



RAF Odiham Glasstex® Overlay Reinforcement Hampshire, UK 2010



Centre: Overlay milled-off ready for Glasstex installation. Right: Repaired airfield for Chinook helicopters

BENEFITS TO CLIENT

Simple low cost means of providing reflective cracking resistance to an overlay, increasing service life and enhancing protection of the underlying aquifer from fuel oil spillages.

THE PROBLEM

Approximately 8,500m² of an existing military airfield consisting of 3m x 3m pavement quality concrete (PQC) slabs overlaid by a 100mm thick blacktop surfacing layer which had suffered extensive reflective cracking over a number of years mainly due to thermal stresses. A long term solution was required for the airfield, which is used primarily by Chinook helicopters and sited over a sensitive grade 1 aquifer.

THE SOLUTION

Tensar Glasstex® was chosen not only as a means of inhibiting reflective cracking but also because the fabric component of the composite when impregnated with bitumen, provides an additional barrier against potential contamination of the underlying aquifer from any fuel spillages. The existing cracked blacktop was milled off, a straight run bitumen spray applied and Tensar Glasstex installed by specialist machine on to the milled surface. The Glasstex was covered with a 60mm thick stone mastic asphalt (SMA) binder followed by a 40mm thick hot rolled asphalt (HRA) surfacing with a slurry binder to enhance fuel resistance.

PROJECT DESCRIPTION

The existing asphaltic overlay had undergone extensive reflective cracking from the joints between the PQC slabs below. A new asphaltic overlay was required which would have a high resistance to the thermally induced reflective cracking stresses and also provide a barrier to any fuel spillages so minimising the risk of contamination of the underlying grade 1 aquifer.



Rapid mechanical installation of Glasstex



The completed helicopter airfield

The cracked blacktop was milled off, 160/220 pen bitumen (to BS EN 12591:2009) spray applied at the specified rate and Tensar Glasstex composite installed on to the milled surface. Tensar Glasstex is an asphalt reinforcing composite consisting of high tensile modulus glass fibre filaments stitch bonded to a non-woven geotextile backing which absorbs bitumen. The Glasstex was covered with a 60mm thick stone mastic asphalt (SMA) binder followed by a 40mm thick hot rolled asphalt (HRA) surfacing with a slurry binder to enhance fuel resistance.

The Client's Major Gary Fletcher commented, "Specialist installer Foster Contracting efficiently laid the 8,500m² of Glasstex in just 3.5 hours using 2 gangs each with a dedicated tanker and Glasstex lay down rig, which surpassed our expectations."

CONTRACT DETAILS

Contractor: Red Rose Pavements Ltd	Sub-Contractors: Foster Contracting Ltd Lafarge Contracting Ltd	Client: Defence Estates	Managing Agent: Turner FM
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