



# TLRN Performance Report

## Quarter 1 2016/17

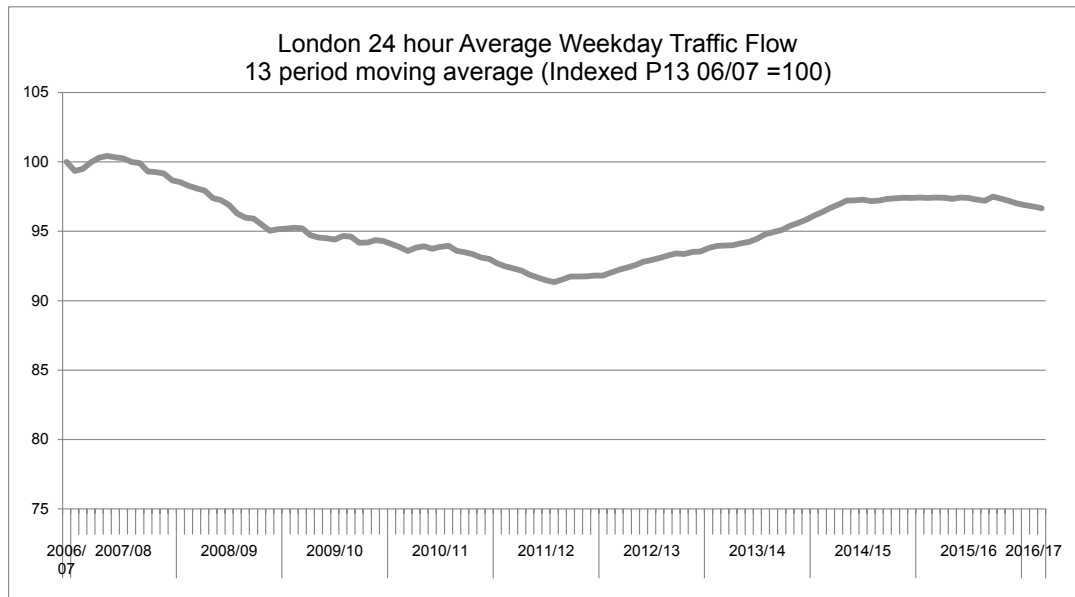
# CONTENTS

Summary of Network Performance for Q1 2016/17 .....	3
1. Reliability .....	6
2. Network Disruption.....	13
4. Traffic Volumes .....	17
6. Traffic Speeds.....	19
7. Road Safety .....	20
8. Asset Availability .....	21
9. State Of Good Repair .....	22
10. Customer Satisfaction: TLRN.....	23

## Summary of Network Performance for Q1 2016/17

Bringing an end to the relative stability seen in the past year, Q1 2016/17 traffic volumes showed a 1.4 index point (1.5%) decrease on London's major roads compared to Q1 2015/16, and a 1.3 index point (1.3%) decrease compared to Q1 2014/15.

Taking a longer term view, Q1 2016/17 figures show a 2.7 index point (2.9%) increase on the same quarter 4 years ago. This is illustrated in the graph below.



Following the economic recovery late in 2012 we saw a period of sustained growth in traffic volumes. From 2014 traffic volumes have been fairly static for close to 2 years, with a small decline observed from the end of 2015/16 which has persisted into Q1 2016/17.

In this same time frame, a significant number of building and construction works are taking 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 through its £4bn Road Modernisation Plan. This plan comprises numerous projects and programmes that will transform 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 become increasingly affected by rising construction activity, for example:

- Large scale redevelopment projects such as Lewisham Gateway, Victoria Station upgrade and Nine Elms.
- Completion and bedding in 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. During intense building phases the ability of the network to accommodate traffic volumes despite the underlying growth in demand was compromised hence we have seen fairly static traffic volumes over this period. We have also 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 0.8 mph to 16.7 mph when compared to Q1 last year, representing a 5% 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. Actual AM Peak JTR on the TLRN in Q1 2016/17 was 87.5%, which is 0.7% below target. Performance this quarter was particularly affected by unplanned incidents such as:

- **Major fire on A13 The Highway on 18 May**
  - A major fire at an industrial unit caused delays of up to two hours in the interpeak and 4.5 hours of serious disruption
  - A number of road closures were required by the Police during their investigation, however a 'tidal flow' arrangement to keep two way traffic moving was quickly established and maintained throughout the incident to minimise disruption
- **HGV fire on the A406 on 25 May**
  - An HGV fire on the eastbound carriageway near the junction with Harrow Road closed the A406, causing delays of up to 55 minutes and 10 hours of serious and severe disruption
  - The fire caused extensive damage to the carriageway surface and therefore emergency resurfacing works were required
  - The severity of the incident was exacerbated owing to three separate incidents occurring in the area at the same time

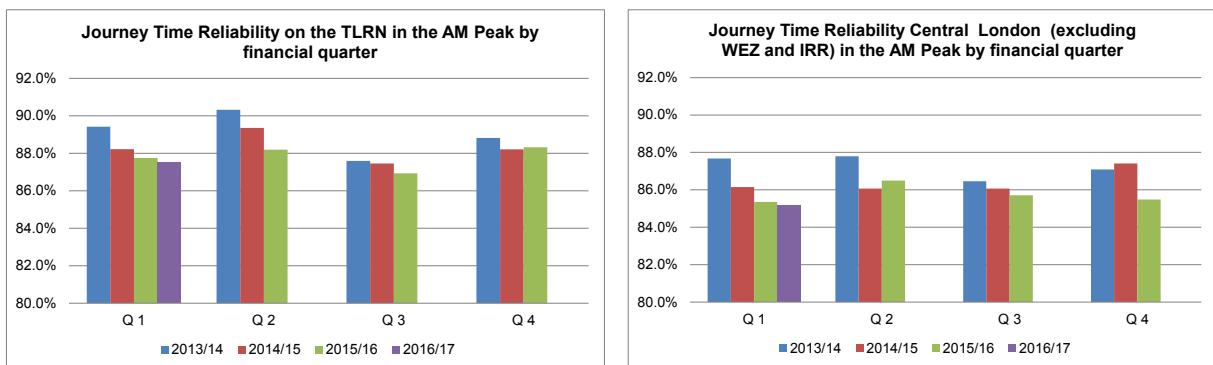
- **Closure of the Blackwall Tunnel on 24 May**
  - The Blackwall Tunnel was closed northbound after a large diesel and hydraulic fluid spillage was identified - stretching three-quarters of the length of the tunnel (1.1 km)
  - The initial clean-up operation determined that the carriageway surface required emergency resurfacing works
  - The closure caused 19 hours of serious and severe disruption and delays of up to an hour in the AM peak, rising to two and half hours by the late evening
  - To manage delays, the A102 was closed northbound at Sun In the Sands, with traffic diverted via Shooters Hill Road. All other planned non-essential road works were suspended wherever possible across east and south-east London to reduce the impact
  
- **Flooding on 23 June**
  - Heavy rainfall caused flooding and widespread delays across the network. Many parts of England and Wales recorded more than twice the average monthly rainfall in June
  - The 23 June flooding caused delays of up to 1 hour 45 minutes on the A13, A12 and A406. There was a total of 42.5 hours of serious and severe disruption
  - This incident alone had a large impact on AM peak JTR. It is estimated that JTR in the period dropped by around 1 percentage point as a result, and by around 0.3 percentage points over the quarter
  - The incident was managed through a centralised 'storm desk' in the London Streets Traffic Control Centre (LSTCC). Traffic signal timing strategies were used to maximise capacity on alternative routes and keep the roads moving

Other key points in this report include:

- Further improvement in KSIs: The number of people killed or seriously injured in road collisions on the TLRN has decreased by 43.87% compared to the 2005-2009 Q3 baseline.
- Overall, the average total cycle kilometres travelled per kilometre per day within Central London across all networks for Q4 2015-16 was 1,065. This represents an 8% increase compared to the baseline in Q4 2013-14 of 986 and a 5% increase compared to 1,011 measured in the same quarter last year. The central London cycle metric is recorded one quarter in arrears.
- Overall satisfaction in Q1 among TLRN users is 69, down from 70 last quarter and this time last year, driven by satisfaction with traffic congestion at its lowest level. Car drivers are less satisfied with TLRN this quarter. Lower satisfaction this quarter is linked to many aspects of the journey including management of roadworks and congestion levels.

## 1. Reliability

The key measure set out in the Mayor’s Transport Strategy 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 for 2012/13 is excluded from the graphs below due to the London Olympics.



The JTR on the TLRN in the AM peak in all directions for Q1 2016/17 was 87.5%, this is 0.2 percentage points lower than the same quarter in 2015/16 but 0.7% below the target set (of 88.2%) for Q1 in 2016/17.

The Q1 2016/17 JTR for Central London (excluding Western Extension Zone (WEZ) and the Inner Ring Road) in the AM peak was 85.2%; this is 0.2 percentage points lower than the same quarter in 2015/16.

In Q1 2016/17, average 24-hour weekday traffic flows across London decreased 1.5% 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 become increasingly 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 Q1, a number of planned works and incidents impacted JTR results compared to the previous year:

### Period 1

Overall TLRN JTR was 88.1%, 1.4 percentage points below target (meaning it was 0.9 points below the same period last year), and 0.8 points above the previous period. The difference with target is accounted for in equal measure by Easter occurring in P1 last year and a poor final week, which saw delays of:

- 1 hour 25 minutes on the A406 due to a collision and delays of 50 minutes on the A40 due to breakdown (Thursday 28th April)
- 1 hour on the A24 due emergency works (Tuesday 26th April)
- 50 minutes on the A21 due to works (Tuesday 26th and Wednesday 27th April)
- 40 minutes on Victoria Embankment due to CSEW works (affected all week)

The worst day was the aforementioned Thursday 28th April, which also saw delays of 40 minutes on the A2 inbound at New Cross; 30 minutes on the A24 corridor (A23) approaching Elephant and Castle. The best performance came during the first week.

All areas were below target with the West down 2.2 points, and South down 0.2 points. JTR was particularly poor on the A4, A316 in the west and A20, A21, BWT in the south-east areas. The A1 and A2 inbound and Farringdon both directions were the only corridors to show a noticeable improvement.

### Period 2

Overall TLRN JTR was 87.1%, 0.2 percentage points below target (meaning it was 0.3 points above the same period last year), and 1.0 points below the previous period. A majority of corridors were above or close to target, with four areas modestly above target.

In the South the A3 was 4.4 percentage points above target inbound, offsetting the 3.9 points below target outbound. In the East the A13 inbound was 6.5 percentage point above target, offsetting the A20 inbound which was down 10.9 percentage points against target, showing volatility across the period in part due to several incidents (flooding on 11th, BWT closure on 24th, multiple Thames Water works). Unfortunately in the West the A316 and A4 outbound were 7.9 and 5.3 percentage points below target respectively, leaving the West 1.2 percentage points below target. The A316 outbound was affected by delays of 20 minutes on Thursday 5th May, due to a collision; and unattributed delays of 45 minutes on Friday 13th May. The A4 was affected by a collision at Hogarth Flyover on Tuesday 10th May and traffic signal issues on Friday 27th May.

The worst day was Tuesday 10th May, which also saw delays of 50 minutes on the A316 and 35 minutes on the A205 due to a collision at Hogarth Flyover; 50 minutes on the

A24 close to Meratun Way due to works; 35 minutes on the A20 Lewisham Way and delays of 20 minutes at multiple other locations.

There were several other notable incidents in Period 2:

- State Opening of Parliament on Wednesday 18th (delays up to 50 mins)
- Fire on the City Route, The Highway on Wednesday 18th (started in interpeak causing delays up to 2 hours)
- Blackwall Tunnel closure on Tuesday 24th (AM peak delays of an hour, increasing to 2.5 hours in late evening)
- HGV fire on the A406 on Wednesday 25th (delays of 55 minutes)

Speeds were down 0.6 mph pan-London and 0.1 mph central, but up 0.5 mph on central London TLRN corridors.

### Period 3

Overall TLRN JTR was 87.4%, 0.5 percentage points below target (meaning it was 0.1 points below the same period last year), and 0.3 points above the previous period.

The East was the only area that was above target. The A20 inbound was down 7.3 points against target as a result of lane reductions associated with the ongoing scheme works at Lewisham Gateway compounded by significant traffic incidents on the 8th, 13th, 22nd and extensive flooding on the 23rd. Signal timings are being reviewed continuously in the vicinity of Lewisham Gateway during each phase of the works to minimise bus delays.

Signal engineers applied localised mitigation for the unplanned incidents and flooding. However there was strong performance on the other corridors, in particular the A2 (up 8.7 points inbound) and Blackwall Tunnel (up 5.5 points northbound). The A4 both directions affected the West; the A406 both directions (especially anti-clockwise) the North; The A3 outbound the South.

The worst day was Thursday 23rd June. Flooding led to widespread problems on the network with delays of:

- 1 hour 45 on the A13 both directions, A12 inbound, A406 clockwise
- 55 minutes at Blackwall Tunnel
- 40 minutes on the A312/A40 inbound
- 30 minutes on the A24 both directions, A3 inbound, A316 outbound, A4/A406 Chiswick Roundabout
- Plus additional 20 minute delays elsewhere

On the 23<sup>rd</sup> signal engineering support was increased from two to seven working alongside LSTCC under the direction of a signal strategy lead. Signal timing strategies were deployed to increase capacity on alternative routes, and strategic routes and junctions were actively managed to ensure traffic kept moving.

The overall flooding impact was deterioration in overall JTR of up to 1.0 percentage points for the period.



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

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

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	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1
Orbital	A102 B. Tunnel	79.5%	75.6%	79.8%	80.6%	79.8%	96.5%	95.9%	93.7%	93.1%	97.4%
Orbital	A406	86.7%	84.0%	86.3%	86.1%	85.1%	85.6%	86.6%	84.5%	87.7%	86.0%
Orbital	A205	86.5%	88.7%	84.7%	84.3%	87.0%	82.6%	82.8%	84.8%	83.9%	85.2%
Orbital	Inner Ring	81.8%	83.3%	83.2%	83.7%	81.6%	83.4%	84.9%	85.3%	85.6%	83.6%

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

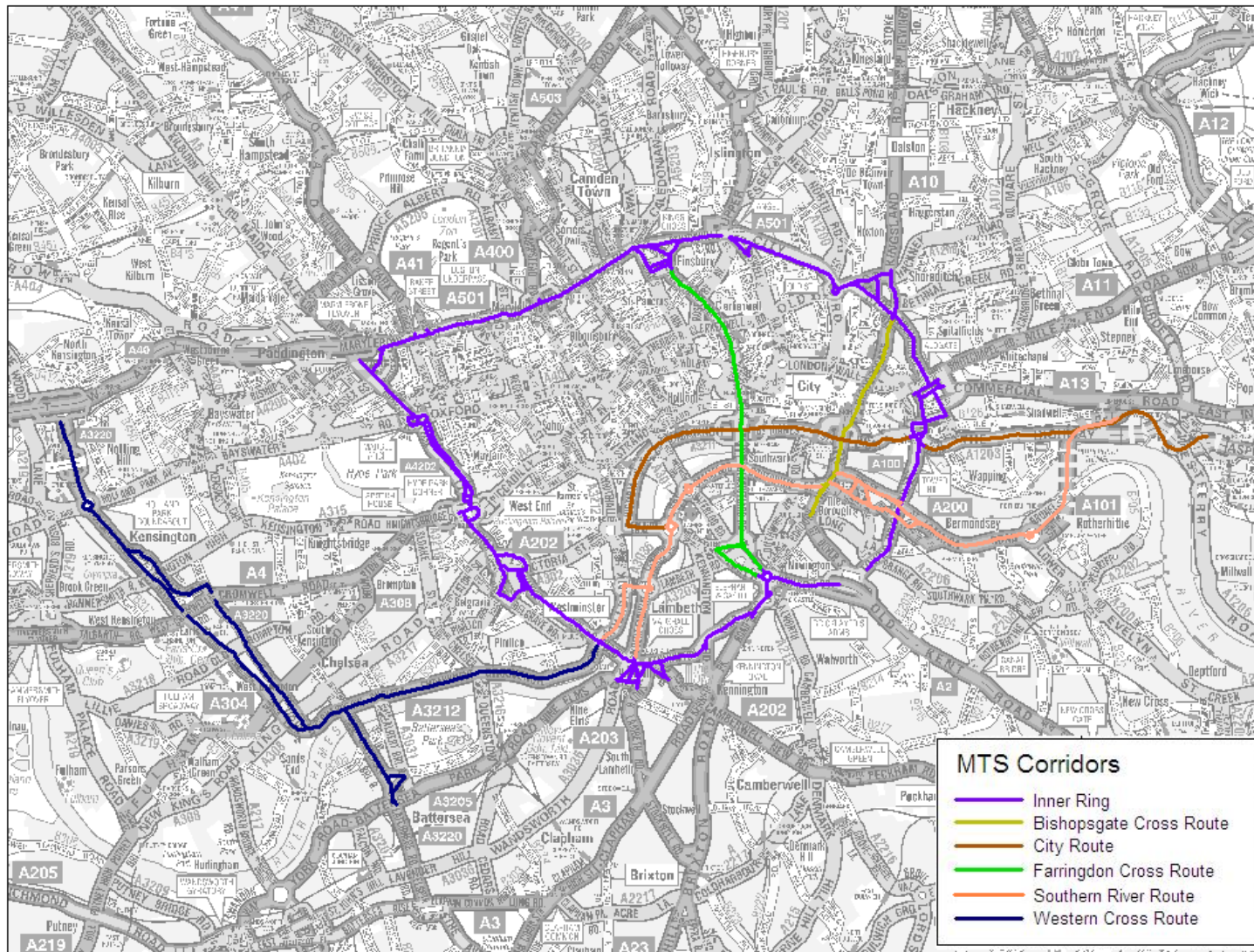
The JTR values on the TLRN and in Central London all directions combined in the AM and PM peaks are:

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

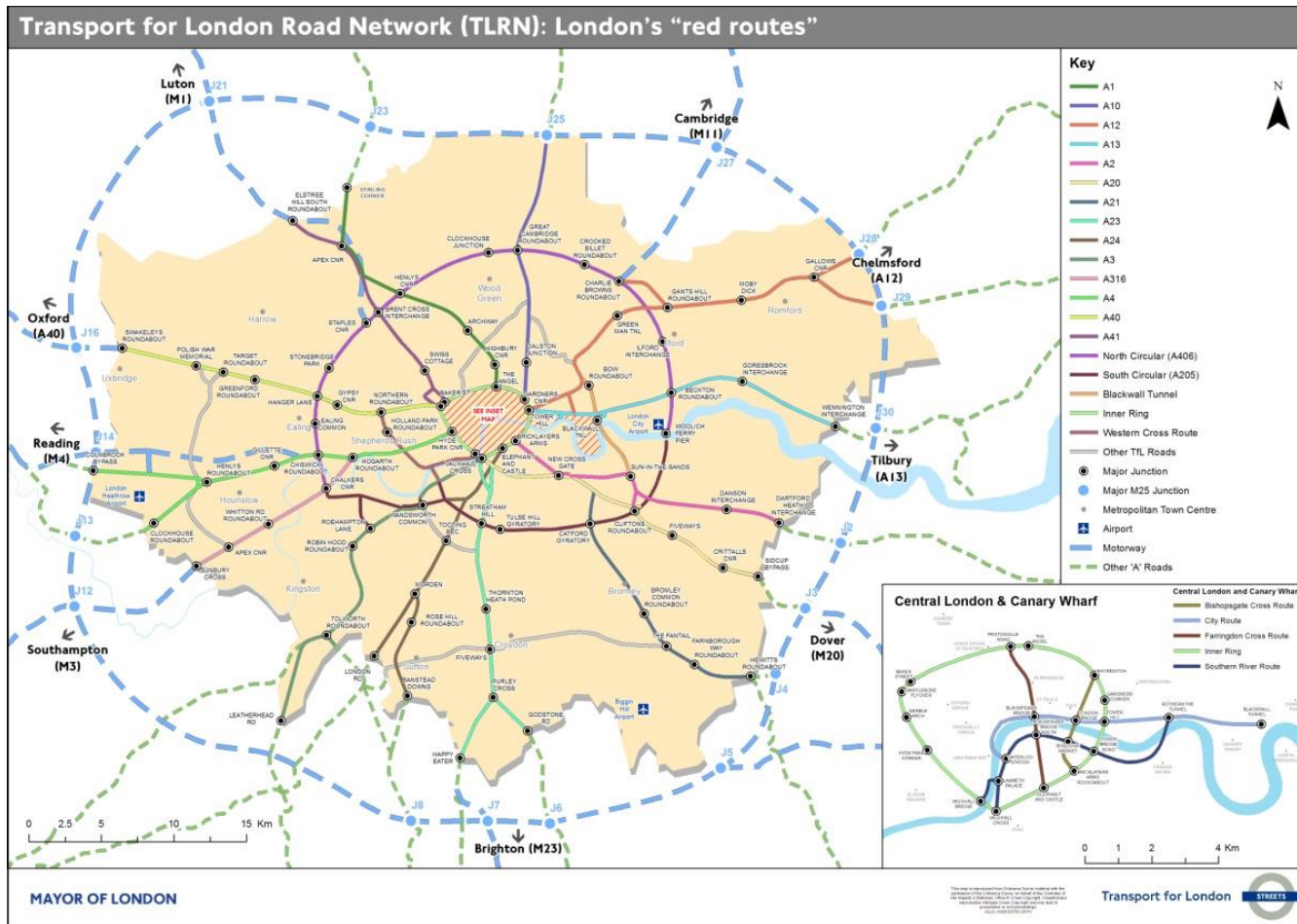
TLRN All Directions	2015/16 Q1	2015/16 Q2	2015/16 Q3	2015/16 Q4	2016/17 Q1
AM Peak	87.7%	88.2%	86.9%	88.3%	87.5%
PM Peak	84.9%	84.9%	84.0%	84.8%	84.0%

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 corridor in Central London



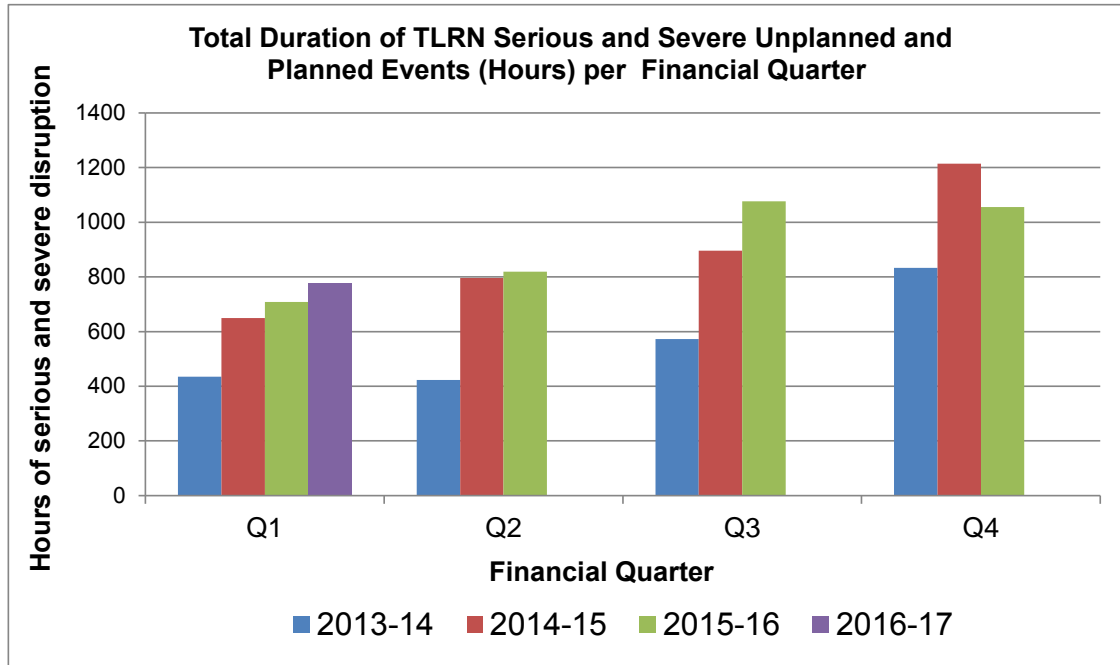
# Map showing the TLRN by MTS corridor across London



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

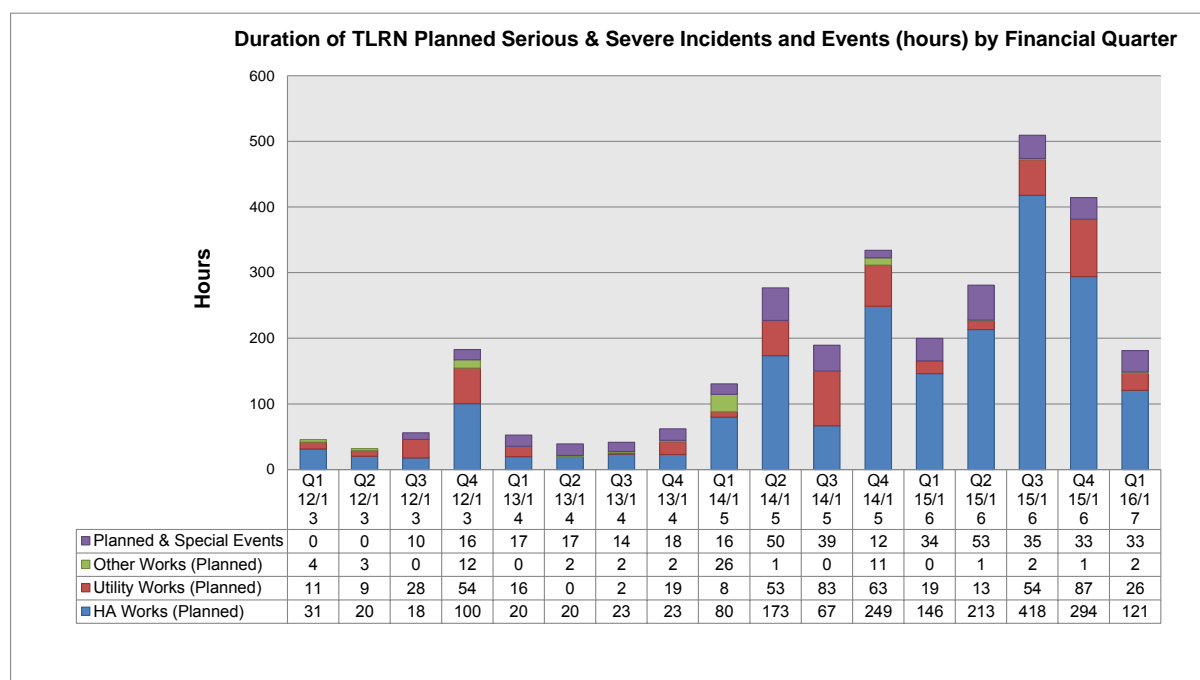


In Q1 2016/17 there were a total of 775 hours of Serious and Severe (S&S) disruption resulting from unplanned and planned events, spread across 347 separate incidents. Planned S&S disruption totalled 181 hours and unplanned S&S disruption totalled 594 hours.

Overall this represents increase of 66 planned and unplanned hours compared to Q1 2015/16 (709 hours), attributable to a decrease of 19 planned S&S disruption hours and an increase of 85 unplanned S&S disruption hours.

The amount of S&S disruption per event, a measure of effectiveness of the resolution of unplanned incidents was at 1.9 hours in Q1, compared to 1.7 hours per event in Q1 last year.

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



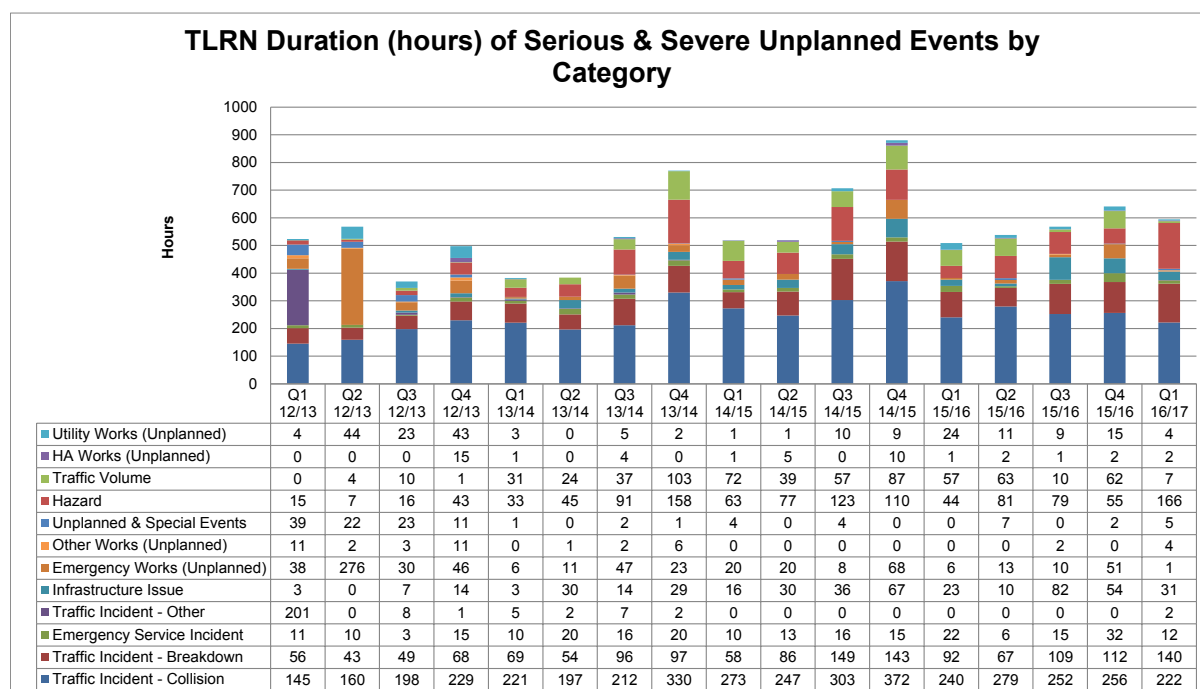
In Q1 2016/17 there were 181 hours of S&S disruption from planned events spread across 27 separate events (an average of 6 hours 43 minutes duration per event). This compared to 200 hours spread across 34 events (an average of 5 hours 52 minutes duration per event) in Q1 2015/16.

In Q1 2016/17 there were two planned events on the TLRN recording more than 10 hours of serious and severe disruption:

- Ongoing planned maintenance works by TfL on Lodge Lane Avenue Flyover accounted for 59.7 hours of serious and severe disruption.
- Starting at 04.00 on Friday 29 May 2016 and ending at 22:10 on Friday 29 May. A crane operation on Talgarth Road caused a total of 18.2 hours of disruption of which 10.7 hours were serious and severe.

<sup>1</sup> 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 <sup>2</sup>



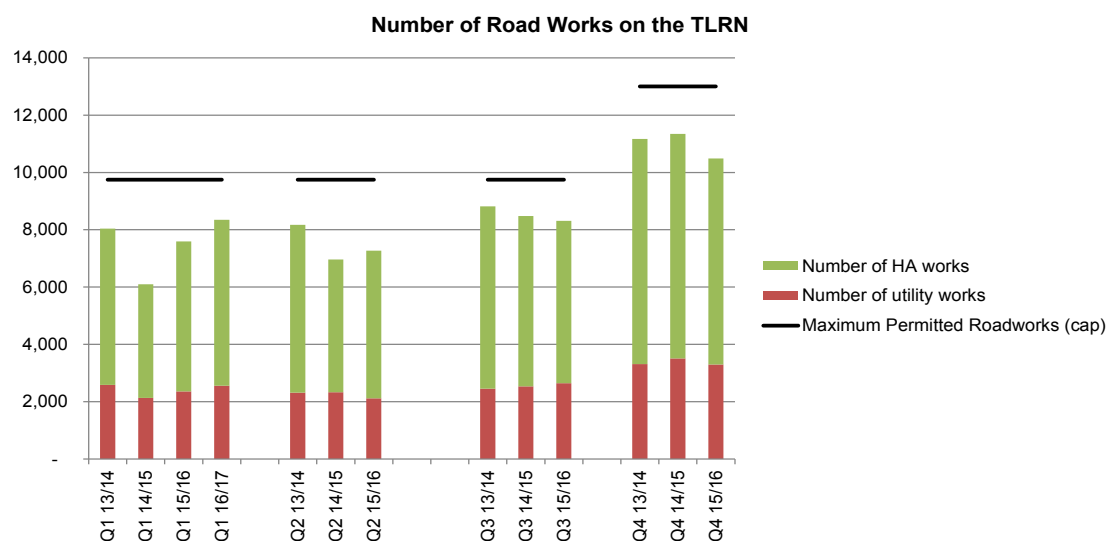
In Q1 2016/17 on the TLRN as a whole there were 594 hours of unplanned S&S disruption, spread across 320 separate events (an average of 1 hour 51 minutes duration per event). This compares to 509 hours, spread across 291 events (an average of 1 hour 45 minutes duration per event) in Q1 2016/17.

In Q1 2016/17 there were three unplanned incidents on the TLRN leading to over 10 hours of serious and severe disruption:

- Starting at 06:50 on Tuesday 24 May 2016 and ending at 03:32 on Wednesday 25 May 2016 there was disruption in the Blackwall Tunnel (Northbound bore) due to a spillage from a vehicle which required significant resurfacing work. There were a total of 20.7 hours of disruption, 18.9 hours of which were serious and severe.
- Starting at 02:08 on Wednesday 25 May 2016 and ending at 17:32 on Wednesday 25 May 2016 there was disruption on the A406 due to a vehicle fire. There were a total of 15.3 hours of disruption, 10.5 hours of which were serious and severe.
- Starting at 03:10 on Thursday 23 June 2016 and ending at 20:48 on Thursday 23 June 2016 there was disruption on the Movers Lane Underpass (A13) due to flooding. There were a total of 17.6 hours of disruption, 14.5 hours of which were serious and severe.

<sup>2</sup> 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.

### 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 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.

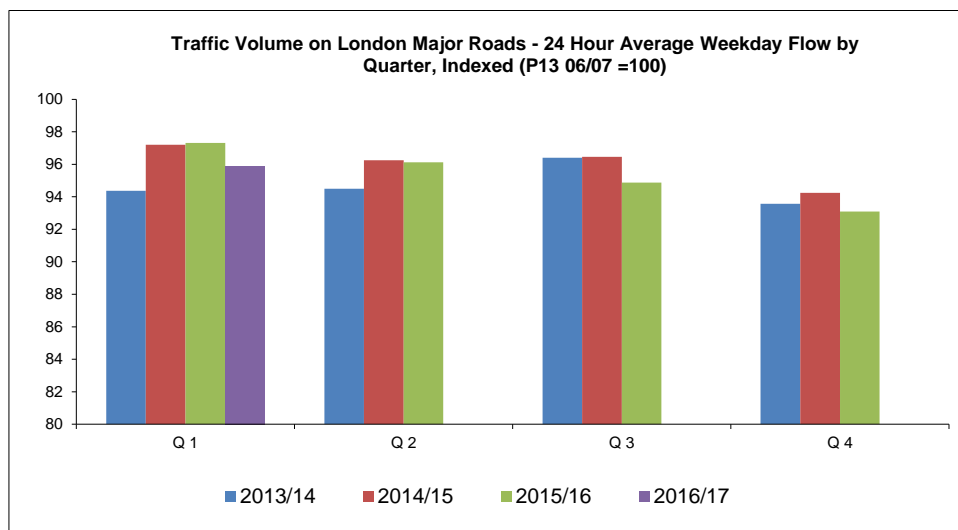
In Q1 2016/17 the total number of roadworks on the TLRN was 8,349 – an increase of 756 (10.0%) on the 7,593 total reported in Q1 of 2015/16, and 14.4% below the allowable cap of 9,750.



## 4. Traffic Volumes

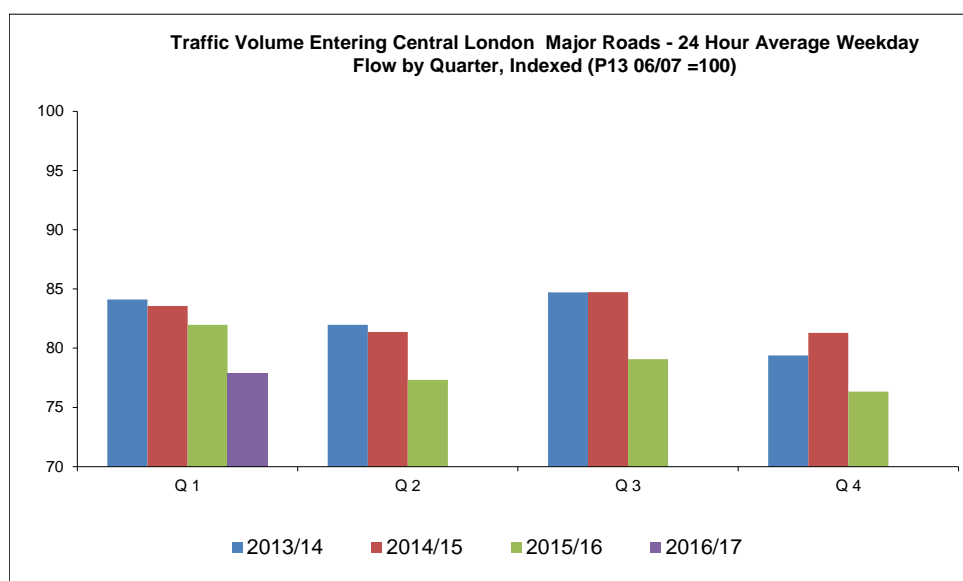
### Vehicular traffic volumes on London's major roads

The pan-London traffic flow index stands at 95.9 in Q1 2016/17. This is 1.4 index points down from the same quarter in 2015/16, and 1.3 index points down from the same quarter in 2014/15. The chart below shows traffic flows relative to an index of 100 in P13 2006/07.



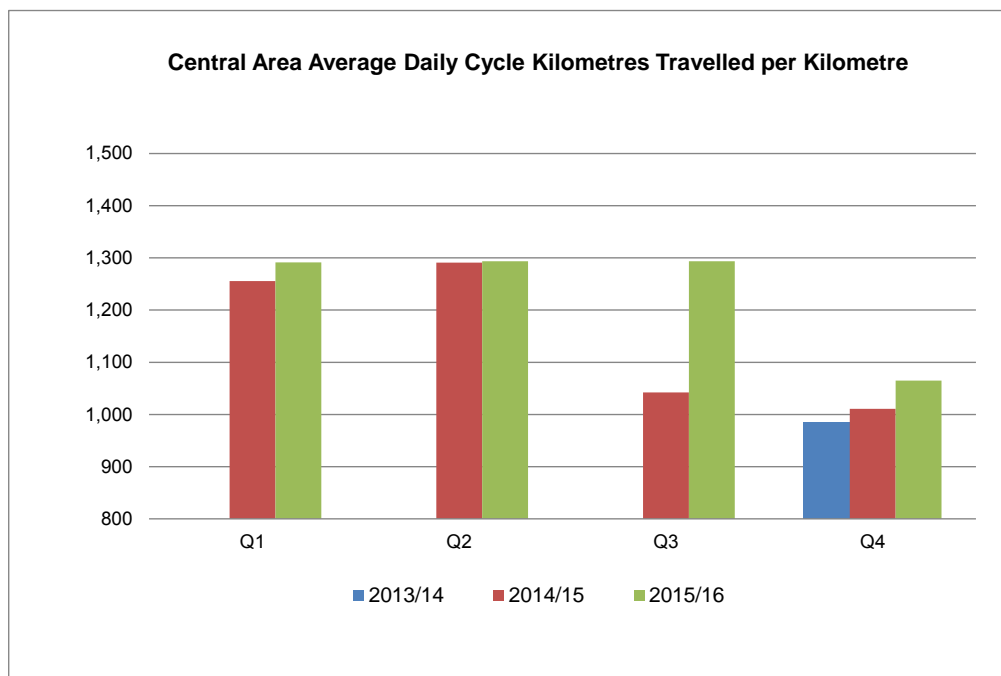
### Vehicular traffic entering central London's major roads

The Central London traffic flow index stands at 77.9 in Q1 2016/17. This is 4.1 index points down from the same quarter in 2015/16 and 5.7 index points down from the same quarter in 2014/15. The chart below shows traffic flows relative to an index of 100 in P13 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 networks for Q4 2015-16 was 1,065. This represents an 8% increase compared to the baseline in Q4 2013-14 of 986 and a 5% increase compared to 1,011 measured in the same quarter last year.

TfL has set a target of cycle levels in 2016/17 to be 3.1% above those in 2015/16.

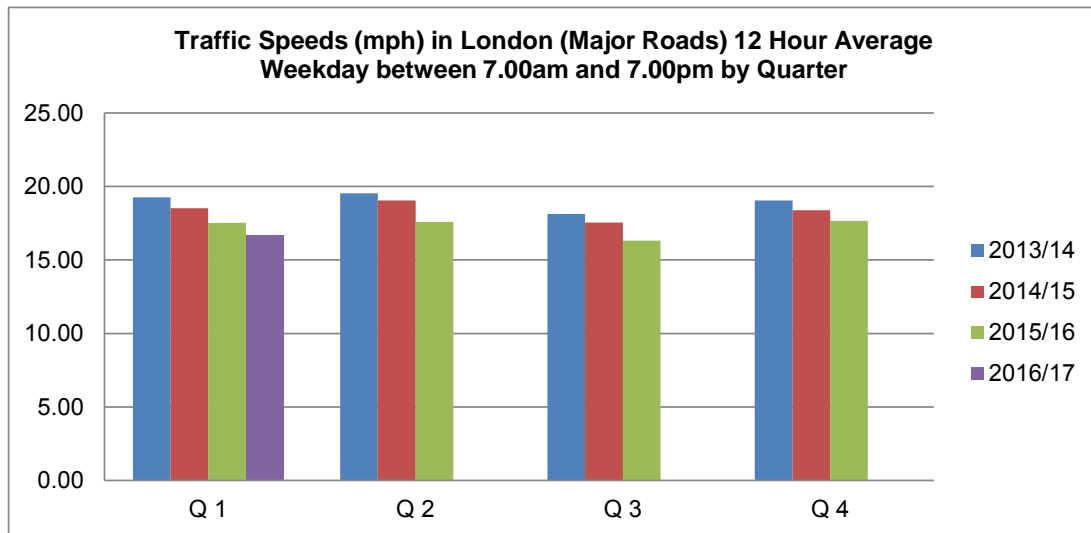
### New Cycling Metric:

This measure 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 quarter 4 of 2013/14, uses 200 stratified manual count sites and is part of a suite of cycling metrics that have been developed as part of the Cycling Vision Monitoring Framework. 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.

The central London cycle metric is recorded one quarter in arrears.

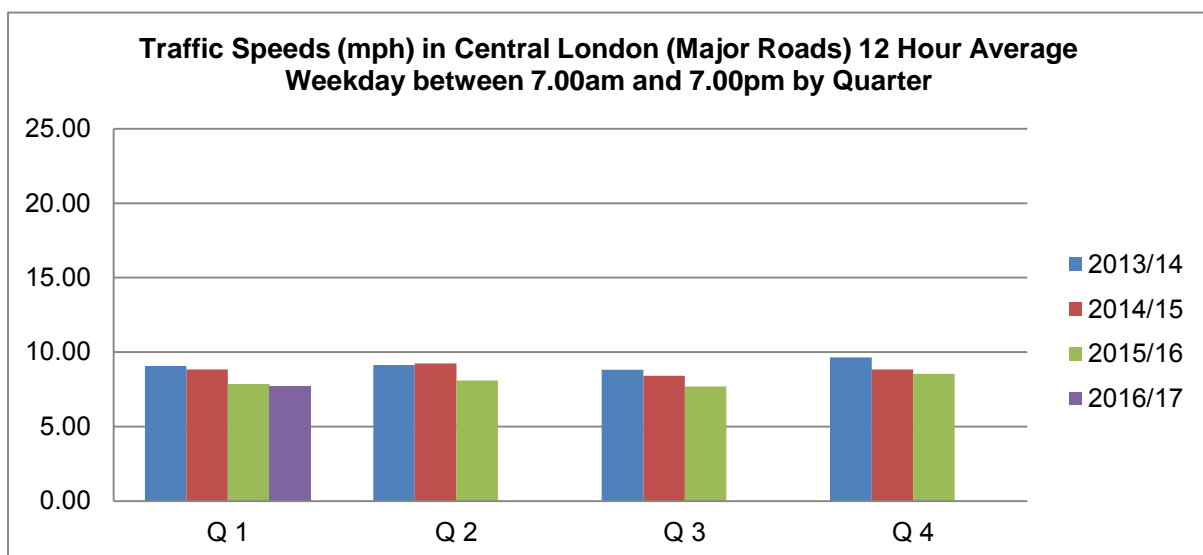
## 6. Traffic Speeds

### Traffic speeds in London



Q1 average traffic speeds for the 12 hours between 07:00 and 19:00 across London were 16.7 mph, compared to the 17.5 mph observed in Q1 2015/16, a 4.6 % decrease year-on-year.

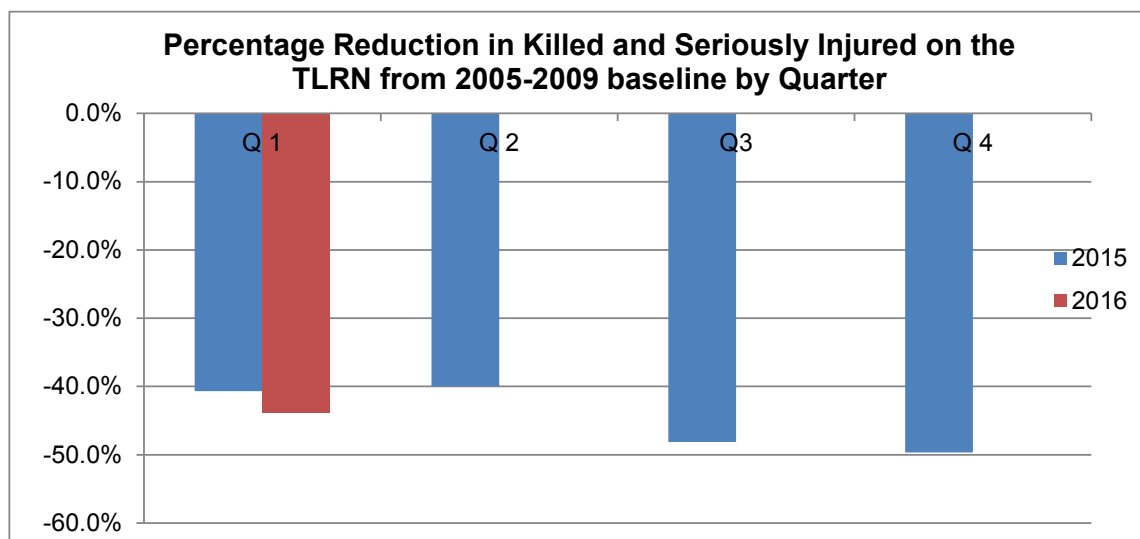
### Traffic speeds in central London



Q1 average traffic speeds for the 12 hours between 07:00 and 19:00 across Central London were 7.7 mph compared to the 7.9 mph observed in Q1 2015/16, a 2.2% decrease year-on-year.

## 7. Road Safety

### Fatal and seriously injured casualties on the TLRN



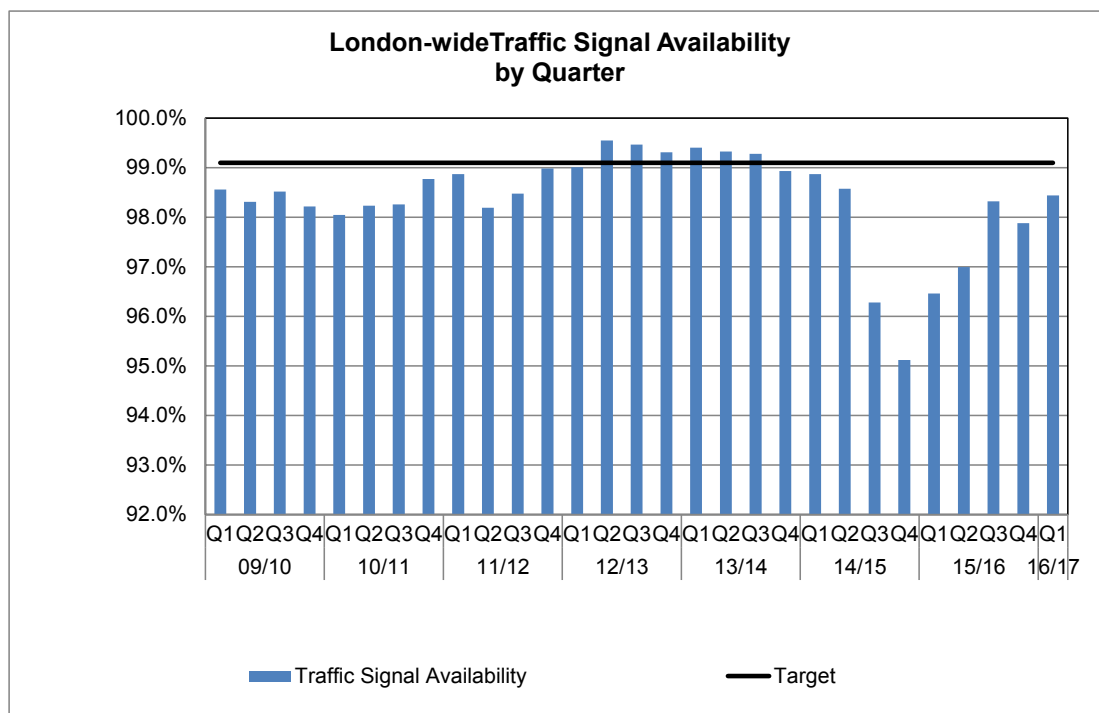
The graph above shows the percentage change in KSI casualties on the TLRN from the 2005-09 baselines for the period from 2014/15 to 2015/16. Note in this data set, Q1 is defined as the three month period from December 2015 to February 2016.

Provisional data for Q1 2015/16 indicates that there were 132 KSI casualties on London's roads, a 43.87% reduction from the 2005-09 Q3 baseline.

The table below shows the absolute and percentage reduction in Q1 2015/16 TLRN KSIs relative to Q1 in previous years.

Quarter 1 Results 2016	2012/13	2013/14	2014/15	2015/16
KSI on the TLRN	187	162	144	132
Percentage change up to Q1 2015/16	-29%	-19%	-8%	

## 8. Asset Availability



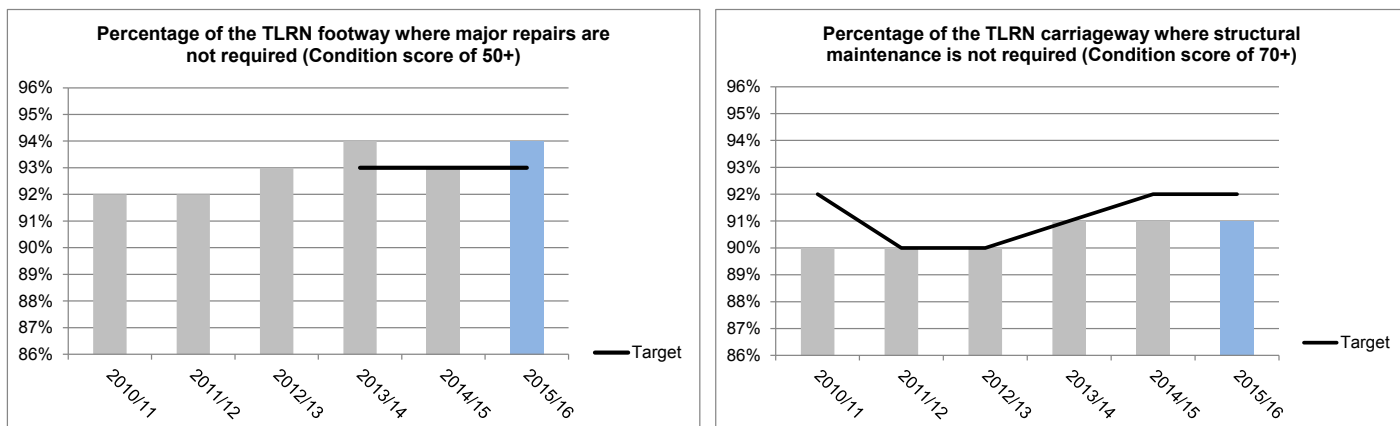
During Q1 2016/17, the availability of traffic signals London-wide was 98.4% - compared to 96.4 % reported in Q1 2015/16. Performance is expected to improve further in the future as new contractors increase resources and continue to train staff.

The target for this indicator is set at 99.1%, representing the availability of all functions of traffic signal equipment. 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.

## 9. 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.

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.

## 10. 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 Q1 2016/17 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. It should be noted that opinions/satisfaction scores are less positive in online surveys than in face to face surveys. TLRN CSS is conducted online and it is estimated that if it were conducted face to face (like other TfL CSSs) the overall satisfaction score would be higher than the current score by between 5-10 points.

Changes to TLRN Customer Satisfaction Scores:

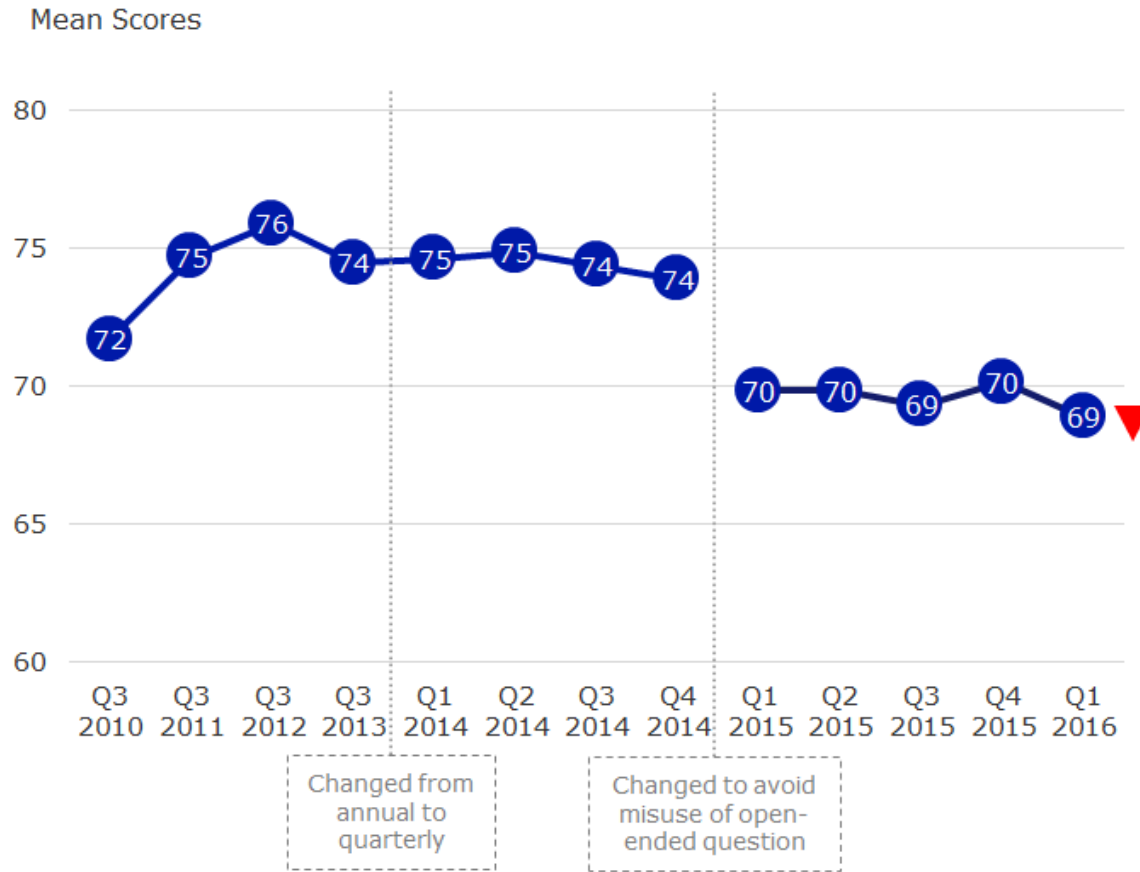
- In this report you will see a break in the data from Q1 2015. This is because we noticed an error in previous scores.
- From 2010 to Q4 14/15 the scores were wrong due to a follow up question being used inappropriately which was artificially inflating the scores.
- The impact of this on our scores can be seen in the results on page 23.

Q1 2016/17 interviews were carried out between 18 April 2016 and 25 May 2016. 3,249 TLRN users were interviewed (2949 in London and 300 in South East England). Detail of 7,923 trips was recorded i.e. collecting multiple trips from some respondents.

Q1 Survey Results:

- Overall satisfaction in Q1 among TLRN users is 69, down from 70 last quarter and this time last year, driven by satisfaction with traffic congestion at its lowest level. Car drivers are less satisfied with TLRN this quarter. Lower satisfaction this quarter is linked to many aspects of the journey including management of roadworks and congestion levels.
- Car users satisfaction has declined and they are now the most negative. P2W are the most positive users.
- Car drivers are less satisfied with all aspects of their journey. Bus users are less positive about most aspects.
- Road users are most satisfied with the infrastructure and least satisfied with the environment.
- Awareness of TfL's responsibility for the maintenance of London's major roads and for managing London's traffic has decreased. Fewer TLRN users agree TfL is making improvements to ensure that traffic flows smoothly.
- Roadside displays have a positive impact on satisfaction. Fewer road users noticed a roadside display, but among those, half changed their route as a result.
- New cyclists (cycling less than 2 years) are more satisfied than cyclists who have been cycling in London for longer.

Overall satisfaction with red routes is at 69.

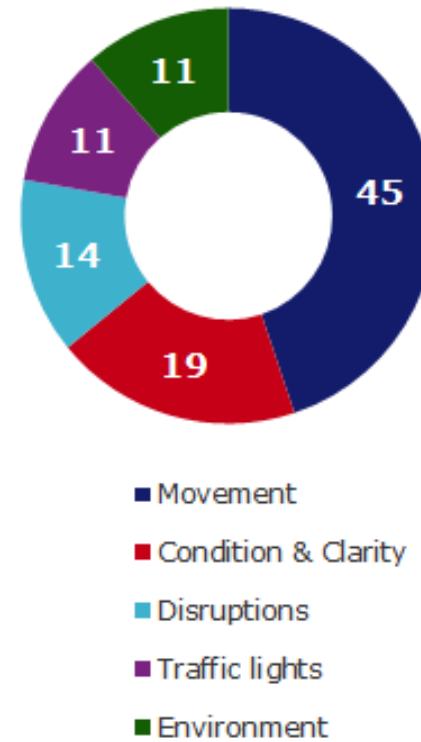
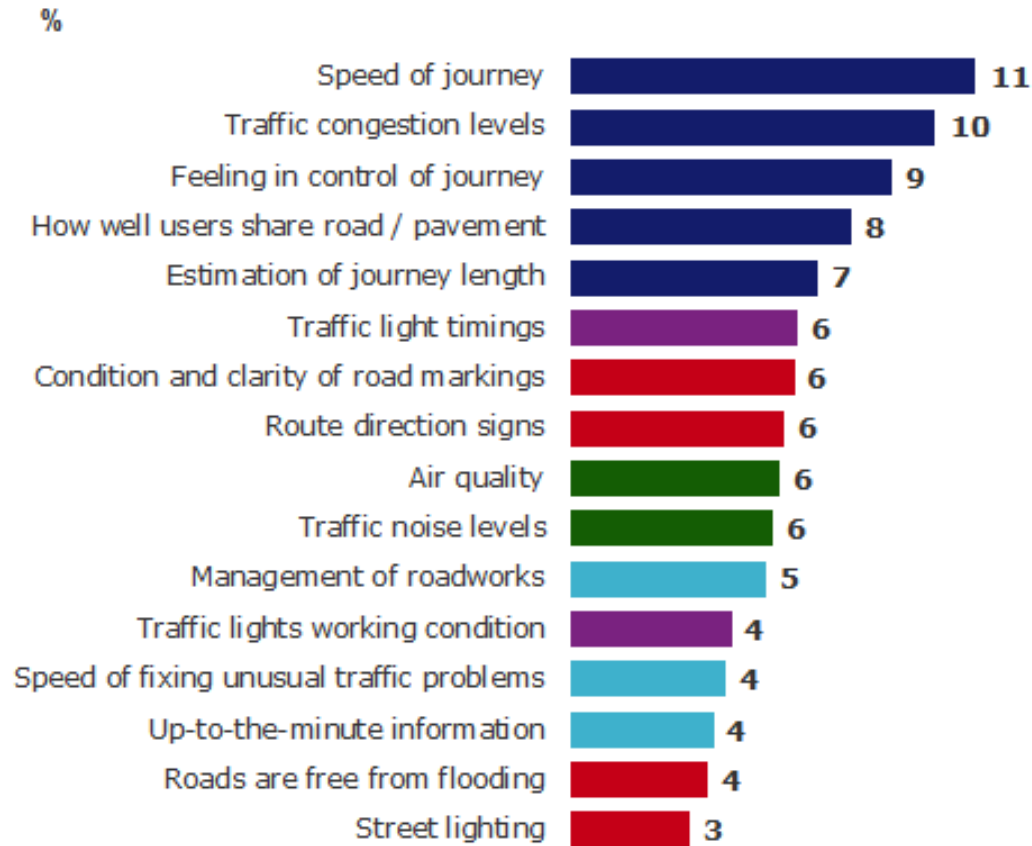


69

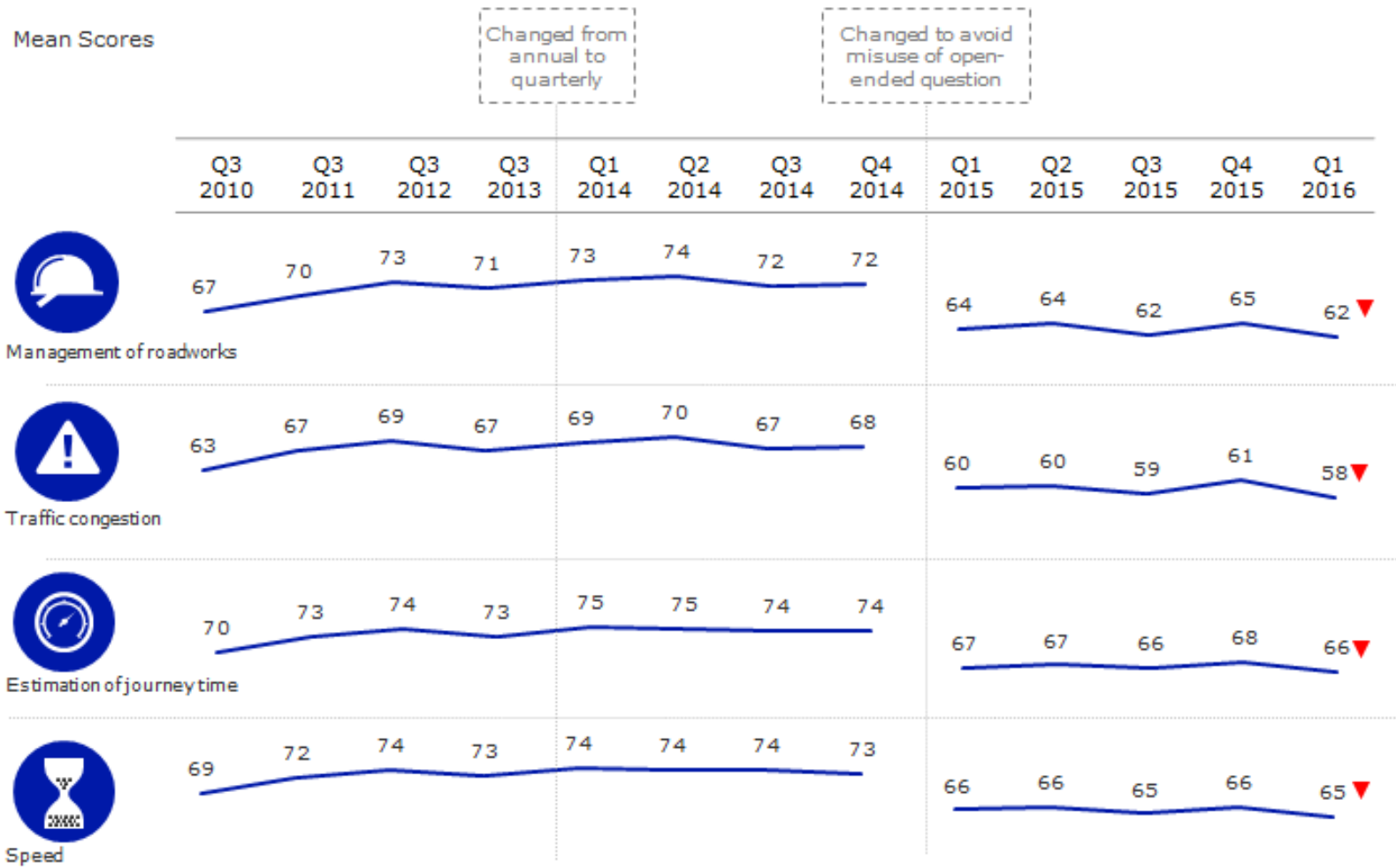
Overall satisfaction  
with TLRN  
Q1 2016/17



Drivers of satisfaction:  
All TLRN users



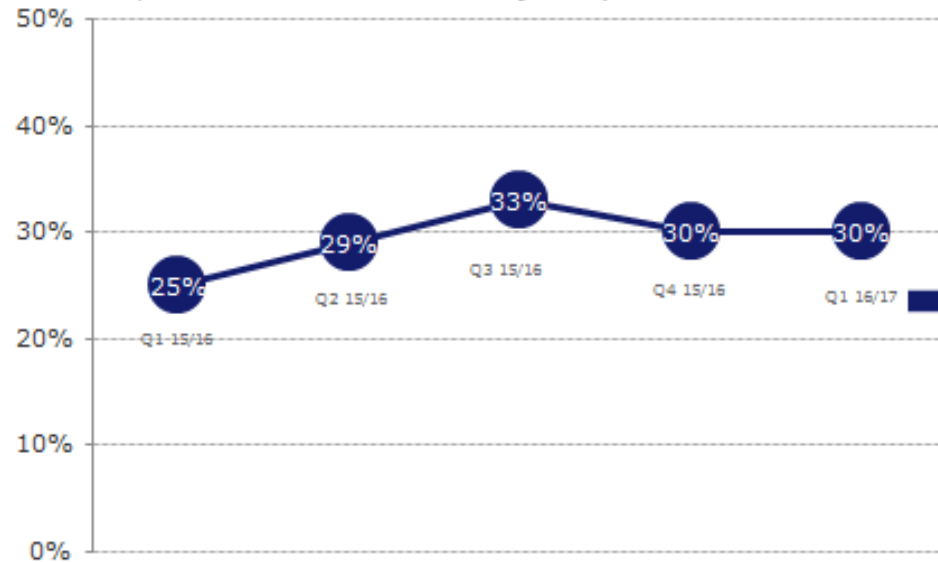
Lower satisfaction this quarter is linked to many aspects of the journey including management of roadworks and congestion levels.



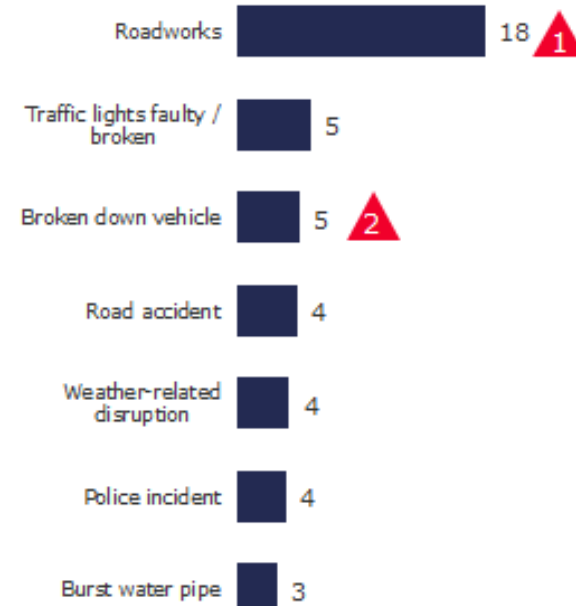
More road users experienced roadworks or a broken down vehicle but overall, road users did not experience more unusual events (30%).

### Experience of unusual events and impact on satisfaction

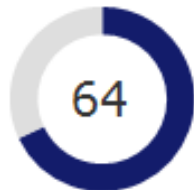
% who experienced an unusual event on journey



% type of unusual event experienced



Overall satisfaction (Mean score)



If experienced unusual event



If did not experience unusual event

Experiencing roadworks lowers the overall satisfaction score by 9 points. The greatest impact is on satisfaction with managing roadworks, speed, estimating journey time and pavements.

