

STABILISATION OF DRY STONE RETAINING WALL AT ABERSYCHAN FOR TORFAEN COUNCIL

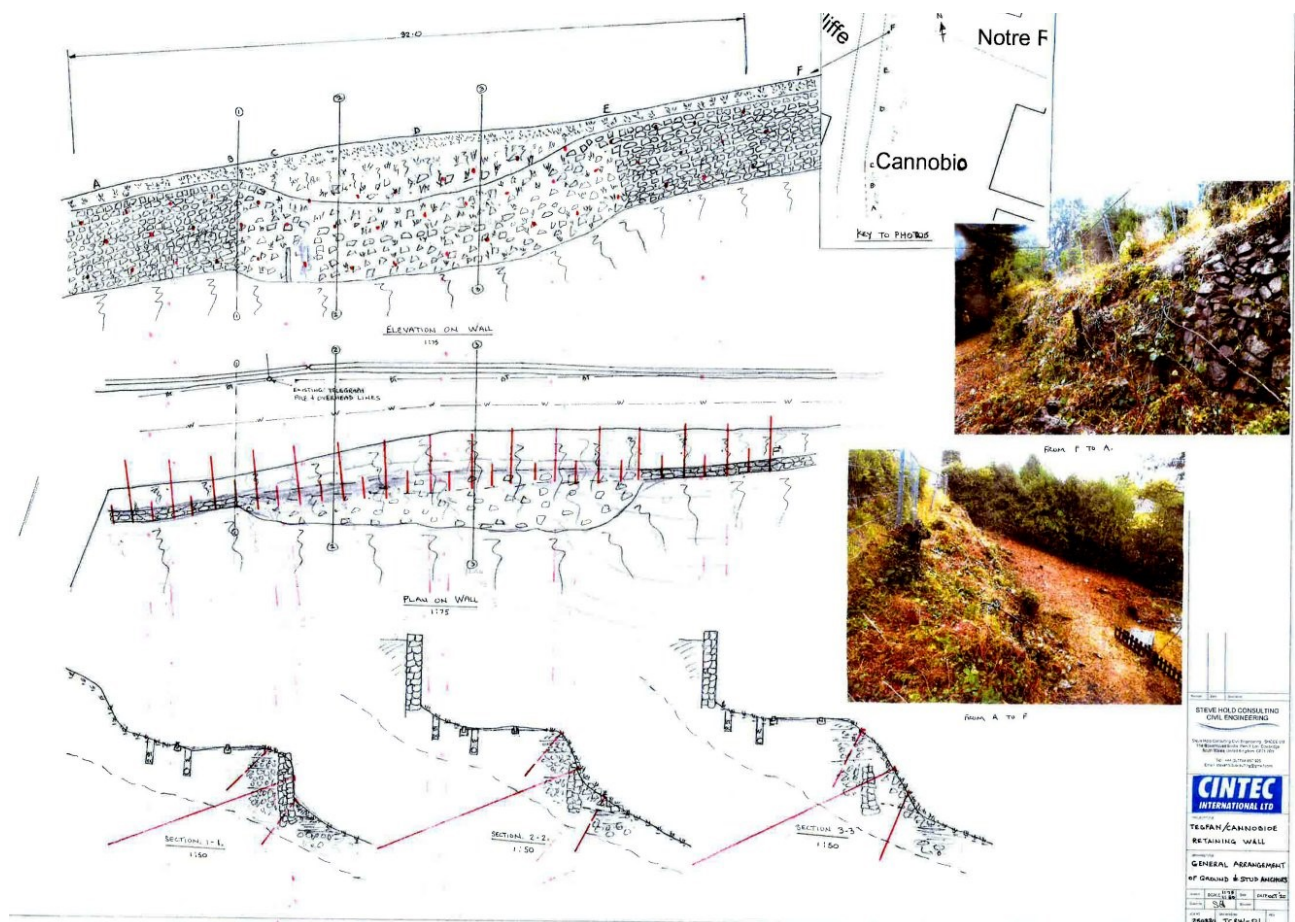


Torfaen County Borough Council were faced with a problem of a failing dry stone retaining wall at Tegfan which retained a small road adjacent to private gardens on a steep hillside.

As may be seen from the above photographs the wall had some substantial vegetation growing from it which has further exasperated the stability of the structure.

The access to the road was very restricted and options of using gabions which would need large excavation and craneage had to be discounted for this reason.

In the knowledge that Cintec had carried out numerous ground anchor stabilisation projects Torfaen CBC approached them for a buildable solution given that the access should not present a problem to the equipment used by Cintec as it was small in comparison to the alternative. Additionally the Cintec solution would be a fraction of the cost to gabions.



An outline scheme and budget cost was prepared and presented to the client to confirm the viability of the project. The structural engineers Steve Hold Consulting had worked with Cintec on such schemes previously and was able to quickly arrive at a suitable solution.

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The client was able to provide ground investigation information and topographical data to enable the structural engineer to arrive at a suitable design albeit some aspects would be unknown until actual work commenced such as local ground conditions.

The cost was approved and Cintec instructed to proceed with the works subsequent to the client's team clearing the site of vegetation and loose masonry. They also provided the scaffolding.



16 number Cintec GB24 ground anchors in a 65mm diameter hole and 6.95 metres long were installed in accordance with the engineer's design as the main restraint to tie the loose masonry wall back into the hillside slope. Additional Cintec GB20 anchors by 2.40m long were installed to secure the geo-mesh to the substrate and to hold the loose masonry in place to prevent further movement and loss of integrity of the wall.



The completed wall stabilization was a great success which was completed at a fraction of the cost of traditional methods and completely overcame the problem of the limited access to the site. The fact that the wall separated the lane from a private garden wall also a major aspect that needed consideration on how the work should be carried out.

The Cintec option satisfied all criteria and was finished in a considerably shorter time than other options.