



Dyer & Butler



Slope Stabilisation



December 2024



7 Weeks

Universal Group were contracted by Dyer & Butler to install sheet piles, soil nails, mesh and cress retention at a failing embankment in Clandon.

Our Universal Piling team were mobilised at pace after remote sensors at the embankment had detected ground movement and while a limited number of trains could run at a reduced speed, repairs needed to be undertaken over the Christmas period for trains to safely travel at their optimum speed.

The line between Guildford and Effingham Junction was closed from Saturday 21 December until Thursday 26 December to allow our dedicated team to undertake emergency works to stabilise the embankment.

During the closure, to stabilise and strengthen the embankment, we installed 30 linear metres of sheet piles at a 6.5m embedment depth, along with 167no. soil nails at depths between 6m & 9m.

Once the lines were reopened we proceeded to install:

- 30 linear metres of 600mm wide steel capping beam to the sheet piles.
- 51m of the ballast shoulder were excavated to allow the installation of Gabion baskets, the top row of soil nails were incorporated into the design to help retain the ballast shoulder.
- 30m of GRP hand rail was installed along the capping beam along with 51m along the length of the Gabion baskets.
- 510m² of Maccaferri MacMat R Mesh.
- 24no drainage columns behind the sheet piles, a 300mm auger was used to excavate 1.5m below the sheet piles, jet filters were then installed before the columns were backfilled using pea shingle and geotextile.

This was a fantastic achievement on a challenging project by all involved, All works were completed accident/incident free and on programme.



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