

# Time is now to adopt future thinking in managing highways

New technology and better communications look set to have a major impact on how highway authorities manage road maintenance says the Department for Transport’s head of local roads, innovation and resilience Steve Berry.

Britain’s transport system is on the cusp of a major transformation. New technologies and business models – such as automated vehicles, electric cars, unmanned aerial systems and mobility on demand – promise to dramatically improve the safety, efficiency, competitiveness, accessibility and sustainability of how we travel and use our transport networks.

The Department for Transport and various sector groups including the UK Roads Liaison Group, its sub boards, ADEPT and the World Road Association are now embracing this innovation and technology agenda.

Asset management plans and strategies have begun to transform how highway authorities approach local roads maintenance.

The introduction of incentive funding in England, outside London, has allowed those highway authorities to plan their maintenance but we now need to consider how we can use new innovation, technology, data sources and tools to improve how authorities and the wider sector can make investment and operational decisions, as well as how we engage the user.

Mobile applications already allow residents to report potholes allowing authorities to quickly respond to road maintenance needs.

We now live in a world where there is a demand for greater openness, transparency, the use of crowd sourced ideas and data to help us manage our services better and to allow the public to understand how decisions are taken and what it means for them.



↑ Cameras fitted to the front of refuse trucks will be used to spot potholes in two areas including Thurrock

For example mobile apps and the use of social media is providing information that easily allows people to have simple easily understood data at their fingertips.

The time is now for us all to be working together to seek how we can embrace these advances in data collection, technologies, navigation systems, communication and mobile technologies and robotics to change the way we manage and maintain our local highways.

Roads Minister Andrew Jones announced in January that the Department for Transport is working in partnership with Thurrock and York councils and two private sector, small to medium sized enterprises – SOENECS and Gaist – to carry out an innovative trial called the ‘pothole spotter’. The DfT is now also working with Wiltshire Council to trial the initiative on its roads.

This trial will use high definition cameras attached to refuse collection vehicles to take quality pictures of pavements and footways.

The integrated navigation system and intelligent software will build up an image library of highways and help officers ‘learn’ how to identify problems before they become potholes.

The cameras will capture the highest ever levels of technically advanced data that will provide a real insight into how roads deteriorate and defects, such as potholes, appear.

They will allow the authorities to understand more about surface durability, day to day traffic volume damage and if the weather plays a significant part in deterioration of our roads.

By using computer vision technology which is advancing rapidly

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## Network Management Board lead Martin Low steps down

Westminster City Council's former transport advisor Martin Low is to step down as chairman of the UK Network Management Board at the end of March.

During his time in office Martin shared his experience through the Board – and therefore with road network operators throughout the UK – by drawing, in part, on some of the challenges he faced in the heart of Westminster.

He will be succeeded by Buckinghamshire County Council's director of growth, strategy and highways Mark Kemp, who takes over as chairman of the Board in April.

One of Martin's areas of expertise is security and in Westminster he worked on the 'Whitehall Streetscape' project that involved implementing security solutions such as improved physical security measures for buildings. For more on this listen to the CIHT podcast 'How to be security minded'.

In addition the recently published UKRLG Code of Practice: 'Well Managed Highway Infrastructure' now has a number of references on the need to adopt a security minded approach.

As the Network Management Board chairman Martin drew in external experts to present on a range of challenges of relevance

across the UK. One such example was an insight from hosting the London 2012 Olympics and lessons regarding travel demand management.

Another insight Martin shared was the work by Transport for London on freight consolidation with reductions in trips or deliveries and collections at less busy times to reduce the number of vehicles travelling in peak periods.

Road safety was also a focus for him and he took a keen interest in Transport Scotland's successful project on the A9 to introduce Britain's longest stretch of average speed limits.

The Association of Chief Police Officers – now replaced by the National Police Chiefs' Council – gave a very interesting presentation on the importance of 'look and feel' to enforcement policy, for instance to enforce a 20MPH speed limit the road must have the look and feel of a road subject to a 20MPH speed limit.

Another subject high on the political agenda is air quality and work by Martin and colleagues in Westminster illustrated some measures that can be implemented to reduce pollution. These include installing electric vehicle charging points and parking bay sensors to determine



↑ Martin Low

if a space is occupied. The authority has also proposed a surcharge for diesel vehicles to park in the Marylebone area.

His experience of all these initiatives has since been shared through the UKRLG.

Martin said: "I have really enjoyed my time as chairman and take this opportunity to thank Justin Ward who has acted so ably as secretary as well as the large number of subject experts who sit on the Board or attend to share their knowledge and experience."

the trial will seek to capitalise on new 'deep learning' data analysis techniques to help analyse and manage the huge volumes of video and related data to improve the safety of roads and provide more cost effective repairs.

Using this technology will ultimately ensure that council resources are used as effectively as possible so as to get the best possible outcomes for local residents and road users.

Technologies emerging today promise to make our future transport system safer, more reliable, more efficient, more environmentally sustainable and more convenient.

Many of the most transformative technology applications for transportation have been developed in other sectors and for other purposes and we should consider where we can learn from these and introduce similar for maintenance purposes.

It is the time to bridge the gap between the traditional engineering approaches we have always adopted and how we embrace the new technological revolution.

Our local roads are the lifeblood of the country's infrastructure but potholes and maintenance continue to be one of the largest areas that users are concerned about. This is why Ministers and the Department for Transport, as well as others, are now looking to the future.

It is right that we start a conversation to ensure that we can work with all parties, not just the highways sector but road users and their associated groups, charities, politicians, think tanks, business groups and other interested parties to discuss the condition of local roads and associated highway infrastructure.

This would hopefully allow us to bridge the gap between our traditional engineering excellence and the experiences that users are facing day to day, by introducing technology and innovation.

I look forward to this discussion and would be happy to receive ideas and contributions on how best we can deliver this exciting new approach to how we maintain our roads.



### BRIDGE INSPECTION SCHEME SUCCESS:

Congratulations to Peter Hemsley from AECOM who has qualified as the first senior bridge inspector under a new bridge inspectors' scheme, administered by training provider Lantra.

The competency based international scheme has been developed by industry for industry to provide formal recognition of knowledge and experience required by bridge inspectors working in the UK and Ireland on assets around roads, waterways and railways.

This scheme is promoted by the UK Bridges Board and the Irish National Roads Authority and is supported by the Bridge Owners Forum. To date, 300 applications have been received for the scheme.