

Reliability of journeys on Highways Agency roads: England, April to June 2014



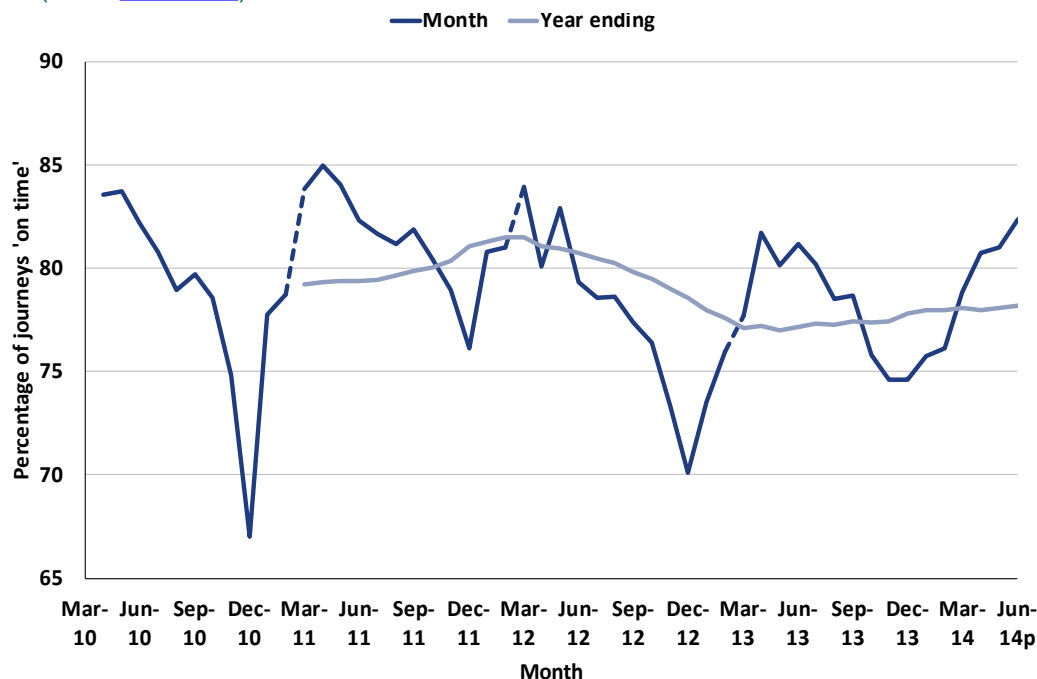
Department
for Transport

Main findings: Reliability of journeys broadly stable since March 2013

- ▶ **78.2% of journeys on the Highways Agency's network were 'on time'** in the year ending June 2014, **similar to** the year ending March 2014.
- ▶ Since the year ending March 2013 reliability levels have been broadly stable. There were small increases in reliability in December 2013 and January 2014.
- ▶ This recent stability of reliability levels may relate to a combination of improved weather conditions, and increases in traffic on motorways and 'A' roads, relative to the previous year.

Percentage of 'journeys' on Highways Agency roads that are 'on time': monthly and annual averages from April 2010-June 2014 p

(Table [CGN0104](#))



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.

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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Latest statistics: 78.2% of journeys on the Highways Agency managed network between July 2013 and June 2014 were 'on time'. This is similar (0.1 percentage points increase) to the year ending March 2014.

During the month of April 2014, the percentage of journeys 'on time' was 80.8% (down 1.0 percentage points from April 2013). In May 2014 it was 81.0% (up 0.9 percentage points from May 2013) and 82.4% during June 2014 (up 1.2 percentage points from June 2013).



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 changes in rainfall and periods of heavy snowfall relative to the previous year.

The reliability measure has been broadly stable since the year ending March 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), compared to the same months in the previous year. There have been small increases in the measure in December 2013 and January 2014. Although January 2014 was a particularly wet month, the increase in reliability may be explained by a larger negative impact of short periods of heavy snowfall across England the previous year.

The reliability statistics for June 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 September 2014, but are unlikely to change from the provisional estimates.

Other tables, which further detail of the key results presented in this statistical release and statistics on other related topics. They are available here: <https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics#data-tables-associated-with-this-series>

Since the last quarterly release we have continued to engage with stakeholders about the reliability statistics, and to explore alternatives to the current 'on time' reliability measure. In particular, we are evaluating the use of a series of variability measures, comparing speeds or journey times at different points in the distribution to do this. We will provide a further update of our work in this area, and its relevance to the current measure, in our next release in November 2014.

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.

Over the last year, we have been publishing statistics, ‘badged’ as ‘Experimental’, on individual road sections on Highways Agency roads. This included publishing maps and charts in our quarterly releases, and publishing statistical table [CGN0106](#) for each road section on a monthly basis. In our last quarterly release, published on 8 May 2014, we proposed to publish table CGN0106 on a quarterly basis instead, and to publish the maps and charts on an annual basis at the end of each calendar year. Because of the relatively small changes observed on a quarterly basis, and the limited feedback we had received on these Experimental Statistics to date, we have decided to implement these proposals with immediate effect. Table [CGN0106](#) has been published this month, and will be published on a quarterly basis thereafter. The latest map, for 2013, showing reliability for individual road sections, can be found in table [CGN0107](#).



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.

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](#).

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. Differences observed when comparing reliability for months in different financial years will partly reflect a change relating to the updated references used. The impact of reference changes on the national reliability measure has been up to around +/- 2 percentage points for these comparisons. For the latest reference change, which took place in April 2014, the impact on the national measure is around 2.3 percentage points. This is due to slightly slower reference times in 2013, compared to the previous year.

Reliability data for individual road sections in 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 Release

The next release of journey time reliability statistics will be published on 13 November 2014. It will contain provisional information about the reliability of journeys on the Highways Agency's motorway and 'A' road network in the year ending September 2014, as well as the final figures for July and August 2014. The next update of sub-national statistics on individual road sections will be published in table CGN0106 at the same time. However, we will also continue to update and publish our national reliability statistics on a monthly basis. Provisional figures for July and August will be published in table CGN0104 on 11 September 2014 and 9 October 2014 respectively.

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.