

Associated Asphalt

Thin surfacings have revolutionised road maintenance since they were introduced into the UK a decade ago. Now one of the first – Safepave – is officially recognised as having come of age.

Paving the way forward

At first glance there is little to differentiate recent resurfacing of the A48(M) in Wales from any other previous Safepave surfacing projects undertaken by Associated Asphalt. But closer inspection of the contract reveals that it was the first to be carried out since Safepave received its HAPAS (Highways Authorities Product Approval Scheme) approval.

Safepave – adapted from French surfacing technology – was the first thin surfacing to be introduced into the UK and over 10M.m² of the material has now been laid. Following the launch of Safepave in 1991, other thin surfacings were developed and such materials have now become de rigueur in UK highway maintenance, the traditional surfacing of Hot Rolled Asphalt (HRA) having lost favour.

The Safepave family of surfacings officially gained its HAPAS certificate from the British Board of Agrément in December last year. Nonetheless, Associated Asphalt's contract to resurface the

A48(M) for the National Assembly for Wales is the first time the certificate has been used as part of a bid.

"Resurfacing work on the A48(M) involved replacing the existing worn HRA surface course with a 25mm nominal thickness of Safepave during a succession of overnight possessions," says Associated Asphalt Technical Development Director Bill Heather.

"We laid over 80,000m² of Safepave on both carriageways of a 4km stretch of the road in seven nights to improve the pavement profile and create a high skid resistant surface. The old HRA surface on the A48(M) was very close to the end of its service life but overlaying Safepave avoided the need for lengthy full depth reconstruction."

"Baptism by fire would probably be the best way to describe some of the early Safepave test sites." **Bill Heather**

Use of Safepave's HAPAS certificate in the A48(M) bid process enhanced the credibility of the already well established material but was not absolutely essential. Nonetheless, it is likely that a HAPAS certificate will soon become a vital requirement for companies vying to use thin surfacings on highway maintenance contracts.

Gaining HAPAS approval marks a happy conclusion to the first decade of Safepave development. Associated Asphalt began working with French contractor Scred to develop its Novachip surfacing system for use in the UK over 10 years ago. The result of the joint research was Safepave – the UK's first thin surfacing.

"Safety was, and still is, a high priority on UK roads," says Heather. "By the early 1990s HRA had built up a proven safety record but we could see that increasing traffic volumes would place even greater demands on durability and safety. New materials needed to be developed in order to meet these demands."

Thin surfacings were already popular in Europe but the safety aspect had to be demonstrated before they could be adopted in the UK and that is exactly what Associated Asphalt set about doing.

The Safepave system uses an integrated paver to apply the bond coat as well as mix and lay the hot asphalt material in a single pass process. The polymer modified bitumen bond coat is hot applied

Making a clean sweep

Accumulation of rubber deposits on an airport runway or loss of macro texture on a highway can debilitate an asphalt surfacing's ability to provide skid resistance and drainage. Removal of debris and restoration has always been a slow, difficult and often messy process. But Captive Hydrology, an environmentally sound technique available from Associated Asphalt, can do the job with minimal disruption.

"The technique combines controlled high pressure water with high flow rates to blast debris away from the treated surface," explains Associated Asphalt Highways & Airfield Surface Treatment Manager Chris Green. "Used water and debris is recovered at the point of treatment by means of a vacuum which leaves the surface ready for immediate trafficking."

Recovered water is treated by waste specialist Onyx to allow it to be reused in industrial applications elsewhere. This also makes the system ideal for cleaning up fuel or chemical spills. Captive Hydrology is used to deep clean porous asphalt and has also been used successfully to remove road markings and prepare surfaces for overlay applications.

But if loss of microtexture is the problem, Green has another trick up his sleeve – micromilling. He says: "Skid resistance of asphalt can also reduce if the aggregate becomes polished but we can restore it using micromilling techniques which abrade the surface.

"Both techniques are one pass processes and can be used to treat large areas in a single day. Through choice of the right system the service life of asphalt surfacings can be increased by up to five years."

to the existing road surface through a spray bar just in advance of laying the asphalt. Heat from the asphalt material initiates the breaking process in the bond coat.

Despite early scepticism from the Highways Agency and local authorities, four trial sites were secured for the new material during the summer of 1991.

"Baptism by fire would probably be the best way to describe some of the early Safepave test sites – most were ones which had proved troublesome in the past and other traditional solutions had already been tried and failed," says Heather. "Cambridgeshire's A47 was the very first Safepave trial site. The road was very heavily trafficked and

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1: Wales' A48(M) was the first contract to be completed since Safepave gained HAPAS approval.

2: Over 10M.m² of Safepave – the UK's first thin surfacing – has been laid since its launch in 1991.

3: Captive Hydrology removes rubber deposits and other dirt from road and runway surfaces to restore original characteristics and prolong service life.

4: Safepave system uses an integrated paver to apply the bond coat and lay the hot asphalt material in a single pass process.

had a history of rutting problems."

Nonetheless, the trials went well and confidence in the new product grew and over 1M.m² of Safepave was laid during 1992. The following year

the thin surfacing market began to expand as other products became available and acceptability grew.

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