Highway maintenance

North Yorkshire is England’s largest county geographically, with 5350 miles of roads running through it. Laid end to end, they would reach India.

Keeping our roads in the best condition for the money that we have available is one of the biggest challenges that the County Council faces. We have an annual highways maintenance budget of around £55 million and this money has to cover:

• planned maintenance – maintenance schemes that prevent problems occurring; and
• reactive maintenance – repairing problems that we find or that people report to us.

It is often said that prevention is better than cure and this is also true in the world of highway maintenance. Our aim is to keep the roads in as good a condition as possible by maximising the amount of planned maintenance work whilst also maintaining safety by fixing potholes or other defects in the road though reactive maintenance. It is not only more cost effective but also results in better quality roads for drivers throughout the county.
Planned maintenance

Planned maintenance is where we decide in advance which roads we are going to work on. This approach makes our budget go further, helps to prolong the life of a stretch of road and reduces the likelihood of problems happening in the future.

Measuring the condition of the roads

There are a number of ways in which we measure the quality of the road surfaces. These include:

- using a specialist survey vehicle to scan the surface of our busier roads - around 1300 miles in one direction one year, and the other direction the following year; and
- carrying out regular visual inspections from a slow moving vehicle for the remaining roads.

We use this information to create an accurate picture of the overall condition of the road network. We rate the condition of the roads using a simple red, amber and green system.

- Red – maintenance is required
- Amber – maintenance is required soon
- Green – maintenance not required

We use these ratings to produce a list of lengths of road that will benefit from some form of planned maintenance.

Prioritising planned maintenance

The most cost effective use of our finances is to target the amber condition roads that are in danger of becoming red and to “chip away” at the existing red condition roads. Through this approach we are able to stop roads getting into a condition where a more expensive preventative treatment is needed or where potholes or other defects might become more common. An amber condition road will more often require a less costly road treatment such as surface dressing which lengthens its usable lifetime.

There are other factors in the decision where we carry out planned maintenance:

- we mainly prioritise our busier roads which have the biggest impact on the people who use them;
- we may decide that a road in poor condition, such as a red rating, is unlikely to get any worse and so we can delay maintenance. We will, however, ensure we maintain its safety through reactive maintenance; and
- we often receive funding that can only be used for specific types of road. An example of this is when we recently bid successfully for money from the government to improve the condition of our lesser used roads that are important to the local economy.

This approach means that you could see us working on roads that are, on the face of it, in a better condition than others, however this is done to maximise the long term benefit for the money that we have.
Picking the right road treatment

Picking the right treatment is essential for making the best use of our highways budget to keep the roads in the best condition possible.

Before discussing the treatments, it is worth mentioning the biggest enemies of road condition, namely time and water. Over time a newly laid road will lose its flexibility and start to become brittle. Once this happens, traffic, particularly heavy traffic, can cause cracks to appear in the surface. This allows water to seep through and undermine the road leading to potholes and other defects. Very cold or wet weather speeds up this process which is why there are often more potholes at the end of winter.

There are four main types of treatment:

- **surface dressing** – a layer of bitumen is spread on an existing surface. Chippings are then spread on the surface and rolled in. Over the next few days, traffic on the newly surface dressed road beds the chippings into the surface. Importantly, surface dressing re-seals the surface against both cracking and water. It improves the surface texture and is quick to lay minimising road closures and disruption for the public. It can last around 10 years under normal use, can be re-dressed up to 3 times and at around £3 - £5 per square metre, it is the most cost effective way of maintaining the road network;

- **resurfacing** – we take the top surface layer off a road that is structurally sound and replace it with a new surface. This type of treatment is about five times more expensive than surface dressing. A newly resurfaced road can last up to 20 years however we will surface dress it before it reaches that age to prolong its lifetime. This explains why we often surface dress a road that looks in otherwise good condition;

- **reconstruction** – reconstruction is required when a length of road has deteriorated to a point where we can neither surface dress nor resurface it. Reconstruction consists of digging down to repair or replace the foundation layers of the road and finally resurfacing it. As with resurfacing, a reconstructed road can last up to 20 years but will be surfaced dressed before then. At around 15 times the cost of surface dressing, this is a very expensive treatment which can also cause a lot of disruption; and

- **patched repairs** – we often apply patching to a road that is largely good but has some problems. This is similar to filling in potholes but is better value as it takes place on a length of road not just a single location. Patching often enables the road to be surfaced dressed, which further extends its life.
Reactive maintenance

There will always be highways maintenance issues that need to be investigated and we have two ways of finding out about them.

• From customers - we receive thousands of reports of issues annually. We want to know about these, so if you see a highways problem, please report it using our online system. www.northyorks.gov.uk/potholes-and-road-condition-issues

• From inspections – we have a team of highways officers who travel the county all year round, inspecting road conditions. Generally, the busier the road, the more often we inspect it. If something is spotted during an inspection, then the highways officer investigates it in more detail.

Prioritising reactive maintenance

However we find out about a highways problem, we have to take a decision on whether to do something about it. We cannot fix every problem because we simply do not have the money to do so and prioritisation is the only way to spend our money wisely.

The decision on what action we take is based on these factors

• how bad the problem is – for example, how long or deep a pothole is; and
• where the problem is – for example, how busy the road is.

We use a combination of these factors to prioritise the problem and either repair it or make it safe within a particular timescale. Serious problems or problems on busier roads get fixed fastest.

This is known as a risk based approach to reactive maintenance. If you would like to know more about highway maintenance then please go to our website.

www.northyorks.gov.uk/road-maintenance

Highways England maintained roads

We are not responsible for maintaining all the roads in North Yorkshire. All motorways, the A1, A64, A66 plus the dual carriageway sections of the A168 and A19 are the responsibility of Highways England:

www.gov.uk/government/organisations/highways-england

How you can get involved

If you see a problem with a road you use, please tell us about it. The easiest way to do this is by using the online portal on our website. This lets you report the problem, and track what’s happening to it:

www.northyorks.gov.uk/potholes-and-road-condition-issues

Find out more

You can find out more about North Yorkshire’s highway service on our website:

www.northyorks.gov.uk/roads

Facebook: facebook.com/northyorkscctwitter.com/northyorkscctwitter.com/northyorksc
Contact us

North Yorkshire County Council, County Hall, Northallerton, North Yorkshire, DL7 8AD

Our Customer Service Centre is open Monday to Friday 8.00am - 5.30pm (closed weekends and bank holidays). Tel: **01609 780 780**
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