

Lapps Quay Steel Intensive Permanent Sheet Pile Basement

Contract No: C344

Client: P. J. Hegarty & Sons Ltd

Location: Lapps Quay, Cork, Ireland

Value: Approximately €1.8 million

Summary: Design, supply and installation of sheet pile cofferdam and temporary support system to facilitate construction of a two storey car parking basement for a major Hotel, Commercial, Retail and Residential development on the river Lee in the centre of City of Cork.

Sheet Piling (UK) Ltd were employed by Principal Contractor P. J. Hegarty & Sons and Walsh Goodfellow Consulting Engineers to design and construct a steel intensive basement for a two storey car parking basement adjacent to the river lee in Cork City Centre.

The design required the construction of a gravel filled temporary double skin gravity cofferdam in 17m PU25 section sheet piles, over a 100m plan length of the river Lee. The other three sides of the basement cofferdam were constructed using PU25 section sheet piles 17m long. The sheet piles were braced at one level using either fabricated steel bracing designed and installed by Sheet Piling (UK) Ltd, or temporary ground anchors installed by HMC Construction, a specialist company owned by P. J. Hegarty

The soils consisted of approximately 6m of made ground, overlying 4m of med dense sandy gravel, overlying 6m of very dense sandy gravel into very stiff clay.

The sheet piles were installed using a bauer RTG 18m telescopic leader rig fitted with a 1000kN variable moment high frequency vibratory hammer.

When the basement had been excavated down to approximately 7.0m below ground level the clutches were fully welded to provide a fully watertight structure in compliance with BS8102:1990 Grade 2 as defined by CIRIA Report 140 (Steel Intensive Basement table 11).

Project Images



