

**A38 STATION ROAD
LISKEARD, CORNWALL, UNITED KINGDOM**

Soil Nailing

Problem

The dual carriageway section of the A38 was built in 1976 to bypass Liskeard in Cornwall. During construction, a deep rock cutting was excavated through Devonian slates, supported by a retaining wall formed using concrete kingposts secured by ground anchors. The kingposts were placed at 3m intervals with precast concrete panels spanning the gaps. The annulus behind them was backfilled with loosely compacted granular fill.

Designed by Freeman Fox & Partners, this solution has stood the test of time, however, routine monitoring revealed that while the anchored concrete posts were sound, some of the panels were showing signs of localised weakness.

Solution

To ensure there were no risks of concrete spalling onto the carriageway, the Highway Agency asked its consulting engineer Parson Brinkerhoff (PB) for a solution that could be installed with minimal disruption to traffic.

PB's answer was to encase the wall in a high punching resistance rock netting system supported by rock nails drilled through each panel and fixed into the slate behind.

Dean & Dyball won the contract, worth just under £12M. it worked with its regular subcontractor, Saxton Drilling, and consultant Applied Geotechnical Engineering (AGE). 2,220 sqm of Steelgrid mesh was used on the project.

Client: Highway England

Designer / Consultant: Applied Geotechnical & Parson Brinkerhoff

Contractor: Saxton Drilling

Products used (Qty.)

Date of construction: 09/2006 - 10/2006

[Google Maps](#)

[Google Earth](#)



Retaining wall on a key route to the West country



Steelgrid mesh anchored to the original slate



Steelgrid mesh system laid over the kingpost & panel