

PROJECT: METHIL SEAWALL TOE WALL CONSTRUCTION

VALUE: **£235,000**
 ROLE: **MAIN CONTRACTOR**
 START DATE: **NOVEMBER 2013**
 COMPLETION: **DECEMBER 2013**

CLIENT: **SCOTTISH POWER GENERATION
 DALDOWIE FUEL FARM
 UDDINGSTON
 GLASGOW**

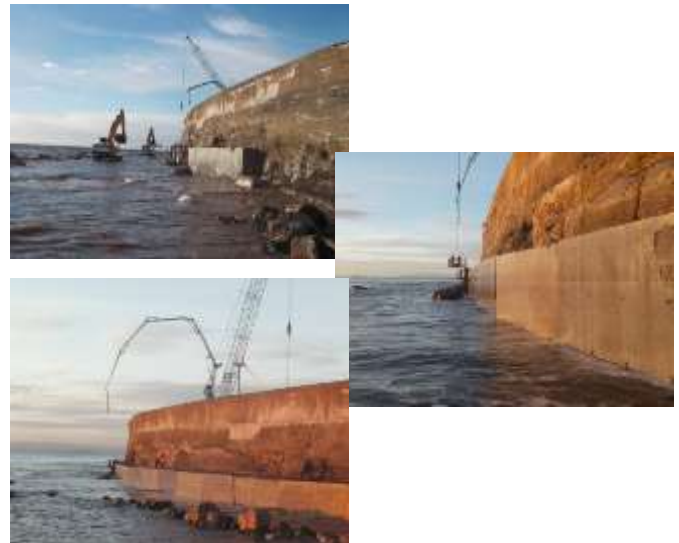
- Restricted Tidal Working (Spring Tides)
- Reinforced Concrete Toe Wall 150m in length, 2.5m high constructed in 6m bays
- Reinforced Concrete Toe Foundation 150m in length and ranging from 1m to 2.5m in depth (to accommodate bed rock undulation)
- 180 number Dowels drilled into existing Seawall.
- 396 Dywidag drilled to support Temporary Works
- Over 800m³ of Structural anti washout concrete
- 12 days (24 Shifts) of construction activity.
- On average each shift incorporated 2 concrete pours

Part of the larger project – Methil Seawall Refurbishment, Southbay took on a Lump Sum fixed price to construct a 'Toe Wall' at the Foot of the existing 12m vertical Seawall in Area 1. The Toe Wall construction was always critical path for the programme delivery as all associated works were dictated by Spring Tides.

Over the 40 years, the existing Seawall had been host to large environmental forces and had become severely damaged. Our Design and Build of a 2.5m high 1.5m thick reinforced toe wall to mitigate any future environmental loads/missiles was accepted by our Client along with our fixed price of £235k.

Prior to the reinforced Toe Wall, a reinforced concrete foundation was constructed, this foundation provided a level platform to accommodate the (+/-) 1m bedrock undulation.

Southbay procured Temporary Works Design and utilised in house materials to complete the works to a high standard set in difficult conditions.



Toe Wall during Construction. Access for Plant & Workforce via Foreshow Ramp. Material Access via Crane & Concrete Pump.



Construction Nearing Completion

CHALLENGES

Harsh environmental conditions were experienced during the Spring tides including Artic Winds of up to 80mph at times. Site and material access were difficult due to the 12m high Vertical wall and also a secondary wall being present. Concrete was placed by a 52m concrete pump and temporary materials serviced by the 80t crawler crane.

PROGRAMME

Initially the programme was set over 4 Spring Tides; the construction of the Toe Wall was complete within 2 Spring Tides, this also incorporated an additional foundation as bedrock level was undulating. These spring tides in total consisted of 12 days of double shifts working both low tides in a 24 hour period.