

# Reliability of journeys on Highways Agency roads, England: July to September 2014



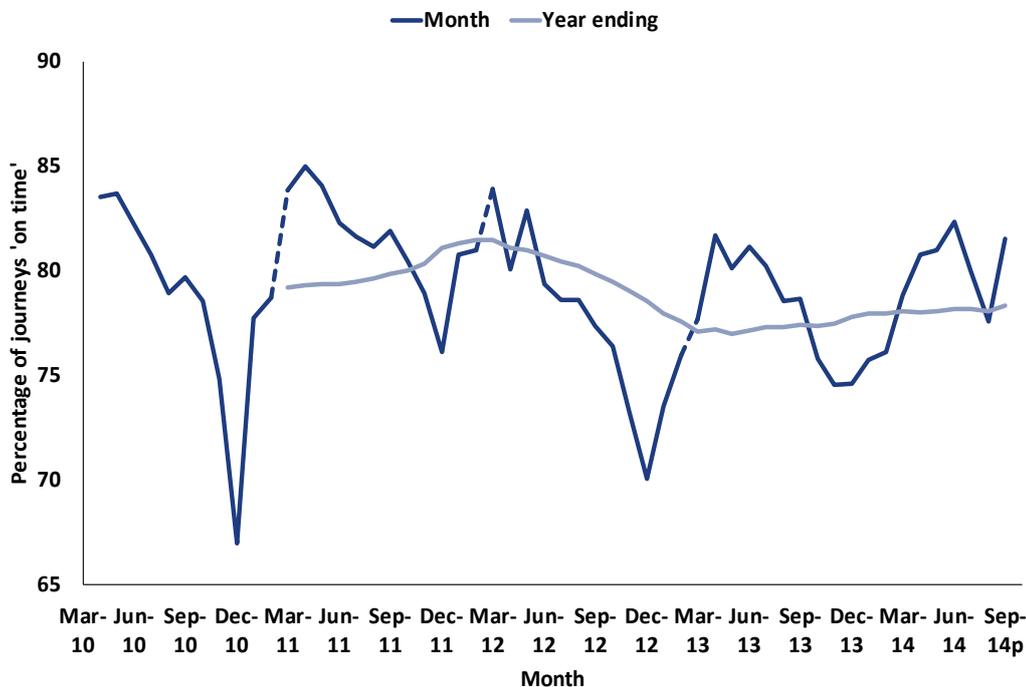
Department for Transport

## Main findings: Reliability of journeys broadly stable since March 2013

- ▶ **78.3% of journeys on the Highways Agency's network were 'on time'** in the year ending September 2014, **similar** to the year ending June 2014.
- ▶ Since the year ending March 2013 reliability levels have been broadly stable. This recent stability may relate to a combination of improved weather conditions, particularly less rain, and increases in traffic on motorways and rural 'A' roads, relative to the previous year (for further explanation please see 'Recent trends' section on page 2).



### Percentage of 'journeys' on Highways Agency roads that are 'on time': monthly and annual averages from April 2010-September 2014 p (Table [CGN0104](#))



### About this release

This statistical release presents information about the reliability of journeys on motorways and 'A' roads managed by the Highways Agency, known as the [strategic road network](#). The reliability of journeys on Highways Agency roads is measured by the percentage of 'journeys' that are 'on time', comparing journey times with historical data for individual sections of road. This reliability measure is one of a number of indicators in the Department's [2012-2015 Business Plan](#).

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1. Reference times are updated for the April data each year.  
 2. Data to December 2012 were revised in March 2013 as a result of the implementation of planned methodology changes  
 p = provisional

**Latest statistics:** 78.3% of journeys on the Highways Agency managed network between October 2013 and September 2014 were 'on time'. This is similar (0.1 percentage points increase) to the year ending June 2014.

During the month of July 2014, the percentage of journeys 'on time' was 80.0% (down 0.3 percentage points from July 2013). In August 2014 it was 77.6% (down 1.0 percentage points from August 2013) and it was 81.6% during September 2014 (up 2.9 percentage points from September 2013). The reliability statistics for September 2014 are currently provisional while final checks on the raw data sources underpinning the statistics are carried out. They will be finalised in table [CGN0104](#) in December 2014, but are unlikely to change from the provisional estimates.

**Recent trends:** The annual reliability measure (percentage of journeys on time) consistently increased from the year ending March 2011 up to March 2012, but decreased in each of the following twelve months to March 2013. The changes in reliability over this period are believed to be predominantly due to large changes in rainfall and periods of heavy snowfall in England, relative to the previous year.

The reliability measure has been broadly stable since the year ending March 2013. During the rest of 2013, this relative stability is believed to relate to a combination of lower levels of rainfall (which in itself is likely to lead to improved reliability) and increases in traffic on motorways and rural 'A' roads (which may lead to lower levels of reliability), relative to the previous year. During 2014, we have continued to observe small increases in traffic on motorways and rural A roads and rainfall in England has, on average, been higher than in 2013. In this context, we might have expected reliability levels to fall, so the reasons for the continued stability are less clear. However, reference journey times updated for April 2014 data may also partly explain recent trends (see Background information section for more details).

**Future plans:** Since the last quarterly release in August we have continued to engage with stakeholders about the reliability statistics, and to explore alternatives to the current 'on time' reliability measure. Progress on this has been positive. If we plan to introduce a new reliability measure for Highways Agency roads we expect to be in a position to make proposals on this in our next statistical release in February 2015. For more information about this, please contact us using the details provided on the first page of this release.

## Introduction

The Highways Agency's network of motorway and 'A' roads account for around 2% of all roads in England, but carries around a third of all traffic.

The reliability of journeys on the Highways Agency's roads is a measure of how predictable journeys are on the network. For the statistics in this release, reliability is measured by the percentage of 'journeys' that are 'on time' where:

- ▶ 'Journeys' are defined as travel between adjacent junctions on the network
- ▶ An 'on time journey' is defined as one completed within a set reference time, based on historic data on that section of road.

The data are based on journey times which are estimated using in-vehicle Global Positioning Systems (GPS) and traffic flows estimated using automatic traffic counters.

For further information, [a useful introduction to the Department's road congestion and reliability statistics](#) is available.

## Background information

### Strengths and weaknesses of the data

As a measure that is based on comparing current journey times on the network to road users' previous experiences on similar types and times of day, these statistics are very useful in monitoring how predictable journey times on the network are. However, they do not directly measure whether congestion, in a physical sense, has improved or deteriorated over time.

For example, journeys on a particular stretch of road could be very slow moving at certain times of the day with lots of congestion evident. However, if the effects of this congestion were fairly predictable and journey times were similar day to day, these journeys would be considered reliable. Similarly, journeys on another stretch of road could be fairly fast moving on average, but equally would be considered unreliable if conditions varied wildly from day to day, with some journeys experiencing very little congestion while others were affected severely.

### Methodology and technical detail

The statistics used to monitor journey time reliability on the Highways Agency's motorway and 'A' road network are compiled from in-vehicle GPS data and from flows estimated using automatic traffic counters.

Real, observed, journey time data with a good temporal match are used to estimate reliability for each section of road. Where no data of this quality are available for a particular section of road or time period, reliability levels are imputed. Imputation is predominantly based on corresponding monthly day-time and night-time averages for individual sections of road. Where there is insufficient data for individual road sections, national day-time and night-time averages are used to impute reliability levels.

There has been a reduction in the imputation levels from October 2013 due to the relatively large increase in the vehicle fleet used to estimate journey times to produce the reliability statistics at that point. A monthly breakdown of the amount of data requiring imputation is available at: <https://www.gov.uk/government/publications/road-traffic-speeds-and-congestion-statistics-guidance>

Reference journey times are updated annually for the start of each financial year and are predominantly based on journey time data from the previous calendar year. This ensures that reliability levels are measured relative to the latest conditions experienced on each part of the network. Therefore, differences observed when comparing reliability for months in different financial years will reflect the change in the references used. For the latest reference change, which took effect from April 2014 data, the impact on the national measure is around +2.3 percentage points. This is mostly due to slightly slower reference



### Reliability tables

Both the main tables on the reliability statistics, plus an accompanying map, are available [from the reliability tables page](#).

### Links for further information

[Guidance on the methods used to compile the reliability statistics](#) is available.

The historic reliability data series to December 2012 was revised in the March 2013 release, as a result of [planned methodology changes](#).

times from 2013, compared to the previous reference year's times. Although 2013 was generally drier than 2012 (which is likely to have reduced journey times in general), the slower reference times from 2013 may relate to heavy snowfall observed early in the year (particularly in January), combined with the small increases in traffic on Highways Agency roads.

Reliability data for individual road sections in table [CGN0106](#) are not published where the level of national imputation used in that estimate is greater than 20%, or where corresponding references are of very poor quality.

The estimates of journey reliability for individual road sections may reflect the impact of a number of factors, including roadworks. Where the time and location of roadworks are published in advance at <http://www.highways.gov.uk/traffic-information/traffic-information-services/scheduled-roadworks/> estimated impact of those works will be taken into account in the reliability estimates provided.

### Next updates

Provisional 'on time' reliability figures for October and November 2014 will be published in table [CGN0104](#) on 11 December 2014 and 8 January 2015 respectively. The next release of 'on time' reliability statistics will contain provisional figures for December 2014, along with final figures for October and November 2014, and will be published on 12 February 2015. The next update of sub-national statistics on individual road sections will be published in table [CGN0106](#) at the same time as the next quarterly release.

### Request for feedback

We are always keen to receive feedback from users of transport statistics. If you have any comments about how the statistics in this release are presented or analysed, please contact us using the details listed on the first page of this release.

## National Statistics

National Statistics are produced to high professional standards set out in the [Code of Practice](#). They undergo regular quality assurance reviews to ensure they meet customer needs.

In July 2012, the United Kingdom Statistics Authority confirmed the designation of the national level statistics in this publication as National Statistics, signifying compliance with the Code of Practice for Official Statistics.

A limited number of [ministers and officials](#) receive pre-release access to these statistics up to 24 hours before their release.