvement**

- 1.7 To review the health and safety aspects of contract conditions to ensure they reflect the new CR operating model.
- 1.8 Work continues on the review and update of procedures and documents that are part of the Environment Management System to reflect the new structure and new roles and responsibilities since the integration of CR and its project delivery partner to produce a single delivery organisation.

**Significant plans for the next quarter**

- 1.9 The release of the next phase of Target Zero campaign ‘How do you do Target Zero?’ which features posters and videos of a cross section of Crossrail staff showing what makes it personal for them.
- 1.10 User requirements review of RIVO Safeguard to continue to improve the system for ease of input and extraction of data.

- 1.11 The Green Line Environmental Award for individuals demonstrating exemplary environmental behaviours was launched and the awards ceremony was held in August. Contractor awards have been developed alongside the health and safety team and are to be launched shortly. Work has been undertaken on a special environmental edition of the OnSite magazine, which is due to be issued in early September.
- 1.12 The outcome of the CDM audit will be reviewed and actions taken.
- 1.13 There are plans to carryout six occupational health audits into contractor implementation of the CR health requirements.
- 1.14 An annual environmental award event is being developed to celebrate achievements by contractors which positively improve health, safety and environmental management.

## 2 PROGRESS AGAINST HEALTH AND SAFETY PLAN

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

## 3 STATUS OF HEALTH AND SAFETY MANAGEMENT SYSTEM

- 3.1 The new and revised procedures were disseminated and a presentation on the changes to the management system was issued to directors/line managers to enable them to brief their staff.

## 4 HEALTH AND SAFETY PERFORMANCE

### Health

- 4.1 There were 268 working days lost due to sickness absence in Quarter 1, which represents an average of 0.97 days per employee. The top three categories of sickness absence in Quarter 1 were gastrointestinal, coughs and colds and mental health.

Days lost	Q1 2011/12	Q4 2010/11	Q1 2010/11
Sickness absence	268	672	323
Average/employees	0.97	2.35	1.40

### Safety

- 4.2 There were no employee major injuries in Crossrail reported in Quarter 1.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Employee major injuries	0	0	0
Rate/1000 employees	0	0	0

- 4.3 There were no contractor major injuries reported in Q1. For comparison, there were none in the previous quarter and none in the same quarter last year.

	Q1 2011/12	Q4 2010/11	Q1 2010/11
Contractor major injuries	0	0	0
Rate/1000 contractor employee	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 or verbal assaults to employees in Quarter 1. 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 Electricity and fuel use on site from construction of the Canary Wharf station for Quarter 1 is not yet available and therefore shows an anomalously large drop from the previous three quarters where it was included.
- 5.2 Office energy use from the Crossrail head office at Canary Wharf shows a decrease for the first quarter of this year, which is likely to be due to a decrease in staff numbers in the office over this period as staff move out to site offices.

Construction Activities	Q1 2011/12	Q4 2010/11	Q1 2010/11
Site Electricity and Gas Consumption (kWh)	354,167	633,527	500,855
Site Fuel Consumption (litres)	121,021	181,521	175,447
Total CO <sub>2</sub> (tonnes)	511	815	734

Office Activities	Q1 2011/12	Q4 2010/11	Q1 2010/11
Office Electricity Consumption (kWh)	389,651	424,352	423,033
Total CO <sub>2</sub> (tonnes)	209	230	227

Notes: This is data for central section only: Canary Wharf data not yet available.

### Recycling and Waste Management

- 5.3 Of the 10,117 tonnes of construction and demolition waste recorded over the first quarter, 94 per cent of this waste was reused or recycled, which is above the 90 per cent target but did not quite meet 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.

<b>Construction Activities</b>	Q1 2011/12	Q4 2010/11	Q1 2010/11
Construction and demolition waste produced (tonnes)	10,117	9,206	5,287
Construction and demolition waste recovered (tonnes)	9,460	8,644	4,932
Construction and demolition waste recovered this quarter (per cent)	94	94	93
Cumulative construction and demolition waste recovered (per cent)	96	96	93
Excavated material (tonnes)	87,545	47,252	256
Excavated material recovered (tonnes)	84,913	46,425	251
Percentage excavated material recovered this quarter (per cent)	97	98	98
Cumulative excavated material recovered (per cent)	97	97	98

## 6 MAJOR INCIDENTS

6.1 There were no major incidents in Crossrail in Quarter 1.

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

- 1.1 The combined TfL Annual Health, Safety and Environment Report 2010/11 was considered by the TfL Board on 21 September.
- 1.2 The Annual Report under the Carbon Reduction Commitment was completed.
- 1.3 A TfL wide Environment Delivery Plan is being produced, mapping all of the relevant activities across TfL and their contributions to meeting TfL's targets on CO<sub>2</sub> reduction, waste recycling and air emissions improvements.
- 1.4 The online driving licence check and driver risk profiling system for all TfL pool car users drivers was implemented. Over 800 pool car users across TfL can now use the system, which is being administered by Tube Lines. The new system replaces paper based systems, reduces processing time and facilitates the use of one process for drivers on TfL business.
- 1.5 Cubic Transportation Systems plans for health and safety training and environmental protection were reviewed as part of the Future Ticketing Agreement.
- 1.6 TfL was invited by the US Federal Transit Administration (FTA) to run a workshop as part of a conference on 'Adapting Transit to Climate Change'. The workshop reviewed the issues, processes and lessons learned and showed how to carry out a practical risk assessment exercise. There were 70 attendees from a wide range of US and Canadian transit authorities including New York and San Francisco Municipal Transportation Agencies. In addition, TfL provided a case study for the FTA's new report on adapting to climate change.

**Areas for improvement**

- 1.7 Based on feedback, the risk assessment pro forma will be redesigned to make the process more efficient and simpler for line managers to complete.
- 1.8 Work to deliver an improved approach to HSE training for managers in Corporate Directorates and to align training with requirements of the TfL Group HSE Competency Framework will be developed.

**Significant plans for the next quarter**

- 1.9 The RSIGuard, repetitive-strain-injury risk control software, will undergo user acceptance testing with a view to it be deployed by the end of Quarter 2. This will be developed as a TfL wide tool.
- 1.10 An HSE competency audit will be performed at Cubic Transportation Systems Park Royal office.

- 1.11 A programme of Planned General Inspections (PGIs) across the Corporate Directorates' building portfolio will be carried out.
- 1.12 The implementation of the online driving licence check and driver risk profiling system for TfL 'grey fleet' users will be completed.

**2 PROGRESS AGAINST HSE PLAN**

- 2.1 Corporate Directorates' HSE Management System (HSEMS):
  - (a) HSE Priorities and Plans for 2011/12 are in place.
- 2.2 Specific areas of risk:
  - (a) hazardous waste management arrangements at the Lost Property Office were reviewed and additional risk control measures implemented; and
  - (b) a significant increase in the number of office moves this quarter led to a high number of Display Screen Equipment (DSE) reviews being required.

**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 the associated proforma in the Corporate Directorates HSEMS will be carried out in Quarters 1 and 2 2011/12.

**4 HEALTH AND SAFETY PERFORMANCE**

- 4.1 There were 3,890 working days lost to sickness absence in Quarter 1, representing an average of 1.7 days per employee. This is the same rate as occurred in the previous quarter and very similar to the rate in Quarter 1 2010/11. The top three sickness absence categories were mental health, gastrointestinal and coughs and colds.

Days lost	Q1 2011/12	Q4 2010/11	Q1 2010/11
Sickness absence	3,890	4,114	3,848
Average/employee	1.7	1.7	1.6

**Safety**

- 4.2 There were no accidental customer major injuries, employee major accidental injuries or any physical assaults on employees during Quarter 1 or during the same quarter last year. The Corporate Directorates consist mainly of non-operational staff. Periodic risk assessments and the implementation of adequate controls help to maintain this low risk environment.

**5 ENVIRONMENT PERFORMANCE**

**Carbon emissions**

- 5.1 The target for CO<sub>2</sub> emissions in head office buildings was bettered for the quarter.

Performance improved by 15 per cent on the same period last year, reflecting the success of the RE-FIT project, ongoing efficiency improvements through the Environmental Improvement Programme and staff engagement through the Environmental Champions and Destination Green. Activities related to the 10:10 campaign, particularly 'Building Health Checks', have also contributed to the significant improvement.

<b>CO<sub>2</sub> kg/m<sup>2</sup></b>	<b>Q1 11/12</b>	<b>Q4 10/11</b>	<b>Q1 10/11</b>
Target emissions	29.8	38.0	30.5
Actual emissions	25.6	37.0	30.2

### **Water consumption**

- 5.2 The target for water consumption was met for the quarter. Performance has improved by four per cent on the same period last year, reflecting the success of the numerous water efficiency devices installed under the Environmental Improvement Programme. Performance is on track to meet the year end target of 6.47 m<sup>3</sup> per person, which is in line with DEFRA's best practice figure. The target for Q1 11/12 is higher than that of Q1 10/11 due to the revision of the benchmark group of offices to reflect changes in the portfolio and accommodation strategy.

<b>Water use (m<sup>3</sup>/person)</b>	<b>Q1 11/12</b>	<b>Q4 10/11</b>	<b>Q1 10/11</b>
Target	1.82	1.37	1.65
Performance	1.45	1.52	1.51

## **6 MAJOR INCIDENTS**

- 6.1 There were no major incidents in the Corporate Directorates in Quarter 1.

**QUARTER 1 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;  
 LOROL – London Overground; TRAM – London Tramlink.  
 n/a – not available

**Health**

	Sickness absence days lost			Average days lost/employee		
	Q1 2011/12	Q4 2010/11	Q1 2010/11	Q1 2011/12	Q4 2010/11	Q1 2010/11
LU*	36,901	36,347	37,161	2.20	2.14	2.12
ST	6,475	6,321	7,254	1.94	1.80	2.05
LR	110	216	108	0.55	1.07	0.52
CR	268	672	323	0.97	2.35	1.40
CD	3,890	4,114	3,848	1.7	1.70	1.6

**Customer Major Injuries**

	Customer major injuries			Rate/10 <sup>6</sup> customer journeys		
	Q1 2011/12	Q4 2010/11	Q1 2010/11	Q1 2011/12	Q4 2010/11	Q1 2010/11
LU*	33	25	35	0.12	0.10	0.13
ST	240	269	204	0.48	0.40	0.38
DLR	0	0	1	0	0	0.06
LOROL	2	0	0	0.11	0	0
TRAM	0	0	0	0	0	0

\*London Underground's data covers three periods during Quarter 4 while other business areas cover four periods.

**Employee major injuries**

	Employee major injuries			Rate/1000 employees		
	Q1 2011/12	Q4 2010/11	Q1 2010/11	Q1 2011/12	Q4 2010/11	Q1 2010/11
LU*	2	1	2	0.12	0.06	0.11
ST	0	1	2	0	0.33	0.51
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/1000 employees		
	Q1 2011/12	Q4 2010/11	Q1 2010/11	Q1 2011/12	Q4 2010/11	Q1 2010/11
LU*	422	412	303	43.29	39.96	26.31
ST	27	39	24	7.03	12.96	6.15
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		
	Q1 2011/12	Q4 2010/11	Q1 2010/11	Q1 2011/12	Q4 2010/11	Q1 2010/11
BUSES	372	399	334	16	17	15
LOROL	42	29	18	26	25	16
DLR	44	44	35	64	64	56
TOL	15	16	16	95	98	99