

CYCLEWAY RAMP & FOOTWAY RADCLIFFE ON TRENT, NOTTINGHAMSHIRE, UNITED KINGDOM

Mass Gravity Retaining Walls

Problem

In early 2020 Realln the summer of 2018, Maccaferri was approached by Nottinghamshire County Council's term consulting engineers Via to provide a reinforced soil retaining structure so a new shared footway/cycleway ramp could be constructed from Holme Lane in Radcliffe on Trent up the existing former railway embankment to the new greenway along the disused Cotgrave Colliery Railway and link the villages of Radcliffe on Trent and Cotgrave.

Access to the site was limited, so Via was looking to reuse excavated site-won marginal soil within the new retaining structure to avoid removing this material from the site and replacing it with an imported stone. Via was also keen to explore a sustainable and environmentally sensitive solution as part of the remit of the greenway was to reduce carbon footprint and increase wildlife in the surrounding area.

To create the ramp at an acceptable gradient within the space available, an upper retaining structure would be required to enable the ramp to cut into the embankment and a lower retaining structure would be required to build up the level of the ramp from Holme Lane to the disused railway line at the top of the embankment.

Solution

Maccaferri proposed the use of the Green Terramesh® reinforced soil retaining system to create the upper and lower retaining structures. Green Terramesh® is a naturally vegetating system created from individual Terramesh® units manufactured from double twist woven steel mesh. The units have an integral erosion protection blanket to the front face which is set at an angle of 70 degrees to give a steep slope appearance.

The units have an integral steel mesh tail which is installed within the structural fill to provide soil reinforcement. Topsoil is placed immediately behind the face and then seeded to establish vegetation on the slope. Maccaferri proposed to supplement the Green Terramesh® with additional geogrid reinforcement and specified Paradrain to enable the use of site won marginal fill to be used within the reinforced soil structure, thereby eliminating the need to remove this material from site and replace with an imported stone fill.

Client: NOTTINGHAMSHIRE COUNTY COUNCIL

Designer / Consultant: Maccaferri Ltd

Contractor: Via Highways

Products used (Qty.)

Date of construction: 09/2018 - 09/2018

[Google Maps](#)

[Google Earth](#)



Maccaferri Green Terramesh units have an integral



Construction of split level Green Terramesh to form



Macdrain was used to the rear of the reinforced soil to



Completed lower Green Terramesh slope starting to



Stepped corner return detail tying into bridge



Completed upper Green Terramesh slope &