



## Case

# STUDY

## STRATAGRID, LANDLOK AND DUODRAIN

Gloucester Services  
Reinforced Wall & Slope



**MARKET SECTOR:**  
Commercial



**LOCATION:**  
Gloucester Gateway MSA  
M5 North Bound



**CONTRACTOR:**  
Buckingham Group Contracting



**CONSULTANT:**  
BWB Consulting

## The BACKGROUND

**Planning requirements specified that for the new Gloucester Gateway service station it was necessary to create a fully functioning motorway service station whilst retaining the picturesque views of the Gloucestershire countryside.**

On completion the station will be the largest in the UK with a box structure 850m long, 70m wide and 20m deep. A subsurface structure of this kind requires extensive ground engineering works.

## Our Client's REQUIREMENTS

A sustainable solution for a reinforced wall and slope

**Surveys concluded that the site won soils did not have the required physical properties to create the landscaped structures required from the design and the cost of importing materials was prohibitive.**





## Our Value Engineered SOLUTION

**Geosynthetics determined that by utilising the on site fill material combined with Stratagrid 35kN and 55kN polyester geogrids it would be possible to construct a double sided structure.**

Both a 70° wall facing the service station and a 45° slope facing the motorway was constructed using the recommendations prepared by the Geosynthetics Engineering team.

Both slopes used Landlok TRM 450 to create a vegetated face with the aim of minimising the impact of the development on the environment.

By introducing the reinforced earth solution we were able to create a steep sided aesthetically pleasing structure at a reduced cost for the contractor.

Without a reinforced earth solution it would have been necessary to import large quantities of granular material and dispose of the site won soils.

This recommendation dramatically reduced cost and the environmental impact of import and export activities.

**“The flexible approach of the Geosynthetics team helped to facilitate the most appropriate solution for the scheme.”**

**NEAL GARSIDE**  
Procurement Manager

