

CASE STUDY

WHERE? M4 Motorway, Datchet

WHEN? 2012

WHO WAS THE CLIENT? Highways Agency (London and South East)

OVERVIEW:

The Tensor Glasstex SAMI layer application was proposed in order to mitigate reflective cracking and extend design life. The installation was carried out by Foster Contracting Ltd, who have developed plant specifically for the efficient and rapid installation of Glasstex composite. Their plant and expertise was essential in a time constrained project requiring night work with full road and lane closures to minimise traffic disruption.

“Glasstex P100 as an interlayer between the substrate and the asphalt will dissipate the peak strain from potential movement in the unstable concrete foundation and limit the mechanical stresses on the asphalt layer,” points out Ray Wicks, Director of Foster Contracting Ltd.

Pavement contractor Toppesfield Ltd planed the concrete layer down by 100mm, and carried out Type F inlaid crack repairs where required. Foster Contracting Ltd then sprayed a bond coat of 160/220 pen bitumen using one of their own calibrated tankers. This was immediately overlaid with the Glasstex composite.

The Glasstex composite is laid directly onto the bond coat which securely holds it in place. This ensures no pick up of materials from the delivery vehicles. As the asphalt is laid, the heat from the overlay draws the suspended bitumen through the Glasstex. This saturation of material and its subsequent bond, eliminates the requirement for a tack coat; saving time, cost and adding a waterproofing to the system.



Due to the instant break time of the 160/220 pen bitumen bond coat, Toppesfield could proceed rapidly with installation of the final 75mm AC 14 EME binder and the surface course system.

Craig Germeney, Operations Director, Toppesfield Ltd confirmed: "Foster Contracting Ltd provided a very efficient and competitive service with a speed of installation that does not compromise quality and caused us no delays or disruption in our surfacing programme."

Surfacing work to the three Eastbound and Westbound lanes of the 2700m stretch of motorway started on 27th February and was completed on 30th March 2012.

WHAT WERE THE CHALLENGES?:

Maintenance on this busy London access route was a time constrained project, requiring night work with full road and lane closures to minimise traffic disruption.

SOLUTION:

Tensar International's Glasstex® P100 composite grid was specified as part of a Stress Absorbing Membrane Interlayer (SAMI) solution to mitigate extensive reflective cracking originating from the underlying concrete.

BENEFITS TO CLIENT:

Timely completion of repairs to the M4 pavement surface between Junction 5-6 (Datchet) designed to extend its working life and reduce maintenance on this busy London access route.

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