Project Profile No 17/66

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BOURNEMOUTH BEACH GROYNES

Client: **Bournemouth Borough Council**

Value: **£2.3m**

Duration: **Over two winters - 2017/18 and 2018/19**

Project Detail

The project aim was to renew coastal defences at Southbourne Beach, Bournemouth, to provide ongoing protection of assets and property from coastal erosion and damage, and protect the sand beach as an amenity.

Suttle Projects were contracted to replace 12 timber groynes, in accordance with Bournemouth Borough Council's designs. These structures prevented the long shore drift of sand, thus protecting beaches from unwanted erosion.

The work, which took place over two winters, was part funded by the Environment Agency and was secured via a quality bid procurement regime. Through providing a high standard of management, Suttle Projects were able to bring the benefits of an SME to the client at a much-reduced cost, in comparison to competing with national contractors. The work required a highly skilled workforce and was dependent on a good understanding of tides and climatic conditions.

Bournemouth seafront is a heavily utilised public amenity, which is promoted as a major tourism asset. Many activities and events take place on the promenade and beach, and Suttle Projects were required to consider these activities and plan around them during the construction.

Installation of the piles commenced nearest to the promenade, working towards the sea. Each pile location was marked using a robotic total station and steel pins, with protective caps. A leader mounted auger drilled down to an agreed depth. To a high degree of accuracy, piles were driven with a Movax attachment mounted on a 35-tonne excavator. This process had been meticulously considered to avoid causing later deflection of the installed pile line.

Each timber groyne had consisted of 17 rows of timber planking, made up of two different types of timber planks, usually Greenheart and EKKI. Each different type of timber had a unique position in the timber groyne structure.

Assembly of timber planks involved the use of a 24-tonne excavator, with modern fork attachments to minimise manual handling. Planks were clamped in position, as air operated specialist drills were utilised to drill each end of the timber plank and then coach screws were fastened.

As this process was repeated and the planks were installed deeper into the beach, heavy excavators were deployed to dig to deeper levels on the line of the piles, creating bunds to hold back the incoming tide and extend working periods. Outputs of up to 35 planks per shift were achieved in this way, delivering efficiency for the benefit of our client.


Suttle