

Case Study – Stabilisation of Gatcombe Rail Cutting

Project

- The stabilisation of a railway cutting using ground anchors, soil nails, rockfall netting and facing systems.

Client Requirements

- To install 41,000m² of rockfall netting and facing system over a 2.7km stretch of cutting for Network Rail on the western bank of the Severn Estuary.
- To work above busy rail lines without causing interference or disruption.

CAN Solution

- More than 700 crest line, face and toe anchors were installed in clays and mudstone. The design of the anchors was undertaken by CAN to marry drill hole length and diameter with drilling systems in different locations.
- The anchors, each with a working load of 150 kN, secured 16mm diameter steel cables providing vertical reinforcement for the curtain of rockfall netting. All anchors were subjected to individual acceptance testing.
- Rock netting was lowered from the crestline and stitched to form a continuous curtain. Geomat was installed to areas of bare soil prior to hydroseeding. Along the toe of the slope the netting was formed into a bag, designed to contain any failed material without encroaching on the railway.
- Substantial thrust block was required to transfer loads from the face cables into top anchors. All were constructed on site by CAN, using precasting techniques where topography permitted the placement by lorry crane mounted on Unimog. Elsewhere CAN's novel lightweight system was adopted, utilising high density foam blocks.

