



How do we choose which schemes to include in our maintenance programme?

We consider the whole life of our roads and look at the most cost-effective way to maintain them. Road repairs are more expensive if the road is in a very bad condition, therefore, identifying problems and intervening early leads to cheaper whole life costs. This allows us to repair greater lengths of our roads for the same cost.

Whilst this is the most cost-effective way of maintaining our roads, there will have to be a balance, ensuring that some of our worst roads are included in our maintenance schemes.

We survey our roads every year, in line with national best practice, using machine based and visual surveys. The machine-based survey vehicles scan the road, looking for a number of different defects which are fed into a system, ensuring all roads are considered for repair. On roads that are not suitable for machine-based surveys (the road may be too narrow for the survey vehicle or may not be long enough for the vehicle to achieve minimum test speed) we carry out visual surveys which are done by accredited inspectors.

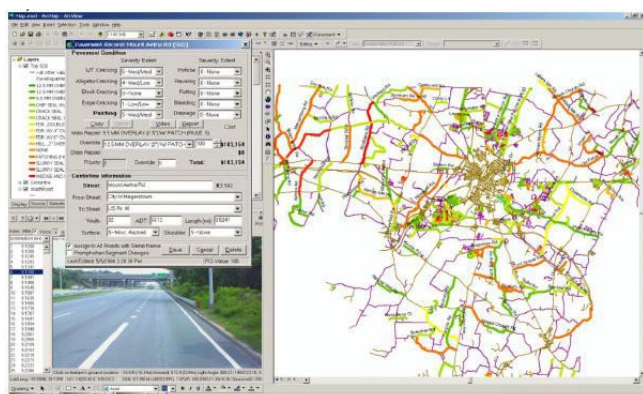
As well as defects, we are also concerned about safety, and on our higher speed roads we measure the grip to ensure the surface of the roads does not become too slippery. We measure the grip using a sideways-force coefficient routine investigation machine (SCRIM).

The road assessment vehicle (SCANNER) measures the condition of the road surface, along with the ride quality, and picks up data including:

- Rut depth
- three metre longitudinal profile variance (the ride quality experienced by the driver over a three metre distance)
- 10 metre longitudinal profile variance (the ride quality experienced by the driver over a 10 metre distance)
- Whole carriageway cracking
- Texture depth



All of this data, together with that from the SCRIM, is fed into pavement management software to be analysed. The SCANNER data is then categorised according to the condition of the road and is given a red, amber or green rating based on national condition thresholds. The SCRIM data is also processed against minimum safety thresholds and a list of sites which fall below the thresholds is produced. These ratings are then used to determine the best type of treatment.



We are then left with a long list of potential works and the most cost effective of these are investigated further by highways engineers to verify the schemes and to calculate an estimated cost for the treatment.

The condition of the highway, though important, is not the only thing to consider when putting a programme of works together. The following factors are also looked at:

- Customer enquiries – whilst we cannot repair every road that is reported to us, we can use the reports to help prioritise roads which have been picked up in the condition surveys
- Area officer/highway engineer reports – our area officers and highways engineers are effectively our eyes and ears on the ground. Area officer reports are used to prioritise, and highways engineers inform us of roads with significant patching which would benefit from being sealed using surface dressing.
- Importance to the network – If we have a large number of the same type of roads that are in the same condition, we'll take into account the importance of the road. For example, an unclassified road that is used as a through route may be chosen over an unclassified road that isn't, and a school or bus route may be considered over one without.
- Insurance claims – if a road has been involved in a number of insurance claims we may consider it for repair to prevent future incidents.
- Other major works affecting traffic flow – we have a responsibility to keep traffic moving around the network and cannot have works impacting on each other. Sometimes we will delay works to prevent that from happening.
- Joint schemes – we aim to bring works together that would be happening on the same stretch of road. If drainage work is due to take place on a road this year, and we were planning to do work on the same road the following year, we would aim to bring these works together to minimise disruption.
- Utility works – if there is a large amount of utility works due to take place which involves digging up the road, we will consider waiting until this work has been completed before carrying out any resurfacing.
- Network resilience – we need to look at routes that link us to neighbouring authorities, where a failure in the route would have an impact on travelling and on the economy. These routes need to be prioritised to ensure we maintain a resilient network.

The draft three-year maintenance programme produced by the Asset Management team is considered by the Highways and Transport Board and then submitted to the executive member for highways and transport for consideration. Once it has been discussed and agreed with the executive member the scheme is designed and delivered.

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