

## West London – Combination Waterproofing (2 forms) to BS 8102:2009



### SYSTEM COMPONENTS

- Koster NB 1 Grey
- Delta MS 500
- Delta MS 20
- Delta Channel
- Koster Polysil TG 500

### SPECIFICATION

BS8102:2009 Code of Practice for the Protection of Below Ground Structures Against Water from the Ground.

### OVERVIEW

Advance Property Preservation Limited were approached to offer a waterproofing solution for a large new build, single storey structure with basement which would offer both residential and commercial use to a prestigious development in West London.

The basement area of this project was to accommodate both commercial and residential units and the upper floor also accommodating both commercial and residential units.

The warranty provider requested 2 forms of waterproofing be incorporated into the design to the front retaining walls of the structure.

When specifying the most appropriate method of waterproofing for a new-build basement it is advisable to follow the recommendations within BS 8102:2009 'Code of Practice for Protection of Below Ground Structures Against Water from the Ground'. The standard advises on the types of waterproofing available and confirms the performance grade to be achieved. This project required Grade 3 protection – no dampness or water penetration acceptable.

The waterproofing method adopted for this new-build basement required careful consideration as failure to design in the correct specification of products and associated systems/products can have a major impact on the effectiveness of the system and the potential use of the basement. In addition, consideration had to be made for the maintenance the drainage elements of the waterproofing system.

### METHODOLOGY

#### Phase 1

The basement walls were high power

pressure washed prior to an application of Koster Polysil TG 500 an anti-lime inhibitor. With two coats of Koster NB 1 grey being applied to the retaining walls which was lapped to the ceiling and floor slab. Koster NB 1 with its crystallizing minerals were employed to seal against pressurized water (> 13 bar) and is classified as a Type A (Barrier Waterproofing) System. This mineral coating waterproofing slurry contains capillary-plugging agents making it an ideal solution to protect the structure from ground moisture ingress, for non-pressurized and pressurized water.

#### Phase 2

A combination of a maintainable modular/sub slab and perimeter drainage system was incorporated into the ground bearing basement slab in association with the Cavity Drain Membrane System and the basement floor was levelled to no more than 1-10mm. The reason for levelling the basement floor to no more than 1-10mm is to reduce associated risks of water ponding or pooling beneath the Cavity Drainage System, which could potentially cause flotation stress to come to bear too. 48 Linear Meters of Delta Drainage Channel was also incorporated into the basement floor area of the project, accumulating to 250 m<sup>2</sup>. The all-important access ports to the Delta Channel were incorporated at regular intervals for future maintenance purposes, which is a vital aspect of internally applied Type C Cavity Drained Membrane Systems to keep running to their optimum.

120 m<sup>2</sup> of retaining walls to the structure were linked to the Drainage System to ensure any weak points (floor/wall junctions) were adequately protected from any potential water ingress.

To finalize the twin waterproofing system, Delta MS 500 membrane was applied to the basement walls and Delta MS 20 membrane was applied to the basement slab.







A Type C Cavity Drain system is made up of cusped membranes which are applied to the walls and floor of a basement with a channel incorporated at the wall/floor junction. The cavity drain membrane allows any water ingress to filter down to the slab and find its way to the perimeter channel. The channel directs any water ingress to a sump pump or agreed drainage points which is situated below the slab (floor). The sump pump chamber will then remove any water ingress to the ground level drains.

The lower internal, non-earth retained walls received a DPC (damp-proof course) to act as a barrier through to prevent moisture rising by capillary action such as rising damp. The DPC was linked to the Type C system ensuring the structure was adequately protected.

### CASE STUDY RESULTS

Advance Property Preservation Limited were able to offer empirical results on this project, from site attendance to methodology and installation. The customer was delighted with the project and Advance's professional and logical approach.

Advance Property Preservation Limited were able to offer the customer a 10-year Insurance Back Guarantee ensuring confidence in the works.

Whether waterproofing a new-build basement or an existing structure, Delta will always recommend that the preferred waterproofing system be installed by one of our Registered Installers.

Delta Registered Installers are an elite group of experienced structural waterproofing installers who share our values – a dedication to quality, authenticity and exceptional customer services.

Our Delta Registered Installer Partners all have extensive experience of working with and installing Delta Systems, meaning you can be confident of a quick, efficient installation, carried out with the minimum of disruption and fuss.