Developments in Road Surface Maintenance

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Perth 24.1.17

www.rsta-uk.org
Today’s menu

• Quick RSTA intro

• Context for Asset Management

• Consider new guidance and specifications affecting surface treatments

• Look at some new product innovations
RSTA overview

- Formed in 2008
- Members treat 100 million m\(^2\) per annum
- 5 sectors represented
- 83 members – 14 local authority members
- Represents the full supply chain
- Activities include; stakeholder engagement, developing guidance, specs and training
Stakeholder engagement

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National Highways Sector Schemes for Quality Management in Highway Works

13
For the supply and application of surface treatments to road surfaces

Published by the Sector Scheme Advisory Committee for Surface Treatments (SSACST)
Training and qualifications

We train c. 500 highway engineers and contractors per annum all over the UK

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ASSET MANAGEMENT
Context

• The road network is our biggest asset and its availability and standard of maintenance impacts on economic activity and our everyday lives

• Local road maintenance funding is reducing year on year so highway authorities are improving efficiencies through better asset management

• Preventative maintenance is integral to good asset management and now there is more help available to make the right choice
Drivers for Better Asset Management

- Reducing highway maintenance budgets and increasing input costs e.g. aggregates and bitumen
- New incentive funding scheme
- Increasing traffic and the need to reduce congestion
- Improving network resilience to combat climate change
- Protecting public safety e.g. skid policy
- Extending the road asset service life and delaying replacement
- Improved customer satisfaction
- Benchmarking and efficiency
It is important for asset managers to know what treatments are available
The most common treatment used is surface dressing, followed by asphalt resurfacing, then strengthening (reconstruction and overlay).

Surface dressing accounted for 65% of all surface treatments on the principal ‘A’ road network and 69% on the minor road network in 2014/15.
Preventative maintenance

Source: Asphalt Surfacings, Steven St John
New asset management guidance

- RSTA, ADEPT and MSIG recognised in 2014 the need for new tools/guidance to help highway authorities to make better informed decisions at the pavement level
- This resulted in a panel being set up involving industry stakeholders to collaborate and produce a new tool
- The tool was launched at the 2016 RSTA Conference and is now available through www.rsta-uk.org and www.trl.co.uk
The initial demand came from MSIG

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.

Courtesy of Herefordshire CC
The MSIG Authorities

 Courtesy of Herefordshire CC
NEW GUIDANCE AND SPECS
UKPLG

- All new specs and design guidance now come under the UK Pavement Liaison Group
- Chaired by Highways England – Transport Scotland are represented
- Full industry representation
- Meets 3-4 times a year
- Looks after the MCHW and DMRB
- Set up in 2012
HD37 is being updated

- HD37 is being updated as part of the DMRB revision 2017-19
- It provides guidance on several surface treatments
- It will be published this year
• DfT invested £6M in HMEP in 2011 and audited figs show a return of £250 M savings amongst local authorities
Codes of practice

- We now have 10 Codes of Practice, we had 1 in 2009
- New RSTA Skid Risk Policy guidance on website
- Others in the pipeline – Ironwork Installation & Refurbishment
- How can we work together to raise industry awareness?
New Code of Practice
DESIGN GUIDE FOR ROAD SURFACE DRESSING

by D Bateman

With the advice of a panel representing the industry and the clients under the Chairmanship of Dr H L Robinson, The Road Surface Treatments Association

Road Note 39 (Seventh Edition)
PD6689 is being updated
Highways England now want contractors to have...

- HAPAS certification for Cold Applied Ultra Thin Surfacings (CAUTS)
in other words Surface Dressings and Micro Surfacings
New Code of Practice for Signing
CE Marking is still fairly new

- It is a legal requirement for surface dressing and slurry surfacing contractors to have a CE mark for their products.
- The Contractors declaration of performance informs the client what level of performance is provided after 1 years service, e.g. texture depth and minimum surface defects.
Some European Standards are being updated

- Six standards affecting Slurry Surfacings have reached CEN enquiry as part of the 5 year review
Independent study on HFS durability

Site information and data gathering – 2013 to 2014

- 304 inspections recorded on 272 different sites
- 12 months to 14 years of age
- Sites are located throughout the UK
- All sites are traceable to BBA HAPAS High Friction from:
  - Five year reviews
  - Routine surveillance
High Friction Surfacing

Inspections per generic group

Concluded the average service life is at least 5 years with good evidence for much longer life.
Spray Injection Patching

A new British Standard is under development
Asphalt Preservation Systems

- A new HD is being developed by RSTA and Highways England
- Clause 950 is also being updated
Geosynthetics and Steel Meshes

There will be a new chapter in HD37 and also a new specification clause 936.
PRODUCT INNOVATIONS
New Overbanding Products

- Skid resistant / retained long term
- No spread (thermoset)
- Hard wearing
- Safe to use
- Low cost / minimal disruption
- HAPAS certification
New Fill and Overband Products
Inlay repairs
Reinforced surface dressing

Uses a non-woven SAMI – stress absorbing membrane interface, bonded to the road surface then surface dressed.
Road Preservation/Sealants

- Developed in California
- Integral part of the Highway Design process in USA
- Low cost economic solution for preserving roads in acceptable condition – avoiding slipping into amber
- They compliment Surface Dressing

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Road Preservation/Sealants

- Two types – penetrative and non-penetrative
- Special Bitumen Emulsions and Solvented systems
- Applied at typically 0.5 litres m² – can vary
- Seals surface against ingress of water and frost
- Minimises damage caused by salt ingress
- Blackens existing surface, makes it look new!
- Fills small surface voids, and hairline cracks
- Binds together aggregate and surface fines
Sealed Surface Dressing

- Spray applied binder locks in ‘loose aggregate’ reducing excess loose chippings (flyers)
- Reduces scuffing and fretting on stress areas
- Blackens road surface; transforms appearance from a dressing to look more like asphalt
Longer Life Slurry Surfacing Systems

HAPAS Certificate
12/H181
Product Sheet 1

RALUMAC THIN SURFACING SYSTEMS FOR HIGHWAYS
RALUMAC RMT THIN SURFACING SYSTEM

This HAPAS Certificate is issued by the British Board of Agrément (BBA) on behalf of the pre-agreed organisations of the Department for Transport, Transport Scotland, the Welsh Assembly Government and the Department for Regional Development, Northern Ireland, the Association of Directors of Environment, Economy, Planning and Transport (ADEPT), the local Government Technical Advisers’ Group and Industry bodies. HAPAS Agreement Certificates are normally subject to a review every five years.

PRODUCT SPECIFICATION AND SUMMARY OF CERTIFICATE

This Certificate relates to the Balance RMT, a cold-applied, multi-layer thin surfacing, for use as a surface course on new and maintenance road construction.

HAPAS CERTIFICATION INCLUDES:
- factors relating to compliance with HAPAS requirements
- factors relating to compliance with Regulations where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal frequency reviews.

KEY FACTORS ASSESSED
- Surface macrotexture — the system conforms with Performance level 3° and is satisfactory for use on roads with posted speed limits greater than 30 mph (see section 6).
- Bond to substrate — the system has a satisfactory bond to substrate (see section 7).
- Durability — the system will provide a durable surface course (see section 9).


The BBA has awarded this HAPAS Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First Issue: 1 May 2012
Simon Wray
Head of Approvals — Materials

Greg Cooper
Chief Executive

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RSTA Advisory Service

• At a time when councils are seeing reducing maintenance budgets the RSTA can provide advice on product selection, design, service life, life cycle, remedials etc.

• Would this be of interest to APSE members?
RSTA training courses

- Surface Dressing – 2 day silver certificate course, Perth, 8th - 9th February
- Slurry Surfacing – 1 day silver certificate course, Perth, 27th April
The End

Thank you for your attention