

WATERPROOFING CASE STUDY Pentland Avenue, Edinburgh

MULTI LEVEL NEW BUILD BASEMENT

Newton System 500 Allows For Highest Level Of Waterproofing Protection In The UK

History

Architect-APrioriDesign&Architecture, Gardner’sCrescent, Edinburgh

This New Build Design is split onto two levels and has been constructed out of reinforced concrete panels bearing off a structural raft. The nature of the build sees the property cut into a sloping site making the back elevations of the project earth retaining down two stories and partially on both flank elevations. This top spec new build project is “live” on site and will be waterproofed to the highest level of structural waterproofing available - Grade 3 - Habitable accommodation to BS8012:2009.

Methodology

Newton Specialist Basement Contractor Richardson and Starling have curtain hung the Newton 508 membrane to the re-forced concrete panels using minimal MultiPlug fixings. This technique meant no surface preparation was required meaning the a significant cost saving when compared to traditional tanking systems. Newton 508 once affixed to the retaining walls terminates into the Newton Basedrain conduit. The Basedrain has been recessed into a 50mm x 80mm rebate allowing the Basedrain to sit level in a horseshoe formation. Any water that enters the structure will then be diverted into the Newton Basedrain which will then guide it to the front elevation of the property. At this point the upper ring main of the Basedrain then discharges down behind the Newton 508 on the lower level (see diagram). Once the water is diverted to the lower level, another horseshoe of Basedrain picks up the water and then diverts it to the open elevation at the bottom of the property. Both slabs are protected with Newton 508 which then is sealed to the up stand of the Newton Basedrain in preparation for a screed with under floor heating incorporated. Once the screed is installed then the client is having a mixture of independent dry lining and light weight block as an internal finish option.

Benefits

The installation of the Newton System 500 water management system allows for the highest level of waterproofing protection in the UK. Richardson and Starling are able to offer full design and installation guarantees for the work and their design omitted the use of sump and pumps. The Basedrain conduit was installed with maintainable jetting points making the system fully maintainable - a mandatory design requirement in accordance with BS8102:2009. The Newton System was installed with precision and speed and was not inhibited by adverse weather conditions as with external systems.

NSBC Contractor: Richardson & Starling



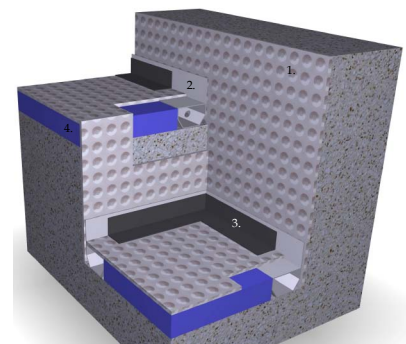
The New Build design is split on two levels



Newton 508 curtain hung to concrete panels



Newton System 500 fully complies with BS8102:2009



Newton Basedrain ensured the system was fully maintainable, a requirement of BS8102:2009