

Resin Injection–

The Signature Building, Titanic Quarter, Belfast

The Docks area of Belfast is the scene of major regeneration efforts in recent years. A landmark structure to commemorate the building of the world famous trans-Atlantic liner, The Titanic, at the Harland & Wolf Shipyard is the £97m Signature Building which is currently under construction. The overall design of the building has been influenced by the shipbuilding heritage of Belfast.

Like the liner, the site has its own challenges in terms of water integrity with a two storey basement adjoining the River Lagan. The perimeter secant pile walls were formed to allow the excavation of the basement, prior to constructing the structural floor and walls of the basement. As the structure began to rise from the ground slab and the dewatering pumps were turned off, a number of leaks were evident.

The design team looked at a number of solutions and selected resin injection as a means of sealing the water under pressure coming from the River Lagan.



Project Details:

Client:

Titanic Quarter Ltd

Location: The Signature Building, Belfast

Main Contractor:

Harcourt Construction

Specialist Contractor:

Larsen Contracts Ltd

Application: Resin injection

Market:

City regeneration, Tourism

Curtain injection of the upstand wall allowed the fine void between the piles and the reinforced concrete wall to be sealed and filled. The pressure injection technique allow the hydrostatic back pressure to be controlled by monitoring and adapting the set time of the MC GL95 TX polyurethane resin. This product allows an experienced site operative to adjust the resin setting time depending on site conditions and temperature.

