

GEOSYNTHETICS

Case Study Ref: 603B

Paving – Rehabilitation of A606 Stamford Road, Oakham UK

Challenge

The A606 Stamford Road, Oakham is a busy route for tourists travelling between Oakham and Stamford and is also the main route serving the north shore attractions at Rutland Water.

In recent years the surface course has steadily deteriorated showing signs of reflective cracking and water pumping to the surface from the sub-layers. Core samples revealed that the bituminous surface courses were in reasonable condition but the concrete base layers were in poor condition allowing the upper layers to flex and crack.

Project Data

Application: Asphalt Inlay

Products: Tencate PGM-G100/100

Bond coat: 160/220 pen bitumen @1.1ltr/m²

Quantity: 14,000

Client: Rutland County Council

Main Contractor: Tarmac

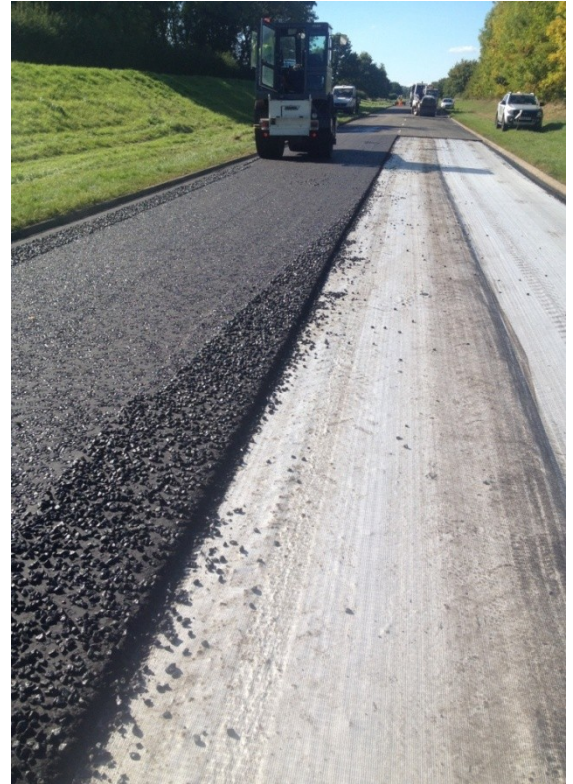
Date: 30/09/2015

Solution

Rutland County Council working in partnership with Tarmac proposed that the most cost effective and time saving option would be to strengthen the carriageway structure within the upper layers of construction using a grid reinforcing system. Consideration also had to be given to the water egress through the construction layers. The scheme consisted of planning the carriageway to a depth of 60mm to a firm platform on which 60mm of Masterfoam binder course was laid. Tencate PGM-G100/100 supplied and laid by Asphalt Grid Systems Ltd was applied to the binder course in two shifts. 30/14 hot rolled asphalt and pre-coated chippings was specified for the surface course.

Benefit

Tencate PGM-G conforms to EN 15381. Incorporating a Sami layer, (stress absorbing membrane interlayer) compared with alternative products PGM-G can offer 140g/m² mechanically bonded continuous filament nonwoven, for optimum sealing function being able to retain app. 1.1 lit/m² of bitumen. PGM-G retards the progress of differential stresses between substrate and the new overlay. Crack propagation and reflective cracking is therefore substantially reduced.



Top Left: Tencate PGM-G100/100 Installed by AGS specially trained operatives, using hydraulic pretension equipment ensuring a fast and efficient installation free from any wrinkles and folds.

Bottom left: AGS application machine installing PGM-G100/100 behind our bitumen tanker on site. All work carried out to client and NHSS 13 requirements

Right: PGM-G overlaid by 30/14 hot rolled asphalt and pre-coated chippings