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OVERVIEW

Celtic Manor is a 5-star resort is set in more than 2000 acres of panoramic parkland at the gateway to Wales.

Home of the 2010 Ryder Cup and host venue of the NATO Summit 2014, this historic 19th century Manor House provides a complete experience for business, leisure and golf travellers.

The Resort offers three 18-hole championship golf courses, including the Twenty Ten course, the first course to be designed and built specifically to host The Ryder Cup.

Delta Registered Installers, Tywi Damp Proofing were commissioned to create a waterproofing system for the newly constructed golf facilities.

Build contracts were awarded to Welsh companies continuing Celtic Manor's ethos of supporting local businesses.

This new build structure would be earth retaining at one end and constructed from reinforced concrete.

CASE STUDY

BASEMENT WATERPROOFING - CELTIC MANOR

DMSCS2020

SYSTEM COMPONENTS

- Delta MS 20
- Delta MS 500
- Delta Cornerstrip
- Delta Plugs
- Koster Polysil TG 500
- Koster Deuxan 2C
- Delta Channel



Head Office:

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METHODOLOGY

Consultations were undertaken at the concept stage of this project which enabled a clear and precise waterproofing design.

This large new-build structure required to be waterproofed to meet BS 8102:2009, the British Standard for the Protection of Structures against Water from the Ground requirements. As it is not possible to determine the amount of potential water pressure surrounding the structure, BS 8102:2009 states the waterproofing designer should expect a head of water against the structure at some stage during the structure's service life, further, BS 8102:2009 states that all waterproofing systems should easily be maintainable and repairable.

Tywi Damp Proofing with assistance from Delta's Technical Consultant, Paul Callaghan proposed using a combined Delta System.

The main facilities slab was recessed below external ground level and required to be Grade 3 habitable. This has been protected by two coats of Koster Deuxan 2C, a polymer modified bitumen thick film sealant for waterproofing construction.

Koster Deuxan 2C is designed for the secure and permanent exterior waterproofing of basement walls, foundations, floorplates and for intermediate waterproofing of balconies, terraces as well as for wet and damp rooms. Koster Deuxan 2C is also suited for the intermediate waterproofing underneath screeds and for bonding insulation and drainage boards.

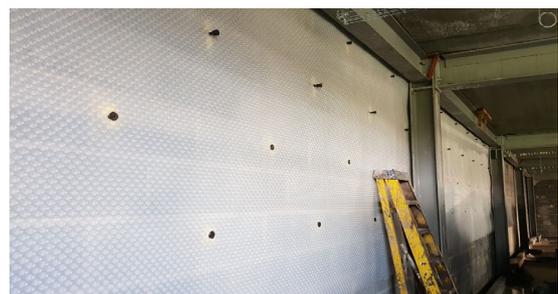
Pre-backfill, Delta GeoDrain Quattro, a unique drainage protection system/external waterproofing membrane that works in conjunction with Type A External Waterproofing systems, was installed as a drainage and protection membrane, which was flashed in and buried just below the external ground level, using a Delta MS Profile Capping Strip.

A maintainable Delta Type C System was incorporated to the inside of the structure to ensure the project was fully "locked down".

RESULTS

When combining systems in order to minimise the risks or negate the need for future remedial measures, consideration to the compatibility of the combining systems was given. By using 2 systems produced by 1 manufacturer Tywi Damp Proofing were able to offer reassurances of system compatibility.

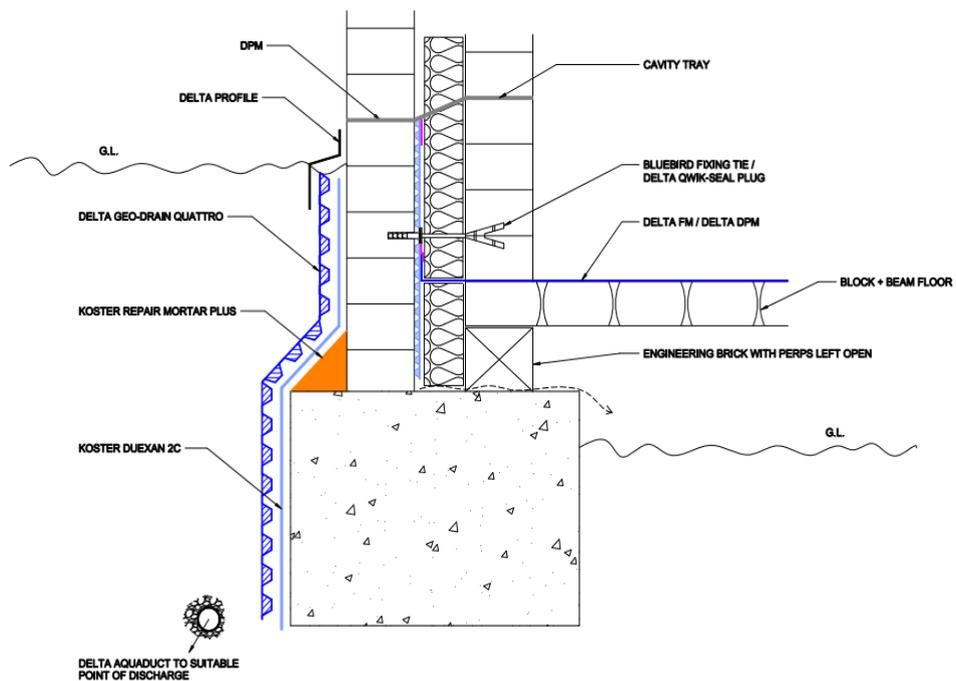
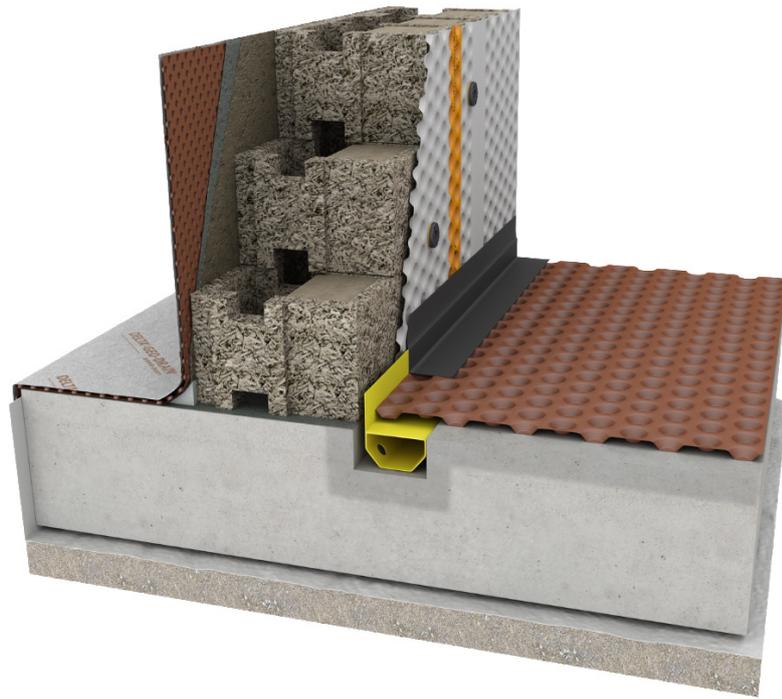
The customer was delighted with Tywi Damp Proofing's customer service, design and build ethos. All Delta Registered Installer Partners have extensive experience of working with and installing Delta Systems, meaning customers can be confident of a quick, efficient installation, carried out with the minimum of disruption and fuss.



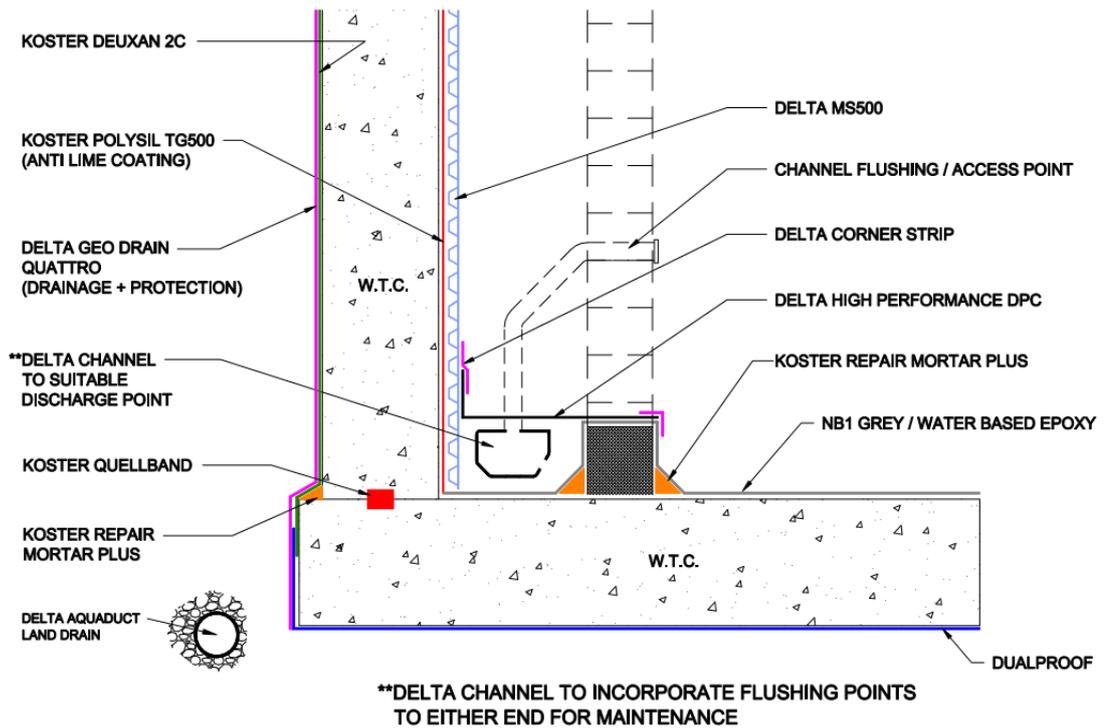
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TECHNICAL DRAWINGS



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