

TLRN Performance Report

Quarter 4 2015/16



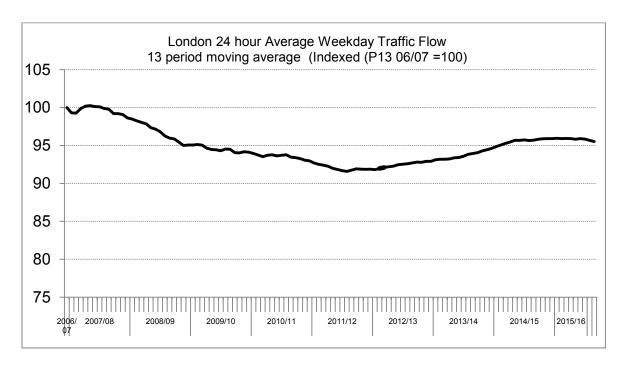
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Summary of network performance for Q4 2015/16

Compared to the recent relative stability seen over the past year in pan London traffic volumes, Q4 2015/16 showed a 1.1 index point (1.2%) decrease in the volume of traffic on London's major roads when compared to Q4 2014/15, and a 0.5 index point (0.5%) decrease compared to two years ago in Q4 2013/14.

In comparison to the recent economic cycle, Q4 2015/16 figures compared to Q4 2011/12 show a 2.4 index point (2.6%) increase. This is illustrated in the graph below.



These results show what we expect to see during a period of economic recovery, i.e. a period of steep growth as the economy returns to normal levels, followed by a slowing down of the rate of increase while returning to the long term forecast trends.

At the same time, a significant number of building and construction works continue to take place to accommodate London's exceptional economic and population growth, with developers, boroughs and utility providers building additional homes, shops, public places and infrastructure. We also expect an extra 5 million trips a day by 2030, on top of the 30 million daily trips taking place currently.

This growth is changing the way our roads operate and are used. In response to this, TfL is continuing to oversee the largest ever investment in London's roads and streets. This comprises numerous projects and programmes that are transforming some of the busiest roads and junctions in London making them safer and more attractive for all road users including vulnerable road users.

So while we are seeing a significant slowing in the rate of traffic growth in London, the overall performance of the network has been affected by rising construction activity, for example:

- Large scale redevelopment projects such as Lewisham Gateway, Victoria Station upgrade and Nine Elms
- Construction and completion of the Cycle Superhighways: East-West, North-South and CS2
- Borough road scheme improvements such as Aldgate, Shepherd's Bush Town Centre and Harlesden Town Centre
- Transformation of major junctions such as Elephant & Castle Northern Roundabout and Stockwell Cross

Major construction and roadworks often require significant traffic management and network interventions such as temporary traffic signals, re-phasing of traffic signals and lane reductions. As a consequence we have seen a significant deterioration in London-wide traffic speeds during the observed hours of 07:00 to 19:00. Latest figures show that speeds decreased by 0.7 mph to 17.7 mph when compared to Q4 last year, representing a 4% reduction.

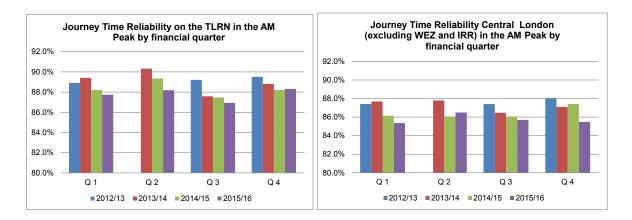
Taking all these planned and unplanned works (such as emergency road works) into account, as well as anticipated increases in traffic flows and construction activity, Journey Time Reliability was forecast to be impacted. Our Q4 target of 86.9% was derived by adjusting the 2014/15 Q4 performance of 88.2% by 1.3% points. Actual AM Peak JTR on the TLRN in Q4 2015/16 was 88.3%, which is 1.4% above target.

Other key highlights of this report include:

- Further improvement in KSIs: The number of people killed or seriously injured in road collisions on the TLRN decreased compared to the previous year, and has decreased by 49.6% compared to the 2005-2009 baseline.
- Cycle flows on the TLRN in Q4 2015/16 stand at an index level of 235.4. This is 27.94 index points (10.6%) lower than the same quarter in 2014/15.
- Overall satisfaction in Q4 among TLRN users is 74, the same level as this time last year and up from 73 in Q3. Fewer journeys were impacted by roadworks this quarter (down 3 percentage points to 17%).

1. RELIABILITY

The key measure for monitoring traffic performance is Journey Time Reliability (JTR). This is defined as the percentage of journeys completed within an allowable excess of 5 minutes for a standard 30 minute journey during the AM peak. Journey times for this purpose are recorded using Automatic Number Plate Recognition (ANPR) camera across the Transport for London Road Network (TLRN). Note Q2 2012/13 is excluded from the graphs below owing to the London Olympics.



The JTR on the TLRN in the AM peak in all directions for Q4 2015/16 was 88.3%, this is .01 percentage points higher than the same quarter in 2014/15 but 1.4% above the target set (86.9%).

The Q4 2015/16 JTR for Central London (excluding WEZ and the Inner Ring Road) in the AM peak was 85.5%; this is 0.9 percentage points lower than the same quarter in 2014/15.

In Q4, average 24-hour weekday traffic flows across London decreased 1.2% compared to the same quarter last year.

So while we are seeing a significant slowing in the rate of traffic growth in London, the overall performance of the network has been affected by rising construction activity e.g.

- Large scale redevelopment projects such as Lewisham Gateway, Victoria Station upgrade and Nine Elms
- Construction of the Cycle Superhighways: East-West, North-South and CS2
- Borough road scheme improvements such as Aldgate, Shepherd's Bush Town Centre and Harlesden Town Centre
- Transformation of major junctions such as Elephant & Castle Northern Roundabout and Stockwell Cross

Across Q4, a number of planned works and incidents impacted JTR results compared to the previous year:

• In Period 10, overall TLRN JTR was 89.9%, 1.0 percentage points above target (meaning it was 0.3 points below the same period last year), and 3.1 points above the previous period. All areas except the South were above target. However Central corridors were generally below target, being offset by the inner ring road (IRR) performing marginally better than last year and so modestly above target.

JTR was particularly helped by strong performance on the A406 in both directions (up over 3 percentage points against target) and A40 outbound (up over 8 percentage points against target) Generally Period 10 sees improved performance as demand drops approaching the Christmas period and this year was no exception. As a result there were few notable incidents after the first week when there were two collisions (BWT, A3) and a breakdown (A2) which caused delays of 40 minutes to an hour.

The worst day for JTR was Thursday 7th January, when a few links (on A13, City Route and A20) saw delays of around half an hour.

Central London corridors saw a slight drop in speeds in the AM peak, but otherwise speeds both centrally and pan-London were up approximately 0.5 mph compared to the same period last year and much more so against the previous period. (19.4 mph 07:00-19:00 pan-London, compared to 16.0 mph last period.)

• In Period II, overall TLRN JTR was 87.9%, I.3 percentage points above target (meaning it was the same as the same period last year), and 2.0 points below the previous period. All areas except Central were above target.

JTR was particularly helped by strong performance on the A40 both directions (up over 6 percentage points against target outbound), where average speed cameras have been installed; and A406 anticlockwise (up over 4 percentage points against target) despite resumption of the Neasden works and a collision causing delays of over an hour at Great Cambridge Underpass on Monday 18th January.

The worst day for JTR was Monday 11th January, when a breakdown in the Blackwall Tunnel caused additional delays of 45 minutes; Neasden works caused delays of 35 minutes and a collision exacerbated performance on the City Route causing delays of 25 minutes. The period appears to have been characterised by quite a lot of delays of the order 20-30 minutes due to works, but not so many incidents, possibly explaining the good JTR performance but speeds remaining down - in general approximately 1.5 mph compared to last year.

• In Period 12, overall TLRN JTR was 87.8%, 1.7 percentage points above target (meaning it was 0.4 points above the same period last year), and 0.1 points below the previous period. All areas were above target except the West, which was down just 0.3 points.

JTR was particularly helped by strong performance on corridors in the East (A12, A13 both direction, A2) and the north circular both directions, again despite the Neasden works. As is often the case, the best performance came during half term (week 2), with the Monday following being the worst day of the period and that week being the worst week. The Monday

saw delays of an hour on the A40 and 40 minutes on the A312 northbound due to a breakdown on the A40; delays of 30 minutes on several routes approaching Vauxhall due to a gas leak; and delays of 25 minutes on the A12, at Wick Road due to traffic signals being on local control; as well as delays of 20+ minutes elsewhere due to ongoing works.

Speeds were again down, but generally less than Imph, an improvement on recent periods.

• In Period 13, overall TLRN JTR was 87.3%, 1.3 percentage points above target (meaning it was the same as the same period last year), and 0.8 points below the previous period. All areas were above target except the North, which was down 1.6 points, due to lower performance on the A406.

JTR was particularly helped by strong performance on corridors in the South and East (A12, A13 inbound, A2,A20, A21, A23, A24 both directions).

Full year JTR was 87.8%, 0.8 percentage points above target (meaning it was 0.5 points below the prior year).

The best performance came during school holiday period following Easter (week 4), with the worst day being the Tuesday in the week before, that week also being the worst week. The Tuesday saw several delays on the A406 of about 20 minutes due to works, a collapsed manhole cover and a breakdown; along with delays of 30+ minutes on the A316 and A20 (collision); plus delays of 45 minutes on the Embankment.

Similar to last period, average speeds were again down less than Imph compared to the same period last year.

Journey Time Reliability (JTR) on the TLRN $\,$

The JTR values on each of the main radial routes on the TLRN in the AM and PM peaks in both directions are:

AM Peak					Inbo	ound							Outb	ound			
		2013/14	2013/14	2013/14	2013/14	2014/15	2014/15	2014/15	2014/15	2013/14	2013/14	2013/14	2013/14	2014/15	2014/15	2014/15	2014/15
Route Type	Corridor	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Radial	A4	90.2%	89.5%	90.7%	89.5%	87.6%	90.9%	88.9%	90.5%	94.3%	93.2%	89.3%	92.5%	91.9%	93.5%	91.0%	93.2%
Radial	A40	77.8%	80.9%	78.0%	79.6%	80.8%	81.3%	78.8%	79.5%	94.2%	95.9%	92.5%	92.4%	91.9%	94.6%	92.0%	91.7%
Radial	A41	87.7%	89.2%	85.8%	86.4%	84.1%	88.0%	83.1%	87.4%	89.6%	90.6%	89.6%	90.5%	91.6%	93.0%	90.7%	90.2%
Radial	A1	82.9%	81.3%	79.3%	82.4%	80.6%	80.0%	78.2%	82.8%	90.8%	93.5%	88.3%	88.9%	90.1%	93.1%	87.8%	88.3%
Radial	A10	85.8%	87.1%	83.8%	82.7%	86.0%	88.3%	84.5%	84.5%	88.7%	89.7%	87.1%	88.5%	90.0%	90.5%	88.2%	87.5%
Radial	A12	88.8%	89.4%	81.9%	86.7%	85.5%	87.6%	82.4%	84.4%	96.3%	96.3%	95.5%	94.8%	95.9%	95.1%	95.5%	95.1%
Radial	A13	87.2%	87.6%	78.8%	85.8%	85.4%	85.7%	81.4%	83.8%	97.2%	98.9%	98.0%	97.4%	98.5%	98.3%	98.0%	96.2%
Radial	A2	87.8%	89.4%	83.2%	84.5%	83.1%	85.9%	80.2%	81.9%	97.7%	98.0%	96.7%	97.2%	97.6%	97.5%	97.0%	96.1%
Radial	A20	89.5%	91.6%	85.8%	87.3%	86.0%	88.4%	85.4%	84.4%	95.7%	95.6%	93.7%	93.1%	92.7%	95.4%	95.0%	90.4%
Radial	A21	87.2%	89.4%	88.6%	87.8%	87.9%	93.1%	85.1%	86.1%	92.8%	93.8%	91.4%	91.5%	92.2%	96.3%	92.5%	91.6%
Radial	A23	89.1%	89.7%	87.5%	87.7%	85.7%	88.7%	86.5%	86.2%	91.4%	91.7%	89.3%	90.1%	91.3%	91.7%	89.9%	88.5%
Radial	A24	88.2%	89.2%	84.1%	85.9%	84.0%	89.6%	83.2%	83.9%	92.7%	94.3%	90.5%	93.7%	91.4%	94.0%	92.8%	93.5%
Radial	A3	87.7%	91.3%	89.2%	89.2%	86.7%	89.6%	89.2%	89.3%	96.5%	96.3%	94.2%	95.3%	95.5%	95.9%	94.0%	95.0%
Radial	A316	84.0%	92.4%	85.9%	88.0%	83.9%	87.1%	87.0%	88.3%	98.2%	96.4%	93.2%	94.9%	95.9%	96.4%	95.9%	98.3%
PM Peak					Inbo	ound							Outb	ound			
PM Peak		2013/14	2013/14	2013/14	Inbo 2013/14		2014/15	2014/15	2014/15	2013/14	2013/14	2013/14	Outb		2014/15	2014/15	2014/15
	Corridor	2013/14 Q1	2013/14 Q2	2013/14 Q3		ound 2014/15 Q1	2014/15 Q2	2014/15 Q3	2014/15 Q4	2013/14 Q1	2013/14 Q2	2013/14 Q3			2014/15 Q2	2014/15 Q3	2014/15 Q4
PM Peak Route Type Radial	Corridor				2013/14	2014/15							2013/14	2014/15			
Route Type		Q1	Q2	Q3	2013/14 Q4	2014/15 Q1	Q2	Q3	Q4	Q1	Q2	Q3	2013/14 Q4	2014/15 Q1	Q2	Q3	Q4
Route Type	A4	Q1 91.1%	Q2 91.6%	Q3 88.3%	2013/14 Q4 90.6%	2014/15 Q1 89.8%	Q2 89.4%	Q3 86.5%	Q4 90.0%	Q1 81.1%	Q2 83.0%	Q3 80.2%	2013/14 Q4 80.1%	2014/15 Q1 79.7%	Q2 81.6%	Q3 79.8%	Q4 81.3%
Route Type Radial Radial	A4 A40	Q1 91.1% 86.3%	Q2 91.6% 83.8%	Q3 88.3% 83.0%	2013/14 Q4 90.6% 86.4%	2014/15 Q1 89.8% 84.5%	Q2 89.4% 84.6%	Q3 86.5% 82.0%	Q4 90.0% 85.4%	Q1 81.1% 83.5%	Q2 83.0% 86.3%	Q3 80.2% 82.1%	2013/14 Q4 80.1% 83.8%	2014/15 Q1 79.7% 85.2%	Q2 81.6% 84.7%	Q3 79.8% 82.5%	Q4 81.3% 83.3%
Route Type Radial Radial Radial	A4 A40 A41	Q1 91.1% 86.3% 91.4%	Q2 91.6% 83.8% 91.2%	Q3 88.3% 83.0% 90.1%	2013/14 Q4 90.6% 86.4% 92.6%	2014/15 Q1 89.8% 84.5% 90.5%	Q2 89.4% 84.6% 92.0%	Q3 86.5% 82.0% 90.0%	Q4 90.0% 85.4% 91.0%	Q1 81.1% 83.5% 84.7%	Q2 83.0% 86.3% 85.2%	Q3 80.2% 82.1% 82.3%	2013/14 Q4 80.1% 83.8% 83.4%	2014/15 Q1 79.7% 85.2% 85.0%	Q2 81.6% 84.7% 83.3%	Q3 79.8% 82.5% 81.4%	Q4 81.3% 83.3% 84.0%
Route Type Radial Radial Radial Radial	A4 A40 A41 A1	Q1 91.1% 86.3% 91.4% 85.6%	Q2 91.6% 83.8% 91.2% 85.3%	Q3 88.3% 83.0% 90.1% 81.7%	2013/14 Q4 90.6% 86.4% 92.6% 86.6%	2014/15 Q1 89.8% 84.5% 90.5% 85.8%	Q2 89.4% 84.6% 92.0% 84.3%	Q3 86.5% 82.0% 90.0% 81.9%	Q4 90.0% 85.4% 91.0% 86.1%	Q1 81.1% 83.5% 84.7% 85.0%	Q2 83.0% 86.3% 85.2% 84.6%	Q3 80.2% 82.1% 82.3% 80.2%	2013/14 Q4 80.1% 83.8% 83.4% 82.3%	2014/15 Q1 79.7% 85.2% 85.0% 81.9%	Q2 81.6% 84.7% 83.3% 85.3%	Q3 79.8% 82.5% 81.4% 81.4%	Q4 81.3% 83.3% 84.0% 83.2%
Route Type Radial Radial Radial Radial Radial	A4 A40 A41 A1 A10	Q1 91.1% 86.3% 91.4% 85.6% 90.5%	Q2 91.6% 83.8% 91.2% 85.3% 90.4%	Q3 88.3% 83.0% 90.1% 81.7% 87.1%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5%	Q2 89.4% 84.6% 92.0% 84.3% 89.6%	Q3 86.5% 82.0% 90.0% 81.9% 88.9%	Q4 90.0% 85.4% 91.0% 86.1% 88.2%	Q1 81.1% 83.5% 84.7% 85.0% 82.3%	93.0% 86.3% 85.2% 84.6% 83.3%	Q3 80.2% 82.1% 82.3% 80.2% 80.3%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2%	Q2 81.6% 84.7% 83.3% 85.3% 81.9%	Q3 79.8% 82.5% 81.4% 81.4% 80.6%	Q4 81.3% 83.3% 84.0% 83.2% 78.4%
Route Type Radial Radial Radial Radial Radial Radial	A4 A40 A41 A1 A10 A12	Q1 91.1% 86.3% 91.4% 85.6% 90.5% 87.6%	Q2 91.6% 83.8% 91.2% 85.3% 90.4% 87.3%	Q3 88.3% 83.0% 90.1% 81.7% 87.1% 85.2%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6% 87.4%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5% 88.3%	Q2 89.4% 84.6% 92.0% 84.3% 89.6% 87.5%	Q3 86.5% 82.0% 90.0% 81.9% 88.9% 83.9%	Q4 90.0% 85.4% 91.0% 86.1% 88.2% 87.4%	Q1 81.1% 83.5% 84.7% 85.0% 82.3% 85.7%	Q2 83.0% 86.3% 85.2% 84.6% 83.3% 86.1%	Q3 80.2% 82.1% 82.3% 80.2% 80.3% 83.8%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0% 84.1%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2% 84.8%	Q2 81.6% 84.7% 83.3% 85.3% 81.9% 83.2%	Q3 79.8% 82.5% 81.4% 81.4% 80.6% 82.8%	Q4 81.3% 83.3% 84.0% 83.2% 78.4% 84.3%
Route Type Radial Radial Radial Radial Radial Radial Radial	A4 A40 A41 A1 A10 A12 A13	Q1 91.1% 86.3% 91.4% 85.6% 90.5% 87.6% 92.6%	Q2 91.6% 83.8% 91.2% 85.3% 90.4% 87.3% 92.1%	Q3 88.3% 83.0% 90.1% 81.7% 87.1% 85.2% 90.2%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6% 87.4% 89.9%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5% 88.3% 92.7%	Q2 89.4% 84.6% 92.0% 84.3% 89.6% 87.5% 90.8%	Q3 86.5% 82.0% 90.0% 81.9% 88.9% 83.9% 90.0%	Q4 90.0% 85.4% 91.0% 86.1% 88.2% 87.4% 93.7%	Q1 81.1% 83.5% 84.7% 85.0% 82.3% 85.7% 84.1%	Q2 83.0% 86.3% 85.2% 84.6% 83.3% 86.1% 84.3%	Q3 80.2% 82.1% 82.3% 80.2% 80.3% 83.8% 86.7%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0% 84.1% 86.1%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2% 84.8% 87.1%	Q2 81.6% 84.7% 83.3% 85.3% 81.9% 83.2% 83.4%	Q3 79.8% 82.5% 81.4% 80.6% 82.8% 85.5%	Q4 81.3% 83.3% 84.0% 83.2% 78.4% 84.3% 84.1%
Route Type Radial Radial Radial Radial Radial Radial Radial Radial	A4 A40 A41 A1 A10 A12 A13 A2	Q1 91.1% 86.3% 91.4% 85.6% 90.5% 87.6% 92.6% 92.5%	Q2 91.6% 83.8% 91.2% 85.3% 90.4% 87.3% 92.1% 91.5%	Q3 88.3% 83.0% 90.1% 81.7% 87.1% 85.2% 90.2% 91.1%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6% 87.4% 89.9% 93.2%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5% 88.3% 92.7% 89.7%	Q2 89.4% 84.6% 92.0% 84.3% 89.6% 87.5% 90.8% 91.5%	Q3 86.5% 82.0% 90.0% 81.9% 88.9% 83.9% 90.0% 90.9%	Q4 90.0% 85.4% 91.0% 86.1% 88.2% 87.4% 93.7% 92.7%	Q1 81.1% 83.5% 84.7% 85.0% 82.3% 85.7% 84.1% 85.1%	Q2 83.0% 86.3% 85.2% 84.6% 83.3% 86.1% 84.3% 86.8%	Q3 80.2% 82.1% 82.3% 80.2% 80.3% 83.8% 86.7% 84.3%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0% 84.1% 86.1% 84.6%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2% 84.8% 87.1% 81.7%	Q2 81.6% 84.7% 83.3% 85.3% 81.9% 83.2% 83.4% 84.9%	Q3 79.8% 82.5% 81.4% 80.6% 82.8% 85.5% 83.7%	Q4 81.3% 83.3% 84.0% 83.2% 78.4% 84.3% 84.1% 82.8%
Route Type Radial	A4 A40 A41 A1 A10 A12 A13 A2 A20	Q1 91.1% 86.3% 91.4% 85.6% 90.5% 87.6% 92.6% 92.5% 92.1%	Q2 91.6% 83.8% 91.2% 85.3% 90.4% 87.3% 92.1% 91.5% 93.0%	Q3 88.3% 83.0% 90.1% 81.7% 87.1% 85.2% 90.2% 91.1% 90.2%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6% 87.4% 89.9% 93.2% 91.2%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5% 88.3% 92.7% 89.7% 90.2%	Q2 89.4% 84.6% 92.0% 84.3% 89.6% 87.5% 90.8% 91.5% 88.3%	Q3 86.5% 82.0% 90.0% 81.9% 88.9% 83.9% 90.0% 90.9%	Q4 90.0% 85.4% 91.0% 86.1% 88.2% 87.4% 93.7% 92.7% 91.0%	Q1 81.1% 83.5% 84.7% 85.0% 82.3% 85.7% 84.1% 85.1% 89.7%	Q2 83.0% 86.3% 85.2% 84.6% 83.3% 86.1% 84.3% 86.8% 90.3%	Q3 80.2% 82.1% 82.3% 80.2% 80.3% 83.8% 86.7% 84.3% 89.4%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0% 84.1% 86.1% 84.6% 89.4%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2% 84.8% 87.1% 81.7% 88.6%	Q2 81.6% 84.7% 83.3% 85.3% 81.9% 83.2% 83.4% 84.9% 88.5%	Q3 79.8% 82.5% 81.4% 80.6% 82.8% 85.5% 83.7% 89.6%	Q4 81.3% 83.3% 84.0% 83.2% 78.4% 84.3% 84.1% 82.8% 89.1%
Route Type Radial	A4 A40 A41 A1 A10 A12 A13 A2 A20 A21	Q1 91.1% 86.3% 91.4% 85.6% 90.5% 87.6% 92.6% 92.5% 92.1% 97.3%	Q2 91.6% 83.8% 91.2% 85.3% 90.4% 87.3% 92.1% 91.5% 93.0% 96.4%	Q3 88.3% 83.0% 90.1% 81.7% 87.1% 85.2% 90.2% 91.1% 90.2% 95.6%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6% 87.4% 89.9% 93.2% 91.2% 94.6%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5% 88.3% 92.7% 89.7% 90.2% 95.4%	Q2 89.4% 84.6% 92.0% 84.3% 89.6% 87.5% 90.8% 91.5% 88.3% 98.1%	Q3 86.5% 82.0% 90.0% 81.9% 88.9% 83.9% 90.0% 90.9% 91.6%	Q4 90.0% 85.4% 91.0% 86.1% 88.2% 87.4% 93.7% 92.7% 91.0% 95.0%	Q1 81.1% 83.5% 84.7% 85.0% 82.3% 85.7% 84.1% 85.1% 89.7% 89.9%	Q2 83.0% 86.3% 85.2% 84.6% 83.3% 86.1% 84.3% 86.8% 90.3% 89.9%	Q3 80.2% 82.1% 82.3% 80.2% 80.3% 83.8% 86.7% 84.3% 89.4% 90.0%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0% 84.1% 86.1% 84.6% 89.4% 88.5%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2% 84.8% 87.1% 81.7% 88.6% 89.5%	Q2 81.6% 84.7% 83.3% 85.3% 81.9% 83.2% 83.4% 84.9% 88.5% 92.7%	Q3 79.8% 82.5% 81.4% 81.4% 80.6% 82.8% 85.5% 83.7% 89.6% 87.3%	Q4 81.3% 83.3% 84.0% 83.2% 78.4% 84.3% 84.1% 82.8% 89.1% 88.3%
Route Type Radial	A4 A40 A41 A1 A10 A12 A13 A2 A20 A21 A23	Q1 91.1% 86.3% 91.4% 85.6% 90.5% 87.6% 92.6% 92.5% 92.1% 97.3% 90.9%	Q2 91.6% 83.8% 91.2% 85.3% 90.4% 87.3% 92.1% 91.5% 93.0% 96.4% 90.7%	Q3 88.3% 83.0% 90.1% 81.7% 87.1% 85.2% 90.2% 91.1% 90.2% 95.6% 89.5%	2013/14 Q4 90.6% 86.4% 92.6% 86.6% 87.6% 87.4% 89.9% 93.2% 91.2% 94.6%	2014/15 Q1 89.8% 84.5% 90.5% 85.8% 89.5% 88.3% 92.7% 89.7% 90.2% 95.4%	Q2 89.4% 84.6% 92.0% 84.3% 89.6% 87.5% 90.8% 91.5% 88.3% 98.1% 89.5%	Q3 86.5% 82.0% 90.0% 81.9% 88.9% 83.9% 90.0% 90.9% 91.6% 89.4%	Q4 90.0% 85.4% 91.0% 86.1% 88.2% 87.4% 93.7% 92.7% 91.0% 95.0% 89.8%	Q1 81.1% 83.5% 84.7% 85.0% 82.3% 85.7% 84.1% 85.1% 89.7% 89.9% 83.3%	Q2 83.0% 86.3% 85.2% 84.6% 83.3% 86.1% 84.3% 86.8% 90.3% 89.9% 82.2%	Q3 80.2% 82.1% 82.3% 80.2% 80.3% 83.8% 86.7% 84.3% 89.4% 90.0% 81.0%	2013/14 Q4 80.1% 83.8% 83.4% 82.3% 81.0% 84.1% 86.1% 84.6% 89.4% 88.5% 82.8%	2014/15 Q1 79.7% 85.2% 85.0% 81.9% 80.2% 84.8% 87.1% 81.7% 88.6% 89.5% 82.1%	Q2 81.6% 84.7% 83.3% 85.3% 81.9% 83.2% 83.4% 84.9% 88.5% 92.7% 83.8%	Q3 79.8% 82.5% 81.4% 81.4% 80.6% 82.8% 85.5% 83.7% 89.6% 87.3% 81.4%	Q4 81.3% 83.3% 84.0% 83.2% 78.4% 84.3% 84.1% 82.8% 89.1% 88.3% 82.7%

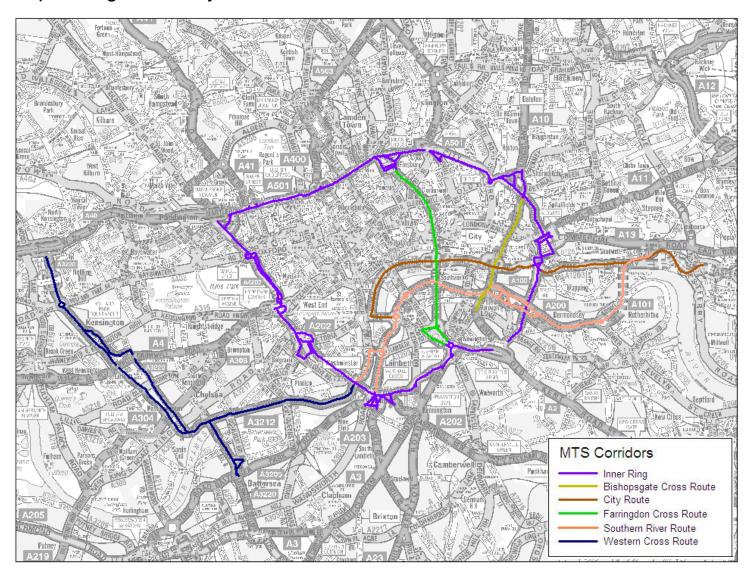
The JTR values on each of the main orbital routes on the TLRN in the AM and PM peaks in both directions are:

AM Peak					Anti-Clo	ockwise							Clock	wise			
		2013/14	2013/14	2013/14	2013/14	2014/15	2014/15	2014/15	2014/15	2013/14	2013/14	2013/14	2013/14	2014/15	2014/15	2014/15	2014/15
Route Type	Corridor	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Orbial	A102 B. Tunnel	79.4%	77.2%	77.1%	82.2%	80.1%	76.8%	77.3%	78.8%	98.0%	98.7%	97.7%	97.9%	97.2%	97.4%	94.5%	96.3%
Orbital	A406	86.1%	86.4%	84.0%	86.8%	86.6%	85.6%	85.2%	85.9%	89.1%	90.6%	88.0%	89.0%	87.8%	89.0%	86.4%	87.9%
	A205	86.1%	89.9%	87.3%	87.5%	86.4%	88.2%	85.4%	87.0%	82.6%	83.5%	82.6%	83.5%	83.2%	82.0%	82.9%	83.3%
Orbital	Inner Ring	84.2%	83.3%	84.1%	85.0%	82.1%	83.9%	83.9%	84.7%	85.4%	85.1%	83.8%	85.9%	83.3%	84.4%	85.5%	86.0%
PM Peak				Ant	i-Clockv	vise							Clock	wise			
PM Peak		2013/14	2013/14				2014/15	2014/15	2014/15	2013/14	2013/14	2013/14			2014/15	2014/15	2014/15
PM Peak Route Type	Corridor	2013/14 Q1	2013/14 Q2				2014/15 Q2	2014/15 Q3	2014/15 Q4	2013/14 Q1	2013/14 Q2	2013/14 Q3			2014/15 Q2	2014/15 Q3	2014/15 Q4
Route Type	Corridor A102 B. Tunnel			2013/14	2013/14	2014/15							2013/14	2014/15			
Route Type Orbital		Q1	Q2	2013/14 Q3	2013/14 Q4	2014/15 Q1	Q2	Q3	Q4	Q1	Q2	Q3	2013/14 Q4	2014/15 Q1	Q2	Q3	Q4
Route Type Orbital Orbital	A102 B. Tunnel	Q1 80.5%	Q2 76.5%	2013/14 Q3	2013/14 Q4 78.4%	2014/15 Q1 74.9%	Q2 73.5%	Q3 73.8%	Q4 79.9%	Q1 82.2%	Q2 84.4%	Q3 80.3%	2013/14 Q4 81.8%	2014/15 Q1	Q2	Q3 78.8%	Q4 79.7%

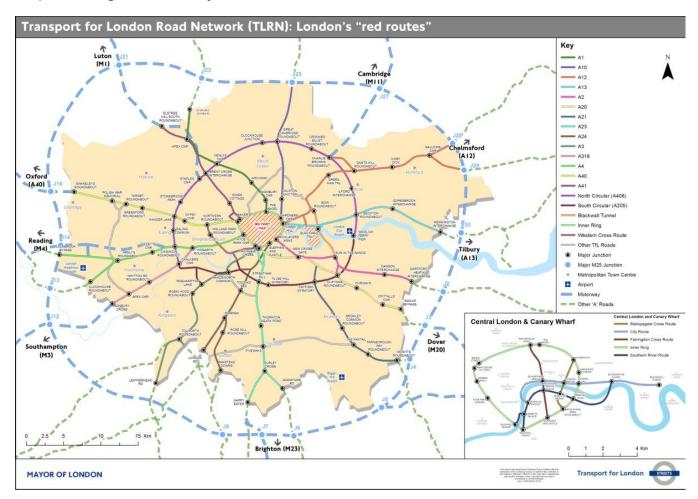
The JTR values on the TLRN and in Central London all directions combined in the AM and PM peaks are:

Central London	2013/14	2013/14	2013/14	2013/14	2014/15	2014/15	2014/15	2014/15
All Directions	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
AM Peak	87.7%	87.8%	86.5%	87.1%	86.1%	86.1%	86.1%	87.4%
PM Peak	84.4%	85.8%	82.4%	84.1%	83.1%	84.8%	80.5%	83.6%
TLRN	2013/14	2013/14	2013/14	2013/14	2014/15	2014/15	2014/15	2014/15
All Directions	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
AM Peak	89.4%	90.3%	87.6%	88.8%	88.2%	89.4%	87.5%	88.2%
PM Peak	86.5%	86.9%	84.4%	86.0%	85.7%	85.9%	84.2%	85.9%

Map showing the TLRN by MTS corridors in central London



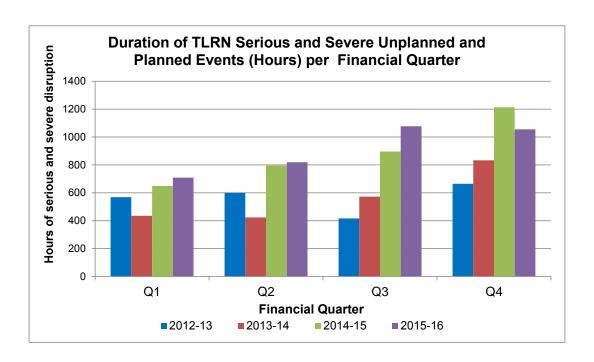
Map showing the TLRN by MTS corridors across London



Note: The named corridors do not exactly replicate the road number in the legend, but reflect the strategic radial and orbital corridors set out in the Mayor's Transport Strategy (e.g. the "A12 corridor" includes the A11 Mile End Road into Central London)

2. NETWORK DISRUPTION

Serious and severe (S&S) unplanned and planned disruption hours on the TLRN



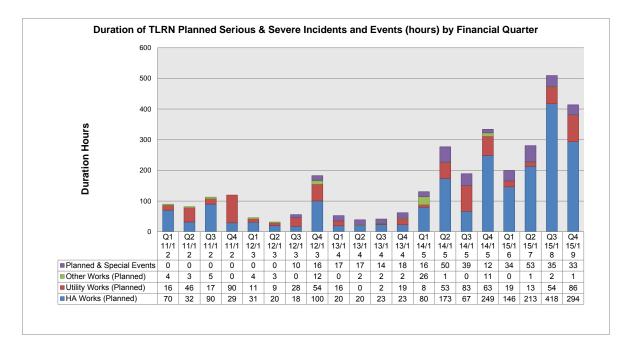
In Q4 there were a total of 1055 hours of Serious and Severe (S&S) disruption resulting from unplanned and planned events, spread across 374 separate incidents. Planned S&S disruption totalled 414 hours and unplanned S&S disruption totalled 641 hours.

Overall this represents decrease of 159 planned and unplanned hours compared to Q4 2014/15, attributable to an increase of 80 planned S&S disruption hours and decrease of 239 unplanned S&S disruption hours.

The amount of S&S disruption per event, a measure of effectiveness of the resolution of unplanned incidents, it was at 1.9 hours in Q4, compared to 2.2 hours per event in Q4 last year.



Planned incidents and events: TLRN 1



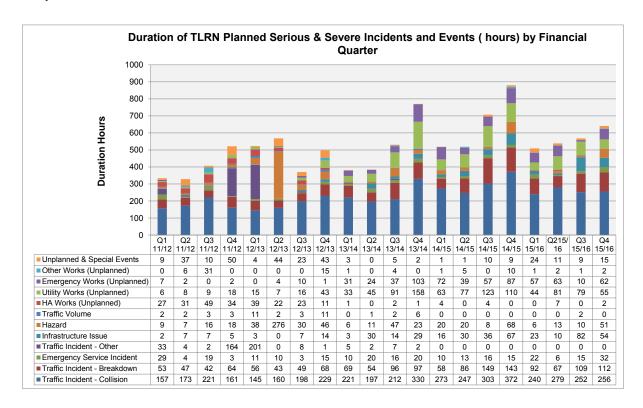
In Q4 there were 414 hours of S&S disruption from planned events spread across 40 separate events (an average of 10 hours 20 minutes duration per event), which was largely due to a number of Highway Authority (HA) works across the quarter. This compared to 334 hours spread across 41 events (an average of 8 hours 9 minutes duration per event) in Q4 2014/15. In Q4 there were three planned events on the TLRN recording more than 10 hours of serious and severe disruption:

- Planned TfL roadworks continued on the A406 North Circular Road between Dury Way and Neasden Lane. A contra flow system remains in place due to ongoing bridge strengthen works. The carriageway is reduced to two lanes in both directions. Traffic congestion during the PM peak extended westbound towards Brent Cross Interchange and eastbound beyond Abbey Lane this is now a regular occurrence during the peak periods. UTC contingency plans and VMS where used and LSTCC and OM continue to review and manage the impact of the works. P II (118.0 hours), P12 (91.8 hours); P13 (32.7 hours); Total: 242.5 Hours.
- National Grid gas works continue on Archway Road. Temporary traffic signals and a signal
 alternative contraflow are in place to facilitate the works. Queues northbound regularly
 extend back through Archway Gyratory to Tufnell Park on Junction Road and Upper
 Holloway. Southbound queues extend back to Aylmers Road during the PM peak. Local bus
 services report severe delay during the PM peak and UTC plans are being used to manage
 traffic congestion. P II (45.4 hours), P12 (29.1 hours). Total: 74.5 Hours.
- Works continued on the Cycle Superhighway North South (Phase 1) causing disruption on affected roads. 11.7 hours.

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¹ NB: Data prior to 2013/14 was recorded using LTIS. This was replaced in April 2013 with TIMS. The two systems record incidents and events using different categorisations and are not directly comparable. In the chart above, the LTIS data has been aligned to the new TIMS categories for information only.

Unplanned incidents and events: TLRN ²



In Q4 on the TLRN as a whole there were 641 hours of unplanned S&S disruption, spread across 334 separate events (an average of 1 hour 55 minutes duration per event). This compares to 880 hours, spread across 404 events (an average of 2 hours 11 minutes duration per event) in Q4 2014/15.

In Q4 there was one unplanned incident on the TLRN leading to over 10 hours of serious and severe disruption:

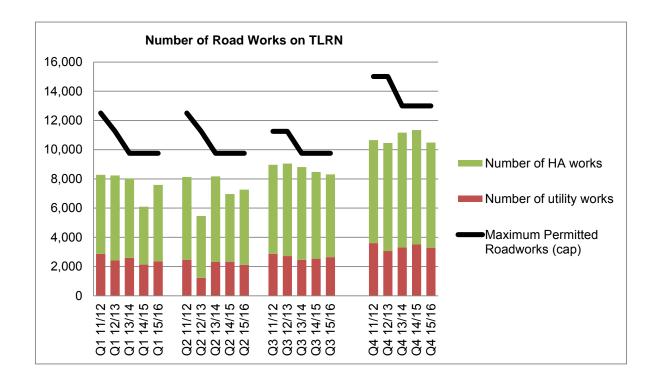
 Monday 28 December there was a gas leak located on Brighton Road at the junction of Smitham Downs Road reported at 08:12 in the morning. Temporary lights were put in operation and access to Smitham Downs Road closed from 09:27 onwards to facilitate the emergency works.

Deep excavations of the road were undertaken to find the source of the gas leak this extended the duration of the emergency works.

The investigation and works continued until Sunday 3 January 2016 with the timings of the temporary signal being changed when required. There were 153.26 hours of disruption with 39.03 being Serious or Severe. 39.03 hours.

 $^{^2}$ NB: Data prior to 2013/14 was recorded using LTIS. This was replaced in April 2013 with TIMS. The two systems record incidents and events using different categorisations and are not directly comparable. In the chart above, the LTIS data has been aligned to the new TIMS categories for information only.

Number of roadworks on the TLRN



The London Permit Scheme (LoPS) for roadworks was introduced in February 2010. Its purpose is to improve the ability of Highway Authorities to minimise disruption from planned highway works - by requiring works promoters to apply for a permit to work in the highway. A Highway Authority's own works are also included in the scheme.

To manage the cumulative impact of roadworks on the TLRN, the total number of new road works permitted in any one period was capped at 4,170 from the start of 2010/11. This was 20% below the peak level of roadwork activities experienced in 2009/10 (5,212 in period 12 of that year). The cap was then reduced in period 7 of 2011/12 to 3,753 per period.

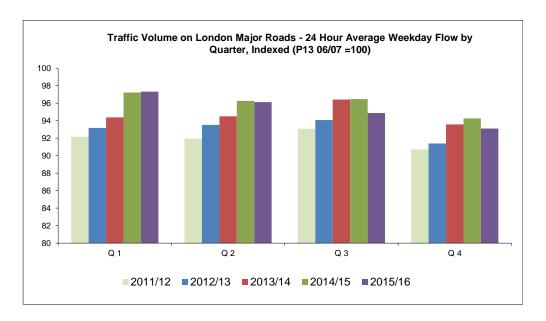
At the beginning of Q1 2013/14, the maximum permissible total number of roadworks allowed on the TLRN was lowered again to 3,250 per period. This was a reduction of 13.4% from the previous cap. The volume of roadworks on the network stayed below the cap throughout 2014/15.

In Q4 2015/16 the total number of roadworks on the TLRN was 10,485 - a decrease of 862 (7.6%) on the 11,347 total reported in Q4 of 2014/15, and 19.3% below the allowable cap of 13,000.

3. TRAFFIC VOLUMES

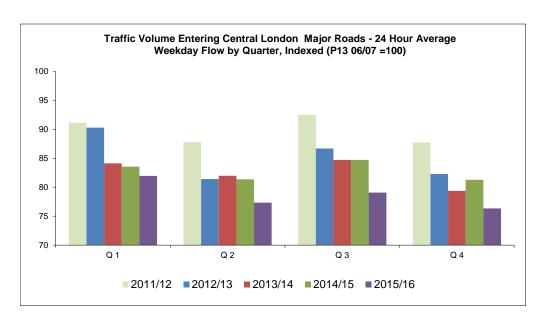
Vehicular traffic volumes on London's major roads

The pan-London traffic flow index stands at 93.1 in Q4 2015/16. This is 1.1 index points down from the same quarter in 2014/15, and 0.5 index points down from the same quarter in 2013/14. The chart below shows traffic flows relative to an index of 100 in P13 2006/07.



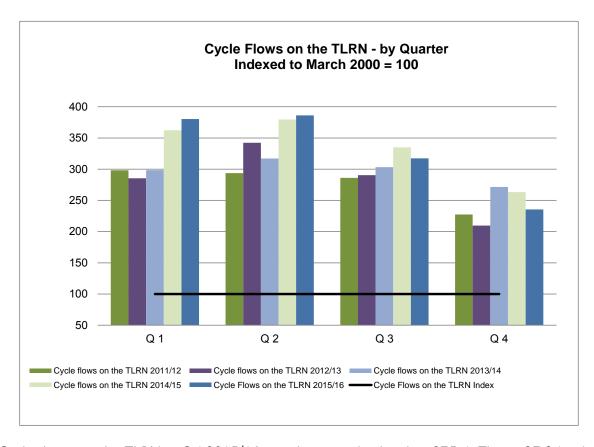
Vehicular traffic entering central London's major roads

The Central London traffic flow index stands at 76.3 in Q4 2015/16. This is 4.9 index points down from the same quarter in 2014/15 and 3.0 index points down from the same quarter in 2013/14. The chart below shows traffic flows relative to an index of 100 in P13 2006/07.



Volume of cycling on the TLRN

The chart below shows cycling levels on the TLRN relative to an index of 100 in March 2000.

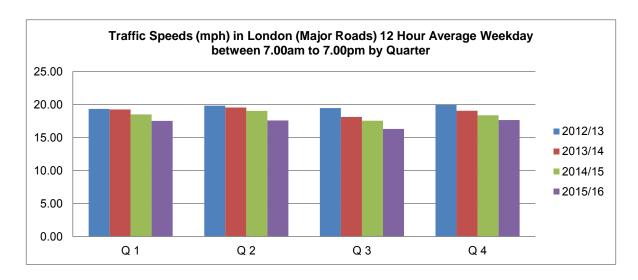


Cycle flows on the TLRN in Q4 2015/16 stand at an index level of 235.4. This is 27.94 index points (10.6 %) lower than the same quarter in 2014/15.

Between March 2000 and the end of 2014/15 cycle flows on the TLRN increased by 230%. Compared to 2013/14, average cycling levels on the TLRN at the end of 2014/15 were 11.5% higher.

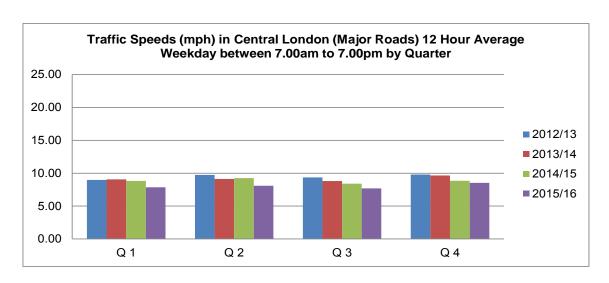
4. TRAFFIC SPEEDS

Traffic speeds in London



Q4 average traffic speeds for the 12 hours between 07:00 and 19:00 across London were 17.7mph, compared to the 18.38mph observed in Q4 2014/15, a 3.9 % decrease year-on-year.

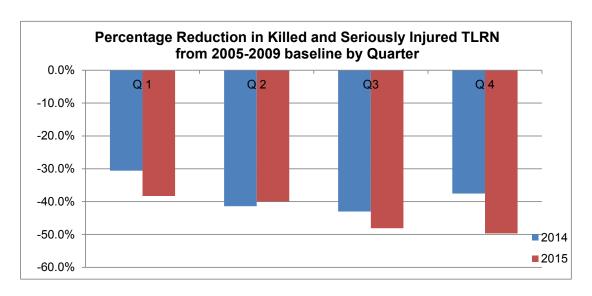
Traffic speeds in central London



Q4 average traffic speeds for the 12 hours between 07:00 and 19:00 across Central London were 8.5mph compared to the 8.8 mph observed in Q4 2014/15, a 3.38% decrease year-on-year.

5. ROAD SAFETY

Fatal and seriously injured casualties on the TLRN



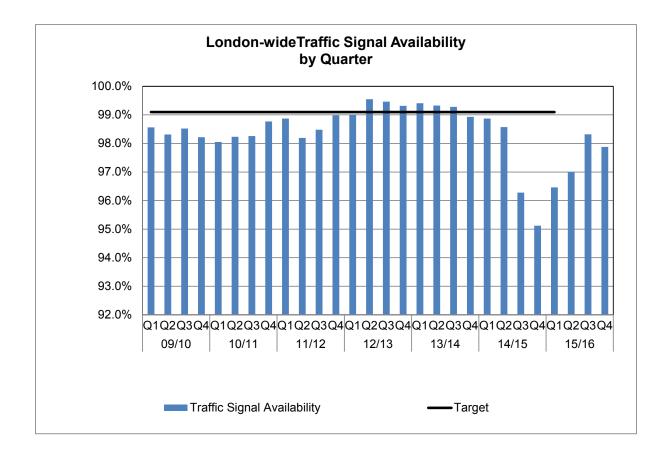
The graph above shows the percentage change in KSI casualties on the TLRN from the 2005–09 baseline for the period from 2014/15 to 2015/16. Note in this data set, Q3 is defined as the three month period from September to November 2015.

Provisional data for Q4 2015/16 indicates that there were 137 KSI casualties on London's roads, a 49.6% reduction from the 2005-09 Q3 baseline.

The table below shows the absolute and percentage reduction in Q4 2015/16 TLRN KSIs relative to Q4 in previous years.

Quarter 4 Results	2011/12	2012/13	2013/14	2015/16
KSI on the TLRN	235	200	170	137
Percentage reduction Q4 2015/16 relative to Q4 in previous years	-42%	-32%	-19%	

6. ASSET AVAILABILITY



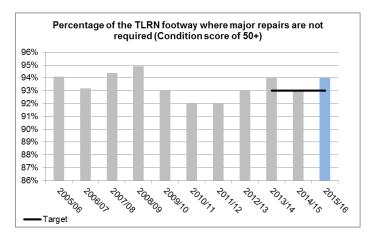
During Q4 2015/16, the availability of traffic signals London-wide was 97.8% - compared to 95.1 % reported in Q4 2014/15. Performance is expected to improve further in the future as new contractors increase resources and continue to train staff.

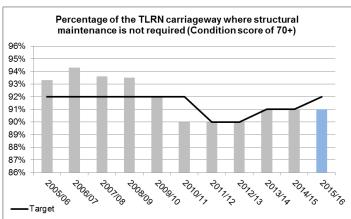
The target for this indicator is set at 99.1%, representing the availability of all functions of traffic signal equipment. The reason for not meeting this performance target is primarily due to poor performance from one contractor covering the east and south areas. Where full availability is not maintained, abatements are applied to contract payments. This is a demanding target for the three contractors responsible for maintaining London's traffic signal equipment – and overall, traffic signal assets are in good condition.

TfL's current focus remains on carrying out preventative maintenance. This is having an impact on availability scores in the short-term as more faults are raised — however, this strategy will lead to improved availability longer term.

7. STATE OF GOOD REPAIR

The State of Good Repair (SOGR) metrics for the TLRN carriageways and footways are reported annually at the end of each financial year. SOGR represents the percentage of the TLRN where structural maintenance/major repairs are not required; it is based on asset condition scores from structural surveys analysed using the national Rules and Parameters from the UK Pavement Management System (UKPMS).





The percentage of the TLRN carriageway where structural maintenance is not required was 91% in 2013/14 and 2014/15, the provisional figure for 2015/16 remains at 91% and will be confirmed following the year-end review of delivery. This is on target with the strategy for carriageway State of Good Repair.

The percentage of the TLRN footway where structural maintenance is not required was 94% in 2013/14, 93% in 2014/15 and back to 94% in 2015/16 — the fluctuation is caused by the timing of annual condition inspections in relation to major footway schemes. The condition remains on target with the strategy for footway State of Good Repair.

8. CUSTOMER SATISFACTION: TLRN

The customer satisfaction survey was conducted annually between 2010 and 2013 (with fieldwork conducted from mid-October to mid-November). Since 2014, the survey has been carried out quarterly to enable the road network to be assessed during different seasons, building up a more representative picture over the year.

In Q4 2015/16 an online customer satisfaction survey was conducted among people who had used the TLRN in the last month and using any of the following modes: car, pedestrian, bus, motorcycle / scooter / moped, taxi / commercial delivery / emergency vehicle, cycle.

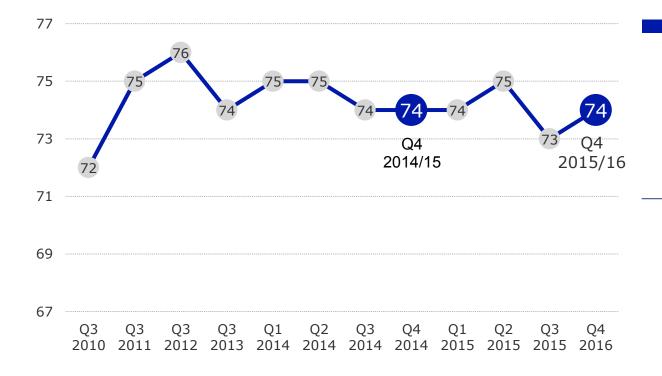
- Q4 interviews were carried out between 15 January 2016 9 February 2016.
- 3,304 TLRN users were interviewed (3,003 in London and 301 in South East England). Detail of 7,921 trips were recorded i.e. collecting multiple trips from some respondents.

Q4 Survey results:

- TLRN users are asked to score their satisfaction with their three most recent trips. The
 reported satisfaction scores are based on combining scores from up to three trips per
 respondent.
- Historically, after scoring the first trip, respondents were asked to provide reasons why they were dissatisfied with every score lower than 7 out of 10. In Q1 2015-16, these follow-up questions were removed to shorten the interview and reduce respondent fatigue. This had the unexpected impact of lowering satisfaction scores for the 2nd and 3rd trips (and resulted in a lower combined score). It has now become clear that some respondents were previously taking 'avoidance action' when rating trips 2 and 3 by scoring high (in order to avoid the follow up questions asked of dissatisfied users).

Overall satisfaction in Q4 among TLRN users is 74, the same level as this time last year and up from 73 in Q3. Fewer journeys were impacted by roadworks this quarter (down 3 percentage points to 17%).

Overall satisfaction with red routes is up at 74.



74

Overall satisfaction with TLRN Q4 2015/16 Commercial vehicle drivers remain the more positive. Car drivers and pedestrian satisfaction has increased from Q3 while Bus users and P2W has declined.

		Q3 2012	Q3 2013				Q4 2014			Q3 2015	Q4 2015
71	70	76	77	74	73	74	74	74	74	76	76
Commercial											
72	73	77	75	75	75	74	75	75	76	74	75
Car											
73	76	78	76	77	78	76		77	77	75	74
Bus											
71	72	78	79	74	71	72	71	73	74		74
P2W											
72	77	73		73				72		71	72
Pedestrian											
67	72	71	71	70	70		70		72	71	71
Cyclist											

Key movements this quarter

Higher satisfaction this quarter is linked to management of roadworks and congestion levels. Improvements are across user groups.



Management of roadworks

71 🛕



Traffic congestion

67



Key sub groups

Car drivers Bus passengers Pedestrians 71 71 68

Car drivers

Bus
passengers

Pedestrians

68

66

63

