



Marine Harbourside Remediation & Enabling Works



Client: Bowmer and Kirkland

Site: Hayle Harbour
North Cornwall

Contract Value: £780,000

Technology Used: Regener8 – Reduction treatment of heavy metals.
Bio-accelerator – Rapid bioremediation of hydrocarbons.
Cementex – Guaranteed stabilization of heavy metals and phytotoxic contaminants.



As part of a harbourside regeneration scheme in North Cornwall, Hayle South Quay was to be redeveloped for an ASDA supermarket and associated car parking.

“Dunton are a non-Contractual Contractor that will work with the principal contractor to deliver a scheme on programme. Health and Safety is excellent. Senior Management is constantly striving to improve the company in all aspects.

From my personal point of view the right people with the right training were in place to deliver a very difficult and challenging scheme, the wettest consecutive 2 months of weather were recorded on this scheme. Duntons battled their way through some atrocious conditions to keep delays to a minimum.”

Simon Humphrey, Project Manager

**Bowmer
& Kirkland**

Challenges

- The site had a history of contamination arising from previous uses as a foundry, shipbuilding and dismantling yard and small engineering works.
- Made ground soils and pre-existing stockpiles were impacted with asbestos containing materials (ACM) and deleterious materials including builder's rubble, wood, steel and plastic.
- Previous risk assessment identified the need to remediate ACMs as the key contaminant of concern.
- The Hayle Estuary & Carrack Gladden Site of Special Scientific Interest (SSSI) and Carnsew Pool RSPB reserve was located immediately to the west.
- Tidal groundwater.
- Works were undertaken during January 2014; the wettest calendar month on record for the south-west of England.

Our Solution

Dunton Environmental set up soil treatment zones to facilitate the screening, processing and picking of asbestos. The following solutions were established:

- Set up of soils treatment zone to facilitate screening, processing and picking of asbestos.
- Site clearance, obstruction removal and cut & filling works.

- Stockpile screening and asbestos testing.

- Carnsew Channel extensive enabling works for construction of 600mm thick piling mat.

- Lime modification of soils for car park and store development platforms.

- Installation and maintenance of a silt curtain adjacent Carnsew Channel and temporary coffer dam to prevent silt migration.

- Excavation and removal of original sluice gates under inspection by archaeologists.

- Preparation of an environmental management system to mitigate against nuisance during works and extensive environmental monitoring.



Results

- Soils contaminated with ACMs have been successfully remediated to comply with approved site re-use criteria.
- Breakout of all substructures and crushed to 6F2 grade material for reuse.
- Provision of working pile mat platforms for CFA piling in store area and sheet piling works.
- All earthworks tracked in accordance with the Materials Management Plan (MMP) under the Industry Code of Practice.
- Environmental and human health risk significantly reduced.