

PROJECT SHEET

SEATON REGENERATION PROJECT
SEATON, DEVON, UNITED KINGDOM

BOSKALIS WESTMINSTER: SKILLS, RESOURCES, EXPERIENCE

Boskalis provides clients with tailored, project-specific solutions for dredging related services, as illustrated by the following project summary.

PROJECT DESCRIPTION

Approximately 246,000m³ of dredged material was required to raise the level of a 100,000m² development in the coastal town of Seaton, Devon. Planning conditions for construction dictated that the land must be raised by approximately 2m to mitigate flood risk. On this reclaimed area, a Tesco supermarket, 200 homes and a hotel will be built.

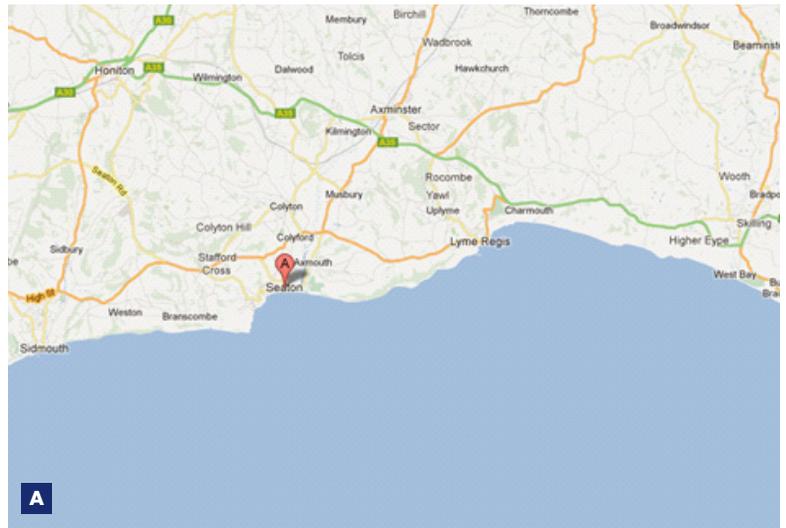
The Trailing Suction Hopper Dredger, Oranje, was used to pump ashore the material, dredged offshore from South Wales, into the reclamation, along 1.5miles of steel pipeline. The pipeline route included 1 mile of continuous undersea pipeline and 0.5 miles of pipe running from the beach to the site – crossing two busy roads via specially constructed temporary bridges spanning 37m and 40m respectively.

As an environmental protection measure, the mixture of dredged aggregate and sea water was pumped into 2 specially constructed pits measuring 150m x 50m – each lined with an impermeable membrane to prevent the saline seawater leaching into the ground and chusing aquifer contamination. This water was drained out of the sand, into a separate settlement lagoon to allow the fine particles to settle before two large pumps pumped the water back to the sea along the same pipeline.

As soon as each 13,000 m³ was placed in the reception pit and de-watered, it was excavated and placed into location on site, to the required compaction. The site team had to ensure the pit was empty and ready for the cycle to begin again – 21 times!

FEATURES

Project Name	Seaton Regeneration Project
Client	ISG Pearce
Contractor	Westminster Dredging Company Ltd
Location	Seaton, Devon, United Kingdom
Execution period	Apr – Jul 2011



A Location Map
B Aerial View
C Panoramic View



PROJECT HIGHLIGHTS

Preparatory Earthworks

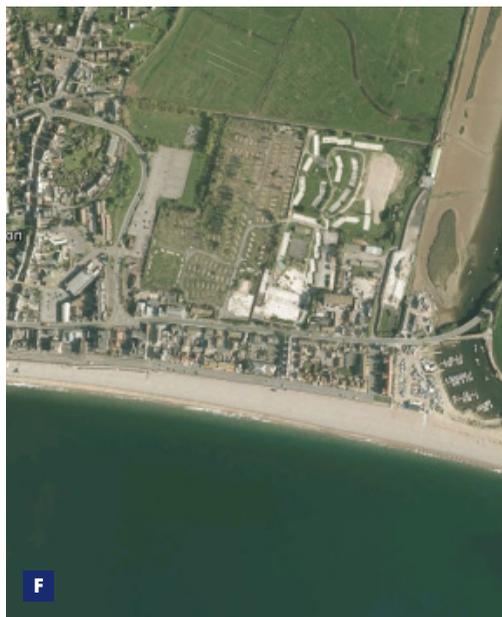
Construction of the pit and lagoons was challenging. Difficult soil conditions (very wet, clayey ground) made the use of dump trucks very difficult and increased the amount of re-handling required by other machines such as excavators and bulldozers. The bunds around the edge were constructed using this soft material after analysis and design work by our in-house consultants, Hydronamic. The entire area then had to be lined which required a winching system with an impermeable membrane removing the need for an excavator to cross the very soft ground.

Sinker Pipeline Construction

In order to create an exceptionally long 1600m sinker pipeline – two smaller pipes had to be joined together. A barge was specially prepared to lift and hold in place the ends of two pipelines on deck while a welded connection was made. To prepare such a pipeline require a sheltered position, in this case Southampton Water was chosen – 8 miles upstream of the main port entrance. After joining, this entire mile long pipeline then had to be towed through one of Europe’s busiest shipping areas toward Seaton where it was sunk onto the seabed.

Bridge Construction

The bridges crossed two roads including the main access road into Seaton. Construction required the transport of 4 large sections, imported from Holland, to be welded together to make 2 separate pipe bridges.



- D** Pipebridge being delivered and lowered into position onsite
- E** Aerial view before Works
- F** Aerial view during Works
- G** Oranje at sea

Boskalis Westminster Ltd
Westminster House
4 Crompton Way
Segensworth West
Fareham, Hampshire PO15 5SS
United Kingdom

T +44 1489 885933
F +44 1489 578588

wdco@boskalis.co.uk
www.boskalis.co.uk

