



Case

STUDY

EKOTEX®

M1 Junction 12

Drainage



MARKET SECTOR:

Commercial



LOCATION:

M1 Junction 12



CONTRACTOR:

Costain/ Carillion Joint Venture

The

BACKGROUND

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.

Our Client's

REQUIREMENTS

A sustainable solution for a reinforced footpath

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.

Our Value Engineered SOLUTION

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

