ROAD MAINTENANCE BECOMING TOP PRIORITY

Research reveals county councils across England are making pothole repairs and road maintenance a top priority.

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HaTelit® offers an exhaustive range of asphalt reinforcement grid products finished with a coating with over 60% bitumen content for the active retardation of reflective cracking.

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In the recent budget statement by the Chancellor the government continues to focus attention on funding major infrastructure projects including the Strategic Road Network. However, behind the headlines local road maintenance funding continues to languish comparatively despite recent injections of new government money with authorities struggling to keep their roads safe for the public to use. The pothole plague continues to spread far and wide making access to these high-profile infrastructure projects all the more difficult via a poorly maintained local road network.

It remains to be seen what will happen to road maintenance funding over the next few years as councils continually have to make budget reductions with highway maintenance remaining unprotected and an easy target for cost savings. The relatively new ‘Self-Assessment’ scheme introduced to encourage authorities to adopt amongst other things best practice on asset management may encourage more innovation in the sector which is badly needed but will all authorities be able to rise to the challenge following years of cost cutting and loss of expertise? However, we are now seeing some authorities ‘innovating’ by sharing highway maintenance services and in this way getting more for less to stretch already tightened budgets even further. The unrelenting drain in expertise within local authorities is a worry and may have left many authorities under resourced to adopt these new initiatives and be unable to embrace the need for change without further support.

The spring edition of the renew magazine touches upon many of these important issues and offers further insights from various stakeholders including the Roads Minister. It highlights various road maintenance solutions that should be of interest to everyone working in the highway maintenance sector challenged with adopting best practice.

Welcome to the spring renew magazine - the only magazine dedicated to road surface maintenance.

Howard Robinson
RSTA Chief Executive

renew is published twice a year by the Road Surface Treatments Association.
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The condition of the local road network in England and Wales looks set to go from bad to worse as the decades of underfunding and increased traffic takes their toll. The latest Annual Local Authority Road Maintenance (ALARM) survey, published by the Asphalt Industry Alliance, has found that the cost to bring the road network up to a reasonable standard would cost £11.8 billion and take 14 years to complete.

“Local highway authorities are increasingly adopting new asset management and preventative maintenance policies and examining all possible cost efficiencies in order to tackle the enormous challenge that faces them”, said Howard Robinson, RSTA chief executive. “The survey showed that over the last year local authorities filled in over 2 million potholes. However, despite their best efforts, the impact of decades of underfunding plus current and future budget restraints means that local roads will continue to deteriorate.”

The ALARM survey found that overall budgets for road maintenance have fallen by 16 per cent.

Robinson continued: “Central government seems to be unable to understand that the local road network is the essential link to the national road network, rail stations, ports and airports. It is also the main means of access to people’s homes, to schools, hospitals and businesses. The indifference to the importance of a well maintained local road network is, quite frankly, staggering.”

The ALARM survey provides an interesting insight as it asks motorists who have the driving experience that enable them to compare the condition of roads over several decades. The lack of real investment in road maintenance during those decades is evident by today’s estimated £12bn cost to repair the backlog of existing potholes. It is not so much a case of fondly remembering the past but worrying about your vehicle’s suspension as you hit another pothole.
Increase in pothole damaged vehicles not acceptable

Data released by the RAC shows a 24% year-on-year increase in the number of call-outs to vehicles likely to have suffered damaged due to poor road surfaces.

The RAC has reported that its patrols responded to 5,010 more incidents involving broken shock absorbers, ruined suspensions parts and distorted or damaged wheels in 2015 compared with 2014. In total, RAC dealt with 25,487 pothole related call outs in 2015.

Given the amount of taxation that motorists pay, the increase in the number of vehicles being damaged by potholes is unacceptable. Motorists pay £26.6bn in fuel duty, £25bn for VAT on fuel and a further £6.1bn on other motoring taxes. An annual total of £58bn. In return they have a potholed local road network, damaged vehicles, a black hole of £12bn is needed to bring roads up to an acceptable standard and local authorities struggling with ever-reducing budgets being unable to commit to the necessary programme of long-term maintenance.

Fines for unattended roadworks would be self-defeating

Department for Transport proposals to fine councils and utility firms £5,000 a day for leaving roadworks unattended at weekends would further reduce local authority funds for essential road maintenance.

Under the proposals, local authorities and contractors would have to work seven days a week or remove roadworks at weekends. The plans cover the 24,000 mile network of A-roads that are overseen by local authorities. Currently, there is a penalty of £5,000 a day for delayed roadworks, but these ‘overrun’ charges do not apply to local authorities.

Frustration at unattended roadworks is understandable but to fine local authorities is self-defeating. The fines would further diminish already limited local authority funds. Fine payments would be money which could otherwise be spent on maintaining roads and so reduce the need for roadworks in the first place.

Aggregate supply concern for road maintenance

A new survey raising the problems of declining aggregate reserves has been met with concern by the Road Surface Treatments Association (RSTA).

The Annual Mineral Planning Survey, published by the Mineral Products Association (MPA), calls upon the Government and planning authorities to speed up the planning system for aggregate reserves. Failure to do so means maintaining a steady and adequate supply will become increasingly difficult. Sand and gravel is being severely under-replenished as reserves are being used twice as fast as new capacity is being permitted. Despite a few large planning permissions, crushed rock is also suffering from general under-replenishment.

Commenting on the new survey Howard Robinson, RSTA Chief Executive said: “The RSTA shares the concerns of the MPA with regards to the diminution of available aggregate reserves across the UK. It is vitally important to ensure the sustainable supply of high quality aggregates for use in road surface courses and treatments.

Over the past few years there has been a shortage in availability at peak season of aggregate of the required polished stone value for use in surface dressing. This can have a negative impact on the implementation of planned programmes of road maintenance. The MPA findings would suggest that this situation could get worse unless the mineral planning systems and approval timescales are radically improved.”
How do we produce high-performance bitumen? We add knowledge to the mix.

How do you become an expert? You focus on one thing only. For more than eighty years, Nynas’ focus on bitumen has enabled us to continuously develop high-performance products for a wide range of challenging applications. That’s why we are the partner of choice when our customers need long-term solutions. Let’s talk. nynas.com
A Freedom of Information (FOI) request by the IAM has found councils are following government-stated best practice and increasingly investing more money into capital projects (i.e. road rebuilding) rather than spending funds on short-term temporary repairs. The FOI request asked county councils how much they spent on fixing road surface defects such as potholes and how much they spent on capital projects to resurface roads between 2013 and 2015.

While the IAM’s findings reveal many councils are spending less on filling potholes, 17 out of 23 of them are in fact spending more overall on resurfacing worn-out roads.

### ROAD MAINTENANCE BECOMING TOP PRIORITY

A number of county councils across England are making pothole repairs and road maintenance a top priority, according to research carried out by the Institute of Advanced Motorists (IAM).

TRL (the Transport Research Laboratory) is offering advice to local authorities and private finance initiatives (PFIs) to help them adopt best practice for highway appraisal and maintenance. The guidance accompanies the newly-launched Highways Maintenance Appraisal Tool (HMAT) and will help organisations to secure vital additional funding as part of the Department for Transport’s (DfT) Local Highways Maintenance Challenge Fund.

TRL recently developed HMAT, a spreadsheet based model designed to estimate the wider benefits that arise from road maintenance, as part of work funded by the DfT. For the first time, a fully holistic approach has been adopted for highways upkeep, with factors analysed including delays to road users, carbon emissions, vehicle operating costs, accidents and much more.

In addition, experts from TRL are now offering support in analysing road network maintenance options using HMAT, enabling organisations to maximise performance and reduce costs, resulting in more efficient highways maintenance.

Built on the existing Highways Maintenance Efficiency Programme (HMEP) and Potholes Review of 2012, the HMAT modelling enables highway officials to assess and compare the economic costs and benefits of proposed asset management strategies, allowing them to make key decisions on maintenance funding and justify any proposed budget increases.

The local road network is our single biggest transport asset providing a vital link for individuals, communities and businesses. This Government recognises that one of the best ways to foster job creation, encourage economic growth and support communities is to ensure we have a well maintained local road network.

That is why we announced in December 2014 allocations of just under £6 billion for local highways maintenance between 2015/16 to 2020/21. More recently we announced a further £250 million for a Pothole Action Fund between 2016/17 and 2020/21.

I am therefore pleased to see that this year’s RSTA conference will be looking at the future funding for road maintenance in the UK and the role that asset management and new accounting rules for local authorities will play in local roads maintenance. It is right that local highway authorities continue to play their part in achieving best value for the taxpayer and to devote renewed energy and commitment to maintaining their local roads. There are 118 highway authorities in England, outside London, who are often doing things in different ways. It is clear that councils can learn from each other and get more for less.

Councils that apply sound asset management principles can clearly demonstrate benefits in terms of financial efficiencies, improved accountability and customer service. Applying these principles will help councils achieve a more long-term approach to maintaining their networks. That is why we have introduced from 2016/17 an incentive funding element worth £578 million from the £6 billion. This will help to incentivise local highway authorities to adopt good asset management principles and efficiencies into their highways maintenance service.

But that is not all. The Department for Transport continues to work closely with the UK Roads Liaison Group. One area currently underway is the review of the Codes of Practice for highways, structures and lighting which aims to update the Codes to reflect current developments in the maintenance sector and bring a fundamental change in the way highway infrastructure is managed in the UK, through the adoption of a risk based approach. The review started in autumn 2014 and the revised Codes are due to be published later this year.

We have also recently made available a tool for local councils to use to demonstrate the value of the wider economic benefits of local maintenance. This tool can be used at either a national or local level to provide evidence of the benefits to assist decision makers on demonstrating that there is a sound business case for maintaining roads.

This Government continues to be very active on local highways maintenance – through providing funding and guidance to local councils to ensure that we have a well maintained road network fit for the future.

This Government recognises that one of the best ways to foster job creation, encourage economic growth and support communities is to ensure we have a well maintained local road network.
All Roads Authorities are committed to working together to improve the maintenance of all our roads. We are exploring existing collaborative activity between Councils and Transport Scotland (and their Operating Companies) to seek ways to increase collaboration between the local and trunk road maintenance providers.

The Programme is also taking a long term view of the future needs and challenges of the roads service in Scotland in the next 20 years.

We are exploring new ways of funding road maintenance that will support the delivery of long term investment plans. Central to this is effectively communicating the critical importance of road maintenance and the asset management approach to the key decision makers. By considering the central role of the road network in the delivery of many of the ongoing national outcomes and priorities, a stronger ‘position’ for the network will be developed.

We are developing a Workforce Action Plan for the public roads sector, to develop a future workforce with the necessary skills to continue to manage our country’s road network.

The Programme is taking a long term view of the future needs and challenges of the roads service in Scotland in the next 20 years

All Roads Authorities are committed to working together to improve the maintenance of all our roads. We are exploring existing collaborative activity between Councils and Transport Scotland (and their Operating Companies) to seek ways to increase collaboration between the local and trunk road maintenance providers.

The Programme Board has representation from Transport Scotland, the Society of Chief Officers of Transportation in Scotland, Society of Local Authority Chief Executives, the Convention of Scottish Local Authorities and the Improvement Service, and is supported by a small team of officers to deliver the following aims:

• Support the design and delivery of existing roads initiatives to share services/capacity;
• Develop existing shared initiatives further, considering the potential to widen the scope of what could be shared, widen partnerships, remove/manage barriers to change, escalating the business case design stage to drive forward a faster pace of change;
• Identify and develop new opportunities for collaboration between the 33 roads authorities;
• Encourage and support communication across authority boundaries;
• Encourage the consistent use of roads-related data, maximising the potential to use the data to drive improvement;
• Support local authorities and their partners to establish sound governance arrangements for collaborative initiatives that meet all EU procurement guidelines .

Through our flagship project ‘Governance First’, local authorities are approaching collaboration by addressing the governance requirements as the first fundamental step. Operational design is considered to be a second step following establishment of the governing body, and a rapid business case development approach should ensure timeous implementation. The project has successfully embedded a ‘sharing by default’ concept in the development of collaborative initiatives across the country.

The Roads Collaboration Programme (RCP) was established in January 2014 to support the recommendations of the Scottish National Roads Maintenance Review (NRMR), to explore opportunities to share services and capacity among the 32 roads authorities and Transport Scotland in order to facilitate change and ensure a resilient and sustainable roads service for Scotland’s communities.

Angus Bodie
Programme Manager, Roads Collaboration Programme

STAKEHOLDER VIEW

COLLABORATION IS THE WAY FORWARD

The Programme is taking a long term view of the future needs and challenges of the roads service in Scotland in the next 20 years.

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Programme Manager, Roads Collaboration Programme
RSTA members will be increasingly aware that their local authority clients are now talking 'Asset Management' when it comes to maintaining their roads, footways and cycle paths. Indeed, many have become asset managers as they seek to maintain and sustain the nation’s extensive local road network well. Central Government is also encouraging local highway authorities to adopt asset management and from this coming financial year Councils will have a proportion of their funding allocated through an Incentive Fund that is designed to sustain funding for those who take forward this best practice approach.

The RSTA is working with The Midlands Service Improvement Group (MSIG) to bridge the gap between the more strategic asset management planning tools, such as the Highway Maintenance Efficiency Programme (HMEP) Lifecycle Planning Toolkit, and the extensive guidance that the RSTA has on the design and delivery of road surface treatment products. MSIG is a collective of Midlands and North West County, City and Unitary Councils sharing best practice to drive improvements and efficiencies within the Highways and Road Safety Disciplines of Local Authorities. Established in 1997 as the Midlands Regional Best Value Group, MSIG members have been at the forefront of asset management on the local road network.

Many local authorities are now investing in the condition of their highway network. Asset management strategies are being designed and delivered to not only make a change now, but sustain the impact of that change over time. As such highway authorities are seeking to maximise the contribution that well maintained highway infrastructure can make to local communities and the economy. The best results will be achieved through these investment strategies if asset managers can successfully make the shift from a predominantly reactive ‘worst first’ approach to planned, preventative works that reduce the whole life cost of maintaining the highway asset.

It is well understood that ‘prevention is better than cure’ and if asset managers are to successfully make the shift and be able to invest in preventative treatments, it is essential that they are aware of the full spectrum of surface treatment options available.

The tool and supporting guidance that will be launched at the RSTA Spring Conference is aimed at asset managers and will be freely available for all to use.

To make sound investment decisions it essential that local authority asset managers have a full appreciation of the treatment options that are in the pallet, where they can fit as part of a lifecycle plan for the asset, the relative whole life costs of various options and to know that delivery is affordable. The RSTA tool will support such decisions and enable RSTA members to demonstrate how their products can help deliver the best return on the investment made in local roads.

The highway authorities are seeking to maximise the contribution that well maintained highway infrastructure can make to local communities and the economy.
Innovative patching products offer a range of benefits, including relatively low operational cost and carbon footprint; fast installation; minimal disruption to road user. All these combine to offer efficient and cost-effective temporary and permanent repair of potholes and safety hazards. IPPs are particularly suitable for reactive (Category 1 within 24 hours) or planned maintenance (Category 2 within 28 days) small works such as pothole repairs, street ironwork, footway repairs, access covers and link boxes.

In essence, cold lay asphalts are asphalt mixtures manufactured using standard aggregates and bituminous binders mixed at elevated temperatures and then allowed to cool to ambient prior to packaging in tubs or bags. As they are cold applied, the repairs can be trafficked immediately after laying. IPPs are available in different aggregate grades, typically 3mm, 6mm, 8mm and 10mm in order to accommodate varying repair thicknesses. They contain a proprietary bituminous binder and graded aggregates to BS EN 13043:2013. PSV required is site specific and is normally supplied by the local authority as determined from the Design Manual for Roads and Bridges, Volume 7, section S10, HD36/06 Table 31. Cold lay asphalt products usually contain aggregate with a PSV above 60.

Product selection is determined by the depth and the type of road surface defect. Each site must be considered in the light of its specific characteristics including nature of surface, geography, traffic volume and speed. Some local authorities may decide to select a product aimed at heavily trafficked roads where end performance is a high priority. It should be noted that these IPP products are proprietary and should not be confused with traditional deferred set macadam. Each product is supplied with guidance to ensure appropriate installation. The required site information, planning and execution and traffic management is the same as for other surface treatments.

Cold lay asphalts can be applied when air and road temperatures are between -5°C and 40°C. The area to be repaired should be marked out the edges saw cut back to sound material. The prepared area should be regular in shape and should be free from loose debris, contaminants and water. For high-speed roads, BS 434-2:2006 recommends a diamond shape. Note, some IPP manufacturers claim that saw cutting is not always required for their products. In accordance with the Specification for the Reinstatement of Openings in Highways (SROH) some manufacturers recommend a bond coat to the vertical edge of the repair prior to compaction to ensure that a good bond is achieved when the cold lay asphalt is fully compacted. The manufacturer will advise the contractor how best to compact the cold lay asphalt, including surcharge, to ensure that a durable, dense finish is achieved. The material should be compacted in accordance with the certificate holder’s instruction or Section S10 and Appendix A8 of the SROH. It is important that the material is fully compacted and completed before migration of binder to the surface or aggregate crushing is observed. Installation of a HAPAS approved anti-skid thermoplastic over-banding system to the edges of the reinstatement is recommended by some manufacturers to seal and waterproof the joints.

**SPOTLIGHT**

**INNOVATIVE PATCHING PRODUCTS**

Innovative patching products (IPP) are specially designed and manufactured cold lay asphalts that offer highway authorities an alternative to conventional asphalt patching products.
**SECTOR UPDATE**

**Surface Dressing**

Last committee meeting 17th March, 2016.

- The Code of Practice for Signing is being updated and will be published later this year in time for the 2017 season.
- There is a lack of consistency between authorities on how site permitting is applied and this has been raised with ADEPT.
- There is a recognised shortage of chippings peak season however this is less of a problem for contractors with long term contracts who are able to secure supplies without too much difficulty.
- A new PSV table has been included in the new Road Note 39 (7th Edition) for lower trafficked sites recommending a reduction of PSV and a maximum AAV of 8.
- Swept chippings are no longer regarded as waste following discussions with the Environment Agency.
- Road Note 39 (Design Guide) has been updated as the 7th Edition and published by TRL in March. RSTA will be providing briefing sessions for members.

**Slurry Micro-surfacing**

Last meeting 17th March, 2016

- PD6689 is being updated so the committee reviewed various proposals.
- Considered the revised BS EN 12274 parts 1-6 undergoing CEN enquiry.
- Agreed to develop new industry guidance on Signing at Slurry Surfacing sites.

**High Friction Surfacing**

Last meeting 11th March, 2016

- Revised service life numbers were noted for Hot applied (8years) and Cold applied (12 years) based on the BBA two year audit report.
- A new pocket installation guide for operatives is under development.
- A working group is updating the Code of Practice published in 2011.

**Specialist Treatments**

Last meeting on 16th November, 2015

- Discussed the Toolbox seminar, new training courses developed by RSTA and the Diploma in Road Surface Technology at the University of Derby.
- Discussed updates to the MCHW 900 series and Sector Scheme 13.
- Noted Sector Scheme 23 was published by UKAS in May.
- Discussed the new RSTA Asset Management tool being developed by TRL-Appia.
- Discussed stakeholder engagement activity; ADEPT, TAG, IHE, HE, Roads Collaboration Programme.

**Geosynthetics & Steel Meshes**

Last meeting 25th February, 2016

- Reviewed progress on the new PRoTECT carbon foot-printing tool under development by NTEC.
- Discussed the new clause 936 specification and HD51.
- Discussed member’s progress towards qualifying assessors for NHSSI3 compliance.
- Discussed the highly successful RSTA CPD course run in January.
- The meeting received a presentation from TRL-Appia on the new Asset Management Tool.
Smarter surfacing for a sustainable network

Surface treatments designed to save you money, energy and time

- Retread carriageway and footway recycling processes
- Microsurfacing cold applied surfacing for carriageways
- Fibredec crack inhibiting and durable solutions
- Slurry treatments for footways and cycleways
- Heritage decorative surfacing
- High friction surfacing
- Pentack rejuvenation treatment

Surface treatments designed to save you money, energy and time.
**RSTA NEWS**

**15th Asphalt, Pavement Engineering and Infrastructure Conference**

The recently held 15th Asphalt, Pavement Engineering and Infrastructure Conference, hosted by the Liverpool John Moores University Department of Civil Engineering in association with the RSTA, is a major international event for those interested in asphalt technology, sustainable infrastructure, aggregate recycling, airport and highways design and maintenance. Howard Robinson, RSTA Chief Executive, chaired Day 1 of the two day conference and RSTA was well represented by a number of its members who provided presentations on a wide range of road surface treatment issues, developments and innovation. Abstracts of these are shown below:

**New Developments in Microasphalt**
**John Richardson, Colas Ltd; Hassan Al-Nageim, Liverpool John Moores University, Atif Rasheed, Liverpool John Moores University**

Microsurfacing has an important role to play in road maintenance. Importantly, it is well placed to meet the challenges of increasingly strict environmental regulations and budgetary restrictions.

Fibre modified microasphalt is a very thin layer of 18mm that acts as a membrane to dissipate strain created by movement of the cracked base to overcome reflective cracking. A crack at the base of the layer propagates within the upper layers and exerts strain at the base of the layer above. This crack can then propagate to the surface.

The paper outlines work aimed at producing super microasphalt with high resistance to cracking and deformation by investigating and modelling the behaviour of glass fibres that will enhance its durability.

**Improving and Extending the Life of Surface Dressing and Chip Seal**
**Leigh Foster, Jobling Purser**

Spraying of a low penetration grade polymer bitumen emulsion to a surface dressing or chip seal is known as a ‘lock coat’. These specialised emulsions are designed to be applied following the initial sweep of the new dressing or to an existing dressing or chip seal. The benefits include stabilisation of the new dressing at an early age to retain a higher percentage of aggregate, reduce the need for additional sweeping and during the first winter, provide a seal that reduces oxidation and extends a surface’s life, stabilise and reduce fretting in old dressings.

Lock coat systems have been used in the UK for over five years. The paper provides data on laboratory and site tests on the Jobling Purser Sprayco Armaseal lock coat product.

**New Industry Guidance on Installation of Ironwork and Maintenance**
**Alex Wright, Instarmac**

The correct installation of ironwork and the compatibility of the constituent materials is critical to its service life. Currently, service life expectation and specification guidance for ironwork installation and refurbishment varies greatly from location to location. The paper consolidates all aspects of installation and existing industry experience to offer overall best practice guidance.

The paper forwards the fact that the cost of materials and components used for ironwork installation account for up to 20% of the overall cost. Therefore, correct installation and maintenance is imperative. An RSTA sub-committee has been established to develop a code of practice aimed at forwarding a ‘right first time’ approach.

**Asphalt Reinforcement through Geosynthetics: Design Methods and UK experience**
**N. Brussa, Maccaveri Ltd UK; D. Crowther, Maccaveri Ltd UK**

High levels of traffic loading, particularly from HGVs place considerable strain on the road network. The geotechnical industry has developed a range of geosynthetic reinforcements systems designed to optimise the performance and durability of pavements and to reduce required asphalt thickness.

The paper analyses the work that has been done and what solutions are available in terms of research undertaken, design criteria, product choice and installation. Real case studies are examined to provide an understanding of the role of geosynthetics as an effective engineering solution.

[Continued on p15]
Innovations in Mastic Asphalt Bridge Deck Surfacing
Wayne Perrin, IKO PLC

Polymer modification to mastic asphalt could further improve temperature susceptibility and resistance to cracking thereby helping to maintain structural integrity and durability of mastic asphalt bridge deck surfacing. Improvements have also been made in delivery of materials to site. This can now be done in hot-charge transporters with material at the required laying temperature and so is ready-to-lay.

The high content of hard grade or modified bitumen and the high content of limestone filler produce an impermeable asphalt that provides a premium surfacing material for road and bridge applications.

Mechanical Stabilisation of Unbound Layers in Permanent Roads to Increase Pavement Performance and the Incorporation of that Benefit into an M-E Analysis Tool
T.Oliver, Tensar International; J.Cook, Tensar International; C.Andrews, Tensar International; J. Kwon, Tensar International

There is a growing body of evidence supporting the performance benefits of incorporating stiff geogrids into unbound layers of permanent roads to control deformations and improve pavement life. The paper reviews the evidence and provides an explanation for the stabilisation mechanism proposed with supporting evidence from DEM modelling. A description is provided of the steps taken to incorporate geosynthetics effects into an M-E pavement analysis.

Design of Micro Surfacing Emulsions Using Non-Naphthenic Bitumen
Gary Schofield, Total Bitumen

Recent changes in the crude oil market have challenged the accepted view that effective micro-surfacing emulsion manufacture requires the use of a naphthenic bitumen. The paper examines the use of alternative non-naphthenic binders.

The paper examines the progress of non-naphthenic bitumen emulsion, considers the limitations of laboratory assessments, the reality of on-site and the challenges to achieve desired performance. Having achieved good performance with two different aggregate chemistries, the paper looks at how to better assess such materials on a site and laboratory scale.

Investigation of the Long-Term Performance of a High Tenacity Polyester Reinforcement in Asphalt Pavement Rehabilitation
Daniel Hilpert, Huesker Synthetic GmbH

Rehabilitating cracked asphalt pavements by installing new asphalt layers does not make the underlying cracks disappear. Indeed, they will soon propagate into the new asphalt overlay. This phenomenon, known as reflective cracking, is one the major problems associated with the use of asphalt overlays.

Asphalt reinforcement made of high tenacity polyester fibres offers an effective solution. This was demonstrated by a Masters Thesis that studied over 30 different project sites. The paper reviews this Thesis demonstrating both the basic theory and practical experiences.

NEW RSTA TRAINING & ASSESSMENT MANAGER APPOINTED

Kevin Pickering joined the RSTA on 29th February as Training & Assessment Manager, reporting to Clive Mitchell, Head of Training & Assessment.

Over the past few years we have experienced significant growth in demand for training and assessment services from members so Kevin’s appointment is timely and will further strengthen the RSTA management resource in this important area. Kevin is also well known by many members having represented Colas on the RSTA Surface Dressing Committee over a number of years and has previously worked for Balfour Beatty Infrastructure Services, South West Tar Distilleries and Hampshire CC.

WELCOME TO NEW MEMBERS

Over the last year, RSTA has welcomed a number of new members including:
Asphalt Grid Systems
Ceredigion County Council
Go Plant Limited
IKO Plc
Larsen Building Products Ltd
Quality Marking Services Ltd
Schaeffer Technic
Wrekin Products

RSTA looks forward to working with them in forwarding the road surfaces treatments sector and helping to develop their business profile and industry networking.
Emulsis - Total Bitumen’s complete range of low temperature emulsions

Ultra
Intermediate Grade Emulsion

Satis
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Supreme
Super Premium Grade Emulsion

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Bitumen Division

Total
Safe, colourfast demarcation with minimal disruption

WeatherGrip is an innovative, cold applied coloured surfacing, based on 2 part solvent-free Methyl Methacrylate (MMA) technology, designed to provide bright, colour-fast, skid and slip resistant demarcation for various large and small highway and non-highway applications.

WeatherGrip is highly durable so especially suitable for areas subjected to high wear and stress through braking forces and can be installed in reflective or non-reflective options.

WeatherGrip has a unique fast cure characteristic even at low temperatures with areas typically open for use within 1 hour.

WeatherGrip is the ideal system for restoring and enhancing existing surfaces.

To find out how WeatherGrip can help you get a grip of safer demarcation, visit: www.wj.uk or email us on weathergrip@wj.uk
RSTA currently has 86 members. Membership of RSTA includes national and regional contracting companies, local authority direct services organisations, material and equipment suppliers. RSTA members must join National Highway Sector Scheme 13 where appropriate or comply with the requirements of HAPAS Product Certification and Approved Installers Scheme or equivalent.
NEW FOR 2016

THE RSTA IS PLEASED TO LAUNCH ITS NEW ASSET MANAGEMENT PAVEMENT DECISION TOOL

Look out for official launch presentation by TRL at the conference

For further details please contact enquiries@rsta-uk.org

WE LOOK FORWARD TO SEEING YOU AT THE BELFRY
Your Target: Long Lasting Roads
Our solutions: TenCate Polyfelt® PGM, PGM-G & PGM-G Patch

TenCate Geosynthetics has developed a complete range of products specifically suited for the application in asphalt pavements.

TenCate Geosynthetics and its preferred installer Asphalt Grid Systems offer you a complete solution from A to Z, from product to advice and installation.

TenCate Polyfelt® PGM is ideal for:
- Stress absorbing membrane underneath new asphalt wearing courses. It increases the working life and service intervals
- Maintenance with surface dressing: the most cost effective method to treat cracking & water penetration
- Maintenance of old asphalt roads without levelling layer.

TenCate Polyfelt® PGM-G is ideal for:
- Complete asphalt reinforcement
- Asphalt reinforcement on old concrete roads
- Asphalt reinforcement of a longitudinal crack with milling

TenCate Polyfelt® PGM-G Patch is the quick & easy local repair of cracked roads:
- No sticking of bituminous product thanks to its thin separator membrane
- No requirement for tack coat (the bitumen is already on the product)
- Safe, quick and easy installation due to self adhesive bitumen
- The glass filaments are protected and embedded completely in abituminous matrix.

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PGM 14: Reflective crack control and waterproofing
PGM-G: Reinforcement plus sealing for highly stressed pavements
PGM-G: Patch: impermeabilisation, stress relief & reinforcement

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materials that make a difference

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