

FM Conway lays highest ever recycled content used in the UK in one-of-a-kind carbon neutral Westminster scheme



Leading infrastructure services company FM Conway has delivered a ground-breaking carbon neutral scheme in Elmfield Way, Westminster, laying a new road surface containing 92% recycled materials - the highest percentage ever used on a UK road.

As Westminster City Council's Highways partner, FM Conway delivered an upgrade of the road and footways, implementing multiple low carbon techniques, to achieve a total embodied and operational carbon saving of 78% – equal to approximately 100 tonnes of CO₂ equivalent.

The residual unavoidable carbon emissions were then offset using high-quality Verified Carbon Standard (VCS) units, administered and certified by Verra, the world's largest carbon registry, to make it a one-of-a-kind carbon neutral scheme.

Approximately 280 tonnes of warm mix asphalt was laid as a single layer, covering 1,600m² of carriageway. The proprietary mix, designed, manufactured, and laid by FM Conway, was the combination of three specifications of the contractor's 14mm SureLayer E product with the addition of extra recycled aggregate.

The finished product provided a brand new surface course containing 92% recycled materials, which delivered other benefits in addition to carbon reduction, such as faster installation and less neighbourhood disruption. The material's use of a bespoke polymer modified bitumen also meant increased durability and resilience, extending its life for years to come.

To achieve the substantial carbon savings, the asphalt material was manufactured at lower temperatures and laid in a thinner layer, meaning there were approximately 30% less tonnes manufactured, transported and laid – saving carbon throughout the life cycle.

The use of recycled content meant less virgin bitumen and less quarried stone was used, preserving the natural environment and reducing the carbon impact from haulage of these materials. In addition, the road planings were transported back to the same plant where the asphalt was made, optimising HGV logistics and minimising empty journeys.

Alongside the new carriageway, the scheme also involved the enhancement of the footway between the Woodfield Medical Centre and Harrow Road, as well as the installation of 11 new LED lamp columns, 200m of new cabling, and a full drainage review and clean.

Additional carbon savings were made in the footway construction, through the implementation of FM Conway's low carbon model, which incorporated closed loop recycling of excavated materials, as well as the use of lower thickness paving materials and lower carbon cement alternatives.

The full scope of works was carried out using no fossil fuels on site. This was achieved through the use of Hydrotreated Vegetable Oil (HVO) in the resurfacing element of the scheme, plus the use of electric mini-excavators, disc cutters and compaction plates, as well as using a solar powered welfare unit which used HVO as a backup in the footways element.

After the industry-leading embodied and operational carbon savings were achieved, the residual unavoidable emissions were offset using high-quality carbon removal and renewable power projects. The business has also supported tree planting in the UK, through the purchase of Pending Issuance Units administered by the Woodland Carbon Code, marking FM Conway's investment in future UK-based carbon removals.

The completed project now joins a series of low carbon trials delivered throughout Westminster as part of the Council and FM Conway's shared net zero ambitions, in which the partnership is using these new specifications to provide significant carbon savings compared to traditional materials and methods.

FM Conway and Westminster City Council have a longstanding history in pioneering the use of recycled content. A trial to lay an 80% recycled content surface in Sutherland Avenue in June 2019 was followed in 2021 by a warm mix surface course containing 85% recycled content on Third Avenue in 2021, and this latest improvement to 92% recycled content in Elmfield Way represents a further significant improvement in sustainable materials.

FM Conway Sustainability Director, Matt Tallon, said:

"This one-of-a-kind scheme illustrates how it is possible to stack together the best low carbon products, methods and techniques that are available today, to deliver massive carbon reductions. It is only once these embodied and operational carbon savings are made, should the residual carbon be offset, which in this case was done with high quality, verified 'VCS' carbon removal and renewable projects, as well as the planting of trees in the UK."

Councillor Paul Dimoldenberg, Cabinet Member for City Management and Air Quality said:

"The use of 92% recycled materials is remarkable and a huge step in the right direction as part of the council's commitment to creating a Fairer Environment. We're not only reducing our carbon footprint but also promoting a cleaner, greener future for Westminster. This is only the start of more carbon saving initiatives we'll be trialling in the city to get us one step closer to hitting our net-zero targets."

Head of Operations (Highways) at Westminster City Council, Phil Robson, said:

"As part of our wider efforts to achieve net zero we are delighted to have worked in collaboration with FM Conway to push the boundaries of the Recycled Asphalt Product (RAP) element of Carriageway works. It is a really interesting time to be working in Highways with partners and adapting services to achieve climate resilience and low zero carbon emissions. The transition requires the use of offsets at this time but we expect to see lower reliance on them over time. A big thank you to all the excellent engineers that have worked on this project."

PRESS RELEASE

January 2024



For further information, please contact:

Natasha Mealey FM Conway +44(0)1732 600 700 Natasha.Mealey@FMConway.co.uk

Oliver Gould FM Conway +44(0)1732 600 700 Oliver.Gould@FMConway.co.uk

About FM Conway

FM Conway is a leading infrastructure services company. Operating in transportation, the built environment, and public realm, we self-deliver all of our services, providing in-house capabilities across the entire lifecycle of a project.

We inspect, design, build, enhance and maintain essential infrastructure services for the community.

With over 60 years' experience, we pride ourselves on being an industry leader and innovator, especially in recycling and reuse. We have a network of asphalt and aggregate recycling manufacturing plants serving London and the wider regions throughout the UK, as well as a Thames-side wharf and our own research and development laboratory.

We recycle 98% of highway arisings, including kerbs, paving and concrete and we have the ability to produce asphalt with a high recycled content and a low carbon footprint.

We are a member of the British Safety Council, the Civil Engineering Contractors' Association, and the Quarry Products Association, as well as being BSI registered for environmental and quality management.

We are multi-award winning in our approach to road safety and were the first company in the UK to have achieved British Standard ISO 39001, which provides a framework to help organisations reduce the incidence and adverse effects of road traffic accidents.

Please visit www.fmconway.co.uk