

CASE STUDY

WHERE? Hampshire

WHEN? 2010

WHO WAS THE CLIENT? Defence Estates



OVERVIEW:

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.

WHAT WERE THE CHALLENGES?:

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:

Tensor 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 Tensor 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.

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.



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