

Ringway

Calling for the long term view

Active asset management is the key to highway authorities maintaining roads more effectively and Ringway is well placed to bring its experience of maintenance and materials to help clients achieve this.

Highway authorities facing backlogs of emergency road repairs and with limited budgets at their disposal may be forgiven for concentrating their efforts on delivering short term, relatively inexpensive maintenance. But with planning and the use of preventative measures, road condition can be preserved more cost effectively if clients and providers can focus their efforts on carefully managing their highway assets over the longer term.

This does not mean that potholes should be left unfilled or reflective cracks ignored. What the road maintenance contractor Ringway is advocating is to use the knowledge from asset inventory and condition surveys and develop durable products and construction processes across a range of contracts and in a variety of locations. This way the very best solutions can be arrived at with both short term needs and long term benefits in mind.

Ringway's Group Bid Director Rob

Gillespie explains: "Asset management is all about taking the known condition of the network and deciding upon the standard of highways you want to see, in terms of structural composition, surface condition and residual life. The asset and pavement knowledge that Ringway has built up across

"We want authorities to make use of the best new technology that offers durable materials and value for money over the long term." Rob Gillespie

its Private Finance Initiative (PFI) activities and European experience, allows us to work with clients to deliver the most appropriate construction and maintenance solutions. We want authorities to make use of the best new technology that offers durable materials and value for money over the long term."

Understanding how a highway performs over time and intervening with a surface treatment at the most appropriate point can also help to prevent surface defects from appearing in the first place, or being allowed to get worse, Gillespie adds.

Highway asset management is not a new idea, says Gillespie, but returning to the process of preventative maintenance given the backlog in maintenance over the last three decades is a daunting thought for network managers. The prospect of a squeeze in maintenance funding after the forthcoming General Election means clients are likely to need to look more closely at making savings. But by deploying more durable products that perform well for many years, the 'whole life' cost of roads – and wider networks – could begin to come down. It is the detailed knowledge of how materials will perform over extended periods that is critical to the decision making process.

ASSET MANAGEMENT PROMPTS DEVELOPMENT

Increased use of asset management techniques for delivery of long term road maintenance has led Ringway to develop asphalt materials that reduce noise, are aesthetically pleasing, help combat vehicle emissions and use less virgin stone.

At Tonbridge in Kent, the company recently specified its new Ultraphone asphalt surfacing that reduces road noise after complaints from local residents. In London, 'Streetprint' surfacing has been laid to mimic the appearance of paving slabs without the need to employ specialist paving gangs.

The company has also developed a road surfacing designed to reduce traffic pollution. The 'Noxer' material contains titanium oxide that accelerates the oxidation of nitrogen oxides emitted from cars to form stable, neutral oxides that are held on the surface and washed away by rain.

Furthermore, trials are under way to create a high friction surfacing which blends together bauxite and lower grade aggregate to create an overall more cost efficient anti skid material that promises to deliver wider options for accident reduction.



Road renewal under way in Enfield, north London



Durable road surfacing materials are being developed by Ringway as a result of its attention to asset management

Ringway has been maintaining local authority roads in the UK for nearly 35 years and in that time has built up a wealth of knowledge on material composition and performance. The company makes good use of a pavement research facility in Warrington and its world innovation centre in France operated by parent company Eurovia to develop new road construction and repair products (see box). Clients are invited along to help tailor materials that meet their long term objectives.

Gillespie welcomes the introduction of long term PFI highway maintenance and management contracts, such as those in

Portsmouth and Birmingham. “These arrangements allow road network condition to be thoroughly assessed at the start of a contract, brought up to standard using durable materials during a core investment period and maintained in the most effective manner for the life of the concession,” Gillespie says.

Ringway was unsuccessful in its recent bid to manage Birmingham’s highways, but the tendering process was not in vain and formed part of Ringway’s long term strategic development. It allowed engineers and mathematicians from the company to further develop their understanding of asset

management and more accurately predict when a range of different carriageway constructions would need to be renewed.

It allowed Ringway to match first hand pavement condition information with the materials and construction techniques gathered from theoretical laboratory study. Together with data from extended monitoring of materials on long term contracts, it has allowed the organisation to fully appreciate the pavement management decisions that clients have to face on a daily basis, and develop long term asset management strategies for Ringway itself.

The company is hopeful that this – together with its experience of looking after highway maintenance for authorities including Worcestershire, Surrey, Kent and Transport for London – will stand it in good stead when bidding for further PFI roads contracts and when studying options for future highway financing models.

“By working closely with clients, we believe that the skills of all maintenance practitioners can work towards building more robust management plans to balance highway quality now with a durable pavement which requires less maintenance in the future,” says Gillespie.

MONITORING ON THE MOVE

Highway condition is often recorded for the purposes of asset management using road monitoring vehicles developed to the SCANNER (Surface Condition Assessment for the National Network of Roads) specification.

There is currently no such nationally recognised system for footways (although industry groups are working on one) which are generally assessed visually to determine the repairs needed and to record the condition of the asset. On some contracts, Ringway and client engineers working together operate ‘find and fix’

teams for identifying and repairing road defects. They use hand held electronic notebooks connected via the Internet to a central road management inventory for logging reports of problems spotted.

‘Emergency’ defects are repaired immediately and the work recorded in the same system. Less urgent programmes of refurbishment work are carried out later by operatives on a scheduled maintenance run, whose vehicles are directed from one site to another using satellite navigation which is linked to the task ordering system.

This blend of immediate repair and condition data gathering ensures the most cost effective approach and guarantees safety defects are acted upon quickly.