



**Tensar**<sup>®</sup>

**WALLS  
AND SLOPES**

The reinforced soil slope was used to maximise space for homes and gardens at two levels on the sloping site.

## Taking things to a new level

Tensar's TensarTech NaturalGreen system, incorporating site-won soil has maximised space for homes and gardens built on two levels on a site in Kendal.

### CLIENT'S CHALLENGE

Story Homes needed to build a steep reinforced soil slope to maximise space for two levels of homes and gardens at Ash Tree Park. The reinforced soil structure also had to be robust enough to withstand piling for houses on the upper level, which meant placing a working platform at the top of the slope.

### TENSAR SOLUTION

Tensar proposed using its TensarTech NaturalGreen System to provide a long-term reinforced slope solution, which was also robust enough to enable the safe working of a piling rig. The working platform comprised a mechanically stabilised layer, formed by incorporating Tensar TriAx geogrid in granular material, to enhance load spread and reduce the load imposed on the slope.

### Ash Tree Park

Reinforced soil retaining structure

📍 Kendal, Cumbria UK

### BENEFITS

**Enabling**  
the use of site-won fill in a reinforced soil slope

**Maximising development space**  
for homes and gardens

**Saving time and money**  
over traditional techniques

REF TEN000



Homes at the upper level had piled foundations, which meant the slope had to also had to be able to support a working platform, formed using TriAx, and piling plant.

## PROJECT BACKGROUND

Ash Tree Park, in Kendal, Cumbria is a development of 71 new homes being built by Story Homes.

Houses are being built on two levels on the sloping site. Story Homes wanted to build a 135m long, up to 8.1m high, reinforced soil slope at the back of gardens at the lower level, maximising the size of the gardens, while creating space for homes and gardens above.

A TensarTech NaturalGreen system was chosen, allowing site-won gravelly sand, with an angle of friction of 30°, to be used in the reinforced soil slope. Layers of uniaxial geogrid reinforced the soil behind the slope face; the surface matting enhanced erosion resistance and helped to create an attractive vegetated finish.

The design of the internal stability of the slope was covered by Tensar's PI insurance. The houses built at the top of the reinforced soil slope were being piled, which meant the slope not only needed to provide a permanent retaining solution but also had to be able to support construction machinery safely.

A working platform was constructed using Tensar TriAx geogrid incorporated in aggregate, creating a mechanically stabilised layer that enhanced the load spread through the platform and reduced the 80kN/m<sup>2</sup> load being imposed on the top of the soil slope from the piling machinery to an acceptable level.

Client:

**Story Homes**

Contractor:

**L&W Wilson (Endmoor)**

Consultant:

**RG Parkins & Partners**

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*“Our solution maximised the space for the new homes and gardens and meant site-won fill could be used, saving time and money, all with an attractive, vegetated finish that blends in with the local landscape.”*

**Craig Roberts**

Product & Technology Manager  
Walls and Slopes

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