

B6454 PINKIE ROAD ASPHALT REINFORCEMENT TRIAL MUSSELBURGH, EAST LoTHIAN, SCOTLAND

PAVEMENTS

Product: Road Mesh™

Problem:

Heavy traffic volumes on the B6454 made it an ideal test site for asphalt pavement reinforcement.

In Autumn 2009, East Lothian Council carried out a site trial with Road Mesh™ on the B6454 Pinkie Road in Musselburgh.

Solution:

Road Mesh™ was installed within both 100mm and 250mm overlays. A 250mm overlay with a glass fibre geogrid reinforcement was also installed in an adjacent section to enable comparison with both Road Mesh™ and unreinforced control sections. Two years after construction all reinforced sections are performing well.

Maccaferri offers a range of reinforcement products for asphalt and unbound pavements. These range from extruded polymer geogrids to MacGrid AR glass fibre asphalt reinforcement and Road Mesh™.

Whereas glass fibre reinforcement reduces reflective cracking, Road Mesh™, structurally reinforces the pavement, providing additional benefits of reduced rutting, shoving and fatigue cracking.

Road Mesh™ was designed for use within the bituminous bound layers of pavements. In remedial overlays the old wearing course is usually planed-off and the Road Mesh™ placed on the exposed surface, then overlaid 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.



The site is located on a busy bus route



Transverse cracking apparent on unreinforced section



The trial site uses both Road Mesh and geogrid

Client:

EAST LoTHIAN COUNCIL

Main contractor:

EAST LoTHIAN COUNCIL

Designer:

EAST LoTHIAN COUNCIL

Products used:

Road Mesh™

Date of construction

September 2009

Road Mesh™ is made from hexagonal woven steel wire mesh. Every 160mm, a transverse steel bar is woven within the mesh, locking it into position. The steel is heavily galvanised (in accordance with BSEN 10244-2 Class A) to offer an expected design life in excess of 60 years. As it has a very open mesh, Road Mesh™ allows excellent contact between the existing pavement and the new overlay. This means that the bond between the two layers is not compromised by the presence of the Road Mesh™ reinforcement interlayer.

The trial will be monitored over time to determine the performance of these reinforcement solutions.



Road Mesh was installed in two different overlay thicknesses



Prior to overlay, the pavement required constant maintenance

Officine Maccaferri S.p.A. Global Headquarters

Via JF Kennedy 10, 40069 Zola Predosa (BO) - Italy

T: (+39) 051 6436000 F: (+39) 051 236507

E: comes@maccaferri.com

www.Maccaferri.com