



PROJECT CASE STUDY

Retail Unit Liverpool

- Architect: NJSR Chartered Architects LLP
- Client: National Retailer
- Contractor: Wates Retail
- Applicator: Lainton Services



NJSR consulted RIW regarding a new retail development complete with basement in the heart of Liverpool city centre.



The Challenge

This city centre location provided a difficult waterproofing challenge. The site was surrounded on two sides by Grade II listed buildings, with a pedestrian plaza on the two remaining sides. The proximity of the buildings and adjacent pedestrianized areas meant that an externally applied membrane and external drainage solution was not possible. Added to this, contiguous concrete piles and a single leaf of blockwork internally meant internal tanking solutions were limited. The depth of the basement also provided a challenge as the floor level of the basement was below the level of existing drains.

The Solution

RIW's design strategy applied RIW Cavity Drain R20 directly to the contiguous piles. As the product is manufactured from HDPE, it is therefore able to follow the irregular surface and curvature of concrete piles. RIW Aqua Channel along with RIW battery backed Sumps and Pumps were used to collect and pump away ground water to higher level drains, with RIW Cementseal being applied to capping beams and linked to the RIW Cavity Drain using RIW Overtape.

RIW Sheetseal 226 was also used internally to protect the floor and was linked to the vertical application of the RIW Cavity Drain. The initial application of the Cavity Drain and commissioning of the Sumps and Pumps early in the construction programme meant that the basement was kept dry during the remaining construction programme. This also meant that the internal application of the Sheetseal 226 was carried out in a drier controlled environment.

Featured Products

RIW Cavity Drain R20

An internal tanking cavity drainage membrane system comprised of high density polyethylene drain board with 20mm studs, used where site conditions or structural design make it difficult to use traditional tanking methods.

RIW Aqua Channel & Pumps

Water controlled behind the RIW Cavity Drain System enters the RIW Aqua Channel at the base of the wall through pre-drilled drainage holes. Water must then be diverted to a suitable drainage point. In this case two RIW Aqua Pump Pro Battery Back-Up Systems (BBUPS) were used. Comprising of a polyethylene sump, locking access cover, powerful submersible pump, 24v back up pump and control panel. It is designed for use where primary pump failure through mechanical fault or loss of mains power would be catastrophic.

RIW Cementseal

A two component cement based waterproof coating with excellent adhesion to prepared concrete and masonry substrates. It protects the concrete, or other substrates, from water penetration and carbon dioxide diffusion. Typically used in basements & sub-structures, podium decks, balconies & terraces and inverted roofs.

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