



# TLRN Performance Report

Quarter 2 2017/18

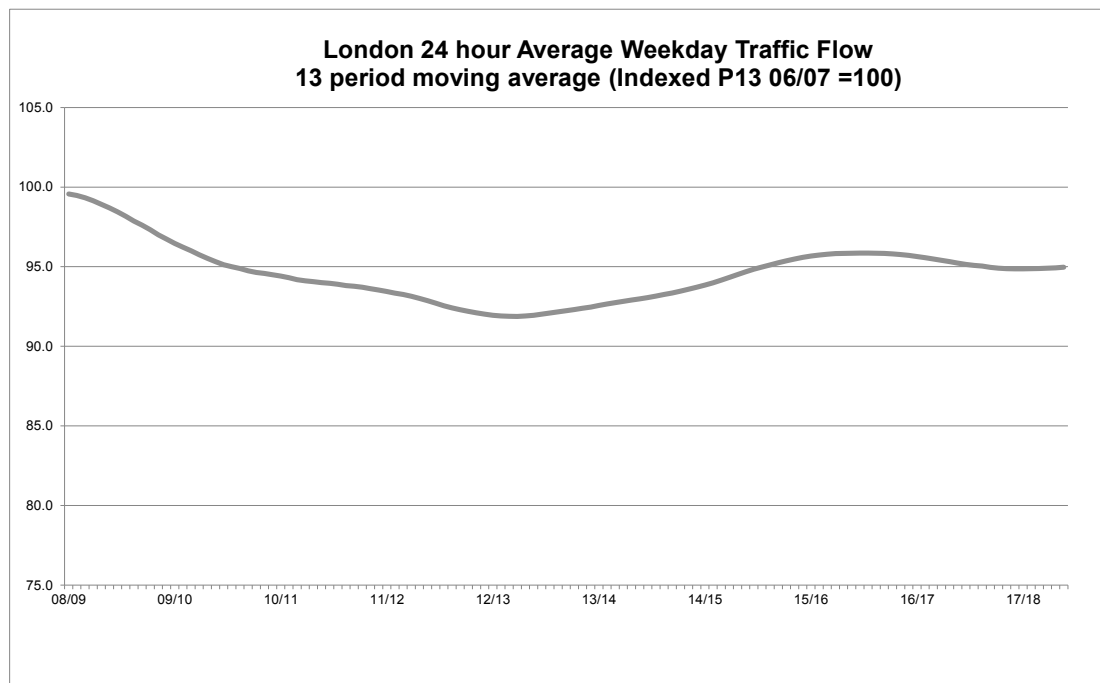
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## Performance summary for Q2 2017/18

We are seeing in Q2 stronger evidence that the network is recovering from the disruption associated with the recent major roadworks seen in previous quarters. The traffic speeds on London's major roads have increased slightly and is now 0.1 index points (0.7%) higher than in Q2 of the previous year. Traffic volumes in London have also seen an increase by 0.4 index points (0.4%) higher than they were in Q2 2016/17. Both of these results are in line with their normal observed quarter on quarter variation.

The longer term pattern of traffic volumes in London is illustrated below. 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. Traffic flows when examined across the most recent past (the last 2 years), across London as a whole, have stabilised and are no longer growing.



In recent years a significant amount of building and construction works have taken place to accommodate London's exceptional economic and population growth. 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 are used and are operated. TfL is continuing to oversee significant investment in London's streets, with numerous projects and programmes that are transforming some of the busiest roads and junctions for all road users. In addition, developers, the London boroughs and utility providers are building additional homes, shops, public places and infrastructure.

We saw in previous reports activity associated with the most recent major works affected the performance of the network. There is some evidence that the network has recovered slightly from the disruption impact of this phase of London's transformation. We have seen a

slight increase in London-wide traffic speeds between 07:00 and 19:00. Speeds in Q2 2017/18 increased by 0.1 mph to 17.6 mph, 0.7% higher than Q2 2016/17.

Taking planned (and unplanned) roadworks and incidents into account, as well as the recent changes in traffic flows, Journey Time Reliability (JTR) for the AM peak JTR on TfL's roads (the TLRN) in Q2 2017/18 has performed better than expected with 89.8% - which is 0.8% higher than Q2 2016/17, and 0.3% higher than the target of 89.4%.

However, in central London (excluding the congestion charging western extension zone and the Inner Ring Road) JTR in Q2 was 86.2%, which is 0.4 percentage points lower than a year ago. Traffic volumes in central London have continued to fall. The central London traffic flow index stands at 71.9 in Q2 2017/18, down 2.9 index points from Q2 2016/17, and 5.5 index points down from Q2 2015/16.

The following incidents may have contributed to the lower JTR and traffic volumes observed in central London this quarter.

- Southern River Route down in both directions. Some of this was associated with delays in the Waterloo area, particularly in the first three weeks in period 4.
- Commencement of eight week closure in Bishopsgate Southbound for electrical works to be carried out has led to delays due to capacity restrictions to allow southbound cycling and right turning vehicles.
- A traffic signal failure on the Inner Ring Road, Tower Bridge approach, and Signal timing issues on the Inner Ring road on Kennington Period 6.

The average total cycle kilometres travelled per kilometre per day within central London in Q1 2017/18 was 1,298. This represents a 32% increase compared to the 2013/14 baseline, and a 6.3% increase compared to the same quarter in the previous year.

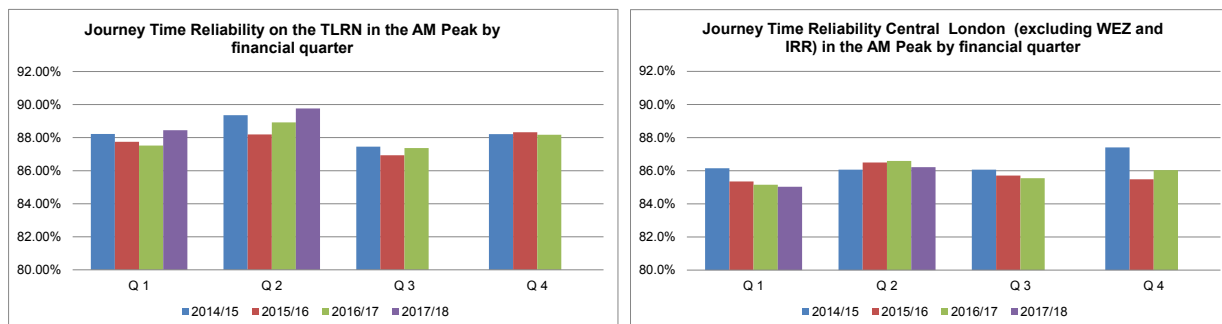
*Notes:*

*The TLRN Customer Satisfaction Survey, which was previously reported quarterly, will be reported twice in 2017/18 (in Q1 and Q3), before reverting to being an annual measure in 2018/19.*

Total cycle kilometres travelled per kilometre per day within central London is reported one quarter in arrears.

## 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 Q2 2017/18, JTR on the TLRN in the AM peak in all directions was 89.8%. This is 0.3 percentage points higher than the target (89.4%), and 0.8 percentage points higher than a year ago in Q2 2016/17.

JTR for central London in the AM peak - excluding the congestion charging western extension zone (WEZ) and the Inner Ring Road - was 86.2%. This is 0.9 percentage point lower than the target (87.1%) and 0.4 percentage points lower than a year ago in Q2 2016/17.

During Q2 a number of incidents impacted JTR:

Period 4

- In Period 4, overall TLRN JTR was 88.2%, which is on target (meaning it was 0.5 points above the same period last year), and 0.7 points above the previous period
- The A205 (Thurlow Road) and A406 (Pinkham Way) both suffered burst water mains. The A406 Brentford suffered delays due to a multi-vehicle collision and a fire. The South area was 1.6 points below target, due to two collisions in the Tolworth area. The West area was down 0.8 points as a result of the A316 & A4 being down due to delays. The Central area was 0.6 points below target, due to the delays in the Waterloo area, particularly in the first three weeks, as well as lesser delays in the Jamaica Road / Rotherhithe Tunnel area. The East area was up 0.9 points, with the A12 the only arterial above 90% inbound and the A13 also up inbound.
- Speeds were virtually unchanged both pan-London and centrally, both AM peak and 7am to 7pm.

## Period 5

- In Period 5, overall TLRN JTR was 91.6%, which is 0.4 points above target (meaning it was 0.9 points above the same period last year), and 3.4 points above the previous period.
- The West, East and Central Areas were all up a healthy 1-2 percentage points.
- The South Area was down 0.3 points due to a collapsed Thames Water sewer on the A205 Stanstead Road. The North area was down 1.9 points principally due to poor performance on the A406 anti-clockwise.
- The worst day for JTR was Monday 24th July, the first weekday of the period; this was due to a burst SES water main on A24, an HGV breakdown at the Blackwall Tunnel, and a bus breakdown on Chelsea Bridge. One of the most disruptive incidents came on Monday 15th August, when a collision between a car and a powered two-wheeler caused Vauxhall Bridge to be shut southbound. Despite the Vauxhall collision, the West Area had the strongest performance coming in at 1.9 percentage points above target. There were modest improvements to speed of 0.1-0.3 mph both pan-London and centrally, both AM peak and 7am to 7pm.

## Period 6

- In Period 6, overall TLRN JTR was 89.5%, which is 0.6 points above target, and 2.1 points below the previous period (which is usually the best in the year). This means that at Period 6 year to date we are 0.4 points above target.
- The improvements were relatively consistent across areas (0.4 to 0.8 percentage points) with just Central Area below target, by -0.1 percentage points. The commencement of an eight week closure of Bishopsgate Southbound led to delays of an hour northbound, due to capacity restrictions to allow southbound cycling and right turners.
- Tower Bridge approach also affected central London, due to a traffic signal failure, whilst UTC temp signals out at Greenford Roundabout affected the A40 and A312. The A40 was one of the few radials to be down, with the outbound particularly affected, due to a collision at Hillingdon Circus. The worst day of the network was on Friday 8th September, this was due to a burst water main at Pinkham Way on the A406. This was one of several burst water mains over the period.
- Whilst central London speeds were generally below those of last year, pan-London speeds were up 0.6 mph in the AM peak and 0.3 mph 07:00 to 19:00.

## Journey time reliability (JTR) on the TLRN

AM Peak		Inbound						Outbound					
Route Type	Corridor	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2
Radial	A4	85.6%	87.9%	87.5%	86.0%	87.2%	89.4%	91.0%	91.6%	90.9%	93.2%	90.9%	93.0%
Radial	A40	80.7%	80.4%	78.6%	81.3%	82.0%	81.6%	93.4%	94.3%	92.5%	94.8%	93.2%	94.6%
Radial	A41	87.1%	87.7%	85.2%	88.3%	87.2%	88.4%	89.6%	90.2%	87.9%	88.6%	89.9%	91.9%
Radial	A1	83.8%	85.9%	84.5%	86.0%	85.4%	87.3%	90.4%	91.1%	89.5%	90.6%	91.4%	91.0%
Radial	A10	83.9%	87.0%	84.6%	84.0%	86.0%	87.0%	88.8%	90.4%	86.5%	88.0%	89.1%	90.7%
Radial	A12	85.0%	87.7%	85.8%	86.4%	88.7%	91.5%	95.5%	96.2%	96.2%	96.4%	96.3%	96.9%
Radial	A13	82.3%	82.1%	80.5%	83.4%	83.7%	85.7%	98.1%	98.5%	97.5%	98.5%	98.5%	98.7%
Radial	A2	86.5%	86.1%	85.0%	84.3%	88.0%	86.8%	96.5%	96.3%	95.6%	95.8%	97.0%	96.4%
Radial	A20	77.9%	83.1%	80.6%	81.7%	81.1%	85.0%	91.1%	91.8%	91.7%	91.4%	91.3%	93.5%
Radial	A21	86.5%	91.8%	86.5%	85.8%	88.8%	90.1%	93.5%	96.7%	94.5%	93.2%	93.1%	93.6%
Radial	A23	85.0%	87.8%	85.5%	86.2%	88.0%	88.9%	87.1%	89.6%	88.1%	87.6%	91.3%	92.2%
Radial	A24	86.0%	89.5%	85.9%	86.3%	89.2%	90.5%	91.5%	93.2%	92.3%	93.2%	92.9%	93.8%
Radial	A3	89.6%	91.7%	90.5%	89.4%	90.4%	90.6%	90.6%	93.2%	90.3%	91.0%	90.5%	93.8%
Radial	A316	84.1%	91.3%	89.7%	85.0%	87.1%	90.0%	92.7%	96.6%	97.2%	95.6%	97.0%	98.7%

PM Peak		Inbound						Outbound					
Route Type	Corridor	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2
Radial	A4	85.4%	87.2%	84.0%	85.8%	85.6%	88.8%	78.8%	80.5%	80.5%	82.5%	80.9%	81.4%
Radial	A40	82.3%	82.7%	81.6%	83.0%	81.2%	83.5%	80.8%	81.9%	81.2%	80.4%	79.3%	82.7%
Radial	A41	90.3%	93.1%	90.8%	92.1%	91.9%	92.1%	81.4%	84.5%	79.7%	83.8%	82.6%	83.6%
Radial	A1	88.7%	89.9%	85.1%	89.3%	87.1%	89.0%	84.2%	85.7%	85.0%	85.2%	86.0%	86.6%
Radial	A10	87.5%	89.7%	85.8%	88.3%	88.1%	89.6%	78.3%	80.9%	77.0%	80.4%	80.0%	81.5%
Radial	A12	86.5%	86.8%	85.3%	88.8%	86.0%	87.7%	83.8%	85.0%	83.4%	86.0%	84.5%	85.3%
Radial	A13	85.7%	92.0%	81.7%	87.7%	89.6%	92.4%	80.9%	82.0%	80.4%	81.8%	82.6%	81.8%
Radial	A2	92.3%	93.7%	92.1%	91.5%	93.3%	88.1%	82.4%	84.3%	81.3%	82.3%	80.8%	82.3%
Radial	A20	81.9%	83.0%	82.6%	86.8%	84.8%	85.8%	83.4%	83.9%	83.5%	84.5%	81.9%	82.6%
Radial	A21	93.7%	96.1%	91.2%	92.1%	92.3%	94.9%	89.8%	93.1%	88.9%	89.5%	91.0%	91.5%
Radial	A23	89.2%	90.3%	88.9%	89.4%	90.1%	90.0%	81.8%	82.3%	81.2%	82.7%	82.8%	85.5%
Radial	A24	89.3%	90.4%	91.9%	92.0%	92.4%	92.7%	87.4%	89.0%	88.5%	88.6%	88.8%	88.8%
Radial	A3	94.3%	94.6%	94.5%	94.7%	92.6%	94.8%	86.5%	89.6%	87.7%	88.8%	87.8%	87.9%
Radial	A316	90.4%	92.5%	89.1%	91.0%	90.2%	91.7%	92.3%	91.0%	87.5%	88.0%	93.5%	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	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2
Orbital	A102 B. Tunnel	79.8%	76.1%	80.2%	81.0%	80.3%	76.6%	97.4%	94.7%	94.1%	96.1%	97.2%	95.8%
Orbital	A406	85.1%	87.9%	84.7%	86.7%	85.6%	87.3%	86.0%	86.6%	84.8%	85.9%	86.2%	88.3%
Orbital	A205	87.0%	89.6%	85.7%	86.5%	88.5%	89.5%	85.2%	85.4%	85.8%	85.3%	84.9%	86.2%
Orbital	Inner Ring	81.6%	82.8%	82.2%	83.9%	81.7%	84.1%	83.6%	85.0%	85.2%	85.6%	84.6%	85.8%
PM Peak		Anti-clockwise						Clockwise					
Route Type	Corridor	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2
Orbital	A102 B. Tunnel	72.6%	71.5%	77.1%	78.2%	73.1%	72.0%	80.3%	83.8%	80.0%	80.4%	82.0%	80.2%
Orbital	A406	82.9%	85.1%	81.8%	83.9%	83.4%	85.4%	80.9%	83.1%	80.1%	81.8%	78.5%	80.3%
Orbital	A205	82.7%	85.9%	84.2%	84.5%	83.5%	86.7%	85.9%	88.0%	85.5%	86.0%	85.6%	89.0%
Orbital	Inner Ring	78.4%	77.8%	78.3%	80.2%	79.2%	79.8%	81.1%	80.7%	81.0%	82.2%	80.7%	81.5%

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

Central London	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2
All DirectionF						
AM Peak	85.2%	86.6%	85.5%	86.0%	85.0%	86.2%
PM Peak	82.4%	84.3%	82.0%	83.8%	83.5%	83.9%

TLRN	2016/17 Q1	2016/17 Q2	2016/17 Q3	2016/17 Q4	2017/18 Q1	2017/18 Q2
All DirectionF						
AM Peak	87.5%	88.9%	87.4%	88.2%	88.4%	89.8%
PM Peak	84.0%	85.6%	83.5%	85.1%	84.3%	85.5%

Legend

Journey Time Reliability

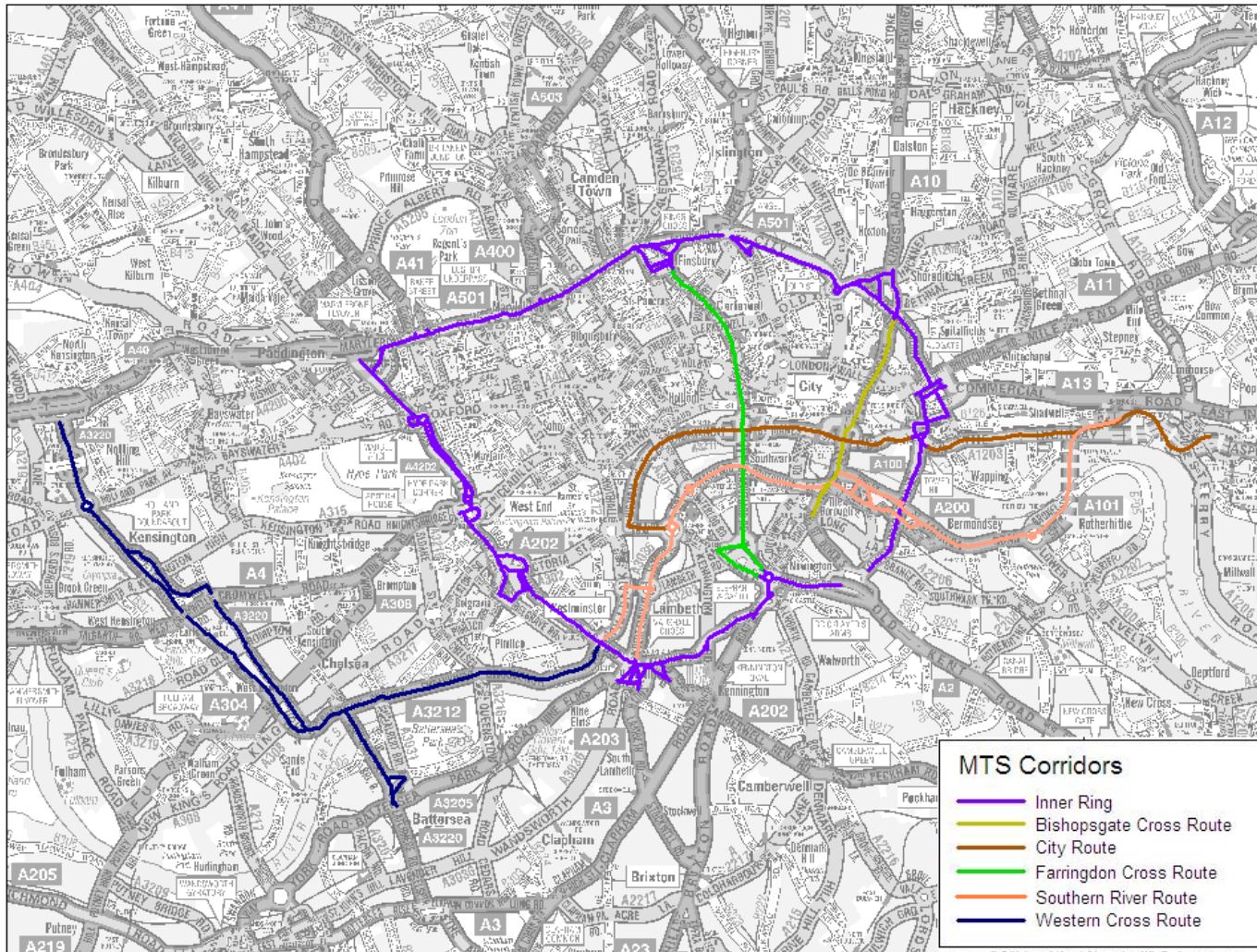
>=90% More than 9 out of 10 journeys are "on time"

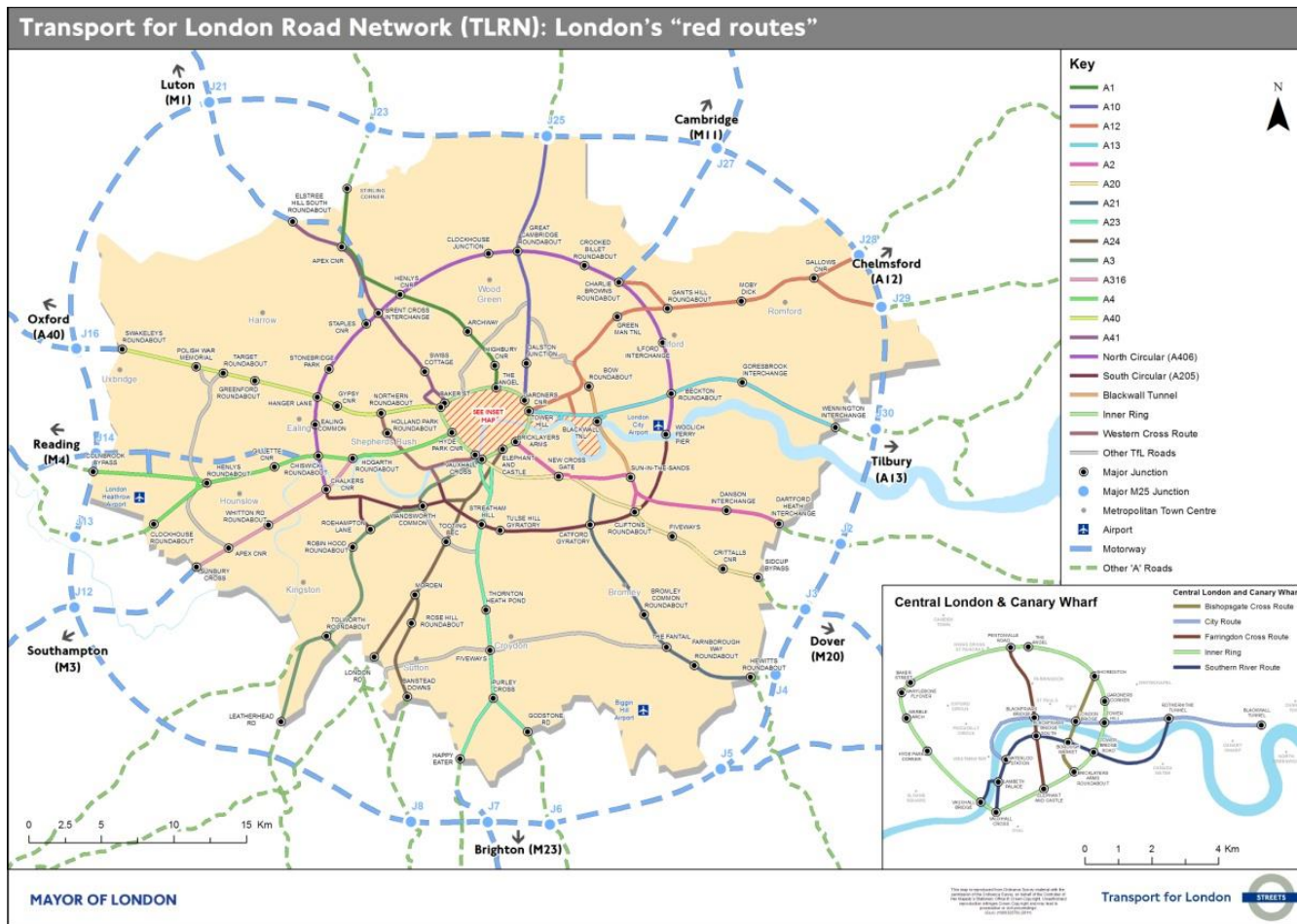
80%-89.9%

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



Map showing the TLRN by MTS corridors in central London

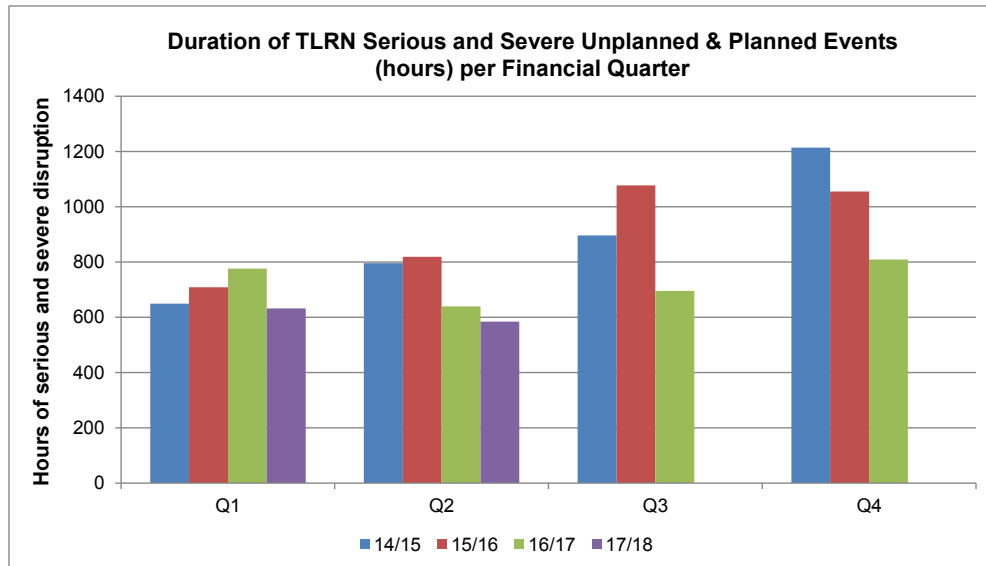




Note: The named corridors do not exactly replicate the road number in the legend, but reflect the strategic radial and orbital corridors set out in the Mayor's Transport Strategy (e.g. the "A12 corridor" includes the A11 Mile End Road into Central London)

## 2. Network disruption

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

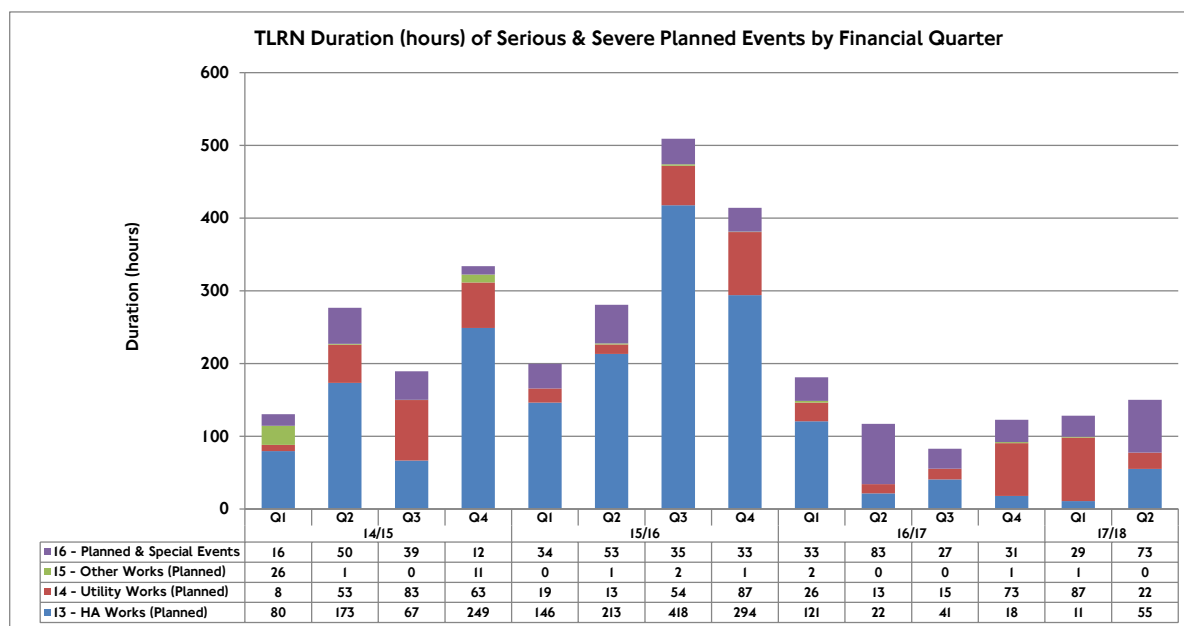


There were 584 hours of Serious and Severe (S&S) disruption in Q2 2017/18 resulting from unplanned and planned events, spread across 285 separate incidents. Planned S&S disruption totalled 150 hours and unplanned S&S disruption totalled 434 hours.

Overall this represents decrease of 55 planned and unplanned hours compared to Q2 2016/17, attributable to an increase of 33 planned S&S disruption hours and decrease of 88 unplanned S&S disruption hours.

The amount of S&S disruption per unplanned event, a measure of effectiveness of the resolution of unplanned incidents stands 1.7 hours in Q2 2017/18; this has decreased compared with 1.8 in Q2 2016/17.

## Planned incidents and events: TLRN I



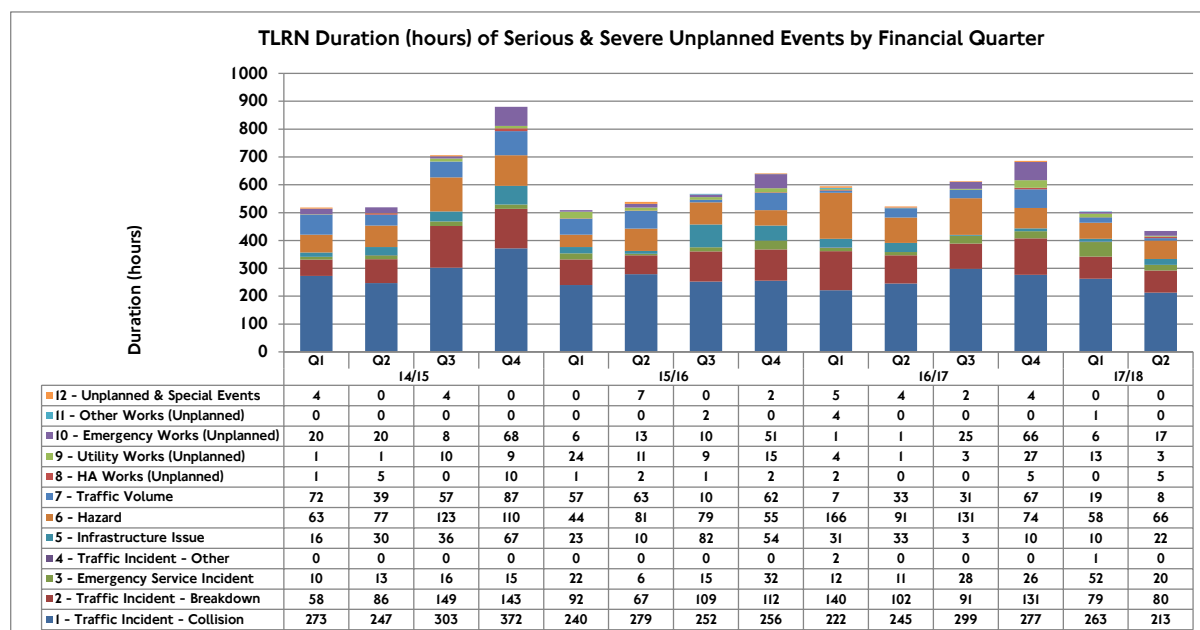
There were 150 hours of S&S disruption in Q2 from planned events, spread across 31 separate events (an average of 4 hours 50 minutes per event). This compares to 117 hours spread across 29 events (an average of 4 hours 2 minutes duration per event) in Q2 2016/17.

There were three planned events on the TLRN recording more than 10 hours of S&S disruption:

- Starting at 22:00 on Tuesday 11 July 2017 and ending at 06:02 on Thursday 13 July 2017 there was disruption in the Trafalgar Square Area due to a parade event. There were a total of 31.8 hours of disruption in the period, 12.6 hours of which were serious and severe. 12.6 hours.
- Starting at 10:00 on Sunday 23 July 2017 and ending at 15:53 on Wednesday 26 July 2017 there was disruption on Catford Hill due to Thames Water utility works. There were a total of 77.0 hours of disruption in the period, 15.1 hours of which were serious and severe. 15.1 hours.
- Starting at 10:00 on Monday 28 August 2017 and ending at 05:00 on Wednesday 20 September 2017 there was disruption on Western Avenue due to Thames Water utility works. There were a total of 143.1 hours of disruption in the period, 48.2 hours of which were serious and severe. 48.2 hours.

<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.

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

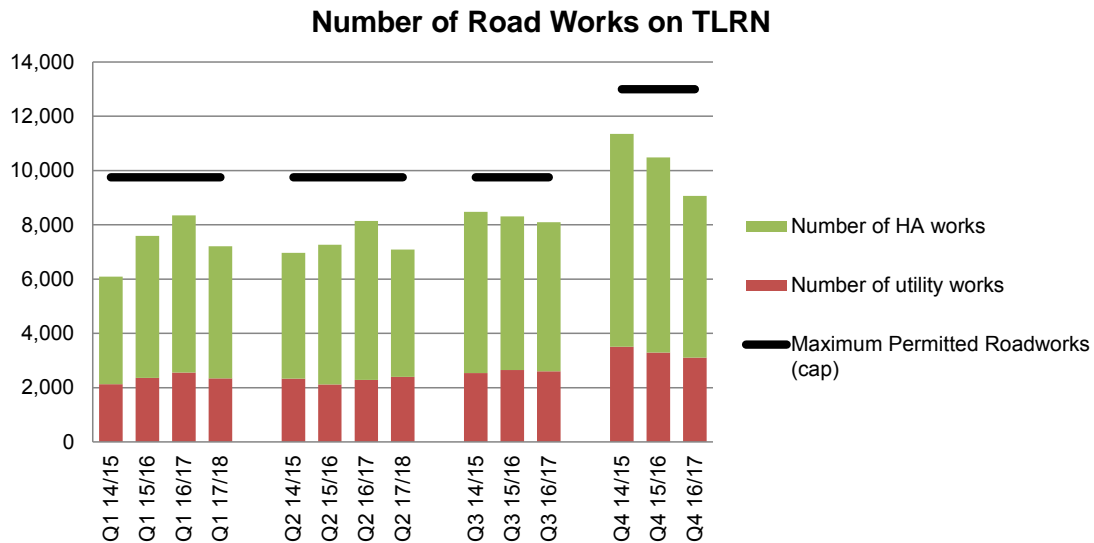


This quarter on the TLRN there were 434 hours of unplanned S&S disruption, spread across 254 separate events (an average of 1 hour 42 minutes duration per event). This compares to 523 hours, spread across 287 events (an average of 1 hour 49 minutes duration per event) in Q2 2016/17.

There were two unplanned incidents on the TLRN leading to over 10 hours of serious and severe disruption:

- Starting at 13:32 on Saturday 08 July 2017 and ending at 01:00 on Sunday 09 July 2017 there was disruption on Pinkham Way North Circular due to a burst water main. There were a total of 47.7 hours of disruption, 12.7 hours of which were serious and severe. 12.7 hours.
- September 2017 there was disruption on Pinkham Way North Circular Road due to a burst water main. There were a total of 25.2 hours of disruption in the period, 10.9 hours of which were serious and severe. 10.9 hours.

### 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 subject to permitting.

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.

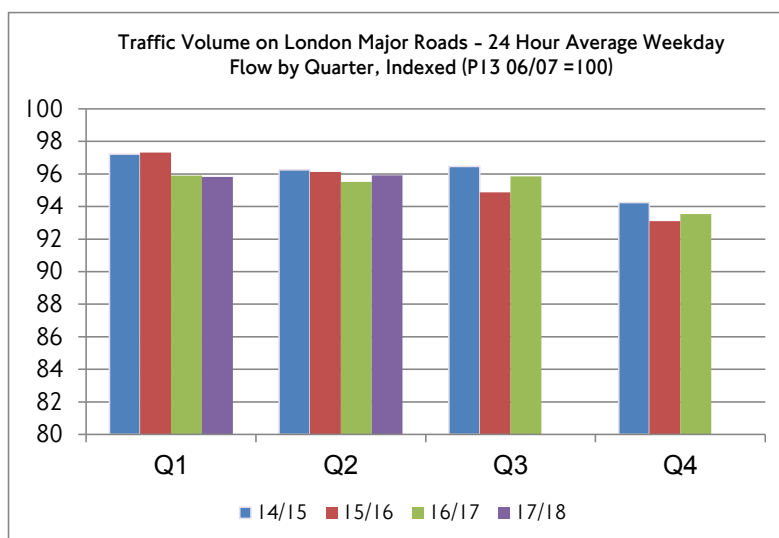
In Q2 2017/18 the total number of roadworks on the TLRN was 7,093 - a decrease of 1,053 (13%) on the 8,146 total reported in Q2 2016/17, and 27% below the allowable cap of 9,750.



## 4. Traffic volumes

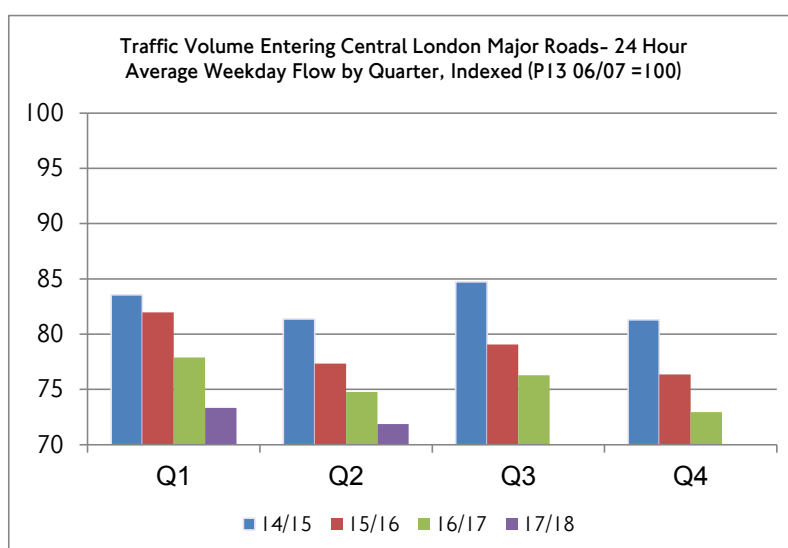
### Vehicular traffic volumes on London's major roads

The pan-London traffic flow index stands at 95.9 in Q2 2017/18. This is 0.4 index points above the same quarter in 2016/17, and 0.2 index points down from the same quarter in 2015/16. The chart below shows traffic flows relative to an index of 100 in 2006/07.



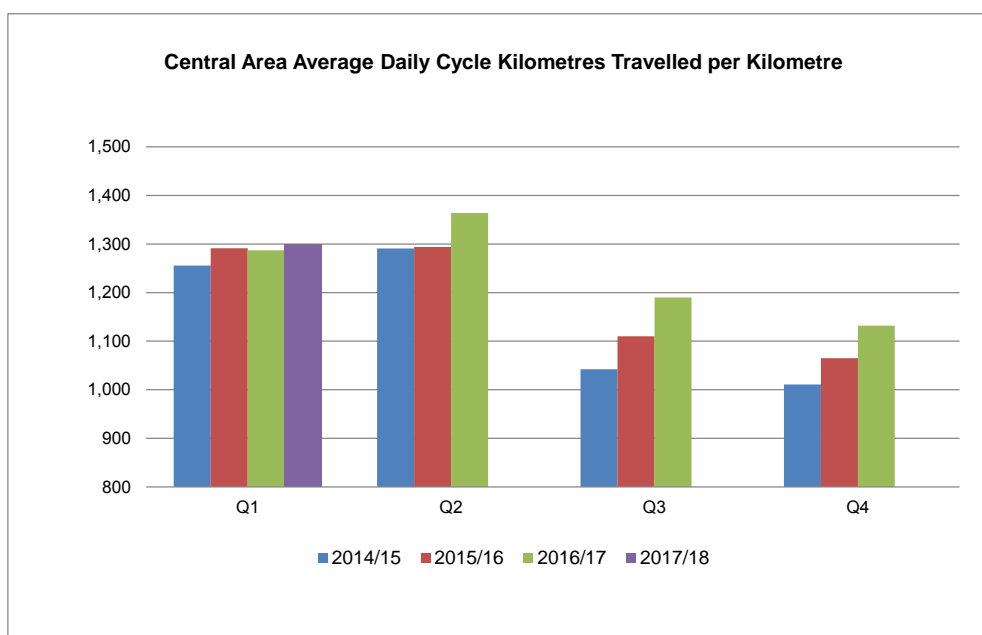
### Vehicular traffic entering central London's major roads

The central London traffic flow index stands at 71.9 in Q2 2017/18. This is 2.9 index points down from the same quarter in 2016/17 and 5.5 index points down from the same quarter in 2015/16. 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 in Q1 2017/18 was 1,298. This is a 32% increase compared to the Q4 2013/14 baseline of 986, and a 0.9% increase compared to the same quarter in the previous year. TfL a target of cycle levels in 2016/17 to be 3.1% above those in 2015/16.



### Central London cycling metric

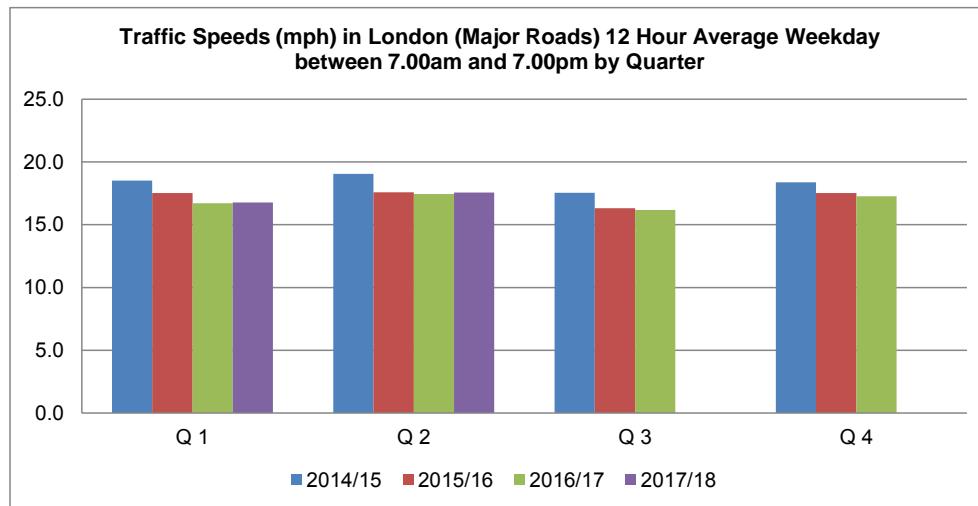
*This is a representative measure of total kilometres cycled each day in central London, as defined by the congestion charging zone (CCZ), and is reported each quarter. It has been in place since Q4 2013/14, and uses 200 stratified manual count sites and is part of a suite of cycling metrics that have 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

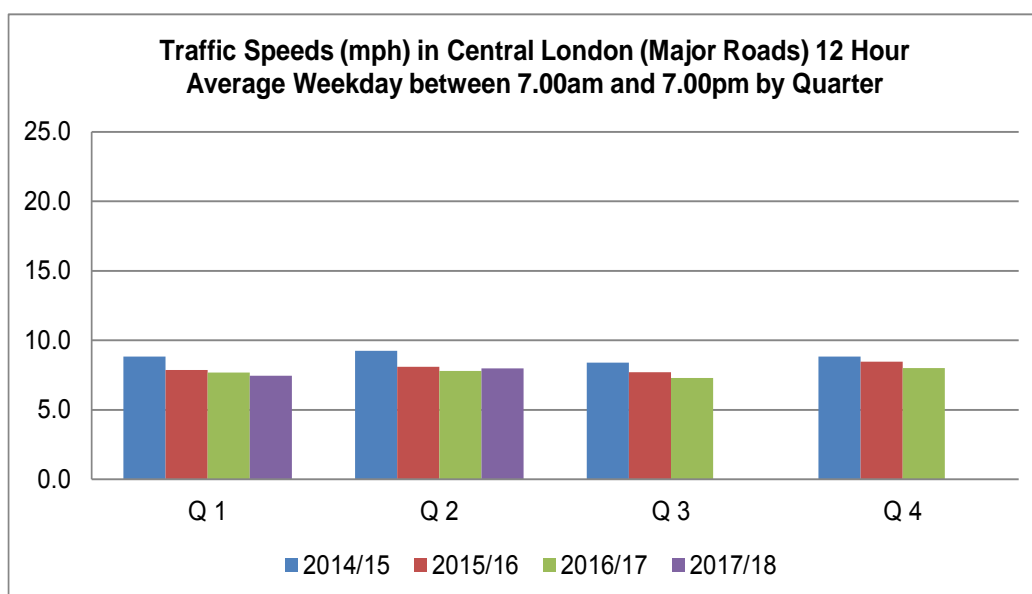
### Traffic speeds in London

In Q2 2017/18 average traffic speeds for the 12 hours between 07:00 and 19:00 across London were 17.6 mph, a 0.1mph (0.7%) increase compared with Q2 2016/17. Overall, London-wide traffic speeds have seen a decrease compared with previous years..



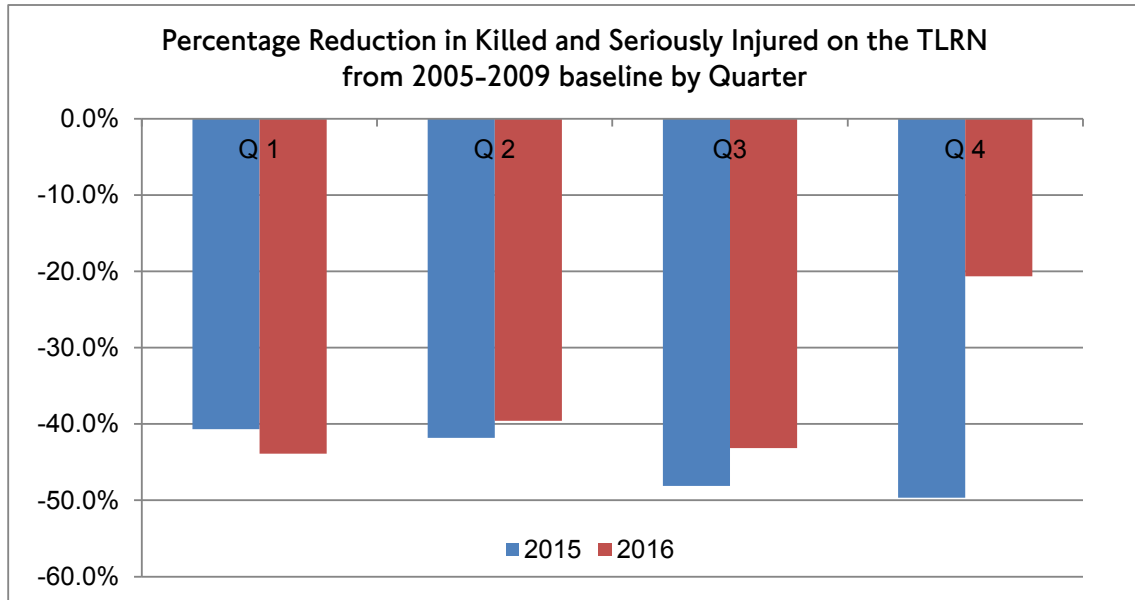
### Traffic speeds in central London

In Q2 2017/18 average traffic speeds for the 12 hours between 07:00 and 19:00 across central London were 8.0 mph, a 0.2mph (2.2%) increase compared with Q2 2016/17. Overall, Central London traffic speeds have also seen a decrease compared with previous years.



## 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, Q4 is defined as the three month period from September 2016 to November 2016.

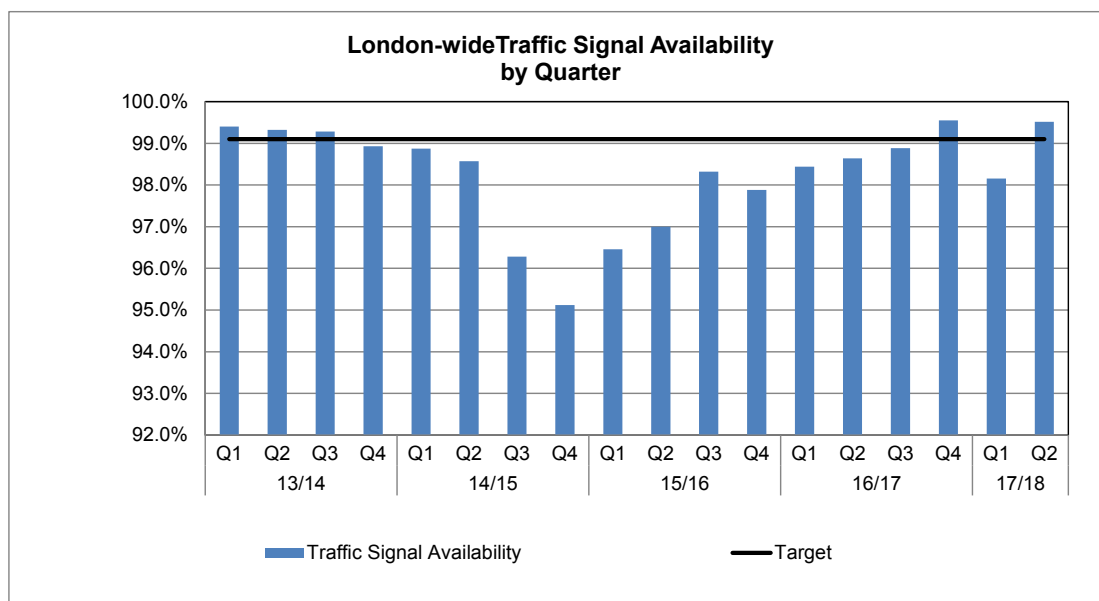


Provisional data for Q4 2016/17 indicates that there were 216 KSI casualties on London's roads, a 20.6% reduction from the 2005-2009 Q2 baselines.

Due to the new road safety reporting system by the Metropolitan Police, the figures for the number of serious injuries reported by the police during 2016 are not directly comparable with data collected using previous systems, therefore it is not possible to interpret year on year trends at this moment in time.

TfL is working with the DfT to back-estimate the number of seriously injured casualties that would have been reported by the police using an injury-defined rather than a severity-defined system. This will allow comparisons to be made between 2016 serious injury figures and previous years.

## 8. Asset availability



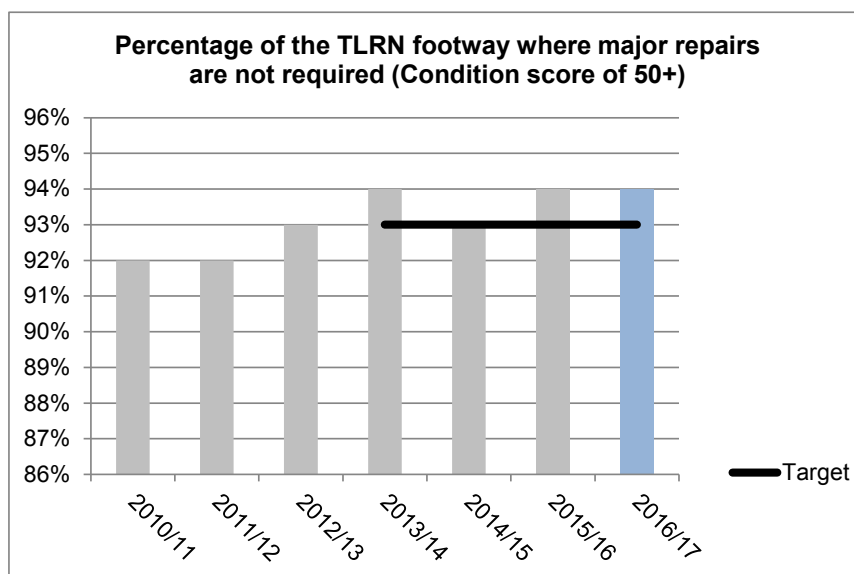
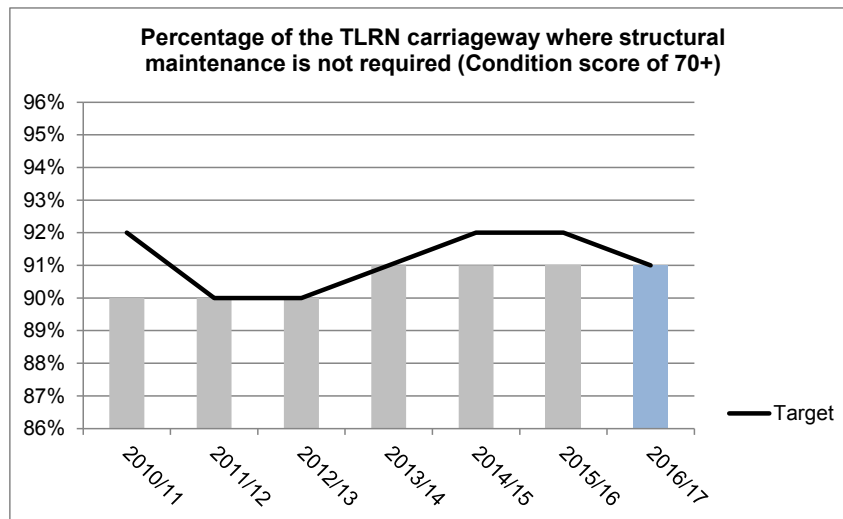
During Q2 2017/18, the availability of traffic signals London-wide was 99.5%, compared to 98.6% in Q2 2016/17. Performance is expected to improve further in the future as new contractors increase resources and continue to train staff.

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 has remained at 91% for the past few years, from 2013/14 to 2016/17.

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 & 2016/17 – the fluctuation is caused by the timing of annual condition inspections in relation to major footway schemes.

