

POTHOLES REVIEW

PREVENTION AND A BETTER CURE

A follow-up report



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About The Highways Maintenance Efficiency Programme (HMEP):

- HMEP exists to transform and improve the condition of our roads and highways for every local community.
- Through its key strategic aims of capacity, leadership and enabling change HMEP has already helped Local Authorities across England to plan and deliver greater efficiencies, so that local highways funding can be fully maximised and go further.
- HMEP offers practical help and advice ranging from freely available peer-to-peer support from industry professionals to a practical range of resources and toolkits.
- HMEP is 'by the sector, for the sector', backed by Government with £6m funding through the Department for Transport (DfT), until 2018.
- HMEP actively promotes partnerships between the public and private sectors and has close links with Government Construction Strategy, Infrastructure UK Review and the 'localism' agenda.

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Introduction and summary

Local roads matter

Managing local highways is now a **critical challenge** for local authorities who **are in the spotlight and feel concerned about the future of their** single biggest asset: **local roads and highway infrastructure**.

They know that maintaining and improving **their highways, with less money**, is a key priority; and that this has been intensified following the bad weather and **continued demand and scrutiny** from members of the public and business leaders.

Balancing **longer-term** strategic planning and **keeping our local roads safe and serviceable** is a critical challenge.

Potholes Review

The HMEP **Potholes Review** was published in April 2012 as a response to the increase in the number of potholes on the highway network.

The **Potholes Review** identified good practice within the sector and provided local highway authorities with new ideas, case studies and approaches that could be easily transferred to those who wished to adopt a longer-term, preventative approach to maintaining their road network.

The **Potholes Review** made seventeen recommendations aimed at local highway authorities, the broader highways maintenance sector (including suppliers), the UK Roads Liaison Group and the Department for Transport.

The **Potholes Review** explained that:

- **Prevention is better than cure** – Intervening at the right time will reduce the amount of potholes forming and prevent bigger problems later on.
- **Right first time** – Do it once and get it right, rather than face continuous bills. Guidance, knowledge and workmanship are the enablers to this.
- **Clarity for the public** – Local highway authorities need to communicate to the public what is being done and how it is being done.

The **Potholes Review: follow-up report** explains how the original recommendations are starting to be **embedded by the sector**.

This report provides:

- **Case studies showing some of the different approaches being taken by local highway authorities to address the recommendations in The Potholes Review**
- **An explanation of what further action is needed by local highway authorities to realise the full potential of savings and efficiencies required to more efficiently reduce the number of potholes and to help make our roads safe and serviceable.**

Summary

Central government recognised that using short-term interventions was not the answer and wished to encourage all local highway authorities to move from reactive maintenance to proactive maintenance and to make their repair practices more cost effective.

The Potholes Review: prevention and a better cure was specifically commissioned to provide local highway authorities with new ideas and approaches that could be easily transferred to those who wished to adopt a longer-term, preventative approach to maintaining their road network.

It is pleasing that fifteen months after the Potholes Review was published, it is starting to make a positive impact across the sector, influencing local authorities' approach to improving their highways maintenance service. However, HMEP believes that there is still scope for the full potential of the Report's recommendations to be fully realised across England.

HMEP encourages every local highway authority to:

- **Increase the pace of progress**; continuing to monitor the impact of changing maintenance expenditure on the condition of their roads
- Respond to, and **adopt innovative practices** that are now well documented and can make a lasting and positive impact
- **Improve knowledge sharing** across local authorities, seeking peer-to-peer help and advice from HMEP
- Use the **freely available resources** developed **by the sector, for the sector**

In particular, HMEP believes that is imperative that local authorities continue to adopt the Report's recommendations particularly:

Prevention is better than cure

- Adopt methods that clearly show that **prevention is better than cure** by formally adopting an asset management approach in accordance with the Highways Infrastructure Asset Management Guidance that has recently become available (recommendation 6).

Right first time

- **Make informed choices**, choosing the right solution for their area and utilising the help, resources and support freely available (recommendation 7 and 8) and by adopting a first-time permanent repairs policy to drive up the quality and standards of repairs (recommendation 10, 14 and 16).

Clarity for the public

- Continue to monitor, and to **improve public satisfaction** by benchmarking their performance, **clearly communicating their progress** to members of the public and stakeholders on a regular basis, and well ahead of the Winter period (recommendation 2 and 3).

Updated Potholes Review Action Plan – July 2013

Summary of Actions and Current Position

An Action Plan was originally developed following the completion of the Potholes Review to identify how each recommendation should be taken forward by the sector.

HMEP believes that the recommendations contained in the Potholes Review: prevention and a better cure remain accurate and relevant to all local highway authorities.

An update on each recommendation is presented here providing you with a helpful summary on their current and future status.

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RECOMMENDATION 1

Strengthen well-maintained highways

Well-maintained Highways (W-mH) should be revised and strengthened to include all recommendations of this review which are relevant to local highway authorities

The review of W-mH is currently being commissioned by the DfT. This work was put on hold whilst the Department awaited the outcome of the Spending Review 2013. This review assimilates all complimentary guidance published since 2005, together with more substantial changes as a result of the recent release of the Highway Infrastructure Asset Management Guidance and other HMEP documents. It will also include areas of best practice from within the sector and reflect current practices and priorities in the day-to-day delivery of highway services.

RECOMMENDATION 2

Public Opinion Surveys

Local highway authorities should monitor public satisfaction with road, footway and cycleway condition and repair annually through the National Highways and Transport (NHT) Public Satisfaction Surveys or their own surveys. The findings can be used to benchmark performance and be taken into consideration in local highway maintenance policies.

A significant number of local highway authorities have bought into the NHT public satisfaction surveys and utilise the information provided to review their present levels of satisfaction. Most local highway authorities are members of regional groups where they can benchmark their respective NHT scores with those in their region and therefore be able to identify any differences in approach or funding which may account for any public satisfaction shortfall.

In the future local highway authorities will be encouraged to participate in regional Customer, Quality and Cost (CQC) surveys to identify how they are delivering their service relative to their regional neighbours and those authorities of similar demographics. This will create opportunities to learn from those performing better and could act as a catalyst to collaboration between local highway authorities. A HMEP proposal to develop better guidelines and measurable targets for CQC surveys is presently under development within the Programme and is expected to be delivered in 2014.

The benefit of regular and good quality public satisfaction surveys and how the identified differences in approach and funding can be used to drive service improvements will be detailed within the update to W-mH, due in Spring 2014.

RECOMMENDATION 3

Public Communications

Local highway authorities should have an effective public communications process that provides clarity and transparency in their policy and approach to repairing potholes. This should include a published policy and details of its implementation, including the prevention, identification, reporting, tracking and repair of potholes.

Local highway authorities will be encouraged to develop and adopt an effective communication strategy for all their highway maintenance activities, which must include their pothole repair strategies. Relevant information about the highway infrastructure is being actively communicated through engagement with stakeholders and is one of the recommendations included within the new Highway Infrastructure Asset Management Guidance. It also demonstrates how asset management can support better highways maintenance. You can download the HMEP Asset Management leaflet [here](#).

HMEP will continue to monitor the needs of the sector to develop specific advice in this area as part of its future programme of work currently being developed.

HMEP will continue to showcase best practice within the sector as it becomes aware; such as the promotional video of Worcestershire County Council's pothole repair practices on YouTube [here](#).



Image courtesy of Worcestershire Highway

RECOMMENDATION 4

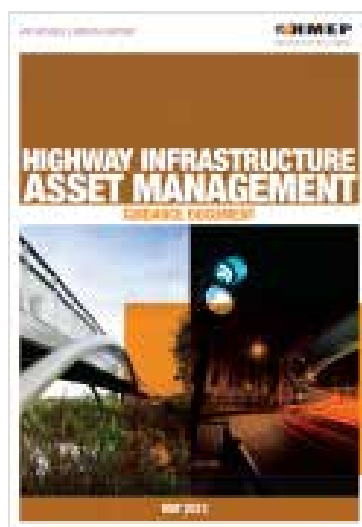
Economic Benefits of Highway Maintenance

To evaluate and justify the need for investment in maintenance of the local highway network, the Department for Transport should work in conjunction with local highway authorities to develop advice on determining economic costs and benefits.

Detailed guidance on the economic benefits of highway maintenance is to be published in January 2014.

In the interim, local highway authorities will be directed to the new HMEP Highway Infrastructure Asset Management Guidance that was published in May 2013. This suggests that when making the case for investment in the highway, local authorities should demonstrate wider additional benefits from the investment including social, environmental, economic and financial. Basically the business case needs to set out why investing in highway infrastructure is worthwhile. To learn how asset management can support better highways maintenance you can download the HMEP Asset Management leaflet [here](#).

“**The Economics of Road Maintenance**” is a recently published report conducted by Transport Research Laboratory (TRL) on behalf of the RAC Foundation and ADEPT that provides useful background on the topic and offers a good starting point for further work in the future.



RECOMMENDATION 5

Commitment of Highway Maintenance Budgets

The Government should commit to establishing budgets for highway maintenance for the full four years of Comprehensive Spending Review periods. This will provide greater budget certainty for the highway sector. Local highway authorities should ensure their funding for highways maintenance is aligned to this time period.

The DfT have confirmed a 4 year allocation of highway maintenance funding to local highway authorities immediately after the publication of the Potholes Review in April 2012.

While this local authority funding is not ring fenced to any particular service function, it is important that local highway authorities, when determining their highway infrastructure asset management requirements align their budgets to longer-term funding allocations. The Spending Review announcement in June 2013 has allocated nearly £6bn from 2015/16 to 2020/21 for local highways maintenance. The Department will now consider the best way to allocate this funding and intends to open up a dialogue with local highway authorities and other parts of the sector. It is important that funding allocated for highways maintenance is clearly linked to adopting efficiency principles such as those produced through HMEP to ensure that the best possible value for money is achieved.

RECOMMENDATION 6

Prevention is Better than Cure

Local highway authorities should adopt the principle that 'prevention is better than cure' in determining the balance between structural, preventative and reactive maintenance activities in order to improve the resilience of the highway network and minimise the occurrence of potholes in the future.

The new Highways Infrastructure Asset Management Guidance (published May 2012) underpins this recommendation by providing relevant guidance on using asset condition data, agreed and affordable levels of service and lifecycle plans to develop long term works programmes to deliver a more proactive highways service and reduce the amount of expensive reactive measures.

HMEP has a new product under development about 'Building Intelligent Client Capability' as part of a wider programme objective to aid authorities to build client competency, which will have an impact on guiding informed decisions around the use of preventative treatments. Due for release in Spring 2014.

HMEP has also provided the tools by which network level decisions can be made to assess the rate of carriageway deterioration against different funding scenarios through the Lifecycle Planning Toolkit and associated Carriageway Deterioration Models. There are also deterioration models for footways and 'other assets' which can be used for structures, street lighting or any other highway assets. These models can be used as part of a network level highways investment plan where authorities identify the need for additional funding streams, or to provide information on the 'affordable' levels of service for any given funding level.

RECOMMENDATION 7 Informed Choices

Local highway authorities should ensure that appropriate competencies are available to make the right choices when designing and specifying techniques and materials for the maintenance and repair of highways. These competencies can be secured through training, collaboration with neighbouring authorities or external advice.

The **HMEP Highways Specification and associated notes for guidance** help to inform the choice of materials that are most appropriate in any given location for pothole repairs. On-going development of the specification through the HMEP Term Maintenance Contract and Document Compiler (due for release in October 2013) will help to advise local highway authorities about the right material to use at the appropriate time.

The **HMEP Lifecycle Planning Toolkit** incorporates default deterioration models and helps to guide the user in identifying the most effective solution to maintain the network – promoting a long term rather than short term investment approach.

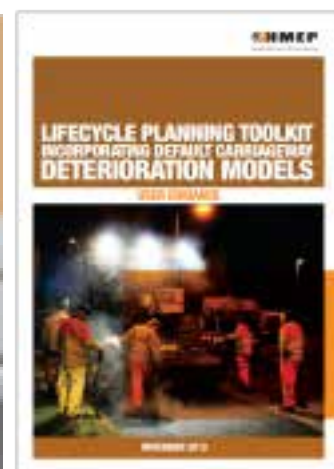
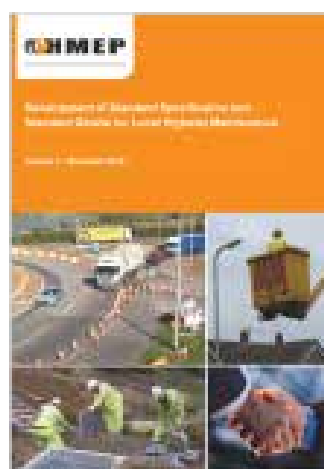
The CIHT **webinar** programme has supported the publication of the HMEP Highways Infrastructure Asset Management Guidance and the approach that practitioners should adopt. It promotes the asset management framework approach with appropriate asset condition data and decision support systems to help choose the right material treatment when maintaining the network.

The HMEP Strategic Review and a further HMEP product around 'Building Intelligent Client Capability' has been commissioned by the Programme that will identify gaps in organisational and individual competencies that can be addressed through specific training against a target operating model or skills matrix. The Strategic Review is due for delivery in the autumn while the Client Competency product is due in early 2014.

RECOMMENDATION 8 Guidance on Materials

Comprehensive guidance should be made available in the design, specification and installation of materials for the maintenance and repair of highways, to ensure the use of appropriate materials for the right site. This guidance should be produced by the sector, for the sector.

The Chartered Institute of Highways and Transportation has agreed to support the Programme by hosting the various products on their **Transport Advice Portal** where associated guidance on the repair techniques and treatments can be found.



RECOMMENDATION 9

Definition of Potholes

To provide clarity, local highway authorities should adopt dimensional definitions for potholes based on best practice as part of their maintenance policy. Response times and treatment of potholes should be based on local needs, consideration of all highway users, and an assessment of risk.

The current version of W-mH has definitions and recommended dimensions for potholes for carriageways, footways and cycle lanes. The forthcoming review of W-mH will consider whether there is the need to move to a dimensional definition for carriageways and footways.

DfT to consider the publication of guidance about the definition of potholes on the YouGov website to help the public understand the issues around pothole repair strategies and their local highway authority's responsibilities.

The work by HMEP on the Customer, Quality and Cost (CQC) will be used to assess the public's satisfaction on the strategies adopted by local highway authorities.

DfT should encourage public satisfaction surveys through means such as the HMEP CQC mechanism.

RECOMMENDATION 10

Permanent Repairs Policy

Local highway authorities should adopt permanent repairs as the first choice. Temporary repairs should only be used where safety cannot be managed using alternative approaches and in emergency circumstances.

DfT to update the guidance offered to local highway authorities as part of the revision to W-mH, due Spring 2014.

Best practice in highways maintenance has always stated that permanent repair is the first choice for all potholes in carriageways and footways. Historically there have been cost and operational reasons why temporary or 'cold' materials have been used in the first instance. Clients and contractors need to work together to agree the most cost effective method of ensuring that all repairs are permanent and first time.



Images of cold lay materials, before and after, courtesy of TfL

RECOMMENDATION 11 Inspection and Training

Local highway authorities should utilise inspection manuals to support implementation of their inspection policies. They should also ensure that highway inspectors are trained, qualified and competent in the identification and assessment of defects, including potholes, through a scheme accredited by the Highway Inspectors Board.

DfT to strengthen the guidance on inspection and training as part of the update to W-mH, due Spring 2014.

The previously proposed removal of highway operative accredited training as part of the Red-Tape challenge has been avoided. The Minister confirmed that this will be retained at the Streetworks Summit on 14th March 2013.

HMEP to develop an Asset Management Practitioner Training package associated with HMEP asset management products to help embed them within the sector and to give commonality to the approaches local highway authorities take. This may also lead to accreditation, and the training is currently being scoped.

RECOMMENDATION 12 Technology

Local highway authorities should consider using proven technology and systems for the effective identification and management of potholes.

HMEP will support this through communication forums.

HMEP will showcase good practice from across the sector using a 'case study' standard template for consistency of responses. See case study no.6 from Rochdale MBC and as publicised in the Highways Magazine – April 2013.

RECOMMENDATION 13

Guidance on Repair Techniques

Local highway authorities should consider the guidance provided in the ADEPT report **Potholes and Repair Techniques for Local Highways** and adopt as appropriate to their local circumstances.

This guidance is available on the **UK Roads Liaison Group (UKRLG) website**, and provides advice on effective treatment to potholes within the local authority network which are often formed in roads with little construction depth. HMEP invites the sector to help disseminate and share good practice through their sector, regional groups and trade bodies.

RECOMMENDATION 14

Quality of Repairs and Reinstatements

To drive up standards, a quality scheme similar to a National Highway Sector Scheme should be developed by the sector to cover all aspects of manual surfacing operations, including pothole repairs and reinstatements, and its use specified by local highway authorities and utility companies.

HMEP will contribute to the on-going work led by members of the Road Surface Treatment Association, ADEPT Soils and Materials Group and DfT to develop a competency based sector scheme for the use of hand lay materials.

The proposed removal of highway operative accredited training as part of the red tape challenge has been avoided through confirmation from the Minister that this will be retained (Streetworks Summit on 14 March 2013).



Image courtesy of Atkins Limited

RECOMMENDATION 15 Coordinating Streetworks

All parties undertaking works on the highway should share and co-ordinate short and long term programmes of work for up to four years in advance, based on good asset management practice.

HMEP will gather and promote case study examples, which demonstrate effective coordination of streetworks through the new permitting scheme to control and coordinate works on the highway. You can read more about this in Case Study 5 supplied by Transport for London.

Coordination of roadworks with statutory undertakers and the local highway authority are contained in the Traffic Management Act 2004 and the New Roads and Streetworks Act 1991.

Any revisions necessary to W-mH to provide consistency between the respective documents will be included as part of the update to W-mH, due Spring 2014.

RECOMMENDATION 16 Minimising Highway Openings

All parties involved in reinstatements must consider the need to minimise long term damage from the installation, renewal, maintenance and repair of utility and highway apparatus through alternative and innovative ways of working. Trenchless technology should be considered as part of this decision making process.

There are a number of trenchless techniques available for replacing utility equipment, however these tend to be only available in particular situations and for larger replacement projects. HMEP will gather and promote case study examples, which demonstrate the situations where trenchless and other technologies can help to reduce the need for road openings.

HMEP has started to scope out the issues around streetworks with a view to improving coordination between local highway authorities and utilities. This will minimise the need for road openings and allow better quality permanent reinstatements so that recurrent streetworks are minimised. This project was commissioned in May 2013.



Image courtesy of Leicestershire Highways

RECOMMENDATION 17

Research and Innovation

The sector will benefit from supporting, co-ordinating, contributing and disseminating research on all aspects of pothole operations. Innovation from such research may continue to provide opportunities for improvement of pothole management and operations.

HMEP will work with all organisations in the highway maintenance sector to ensure that there is proper coordination of research projects within the wider sector to avoid duplication of effort.

HMEP will continue to promote appropriate research within the sector that will contribute to a better understanding of pothole failure mechanisms and the best treatments that can be used to undertake reinstatements.



Image sourced from Shutterstock



Evidenced Case Studies

How the Potholes Review Recommendations have supported existing Council policies and procedures:

- **Case Study 1** – Leicestershire County Council
- **Case Study 2** – Lancashire County Council
- **Case Study 3** – Wiltshire County Council

How collaboration with their Service Provider enabled an improved approach to managing Pothole Repairs, concentrating on Service Response Times, Insurance Risk and IT systems:

- **Case Study 4** – Surrey County Council

Adopting a Right First Time approach to Pothole Repairs:

- **Case Study 5** – Transport for London

How the use of Technology improved systems between the Client and the Contractor to identify and action pothole repairs:

- **Case Study 6** – Rochdale MBC

Officers would be delighted to discuss and to help replicate their approach in your authority. Contact details can be found at the base of each case study.

CASE STUDY 1

From Leicestershire County Council

How the Potholes Review Recommendations have supported existing Council policies and procedures:

Background

The recommendations from the Potholes Review were assessed by the Assistant Director (Highways) to identify the likely impact on the present highways maintenance service provided by Leicestershire County Council. Following the Review, a report was taken to the Cabinet to make Members aware and to gain the Council's support in addressing each of the recommendations. The report highlighted the key aspects of the Potholes Review and the action required by the highway service to address each of the recommendations. It also identified how £2m of DfT funding to repair potholes within the County, could be best utilised.

The following summarises Leicestershire's reaction to the three key themes of the Review and expands on each point elaborating some of the key actions being implemented by the Authority.



Image courtesy of Leicestershire Highways

What was done?

The following summarises Leicestershire's reaction to the three key themes of the Review and expands on each point elaborating some of the key actions being implemented by the Authority.

Prevention is Better than Cure

- Economic Benefits of Highway Maintenance** – Leicestershire supports the need for evidence on how the investment of highway maintenance contributes to economic development of local communities. It is supporting this through representation with HMEP, ADEPT and the Midlands Highway Alliance to develop advice on the economic costs and benefits of highway maintenance to provide guidance on the evaluation and justification on the need for this investment.
- Commitment of Highway Maintenance Budgets** – Leicestershire support the need for funding highway maintenance budgets over a longer time frame to achieve better value for money. The County has already implemented this recommendation through the LTP3 settlement and in its Medium Term Financial Strategy.
- Coordinating Street Works** – The review recommends that all parties undertaking works on the highway should share and coordinate programmes of work over longer periods. While the County currently reviews larger scale maintenance activities and engages fully with the utilities, this process fell short of meeting the recommendations in full. The County is therefore planning improvements to the coordination and management of road works as part of its business plans to improve its ability to manage its highway assets more effectively and efficiently.
- Prevention is Better than Cure** – The County has been an advocate of this principle for many years, targeting budgets at cost-effective preventative treatments, and continues to develop asset management strategies to minimise the occurrence of potholes.
- Informed Choices** – The review recommends that only staff with the appropriate competencies are used to make the right technical choices when designing and specifying highway maintenance interventions. The County has been a lead

member of the Midlands Highway Alliance that has established and implemented a continuous improvement model for highway term maintenance activities and has led to the embedding of highway maintenance best practice in all of its work and through its supply chains.

- **Minimising Highway Openings** – The Review recognises the potential weaknesses introduced into the fabric of the highway as a result of any disturbance. As a consequence, the County is challenging traditional working methods and looking at any trenchless alternatives to undertake this type of work.

Right First Time

- **Quality of Repairs & Reinstatements** – The Review recommends that a quality training scheme for operatives should be developed by the highway sector to drive up the quality of repairs and reinstatements. The County recognises the role such a training scheme will play through sector group representation (ADEPT) to develop and embed any resulting changes.
- **Guidance on Repair Techniques** – The County is currently reviewing the ADEPT report ‘Potholes and Repair Techniques for Local Highways’ and will adopt the outcomes as appropriate to their local circumstances.
- **Inspection & Training** – The County already has an Highway Inspection Manual and is involved in developing a national training scheme for highway inspectors following the publication of the ‘Highway Risk and Liability Guide to Well-maintained Highways’ in 2005.
- **Technology** – The County has already invested in proven technology and systems for the effective identification and management of potholes.
- **Research & Innovation** – The County has an on-going commitment to the coordination of research, innovation and the sharing of good practice through its membership of ADEPT, the Midlands Highway Alliance and the Midlands Service Improvement Group.

Clarity

- **Public Communications** – The County already has a system, via its website, that enables the public to identify, report and track the repair of any defect together with the overall performance of the defects being monitored.
- **Definition of Potholes** – The County already has a policy in place that defines its response to potholes according to dimensional definitions.
- **Permanent Repairs Policy** – The County has adopted a permanent repairs approach to all potholes over a number of years and does not propose to change this approach presently.
- **Public Opinion Surveys** – The County has commissioned public opinion surveys since 2008 which are benchmarked against other authorities in England. Leicestershire has improved its public satisfaction in relation to the condition of highways and was 4th., based on the 2011 survey. No further improvement is planned in changing the current public opinion survey process.

What is planned for the Future?

The County will continue to review and implement improvements to its highway services to reflect each of the recommendations within the Potholes Review.

Case Study offered by:

Leicestershire County Council

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CASE STUDY 2

From Lancashire County Council

How the Potholes Review Recommendations have supported existing Council policies and procedures:

Background

The Potholes Review made seventeen recommendations that, if fully adopted, will provide an overall improvement in highway maintenance and a subsequent reduction in potholes. The actions taken by Lancashire to provide an overall improvement in highway maintenance are set out next.



What was done?

Lancashire undertook a review of their Highway Maintenance Service following the publication of the Potholes Review. The following summarises the outcome of the review in addressing the seventeen recommendations which were set out under the three themes of the Review. This is further expanded by some of the key actions now being implemented by the County.

Prevention is Better than Cure

- Economic Benefits of Highway Maintenance** – Lancashire will investigate how authorities have used prudential borrowing to determine if this is a suitable approach to reduce the funding gaps for highway maintenance activities for the authority. (Note not economic benefits of highways?)
- Commitment of Highway Maintenance Budgets** – Lancashire will use deterioration modelling to enable its service to benefit from a long-term strategic planning approach to its highway maintenance operations.
- Coordinating Street Works** – proposals for a permit scheme are being developed, as highlighted by one of the Review's case studies. The County will also share its medium to long term work programmes with the statutory undertakers to help minimise disruption and protect its highway assets.
- Prevention is Better than Cure** – The County's surface dressing programme is included within the Review as an example of good practice in preventative maintenance and will remain a key element of our highway management strategy. This will be further developed to inform the selection of treatments to minimise whole life costs through the use of deterioration modelling.
- Informed Choices** – Lancashire will identify any weaknesses in staff competencies and provide training where needed as part of a review of skills and competency through Lancashire Highways.
- Minimising Highway Openings** – The Review recognises the weaknesses introduced into the fabric of the highways as a consequence of any road opening. As a consequence, the County will continue to challenge traditional working methods by utilities and look at alternative trenchless ways

to undertake their work to ensure that damage to the highway is kept to a minimum.

- **Guidance on Materials** – Lancashire will review the work of HMEP around its standardisation of common specifications for materials to develop improved guidance on material selection. The County will also establish a database of highways maintenance treatment records to allow analysis of trends in materials and techniques to be identified. It will also ensure that ownership for specifying surface treatments are clearly identified and establish clear guidelines on which materials are to be used in the County.

Right First Time

- **Quality of Repairs & Reinstatements** – The County will continue to deliver in-house training to staff who undertake the repair of potholes and will consider adopting any future national scheme where there are clear benefits in doing so.
- **Guidance on Repair Techniques** – The County will monitor completed pothole repairs for durability and develop methods to reduce the whole life costs of pothole repairs. It will also standardise the material used and provide clear guidance for making reinstatements.
- **Inspection & Training** – As part of the Council's re-write of their highways maintenance code of practice, the policy and inspection aspects will be rationalised. The County will also introduce new ways of working to improve the coordination of defect identification and repair to provide a more responsive service. It will also introduce training for their highway defect inspectors.
- **Technology** – The County intends to complete a full systems review to evaluate the costs and benefits of improved technology including hand mobile held devices for recording and auctioning defects. It will also consider and develop interim solutions using low cost technology to deliver improvements to present service delivery.
- **Research & Innovation** – The County has strong links with both local and national sector groups to develop improved efficiency in pothole repairs.

Clarity

- **Public Communications** – The County will develop a highways maintenance communications strategy. It will also build on the successful use of social media for winter service and highway maintenance notifications. The Council will also incorporate the Review's recommendations in its latest TAMP. Lancashire will provide a clear summary of highways policies on its Council web pages while at the same time developing an improved on line reporting system with mobile phone compatibility.
- **Definition of Potholes** – The code will be re-written learning from best practice from other authorities and will result in the updating of its inspection classification and schedule.
- **Permanent Repairs Policy** – Lancashire already operates the 'right first time' approach. It will ensure that systems are in place to properly record any temporary repairs and to arrange a return inspection visit prior to the end of the guarantee period to ensure these are reinstated with a permanent reinstatement.. Defect response times will also be reviewed as part of the full review of the County's highways maintenance code of practice.
- **Public Opinion Surveys** – The County will review the extent of the public opinion surveys they currently undertake to ensure that they are in line with the recommendations of the Review.

Strengthen Well-maintained Highways

- The Council's policies and standards will be reviewed against the new version when updated.

What is planned for the Future?

The County will continue to review and implement improvements to its highway services as a consequence of the recommendations of the Potholes Review.

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Lancashire County Council

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CASE STUDY 3

From Wiltshire County Council

How the Potholes Review Recommendations have supported existing Council policies and procedures:

Background

Following the April 2012 publication of the HMEP Potholes Review, Prevention and a Better Cure, Wiltshire Council commissioned Creative Transport Solutions Ltd to undertake an independent review of its current standards, policies, processes and procedures in relation to potholes.



Images courtesy of Wiltshire County Council

What was done?

This task was approached in five stages:

- To examine the HMEP report and in particular the key findings and recommendations.
- To consider UK Highway Maintenance generally, the current Code of Practice – Well Maintained Highways, and the responsibilities of local highway authorities.
- To identify Wiltshire Council's policies and practice
- To examine how the HMEP recommendations were being addressed nationally, the future plans and intentions, highlighting Wiltshire's own actions and identifying areas for further action by the Council to fully comply with the HMEP recommendations.
- To draw conclusions and any recommendations.

The review confirmed that Wiltshire's approach was very much in line with the HMEP recommendations, and the following clear evidence that the Council was already doing much to deliver the three key messages:

Prevention is Better than Cure

- 4-year corporate commitment to reduce highways maintenance backlog.
- Increased highway maintenance funding
- Improved condition of classified roads
- Adopted asset management approach
- Use of modern Pavement Management System to prioritise spending.
- "Find and Fix" (Parish Stewards) system repairs potholes early and prevents further deterioration.
- Use of various techniques and materials as appropriate.
- Coordination of all street works.
- Apparent decreasing insurance claims (c. 7%/year).

Right First Time

- Use of published Highways Inspection Manual and experienced inspectors.
- Embraced technology and IT systems for whole process management of highway maintenance

(including potholes).

- Involved in acknowledged national professional/technical organisations.

Clarity for the public

- 18 Community Area Boards.
- 20 Parish Stewards ensure regular community liaison, with the public and parish representatives.
- Local community workshops
- Public access/reporting via Wiltshire Council web site.
- Wiltshire Parish newsletter
- CLARENCE public reporting system
- New App. soon to be introduced for public communication.
- Use of social media communication.

In summary, the review concluded that Wiltshire's management of potholes compared favourably with other County and Unitary authorities as evidenced by national and South West performance surveys.

Notwithstanding this, areas for improvement were identified in order for Wiltshire to fully comply with the HMEP report and the **following sixteen recommendations were adopted by the Council:**

1. To openly adopt the three key messages of the Pothole Review (Prevention is better than cure, Right first time and Clarity for the public) as the basis for highway maintenance across Wiltshire.
2. To pursue and support the DfT/HM Treasury in producing advice on determining the economic costs and benefits of highway maintenance.
3. To continue to pursue its corporate objective to reduce the road maintenance backlog
4. To document how decisions regarding choice of repair techniques should be made and ensure relevant training for decision makers
5. To support the highway sector work to produce guidance on the design, specification, installation and use of materials and apply as appropriate in Wiltshire.
6. To continue to work with utilities to improve

co-ordination of short and long term work programmes, always considering trenchless technology and always with the intention for less occupation, disruption and congestion of the highway network.

7. To pursue and support the development of a quality scheme for manual workers and, when implemented, specify as a requirement in all relevant work in Wiltshire.
8. To review how the ADEPT report "Potholes and Repair Techniques for Local Highways" is being used as appropriate in Wiltshire.
9. To undertake a further review of Wiltshire's Highway Inspection Manual 2005 plus current inspector training and accreditation.
10. To continue to embrace and improve the use of modern technology and systems for the efficient and effective management of highway maintenance, including potholes.
11. To continue to support pothole related research.
12. To continue with current well established public communications systems, review how to further improve public involvement to achieve better knowledge and understanding of how and why Wiltshire Council maintains roads, including treatment of potholes, and thus ultimately raise public satisfaction levels.
13. To review current practice to reassure a permanent repair approach including measuring outcomes (e.g. permanent/temporary repairs ratio).
14. To review the successful "Find and Fix" approach in relation to the Wiltshire Inspection Manual's pothole definitions, descriptions and response policies.
15. To support the DfT commissioned revision of "Well-maintained Highways" and review Wiltshire's own policies and practices (including Wiltshire's Network Management Plan 2000-2005, the Highway Inspection Manual 2005 and the finalised/approved Transport Asset Management Plan) against the updated Code of Practice.
16. To produce an action plan to prioritise and monitor delivery of the above recommendations.

What was achieved?

Since Wiltshire's review was completed in August 2012 much progress has been made to ensure delivery of the above as further improvements to an already very sound approach to pothole management. Wiltshire has fully embraced the HMEP recommendations and is committed to continually improve its highway service including potholes management, in line with its Corporate Vision and Values:

Corporate Vision: To create stronger and more resilient communities

Values: To place customers first, strengthen communities, adopt a 'can-do' approach to everything and value colleagues

Accordingly, delivery of the above recommendations is continuing so as to fully embrace the HMEP Pothole Review outcomes and Wiltshire expects to further improve the quality of services to customers and local communities, and to realise efficiencies and savings.

What is planned for the Future?

1. An expectation that the highway management improvement programme (with particular reference to potholes) will ensure a locally driven service where communities will have greater involvement, identify priorities and be very much be a part of a collaborative approach to delivering a quality, fit for purpose service.
2. A three month induction period (from 1st June 2013) for the new highway service contractor (Balfour Beatty) to pick up the Wiltshire improvement ethos and further increase the pace with added items relating to skills accreditation, techniques, materials, plant, better IT (to measure permanent/temporary repair ratio, site specific defects reoccurrences, improved records system, better resource targeting) and public information and response.
3. The Action Plan (ref. recommendation 16 above) will monitor delivery of all agreed actions to ensure that Wiltshire Council

meets its commitment to fully comply with the HMEP Pothole Review recommendations.

What efficiency savings or other improvements have resulted that may be of interest to the Programme for capture?

Notable improvements to date are:

- Introduction of a Right Fix First Time slogan with associated training programmes.
- A generic, multi-skilled workforce approach to local service delivery.
- Intensive skills training of Wiltshire's front line Find, Fix and Record local community teams to increase their "one team to fix all local priorities" capabilities and specific highways defect training regarding improved identification and recording of defects, material and plant choices, costing and decision making.
- "Blitz" days where a collective teams focus on a specific area to deal with community identified local priorities.
- Programme to increase public information and involvement.
- Eighteen Community Co-ordinators established to work with Town and Parish Councils to identify local priorities.
- £1m (so far) efficiency savings from highway management structure revisions, removal of duplication, Find Fix and Record teams, collaboration of services to deliver a total solution approach, better "fit for purpose" choice of materials and plant.
- Specific requirements and responsibilities of contractor (e.g. skills accreditation, material choice etc) written into contract procurement process.
- Further enhancements to public communication systems:
 - new App. for public access.
 - new requirement on service contractor to report to local community
 - new "one golden number" easy contact for public

- new “straight through to local depots and trained technical staff “(no call centre) telephone system
- improved Council web-site
- access to social media
- enhanced use of community stewards system

Are there any Lessons Learnt that you would like to share with others so that they can avoid any issues that you have overcome?

By embracing the HMEP Pothole Review and reviewing itself accordingly, Wiltshire Council has already learnt a numbers of lessons which may be useful to others:

- Successful, efficient Community Teams must be fully trained, multi-skilled and equipped to meet local community highway needs (e.g. Potholes to grass cutting) and additionally be able to successfully fulfil their “ambassadorial” role as the front face of the Council.
- Their role and performance is significant to the public perception and satisfaction with the local highway authority.
- The highway industry is too skills focussed rather than community need focussed.
- The total expectations of local communities exceeds the delivery capacity of the highway authority, so the Council needs to work better and smarter with communities, for example, to encourage and enable more self help.

Case Study offered by: Wiltshire Council

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Image courtesy of Wiltshire County Council

CASE STUDY 4

From Surrey County Council

How collaboration with their Service Provider enabled an improved approach to managing Pothole Repairs, concentrating on Service Response Times, Insurance Risk and IT systems.

Background

When writing their current term contract, Surrey County Council included an intention to move away from a very reactive approach when responding to highway defects. Their review coincided with the publication of the Potholes Review, which provided useful guidance, and supported their approach. This was particularly helpful when explaining a change in their strategy to their Members and those managing the Council's insurance claims.

Main reasons for change;

- Surrey County Council already had a 'right first time' policy in place but the reality was that more temporary repairs were being carried out than they would have liked – mainly due to the volume of defects and traffic management issues.
- The volume of 24hr response categorised repairs that were being experienced really highlighted the fact that 24 hours to respond allowed no time to consider the best way of scheduling resource or to plan a more appropriate repair – either as individual defects or to a cluster of defects.
- Surrey County Council wanted to ensure that any investment in maintenance was achieving as much value as possible – simply just 'reacting' rather than planning was not perceived to be offering best value.
- Similar to value for money, Surrey County Council believed that they could deliver improved customer service (e.g. less repeat visits & less 'patchwork' repairs) by implementing a more planned approach.

What was done?

To implement the new approach Surrey County Council did the following:

- Set up a joint project team between Surrey County Council & May Gurney (their Service Provider)
- Revised the policy to allow more planning time based on review from other authorities' policies and good practice/guidance.
- Identified alternative resource provision to enable wider choice on defect repair response e.g. to deliver minor planned works when feasible rather than individual repairs.
- Revised processes; for identification and management of risk, efficient scheduling of resource, decision making on repair (when & what)
- Identified an integrated (client & service provider) team to ensure both parties are working together collaboratively to deliver the outcomes – to include all stages of the defect process from inspection to repair.

What was achieved?

Cabinet approval was given but changes are yet to be finalised and implemented (Surrey County Council are awaiting changes to their mobile devices (both gangs and inspectors) and scheduling systems to enable the decision making/risk management processes to be implemented).

In the interim Surrey County Council are spreading the message of a more planned approach to defects and the benefits that can accrue across their service – including Members.

What is planned for the Future?

Better use of the data and closer integration with defect response and other planned maintenance programmes.

What efficiency savings or other improvements have resulted that may be of interest to the Programme for capture?

Probably too early to say as it is yet to go live. However, under the proposed changes, we are looking to transfer increased insurance liability to the service provider that is anticipated to result in cost savings for Surrey County Council.

Are there any Lessons Learnt that you would like to share with others so that they can avoid any issues that you have overcome?

The chief lesson learnt is not to underestimate the timeline to implement an IT solution (mobile hardware & software).

Building new processes & systems is often easier than rebuilding existing – also helps overcome a fixed/ existing culture/mind-set more quickly.

Case Study offered by: Surrey County Council

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Image sourced from Shutterstock

CASE STUDY 5

From Transport for London

Adopting a Right First Time approach to Pothole Repairs

Background

Transport for London (TfL) manages the Red Route network in London. 580km of strategic roads that carry a third of the traffic in London. Following the severe winters of 2009/10 and 2010/11 its network suffered a marked deterioration that was partially addressed through additional DfT funding as well as re-prioritisation of their own capital renewals budget. Generally, following winter seasons TfL's network, like all highway networks, suffers from deterioration and increases in pothole and other carriageway defect formation, due to the action of the severe weather on the carriageway.

The strategic nature of TfL's highly trafficked highway network means that a continuous balance must be struck between carrying out works to maintain the network in a safe and serviceable condition whilst ensuring that the impact of works on traffic movements is minimised. TfL operate permitting and lane rental systems and have sought to minimise disruption to its network by all activities including reactive maintenance works within the scope of these initiatives.

What was done?

Permitting

A permitting system was introduced in 2010 to allow the highway authority to improve control and coordination of roadworks. This extends to all works whether carried out by utilities or their own contractors. Wherever possible permits are restricted to the least disruptive times, notably night time and weekends, with different works promoters encouraged to collaborate within single traffic management set-ups to minimise the overall impact of works taking place on the network.

Lane Rental

In 2012 TfL also introduced a Lane Rental scheme, whereby works undertakers would face charges for network occupation during busier periods (for example, peak hours). Lane Rental charges apply to any work which results in any restriction to the running lane of a carriageway to which the rental charge applies. The scheme was introduced following a liaison period with those affected, and has been enforced to encourage the consideration of alternative working times, methods and treatments, to the benefit of road users through reduction of disruptive works during busier times of the day.

Cold mix permanent repairs

In 2010 Transport for London (TfL) initiated trials of the use of cold mix materials for permanent repair of potholes on their network. The aim was to reduce the need for repeat visits to repair defects and hence, minimise disruption to road users. The early trials were positive and as a result, HAPAS approved cold mixed materials are now regularly used for temporary repairs.

Images of cold lay material, before and after, courtesy of TfL



What was achieved?

Permitting

The number of permits issued to all works promoters was base-lined using noticing data from previous years and target reductions in permit numbers have been set to reduce the overall numbers of roadworks taking place on the strategic road network. Reductions have been achieved through improved coordination between works promoters but also notably through an increase in first time fix repairs, avoiding the need for return visits, and through the use of innovative repair methodologies and materials.

Cold mix permanent repairs

Since the introduction of cold lay materials, it is estimated that over 2,800 repairs have been carried out with negligible numbers of failures. The use of this methodology removes the requirement for a second visit to defects to undertake lengthy cut out patch repairs, and significantly reduces disruptive work requirements. Before the introduction of this approach, 35 to 40% of defects were fixed on a right first time basis. With the new materials, this number has increased to over 60%.

The materials are generally approved for lower speed roads only, but TfL are now considering their use on higher speed roads (up to 50 mph) to maximise the efficiencies and benefits gained and to minimise the need for multiple works.

What is planned for the Future?

Continuing to monitor the number of roadworks to embed the collaboration aspects and to monitor the performance of cold lay materials.

What efficiency savings or other improvements have resulted that may be of interest to the Programme for capture?

Benefits

Benefits from the use of first time repairs using cold lay materials include:

- Reduced disruption estimated at over 2000 hours within TfL's Central Area contract alone
- Cost savings
- Environmental benefits

Case Study offered by: Transport for London

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CASE STUDY 6

From Rochdale Metropolitan Borough Council (MBC)

How the use of Technology improved systems between the Client and the Contractor to identify and action pothole repairs

Background

Senior managers, staff and elected members at Rochdale MBC were aware of the need to modernise the approach to highway maintenance in the light of reduced budgets and the constant demand for better services. The perception of their service delivery; the timing and quality of repairs became a priority, improving the way they identified and carried out reactive repairs on the highway.

Although it is an on-going process, so far it has started to give clarity and confidence to stakeholders that the network is now being managed better. This has led to improved member expectation and contributed to a significant Highway Investment Programme in the period 2013/15 that is now being implemented by Rochdale MBC.



Image courtesy of Rochdale MBC

What was done?

These improvements are part of an on-going staged approach by Rochdale MBC to highway maintenance delivery. Initial co-location of shared premises with their contractor, Balfour Beatty, started to generate a professional and enthusiastic attitude amongst staff about the way we work.

Moving to an electronic system of highway inspections facilitated the accurate transfer of works orders to the contractor. We used the expertise and guidance of their software providers MAYRISE to identify suitable Personal Digital Assistant (PDA). Using historical data they provided the contractor with a performance based model of works that could be envisaged for the coming year (see attached). This is subject to review but allows a value for money approach because of the ability to plan works more efficiently

This allowed Rochdale MBC to closely monitor and adjust the volume of work in the system at any time which meant that the contractor wasn't faced with wide variations and could reconcile resources with a fluctuating work load and still achieve completion times.

A mechanism for identifying and completing works between the client and the contractor was jointly developed and agreed which has reduced the amount of unproductive time and abortive visits associated with this type of work. Issues are resolved and reinforced through regular monthly work group meetings.

Standardising the material specification and the methodology of repairs for a particular reinstatement has resulted in improved longevity and a more efficient use of material through reduced wastage.

What was achieved?

Ensuring that Rochdale MBC managed the amount of orders being issued to the contractor was a key factor in our approach. A suite of Key Performance Indicators were developed that related to both contractor and staff performance; the rate of completed work within timescales regularly exceeds 95%

This has led to more accurate monitoring and control of costs by reducing wide variations in workloads. In addition responsibility has been transferred for any third party claims arising for works completed out of

time scale, to the contractor.

The public are becoming more confident that when they see patches marked for repair that they will be completed and not left for the markings to wear away.

What is planned for the Future?

It is recognised that there is a need to improve the way orders are transmitted and reported to/between the contractor and client. The use of photographs and in cab PDAs is an area they are keen to develop.

We need to link the number of reactive repairs undertaken on any street with other condition data to improve the identification and justification of forward work programmes.

We are looking at extending the approach to highway drainage/gully maintenance.

What efficiency savings or other improvements have resulted that may be of interest to the Programme for capture?

Advance visibility of the volume and range of works to the contractor offers stability in prices and minimises the risk of claims to the client for increased costs.

Are there any Lessons Learnt that you would like to share with others so that they can avoid any issues that you have overcome?

Early contractor involvement and a clear estimation or definition of what is to be achieved by both parties. A process that both parties agree to.

A very proactive arrangement for checking and monitoring performance between both parties. Identifying variations to the model and how this is managed.

The impact of severe weather events can disrupt programmes and this needs to be recognised with contingency arrangements in place for extreme events.

There is a need to ensure that data is accurately recorded and monitored in order to have confidence in the performance based approach to reactive repairs

Case Study offered by: Rochdale MBC

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Appendix A: Abbreviations

A summary of the abbreviations used are:

- ADEPT** Association of Directors of Environment, Economy, Planning and Transport
- AIA** Aggregate Industry Association
- CIHT** Chartered Institute of Highways and Transportation
- CQC** Customer, Quality, Cost
- DfT** Department for Transport
- HMEP** Highways Maintenance Efficiency Programme
- JAG** Joint Authorities Group
- LGA** Local Government Association
- MBC** Metropolitan Borough Council
- NHT** National Highways and Transport Survey
- NJUG** National Joint Utilities Group
- PDA** Personal Digital Assistant
- RAC** Royal Automotive Club
- RSTA** Road Surface Treatment Association
- TfL** Transport for London

This report was written and prepared by the Highways Maintenance Efficiency Programme (HMEP) on behalf of the Department for Transport.

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Get involved with, and contact HMEP:
HMEP would welcome any comments and feedback, so that it may be reviewed, improved and refined to give the sector the best support possible. If you wish to make a comment, please send an email to highwayefficiency@dft.gsi.gov.uk with the header, 'Feedback on Potholes Review'.

If you would like to find out more about HMEP and to offer your feedback about our products and services please email highwayefficiency@dft.gsi.gov.uk

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