Knowledge Share
Infrastructure

Ref No.	TBA

Instructions: Please complete the below answering as many questions and giving as much information as possible. Named/referenced photographs, if available, are always appreciated - these can either be appended at the end of this document or submitted separately with the form in jpg or other format.

Project Name:	Use of Geocomposite Drainage Blanket to Reduce Aggregate Requirement
Location:	Melton Mowbray Distributor Road (MMDR)
Contact details (Name/email):	Matt Langford / Matthew.Langford@Gallifordtry.co.uk Mark Gillies / mark.gillies@wolseley.co.uk
Knowledge/Case Study Type:	Quality, Efficiency & Improvement ☒ Environment, Sustainability & Carbon ☒ Innovation & Digital Technology ☐ Engineering & Design ☒
Date:	25/03/2024

Description -

With Galliford Try's challenge to construct a 7.1km long, 7.3m wide single carriageway on the £127m MMDR highways scheme, one element of the works required was a starter layer for beneath the numerous embankments which had been specified using a 500mm thick 6C drainage stone with a separation/filtration geotextile layer both beneath and on top, very much a typical requirement on a highways scheme. GT's supply chain partner, Burdens, were able to propose a value engineered solution saving a considerable amount of time, cash and carbon.
The specification required importing 8,829 tonnes of stone, which required approx. 444no trucks bringing material to site which was a clear concern for the local and wider community so there was a real desire to reduce vehicle movements to lessen the impact on local roads. The original solution also came with an associated cost of materials in excess of £1.7m, as always any solution to reduce construction time was also of interest.

Action -

GT approached Burdens for a value engineered solution which could support the starter layer requirement, at which point a 7mm HDPE geocomposite drainage layer was proposed which came pre-bonded with geotextile, this would completely remove the need for the 6c fill and separate geotextile.
Meetings were arranged with Aecom, LCC, Collins Earthworks, Burdens and the manufacturer; ABG to investigate the suitability of the geocomposite drainage blanket; Fildrain. It was assessed and approved following supporting case studies from highways schemes, site visits being carried out, and it being BBA approved also.

Result -

Through GT's collaboration with Burdens, the Fildrain solution delivered a 66% carbon saving by removing 434no trucks from the road (only 10no trucks required to deliver the 50,000m2 of Fildrain), a 50% time saving, and also a monetary saving of £1.125m with the original £1.725m specification being reduced to £600k. These factors have contributed towards the application being shortlisted for a Sustainability Award at the annual Ground Engineering Awards

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Fildrain geotextile being deployed on MMDR.