

LADYFIELD ROAD, CHIPPENHAM

BIOPAVE™

Miles Macadam recently delivered a Net Zero Resurfacing Scheme in Chippenham with Wiltshire Council and Atkins, using Biopave™. This project supports Wiltshire's goal of carbon neutrality by 2030, building on the council's 88% emissions reduction since 2014.

For the past decade, Wiltshire Council has specified Miles Macadam's Milepave™ to reduce emissions and resource use in road surfacing. This Asphaltic Grouted Macadam reduces carbon emissions by 40% compared to traditional materials, featuring a paver-laid open-graded asphalt sealed with a liquid grout. It is produced at lower mixing temperatures, using less energy and a reduced bitumen content, making it a more sustainable alternative to conventional asphalts. By incorporating SteelPhalt's Welsh-produced steel slag in the receiving course, the project eliminates the need for virgin aggregate, further reducing its carbon footprint. Additionally, the use of Biochar within the surface course and grout enhances sustainability by capturing and storing carbon within the road structure. Milepave's grouted system also mitigates reflective cracking from underlying concrete bays through pre- and post-jointing treatment. This provides greater flexibility to accommodate movement, minimising cracking. As a result, it reduces long-term maintenance requirements and optimises performance and longevity.

Delivered Programme of Work:

- 8,216m² of surfacing
- 871 tonnes of Milepave, using steel slag aggregate

Environmental Savings:

- Savings of 871 tonnes of aggregate and 10 tonnes in straight run bitumen over conventional materials
- 17.77 tCO₂e captured in Biochar and stored in the Biopave™ surface course. This equates to the carbon of 10,000 litres of diesel, or 1/5th of Miles Macadam's annual site usage, making a positive contribution to Wiltshire's goal of carbon neutrality.

The Ladyfield Road trial successfully addressed Wiltshire's concrete carriageway challenges, delivering a durable, net zero road surface that supports the council's ongoing commitment to sustainability and carbon reduction.