

Coastal protection

Lyme Regis

Due to years of corrosion, the existing sea defence and ground in front of the council car park in Lyme Regis needed to be stabilised and reinforced.



The project

Balfour Beatty Construction Services designed a new Rotary Piled wall to solve the problem, but the design required anchors to take 545kN axial loading located in the Mudstones and Limestones ranging from extremely weak to medium strong.

The challenge

Typical anchors would not generate the load required, so Keller elected to use their SBMA anchors which allows multiple anchors to be installed in the same bore. Access to drill the bores was hampered by the requirement of a narrow platform for the working area so 2No crawler-based rig were used drilling cross masted at the anchor locations. Due to the ground conditions also indicating a shear zone within the free length, concern was raised regarding the chosen water flush installation method.

The solution

Keller's design consisted between a four-stage SBMA with 4No 3m fixed lengths and a three-stage SBMA with 3No 3m fixed lengths with a minimum 24m free and up to 33m free length. Keller used our dedicated anchor installation crawler mounted rigs and to prove that the chosen proposed method of water flush would be adequate, installed 3No trial anchors using different drilling techniques and tested each to the required loads. All anchors were tested to BS8081.

Project facts

Owner(s)

Environment Agency

Keller business unit(s)

Keller UK

Main contractor(s)

Balfour Beatty Construction Services

Solutions

Slope stabilisation

Markets

Infrastructure

Techniques

SBMA

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