



**Press Release**  
**October 25<sup>th</sup> 2022**

## **Delta Membranes Waterproofing Below Ground Pool Facilities**

A recent Delta Membranes project involved replacing an above ground level pool house (a dated timber structure), with a below ground one. Included in the design was to provide an entrance staircase visible to a grassed area with the pool and tennis courts behind. The project brief included a plant room (servicing the main pool and hot tub), WC and changing area.

Delta Registered Installers, Dryside Limited were appointed as waterproofing specialists to collaborate with Palladium Homes to fulfil the role of Waterproofing Design in providing a reliable, watertight solution for this project.

The structure from concept was designed to be reinforced concrete.

The water table was identified at around 1.8-2m below the finish ground level. The sub-soil conditions were found to be clay, so a perched water table with variable heights was to be anticipated.

The Waterproofing Design Stage was spread between May 2021 and December 2021 and designed to BS 8102:2009 the British Standard for the protection of structures against water from the ground, Grade 3 (no dampness or water penetration acceptable).



When designing a robust waterproofing approach, attention to detail is critical. Working in collaboration with the ground works team, Dryside Ltd were able to ensure all construction joints and service entry points, were sealed to a high standard.

Throughout the project, Dryside were onsite and able to amend and modify the waterproofing approach, to achieve the client's requirements.

### **Methodology**

After undertaking site inspections, Dryside recommended using a combined Type A and Type C waterproofing solution. Combined waterproofing systems can offer optimal structural protection against water ingress.

Installation of a Delta Type A, external drainage system was specified as a primary waterproofing solution. Due to the known water table, this would function as first line of defence. Dryside started alongside the ground workers on site in January 2022, during the construction phase. In a full belts and braces approach, Dryside proposed incorporating a Delta Type C, cavity drained system including basement drainage to ensure the structure would remain watertight for the life cycle of the structure.

Koster NB 4000 is a hybrid product that combines the properties of a polymer modified bitumen sealant and a flexible mineral waterproofing slurry which was applied over the concrete, further protected by Delta Geo Drain Quattro, a drainage and protection membrane, which was flashed in



and buried just below external ground level. Dryside preferred the use of Koster NB 4000, for its ease of application and versatility to work alongside Koster NB 1, as the first coat.

The internal Type C system was a standard installation, with modular drainage to the sump. Dryside added a provision to mitigate a flood event from the pool room plant, which included an additional incorporated floor drain to the plant room.

4m<sup>2</sup> external area of the stairs was incorporated into the specification for ground water sump pump chambers, ensuring the entire area was specified correctly.

Once the construction was complete with third party finishing contractors, undertaking dry lining and finishings, Dryside returned to site to install the pumps and commission the basement drainage system.

Products used:

- Delta Geo-Drain Quattro
- Delta MS 500
- Delta MS 20
- Koster Polysil TG 500
- Koster Repair Mortar Plus
- Koster KB Flex
- Koster NB 1
- Koster NB 4000
- Delta Qwik-seal plugs
- Delta Corner strip and double-sided tape
- Delta V3 Ground Water Sump
- Delta V3 Foul Water Sump
- Delta Alertmaxx2 EC High Level Alarms
- Delta Powermaxx2

### **Case Study Results**

Delivered on time and to budget.

The client was delighted with Dryside Limited's ability to collaborate with the groundwork team throughout the build process. Establishing collaborative practices ensured the smooth running of the project and offered a robust detailed approach.

### **Ends**

Delta Membranes

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