

HOUSING DEVELOPMENT SITE OPTIMISATION COPTHORNE, CRAWLEY, UNITED KINGDOM

Reinforced Soil Walls and Slope Reinforcement

Problem

Heathy Wood is a new development by St Modwen Developments near Copthorne in Sussex. Conveniently close to Gatwick and Crawley, the site is surrounded by woodland.

The site topography required a raised level to the southern end of the project site, which would assist in optimising the developable area and plot layouts on the site.

Solution

Readie Construction approached Maccaferri to provide an eco-friendly and cost-effective solution that would fit within the natural surroundings of the site.

Maccaferri proposed, designed and then installed a Green Terramesh reinforced soil slope with a 70-degree face. The Green Terramesh (GTM) system is vegetating slope-reinforced soil system with a BBA HAPAS-certified 120-year design life. It is made from double-twist steel mesh and a rapid-to-install fascia, all in one single unit. The fascia includes an integral matting which supports vegetation growth giving the green finish at a slope angle of 70 degrees.

The units have an integral steel mesh geogrid 'tail' which is installed within the compacted structural backfill to provide soil reinforcement. Green Terramesh units also feature a heavy-duty welded mesh panel behind the front face and bracing struts to support the face at the appropriate angle during construction, removing the need for external shutters or face support. As all these elements are incorporated into the unit at the factory, it reduces work on site and makes the installation much quicker and safer than with other 'soil bag' or wrapped face style geogrid structures.

Seeded topsoil is placed immediately behind the face to establish vegetation on the slope.

Once installed, vegetation is established fairly rapidly and once fully established contributes a natural appearance to the engineered solution. This provides habitat to flora and fauna whilst also improving local air quality through the absorption of CO2 from the atmosphere.

Client: St Modwen Homes

Designer / Consultant: Maccaferri Ltd

Contractor: Readie Construction Ltd

Products used (Qty.)

- Terramesh 710m2

Date of construction: 06/2021 - 07/2021

[Google Maps](#)

[Google Earth](#)



Green Terramesh unit erected - no external formwork needed



Structural backfill placement



Green Terramesh slope - vegetation established



Green Terramesh slope - vegetation established