

RMC seeks the quiet life

Ever bigger reductions in noise with no impairment of skid resistance – these are the aims of RMC's Viatex.

Road surface noise has at last been officially targeted for action, singled out for mention as a major problem in the Government's recent White Paper on Integrated Transport Policy. Fortunately, says Gordon Lemon, Divisional Technical Manager of RMC, cooperation between the industry and the Highways Agency has already produced a range of cost effective solutions to the problem.

Traffic generated road surface noise is a nuisance which modern societies have been learning to cope with by largely ignoring it as best as they can, up until now.

When Government Transport White Papers quote research findings along the lines of "noise disturbs sleep and affects performance in school children and that the stress this noise causes may increase the risk of developing chronic heart disease and

psychiatric disorders", it is obvious that the problem is now one which is going to climb the political agenda fast.

The solution to the problem will be sought, at least in part, from the asphalt industry. This is confirmed elsewhere in the White Paper when it says: "A new standard has been developed specifically to limit tyre noise, but attention is increasingly being directed at road surfaces which generate less tyre noise."

Crucially, the White Paper continues: "Whenever a road needs to be resurfaced we will seek to take advantage of the new, quieter surfacing that is available in deciding which treatment is appropriate for each location."

The message that noise is regarded as a target of policy has been well received by the asphalt industry, which has already invested considerable time and effort in developing surfacing products with low noise characteristics to meet UK conditions.

Everyone has by now heard of porous asphalt and the benefits it can bring in terms of low noise

and reduced spray in wet weather. The fact that this relatively expensive material is extensively used in continental Europe is often seized upon as evidence that it is an appropriate solution for immediate and widespread adoption in the UK.

Only parsimonious and foot dragging officialdom prevents an end to surface noise and dangerous spray, according to this view.

"That is far from the truth," says Lemon, "and we really do have to congratulate the Highways Agency this time for the way in which they have moved to allow performance specifications which in turn enabled the industry to bring forward a range of new products with lower noise characteristics.

"The Department of Environment, Transport and the Regions has also to be thanked for helping influence government thinking to the extent that we see new commitments in the White Paper to a reduction in traffic generated noise by the adoption of noise reducing surfaces.

"Porous asphalt is a product which will have applications in appropriate places, but city centres for example are not appropriate places for that material, largely because of maintenance problems. We have to offer alternatives which meet the requirements more efficiently from a technical point of view and offer value for money. That means competitively priced, low noise, easy to maintain road surfacing materials."

Turning these sentiments into practical and cost effective solutions is the challenge for the asphalt industry. Lemon says: "Fortunately RMC has a head start as, in common with other producers, we started development work on proprietary sur-

Slabs of Viatex are prepared using a segmental roller compactor at RMC's NAMAS accredited laboratory



faces with noise reduction characteristics some years ago."

This work resulted in the recent introduction of RMC's stone mastic asphalt alternative to hot rolled asphalt, called Viatex, to the UK market. Viatex was originally developed for the environmentally conscious German market and was re-engineered in the UK by RMC to meet domestic needs.

"We knew that improvements in

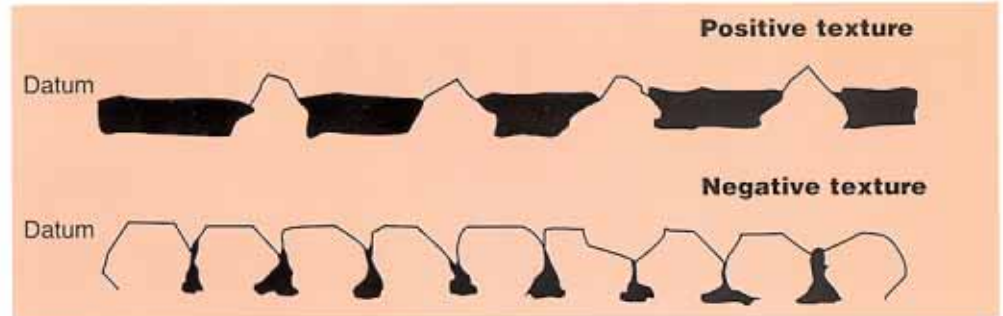


The noise reduction properties of Viatex are equivalent to doubling the distance from the traffic noise

surfacing techniques had been made in other parts of the world, so we went looking for the best of what was already there," Lemon says.

"But there is always a resistance here to anything untried and unproven in our own roads. So we had to develop a material specifically for the UK market on our own, one which gets away from the old recipe book approach and which has its own specially developed design method."

Throughout the development process RMC made all data and results of trials available to the



HA. "We wanted them to see what we were doing every step of the way, so there would be no residual doubts about the material's suitability for UK roads. We were making big claims for our new material, saying that it would be more durable on heavily trafficked high speed and urban roads, that it would have improved resistance to wheel tracking and could be used in thin layers to smoothly surface rutted or uneven roads. Reduced noise and wet weather spray characteristics are practically thrown in as bonuses"

RMC achieved HA type approval for Viatex this year as a result of this process, but the monitoring and development does not stop there. Lemon says: "We took advice from independent consultants during the development phase on noise, skidding and other physical characteristic measurements.

"For routine work we have invested in some of the best equipment available on the world market for our central laboratory, which now monitors routine performance of our SMA material in locations throughout the country."

Laurels are not being rested upon yet. "The HA has freed us up to show what we can do when specifications are based on performance, and we have to show continuous improvement," Lemon says. "The previous seven year trial process would never have resulted in what we have to offer now. The HA allowed us to do more or less what we wanted and we were able to prove that we were right.

"Our experiences with perfor-

mance based specifications with this material suggest that it shows the way forward for other products as well."

RMC is taking up the challenge thrown out by the White Paper by trying to make even bigger reductions in noise without impairing the fight for improved skid resistance, and at the same time trying to reduce costs.

The aim is to optimise noise reduction through a continuing research and development effort.

No quantum leap in performance is expected but RMC thinks that sustained and steady improvement is possible. "We will use the tedious but professionally sound methods of innovate, experiment, monitor and feedback," says Lemon.

"Producing materials which the public can notice the benefits of in terms of reduced noise is a sure way to improve perceptions of our industry. The public doesn't need to know why such low value integers are important, but they will know when they have a more restful sleep in a quieter environment."

A negative texture such as that found in Viatex significantly reduces surface noise production

Traffic noise is recognised as a major source of pollution.

