# Potholes

A Summary Of How We Manage And Repair Potholes In Norfolk


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# Introduction

Over the last few years we have seen an increase in the number of potholes appearing around the county. This is something that is mirrored across the country and was largely to do with the extreme weather we experienced.

Following this dramatic increase in potholes central government allocated additional funding to authorities to help address the pothole problem. They also published 'Potholes – A Repair Guide' – a document that summarises some of the treatment methods and considerations.

The following information outlines how we manage, treat and prevent potholes in Norfolk.

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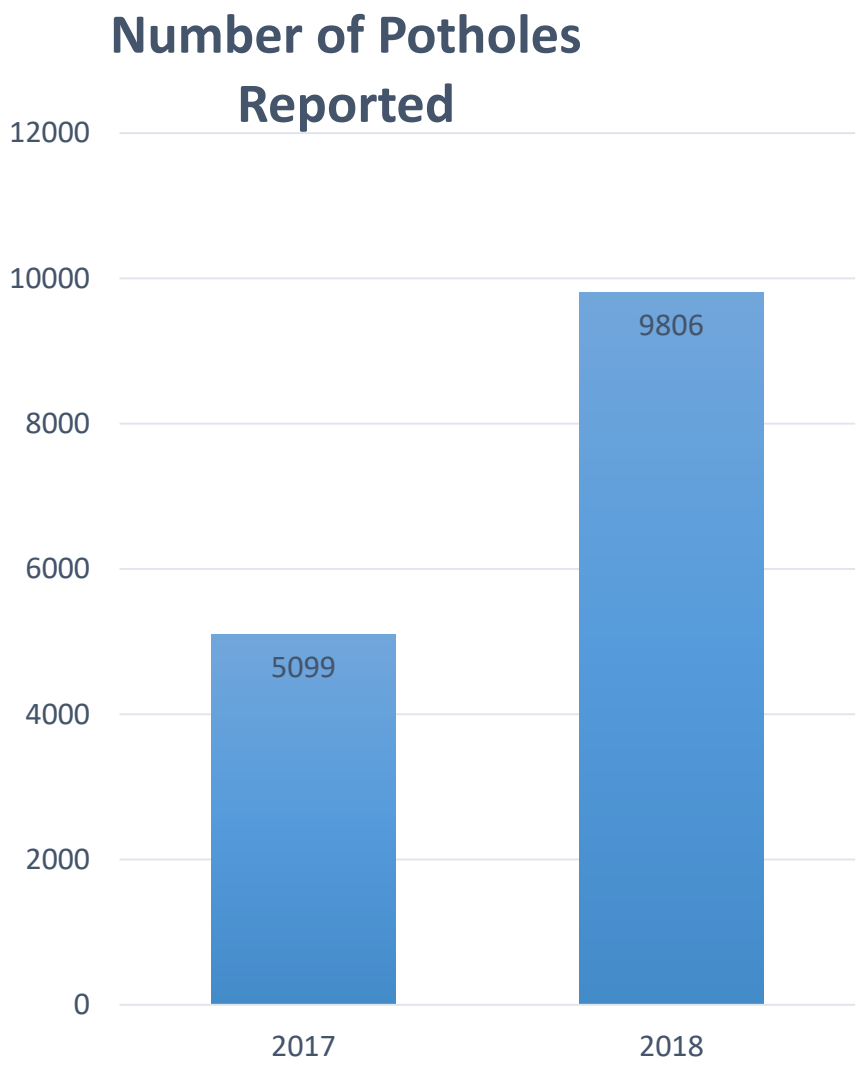
# The Impact of Extreme Weather

After the ‘Beast from the East’ in February/March 2018 we saw a significant increase in potholes in Norfolk, with almost twice the number of potholes being reported by the public in comparison to the year before.

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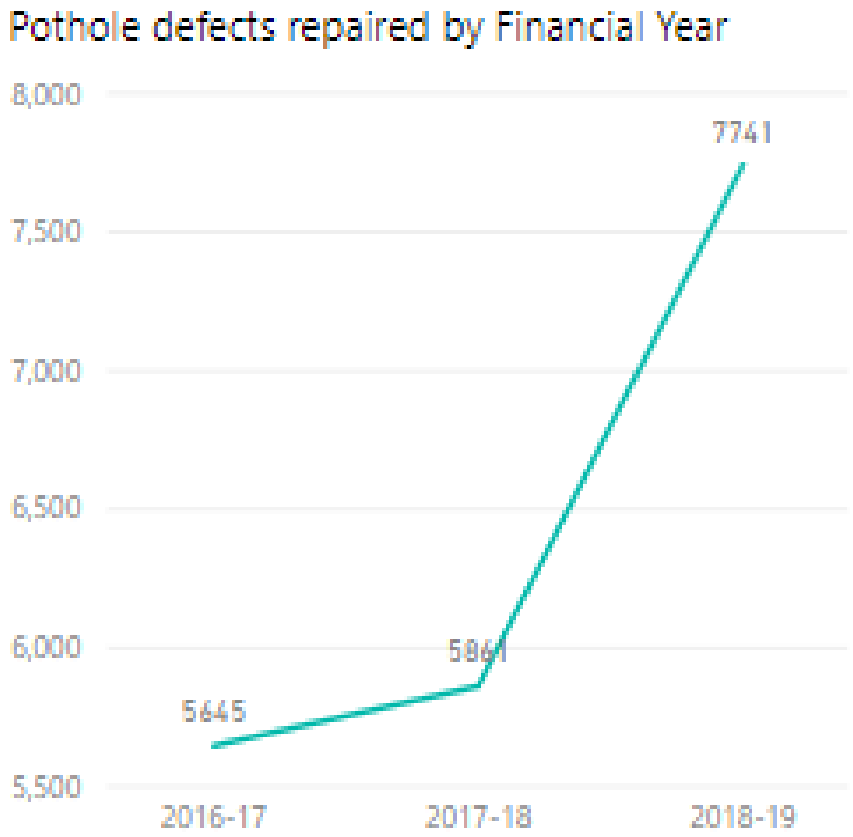
# Additional Funding

Fortunately, we were able to utilise additional funding from central government to help address the issue. Our patching gangs, together with patching gangs from our contractor Tarmac, were joined by 4 Velocity patching machines to get the potholes filled as quickly as possible.

In 18-19 we repaired almost 2000 more potholes than the previous year.

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| LIKELIHOOD | IMPACT | | | | |
|---|---|---|---|---|---|
| | Extreme 5 | Major 4 | Moderate 3 | Minor 2 | Negligible 1 |
| Very Likely 5 | 25 | 20 | 15 | 10 | 5 |
| Likely 4 | 20 | 16 | 12 | 8 | 4 |
| Possible 3 | 15 | 12 | 9 | 6 | 3 |
| Unlikely 2 | 10 | 8 | 6 | 4 | 2 |
| Rare 1 | 5 | 4 | 3 | 2 | 1 |

| Risk Factor | Defect Category | Priority Response | Priority Response Time |
|---|---|---|---|
| 25 | 1 | A | Up to 2 hours from discovery |
| 12 - 20 | 1 | B | Up to 4 days from discovery |
| 5 - 19 | 2 | C | Up to 35 days from discovery |
| 1 - 4 | 2 | D | Defect low risk, continue to monitor or repair on an opportunity basis or next planned programme |

# Well Managed Highway Infrastructure – A Code of Practice

In October 2018 the Department for Transport (Dft) launched a new Code of Practice which emphasizes the importance of a ‘risk based approach’.

In Norfolk we use a risk based approach when identifying potholes and prioritizing their repair.

We consider the type and severity of the defect alongside it’s location to assess risk and determine a response time.

This is reflected in our Transport Asset Management Plan.

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# How We Repair Potholes in Norfolk

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# Patching with hot asphalt


- This method is used across the county and is suitable for most surfaces.

- A permanent repair and a preferred solution.

- Hot Rolled Asphalt (HRA) - a mixture of sand, filler and bitumen - is transported to site in a ‘hot box’ and used to repair the pothole.

- This work is carried out by our works team, Tarmac and sub-contractors (most notably NR Asphalt).

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# Cold Applied Instant Material

- A pre-mixed asphalt material is used to fill potholes on less busy roads.

- It is a relatively quick method of repair and can be less costly.

- We use a more durable product to enable us to make permanent, longer lasting repairs.

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# Spray Injection Patching

- We use this method to help us repair potholes faster than conventional methods.
- It helped us deal with the significant demand as a result of the ‘Beast from the East’.
- We make use of Jet Patching machines from Velocity and Archway Roadmaster.


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# Spray Injection Patching

How it works…

1. A jet of air is directed at the pothole at high speed to remove all the dust and debris.
2. A cold bitumen emulsion is forced into every crack and crevice of the pothole, sealing the defect and protecting it by preventing water from getting in.
3. The aggregate mix is fired at high speed through the hose, evenly coating the granules with bitumen emulsion.


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# Other Treatment Methods

The Pothole Repair Guide published by the Dft summarises a variety of pothole repair methods currently available, including those used in Norfolk.

It also mentions some treatments that Norfolk do not currently use for pothole repair. ‘Thermal Road Repair’ is not commonly used as it requires a specific type of road surface.

In-situ recycling, a method of recycling existing road surface material, is used in Norfolk but because it only becomes cost effective for larger schemes we do not use this for pothole treatment.

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# Resurfacing


- Some roads will require more significant structural repair and will be added to our resurfacing programme.

- Road condition surveys, traffic information, new developments and local knowledge help prioritise and inform this programme.

- The programme is submitted for sign off every January for the following financial year.

- In November 2018 we received additional government funding which we used on 35 additional resurfacing projects - more than double what we would have been able to complete in this financial year.

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# ‘Prevention is Better than Cure”

## Potholes Review 2012 - by Highways Maintenance Efficiency Programme

- It is generally recognised that it is better to prevent potholes forming in the first place and extend the life of our roads. However, we have to take a risk based approach when deciding how best to prioritise repairs. Particularly as resurfacing can be extremely costly.
- The use of intermediate treatments within life cycle planning with the intention of postponing capital investment and delivering a desired level of service at minimum cost is part of our asset management strategy.
- To help extend the life of our roads and prevent potholes forming we deliver an extensive Surface Dressing programme.
- We also use Reclamite, a seal that helps preserve and rejuvenate road surfaces.
- Techniques like joint sealing are also used to help prevent potholes from forming, while retexturing is used to improved skid-resistance.

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# Surface Dressing


- A thin layer of bitumen and chippings is applied to the road, it repairs and seals cracks, stopping water penetrating the surface. This helps reduce the number of potholes forming due to frost.

- Surface Dressing provides a new skid-resistant surface to help reduce the risk of accidents.

- The work takes place between April and September when the weather conditions are more suitable. We notify people living along surface dressing  routes to make them aware of the work due to take place and ask them not to park on the road.

- Surface Dressing can be done relatively quickly which minimises traffic disruption. It is also a cost-effective way to help maintain the road network.

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# Reclamite


- Reclamite is an approved chemical rejuvenator for roads.
- It is an intermediate treatment designed to extend the life of an existing bituminous surface course which is in existing good condition
- It does not repair cracks
- It reduces the rate of oxidation of the bitumen extending performance by up to 7 years.
- The process involves the spraying of an emulsion based chemical followed by the application of some fine aggregate.
- It is quicker to apply and have less aftercare than traditional surface dressing
- It maintains the appearance of the original surfacing, and does not increase noise or build up surface height, and has advantages in whole-life cost and sustainability.
- To be effective requires early intervention in the lifecycle
- It requires application in dry and warm conditions.
- Click here for more information.

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# Joint Sealing

- Joint sealing is an intermediate treatment designed to extend the life of an existing bituminous surface course.

- It is typically applied to those road joints which have deteriorated and are an area weakness in otherwise sound road surface

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# Retexturing

- Retexturing is an intermediate treatment designed to restore the skid resistance properties of roads as a safety intervention.

- Hydrotexture retexturing is specially designed to remove excess binder surface carriageway surfaces.

- Captive Shot Blast is primarily used on an existing bituminous surface course by abrading the aggregate whilst removing excess binder and detritus from the road surface

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For more information or to report a pothole visit:
http://www.norfolk.gov.uk/potholes

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