



Quoile Barrier Remedial Works, Strangford Lough

Contract Value: £425,000
Consulting Engineer: Atkins
Engineer's Representative: Lesley Cooper (028 9037 0704)
Client: McLaughlin & Harvey Ltd
Client's Representative: John Mariner (028 9034 2777)
Works completed: October 2005

Ashleigh Contracts were sub-contracted to McLaughlin & Harvey for this contract which was undertaken under the Framework B contract with Rivers Agency.

Categories:- Coastal Defences, Marine Civil Engineering, Dredging.

Works Comprise:

- Dredging approx. 5,000m³ to an area in front of the existing Quoile Barrier in water depths up to 9m from High Water level and construction of a 1200m³ concrete scour protection apron extending approx. 30m from the Barrier. Dredge and concrete levels controlled using an electronic Leica MC200 "Digmaster" system fitted to a Long Reach excavator (19m reach).
- Excavation and concreting adjacent to the Barrier had to be carried out in restricted widths to ensure structural stability of the Barrier and adjoining Wing Walls.
- Individual concrete pours were isolated using a system of precast concrete caisson units used as sacrificial formwork to enable casting of individual pours in the range from 42m³ up to over 300m³. Individual pours varied in depth up to 1.9m deep adjacent the Barrier structure.
- The majority of dredging and concreting was carried out using a 40T Long Reach excavator working from either foreshore or from a spud-leg barge formed from a modular pontoon system.
- Due to the environmentally sensitive area in which the works are being carried out, a system of grout protection curtains have been employed to isolate each concrete pour from Strangford Lough. Water quality monitoring and testing has been carried out on a daily basis to determine the suspended solids and PH values at predetermined locations upstream and downstream of the tidal Barrier.



Underwater concreting of scour protection apron using concrete pump with levels controlled by electronic "Digmaster" system fitted to 40T Long Reach excavator.

ASHLEIGH CONTRACTS

30c Ballygelagh Road, Kircubbin, Newtownards, Co. Down BT22 1AE
Tel: 028 4277 2781 Fax: 028 4277 2685