MACCAFERRI

CASE HISTORY

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SUNDAYS HILL BYPASS

SOUTHAMPTON, HAMPSHIRE, UNITED KINGDOM

Mass Gravity Retaining Walls

Problem

A housing development consortium including Bovis Homes, Bloor Homes and Linden Homes was required to build a new bypass from Pylands Lane to Heath House Lane in Bursledon near the M3-M27 intersection. This structure was needed to support the local infrastructure related to the consortium's new development of 1,350 new homes on the site of a former golf course at Boorley.
Maccaferri Construction was appointed by Breheny Civil Engineering to build the two approaching ramps to the 20m single-span concrete bridge.

Solution

Paralink and Macwall were the chosen solutions for this project.
The approaching embankments to the bridge were done with Macwall BBA due to the challenging ground conditions and load involved. The MSE walls were supported by Paralink placed over the piled foundation acting as a load transfer platform.
The Paralink and Macwall were also designed to support a crane for moving bridge elements into place which was part of the construction works.
A load of maximum pressure—198kPa was transferred to four steel bearing plates over the design MSE wall.

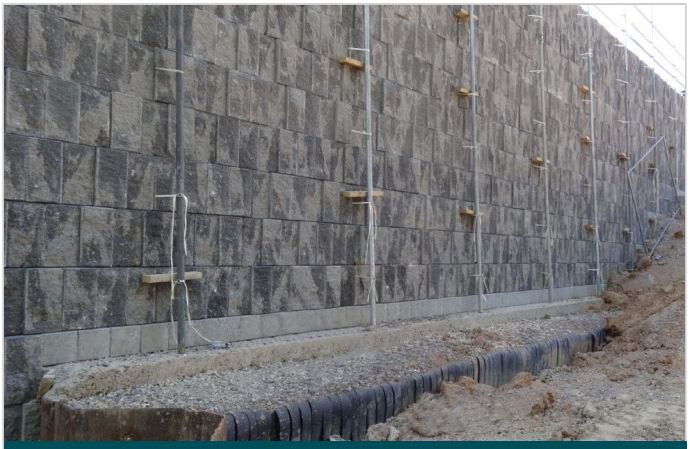
The Macwall approaching the bridge ramps has a maximum height of 11m and a total length of approx 100m. The MSE abutment walls were designed by specialist Geotechnical Engineer Gavin and Doherty Geosolutions Ltd (GDG) coordinating with principal designer SMA and OPUS.
The ecologically sensitive site had a great deal of work done to preserve the local flora and fauna. The bridge allows animals to pass through the valley of their natural habitat avoiding traffic.
The project was not only demanding regards to the geotechnical point of view but also from the health, safety and construction aspects, as the MSE wall and the Paralink foundations were installed into two-tier platforms in very tight spaces.

Client: Hampshire County Council
Designer / Consultant: GDGEO/OPUS-WSP/SMA
Contractor: Breheny Civil Engineering
Products used (Qty.)
Date of construction: 01/2018 - 06/2018
Google Maps Google Earth

Initial earthworks towards the end of 2017

Work started on the Macwall - Jan 2018

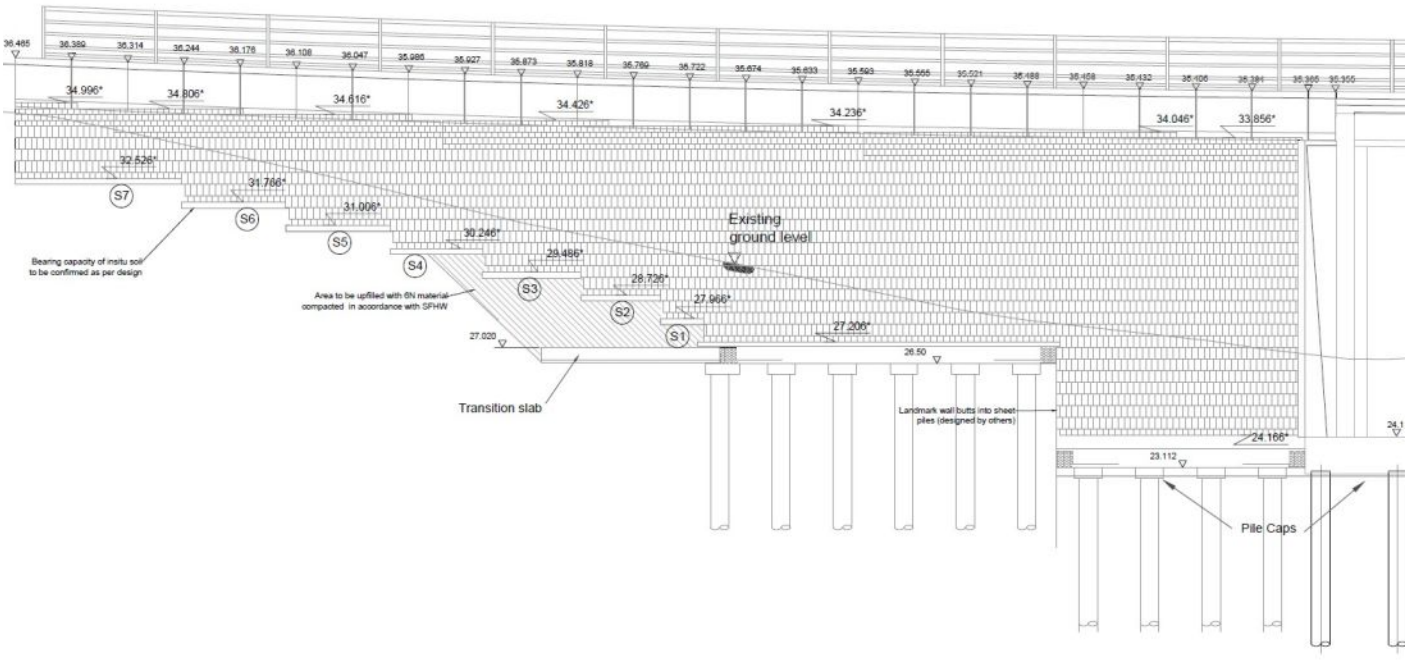
ParaLink 350 & 1100 being rolled out in a piled embankment



Paralink was wrapped back and covered as per BS8006 details

Macwall structure installed over the Paralink LTP platform

Macwall MSEW structure completed in Autumn 2018



Wing wall typical elevation. A two tier piled foundation platform with Paralink

Maccaferri Ltd:
Tel: (+44) 1865 770555
Rep. Of Ireland: Tel: (+353) 18851662
Email: sales.uk@maccaferri.com
info.uk@maccaferri.com