

Rubber Modified Asphalt

Proven performance

3500
tyres recycled
14 tonnes
of CO₂ saved

Turning old tyres into new roads on the A426 Leicestershire

The challenge

Resurfacing was required on this busy dual carriageway from the Leicester Road roundabout at Blaby to the Wychwood roundabout at Whetstone.

Finance for the project was part of a successful £5 million Local Highways Maintenance Challenge Fund Bid awarded by the Department for Transport.

Among the conditions of winning the funding, were the need to demonstrate the positive economic, environmental and social impacts of the work. As a result, the Council had worked with Tarmac to explore more sustainable alternatives to conventional asphalt materials that would help to reduce the carbon footprint of this scheme.

The Council were also keen to minimise disruption to local road users and the works had a strict two-month programme window as stated in a letter addressed to local residents.

As work was scheduled for February, winter weather conditions would add a further challenge to meeting this deadline.

Our solution

After discussions with the client, Tarmac recommended their innovative Rubber Modified Asphalt as a 10mm SMA surface course.

It incorporates recycled rubber from old tyres and uses warm mix asphalt technology, giving a lower carbon footprint, typically 8% lower than the equivalent conventional SMA.

The use of recycled rubber crumb in the mix helps to avoid export of waste car tyres that cannot be recycled in the UK: approximately 500 tyres per kilometre of road, depending on layer thickness.

Warm mix asphalts also offer proven gains in productivity, requiring less time to reach trafficking temperatures and allowing more work to be completed within a given operating window along with excellent workability, even in lower seasonal temperatures.

Using this innovative solution helped the client to meet the terms of their funding, delivering reductions in carbon emissions and waste, along with a positive social and economic impact from fast, efficient completion of the resurfacing work and minimising disruption for local road users.



“Using recycled and carbon friendly components for our road improvements emphasises our commitment to improving the environment... I am delighted to see the environmentally-friendly innovations used in this project.”

Results and benefits

To date, this is the single largest scheme in the UK to use Rubber Modified Asphalt with 4800 tonnes of material supplied from Tarmac's local Mountsorrel plant. It has enabled the rubber from around 3500 tyres to be recycled on this scheme alone.

The carbon footprint was 8.12% lower from using Rubber Modified Asphalt than a standard SMA, saving over 14 tonnes of CO₂. This is the equivalent to the emissions generated by cars travelling an estimated 123,250 kilometres*.

Using Rubber Modified Asphalt was a key part of the Council's successful Challenge Fund bid and also helped contribute to their Climate Emergency Strategy. Tarmac's sustainability team were able to accurately quantify the carbon saving on the scheme and the number of recycled tyres used, which helped the client to report on outcomes.

Full details on carbon savings are available on request from your Tarmac Technical Product Support Manager.

The Council were very pleased with the outcome:

“Using recycled and carbon-friendly components for our road improvements emphasises our commitment to improving the environment. Work on both the Blaby and Harborough bypasses is already almost completed with minimal disruption to motorists and I am delighted to see the environmentally-friendly innovations used in this project.”

Councillor Trevor Pendleton,
Cabinet member for highways and transport, Leicester City Council

*Estimated using figures from DfT and Society of Motor Manufacturers and Traders



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