

“What we are doing on Chester Road is part of the future of resurfacing our highways. Making these decisions today, these small changes, will allow us to preserve our planet for future generations. This material allows asset owners and designers to work towards net zero. It makes improving the condition of our roads, while simultaneously lowering carbon emissions possible.”

Mark Goslin, contracts manager at Tarmac

Solutions

**NET
ZERO**

Sustainable Construction

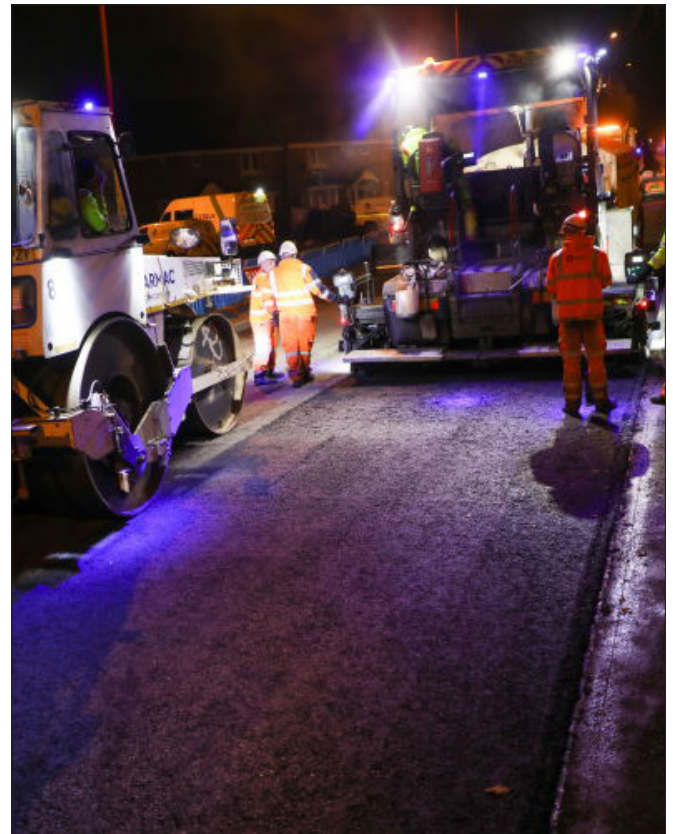
Biogenic binders on the Chester Road

As part of scheduled work to resurface the busy A452 Chester Road in Birmingham, our client and principal contractor were keen to explore ways of reducing carbon emissions and contributing towards their net zero strategy. The Chester Road is around 12.5 miles long, located in the North of Birmingham and runs from Brownhills to Erdington. It is one of the main routes in and out of the city.

Given the importance of the route and the high volumes of traffic using it, resurfacing works would need to be undertaken at night to avoid daytime route closures and disruption to traffic. The chosen solution would need to deliver long-term durability and resistance to these high traffic volumes.

The proposed pavement design would consist of a biogenic binder course topped with a high performance Ultilayer surface course. Biogenic binder replaces some of the fossil fuel derived binder with biogenic or plant-based alternatives.

In all, 530 tonnes of biogenic binder asphalt was supplied to the site being laid along with 630 tonnes of the Ultilayer surface course. Using a biogenic asphalt binder course instead of the original warm mix asphalt binder saved 3.45 tonnes of CO₂e in total. Detailed data on the early testing and trials of the biogenic binder and the proven track record polymer modified asphalt meant that the client was confident in the long-term performance of the new road surface.



Introducing biogenic binder underlines Tarmac's commitment to supporting our customers in their journey towards a net zero future for road maintenance. It follows the introduction of other products like our rubber modified asphalts which can recycle rubber from up to 750 end of use tyres per kilometre of road and our decision in 2022 to take the lead in defaulting entirely to lower carbon warm mix asphalt. This decision alone is expected to save around 21,000 tonnes of carbon dioxide per year. This scheme also illustrates Tarmac's commitment to working with clients to help them introduce innovative materials in a smart and considered way, while ensuring consistent performance comparable to conventional materials.