



RESURFACING A444 GRIFF ISLAND NUNEATON



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MAJOR RESURFACING OF GRIFF ISLAND ROUNDABOUT NUNEATON USING SUPERSAMI AND SUPERCURVE.

C R MacDonald completes major resurfacing of Griff Island Roundabout Nuneaton using SuperSAMI as a stress relieving layer and our SuperCurve surface course for performance and longevity from Aggregate Industries.

THE BRIEF

The A444 at Griff Island is a strategic location in Nuneaton connecting five different roads and leading to the M6 motorway.

The roundabout takes high loading and stresses from heavy traffic from cars, vans and lorries at most times of the day. This regular heavy traffic has given rise to pavement distress in the form of considerable reflective cracking from underlying concrete layers and unravelling joints, visible on all parts of the road around the island.

Due to the ongoing deterioration and safety concerns relating to the very heavily trafficked three-lane road surface on and around the A444 Griff Island, Aggregate Industries was tasked with finding the best asphalt solutions to carry out extensive and essential carriageway removal and resurfacing at the site, to enhance the road's durability whilst providing a safer and smoother surface for all road users.

THE SOLUTION

In May 2023 Balfour Beatty Living Places, a leading provider of highways maintenance services, that works in long-term partnership with Warwickshire County Council, called on Aggregate Industries for its expert advice, materials and delivery of a project to carry out repairs in this traffic-sensitive location, to be

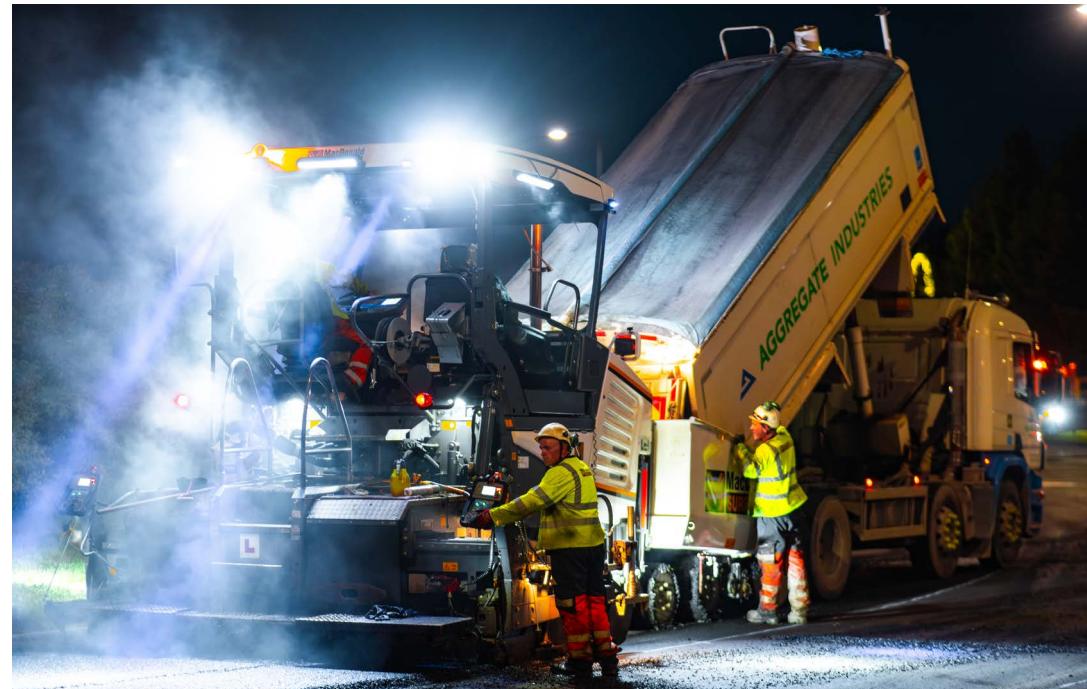
delivered in a short, one week, time frame to minimise disruption.

Consisting of the removal and replacement of the existing road surface to a depth of 110mm for the full extents of the roundabout and its approaches, improving the underlying strength of the road and the running surface to ensure and maximise safety for all road users was the key objective.

Due to the specific requirements of this busy roundabout, prior to the project commencing, a number of site visits were undertaken in the day and at night with our technical and commercial teams in which we carried out coring investigations to discover the extent and cause of the cracking and to be able to give ideal product specification based on the job.

In total, three different asphalt layers were recommended, all with optimised performance for the conditions and workability required.

SuperSAMI was the base layer which was laid on top of the old concrete and acted as a stress relieving layer between the legacy concrete and the new asphalt to prevent or slow down the rate of reflective cracking from occurring in the future. A stress absorbing membrane interlayer – SAMI, used to overlay jointed concrete carriageways – or on CBGM flexible composite pavements before installing binder and surface course. Typically laid 25-30mm thick, it's a fine graded 6mm asphalt containing a high proportion of polymer modified binder reducing



the onset and propagation of reflection cracking.

A highly polymer modified AC20mm binder course was then laid on top of the SuperSAMI layer. This provided the properties of high fatigue resistance with excellent deformation resistance. It was ideally suited for this project where reflective cracking was the main problem.

Finally, SuperCurve 65PSV was laid to enhance performance on this heavily trafficked and stressed road. This high performance 10mm polymer modified asphalt surface course has longevity thanks to the selection of high-grade components.

MacDonald Surfacing completed all surfacing works under planned road closures. Laying plans designed by MacDonald Surfacing ensured disruption to road users was minimal and that work was completed ahead of the program.

