MACCAFERRI

CASE HISTORY

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A75 TRUNK ROAD ASPHALT REINFORCEMENT

DUMFRIES & GALLOWAY, SCOTLAND, UNITED KINGDOM

Sub-grade Improvement

Problem

Much of the A75 in Dumfries & Galloway, links the A74/M74 at Gretna with the west coast port of Stranraer, carrying thousands of heavy goods vehicles every day.

Much of the road had been the subject of improvement during the late 1980s, but settlement problems had persisted. On one particular section to the east of Newton Stewart, a new section of road was constructed over poorly drained clay subgrade and the constant heavy traffic loading had caused severe deflection of the wearing course.

Following unsuccessful attempts at remedial work and a period of visual monitoring, engineers at Dumfries & Galloway Combined Services Department approached Maccaferri for their expertise in asphalt pavement reinforcement systems.

Both sides of the single-carriageway road required attention.

Solution

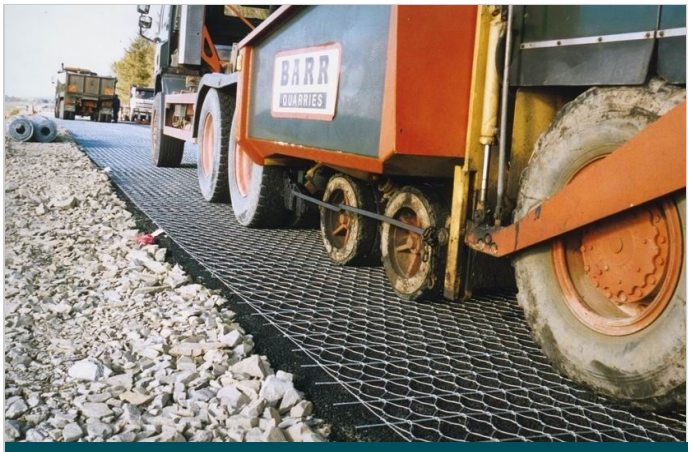
it was decided that this section of the road be reconstructed incorporating Maccaferri's Road Mesh™, double-twist wire mesh, and reinforcing mesh as part of bituminous asphalt overlay.

Road Mesh™ is intended for installation within the bituminous bound layers of the pavement. In remedial overlays, the old wearing course is usually planed-off and the Road Mesh™ is placed on the exposed surface, then overlayed with a new base course plus wearing course. Road Mesh™ causes the overlay to work as a cohesive mass, absorbing the horizontal tensile stresses and spreading the imposed traffic loadings over a wider footprint, thus reducing its damaging effect.

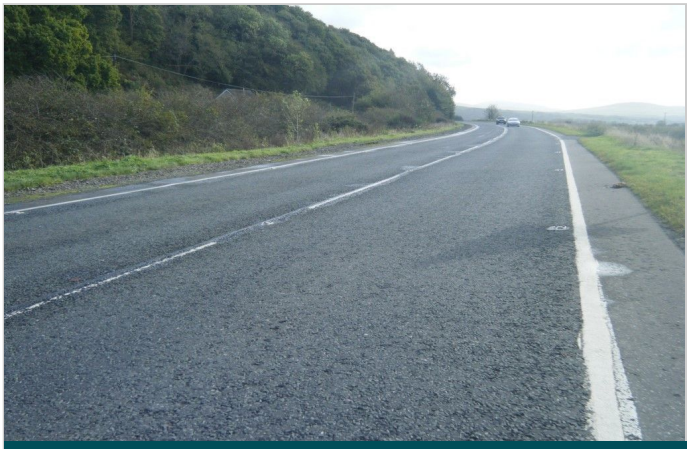
On the A75 project, the reinforcement system was installed by Dumfries & Galloway [D&G] Council with Barr as the main Contractor. Since its installation in 1999, the road surface has performed as intended with no repeat of the wearing course damage, previously experienced.

Client: DUMFRIES & GALLOWAY COUNCIL / BARR
Designer / Consultant: Maccaferri Ltd
Contractor: Dumfries & Galloway Council
Products used (Qty.)
Date of construction: 05/1999 - 08/1999
Google Maps Google Earth

Locally fixing Road Mesh™ to the regulating layer



Close-up view of paving machine receiving asphalt



October 2010, The pavement performs well with no visible distress after 11 years

The paving operation continues

Rolling the wearing course

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