



Case Study

Rockbox, Tenax TT & LBO

Location:

Halton
Lancaster
LA2 6FD

Client:

Lancaster Co Housing

Project:

Forge Bank Co Housing
Scheme



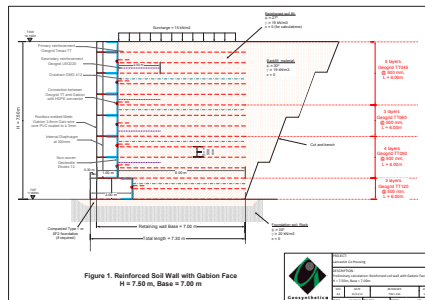
Contractor:

William Pye Limited

Consultant:

Ramboll

Forge Bank Co Housing Scheme is made up of 41 houses designed and built to the highest of eco-friendly standards. Due to it being built on a steep slope, the development required a solution for reinforcing the slope whilst maintaining a low carbon footprint and utilising existing materials.



The solution provided by Geosynthetics Limited combined site won materials with Tenax Geogrids and Rockbox Gabions to create a strong and reliable structure which maintained the ecological values of the project.

The most challenging structure was "Terrace E". This section of the design called for a 7.5m high reinforced structure. The development also needed to incorporate the column foundations for the 3 bed house above.

Due to the on site soil being a cohesive glacial till it was determined that a



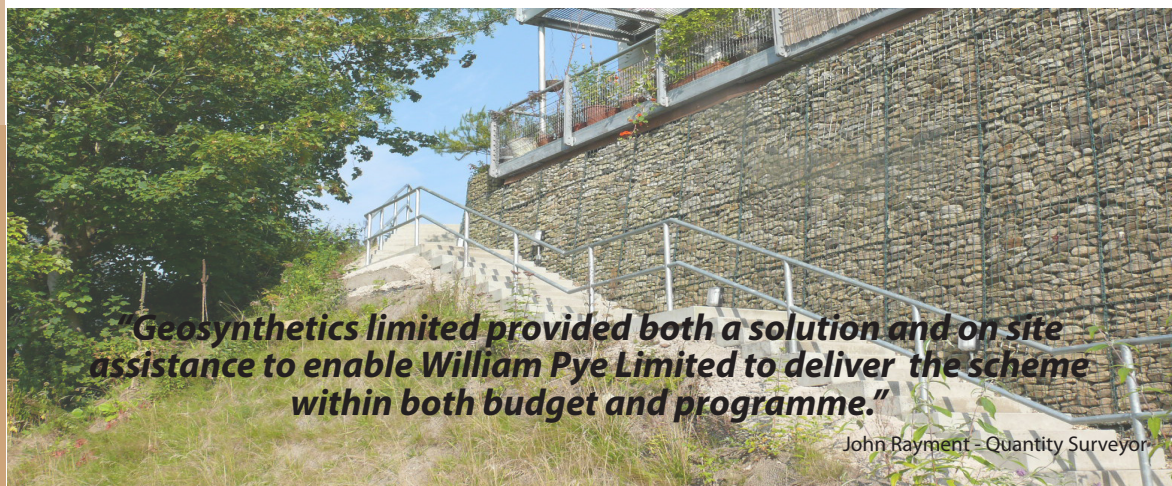
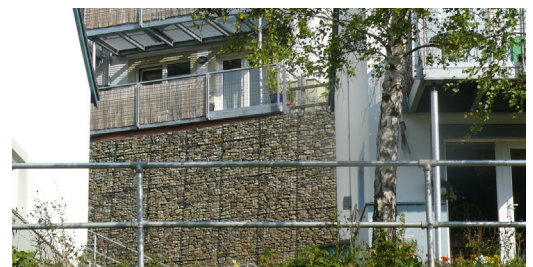
reinforced earth wall comprising of Tenax TT uniaxial geogrids would minimise the footprint of the development and more importantly accommodate the column foundations.

Due to the distance between the column foundations to the face of the structure a Tenax LBO biaxial geogrid was introduced for secondary reinforcement to eliminate "Bulging" at the face.

The face of the structure needed to fit in with the natural aesthetics of the site to achieve this a single skin of welded Rockbox units were secured to the face of the wall with a series of mechanical connections.

Duodrain drainage composite were also placed behind the reinforced soil area to alleviate pore pressure.

The solution allowed the use of site won soils and dramatically reduced the footprint of the structure whilst providing a finish in keeping with the rest of the development.




"Geosynthetics limited provided both a solution and on site assistance to enable William Pye Limited to deliver the scheme within both budget and programme."

John Rayment - Quantity Surveyor

Geosynthetics Limited

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www.geosyn.co.uk

Rhyno®
Woven Geotextile



Interlock
Extruded HDPE Geogrids




Golpla Pregrown
Ready To Lay Paving System



Landlok
Turf Reinforcement Mat



Nicospan
Erosion Control



Geomembrane
Impermeable Membrane




Golpla
Grass & Gravel Paving System



DuoDrain
Composite Drainage Product



RockBox
Gabion Mattresses



2 in 1
Landscaping Fabric



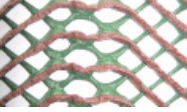
Gas Membrane
Radon, CO2, Methane,
Hydrocarbon Control



Alert
Contamination Indicator



Turfmesh
Grass Reinforcement



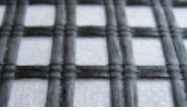
Trinter
Erosion Control Mat




Tenax
Soil Reinforcement Solutions



GeoGlas
Asphalt Reinforcement



Ekotex
Non Woven Geotextile




Flexitex
Textile Shuttering



Bentotex GCL
Geosynthetic Clay Liner




Cellweb
Tree Root Protection



Fibertex
Non Woven Geotextile



Telegrid
Woven Polyester Geogrid



Envirogrid
Cellular Confinement Grid



East Coast
Biodegradable
Erosion Control



RoofCell
Sub Surface Drainage
And Water Storage




Geosynthetics
Engineered Solutions

Televev
High Strength
Woven Geotextile



T-Block
Modular Retaining System



RootBlock
Root Barrier