

# Anti-ageing roads could keep roadworks at bay

A section of dual carriageway in Northamptonshire has become the first in the country to be resurfaced with a pioneering new material that is designed to help roads last significantly longer.

England's motorways and major A-roads are expected to be resurfaced every 10-12 years because water, sun and air, combined with the weight of heavy traffic, causes the surface to deteriorate and crack.

However, laboratory tests have shown that an innovative blend of materials can help extend the life of the road surface without the need for a facelift.

Highways England, together with partners Tarmac and Total, has 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.

More durable road surfaces that require fewer repairs could lead to less money needing to be spent on maintenance, lower carbon emissions caused by maintenance work and less disruption for road users.

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 in a 60-year period, 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 270000 miles – more than 10 times around the Earth.

Mike Wilson, Highways England's 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.

Brian Kent, technical director at Tarmac, said:

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.

What we have in this case is essentially an anti-ageing cream for roads – just as these products are designed to reduce and prevent the signs of fine lines and overall ageing of the skin, the new bitumen being trialled on the A43 will protect the road surface.

It not only has the potential to offer improved value for money to the public purse, but it also contains properties to increase the overall lifespan of roads. Through preventing cracks to the surface of the road caused by elements such as air and water, the longer life bitumen has the ability to reduce disruption, deliver long-term carbon savings and importantly help network operators to better manage their assets.

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.

The new material has previously been tested in the laboratories of Total, at Tarmac's site in Elstow in Bedfordshire and on sections of road in The Netherlands and Germany. The A43 trial is the first time it has been used with high traffic levels in the UK.

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.

## **General enquiries**

Members of the public should contact the Highways England customer contact centre on 0300 123 5000.

## **Media enquiries**

Journalists should contact the Highways England press office on 0844 693 1448 and use the menu to speak to the most appropriate press officer.