



Press Release
May 14th 2024

Delta Membranes Type A and Type C Waterproofing

The scope of this project was to offer a waterproofing solution to an early 19th century two storey, listed cottage sited in a conservation area of beautiful countryside in Scotland.

Delta Registered Installers, Structureseal Services Limited, were appointed to provide a guaranteed, cost-effective scheme that would comply with BS 8102:2022 (Protection of below ground structures against water ingress. Code of practice.).

For any structure below ground, either fully or partially, waterproofing is essential for protecting and preserving integrity.

BS 8102:2022 defines the three main methods of waterproofing protection as Type A (Barrier), Type B (Structurally Integral) and Type C (Drained).

A combination of two forms of waterproofing is preferred when designing a habitable space, often referred to as combination protection. Where a combination of waterproofing protection is being used, the two systems should offer different performance characteristics to mitigate the risk of failure due to a common cause.

The specification and installation on the waterproofing protection will be influenced by the structure, ground conditions, along with the proposed use of the structure. Continuity of the waterproofing protection is a further consideration when specifying a suitable scheme, along with compatibility of the different protection types which should be assessed to minimise the risks and negate the need for remedial measures.

Methodology

During design team meetings various revisions were made to the initially proposed waterproofing protection. The structure required a new concrete slab which enabled the specification of Delta Amphibia, a Type A System and Delta Cavity Drainage Membranes, a Type C System. Pre site inspections were carried out along with consultations with the customer, to ensure the waterproofing design not only meets BS 8102:2022 but also the client's expectations.

The project was split into two phases:

Phase 1 – Installation of the Type A solution, Delta Amphibia.

Phase 2 – to install a secondary waterproofing system, such as the Delta Type C, Cavity Drainage System.

Phase 1

The 150mm ground slab was designed to the Structural Engineers details which included reinforcement where required. The slab edge was reinforced to allow for a recess which would house the Delta Type C, perimeter drainage channel.

Prior to the concrete pour of the new structural slab, Delta Amphibia was specified as the primary waterproofing solution. Delta Amphibia was installed vertically in a Type A, waterproofing application.



The unique properties of Delta Amphibia are achieved through four active layers – a watertight barrier, Reactive Core which allows Delta Amphibia to Self-Seal and Self-Heal in the event of accidental damage, an active barrier with the ability to Self-Seal at overlaps resisting lateral movement of water and a strong bonding layer.

Pre-applied bonded membranes are used to waterproof concrete in basements and below ground structures on the positive side (outside). They are installed before the reinforcement underneath a base slab and vertically on a soil retention system, or in a formwork.

Phase 2

Prior to the installation of the Type C System, to reduce the risk of free lime leaching out from the new concrete slab (during the curing process), Koster Polysil TG 500 was applied. After ensuring the structure was water watertight Delta MS 500 cavity drained membrane was installed to the walls.

Cavity Drained Systems manage water penetration, Delta drainage channel, a water collection conduit designed to discharge water ingress was bedded into a preformed recess/gully at the floor/wall junction with incorporated inspection and maintenance points to comply with BS8102:2022. Prior to the installation of Delta MS20 membrane, the basement slab was thoroughly flood tested. All installed with great dealing and expertise.

Related Products

- Delta Amphibia
- Delta Amphibia Safety Tape
- Delta Amphibia Lap Seal
- Delta MS 500
- Delta MS 20
- Koster Polysil TG 500
- Delta Channel and associated inspection ports

Case Study Results

Delivered on time and to budget!

Delta Registered Installers, Structureseal Services Limited were able to confidently recommend, design and install a comprehensive waterproofing solution that will protect this property from unwanted water ingress for the life cycle of the structure.

Ends

Delta Membranes

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