

# Solutions



**“As part of our corporate commitment to sustainability, boosting efficiencies and delivering improved whole life performance across the network, we’re always pushing to introduce any new technology or innovation that can further improve the durability of the roads we maintain.”**

Brian Kent, National Technical Director at Tarmac

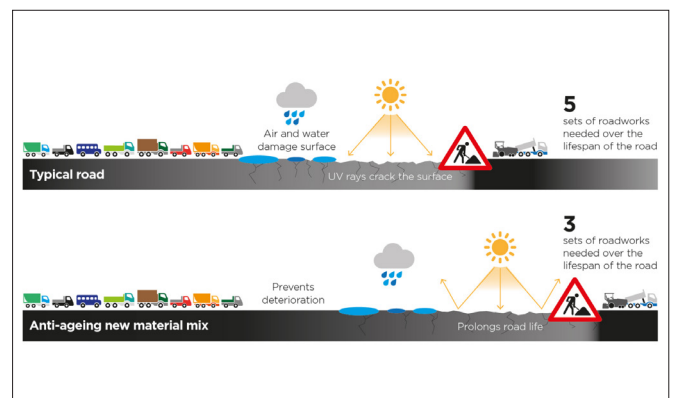
## Sustainable Construction

### Anti-ageing roads could keep roadworks at bay

A section of dual carriageway in Northamptonshire became the first in the country to be resurfaced with a pioneering new material that is designed to help roads last significantly longer. A new type of material that acts like an anti-ageing cream for roads could prevent the need for roadworks and reduce environmental impact. More durable road surfaces can lead to less money needing to be spent on maintenance, lower carbon emissions caused by maintenance work and less disruption for road users.

National Highways, together with Tarmac and Total, have resurfaced a busy section of the A43 near Silverstone, in Northamptonshire, with the new asphalt mix. The mix is held together by a new bitumen called Styrelf Long Life, which is designed to be more resistant to the elements by oxidising more slowly. This slower process means that the road surface stays flexible for longer, preventing cracks forming.

Total estimates that getting the asphalt required to resurface a mile of single lane carriageway - not including transport to site and working with it - can produce up to 26.5 tonnes of CO<sub>2</sub>. If roads lasted longer, so that two sets of resurfacing could be avoided, the reduction in asphalt production alone could save the equivalent of the CO<sub>2</sub> produced by an average car if it was driven for more than 270,000 miles - more than 10 times around the Earth.



Mike Wilson, National Highways Chief Highways Engineer, said: “We’re always looking for innovative ways to help us keep England’s motorways and major A-roads in good condition. The ultimate priority for us is safety so we invest in new technology and materials to keep those using the roads safe. Longer lasting roads means fewer roadworks, less disruption for motorists and a more sustainable network for everyone.”

Rick Ashton, Market Development Manager at Total, said: “At Total our key focus is sustainability through durability. These long-life binders will ultimately lead towards our vision of net zero carbon by 2050 by reducing roadworks, saving manufacturing, transport and installation energy and the associated emissions. This trial paves the way for enhanced highways asset management and predictive deterioration modelling for Highways England.”

Technical experts from Total will regularly measure the performance of the material against an equivalent control section laid at the same time on the A43 before its use is considered elsewhere in the country.