

# PROJECT: METHIL SEAWALL ROCK ARMOUR CONSTRUCTION

VALUE: £415,000  
ROLE: MAIN CONTRACTOR  
START DATE: FEBRUARY 2014  
COMPLETION: MARCH 2014

CLIENT: SCOTTISH POWER GENERATION  
DALDOWIE FUEL FARM  
UDDINGSTON  
GLASGOW

- Restricted Tidal Working (Spring Tides)
- Large placement and construction of two size Rock Armour (2-4tonne and 9-12tonne)
- 9,000 tonne of Rock Armour Supplied and Installed
- Restricted access/egress to construct Rock Armour
- Restricted working room during the construction
- Environmental and Ecological Conditions

Part of the larger project – Methil Seawall Refurbishment, Southbay took on a Lump Sum fixed price to protect the existing revetment by designing a new Rock Armour Revetment.

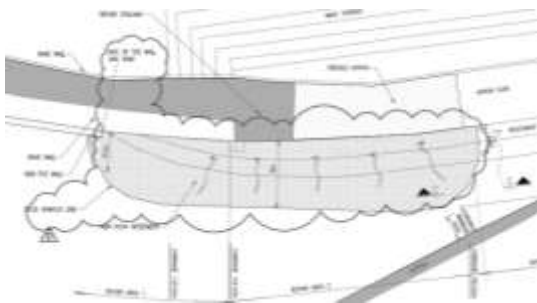
The Design and Build of the Rock Armour would protect an area historically prone to environmental and wave action and had caused bad scouring and washout to the revetment structure. Although the Sea Defence Wall measured over 800m long the Rock Armour was designed to act not only as revetment protection but to serve as a breakwater to minimise the impact to the remaining structure. The Rock Armour was placed and constructed throughout a 90m length.

Rock Armour was procured and locally sourced from a quarry close to site. Situated some 15 miles from site this was key to the delivery of the scheme as all Rock Armour was stockpiled onsite and then double handled into the final location due to the tidal restrictions. All Rock Armour works were carried out within the intertidal zone and mainly during spring tides.

The existing beach/sea bed was excavated to bedrock and the 2-4tonne sub layer placed and positioned. All armour was required to be constructed as per the specification and required a minimum of 3-point contact. During the construction site encountered artic winds of up to 120mph therefore protecting the sub layer needed to occur at the end of each shift. The larger 9-12tonne Rock Armour were positioned and placed.



Rock Armour construction during spring tides.



Plan Elevation of Rock Armour

## CHALLENGES

Harsh environmental conditions were experienced during the Spring tides including Artic Winds of up to 120mph at times. Site and material access were difficult, a haul road/access ramp was constructed to cater for the heavy plant involved and to cope with the tidal forces.

## PROGRAMME

Initially the programme was set over 4 Spring Tides; the construction of the Rock Armour was complete within 2 Spring Tides and working in inter tidal zones, overall the duration to excavate, place, position and construct took 4 ½ weeks.