

The Anchoring of a Retaining Wall at Nantgarw Pottery Works.



Insertion of 3m Cintec Anchor (left), and its inflation using cementitious grout, (above).

Nantgarw pottery rivalled that of Swansea in the 17th Century for its high quality earthenware, in recognition of its historical importance, the local authority wished to restore one of the now derelict bottle kilns. The location of the proposed rebuilt kiln was immediately adjacent to an ancient stone retaining wall. The 2 metre high wall was constructed from random rubble using local stone and was bedded and jointed using black ash mortar. There was concern that this wall would not withstand the additional imposed loading from the rebuilt kiln.

The structural engineers, Ove Arup working in conjunction with Protectahome, opted to specify Cintec ground anchors to stabilise the wall and provide resistance to the additional horizontal forces imposed by the kiln.

Cintec ground anchors were installed horizontally through the bed joints and into the ground infill retained behind it. This infill comprised mainly of broken brick, stone, clay, pottery shards and other assorted material. The core drilling technique employed to create the holes also revealed many voids within it, a significant feature of the Cintec anchor is its ability to bridge such gaps by retaining the flow of grout with its polyester sleeve. The 3 metre long Cintec anchors were installed at 1 metre horizontal intervals and tested to a working load of 15kN each.



The process of diamond drilling (above), with the subsequent core samples produced, (left).



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