



Case Study

Ekotex® 08 Non-Woven Geotextiles

Location:

M1 Junction 12

Client:

Highways Agency

Project:

M1 Junction 12
Improvements



Contractors:

Costain/ Carillion Joint
Venture



Geosynthetics Limited

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The M1 is a heavily used route that connects London with the midlands and the North. It was designed and built in the 1950's and currently operates well over capacity, resulting in queues and delays at peak times. The increase in capacity is in part due to significant housing developments between Luton and Milton Keynes.

A major element of the works was the entire remodelling of junction 12 with an eye to preventing congestion causing traffic to queue back onto the carriageway. As drainage is a very important element of ensuring that a road meets its long term strength requirements, a stone drainage blanket was installed immediately above the formation and below the subgrade. In order to prevent migration of fines from the subsoil below and sub-base above occurring and reducing the capacity and therefore lifetime of the drainage layer a separation material was necessary. A non-woven Geotextile was required for the separation material in order to allow for ingress and egress of water whilst preventing migration of fines.

The permeability of the Geotextile used (Ekotex®08) is 108.76l/m²/s, with an aperture opening size of 0.064mm. Ekotex® 08 also had enough tensile strength to



resist installation damage. The project engineers, URS Scott Wilson approved the use of Ekotex® Non-Woven Geotextiles for this application

Geosynthetics were able to demonstrate that the Ekotex® material had a 120 year design life and met all other requirements of the specification with respect to:

- Tensile strength
- Elongation
- Puncture resistance
- Permeability

"Our selection of Ekotex® Geotextiles was based on a combination of performance attributes in line with the specification and competitive offer received from Geosynthetics Limited."

Chris Francis –Senior Buyer Carillion Costain Joint Venture





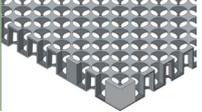
2 in 1
Landscaping Fabric



Gas Membrane
Radon, CO2, Methane,
Hydrocarbon Control



RoofCell
Sub Surface Drainage
And Water Storage



Alert®
Contamination Indicator



Geoglas®
Asphalt Reinforcement



Stratagrid
Soil Reinforcement Geogrid



AquaBlock®
Water Containment Liners



Geomembrane
Impermeable Membrane



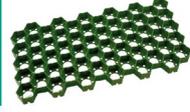
Strataweb
Slope Stabilisation



Bentotex® GCL
Geosynthetic Clay Liner



Golpla
Grass & Gravel Paving System



T-Block
Modular Retaining System



Cellweb® TRP
Tree Root Protection



Golpla Pregrown
Ready To Lay Paving System



Telegrid
Woven Polyester Geogrid



DuoDrain®
Composite Drainage Product



Interlock
Extruded HDPE Geogrids



Televev
High Strength
Woven Geotextile



East Coast
Biodegradable
Erosion Control



Knotblock®
Japanese Knotweed Barrier



Tenax
Soil Reinforcement Solutions



Ekotex®
Non Woven Geotextile



Landlok
Turf Reinforcement Mat



Total Traffic Exopave
Heavy Duty Paver



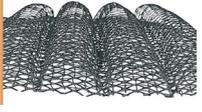
Fiberforce®
Equestrian Geotextile



Nicospan
Erosion Control



Trinter
Erosion Control Mat



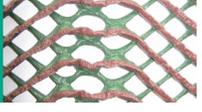
Fibertex
Non Woven Geotextile



Rhyno®
Woven Geotextile



Turfmesh
Grass Reinforcement



Flexitex
Textile Shuttering



RockBox
Gabion Mattresses



RootBlock
Root Barrier

