



Pothole repair

Cormac, on behalf of Cornwall Council, inspects and repairs Cornwall's roads in accordance with the council's Highway Maintenance Manual.

Why do potholes appear?

Potholes can occur for many reasons - from wear and tear of passing traffic, to weather conditions and subsidence. They can appear at almost any time, especially as temperature within the road surface changes.

As the road surface ages it becomes more porous and rainwater gets in through cracks. In wet weather, water is forced further into the road surface by the tyres of passing vehicles and this pressure further weakens the surface.

In winter, as the temperature changes between freezing and thawing, there is a faster deterioration of road surfaces, because the water filling cracks freezes and expands, loosening the surface material

In sufficient quantities, where water gets into the lower layers of material supporting the road surface, wash-out can occur. As vehicles pass over these sub-surface gaps, the top layer collapses and crumbles.

Once a pothole has formed it will quickly grow as traffic continually dislodges and removes weakened and broken pieces of the surface.

How we prioritise repairs

We carry out regular safety inspections across the highway network. Our inspectors log defects needing repair - but potholes can also develop between inspections and, in some cases, overnight and without warning.

How and when we fill a pothole depends on a number of factors, including:

- How soon it has been identified – either through routine inspection or it being reported to us
- The size and depth of the hole
- How likely it is to cause harm or damage
- The importance, or the level of use, of the road

All of these factors feed into a risk based approach to categorise all highway defects and safety is always our primary consideration.

Examples of other road surface defects that are not potholes but are prioritised in the same way include:

- Large areas of uneven surface or depressions
- Trench failure
- Edge of road deterioration
- Cracking/crumbling road surface

If the inspection finds the pothole to be a significant hazard, we will repair it within 48 hours or sooner if it is of real concern.

Where the pothole is categorised as a less significant hazard, then repair times will vary from 3 to 28 days according to severity.

Any lower priority deterioration that has yet to become hazardous will be added to our programmed maintenance, or wider patching or surfacing work for repair in the future.

For more information about future treatment programmes the council publishes details here: [surface treatment programmes](#).

We always aim to repair potholes at the first visit using a permanent repair. A repair may not happen straight away if traffic management is complex or the cause of the failure is not clear. In these cases, we may first carry-out a temporary repair or protect the area with signing or barriers.

Weather can also be a factor as some repairs require dry conditions. In exceptional circumstances our teams may be responding to emergency situations such as flooding or winter weather.

How we carry out repairs

We use a combination of techniques. We utilise spray injection machines which significantly speeds-up the repair process. These vehicles have been designed in conjunction with our teams to work in our narrow rural roads.

First, a high-pressure blower blasts the defect to clear debris. A bitumen emulsion is then applied sealing any cracks. Finally, new bitumen coated aggregate is applied at high velocity, compacting from the bottom up; leaving a permanent repair that is ready for traffic immediately.

We also use towable asphalt hot boxes, which are essentially large ovens used for keeping the material at the right temperature. The repair involves cutting out the weakened area. The hole is cleaned out, painted with bitumen binder, then filled with a hot layer of material and compacted.

In a first of its kind in Cornwall, and possibly the UK, we have successfully converted one of our hot boxes to run on biomethane.

We aim to expand this trial, particularly for equipment that is unlikely to become electric powered in the future.

How many are repaired?

On average, we repair approximately 28,000 potholes a year. That's the equivalent of around 109 every working day.

Report it

Our inspectors can't be everywhere all the time, so it is really important that road users actively report defects as soon as they see one.

You can report an issue on a highway or footway using the council's online reporting tool here: www.cornwall.gov.uk/reportroad

Please be aware the defect reporting system is not monitored outside of working hours. Similarly, our social media channels are not monitored 24 hours a day and may not be monitored at weekends.

If you need to report something that is causing an immediate danger or is an emergency, please telephone **0300 1234 222** (24 hour service) giving details of the location and it will be passed onto our emergency standby team.

And finally, we do not maintain the A30 (other than the section west of Penzance from the Chy and Mor roundabout), or the A38 from Bodmin to Plymouth. These trunk roads form part of the National Highways trunk road network.

If you notice damage on either of these roads, you should report it here: <https://report.nationalhighways.co.uk/> to National Highways (formerly Highways England).



Spray injection machine in use