

Benefits of highway asset risk management explained

Modern approaches to managing highway assets contained in a recently updated code of practice place a greater emphasis on risk and should be closely followed, says Andy Warrington MCIHT.

Introduction

Last October saw completion of a review of the UK Roads Liaison Group's three national codes of practice: 'Well-maintained Highways', 'Management of Highway Structures' and 'Well-lit Highways' which resulted in the publication of 'Well Managed Highway Infrastructure'.

The objective of the review was to strengthen guidance on 'risk based' highway maintenance, enabling authorities to consider their asset management delivery in a local context and to facilitate efficiencies in delivering the highway service.

All local authorities now have just over one year left to implement 36 recommendations contained in the new code of practice across their highway services.

The new code is set to profoundly change the future direction of the UK's highway maintenance sector through the application of good asset management principles and adoption of a risk based approach. It is also designed to be more accessible for highways asset management practitioners.

Adoption of the new code is expected to be tested in the Courts where local highway authorities seek to defend third party liability claims. Implementation of the code is also likely to be a consideration by the media and key stakeholders in understanding an authority's response and risk management to significant events such as flooding and other causes of traffic disruption.

A shift in focus

Asset management delivery in the UK highways sector has moved significantly over recent years from 'reactive', to 'time based', then to 'condition based' and now, through the implementation of the code, to a risk based approach.



↑ Use of the code could help authorities in their response to natural events

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A reactive approach to maintenance could be summed up as: "wait until the asset fails then fix everything" whereas a time based approach – for example surface dressing a road every seven to 10 years – is about: "fix everything, even if it has not failed".

A condition based approach takes the view: "still aim to fix everything and create lists of the unaffordable" but a risk based approach to asset management takes account of risks to an asset as well as its condition.

Not always fixing an asset

Full implementation of a risk based approach would allow consideration to be given to not fixing an asset.

For example, where a road floods frequently but causes no wider flood damage – and where there is a suitable diversion operating – network resilience could be improved by concentrating on drainage system improvements to more critical lengths of highway.

Or a case could be made for not inspecting some sections of lower classification network – such as

adopted highways leading to a single property – and rely more on customer reports of defects instead. Careful consideration will need to be given to how reasonable any change in risk management is in terms of public safety and our duty to maintain roads under the Highways Act 1980.

The new code offers an innovative, risk based approach by not outlining any minimum or default standards. Instead the code recommends the management of current and future risks through its approach to strategic, tactical and operational asset management. This is often considered a major change from previous versions of the code.

The revised code will further encourage asset management, enable efficiencies and support practitioners and organisations to continue to develop their asset management maturity levels.

It is also now more accessible for all local authorities, containing just 36 recommendations and running to only 244 pages. Previously there were a staggering 175 recommendations and 930 pages.

Benefits of a risk based approach

Since publication of the new code I have been working with several authorities to further understand the benefits of this approach. By taking account of the advice contained in the code authorities will, with much more confidence, be able to establish and implement levels of service appropriate to their circumstances and location.

Benefits of the risk based approach include the ability for authorities to:

- evidence their service delivery processes;
- adopt levels of service aligned to local needs and council objectives;
- provide greater confidence in how service levels relate to funding availability; and
- facilitate efficiency savings – although the code does not require this.

What do highway authorities need to do?

The principle of the code is that highway authorities will adopt a risk based approach in accordance with local needs, priorities and affordability.

This is consistent with ISO 55000, which states that ‘asset management translates the organisation’s objectives into asset related decisions, plans and activities, using a risk based approach’.

The code therefore does not outline any minimum or default standards, but includes guidance and advice to support development of local levels of service.

A risk based approach to highway infrastructure maintenance should be documented and will essentially be based on an understanding of – and alignment with – an authority’s corporate approach to risk and management of risk.

In addition, a risk based approach will require:

- an understanding of risk in a highways service and its application to all areas of operations, including people, infrastructure, data, finance and suppliers;
- an understanding of the potential risks and their likely significance to users, stakeholders, the authority and to the data and information held;



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- an understanding of the inventory, function, criticality, sensitivity, characteristics and use of the various assets comprising the highway network;
- establishment of hierarchies and levels of service with appropriate funding;
- implementation of agreed levels of service;
- competency in development and implementation of the risk-based approach; and
- regular evidence based reviews.

The code provides an example of risk management process that may be adopted, however for risk management to be successful the process adopted should be proportionate and adapted to each organisation as appropriate.

Taking the first steps to implementation

Implementation of the code of practice will be unique to each authority taking account of the maturity of their asset management, their corporate mandate, approach to risk management and the service delivery arrangements.

However there are some common starting points emerging across the sector including:

- A network hierarchy review, to better define different characteristics of the unclassified network and manage those different risks more effectively;

- A review of the development of the resilient network, in the context of reviewing the network hierarchy and also the wider risk management guidance and requirements of the new code;
- A greater integration between asset management, risk and resilience bringing together highway teams with corporate risk and emergency management teams;
- A review of highway inspection and defect repair policies in conjunction with corporate insurance and risk management teams;
- A review and development of performance management frameworks. These will increasingly be relied upon to provide evidence for local levels of service and the effectiveness of service delivery.

Conclusion

Introduction of the new code of practice reflects a continuing maturity of UK highway asset management. It develops an opportunity for local authorities to review and improve their existing processes to deliver highway infrastructure maintenance.

The new code encourages a greater integration between highway infrastructure asset management and each authority’s approach to risk management which will strengthen the resilience of the network.

Acknowledgement

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→ Highway maintenance is shifting towards a more risk based approach