



## KALLIN – PIER / BREAKWATER

The project involved expansion of Kallin Harbour at Grimsay, North Uist in the Outer Hebrides. The new pier provides this busy fishing harbour with increased berthing capacity and also acts as a breakwater.

During the initial stage of this design and build project, several options were considered for the construction of this deep water facility and following consultation with the local community the best value solution of precast concrete caissons was chosen.

Three identical caissons, each weighing 850t, were constructed in the dry dock at Troon whilst blasting and dredging of 3000m<sup>3</sup> of rock was undertaken at the site in preparation for the new pier construction.

The caissons were towed from Troon out to North Uist and carefully lowered onto the prepared seabed at Kallin. Once secured the caisson walls were completed and the new deck slab constructed.

The main elements of the works included :

- 3,000m<sup>3</sup> of seabed drilled/blasted & dredged
- 3nr 850t, 20m x 8m x 8.5m precast concrete caissons, constructed at Troon & towed to Kallin
- 350m<sup>2</sup> of pier extension, with 18m x 10m high interlocking precast concrete panels to form the new quay face
- 5,000m<sup>3</sup> of rock filling
- 1,000m<sup>3</sup> of rock armour
- 500m<sup>3</sup> of structural concrete to lift the caisson walls to their final height and provide the pier deck
- mooring rings, bollards and ladders deck furniture
- installation of electrical & water services



**CLIENT**

Comhairle nan Eilean Siar

**ENGINEER**

Arch Henderson LLP

**CONTRACT VALUE**

£ 3.85m

**DURATION OF WORKS**

July 2007 – July 2008 (35 weeks)