



Tensar's TensarTech GreenSlope and TensarTech NaturalGreen reinforced soil slope systems delivered a sustainable and cost-effective solution.

Lean and green

Tensar's TensarTech® GreenSlope and TensarTech NaturalGreen reinforced earth slope systems offered a sustainable and cost-effective solution to building a huge environmental bund for a new distribution centre.

CLIENT'S CHALLENGE

Construction of Costco's UK distribution centre near Crick, Northamptonshire, included major earthworks, that involved building a 258m long, 15.5m high earth bund to minimise the building's impact on the surrounding landscape. In addition, Costco also wanted to minimise costs by re-using all site-won fill material.

TENSAR SOLUTION

Tensar's reinforced soil slope solutions enabled poor quality, site-won clay fill to be used to build the bund and to give it a natural vegetated finish. TensarTech GreenSlope formed the 70° slope along most of the bund, maximising development space, with TensarTech NaturalGreen forming shallower slopes at both ends. The approach eliminated material exports and meant only small amounts of imported fill were needed, saving money and reducing the scheme's environmental impact.

Costco Distribution Centre

Reinforced earth slopes

📍 Northamptonshire, UK

BENEFITS

Maximising development space

and minimising visual impact

Re-use of poor-quality site-won marginal fills

Reducing materials costs



Tensor uniaxial geogrids reinforce the fill used to build the 15.5m high earth bund.

PROJECT BACKGROUND

Costco's national distribution centre, which supplies all its UK stores, was built on a 26ha site next to Junction 18 of the M1 motorway in Northamptonshire.

Extensive earthworks were required to lower site ground level and to build a 258m long, 15.5m high bund along the southern boundary. The bund minimised the visual impact of the new facility on the nearby village of Crick, as well as retaining adjacent higher ground. To keep materials costs as low as possible, excavated material was re-used in the bund and imported fill was minimised.

Earthworks contractor Buckingham Group and its engineer BWB Consulting worked with Tensor to design the bund, using Tensor's TensorTech reinforced soil slope systems. These solutions enabled the excavated clay fill to be re-used and provided a natural vegetated finish.

TensorTech GreenSlope and TensorTech NaturalGreen incorporate uniaxial geogrid to reinforce almost any fill, to create earth structures. TensorTech GreenSlope is designed for up to 70° slopes, with the geogrid connected to durable steel mesh units and an erosion protection layer that can be hydroseeded to encourage vegetation growth. TensorTech NaturalGreen is suitable for slopes up to 45°, with no geogrid connection required, just erosion protection on the slope face.

Subcontractor Cross Keys Structures installed TensorTech GreenSlope along most of the bund with TensorTech NaturalGreen creating shallower slopes at each end. A 700mm thick layer of imported aggregate was laid at the base to protect against sliding.



TensorTech GreenSlope

is designed for up to 70° slopes, maximising development space.

Main contractor:

Buckingham Group

Subcontractor:

Cross Keys Structures

Consultant:

BWB Consulting

Client:

Costco

"The bund reduced the visual impact of the distribution centre and maximised the use of marginal fills, delivering cost savings and improving the sustainability of the scheme."

Craig Roberts

Product & Technology Manager
Walls & Slopes

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