A439 WARWICK ROAD IMPROVEMENT SCHEME

A MEMBER OF HOLCIM

AGGREGATE INDUSTRIES

A439 WARWICK ROAD SAFETY IMPROVEMENT SCHEME

AGGREGATE INDUSTRIES SURFACING SOLUTIONS DIVISION SUPPLIED ASPHALT PRODUCTS MADE UP OF UP TO 95% RECLAIMED MATERIALS TO WARWICK ROAD.

THE BRIEF

Warwickshire County Council launched the Warwick Road A439 road safety improvement scheme this year to significantly reduce collisions and create a safer, more accessible environment for all road users, including pedestrians.

The project was contracted out to Balfour Beatty and as part of the resurfacing element, Aggregate Industries was subcontracted, alongside CR MacDonald.

As part of its ongoing efforts to drive the circular economy and enhance sustainability in the construction industry, Aggregate Industries is on track to reach its goal of producing 100% recycled asphalt. In this project, the Surfacing Solutions team focused on repurposing end-of-life asphalt pavements and additional materials transforming them into fresh, high-quality asphalt. Through this, the team achieved a milestone of 95% recycled content for this project.

THE SOLUTION

Aggregate Industries Surfacing Solutions division supplied innovative asphalt products made from approximately 95% reclaimed materials. By incorporating reclaimed asphalt and additional materials, the team achieved a notable reduction in carbon emissions whilst maintaining the performance quality of the materials used.

For this project, the specific material used was AC 20HDM bin 40/60, a high-durability asphalt mix. Two versions of this material were compared in terms of their carbon footprint:

1. AC 20HDM bin 40/60 with aggregates and reclaimed asphalt:

- Carbon emissions to gate: 30.84 CO2/ tonne
- Carbon emissions delivered to site: 38.13 CO2/tonne
- Recycled content: 97%

2. AC 20HDM bin 40/60 without aggregates with 30% reclaimed asphalt:

- Carbon emissions to gate: 33.62 CO2/ tonne
- Carbon emissions delivered to site: 38.13 CO2/tonne
- Recycled content: 30%

By comparing these figures, it was determined that the use of aggregates and high reclaimed asphalt content led to a carbon savings of 2.78 CO2/tonne. This reduction highlights the environmental benefit of using a higher proportion of reclaimed materials.

Michelle Addison at Aggregate Industries commented on the project, saying: *"We are delighted to have been part of the Warwick Road improvement scheme. It was a great opportunity to not only enhance road safety, but also showcase our ability to produce innovate products, with a focus on circular economy practices. By developing an asphalt product made from up to 97% reclaimed materials, we have been able to reduce the carbon footprint of the project whilst maintaining high-quality standards - a significant step toward our goal of achieving 100% recycled asphalt."*