

Our ref: FOI 100442

[REDACTED]

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Team  
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## Repairing potholes

I am writing to confirm that we have now completed our search for the information, which you requested on 3 September 2019.

In your request you asked for the following information:

*I am looking to gather accurate information from the last 5 years, to determine a better understanding on how the whole process works, in both financial and practical terms.*

*I would be obliged if you would be able to assist me in gathering information on your processes for the identification and the rectifying of potholes. I would like to gather information on the methods used to repair potholes and the associated costs from start to finish. The information I wish to collate are the root causes for carriageway failure, resulting in the formation of potholes.*

*Also I would like to know how long the pothole repair lasts and are the costs involved best value for the stakeholders?*

I will answer each of your points in turn below.

- *processes for the identification and the rectifying of potholes*

We identify defects on the network which need attention, through regular safety inspections undertaken by highways inspectors or our service providers (depending on the type of contract in place), through our Traffic Officers, who patrol the motorway network and through reports from our road users.

We also undertake full road condition surveys across our entire network every year and the results of this are used to identify resurfacing requirements. This includes road surface maintenance which ranges from renewing road markings, localised

minor repairs to replacement of the road surface to the full reconstruction of the road structure.

Once a surface defect has been identified, they are categorised and we aim to fill the most serious ones i.e. safety related defects, within 24 hours. These are known as category 1 defects. These are generally potholes wider than 15 cm (6 inches) diameter, or deeper than 4cm (1.5 inches) or the road surface thickness.

Once made safe, these defects will be fully repaired or 'patched' within 28 days, dependant on weather conditions. This means that the area around the defect (which has been previously filled) will be cut out and a 'permanent patch' will be applied to the carriageway surface. However, if there are a number of defects within a very short distance of each other, a larger patch will be applied. Patching mostly involves the replacement of the surfacing (around 50mm depth) using the specification in our document *Specification for Highways Works*.

All other defects, known as category 2 defects, are split into two sub-categories; non-superficial defects, which have to be repaired within 6 months and superficial defects, that are not likely to deteriorate extensively and therefore can be repaired as part of a future programme of renewal or improvement schemes. All our schemes are based on the principles of sound whole life cost solutions, i.e. to ensure right treatment at the right time. The whole life cost approach is part of our asset management policy. The principle allows us to prioritise the works programme using the available budgets.

For more information, please see the Routine and Winter Service Code, part 2: [http://www.standardsforhighways.co.uk/ha/standards/nmm\\_rwsc/docs/rwsc.pdf](http://www.standardsforhighways.co.uk/ha/standards/nmm_rwsc/docs/rwsc.pdf)

- *methods used to repair potholes and the associated costs from start to finish.*

There are several methods of repairing potholes and the road materials industry provide many viable solutions. As an example, for temporary repairs, potholes can be filled with a 'cold fill' rapid set tarmac product, such as 'Viafix'. For larger patches or carriageway reconstruction, a hot bitumen material is traditionally used to meet the above specification document.

Where an immediate repair is required and where it is suitable, the associated costs would include the use of a rolling road block, to allow our workers to safely carry out a temporary repair. Otherwise, we may use mobile traffic management to make a temporary repair. Permanent repairs would be carried as part of a future programme of renewal, or improvement scheme.

- *the root causes for carriageway failure, resulting in the formation of potholes.*

There are a number of possible causes for carriageway failure. Extreme weather (both hot and cold) is a key factor. Other reasons could be age of the surface, ground movement and traffic loads, but most potholes tend to form when water

penetrates between the aggregate in the surface course and then freezes, which loosens the aggregates.

More information can be found in the Design Manual for Roads and Bridges:  
<http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol7/section4/hd3194.pdf>

- *how long the pothole repair lasts*

There are multiple and varied factors determining how long a pothole repair will last. It will depend on the severity, dimensions, location, type of repair material and conditions when the repair has been carried out. Our aim is to make sure the repair techniques provide permanent solutions by working closely with the materials suppliers.

- *are the costs involved best value for the stakeholders?*

We carry out all work on the network in the most efficient and cost-effective way possible. All repairs carried out follow a value management process depending on the severity of the defect.

The best value temporary repair tends to be a hot repair and we would try and group defects together under the same set of road closures. However, unplanned safety critical defects may entail a less cost-effective repair solution, but it does allow us to keep roads open, ensuring that delays and therefore cost to the economy, are kept to a minimum.

The above relates to how the Strategic Road Network is managed. Local highway authorities have their own set policies and may not be consistent with our policy. In case of local highways, the Department for Transport prescribes the ethos of good asset management principles. For reference, you may be interested in the work the department did on pothole repairs, i.e. Highways Maintenance Efficiency Review (HMEP) around 2012, which guides local highway authorities on good practice. You can find this information on the website.

If you are unhappy with the way we have handled your request, you may ask for an internal review within 2 months of the date of this response for Freedom of Information requests and within 40 days for Environmental Information Regulations requests.

Our internal review process is available at:  
<https://www.gov.uk/government/organisations/highways-england/about/complaints-procedure> If you require a print copy, please phone the Information Line on 0300 123 5000; or e-mail [info@highwaysengland.co.uk](mailto:info@highwaysengland.co.uk). You should contact me if you wish to complain.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office  
Wycliffe House  
Water Lane  
Wilmslow  
Cheshire  
SK9 5AF

If you have any queries about this letter, please contact me. Please remember to quote reference number FOI 100442 in any future communications.

Yours sincerely

**National Correspondence Team**