



Road Conditions in England - a basic guide

What is the purpose of the Road Conditions in England statistical bulletin?

Road Conditions in England (RCE) provides information about the overall state of roads in England as well as an indication of whether the condition is improving or worsening.

What roads does it provide information about?

Information is provided about all types of roads maintained at public expense in England as at 31st March 2019, including roads owned and maintained by local highways authorities (also called local roads) and those owned and maintained by Highways England (also called trunk roads). To note, the financial year 2014/15 was the last year of reporting by the Highways Agency, after which it was replaced by Highways England from April 2015 onwards.

How do you measure road condition?

There are a number of ways of measuring road condition, depending on which aspect of the road is of interest. Most of the information in RCE is about the surface condition of the road – e.g. how many defects there are, whether the surface is breaking up, etc. Surface condition surveys can be carried out either manually, by a surveyor visually inspecting the road, or automatically, using vehicles with mounted lasers and cameras to measure different aspects of the road.

Apart from unclassified roads, all the information on the surface condition in RCE comes from automated surveys except where stated otherwise. The machines that carry out the surveys on the local roads are called SCANNER (Surface Condition Assessment for the National Network of Roads) and the machines which survey trunk roads are called TRACS (Traffic-speed Condition Survey). The two approaches have many similarities, with SCANNER derived from the TRACS approach.

SCANNER, TRACS and the other techniques are discussed in more detail in the [Technical Note](#). Other techniques are used to assess the condition of the sub-surface of the road or the ‘skiddiness’ of the road.

What is the main way road condition is shown in the publication?

The main measure of road condition shown in the publication is the percentage of the network that should have been considered for maintenance that year, at LA, regional and national level. This is the percentage of its network that an LA or Highways England calculated to be in “red” condition based on its Road Condition Indicator (RCI) score.

What is this the Road Condition Indicator (RCI)?

The Road Condition Indicator (RCI) is used to assess the condition of individual sections of road. It is calculated using the outputs from the surveys mentioned above. A complete description and worked example of RCI is provided in Section 3.6 of the technical note.

An RCI score can range between 0 and 315. Any stretches of road scoring below 40 are declared to be in good, or 'green', condition. Any stretches scoring higher than 40 but less than 100 will not be in perfect condition but would still offer a good driving surface (called 'amber' condition). Anything scoring over 100 is likely to be in poor condition and will probably need maintenance within in the next year or so (called 'red' condition).

Highways engineers in local authorities use RCI scores to identify which sections of roads need repairing.

What parameters are used to calculate RCI? The following parameters are used to calculate RCI:

- Rut depth (i.e. the depth of the ruts running along the length of the road caused by where the wheels of vehicles drive)
- 'Bumpiness' along the road surface (called longitudinal profile)
- Texture of the road surface
- Cracking of the road surface

More complete descriptions and photographs of roads showing some of these defects can be found in Section 3.4 of the [Technical Note](#).

How many potholes are in the roads?

SCANNER surveys cannot identify potholes as a specific defect. However, they do not ignore potholes completely. Potholes can show up as defects under the measured parameters, and so will contribute to the condition of the road.

Similarly it is not possible to tell how much larger the potholes are in different years. There are, however, other measures that have been developed within the sector that focus more specifically on potholes. This includes the RAC pothole index, which is based on the number of callouts from their members that are related to vehicle faults that are likely to have been caused by a pothole.

The pothole index data can be found in the latest RAC '[Report on Motoring](#)', published in 2018:

There are also a growing number of tools that allow the public to report potholes and road defects through the use of mobile apps.

The statistics suggest that roads are getting better yet there are more potholes on my street now than there used to be. How can this be?

The statistics give an indication at what is happening on average, throughout the country. It is possible for the national condition to improve but your own local authority's roads to get worse. You will be able to tell this by looking at how your local authority is performing in the LA-level table.

Even if your local authority has seen improvements overall, this does not necessarily mean that every road is improving. It is likely that some roads will have worsened even in an authority which is improving overall.