

TRANSPORT FOR LONDON

SAFETY, HEALTH AND ENVIRONMENT ASSURANCE COMMITTEE

SUBJECT: QUARTERLY HEALTH, SAFETY AND ENVIRONMENT
PERFORMANCE REPORTS

DATE: 20 JULY 2010

1 PURPOSE AND DECISION REQUIRED

1.1 To inform the Committee of the key Health, Safety and Environment matters in the Modes during the last quarter. The Committee is asked to note the report.

2 BACKGROUND

2.1 Full reports on Health, Safety and Environmental activities and 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 4 2009/10 Health, Safety and Environment Performance report for each Mode is 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

3.2 It should be noted that the London Underground report covers three periods during Quarter 4 while other modes' reports cover four periods.

4 RECOMMENDATION

4.1 The Committee is asked to NOTE the report.

5 CONTACT

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LONDON UNDERGROUND QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

1 SUMMARY

What went well

- 1.1 The residual risk measure demonstrates continuing improvement in Time Between Major Incidents (TBMI) this quarter. The last major incident (Tottenham Court Road contractor fatality) occurred over 484 days ago measured in March 2010.
- 1.2 All objectives in the 2009/10 Safety, Environmental and Health Improvement Plans are complete.
- 1.3 The overall recycling rate for construction and demolition waste for 2009/10 was 79 per cent. This significantly exceeded the 2009/10 recycling target (50 per cent). This was largely as a result of the amount of ballast waste recycled each quarter this year (98 per cent).
- 1.4 London Underground (LU) completed its Carbon Footprint report for 2009. The assessment showed that LU's carbon efficiency improved by five per cent from 88g to 84g CO₂e per passenger kilometre. This improvement was achieved by enabling 1.7 per cent more passenger journeys while only using 0.34 per cent more electricity.
- 1.5 There were 37 health fairs held across LU this year, including targeted fairs at the Chief Maintenance Officer's (CMO) depots for (former Metronet) maintenance employees. Attendance increased by 14 per cent compared to last year, with more than 1,600 employees attending the fairs. Excellent feedback continues to be received for this important health promotion activity.
- 1.6 All safety and environment key performance indicators were stable or improving with the exception of those noted below.

Areas for improvement

- 1.7 Incidents of work-related violence increased by 3.7 per cent, from 1,861 in 2008/09 to 1,932 in 2009/10. The largest increase was an 11 per cent increase in threats made to LU staff. These increases may be due to service suspensions resulting from major engineering works and ticketless passengers trying to use the service. A programme of training in handling confrontation is underway at hot-spot locations this will be extended and further guidance and support on handling conflict made available to operational staff and managers.

Significant plans for the next quarter

- 1.8 Implementation of the 2010/11 Safety and Environment Improvement Plans and the Climate Change Impact Programme will begin.

2 PROGRESS AGAINST HSE PLAN

- 2.1 The LU Executive Committee receives an update on progress against actions in the Health, Safety and Environmental Improvement plans every four weeks. All objectives planned for 2009/10 are complete. The following items are of note in Quarter 4:
- (a) In addition to the 37 health fairs held across LU, four were held for TfL and GLA employees. Good attendance and feedback were also received for these health promotions.
 - (b) The 2009/10 Improving Safety Critical Communications programme is complete. All Service Control staff have received training via the Continuous Development Programme.
 - (c) Best practice environmental requirements have been included in each stage of the procurement process for major contracts and capital/infrastructure works including station upgrades and rolling stock decommissioning.

3 STATUS OF HSE MANAGEMENT SYSTEM

- 3.1 The Audit Team monitors compliance with London Underground's Health Safety and Environmental Management System (HSEMS). The full audit programme for 2009/10 was delivered, allowing for controlled changes required by the business. There were no safety critical adverse findings in Quarter 4.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 29,981 working days lost to sickness absence in Quarter 4, representing an average of 2.3 days per employee. For comparison, in the previous quarter there was 3.3 days absence per employee and in the same quarter last year 2.2 days absence per employee. The top three categories of sickness absence in Quarter 4 were coughs and colds, gastrointestinal and musculo skeletal.

Days lost	Q4 2009/10	Q3 2009/10	Q4 2008/09
Sickness absence	29,981	42,845	29,764
Average / employee	2.3	3.3	2.2

- 4.2 The average number of employees taking time off sick due to back pain decreased slightly, with an average of 832 working days lost (0.38 per cent) this quarter when compared to Quarter 4 2008/09. On average, 112 employees (0.87 per cent of staff) were absent per period in Quarter 4 2009/10.
- 4.3 Although there was a small increase in the average number of days of non attendance due to stress anxiety and depression this Quarter, 1,471 per period, (0.67 per cent of working days) compared to an average of 1,204 per period (0.53 per cent of working days) in Quarter 4 2008/09, the long term trend remains stable.

Safety

- 4.4 The number of customer major injuries in Quarter 4 was 31 (0.04 per million customer journeys at the end of the quarter). For comparison, there were 34 customer injuries in the previous Quarter (0.13 per million customer journeys at the end of the quarter) and 35 in the same Quarter (Q4) last year.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Customer major injuries	31	34	35
Rate/million customer journeys	0.04	0.13	0.04

- 4.5 There were no employee major injuries in Quarter 4. From Quarter 1 2009/10, injury data for former Metronet employees is included in this measure; previous year's results will therefore be comparable from the Quarter 1 2010/11 report onwards.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Employee major injuries	0	5	n/a
Rate/1000 employees	0.00	0.32	n/a

- 4.6 There were 120 physical assaults on employees in Quarter 4. For comparison, there were 118 physical assaults on employees in the previous quarter.
- 4.7 There were 228 verbal assaults on employees in Quarter 4 and 107 threats. This compares to 354 verbal assaults and 144 threats to employees in Quarter 3. Note Quarter 3 had four periods.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Employee physical assaults	120	118	102
Threat to employee	107	144	104
Employee verbal abuse	228	354	213
TOTALS	455	626	419
Rate/1000 employees*	41.25	56.34	37.52

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

- 4.8 During 2009/10, 534 LU staff assaults were reported to the British Transport Police (BTP). In 221 cases the alleged assailant has been identified. To date, of the 221 assaults, 127 (58 per cent) resulted in a successful prosecution at court, 18 (eight per cent) were not successful, 47 (21 per cent) are still in the judicial process, awaiting a court hearing and 29 (13 per cent) are still under investigation. The Workplace Violence Unit continues to assist the BTP investigating officers by taking statements from victims/witnesses and/or producing CCTV evidence for use in court. The Unit also supports victims and/or witnesses who are required to attend court to give evidence.
- 4.9 The trend in the quarter of the number of signals passed at danger, SPADs, – All categories – was stable with an average of 53 occurring per period. There were 156 SPADs in total (all categories) during Quarter 4, of which 116 (74 per cent) were Category A and 39 (25 per cent) were Category B (due to either signal equipment malfunction or train equipment (36) and 3 were attributable to Service Control). One Category C SPAD was recorded in the quarter, which

resulted from the correct operation of signalling equipment. The overall SPAD trend continues to decrease and reduced by three per cent (21 SPADs) compared with last year.

4.10 There were 163 Platform Train Interface (PTI) incidents reported during Quarter 4, the trend remains stable. Sixty three were person caught in/struck by doors, 55 were person falling whilst boarding/alighting, 26 were person falling between the train and platform gap, 14 were contact between person and train, four were falls from platform and one was as a result of platform edge doors open (with no train present).

4.11 There were 229 drugs and alcohol tests in the Quarter, 168 unannounced, one for cause, 46 routine monitoring and 14 post incident tests. There was no positive Drug or Alcohol result during the quarter. The 2009/10 target for unannounced drugs and alcohol testing was six per cent (678) of safety critical employees. This was exceeded by 0.3 per cent, a total of 707 safety critical employees were tested.

5 ENVIRONMENT PERFORMANCE

Carbon and energy management

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Total electricity consumption (MWh)	289,486	349,642	279,003
Total Traction Electricity (MWh)	233,285	296,780	243,592
Traction Energy Efficiency (MWh/million passenger journeys)	939	909	938
Total CO ₂ (tonnes)	156,467	138,387	150,802

5.1 A number of energy related actions under the environment improvement programme were delivered in Quarter 4 including:

(a) LU has completed its Carbon Footprint report for 2009. The assessment has shown that LU's absolute emissions have risen by 0.7 per cent although LU's carbon efficiency improved by five per cent from 88g to 84g CO₂e per passenger kilometre. This improvement was achieved by enabling 1.7 per cent more passenger journeys while only using 0.34 per cent more electricity.

(b) The low energy lighting trial is now operational at Charing Cross station. Installation of low energy 'T5' lamps took place in the Bakerloo Line ticket hall and along the Bakerloo Line platform (southbound). The trial runs until the end of July 2010.

Recycling and waste management

5.2 Of all the station and depot waste collected, 47 per cent was recycled in Quarter 4, which resulted in a 46 per cent recycling rate for the year. This exceeded the 2009/10 recycling target for Commercial and Industrial waste (45 per cent). This reflects the successful recycling arrangements LU has had in place throughout 2009/10 in the City of London.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Commercial and Industrial Waste (tonnes)	3,171	4,382	3,624
Commercial and Industrial Waste Recycled (tonnes)	1,484	1,652	1,511
Commercial and Industrial Waste Recycled (%)	47	38	42

- 5.3 In 2009/10, there was an increase in construction and demolition waste collected compared to the two previous years (145,733 tonnes in 2009/10 compared to 118,177 tonnes in 2008/09 and 71,666 tonnes in 2007/08). This is partly due to new project activity in 2009/10, for example, Tottenham Court Road and improvements in the processes for collecting waste data from Projects and Upgrades (in line with the Site Waste Management Plan Regulations 2008). This resulted in a more complete set of waste management data in 2009/10. Over 98 per cent of waste ballast collected was recycled each quarter throughout 2009/10. Similarly, enabling works at Tottenham Court Road also delivered significant recycling rates (98 per cent in Quarter 3).

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Construction and Demolition Waste (tonnes)	29,080	43,055	44,467
Construction and Demolition Waste Recycled (tonnes)	22,839	37,747	31,283
Construction and Demolition Waste recycled (%)	79	88	70

6 MAJOR INCIDENTS

- 6.1 There were no major incidents in the quarter.

SURFACE TRANSPORT, QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

1 SUMMARY

What went well

- 1.1 The Woolwich Ferry operated by Serco Limited received a Royal Society for the Prevention of Accidents (RoSPA) Silver Award for Occupational Health and Safety at the Safety and Health Expo 2010. The award was in recognition of health and safety achievements in the year and the development of good HSE management systems.
- 1.2 Two safety improvement workshops were facilitated for delegates from bus operating companies. These workshops were developed to assist with the identification of industry best practice and to encourage the exchange of knowledge in the safety management of major incident investigations and driver safety matters.
- 1.3 A Cycle Safety Action Plan was produced to support the cycling initiatives planned for the summer in 2010. Actions are focused on a number of priority areas, cycling infrastructure; training/information; communication; enforcement; regulation; technology; research and monitoring and working in partnership.

Areas for improvement

- 1.4 The 2009/2010 programme for mechanical and electrical principal inspections on road tunnels was delayed due to changes in the procurement process and contract conditions during the year. This prevented an independent specialist consultant from being appointed. However, the inspections commenced in the last quarter of the year and they will be completed in 2010/11.

Significant plans for next quarter

- 1.5 A working group consisting of key stakeholders within Surface Transport (ST) has been set up to explore ways of raising awareness of the cycling schemes among bus drivers. The initiative will use the established road show processes and will be delivered within bus garages by the London Buses training and communication team. A main aim of the initiative is to be featured in individual bus company's internal communications.
- 1.6 Work is underway to implement a restriction on the acceleration rate into the vehicle specification for new buses. This will contribute to improving the safety and comfort of bus passengers by enabling smoother acceleration.
- 1.7 The teenage road safety campaign '*Don't Let Your Friendship Die On The Road*' will be re-run on radio with supporting posters throughout London during June 2010. This is to reinforce the value of the message, as evidence

has shown that campaigns are more effective when communicated over a two year period.

- 1.8 Health and safety objectives and deliverables have been identified through the Service Delivery Planning process. ST directorates are now finalising their objectives in line with their priorities which are focused on casualty reduction on the bus network, risk assessment processes, auditing and HSEMS development.
- 1.9 Work to develop environmental objectives for ST directorates and modes in 2010/11 was continued. These will focus on energy and fuel efficiency (and CO2 reduction), waste management and environmental performance reporting.
- 1.10 Plans are being finalised for the 2010/11 Safety, Quality and Environmental audit programmes for bus stations, London River Services piers, the Woolwich Ferry and Victoria Coach Station. Annual audit programmes for bus operators and Dial-a-Ride are also being prepared.

2 PROGRESS AGAINST HSE PLAN

Priority 1: Road casualty reduction

- 2.1 In the first nine months of 2009, 140 people were killed on London's roads, four per cent less than in the first nine months of 2008. "Killed and seriously injured" fell to 2,308 in the same period, 16 per cent fewer than in 2008. 'All casualties' were 19,875, 5.1 per cent lower than the first nine months of 2008.
- 2.2 Ten cyclists died on London's roads in the first nine months of 2009. In total, there were 2,739 recorded cyclists injured in the first nine months of 2009, 10.7 per cent more than the same period in 2008. The Mayor and TfL published a Cycle Safety Action Plan earlier this year to improve the safety of cyclists in the Capital (see 1.3 above). Since 2000, cycling levels have increased by 117 per cent on the Transport for London Road Network (TLRN), meaning that the relative risk of cycling collisions is falling significantly. There was 8.6 per cent growth on the TLRN in cycling levels in financial year 2008/09 compared to 2007/08.
- 2.3 As part of continuing commitment to address the casualty inequality on London's roads, a DVD entitled 'Be Smart' was produced to support the project aimed at addressing the issue. The DVD is specifically aimed at the under five age group.

Priority 2: Safety of highways and the TLRN (including tunnels)

- 2.4 Internal Audit completed its audit of the risk identification and mitigation processes in place for the 13 road tunnels managed/operated by TfL. The 13 management actions identified are currently being addressed.

- 2.5 In response to findings from an independent review of the London Streets Tunnel Operations Centre (LSTOC) four additional staff have been recruited to supplement the existing twelve operators in LSTOC. Training has also been given to TfL office based tunnel managers and relevant Highway Maintenance and Works Contractors (HMWC) staff to ensure that resilience is improved. The review also recommended improvements to the data recording system and communications (internal and external). Both areas have been addressed.

Priority 3: Health and safety of staff and contractors

- 2.6 Good progress was made against health and safety objectives set through the Service Delivery Planning process. Additionally, progress against modal/directorate health and safety objectives was monitored and those that were not fully met are carried forward to 2010/11.

Priority 4: Safety and security of the public transport network and its users

- 2.7 Work was commenced to develop a new campaign to highlight the danger to cyclists who ride on the left hand side of heavy goods vehicles.
- 2.8 The 2009/10 bus operators' assurance audit programme was concluded and no major concerns were identified. A review of the programme will be undertaken and form part of the planning process for 2010/11. The review will be presented to the managing directors of bus companies.

3 STATUS OF HSE MANAGEMENT SYSTEM

- 3.1 All public transport HSE management systems have been revised. Other HSE management systems are being reviewed to ensure that accountabilities are correct following the restructuring in ST.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 6,860 working days lost due to sickness absence in Quarter 4, representing an average of 1.92 per employee. For comparison, the previous quarter's average was 2.80 days absences per employee and the corresponding quarter of last year was 2.34. The sudden reduction is attributable to the transfer of East Thames Buses in the quarter. The top three categories of sickness absence were coughs and colds, musculoskeletal and mental health.

Days lost	Q4 2009/10	Q3 2009/10	Q4 2008/09
Sickness absence	6,860	10,160	9,452
Average / employee	1.92	2.80	2.34

Safety

- 4.2 The number of accidental customer major injuries in Quarter 4 was 192 (0.29 per million customer journeys). For comparison, there were 163 accidental customer major injuries in the previous quarter (0.30 per million customer journeys) and 192 in the same quarter last year.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Customer major injuries	192	163	192
Rate/10 ⁶ customer journeys	0.29	0.30	0.29

- 4.3 There was no accidental employee major injury in Quarter 4. For comparison, there were two employee major injuries in the previous quarter and two in the same quarter last year.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Employee major injuries	0	2	2
Rate/1000 employees	0.00	0.65	0.45

- 4.4 There were 30 physical assaults on employees in Quarter 4. For comparison, there were 19 physical assaults on employees in the previous quarter and 62 in the same quarter last year. There was one reported verbal assault on an employee in Quarter 4. For comparison, there were eight verbal assaults on employees in the previous quarter and 17 in the same quarter last year. There were no threats with offensive weapons in Quarter 4, compared with five in the previous quarter and none in the corresponding quarter of last year.

	Q4 2009/10	Q3 2009/10	Q4 2008/09
Employee physical assaults	30	19	62
Employee verbal assaults	1	8	17
Employee threatened with offensive weapon assaults	0	5	0
Rate/1000 employees	8.74	10.43	17.63

- 4.5 There were 75 physical assaults on contractors (mainly bus drivers) in Quarter 4. For comparison, there were 70 physical assaults on contractors in the previous quarter and in the corresponding quarter of last year, there were 142.

Crime and disorder

- 4.6 Between January 2009 and April 2010, 1,140 cases were notified to the workplace violence unit (WVU). All of these are reported to and 'owned' by local borough police, but the WVU provides full support on investigations. The WVU has dealt with 405 cases with 128 cases remaining ongoing. To date, 152 cases have received judicial disposals (such as charged, summonsed, cautioned etc).

5 ENVIRONMENTAL PERFORMANCE

CO₂ emissions

- 5.1 CO₂ emissions for 2009/10 will be reported as part of the annual reporting round against TfL's environmental key performance indicators and targets.

Waste and recycled materials

- 5.2 The HMWCs recycled and reused 96.5 per cent and 98 per cent of excavated and non excavated materials respectively in Quarter 4 against a target of 90 per cent for 2009/10.
- 5.3 The HMWCs procured 11.7 per cent of recycled and green material in Quarter 4. Revised targets for the procurement of recycled and green materials are being developed.

HMWC waste and recycled materials	Q4 2009/10	Q3 2009/10	Q4 2008/09
Excavated waste recycled and reused - percent (tonnes)	96.5 (34,422)	93.9 (4,571)	98.8 (53,467)
Non-excavated waste recycled and reused – percent (tonnes)	98 (935)	91.9 (718)	94.7 (760)
Recycled and green material procured – percent (tonnes)	11.7 (4,189)	35.9 (2,536)	29.8 (49,356)

- 5.4 Waste reporting by London Streets' three Traffic Control Equipment Maintenance and related Services (TCMS) contractors started in 2009/10. In Quarter 4, the TCMS contractors recycled 65 per cent of generated waste. The performance of the current TCMS contractors will inform the setting of performance targets for future TCMS contracts.

TCMS waste and recycled material	Q4 2009/10	Q3 2009/10	Q4 2008/2009
Waste recycled – percent (tonnes)	65 (10.35)	64 (11.51)	n/a

- 5.5 In Quarter 4, 1.3 tonnes of office waste was recycled in the London Buses East Region (the trial area) and in the same period, 5.95 tonnes of office waste was recycled at Dial-a-Ride depots.

Recycled waste (tonnes)	Q4 2009/10	Q3 2009/10	Q4 2008/09
London Buses office waste	1.3	0.27	N/A
DaR office waste	5.95	6.00	

Built environment

- 5.6 Assessments for the removal of pedestrian guardrail have four key stages. There is an assessment of the guardrail to be removed, the physical removal, a post-removal check and a review a year after its removal. Identified stakeholders are also consulted as part of the decision making process.
- 5.7 Accident statistics in areas where guardrail has been removed are collated centrally to provide the opportunity for future reviews. Should a pedestrian accident occur in an area where guardrail has been removed, investigations will be undertaken to determine if its removal was a factor in the accident. The process of recording and checking incidents against sites as part of normal practice is being instigated.
- 5.8 All guardrail assessments have been completed and 60km have been identified for removal. By the end of Quarter 4 2009/10, 41.4km had been removed in excess of the year end target of 40.9km. There was 11km of guardrail removed in Quarter 4, although this was below the target of 17.4km work is progressing and remains on target to remove 60km. Prolonged stakeholder consultations with two London Boroughs contributed to the delay to delivery in Quarter 4.

	Q4 2009/10	Q3 2009/10
Pedestrian guardrail removed from TLRN (m)	11,018	18,540

Natural Environment

- 5.9 Professional tree management on the TLRN resulted in the loss of 556 trees during 2009/10. The trees were dead or damaged and presented a safety risk or were removed as part of woodland management. A further eight trees were lost to improvement schemes or to third party claims where trees have been proven to cause subsidence damage to buildings.
- 5.10 The trees on two out of three management areas of the TLRN were valued in 2009/10, using the valuation system supported by London boroughs. This will help to support efforts to raise awareness that green highway assets have a value that appreciates. It will also assist in protecting trees under threat from developers where local authorities have granted planning approval adjacent to the TLRN without due regard to the presence of trees.

Reasons for felling trees on TLRN	2008-09	2009-10
Safety	4	431
Natural causes	842	125
3 rd party claims	6	2
GLA schemes	1	6
Developer	0	0
Totals	853	564

Trees planted on TLRN	2008-09	2009-10
Replacements	215	420
Additional	310	642
Totals	525	1062

- 5.11 An improved use of the definitions between removal of trees which have died through natural causes and those removed for safety reasons has resulted in a more accurate split between these reasons for removal in 2009/10 compared to 2008/09.
- 5.12 420 trees were replanted. This number is lower than the number removed because it is not always possible or appropriate to replace in exactly the same place. An additional 642 trees were planted under the 'right place, right tree' principle to improve the highway environment in line with the objectives of the Tree Strategy (part of the Green Estate Management Plan for the TLRN). Sixty of the additional trees were funded by the Mayor's 10K tree planting initiative in two of the priority areas for tree planting.

6 MAJOR INCIDENTS

Fatalities on the bus network

- 6.1 There were four fatalities on the bus network during the quarter. A passenger injured her leg after tripping while alighting a Route 127. She was taken to hospital but died six days later from a suspected heart attack. Two drivers, one of a van and the other of a private car, were involved in fatal road traffic collisions with buses on routes 407 and 368. A pedestrian was fatally injured following a collision with a Route 42 bus. The incidents are currently under investigation.
- 6.2 Investigations into two previous fatal road traffic incidents involving buses on route 25 in April 2009 and route N155 in July 2009 were concluded. In both cases the coroners' hearing recorded "traumatic road deaths" with no recommendations for TfL or the bus operating companies. Investigation into a further incident where a passenger of a Route 254 fell down the stairs of a bus in September 2009 concluded that the bus or its driver were not contributory factors in the incident. The coroner's hearing discovered that the deceased fell because he was intoxicated.

LONDON RAIL QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT**1 SUMMARY****What went well**

- 1.1 Trial Operations on the 'core route' of the East London Line including various assurance activities took place successfully during Quarter 4. The opening of the East London Line between Dalston Junction and New Cross and New Cross Gate took place in April. Customer feedback on the service has been very good.
- 1.2 The main works contractor on the East London Line has worked over 1,504,700 hours without a reportable accident.
- 1.3 On Docklands Light Railway (DLR), a programme of new safety governance arrangements has been successfully introduced.
- 1.4 The annual DLR independent safety management system audit took place this quarter. Overall, the report was positive with no critical issues.
- 1.5 The results of the 2009 DLR Safety Culture Survey were received. The Survey report concluded "that there continues to be a strong safety culture within DLR which has been maintained as the railway has moved through a period of change in the last 12 months".
- 1.6 On the East London Line Project, works progressed well to develop the detailed design of the Phase 2 alignment. This work included the development of landscape proposals for the re-establishment of the Bridge House Meadows site and operational noise assessments to define appropriate mitigation proposals.
- 1.7 On Phase 2 of the East London Line project, good progress was made on developing the Code of Construction Practice. This will be agreed with the London Borough of Lewisham and will set out approaches for dealing with issues related to bats, lizards and Japanese Knotweed.
- 1.8 London Tramlink started work on the production of a risk model for Tramlink operations.

Areas for improvement

- 1.9 While the numbers of contractor major injuries are very low, there are opportunities to improve the minor injury rates on both London Overground and DLR.
- 1.10 Previous reports described how on DLR, line side super capacitors were being used in a trial to reduce energy use. While the trial proved that the capacitors

were effective, the cost in terms of installation has proved prohibitive. DLR is looking at other initiatives to reduced energy use.

Significant plans for the next quarter

- 1.11 There are plans for the full operation of the East London Line from Dalston Junction to West Croydon/ Crystal Palace.
- 1.12 The multi agency 'live' emergency planning exercise called Exercise Vanguard that was planned for March 2010 was postponed to 7 May 2010. The exercise took place and allowed the emergency services, London Overground Rail Operations Limited (LOROL), Network Rail and TfL staff to practise their emergency responses to a 'real' incident. A review of the exercise will take place.
- 1.13 The DLR will be working closely with the Office of Rail Regulation as they enter the more detailed aspects of their 2009/10 Intervention Audit.
- 1.14 Work is in progress for the DLR to run a half day safety legislation updates programme for its engineering and project staff.
- 1.15 As part of London Rail's ongoing health and well-being initiatives, eight teams will be entered into next year's Global Corporate Challenge.
- 1.16 London Rail will be holding a number of Climate Change workshops to ensure that climate change risks and mitigations are accurately recorded in modal risk registers.
- 1.17 On Phase 2 of the East London Line Project, works will continue to develop the landscaping proposals and measures to control operational noise (e.g. noise barriers) so that these can be submitted to London Borough of Lewisham to discharge the Project's Planning Conditions. Additionally, a construction noise assessment will be undertaken to identify whether there are any residential properties that may qualify for noise insulation under the Project's Noise Insulation Policy. Any necessary arrangements will be put in place to ensure the noise insulation is installed prior to the commencement of the works.

2 PROGRESS AGAINST HSE PLAN

- 2.1 The overall London Rail HSE improvement plan commenced during Quarter 4. The plan is monitored over the calendar year and on a quarterly basis.

3 STATUS OF HSE MANAGEMENT SYSTEM(S)

- 3.1 DLR and London Overground have established safety management systems in place. The system in London Tramlink is being revised, with the aim of implementing an integrated system later this year.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 168 working days lost due to sickness absence in Quarter 4 by employees of London Rail. This represented an average of 0.79 days per employee. For comparison, in the previous quarter there was 357 days lost equating to 1.57 days absence per employee and in the same quarter last year there was 127 days lost, equating to 0.55 days absence per employee. The top three categories of sickness absence in Quarter 4 were, gastrointestinal, coughs and colds and neurological (including eye and ear).

Days lost	Q4 2009/10	Q3 2009/10	Q4 2008/09
Sickness absence	168	357	127
Average / employees	0.79	1.57	0.55

Safety

- 4.2 There were no employee major injuries this quarter in London Rail.
- 4.3 There were two accidental customer major injuries for London Overground in Quarter 4 (in 11 million journeys). For comparison, there were no accidental customer major injuries in the previous quarter or the same quarter last year. The two incidents were related to slips and falls during the winter weather. LOROL have since carried out a review of winter weather arrangements and have identified improvements for next year.

London Overground	Q4 2009/10	Q3 2009/10	Q4 2008/09
Customer major injuries	2	0	0
Rate/million customer journeys	0.18	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 4 was six and 12 respectively. For comparison, there were five and 13 in the previous quarter. Analysis has revealed that most assaults are associated with service disruptions and revenue collection. LOROL are working with the British Transport Police to target specific locations.

LOROL	Q4 2009/10	Q3 2009/10	Q4 2008/09
Physical assaults	6	5	3
Verbal assaults	12	13	2
Rate/1000 employees	16	17.9	7.6

- 4.5 There were two accidental customer major injuries on DLR in Quarter 4 (19.8 million customer journeys). These were both the result of slips and falls. For comparison, there were three accidental customer major injuries in the previous quarter and five in the same quarter last year.

DLR	Q4 2009/10	Q3 2009/10	Q4 2008/09
Customer major injuries	2	3	5
Rate/million customer journeys	0.10	0.18	0.25

4.6 There were no TfL employee assaults this quarter on DLR. On DLR, assaults are classified as major or minor (minor includes verbal abuse and pushes and shoves). The number of employees of the franchisee Serco, which suffered workplace assaults in Quarter 4 was zero and 39, for major and minor respectively. For comparison, there was zero and 21 in the previous quarter and zero and 13 in the same quarter last year.

4.7 The majority of the minor assaults are verbal assaults. These assaults have been reviewed by the Assaults Working Group and it is believed that they are connected with the increase in revenue protection exercises and also frustrations experienced by passengers due to a high number of vandalised ticket vending machines. A coordinated British Transport Police (BTP) approach has been developed to deal with both the vandalism and assault issues.

DLR	Q4 2009/10	Q3 2009/10	Q4 2008/09
Major assaults	0	0	0
Minor assaults	39	21	13
Rate/1000 employees	58	31	22

4.8 There was one accidental customer major injury for London Tramlink in Quarter 4 (7.7 million customer journeys). The accident occurred when a passenger slipped on an ice patch at a tram stop and broke their ankle. For comparison, there was one accidental major customer injury in the previous quarter and zero in the same period last year.

Tramlink	Q4 2009/10	Q3 2009/10	Q4 2008/09
Customer major injuries	1	1	0
Rate/million customer journeys	0.12	0.16	0

4.9 In London Tramlink, there were no TfL employee assaults this quarter. The number of workforce physical and verbal assaults in Quarter 4 for its contractor Tram Operations Limited (TOL) on London Tramlink was six and seven respectively. For comparison, there were two and five respectively in the previous quarter and three and 11 in the same quarter last year. The gradual reduction in overall assaults has stopped and levels have risen to almost the same as last year. Almost all of the physical assaults were minor and involved pushing or spitting. The trend is being carefully monitored and TOL is working with the BTP to target particular hotspots and times of the day. It should also be noted that Quarter 4 has an additional reporting period.

TOL	Q4 2009/10	Q3 2009/10	Q4 2008/09
Physical assaults	6	2	3
Verbal assaults	7	5	11
Rate/1000 employees	80	43	86

- 4.10 On London Overground Infrastructure, there were no contractor RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) reportable accidents during the quarter. The cumulative contractor accident rate is 0.11 per 100,000 hours worked.
- 4.11 On DLR Major Projects, there were three contractor RIDDOR accidents in Quarter 4. The cumulative contractor accident rate is 0.26 per 100,000 hours worked at the end of the quarter. This is an increase from 0.14 at the end of the last quarter. The three incidents were relatively minor injuries which resulted in absence from work for more than three days. All incidents have been fully investigated.

5 ENVIRONMENT PERFORMANCE

Carbon and energy management/Carbon emissions

- 5.1 CO₂ emissions for Quarter 4 are set out below. The emission rates have been relatively stable during previous Quarters and this Quarter is no exception. The apparent increase is a result of an additional reporting period in the quarter. London Rail is looking at how energy use can be reduced, but with a significant increase in services and rolling stock over the next quarter, this will be a significant challenge.

	Q4 2009/10	Q3 2009/10	Q4 2008/9
Total CO ₂ (Tonnes)	16,562	12,958	16,345
Normalised CO ₂ (g/passengers km)	60.50	56.43	57.53

Waste Management

- 5.2 The approach to waste management continues to develop. There are good data on construction waste, and there is also good performance against the general trends for the sector. On customer produced waste from stations and rolling stock cleaning, there are good data from LOROL and DLR Serco showing increased levels of recycling. The waste reuse from offices is also developing.
- 5.3 On London Overground, with the addition of the East London Railway, the number of stations with recycling facilities has increased significantly. Both paper and plastic recycling bins are now in place at most stations.
- 5.4 The new bins and the on-train rubbish collection, plus other initiatives at the depots and the LOROL head office, have resulted in a massive increase in recycling on the Overground. Data shows that the percentage of commercial waste recycled increased from three per cent in 2008/09 to 49 per cent in 2009/10. LOROL have set themselves a target of recycling 60 per cent of station waste by December 2012.
- 5.5 At the end of Quarter 4, DLR Serco had achieved its target of increasing the total amount of commercial waste recycled from the 20 per cent in the previous year to 31 per cent. The target for next year is to reduce further waste to landfill

by another five per cent. By far the greatest quantity of recycled waste is paper and the installation of 'Metro' recycling bins at selected stations is helping to increase this figure.

- 5.6 The most significant construction phase of the East London Line Project has been completed. The project has now moved onto Phase 1A and the main works contractor has continued to achieve very low levels of waste to landfill. Against a target of 80 per cent, Birse Metro achieved 96 per cent recycling for demolition waste and 97 per cent of all waste removed from site was recycled (over 8,000 tonnes). All demolition waste stockpiled on site for re-use or kentledge has been utilised (in excess of 2,390 tonnes).

6 MAJOR INCIDENTS

- 6.1 There were no major incidents in the quarter.
- 6.2 Serco, the operator of DLR, has been prosecuted due to a fatality on the track at All Saints Station in April 2007. A man fell and was subsequently hit by a train. The court ruled that Serco did not have sufficient procedures in place to stop trains in an emergency situation. The prosecution was taken under section 3(1) of the Health and Safety at Work etc. Act 1974 for failure to ensure that "persons not in its (Serco's) employment were not exposed to risks to their health and safety, and failure to ensure that automatic trains operating on the Docklands Light Railway system did not hit persons who were on the tracks". Serco was fined £450,000 and £43,773 in costs. It is believed that Serco will not appeal against this decision. Since the incident, new procedures have been put in place to ensure this type of incident cannot recur.
- 6.3 The Rail Accident Investigation Branch has published its report into the West India Quay derailment that occurred in March 2009. There were seven recommendations in the report, the majority of which have been addressed. DLR has met with its stakeholders to ensure that the remaining recommendations are addressed.

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

- 1.1 Crossrail (CR) was awarded BS OHSAS 18001 (Occupational Health and Safety Management Systems) and ISO 14001 certification (Environmental Management System) certification following a successful audit by Lloyd's Register Quality Assurance services (LRQA).
- 1.2 The Health and Safety Executive (HSE) inspection to assess CR's compliance with the Construction (Design and Management) Regulations took place. All actions from the inspection have been completed. A joint meeting with the Health and Safety Executive (HSE), Network Rail, and London Underground (LU) to inform the HSE on safety programmes going forward took place. The CR presentation was well received by the HSE.
- 1.3 Crossrail launched a campaign called "Target Zero, A State of Mind" with a series of briefing sessions for managers. The campaign set out the expectations for Health, Safety and Environmental (HSE) outcomes across the business and defined the culture and behaviours expected on HSE matters.
- 1.4 A meeting with the Office of Rail Regulation was held during the quarter to discuss future operational issues and fire containment within new rolling stock. There were no areas of concern raised at the meeting.
- 1.5 Crossrail has set targets to reduce the disposal of waste and surplus material and for increasing the recycled and reused content of new construction material. The targets are in line with the TfL Group targets and are being included on all construction contracts.
- 1.6 Crossrail achieved scores of 'Excellent' under the Civil Engineering Environment Quality Assessment and Award Scheme for the design of the running tunnels sprayed concrete lining and for the Paddington Integrated Project portals and stand alone shaft.
- 1.7 A month of environment awareness raising was launched in CR and the programme went well. There were five lunch and learn sessions held and staff attendance exceeded expectations with an average of 75 staff per session.

Areas for improvement

- 1.8 Plans are in progress for the review and monitoring of arrangements undertaken by client package managers and client package representatives to ensure their appropriateness.
- 1.9 Work is ongoing to build on the success of the environmental awareness raising that took place in Quarter 4. This will identify lessons learnt and help to raise staff awareness further.

- 1.10 There is a requirement to increase activities relating to industry partner support to ensure that their HSEMSs are developed to provide assurance.

Significant plans for the next quarter

- 1.11 Following the technical pre-approval of the three occupational health providers to provide health services for CR, a health forum will be established and a chairperson will be appointed.
- 1.12 There are plans for a 'healthy in design' publication to be produced as a guide for designers to address health risks of construction workers and end users.
- 1.13 Work is underway to review and update the contractors and Industry Partners Health, Safety and Environment standard.
- 1.14 Crossrail plans to establish arrangements for security management for designers.
- 1.15 There are plans to develop further the CR incident management system to enhance its capability for HSE performance data management.
- 1.16 Work is in progress for phase two of the health, safety, security and environment training plan to deliver on specific training needs identified for staff.

2 PROGRESS AGAINST HEALTH AND SAFETY PLAN

- 2.1 Nine of the ten objectives in the CR Annual Health and Safety Plan for 2009/10 were completed, the tenth objective to review CR's organisation was deferred to Quarter 1 2010/11 when work to finalise the CR organisational structures will be concluded. The CR Health, Safety and Security improvement plan for year 2010/11 was finalised at the end of Quarter 4 in preparation for its launch.

3 STATUS OF HEALTH AND SAFETY MANAGEMENT SYSTEM

- 3.1 An external assessment of the health and safety management system was completed by LRQA resulting in CR being certificated to BS OHSAS 18001.

4 HEALTH AND SAFETY PERFORMANCE

Health

- 4.1 There were 382 working days lost due to sickness absence in Quarter 4 which represents an average of 1.34 days per employee. The top two categories of sickness absence in the Quarter 4 were coughs and colds and gastrointestinal.

Days lost	Q4 2009/10	Q3 2009/10	Q4 2008/09
Sickness absence	382	459	301
Average / employees	1.34	1.69	1.46

Safety

- 4.2 There were no employee major injuries in CR reported in Quarter 4.
- 4.3 There were no contractor major injuries in Quarter 4. For comparison there were two in the previous quarter and one in the same quarter last year.

	Q4 2009/10	Q3 2009/10	Q4 2008/9
Contractor major injuries	0	2	1
Rate/1000 contractor employee	0	7.00	2.71

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 4. For comparison, there were none in the previous quarter and none in the same quarter last year.

5 ENVIRONMENT PERFORMANCE

- 5.1 For the period of the report, Crossrail electricity consumption over the four floors occupied at Canada Square was 405,669kWh. CR's energy consumption data for the two floors occupied at Pier Walk is included in the TfL Head Office report, because sub-metering for this building is not available. There are plans for sub-metering to be introduced within the building to enable energy consumption records to be reported separately.
- 5.2 During the quarter, CR planned and carried out 21 site environmental inspections. These inspections identified no non-conformances, 17 observations and eight areas of good practice; there were no trends identified.

6 MAJOR INCIDENTS

- 6.1 There were no major incidents in Quarter 4.

CORPORATE DIRECTORATES QUARTERLY HEALTH, SAFETY AND ENVIRONMENT REPORT

1 SUMMARY

What went well

- 1.1 A management review of the Group HSE Management System (HSEMS) has been completed. The review addressed the HSE requirements across TfL and simplified and clarified the structure of the management system.
- 1.2 Building on the successful November 2009 staff wellbeing event held at Pier Walk, a second wellbeing event was held in Windsor House in March 2010. Employee attendance was good with positive feedback.
- 1.3 Good progress has been maintained in finalising HSE-related documents to support the Future Ticketing Agreement (FTA). Cubic Transportation Systems resubmitted documents for approval that incorporated improvements to the governance of HSE under the FTA.
- 1.4 The TfL Head Office portfolio was awarded a Carbon Trust Standard (CTS) accreditation during Quarter 4. The CTS has now replaced the energy efficiency accreditation scheme and is recognised throughout the industry as the leading accreditation for organisations that demonstrate their improvement to environmental performance.
- 1.5 TfL won the Chartered Institution of Building Services Engineers (CIBSE) award for energy performance in 2010 and the CIBSE low carbon performance award. These awards were open to organisations involved in designing, maintaining, and refurbishing buildings. It recognised the achievements TfL had made in showcasing innovative and low carbon solutions and in delivering carbon savings.
- 1.6 The area which contains the fuel cell at Palestra has been refurbished and equipped with a public display to highlight TfL's commitment to reduce the environmental impact and encourage emerging technologies.
- 1.7 The review of the Group HSE function was finalised in the quarter. There were no substantive recommendations for change but the need to clarify the relationship with Group Planning in relation to environment and sustainability and the need to communicate Group HSE's role in relation to resilience matters more widely were noted.

Areas for improvement

- 1.8 An improved approach to training will be developed and implemented in 2010/11 to align HSE training for managers in the Corporate Directorates with the requirements of the TfL Group HSE Competency Framework.
- 1.9 As part of the initiatives to meet the internal 10:10 targets (10:10 is a climate change campaign calling for a 10 per cent reduction in carbon emissions in

2010), there are plans to reduce the summer time electricity consumption through better control of air conditioning management in buildings and the reduction of overnight energy consumption associated with the use of Information Technology. There are also plans to increase the number of Head Office Environmental Champions to assist with the change of the environment management culture.

Significant plans for the next quarter

- 1.10 Responses received from those who attended the March Wellbeing event will be used, along with Quarter 1 2010/11 sickness absence data, to inform health initiatives to be taken forward during the remainder of 2010/11. A summary report will be made available to Chief Officers.
- 1.11 The scale of private car use on company business within Corporate Directorates will be reviewed to identify actions necessary to manage any safety risks appropriately.
- 1.12 Following the management review of the Group HSEMS, the Corporate Directorates HSEMS will be reviewed and updated to take account of organisational and legislative changes.
- 1.13 Head Office environments with no individual desk bins show higher recycling rates. Group Property & Facilities will be trialling 'bin sharing' schemes at two sites to assess how similar arrangements can be installed in existing building stock.
- 1.14 The Combined Heat and Power (CHP) plant at Palestra provides low carbon electricity and heat to the building and significantly reduces the building's carbon footprint. Work is in progress for a Combined Heat and Power Quality Assurance (CHPQA) assessment, to be carried out by the Department of Energy and Climate Change. This will analyse the heat and power from the plant and measure its efficiency and performance. Passing the CHPQA assessment will allow TfL to claim a £700k Enhanced Capital Allowance tax rebate and would enable exemption from the Climate Change Levy for the fuels used to power the plant.

2 PROGRESS AGAINST HSE PLAN

- 2.1 Corporate Directorate HSE Management System.
 - (a) Engagement has occurred using the local consultative structure agreed under the TfL Health and Safety Consultation Arrangements and a Group consultative structure addressing Corporate Directorates and Surface Transport is now in place.
 - (b) Improved joint working arrangements with Group Procurement now allow the sharing of procurement strategies and enable timely HSE intervention and support. Existing HSE-specific questions within pre-qualification questionnaires will be reviewed and strengthened as necessary.
 - (c) Agreement was reached with Group HR on necessary HSE input during planning and implementation stages of organisational change. HR Business Partners will be issuing HSE guidance to business sponsors of change as part of advice given out during the organisational change

2.2 Specific areas of risk.

- (a) The Display Screen Equipment risk assessment programme has continued across all Corporate Directorates. This principally involves assessment of those moving to new office environments and reassessment for those not moving in appropriate cases.
- (b) A first home working survey within the Corporate Directorates was conducted in 2009/10 and the results are being used to support work within HR and Group Facilities on home and neighbourhood working.
- (c) Work continues with the London Fire Brigade and LU to agree on fire risk assessment requirements for Travel Information Centres in LU Stations.

3 STATUS OF HSE MANAGEMENT SYSTEM(S)

- 3.1 A management review of the Group HSEMS has been completed. In the light of this and organisational changes in the Corporate Directorates, the Corporate Directorates HSEMS requires updating and this will be completed in 2010/11.

4 HSE PERFORMANCE

Health

- 4.1 There were 2,372 working days lost to sickness absence in Quarter 4, representing an average of 1.6 days per employee. This represents a reduction from the previous quarter (1.8 days) and a small reduction from the same quarter last year (1.7 days).

Days lost	Q4 2009/10	Q3 2009/10	Q4 2008/09
Sickness absence	2,372	4,961	3,744
Average / employees	1.6	1.8	1.7

- 4.2 The top three sickness absence categories were coughs and colds, mental health and musculo-skeletal disorders.

Safety

- 4.3 There were no accidental customer major injuries, employee major accidental injuries or any physical assaults on employees during Quarter 4, during the previous quarter or during the same quarter last year. The Corporate Directorates consist mainly of non-operational staff and periodic workplace assessments and the implementation of adequate controls helps to maintain this low risk environment.

5 ENVIRONMENTAL PERFORMANCE

Carbon Emissions

- 5.1 The full year CO₂ target for 2009/10 was met, showing a three per cent reduction in CO₂ emissions from 2008/09. The prolonged cold snap in Quarter 4 resulted in slightly higher emissions than targeted, although this was countered by efficiencies made earlier in the year.

CO ₂ kg/m ²	Q1 2009/10	Q2 2009/10	Q3 2009/10	Q4 2009/10	Total
Target	31.4	27.4	26.2	40.0	125.0
Emissions	29.1	25.2	25.9	42.2	122.4

Water Consumption

- 5.2 The full year water target for 2009/10 was met, delivering a 12 per cent reduction in water consumption per person on 2008/09 levels. The targets for 2009/10 were set higher for the earlier quarters of the year with gradual reduced targets set for the latter quarters. This accounts for the performance data in Quarter 3 and 4 where consumption was greater than the targets set. The full year performance remains below the Department for Environment, Food and Rural Affairs best practice benchmark of 6.4m³/person/year.

Water use (m ³ /person)	Q1 2009/10	Q2 2009/10	Q3 2009/10	Q4 2009/10	Total
Target	1.74	1.56	1.26	1.44	6.00
Performance	1.54	1.26	1.43	1.59	5.82

6 MAJOR INCIDENTS

- 6.1 There were no major incidents in the quarter.

QUARTER 4 2009/10 HEALTH AND SAFETY - DATA SUMMARY*

LU – London Underground; ST – Surface Transport; LR – London Rail;
 CD – Corporate Directorates; CR – Crossrail; DLR – Docklands Light Railway;
 LOROL – London Overground.
 n/a - not available

Health

	Sickness absence days lost			Average days lost / employee		
	Q4 2009/10	Q3 2009/10	Q4 2008/09	Q4 2009/10	Q3 2009/10	Q4 2008/09
LU	29,981	42,845	29,764	2.3	3.3	2.2
ST	6,860	10,160	9,452	1.92	2.8	2.34
LR	168	357	127	0.79	1.57	0.55
CR	382	459	301	1.34	1.69	1.46
CD	2,372	4,961	3,744	1.6	1.8	1.7

Employee major injuries

	Employee major injuries			Rate / 1000 employees		
	Q4 2009/10	Q3 2009/10	Q4 2008/09	Q4 2009/10	Q3 2009/10	Q4 2008/09
LU*	0	5	n/a	0	0.32	n/a
ST	0	2	2	0	0.65	0.45
LR	0	1	0	0	4.0	0
CR	0	0	0	0	0	0
CD	0	0	0	0	0	0

Employee assaults (Total)

	Employee assaults			Rate / 1000 employees		
	Q4 2009/10	Q3 2009/10	Q4 2008/09	Q4 2009/10	Q3 2009/10	Q4 2008/09
LU*	348	472	315	31.55	42.48	28.21
ST	31	32	79	8.74	10.47	17.63
LR	0	0	0	0	0	0
CR	0	0	0	0	0	0
CD	0	0	0	0	0	0

*LU data is for Chief Operating Officer Staff only

Customer Major Injuries

Customer major injuries				Rate / 10 ⁶ customer journeys		
	Q4 2009/10	Q3 2009/10	Q4 2008/09	Q4 2009/10	Q3 2009/10	Q4 2008/09
LU	31	34	35	0.08	0.11	0.09
ST	192	163	192	0.29	0.30	0.29
DLR	2	3	5	0.10	0.18	0.25
LOROL	2	0	0	0.18	0	0
TRAM	1	1	0	0.12	0.16	0

Contractor Staff Assaults (Total)

Contractor staff assaults				Rate / 1000 staff		
	Q4 2009/10	Q3 2009/10	Q4 2008/09	Q4 2009/10	Q3 2009/10	Q4 2008/09
BUSES	75	70	142	n/a	n/a	n/a
LOROL	18	18	5	16	17.9	7.6
DLR	39	21	13	58	31	22
TRAM	13	7	14	80	43	86