



# TLRN Performance Report

Quarter 3 2016/17

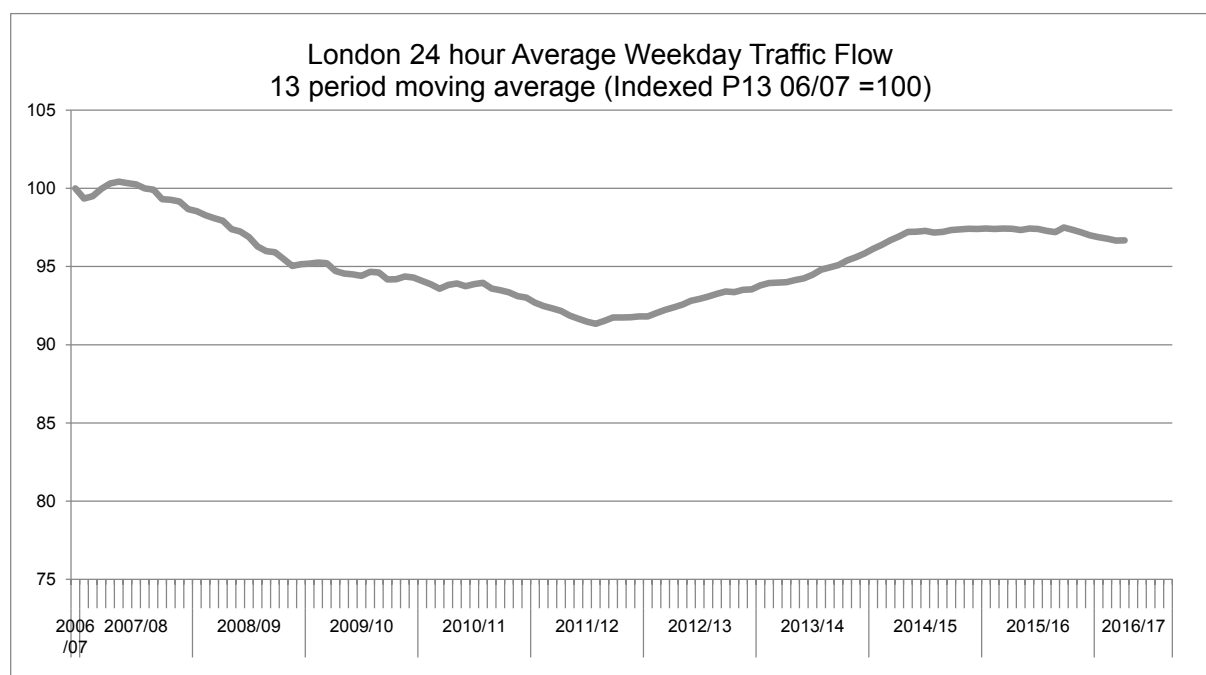
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## Performance summary for Q3 2016/17

Bringing an end to the relative stability seen over the past year, in Q3 2016/17 traffic volumes on London's major roads increased by 1.0 index points (1.0%) compared to Q3 2015/16, and are now 0.6 index points (0.6%) below the level two years ago in Q3 2014/15.

The longer term pattern of traffic volumes in London is illustrated below and shows that following the economic recovery late in 2012, the start of 2014 saw a period of steep traffic growth as the economy returned to normal levels. Then from 2014 traffic flows were fairly static for close to two years, with a small decline between the end of 2015/16 and Q2 2016/17, before the increase seen in Q3 2016/17.



Over this same timeframe, a significant amount of building and construction works have taken place to accommodate London's exceptional economic and population growth, with developers, boroughs and utility providers building additional homes, shops, public places and infrastructure. It is expected that an extra 5 million trips per day will take place on London's roads by 2030, on top of the 30 million daily trips already taking place today.

This growth is changing the way our roads operate and are used. In response, TfL is continuing to oversee the largest ever investment in London's streets, comprising numerous projects and programmes that are transforming some of the busiest roads and junctions to improve them for all road users. So while, overall, there has been a significant slowing in the rate of traffic growth in London, the performance of the network has been affected by construction activity, for example large scale redevelopment projects at Lewisham Gateway, Victoria Station upgrade and Nine Elms, and numerous major road improvement schemes at Archway, Stockwell Cross, Tower Bridge and others.

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 slight reduction in London-wide traffic speeds during the observed hours of 07:00 to 19:00. Latest figures show that speeds decreased by 0.1 mph to 16.2 mph when compared to Q3 2015/16, representing a 1% reduction.

It is also worth noting that the quarter was characterised by several very disruptive unplanned events including multiple burst water mains affecting the A20 and A406.

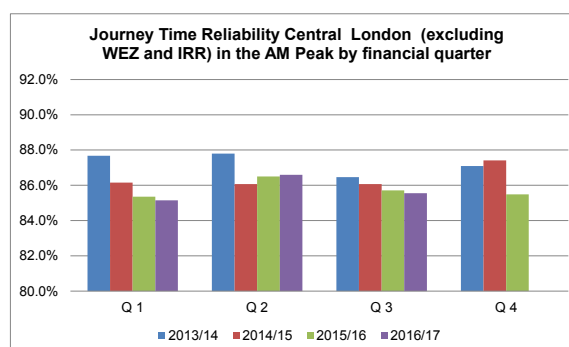
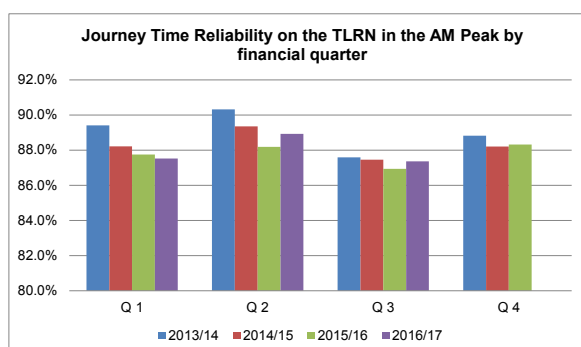
Taking planned and unplanned works into account, as well as anticipated increases in traffic flows and construction activity, Journey Time Reliability (JTR) was forecast to be impacted. However, actual JTR in the AM peak on the TfL Road Network (TLRN) in Q3 2016/17 was 87.4%, which is on target and 0.4 percentage points higher than a year ago in Q3 2015/16.

Other notable updates this quarter:

- Improvement in KSIs: The number of people killed or seriously injured in road collisions on the TLRN has decreased by 39.6% compared to the 2005–2009 baseline. Note that collision data for Q3 was not available at the time of publication, and updates for Q3 will be included in the Q4 2016/17 report.
- The average total cycle kilometres travelled per kilometre per day within central London across all road networks in Q3 2016/17 was 1,364. This represents a 38% increase compared to the 2013/14 baseline, and a 5.4% increase compared to a year ago in Q3 2015/16.
- Overall satisfaction among TLRN users was 70, decreasing by one point from Q2 2015/16, but up one point from a year ago in Q3 2015/16.

## 1. Reliability

The key measure set out in the Mayor's Transport Strategy (MTS) for monitoring traffic performance is Journey Time Reliability (JTR) - 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).



In Q3 2016/17, JTR on the TLRN in the AM peak in all directions was 87.4%. This is on target, and 0.4 percentage points higher than a year ago in Q3 2015/16.

JTR for central London in the AM peak - excluding the congestion charging western extension zone (WEZ) and the Inner Ring Road - was 85.5%. This is 0.2 percentage points lower than Q3 2015/16 and was affected by the closure of Tower Bridge from October for essential maintenance works.

Average 24-hour weekday traffic flows across London increased by 1.0% compared to a year ago in Q3 2015/16. While over the longer term there has been a significant slowing in the rate of traffic growth in London, the overall performance of the network has been affected by this construction activity, for example large scale redevelopment projects at Lewisham Gateway, Victoria Station upgrade and Nine Elms, and numerous major road improvement schemes at Archway, Stockwell Cross, Tower Bridge and others

During Q3, a number of incidents impacted JTR:

### Period 7

- JTR was 87.7%, 0.7 percentage points above target (meaning it was 1.2 points above the same period last year), and 0.7 points below the previous period.
- Almost all radial routes were up against target inbound, although outbound was more mixed. The A24 and A20 were 6.3 and 5.2 percentage points above target respectively.
- Changes to traffic signal timings on the A24 at Newington Butts and Oval improved flows of northbound traffic. The A20 benefited from the completion of long term roadworks at Lewisham Gateway and an intensive period of optimising the traffic signal timings.

- The Central area was down against target by 1.5 percentage points. This was largely due to the Tower Bridge closure which started at the beginning of October. To mitigate the impacts, dynamic traffic signal strategies were used to protect bus routes, key junctions and assist drivers using alternative routes.
- There were no particularly poor days. The worst was 30 September, when there were delays in excess of an hour on the A40 inbound due to a fire, and at the Blackwall Tunnel southbound due to a breakdown. In both incidents signal timings were introduced to contain the disruption and expedite recovery.
- Pan-London traffic speeds were slightly higher in the AM peak (+0.3 mph) and unchanged between 07:00 to 19:00. Speeds were down about 0.5 mph in central London and marginally up on Central area corridors (in both the AM peak and 07:00 to 19:00), which is to be expected with the Tower Bridge closure.

### Period 8

- JTR was 87.4%, 0.6 percentage points below target (meaning it was 0.1 points below the same period last year), and 0.2 points below the previous period.
- The East area had a very good period, being 2.0 percentage points above target. The A12, A13, A2 and A20 all showed inbound increases of between three and six percentage points.
- The remaining four areas were down. The West was down 2.1 percentage points - with the A40, A312 and A4 down in both directions. The North was down 1.7 points, driven by a drop of 4.5 points on the A406 anticlockwise. Both were affected by events on 25 October, the second worst performing day of the period:
  - A collision on the A4 approaching Hogarth Roundabout meant emergency resurfacing was required, which caused delays of an hour and a half, and affected a wide area. Signal timings were immediately changed to prevent the Hogarth Roundabout locking-up and to manage congestion at key junctions along the A4 and A316.
  - A burst water main at Pinkham Way caused delays of 55 minutes, and 40 minutes on the following day. Despite mitigations, peak queues extended to Walthamstow.
- Performance on the A406 was heavily affected by a higher than normal number of traffic incidents on the eastern, un-signalised section which carries the greatest traffic flows.
  - 45 minute delays were caused by a collision at Redbridge Roundabout at the junction with the A12
  - There were two collisions at or approaching Ilford flyover / Romford Road, one on 19 October, the other on 10 November, both causing delays of 50 minutes.
- The worst performing day was 9 November. Coupled with issues associated with the tragic tram derailment at Croydon, and the Redbridge Roundabout collision referenced above, the principle cause appears to be rain - which impacted overall JTR by approximately 0.6 percentage points.
- Traffic speeds followed a similar pattern to previous period. Pan-London traffic speeds were slightly higher in the AM peak (+0.4 mph) and marginally down between 07:00 and

19:00 (-0.1 mph). Speeds were down about 0.5 mph in central London and marginally up on Central Area corridors (in both the AM peak and 07:00 to 19:00), which is to be expected with the Tower Bridge closure.

#### Period 9

- JTR was 87.3%, 0.2 percentage points below target (meaning it was 0.2 points above the same period last year), and 0.4 points below the previous period.
- The period was characterised by several very disruptive events:
  - Multiple burst water mains affecting the A20 and A406 for much of week three, and the A21 and A1 in week four. The A406 burst at Pinkham Way was particularly disruptive, with anti-clockwise delays of an hour on 29 November and 1 hour 25 minutes on 30 November. This alone accounts for at least a 0.5 point drop in JTR.
  - A collision on Victoria Embankment on 23 November caused delays of just over an hour and affected JTR on the City route. Signal timing changes were made to protect the corridor, bus services, and to assist traffic along alternative routes.
  - A spillage at Canning Town on the evening of 8 November caused severe delays of an hour the following morning on the A13 and A2, as well as smaller delays on the A406. To minimise congestion, signal timings were set to regulate traffic onto the outer A13 at the junctions of Woolwich Manor Way, Movers Lane, A406/Beckton Interchange and Renwick Road. Assistance was provided on alternative routes along the A2, A12, A127, Silvertown Way/Lower Lea Crossing and Barking Road.
  - A collision caused delays of 30 minutes on the A40/A312 on 18 November. This was followed by a breakdown that caused delays of an hour 30 November, and a further collision causing delays of an hour on 6 December. In these cases traffic signal timings were changed at Target Roundabout to help traffic flow and protect it from locking-up.

### Journey time reliability (JTR) on the TLRN

AM Peak		Inbound							Outbound						
Route Type	Corridor	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3
Radial	A4	89.4%	88.3%	87.0%	88.6%	85.6%	87.9%	87.5%	94.0%	92.2%	90.5%	92.9%	91.0%	91.6%	90.9%
Radial	A40	81.7%	79.7%	79.5%	81.2%	80.7%	80.4%	78.6%	91.4%	93.9%	94.2%	95.4%	93.4%	94.3%	92.5%
Radial	A41	85.3%	84.9%	83.8%	87.0%	87.1%	87.7%	85.2%	91.0%	91.6%	88.5%	88.1%	89.6%	90.2%	87.9%
Radial	A1	80.0%	82.0%	82.7%	83.5%	83.8%	85.9%	84.5%	88.8%	89.0%	87.0%	86.7%	90.4%	91.1%	89.5%
Radial	A10	84.5%	85.9%	83.4%	84.0%	83.9%	87.0%	84.6%	90.0%	89.8%	87.0%	88.1%	88.8%	90.4%	86.5%
Radial	A12	84.6%	88.1%	83.4%	86.5%	85.0%	87.7%	85.8%	94.2%	95.6%	96.6%	96.2%	95.5%	96.2%	96.2%
Radial	A13	79.2%	80.9%	75.5%	84.0%	82.3%	82.1%	80.5%	98.2%	98.2%	98.1%	97.6%	98.1%	98.5%	97.5%
Radial	A2	81.2%	84.0%	81.2%	84.1%	86.5%	86.1%	85.0%	96.6%	96.2%	95.6%	96.3%	96.5%	96.3%	95.6%
Radial	A20	85.4%	83.9%	77.8%	81.1%	77.9%	83.1%	80.6%	91.0%	91.2%	91.4%	90.8%	91.1%	91.8%	91.7%
Radial	A21	88.0%	92.0%	86.1%	85.8%	86.5%	91.8%	86.5%	91.7%	96.4%	93.9%	93.9%	93.5%	96.7%	94.5%
Radial	A23	84.7%	88.3%	85.5%	87.2%	85.0%	87.8%	85.5%	89.3%	91.1%	87.8%	88.9%	87.1%	89.6%	88.1%
Radial	A24	83.2%	86.2%	80.4%	84.9%	86.0%	89.5%	85.9%	91.9%	90.4%	90.4%	92.3%	91.5%	93.2%	92.3%
Radial	A3	86.5%	91.2%	89.5%	90.4%	89.6%	91.7%	90.5%	94.5%	92.3%	90.0%	92.9%	90.6%	93.2%	90.3%
Radial	A316	87.6%	92.2%	86.2%	88.9%	84.1%	91.3%	89.7%	96.1%	95.1%	96.3%	95.5%	92.7%	96.6%	97.2%

PM Peak		Inbound							Outbound						
Route Type	Corridor	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3
Radial	A4	87.7%	89.6%	87.3%	86.8%	85.4%	87.2%	84.0%	79.7%	79.5%	81.1%	81.3%	78.8%	80.5%	80.5%
Radial	A40	83.8%	84.2%	82.7%	85.5%	82.3%	82.7%	81.6%	84.0%	82.2%	80.5%	79.4%	80.8%	81.9%	81.2%
Radial	A41	90.7%	91.4%	87.9%	91.9%	90.3%	93.1%	90.8%	83.0%	83.3%	80.2%	82.9%	81.4%	84.5%	79.7%
Radial	A1	84.8%	85.1%	86.4%	86.3%	88.7%	89.9%	85.1%	83.4%	82.7%	80.4%	81.9%	84.2%	85.7%	85.0%
Radial	A10	87.2%	89.5%	86.1%	87.0%	87.5%	89.7%	85.8%	79.2%	79.5%	77.3%	79.2%	78.3%	80.9%	77.0%
Radial	A12	86.6%	87.7%	87.7%	88.8%	86.5%	86.8%	85.3%	83.6%	82.9%	83.9%	84.6%	83.8%	85.0%	83.4%
Radial	A13	90.2%	90.6%	87.8%	89.5%	85.7%	92.0%	81.7%	83.3%	83.4%	82.9%	81.8%	80.9%	82.0%	80.4%
Radial	A2	90.1%	90.7%	90.9%	91.2%	92.3%	93.7%	92.1%	81.3%	81.0%	81.4%	81.3%	82.4%	84.3%	81.3%
Radial	A20	90.7%	85.9%	85.6%	83.0%	81.9%	83.0%	82.6%	89.5%	85.9%	82.5%	82.5%	83.4%	83.9%	83.5%
Radial	A21	92.7%	94.7%	92.4%	93.2%	93.7%	96.1%	91.2%	89.5%	91.3%	87.5%	88.9%	89.8%	93.1%	88.9%
Radial	A23	88.3%	89.3%	88.8%	89.1%	89.2%	90.3%	88.9%	81.1%	81.4%	81.7%	80.9%	81.8%	82.3%	81.2%
Radial	A24	92.0%	90.1%	88.4%	90.7%	89.3%	90.4%	91.9%	90.1%	87.7%	85.9%	87.5%	87.4%	89.0%	88.5%
Radial	A3	93.3%	94.7%	95.0%	94.7%	94.3%	94.6%	94.5%	88.8%	87.0%	85.1%	88.6%	86.5%	89.6%	87.7%
Radial	A316	89.0%	92.5%	91.0%	89.4%	90.4%	92.5%	89.1%	90.7%	91.1%	88.2%	88.1%	92.3%	91.0%	87.5%



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-clockwise							Clockwise						
Route Type	Corridor	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3
Orbital	A102 B. Tunnel	79.5%	75.6%	79.8%	80.6%	79.8%	76.1%	80.2%	96.5%	95.9%	93.7%	93.1%	97.4%	94.7%	94.1%
Orbital	A406	86.7%	84.0%	86.3%	86.1%	85.1%	87.9%	84.7%	85.6%	86.6%	84.5%	87.7%	86.0%	86.6%	84.8%
Orbital	A205	86.5%	88.7%	84.7%	84.3%	87.0%	89.6%	85.7%	82.6%	82.8%	84.8%	83.9%	85.2%	85.4%	85.8%
Orbital	Inner Ring	81.8%	83.3%	83.2%	83.7%	81.6%	82.8%	82.2%	83.4%	84.9%	85.3%	85.6%	83.6%	85.0%	85.2%

PM Peak		Anti-clockwise							Clockwise						
Route Type	Corridor	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3
Orbital	A102 B. Tunnel	74.5%	71.0%	76.6%	77.7%	72.6%	72.3%	77.1%	79.2%	81.2%	78.5%	79.8%	80.3%	83.8%	80.0%
Orbital	A406	83.3%	83.5%	82.9%	84.3%	82.9%	85.1%	83.9%	85.2%	82.1%	83.2%	82.9%	80.9%	83.1%	80.1%
Orbital	A205	82.4%	84.4%	81.7%	82.8%	82.7%	85.9%	83.2%	84.1%	86.3%	83.6%	83.2%	85.9%	88.0%	85.5%
Orbital	Inner Ring	78.4%	77.8%	77.9%	79.5%	78.4%	77.8%	78.5%	79.2%	80.5%	79.7%	81.5%	81.1%	80.7%	81.0%

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

Central London	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3
All Directions							
AM Peak	85.4%	86.5%	85.7%	85.5%	85.2%	86.6%	85.5%
PM Peak	81.5%	82.2%	80.5%	82.3%	82.4%	84.3%	82.0%

TLRN	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1	2016/17 Q2	2016/17 Q3
All Directions							
AM Peak	87.7%	88.2%	86.9%	88.3%	87.5%	88.9%	87.4%
PM Peak	84.9%	84.9%	84.0%	84.8%	84.0%	85.6%	83.5%

**Legend**

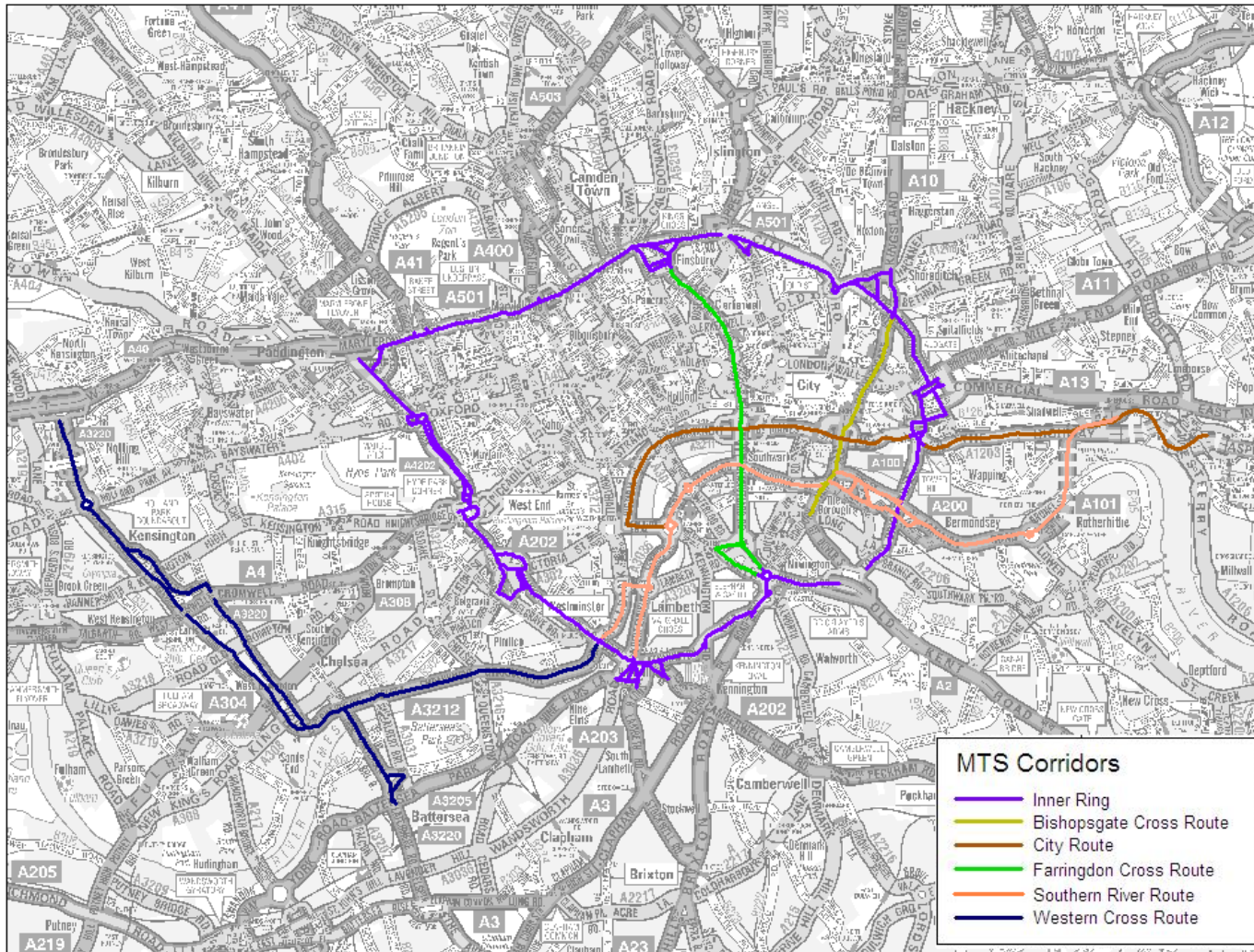
**Journey Time Reliability**

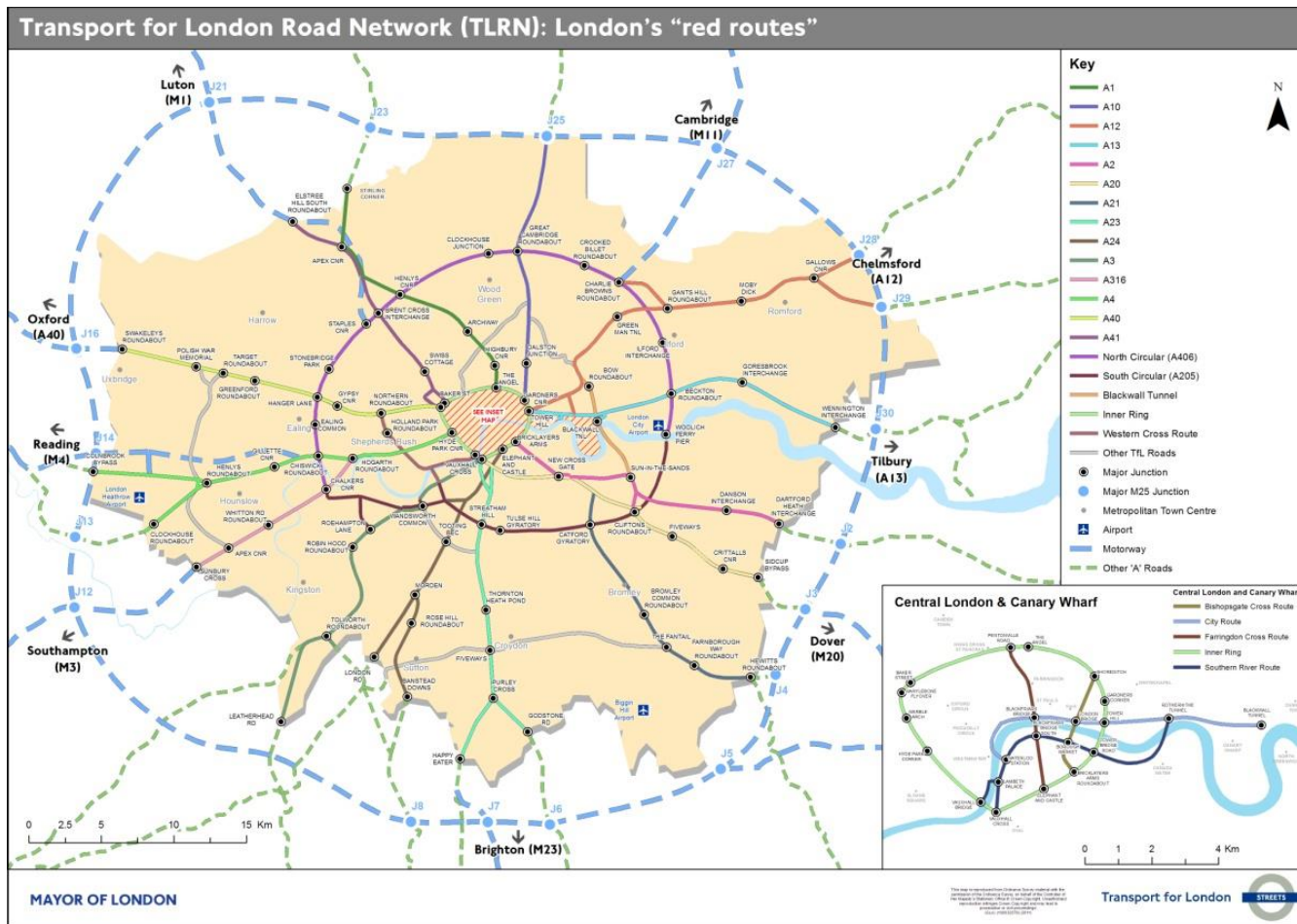
**>=90%** More than 9 out of 10 journeys are "on time"

**80%-89.9%**

**<80%** Less than 4 out of 5 journeys are "on time"

Map showing the TLRN by MTS corridors in central London

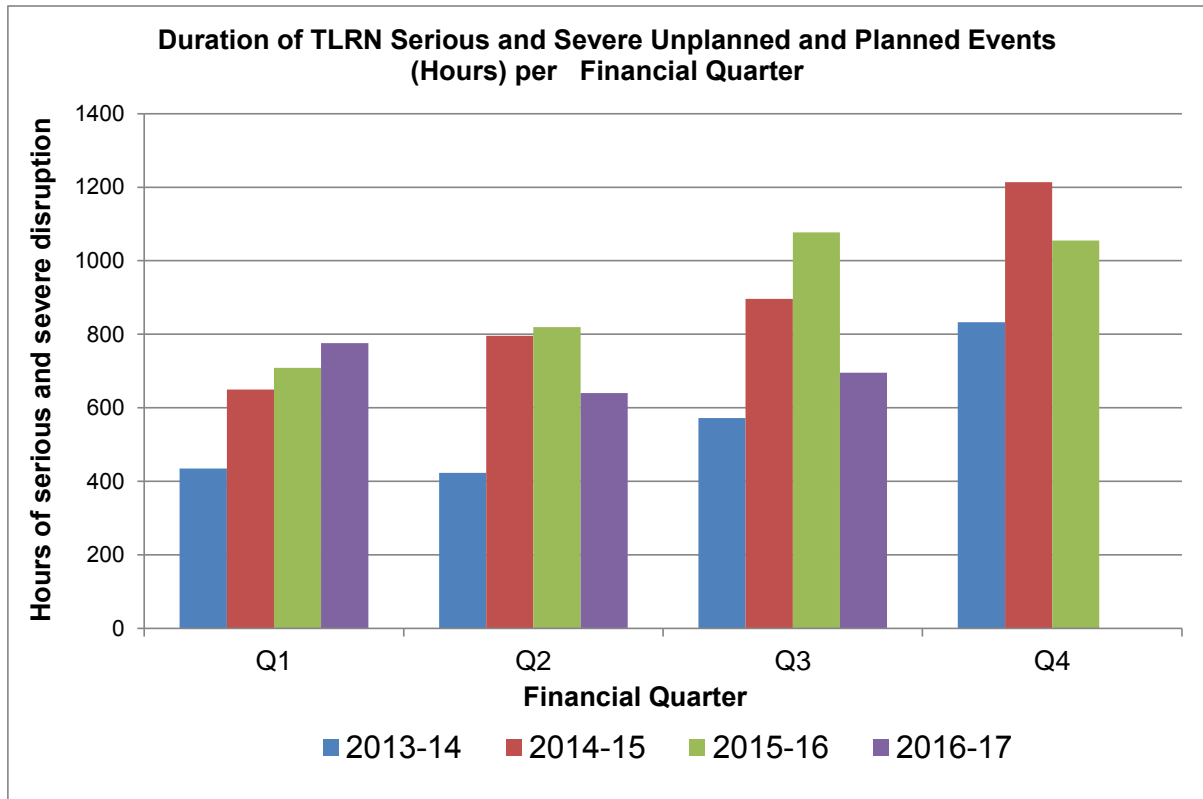




Note: The named corridors do not exactly replicate the road number in the legend, but reflect the strategic radial and orbital corridors set out in the Mayor's Transport Strategy (e.g. the "A12 corridor" includes the A11 Mile End Road into Central London)

## 2. Network disruption

### Serious and severe unplanned and planned disruption on the TLRN

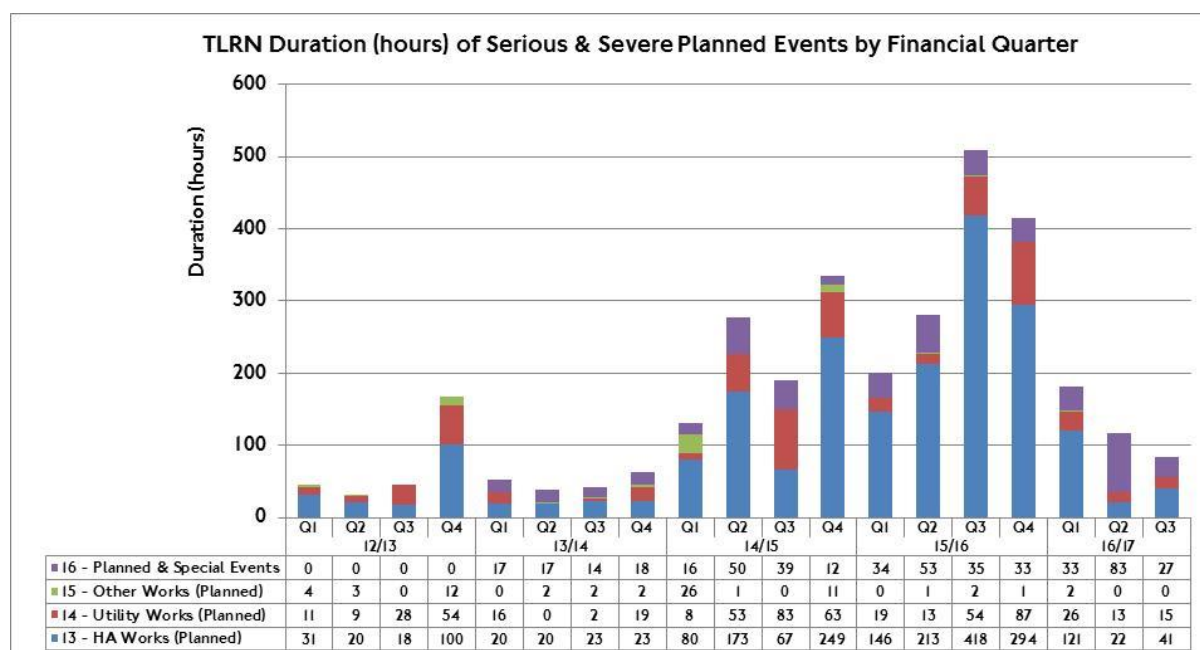


There were a total of 696 hours of Serious and Severe (S&S) disruption in the quarter resulting from unplanned and planned events, spread across 331 separate incidents. Planned S&S disruption totalled 83 hours and unplanned S&S disruption totalled 613 hours.

Overall this represents decrease of 381 planned and unplanned hours compared to Q3 2015/16, attributable to a decrease of 426 planned S&S disruption hours and an increase of 45 unplanned S&S disruption hours.

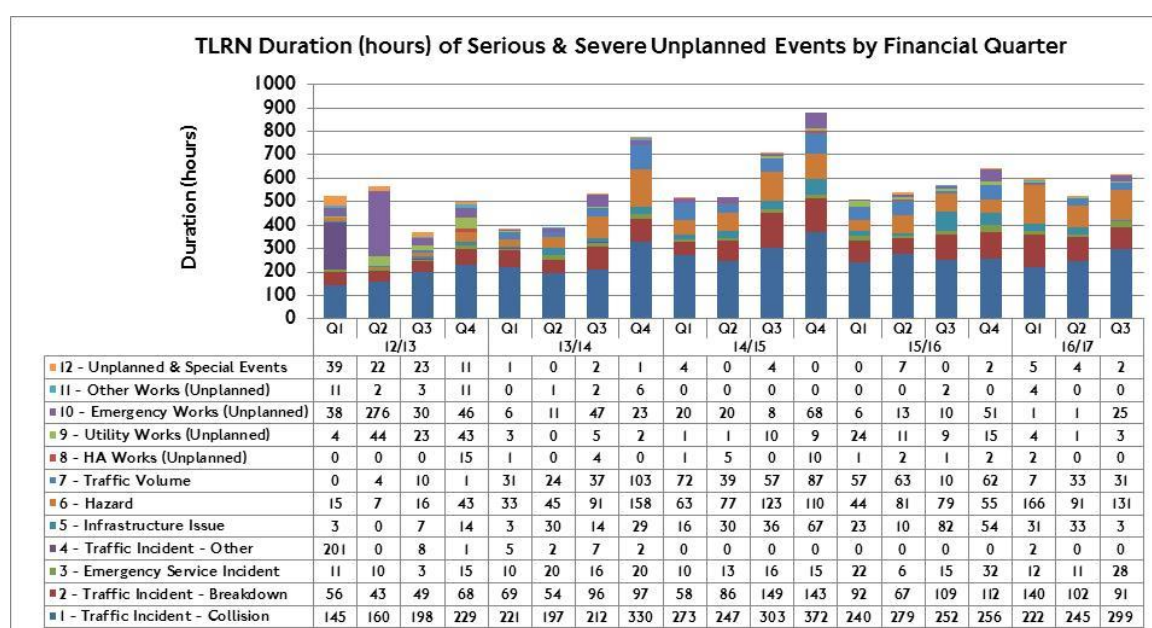
The amount of S&S disruption per event, a measure of the effectiveness of resolving unplanned incidents, was 2.0 hours in Q3 2016/17, the same as Q3 2015/16.

## Planned incidents and events: TLRN <sup>1</sup>



There were 83 hours of S&S disruption this quarter from planned events, spread across 29 separate events (an average of 2 hours 51 minutes per event). This compared to 509 hours spread across 48 events (an average of 10 hours 36 minutes duration per event) in Q3 2015/16. There was one planned event on the TLRN recording more than 10 hours of S&S disruption. This was roadworks on Earl's Court Road, which accounted for 20.0 hours of S&S disruption starting at 22:00 on 24 October and ending at 19:06 on 30 October.

## Unplanned incidents and events: TLRN <sup>1</sup>

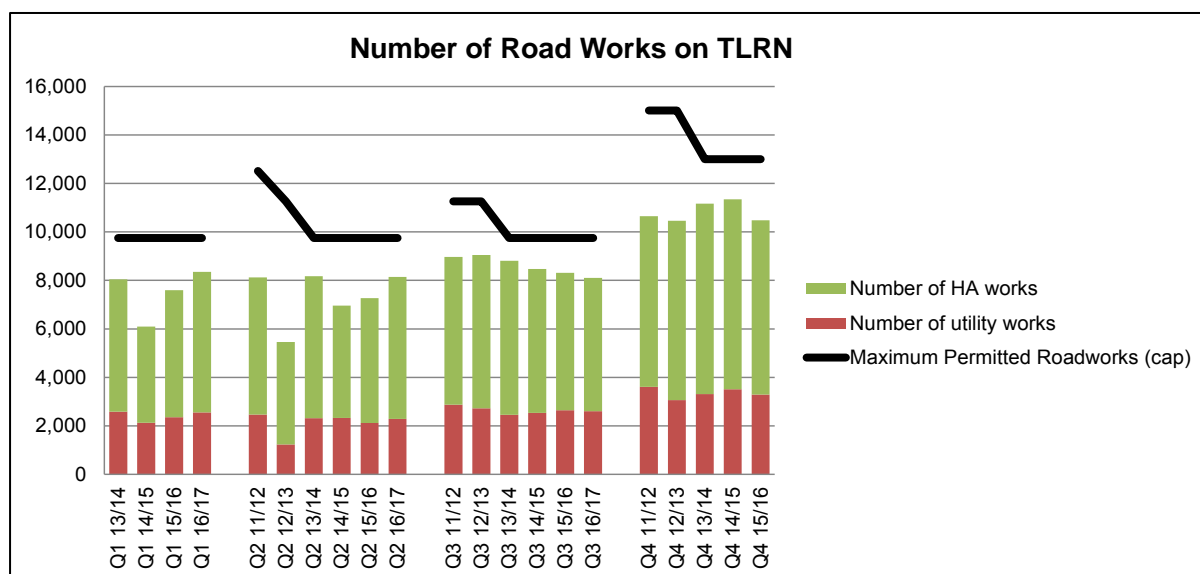


<sup>1</sup> NB: The system to record data was changed in 2013/14. The previous and current systems record incidents and events using different categorisations and are not directly comparable. In the chart, data to 13/14 has been aligned to the new categories for information only.

This quarter on the TLRN there were 613 hours of unplanned S&S disruption, spread across 302 separate events (an average of 2 hours 1 minute duration per event). This compares to 568 hours, spread across 279 events (an average of 2 hours 2 minute duration per event) in Q3 2015/16. There were four unplanned incident on the TLRN leading to over 10 hours of serious and severe disruption:

- Starting on 24 October and ending on 26 October there was disruption on A406 due to a burst water main. There were a total of 48.4 hours of disruption, 28.9 hours of which were serious and severe.
- Starting on 26 November and ending on 7 December there was disruption on Lee High Road due to a burst water main. There were a total of 257.7 hours of disruption, 16.2 hours of which were serious and severe.
- Starting on 29 November and ending on 1 December there was disruption on Pinkham Way North Circular Road due to an emergency water leak. There were a total of 41.6 hours of disruption, 18.6 hours of which were serious and severe.
- Starting on 9 December and ending on 10 December there was disruption on Canning Town Flyover due to surface damage (slippery road surface). There were a total of 20.5 hours of disruption, 15.9 hours of which were serious and severe.

### 3. 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.

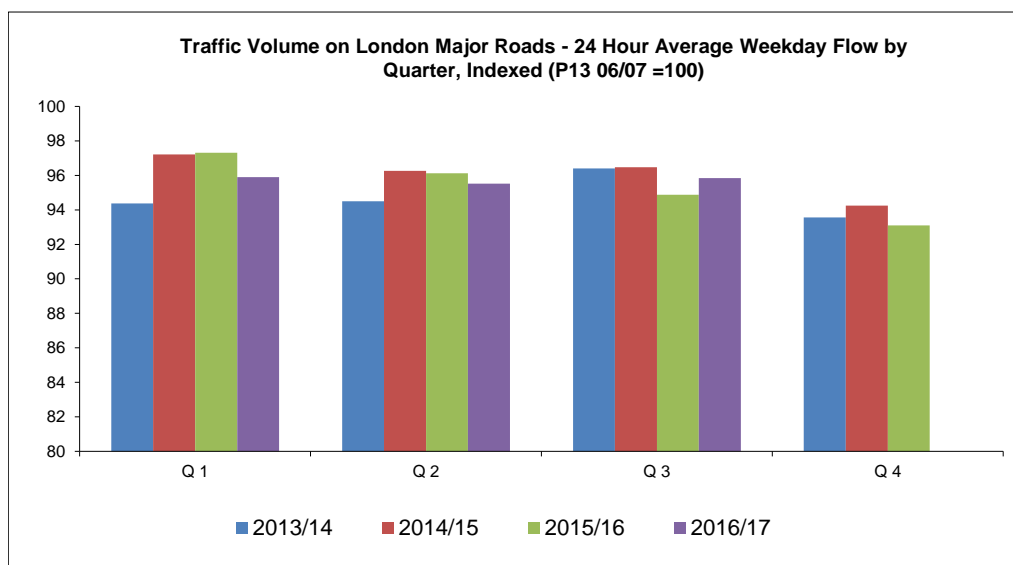
To manage the cumulative impact of roadworks on the TLRN, the total number of new road works permitted in any one period was capped at 4,170 from the start of 2010/11. This was 20% below the peak level of roadwork activities experienced in 2009/10 (5,212 in period 12 of that year). The cap was then reduced in 2011/12 to 3,753 per period, and lowered again to 3,250 per period in 2013/14.

In Q3 2016/17 the total number of roadworks on the TLRN was 8,099 - a decrease of 209 (2.6%) on the 8,308 total reported in Q3 2015/16, and 16.9% below the allowable cap of 9,750.

## 4. Traffic volumes

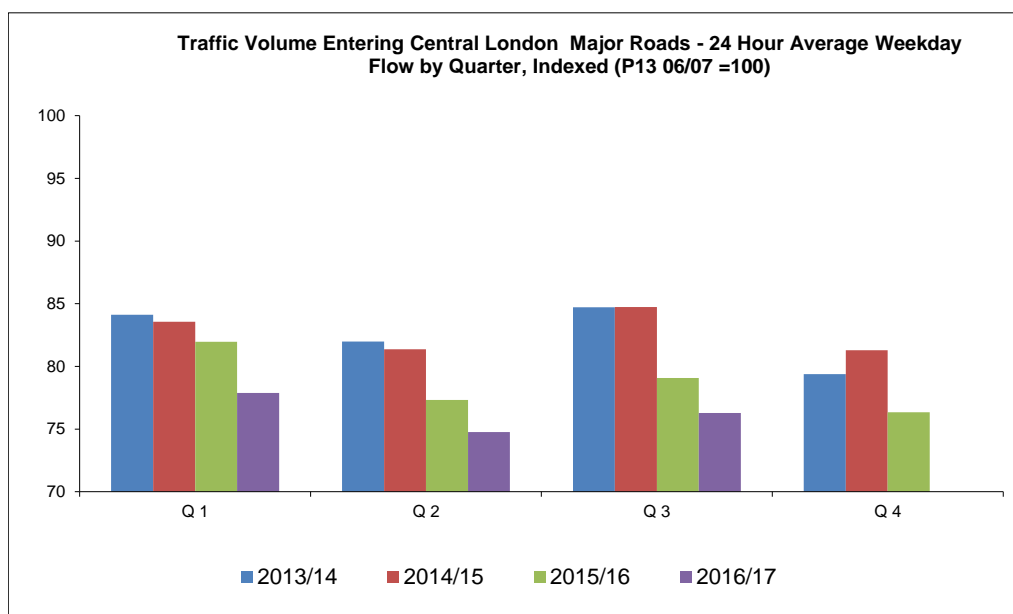
### Vehicular traffic volumes on London's major roads

The pan-London traffic flow index stands at 95.8 in Q3 2016/17. This is 1.0 index points above the same quarter in 2015/16, and 0.6 index points down from the same quarter in 2014/15. The chart below shows traffic flows relative to an index of 100 in 2006/07.



### Vehicular traffic entering central London's major roads

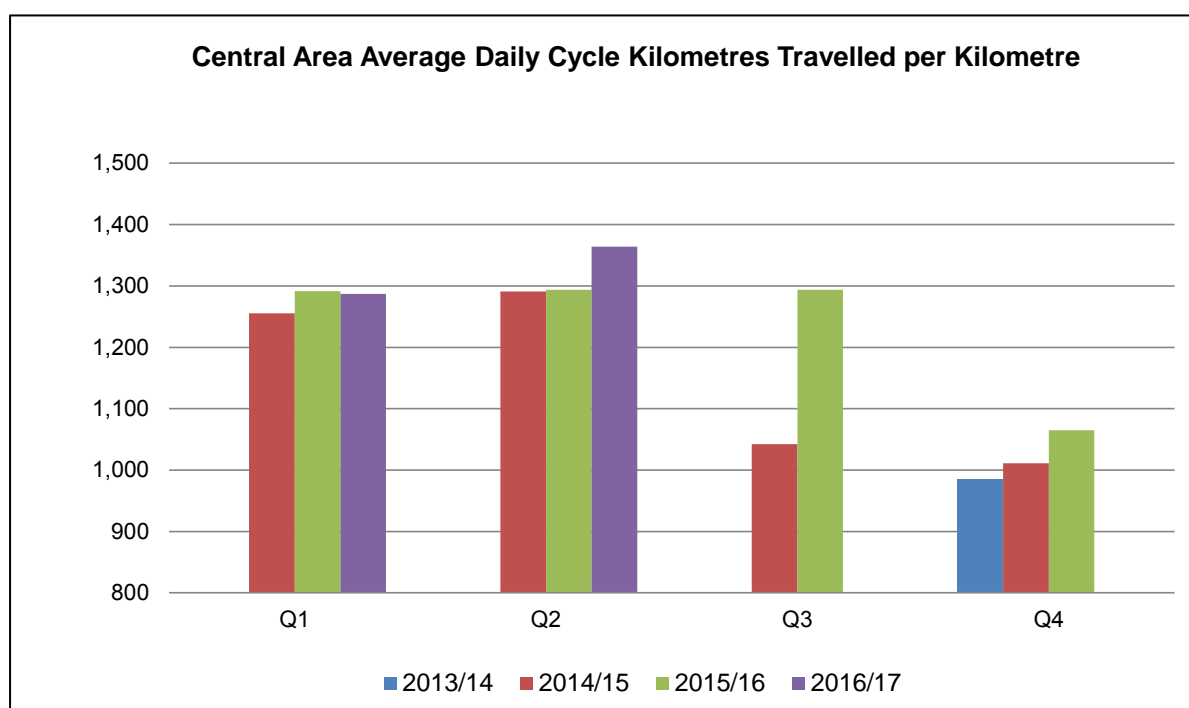
The central London traffic flow index stands at 76.3 in Q3 2016/17. This is 2.8 index points down from the same quarter in 2015/16 and 8.4 index points down from the same quarter in 2014/15. The chart below shows traffic flows relative to an index of 100 in 2006/07.





## 5. Cycling levels in central London

The chart below shows cycle levels in central London relative to a baseline established in Q4 2013/14. Overall, the average total cycle kilometres travelled per kilometre per day within central London across all road networks this quarter was 1,364. This is a 38% increase compared to the Q4 2013/14 baseline of 986, and a 5.4% increase compared to this time last year. TfL a target of cycle levels in 2016/17 to be 3.1% above those in 2015/16.



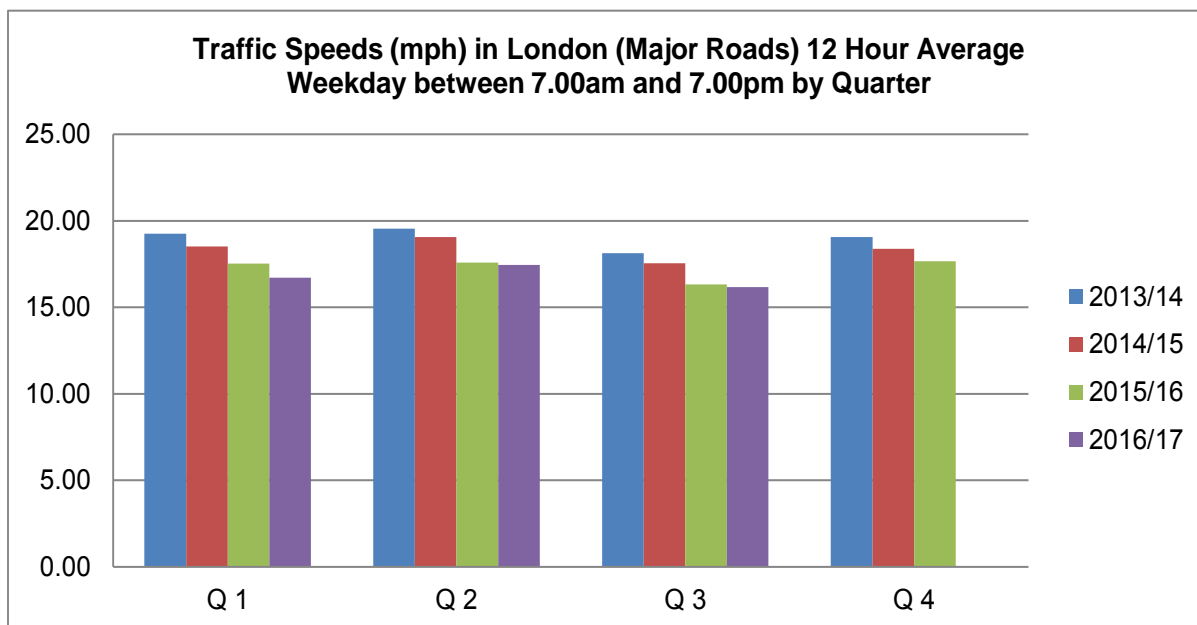
### ***New central London cycling metric***

*This is a representative measure of total kilometres cycled each day in central London, as defined by the congestion charging zone (CCZ), and is reported each quarter. It has been in place since Q4 2013/14, and uses 200 stratified manual count sites and is part of a suite of cycling metrics that have been developed as part of TfL's monitoring framework for cycling in London. The previous TLRN index has been replaced because patterns of cycling have changed substantially, particularly following the provision of new facilities, and the locations of existing cycle counters do not adequately capture these changes. Note that the central London cycle metric is recorded one quarter in arrears.*

## 6. Traffic speeds

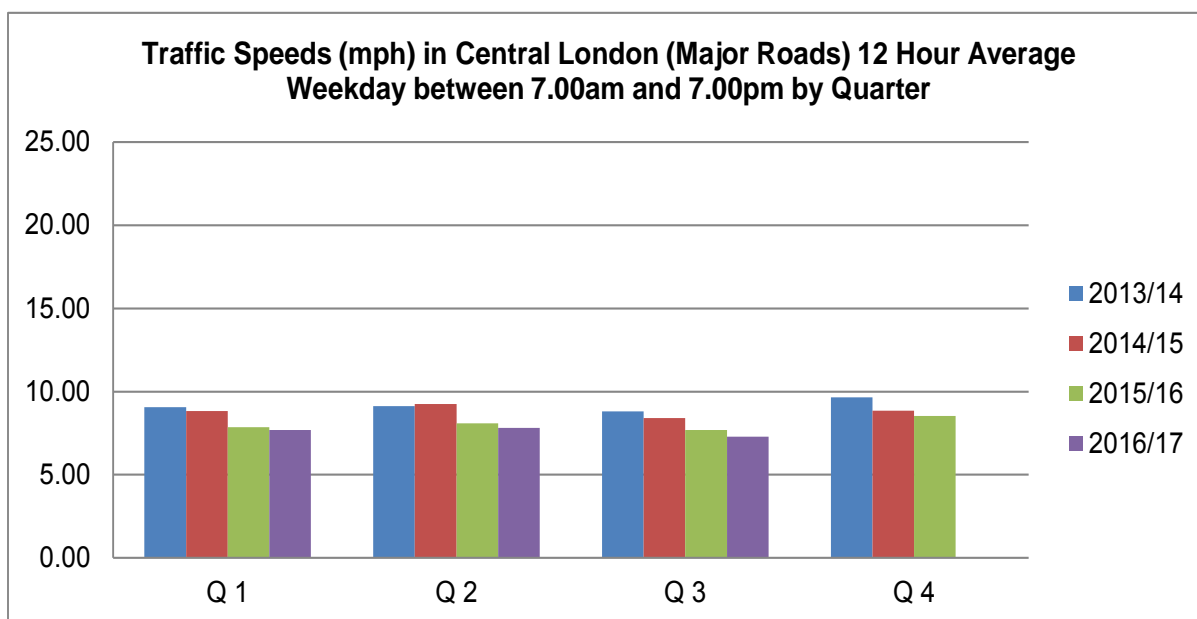
### Traffic speeds in London

In Q3 2016/17 average traffic speeds for the 12 hours between 07:00 and 19:00 across London were 16.2 mph, a 0.1mph (0.9%) decrease year-on-year.



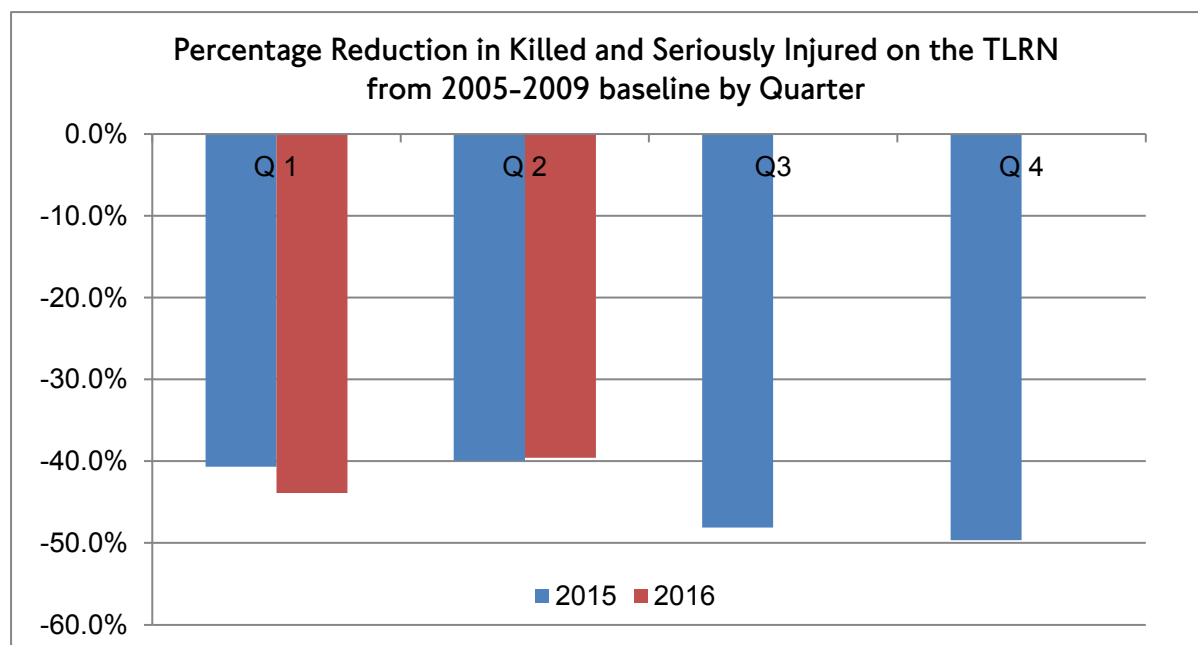
### Traffic speeds in central London

In Q3 2016/17 average traffic speeds for the 12 hours between 07:00 and 19:00 across central London were 7.3 mph, a 5.3% decrease year-on-year.



## 7. Road safety

The graph below shows the percentage change in killed and seriously injured (KSI) casualties on the TLRN from the 2005-2009 baseline for the period 2014/15 to 2015/16. Note in this data set, Q1 is defined as the three month period from December 2015 to February 2016.



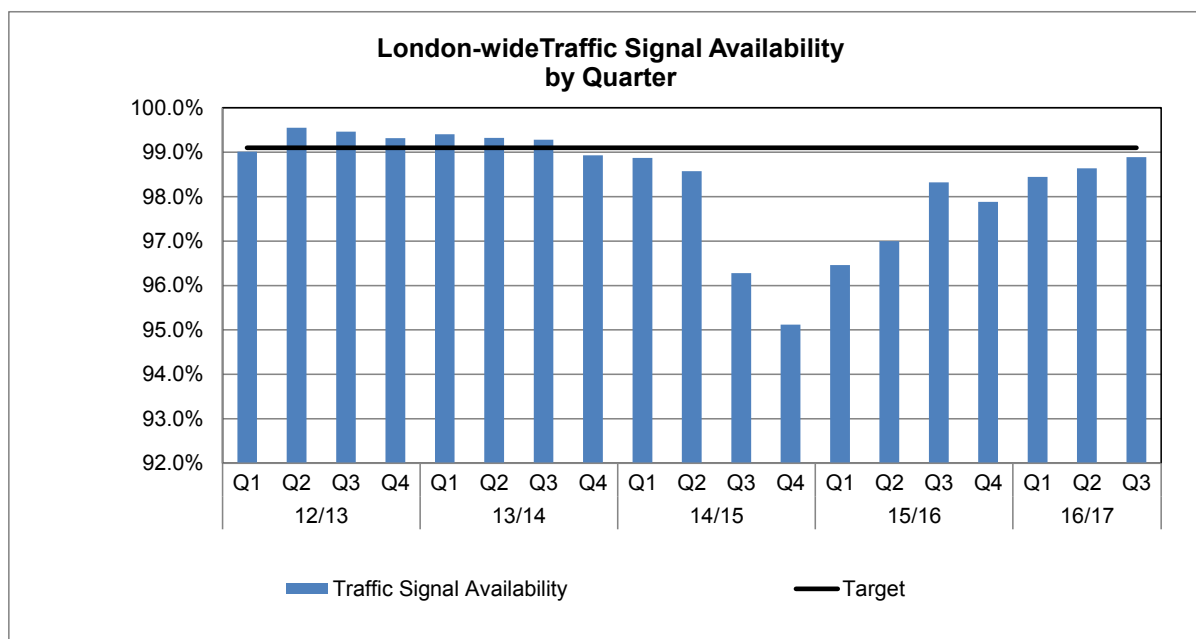
Provisional data for Q2 2016/17 indicates that there were 139 KSI casualties on London's roads, a 39.6% reduction from the 2005-2009 Q2 baseline.

The table below shows the absolute and percentage reduction in TLRN KSIs in Q2 2016/17 relative to Q2 in previous years.

	2013	2014	2015	2016
KSIs on the TLRN	178	148	147	139
Percentage change to Q2 2016/17	-22%	-6%	-5%	

Note that collision data for Q3 is not available at the time of publication. Updates for Q3 will be made in the next quarterly report.

## 8. Asset availability



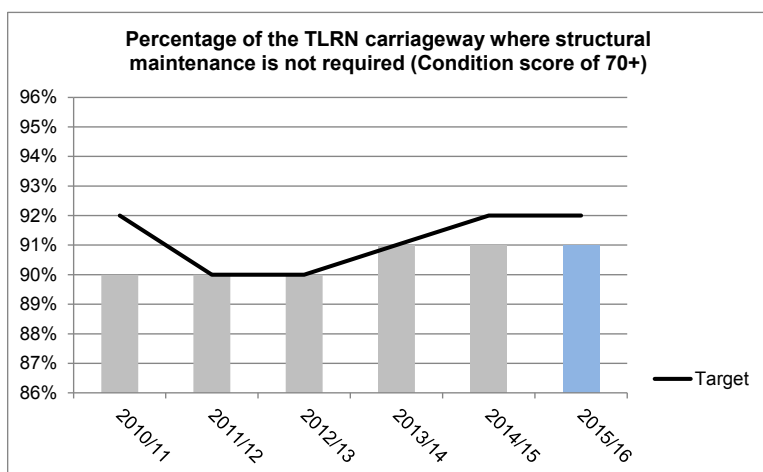
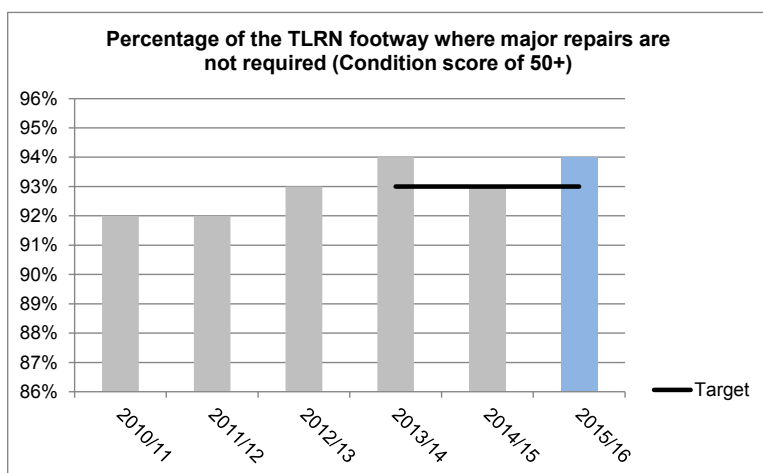
During Q3 2016/17, the availability of traffic signals London-wide was 98.9%, compared to 98.3 % in Q3 2015/16. Performance is expected to improve further in the future as new contractors increase resources and continue to train staff.

The target for this indicator is set at 99.1%, representing the availability of all functions of traffic signal equipment. 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. The reason for not meeting this performance target is primarily due to poor performance in the east and south areas.

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

## 9. State of good repair

State of Good Repair (SOGR) metrics for 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.

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.

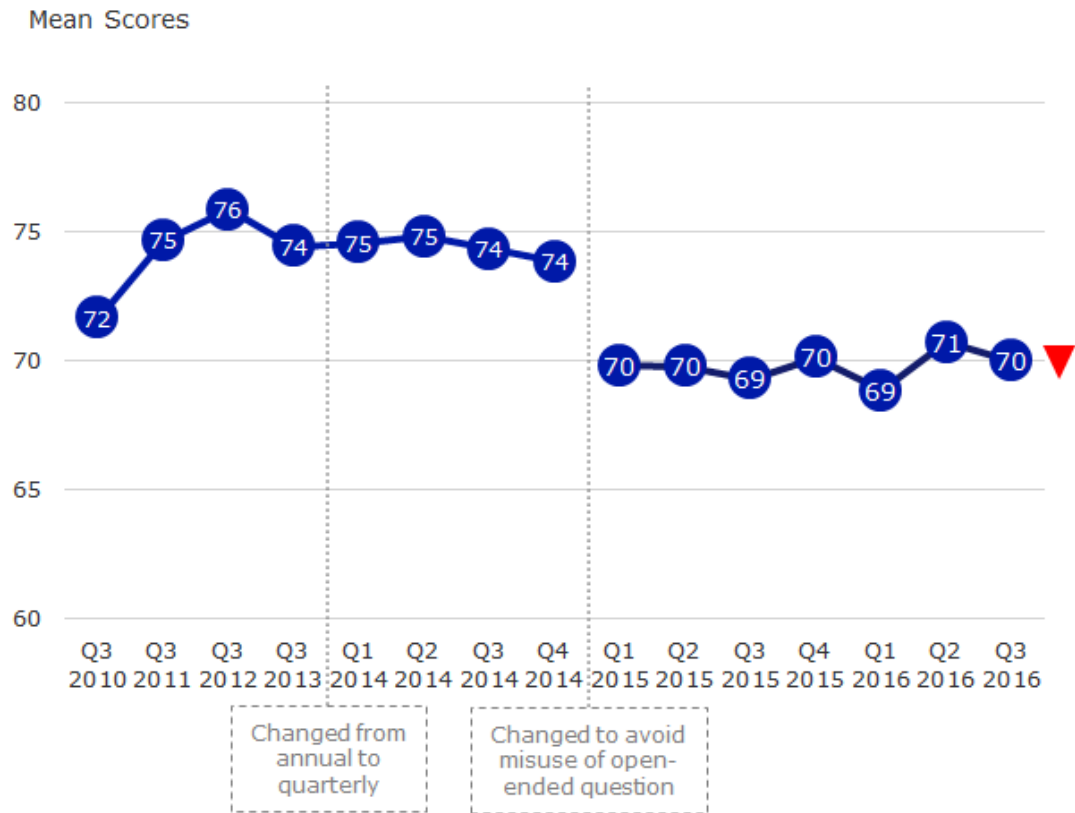
## 10. Customer satisfaction

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

Q3 2016/17 interviews were carried out between 10 October and 9 November. Some 3,295 TLRN users were interviewed (2995 in London and 300 in South East England). Details of 7,812 trips were recorded. The main results are as follows:

- Overall satisfaction among TLRN users is 70, decreasing by one point from last quarter but up a point from the same quarter last year.
- TLRN users are less satisfied compared to last quarter across most key aspect of the journey.
- Satisfaction among car drivers and commercial drivers has declined this quarter, with car drivers now the least satisfied. Compared to Q3 last year, bus user satisfaction has improved, but there is no change among other TLRN users.
- Car drivers, commercial drivers and P2W are less positive about the speed and congestion aspects of their journey, but pedestrians are more satisfied with their speed.
- Experience of disruption due to roadworks (on this journey) remains stable, but lower than in Q3 last year. A3, A406 and 'other' red route users experienced more roadworks this quarter, but A316 users experienced fewer.
- Experience of disruption due to roadworks (on this journey) remains stable, but lower than in Q3 last year. A3, A406 and 'other' red route users experienced more roadworks this quarter, but A316 users experienced fewer.
- New cyclists (cycling less than 2 years) are more satisfied than cyclists who have been cycling in London for longer.
- Road users are most satisfied with the infrastructure and least satisfied with the environment.

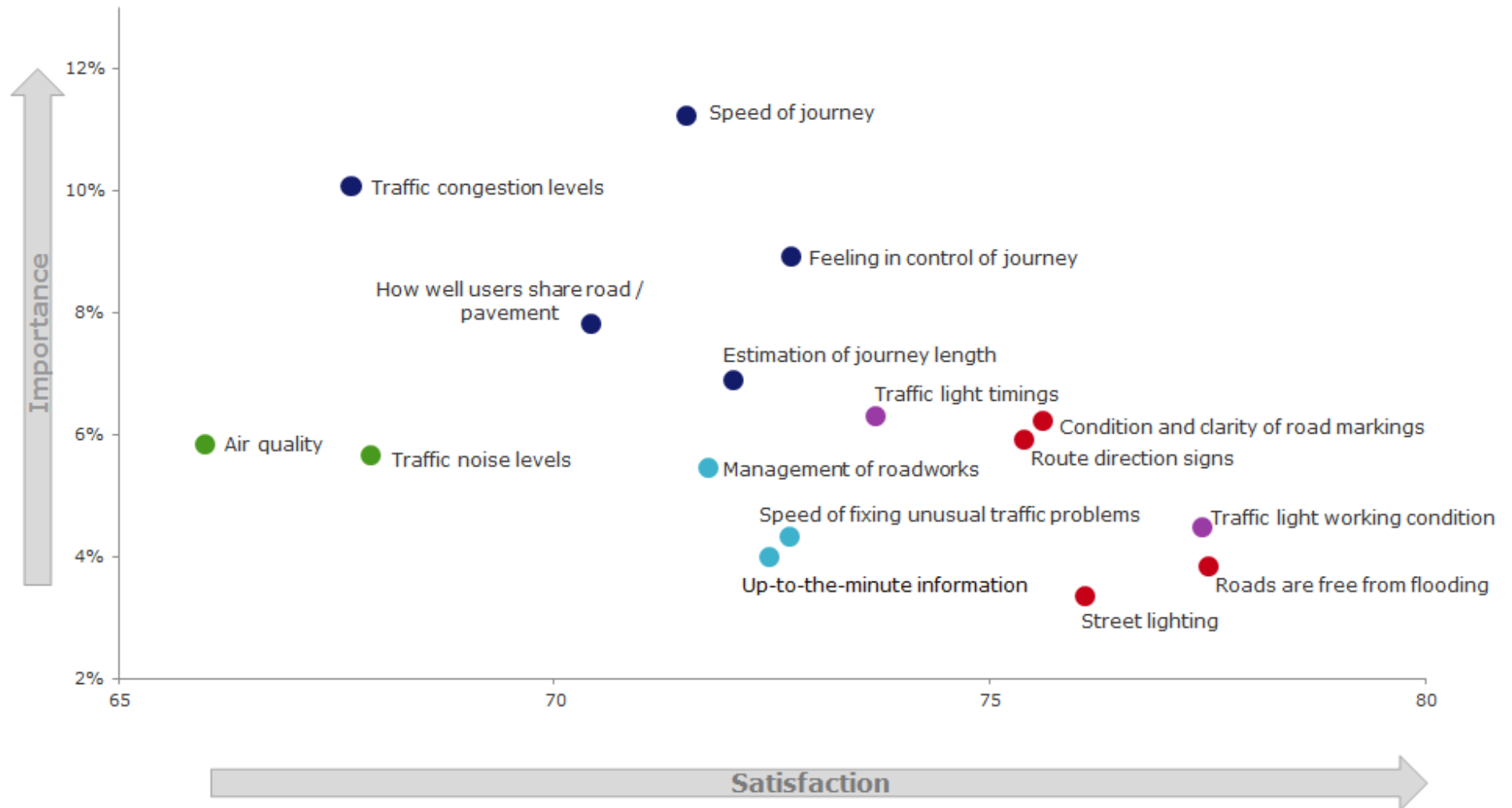
Overall satisfaction among TLRN users is 70



70

Overall satisfaction  
with TLRN  
Q3 2016/17

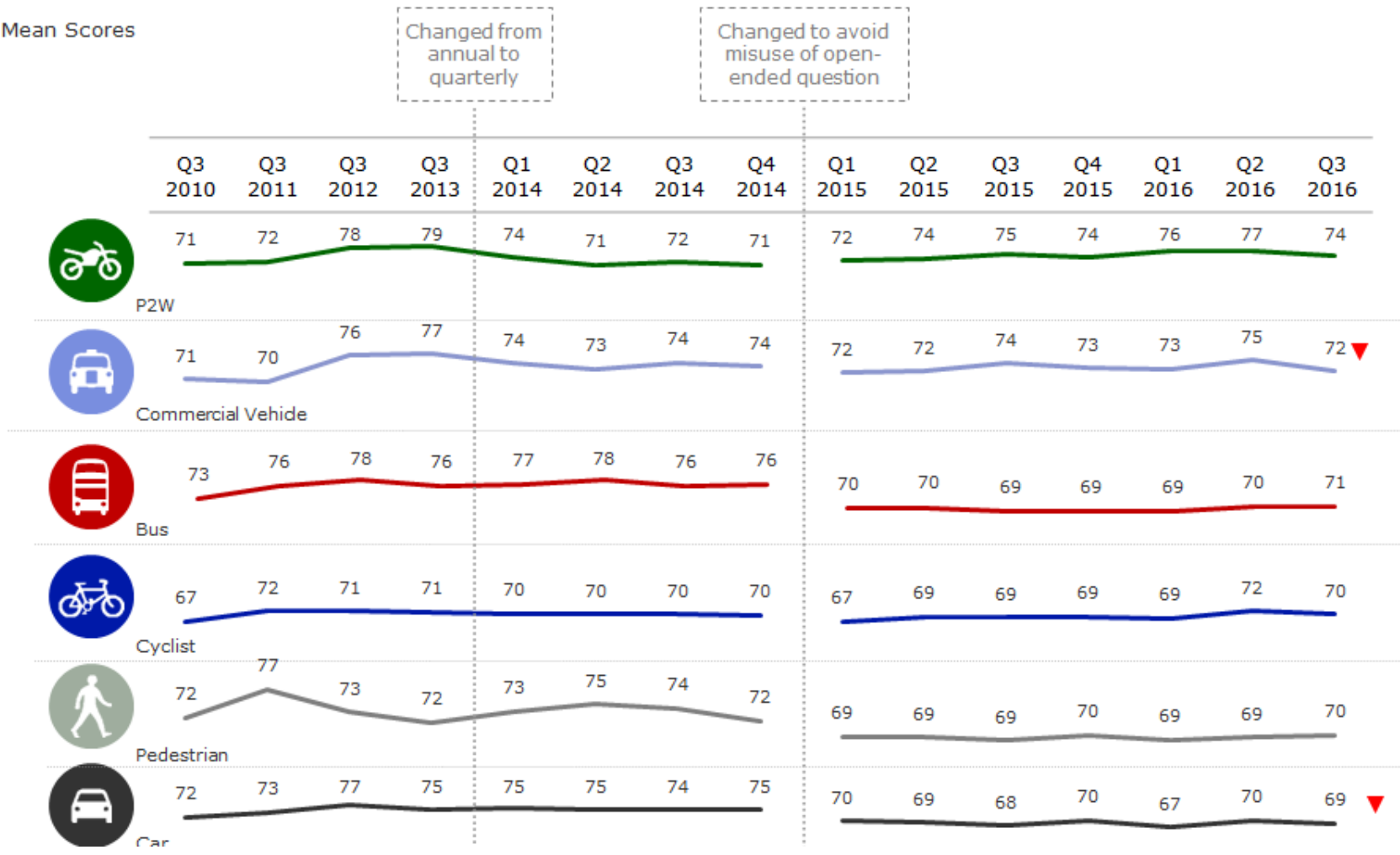
# Importance vs Satisfaction: All TLRN users



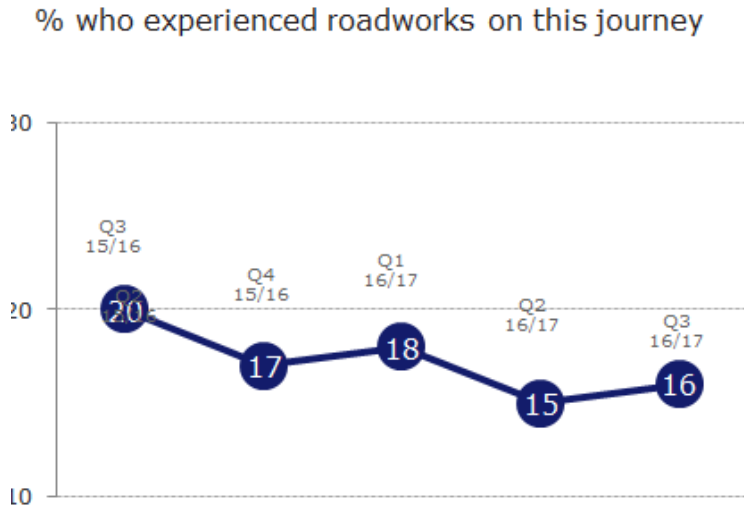


Satisfaction among car drivers and commercial drivers has declined this quarter, with car drivers now the least satisfied.

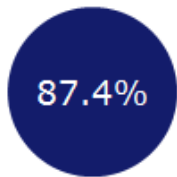
Mean Scores



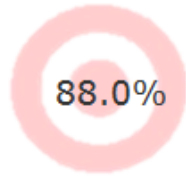
Experience of disruption due to roadworks (on this journey) remains stable.



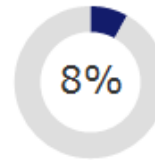
Overall JTR in P8



Target

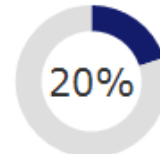


Positive movement this quarter

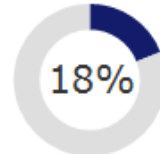


**A316**

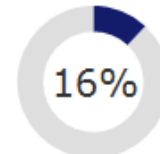
Negative movement this quarter



**'Other' red routes**

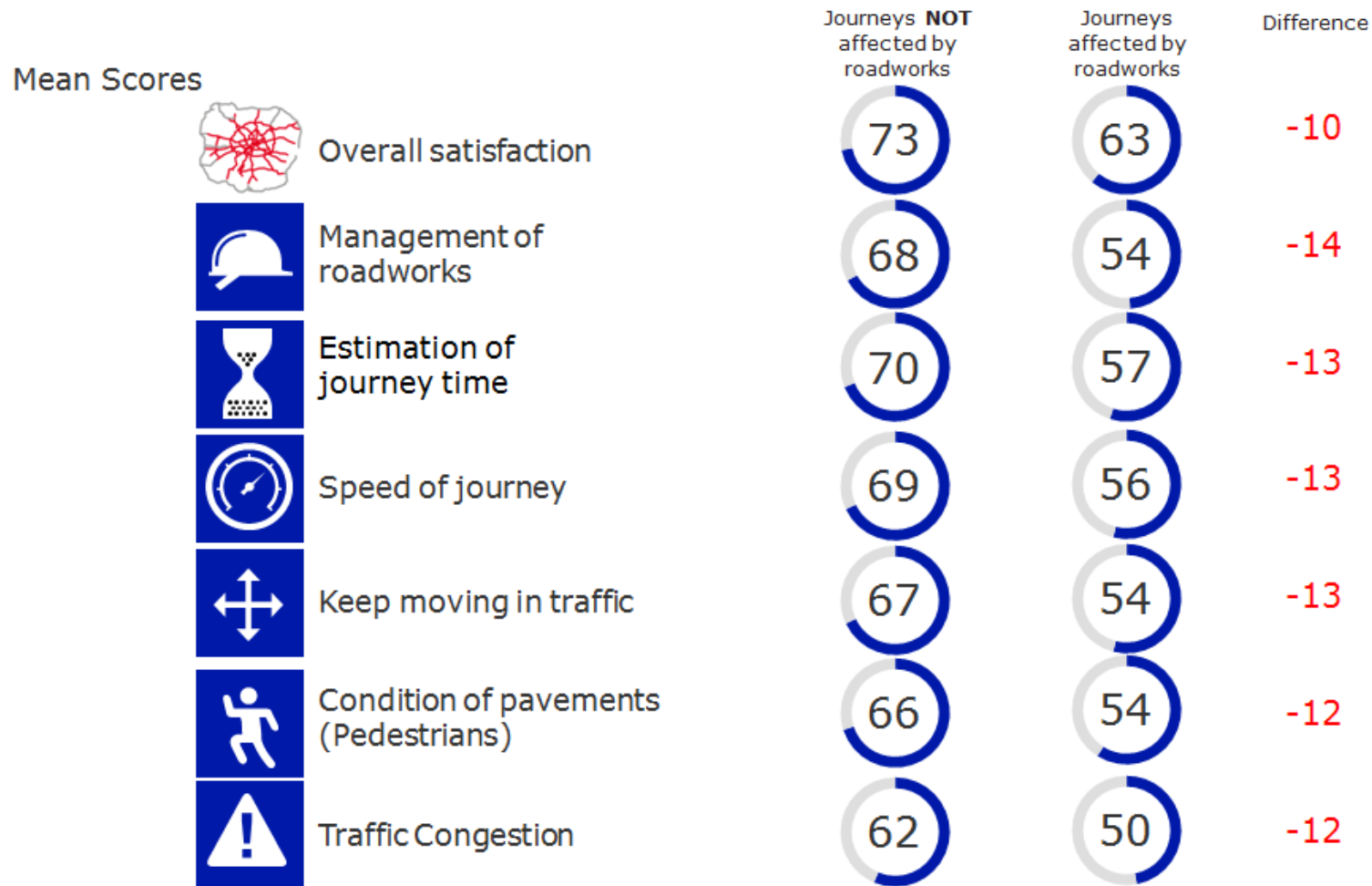


**A3**



**A406**




Experiencing roadworks lowers the overall satisfaction score by 10 points.



Satisfaction with roadworks management has remained at the same level overall.

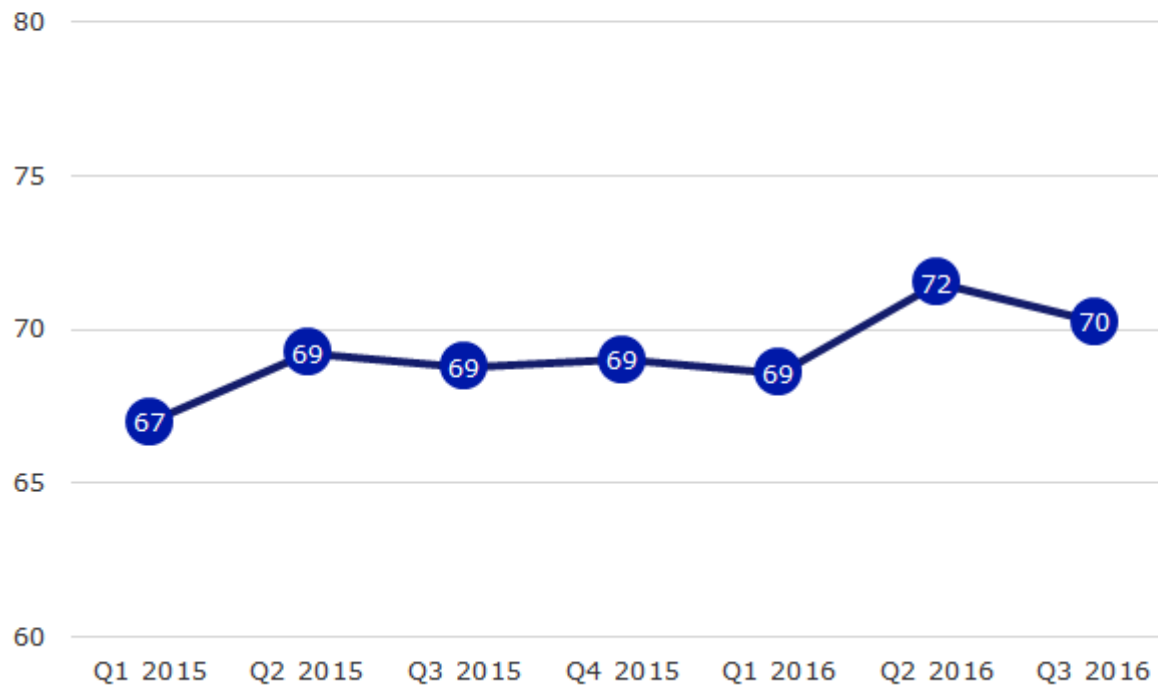
## Mean Scores

Satisfaction with management of roadworks

	Q3 2015/16	Q4 2015/16	Q1 2016/17	Q2 2016/17	Q3 2016/17
<b>All routes</b>	<b>62</b>	<b>65</b>	<b>62</b>	<b>64</b>	<b>63</b>
<b>Corridors improving</b>					
A316	63	71	61	67	72 
<b>Corridors declining</b>					
A23	59	61	61	64	63 
A2/A20	65	66	61	64	59 
<b>Corridors unchanged</b>					
A4	59	64	62	65	67
A40	66	63	62	66	66
A21	66	67	64	71	65
London Inner Ring Road	61	64	62	65	65
A24/217	61	65	66	62	64
A13	62	66	61	63	64
A3	64	66	65	65	64
A406	64	64	62	65	64
Other	62	65	62	64	64
A41	62	64	59	62	62
A10	59	62	62	61	61
A205	61	66	66	64	61
A12	60	68	62	61	60
A1	64	57	58	60	56

Overall satisfaction among cyclists is 70, decreasing by two points from last quarter, but up one point from the same quarter last year.

Mean Scores



70

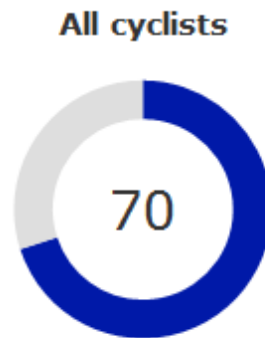
Cyclists overall satisfaction  
with TLRN  
Q3 2016/17

New cyclists (cycling less than 2 years) are more satisfied than cyclists who have been cycling in London for longer.

### Cyclists: overall satisfaction

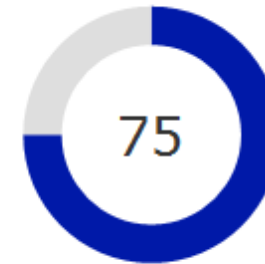


**Cyclist**



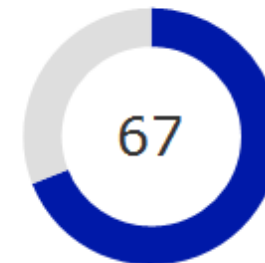
Q2 2016/17  
**72**

**New cyclists**  
Less than 2 years



Q2 2016/17  
**76**

**Experienced cyclists**  
More than 2 years



Q2 2016/17  
**67**