

Asphalt Reinforcement

Fortifix, Chelker Reservoir access road resurfacing, Skipton UK



Case Study

Project Description

The Chelker Reservoir lies within an area of outstanding natural beauty at the southern edge of the Yorkshire dales and is only 2 miles as the crow flies from the Bolton Abbey heritage site. Following a recent programme of sheet piling works and heavy trafficking from site vehicles, the entire length of the access road had suffered from reflective cracking.

The Challenge

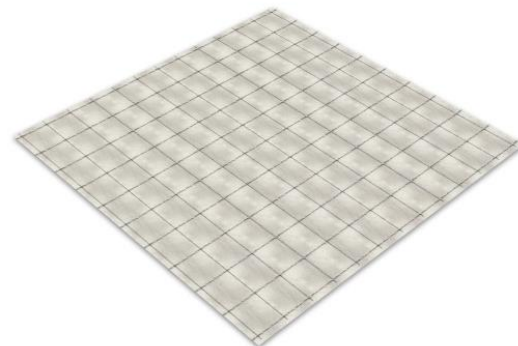
Resurfacing contractors Calder CAD were consulted by JN Bentley, on behalf of clients Yorkshire Water, to install a long-lasting resurfacing repair to fix the potholes and areas of cracking. The single track road receives frequent heavy loadings from tractors accessing the surrounding farms, in addition to Yorkshire Water maintenance vehicles.

The remote area is subject to high levels of annual rainfall with frequent heavy downpours and wintry conditions, so needed a rugged repair option to reduce ongoing maintenance costs and prevent early recurrence of the problem. The low tensile strength of asphalt means it is subject to cracking as a result of settlement, fatigue, temperature fluctuations and vehicle loadings following periods of wet and cold weather.

The solution needed to be fast to install to minimise disruption to the local residents and nearby working farms, especially following on from the recent piling works.

Project Information

Client	Yorkshire Water
Contractor(s)	JN Bentley (main contractor) Calder CAD (surfacing contractor) & Recomac (Fortifix installer)
Consultant	ABG Geosynthetics
Products	Fortifix 1C
Quantity	400m ²
Benefits	<ul style="list-style-type: none">• Fast installation• Long lasting reinforcement• Superior interlock with asphalt• Low strain to prevent cracking• Thinner overlay required



Fortifix 1C – Steel cord & polyester textile composite

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The Solution

The Fortifix steel cord reinforcement option was recommended as providing the best solution to reflective cracking. The low-strain properties of the steel grid and the unique seven strand cord profile provides a strong interlock into the asphalt, giving a 32% longer design life than glass fibre grids. A thinner layer of asphalt is also required as a result (in this case a 50mm surface course of AC 10 dense 100/150).

Following planing and patch repairs by Calder CAD, the Fortifix 1C was laid, supplied cut to the correct width so it could be simply rolled out into the bitumen emulsion bond coat (Multibond 70).

It is the first time Fortifix has been specified by Calder CAD and Managing Director Jason Dooling oversaw the installation. "The Fortifix grid was easy to install and absorbed nicely into the tack coat. Additional emulsion was applied over areas where the textile overlaps widthways and at the start of a new roll to make sure it didn't lift up as we laid the asphalt. The grid was easy to cut around the raised ironwork using straight edge snips, and the entire resurfacing was completed in one morning with minimal disruption to the local residents".

The ABG Service

ABG provided a design and consultation service for the new access road and accompanied the install to provide installation guidance.



Multibond 70 emulsion coat & Fortifix bond before overlay

Contact ABG today to discuss your project specific requirements and discover how ABG past experience and innovative products can help on your project.