



Department for Transport

Reliability of journeys on Highways Agency roads, England: January to March 2015

Main findings: Reliability of journeys broadly stable since March 2013



78.7% of journeys on the Highways Agency's network were 'on time' in the year ending March 2015, a 0.1 percentage point increase compared to the year ending December 2014.

Percentage of 'journeys' on Highways Agency roads that are 'on time': monthly and annual averages from April 2010-March 2015 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

Important note - changes to these reliability statistics

- ▶ **Following the proposals set out in our last statistical release, we will be changing the method we use to calculate reliability on the strategic road network.**
- ▶ **Going forward, statistics using the new method will replace the 'on time' reliability statistics currently published.**

For more information about these changes, and new travel time statistics that we plan to publish, please see page 3 of this release. If you would like to provide feedback, or would like further information, please use the contact details at the bottom of this page.

About this release

This statistical release presents information about the reliability of journeys on motorways and 'A' roads managed by the Highways Agency (Highways England from 1 April 2015, see page 3 sidebar for more information), 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.

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Introduction

The Highways Agency's network of motorway and 'A' roads accounts 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 concise [introduction to the Department's road congestion and reliability statistics](#) is available.

National overview of reliability

Latest statistics: 78.7% of journeys on the Highways Agency managed network between April 2014 and March 2015 were 'on time'. This is a 0.1 percentage points increase compared to the year ending December 2014.

During the month of January 2015, the percentage of journeys 'on time' was 76.6% (up 0.9 percentage points from January 2014). In February 2015 it was 76.1% (unchanged from February 2014) and it was 79.9% during March 2015 (up 1.0 percentage points from March 2014).

Change in monthly reliability performance ([CGN0104](#))

January 2015

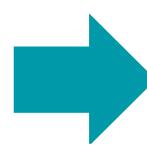
76.6%



0.9 ppts from
January 2014

February 2015

76.1%



unchanged from
February 2014

March 2015 p

79.9%



1.0 ppts from
March 2014

ppts - percentage points

p=provisional while final checks on the raw data sources underpinning the statistics are carried out. They will be finalised in table [CGN0104](#) in June 2015, 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 was 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.

Since the start of 2014 we have continued to observe small increases in traffic on motorways and rural A roads and rainfall in England, has, in many months, been higher than in the same months in 2013. In this context we may have expected reliability levels to fall in some months, so the reasons for continued stability throughout 2014 (and into 2015) are less clear. However, reference journey times updates for April 2014 data may partly help to explain recent trends (see Background information section for more details).

Highways England

As part of the Government's [Roads Reform programme](#), the Highways Agency has become a government-owned strategic highways company, named Highways England. This change took effect on 1 April 2015. We have continued to reference Highways Agency in this release for reasons of continuity.

Geographical network

As part of the methodology changes, we are planning to update the geographical network on which the current statistics are based for the strategic road network.

Important note: Changes to the reliability statistics

Following the proposals set out in our last statistical release, published in February:

- ▶ **We plan to change the method used to calculate reliability on the strategic road network (SRN) for April 2015 data onwards.**
- ▶ **Going forward, statistics using the new method will replace the 'on time' reliability statistics currently published.**
- ▶ **We also plan to start publishing new statistics on average speeds and on congestion (measured by average delay) for the SRN from April 2015 data onwards.**

We are making these changes as a result of feedback received from a number of local authorities and other stakeholders. There will be no new 'on time' reliability statistics published after March 2015 for Highways Agency roads. The provisional figures for March 2015 will be finalised in the relevant tables in June 2015.

After liaising with the UK Statistics Authority on the proposed changes to these statistics we are planning to publish the new statistics as National Statistics.

The reliability measure we are proposing to introduce for April 2015 data onwards is known as the Planning Time Index (PTI). The PTI aims to measure the additional time that drivers need to leave to ensure that they arrive at their destination 'on time' most of the time (e.g. I need to leave an extra 20% of time - on top of the expected time under free-flow conditions - to arrive 'on time' most of the time).

The new statistics proposed are the result of a long programme of work with the Highways Agency (now Highways England). Taken together, the three proposed measures aim to provide a more holistic evaluation of travel time performance on the SRN.

We intend to publish some ad-hoc statistical analysis on these three travel time measures soon, along with further details about each of the travel time measures.

If you would like to provide feedback on these changes, or would like further information, then please use the contact details on the front cover of this release.

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, which are used to produce the reliability statistics) at that point. A monthly breakdown of the amount of data requiring imputation is available [here](#).

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 partly 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 due to slightly slower reference 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



Business Plan

This reliability measure is one of a number of indicators in the Department for Transport's [2012-2015 Business Plan](#).

Reliability tables

Both the main tables on the reliability statistics, plus map CGN0107, 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](#).

National Statistics

In July 2012, the United Kingdom Statistics Authority confirmed the designation of the national level statistics in this publication as National Statistics. This signifies 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.

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 March 2015 will be published in table [CGN0104](#) on 11 June 2015. As this will be the final date for updating these 'on time' reliability statistics, the final update of sub-national statistics on individual road sections will also happen at this time (in table [CGN0106](#)).

The new reliability statistics, along with the new average speed and average delay statistics for the SRN are expected to be first published on 13 August 2015.

Request for feedback

We are 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 release's front page.