

On-line archive documents the key developments

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Lafarge Aggregates, MA 21, autumn 2007 - Free draining Axosport – fit for all weather

Authorities and sports clubs keen to keep hard court facilities open during high rainfall can specify one of Lafarge Aggregates' free draining asphalts, Axosport and Axosport Multi-Use. Both products provide durable and porous alternatives to conventional sport hardstandings and demand for their free draining surfaces will increase if inclement weather continues to hamper sporting activities.

Lafarge's National Added Value Products Manager Phil Battle says: "Tennis courts are perfectly flat and have no crossfalls, so it can be very difficult to get rid of standing water on conventional asphalt playing surfaces. Free draining Axosport materials, on the other hand, allow water to pass quickly through the surface."

Lafarge's sports surface materials have been designed to ensure balls bounce as expected and meet stringent specifications set down by the Sports & Play Construction Association. Axosport has an open graded texture suitable for use on tennis courts and Axosport Multiplay has a closer texture designed to reduce wear and tear, making it suitable for team games.

Both materials contain a high content of voids to aid the passage of rain water, with



Lafarge's Axosport materials prevent build up of standing water on tennis courts and multi-use surfaces

Multiplay containing slightly fewer voids to increase resistance to scuffing during team play. The asphalt mixes contain 6mm single sized aggregate of a sharp, angular shape selected to produce the required void content and a strong interlock in the mix,

bonded with a carefully selected bitumen binder. Great care is also taken at the batching plant to ensure the high quality aggregate is not contaminated with other grades of stone and delivery vehicles are thoroughly cleaned before use.

Nynas Bitumen, MA 21, autumn 2007 - EME2 creates new technical challenges

EME2 (or Enrobé à Module Élevé) is the generic title for high strength, long life asphalt base and binder courses whose technology – developed and proven in France – is now being taken up in the UK. In France the mixture has proven to be extremely durable provided essential material selection and design criteria are met.

Now in Britain, one company in particular is helping the asphalt supply sector get to grips with EME2 and the special needs that come with it. That company is Nynas Bitumen, which has developed binders specifically for EME 2 and whose Asphalt Engineering Laboratory has the knowledge and equipment to assist in proving EME2 mixture design. Nynas feels that EME2

represents a positive development for the asphalt industry and has invested substantially in the new (to the UK) technology.

“One result of our investment is standing here beside me,” says Nynas Senior Chemist Mike Lancaster, pointing to a new Duriez machine recently installed in the company’s laboratory at Eastham. A Duriez has the capability of assessing water sensitivity, one of a number of stringent tests required during the EME2 mix design process; and Nynas’s machine is one of only a handful resident in the UK.

“We have the capability here of carrying out virtually all the testing that is required to prove EME2 mixes.” Lancaster says.



Nynas has the equipment needed for developing EME2 mixes – including a Duriez machine

Ringway, MA 22, spring 2008 - Quiet surfacing draws public praise

Home owners living beside the A26 near Tonbridge in Kent have come out very much in favour of a new quiet asphalt surfacing material. Comments received from local residents via a questionnaire



A roller compacted Ultraphone to a depth of 60mm

praise the reduced noise and vibrations from passing traffic after the road was relaid with Ringway’s ‘Ultraphone’ thin surfacing.

The contract, carried out in October 2007, was the first to feature Ringway’s new asphalt product, which gets much of its noise reducing properties from a recycled aggregate.

“We are delighted with the performance of the surfacing and the reaction of local residents following completion of the works,” says Divisional Manager Jonathan Core of Jean Lefebvre UK, which has overseen development of the material for Ringway. “Kent County Council asked its maintenance

partner Ringway Infrastructure Services to demonstrate an innovative quiet surfacing material on the A26 and we were happy to put forward the new Ultraphone product.”

Audio monitoring equipment set up beside the resurfaced carriageway showed road noise to be significantly reduced, when compared to a section of conventional surfacing recently laid nearby. A reading of 66.8dB was recorded from traffic passing over the Ultraphone material, compared with a noise level of 72.5dB on the adjacent stretch of Stone Mastic Asphalt surfacing. This reduction in noise is equivalent to a 75% reduction in traffic flow.

Shell Bitumen, MA 21, autumn 2007 - Upping surfacing output with Shell S-Grade Binders

Much of the UK’s pavement surfacing is now carried out at night to keep disruption to a minimum for motorists and flight operators. Restriction on working hours brings logistical difficulty, which has driven Shell Bitumen to develop its Shell S-Grades for increasing volumes of surfacing possible in a given time.

The properties of Shell S-Grade binders lower the viscosity of asphalt mixes at high temperatures while increasing the viscosity at lower temperatures, therefore reducing the impact of cooling times on paving operations. Asphalt mixes containing Shell S-Grade binders are more workable at a given

temperature – or can be laid at lower temperatures and any Shell binder can be modified to provide the tangible benefits of Shell S-Grades.

This is allowing unprecedented levels of flexibility when programming paving work. A trunk road project in the UK has benefitted from use of Shell S-Grade binders, as has a massive runway scheme in Germany.

“Our chemists originally developed the additive in Shell S-Grade binders for the German asphalt market, for easing pressures on logistics – enabling thicker layers to be laid in short shifts,” says Shell Bitumen Technical Development Manager Richard Taylor.



Use of Shell S-Grade binders made it possible to reconstruct the runway to its full depth each night