

UNDERGROUND CAR PARK, APARTMENT BUILDINGS, PITSLIGO ROAD, EDINBURGH

A Cruden Homes required a Type A Barrier Protection waterproofing system complying with BS 8102:2009 to waterproof an underground car park to facilitate apartment buildings.



PROJECT

Underground Car Park, Apartment Buildings, Pitsligo Road, Edinburgh

Applicator:
Advance Construction

Architect:
Michael Laird Architects

Engineers:
Quattro Consult

Area: 3,000 m²

Contractor:
Cruden Homes

LOCATION

Edinburgh

PRODUCTS

VOLTEX®

WATERSTOP-RX®101

CHALLENGE:

The main challenges to the works were derived from the need for minimal preparation to achieve the required works duration, the need for an all-weather installation. Firstly, the water proofing works had to be carried between June 2015 and July 2016, continuously throughout the summer and winter months. The chosen system had to be technically robust and suitable for these prevailing site conditions which were to be anticipated throughout the winter months in particular.

SOLUTION:

To meet the first challenge, an all-weather installation with minimal substrate preparation and protection requirements to prevent damage occurring from other trades assisted in keeping the project on schedule. In order to meet the project design requirements, a robust, cost-effective, sustainable system was provided which included a package of standard and bespoke details to counter the challenging site conditions faced by the main contractor.

The installed waterproofing system included VOLTEX® and WATERSTOP-RX101®. VOLTEX® is flexible and easily formed allowing installation to irregular substrates, does not require primers, adhesives or seamtapes, with self-seaming properties at membrane overlaps and self-sealing properties if the membrane experiences minor damage. VOLTEX® is robust and in most cases does not require protection

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courses or concrete overblinding, while the peel-adhesion properties of VOLTEX® enables it to form a continuous mechanical bond to cast concrete, thereby preventing lateral water migration at the actual point of ingress if the membrane becomes breached.

VOLTEX® is suitable for waterproofing vertical and horizontal foundation surfaces, such as below structural slabs, property-line wall construction and backfilled walls. It incorporates the high-swelling properties of sodium bentonite to form a monolithic, low permeable membrane which protects below ground structures from water ingress. VOLTEX® does not contain VOCs and can be installed on green concrete in most weather conditions.

RESULT:

A comprehensive waterproofing system backed with BBA certification and complying to BS 8102:2009 (Type A Barrier Protection) was successfully installed in difficult weather conditions and the overall waterproofing package completed on schedule.