GEOWEB®

CUT SLOPE STABILIZATION

Steep Roadway Embankment





Cut slope prior to stabilization



GEOWEB® Soil Confinement System

3D Soil Confinement System Shores up Steep, Cut Slope in Road Reconstruction Project.

Project Background

The 10.3 Million Dollar (£7.75m) project from Crediton Industrial Link Road to A377 in Devon comprised a 760-metre single lane road from Wellpark roundabout on the A377 into the Lords Meadow Industrial Estate. The Link Road forms a key part of Mid Devon District Council's Air Quality Action Plan. It was also designed to reduce congestion and to support economic development. As the approved Hillside route required 100,000m3 of material to be excavated to form a cut, erosion-prone slope, extensive embankment stabilization was required.

The GEOWEB 3D soil stabilization system was selected. The steep angle of the cut slope meant that the GEOWEB tendon load transfer system was ideally suited to provide safe, secure stabilization of the infill over the slope face.

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GEOWEB / ATRA Tendon Clip Slope Anchorage System

ATRA® Tendon Clips—load transfer devices that transfer slope gravity forces from the GEOWEB® cell walls to the tendons—were utilized with TP31 tendons installed per design.

The ATRA Tendon Clip device engages securely with the GEOWEB cell wall, for a 'locked-in-place', 2X stronger pull-through strength than other load transfer device. A looped tie off assures that tendons stay bound to the device.



Installation of the Slope Stabilization System

Once the 48,500 sf (4500m2) of GEOWEB panels were securely positioned on the slope, infilling was commenced using on-site material due to the reddish color characteristic of the underlying sandstone. Infill was performed from the crest of the slope to the toe in accordance with Presto Geosystems installation guide. Controlled overfilling of cells was required to allow for consolidation and compaction of the infill. The GEOWEB material consists of textured, perforated cell walls that provide optimum interlock between cell walls and infill materials while significantly improving lateral drainage. This was an important factor in considering the GEOWEB solution for this particular site due to the positioning of the cutting and potential water flow issues.

Take Advantage of Our Free Project Evaluation





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Greening of the Embankments

Vegetation was performed in accordance with the Environmental Statement prepared for Devon County Council by Jacobs Engineering.



Project information and material supplied by GREENFIX UK