



Newington Embankment

Rail, Sheet Piling

 **Newington, Kent**

Expertise deployed as landslip closes rail line in Kent

From ground investigation and design, to the installation of a permanent retaining wall and rebuilding a failed embankment, our Strata Geotechnics and Rail Divisions mobilised quickly to enable the speedy re-opening of a railway line in the South East.

Project Background

Following a landslip after heavy rain in Newington in January 2021, we were called in to work alongside Network Rail and Balfour Beatty to resolve the situation on this busy railway line.

Client Challenge

The collapse of an embankment by the side of a railway line called for immediate emergency works to limit the disruption to Network Rail and their passengers.

The priority was to stabilise the slope and remove c. 3000t of spoil, which consisted of mostly London Clay.

Van Elle Solutions

Once the spoil was clear our team began piling using our unique road rail vehicle fleet, however, the piles were refused before reaching the designed depth. With guidance from our engineers we revised the design along with the construction methodology to overcome the challenge.

Once the 62m retaining wall was complete, attention turned to rebuilding the embankment, which involved importing 2,300t of engineered aggregate by rail. Due to our collaborative approach alongside our partners Balfour Beatty, they were able to install 329m of drainage works (which was planned for a later date) during the two week emergency blockade.

Key Benefits

Collaborative working: **Multiple teams mobilised, collaborating together battling challenging weather, limited space and long hours**

Emergency deployment: **Within hours of being notified, Van Elle's Strata division was on-site and completing a thorough ground investigation to generate designs**

Project stats

Client: **Balfour Beatty Rail**

Date: **January 2021**

Rig/Kit: **T10,000 Colmar RRV's with Movax and BSP Hammer attachments**

Quote: **"Thank you Van Elle for helping out. A real team effort."**

- Derek Butcher, Network Rail, Route Asset Manager