



Tensor's TensorTech GreenSlope reinforced soil system helped to maximise development space for new warehouses on the sloping site.

## Perfect blend

Tensor's TensorTech GreenSlope system was ideal for building a steep and stable vegetated reinforced soil slope, to create more space at a whisky distillery on the west coast of Scotland.

### CLIENT'S CHALLENGE

Contractor McLaughlin & Harvey needed to construct a reinforced soil slope along the edge of a raised construction platform being built on the sloping site, to create space for a new bonded warehouse. The slope had to be steep, to maximise the working area, with a vegetated finish.

### TENSAR SOLUTION

Tensor proposed its TensorTech GreenSlope reinforced soil system to build the 70°, 160m long and up to 7.8m high slope. This robust, long-term solution provided sufficient support to the new warehouses and protected existing buildings at the toe of the slope, enabling the use of site-won fill and created a natural finish.

## Curragh Phase Three

Reinforced soil slopes

📍 Girvan, Scotland

### BENEFITS

#### Delivering a 160m long

up to 7.8m high reinforced soil slope

#### Enabling

re-use of site-won fill

#### Maximising development space

with a soft engineering finish



The completed slope provided a permanent solution with a natural, vegetated finish that helped it blend into the surrounding landscape.

## PROJECT BACKGROUND

William Grant and Sons' Girvan distillery on the Ayrshire coast is home to Grant's Scotch whisky, the Hendrick's Gin Palace, a malt distillery, Ailsa Bay, and a state-of-the-art laboratory for new product development.

Contractor McLaughlin & Harvey is designing and building more than 40 warehouses, and refurbishing ten more, under a 20-year partnership with the distillery.

To create space on the sloping site for a new bonded warehouse, McLaughlin & Harvey had to create a raised platform using 6F2 fill, which meant building a 160m long reinforced soil slope up to 7.8m high. This slope had to be steep, to maximise the useable area, with its toe just a few metres from existing warehouses, and had to have a natural, vegetated finish.

Tensar proposed its TensarTech GreenSlope reinforced soil system to form the 70° slope. The system incorporates uniaxial geogrid to reinforce fill behind the slope face. The slope was designed to support a live load of 20kPa for both construction and in-service traffic.

The grid is connected to durable steel mesh units with an erosion protection layer behind, that is hydroseeded to enable vegetation to grow. An added benefit was that recycled site-won fill could be used to build the platform and slope, saving time and money for the client.

Design and build contractor:

**McLaughlin & Harvey**

Consultant:

**NIRAS Fraenkel**

Client:

**William Grant & Sons**

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*"TensarTech GreenSlope helped to maximise construction space on the tight, sloping site; enabled the re-use of site won material, all with an attractive, vegetated finish that blends into the local landscape."*

**Craig Roberts**

Product & Technology Manager  
Walls and Slopes

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