

## Your Complete Roofing Solution

Environmentally Focussed | Responsibly Sourced | Ethically Driven



# University of York [Location](#)

## Heslington East Campus Student Residences: Sustainable and Efficient Expansion

Alongside the preservation of listed buildings, the University of York is investing in a flagship £130m development for students that promotes wellbeing, community, and sustainability. The initial phase sees 16 brand new student accommodation blocks and 2 communal hub buildings providing flexible social spaces. Surrounded by stunning lake views and natural habitats, the buildings are part of a huge initiative to expand the student accommodation offering.

### Goals

Architects Sheppard Robson alongside Graham Construction sought to futureproof accommodation by incorporating multi-use buildings, including catering outlets and social hubs. Key to the brief was using the latest in safety, energy efficiency, longevity, and warranty credentials. Graham Construction's use of modular external sandwich panels, prefabricated steel bathroom pods, and pre-assembled services distribution racks used Modern Methods of Construction with off-site construction techniques.

### Challenges

The major challenge was to specify a roofing system that could keep up with the pace of the build, given the typical building was constructed from start to finish in circa 14 weeks.

The roof deck comprised of precast concrete slabs which facilitated the works programme for speed of construction and consistency in build quality.

Alumasc's challenge was to find not only a waterproofing solution that was able to keep up with such speed of construction but also to meet a truly sustainable life cycle equalling the lifetime of the building.

A key consideration in the design was the roofing materials' thermal properties. To meet the u-value target of 0.15, Alumasc's XPS Plus insulation was specified, providing a single layer of 175mm, which reduced the height of the overall build-up when compared traditional XPS.

## Solution

### Hydrotech 6125 Waterproofing System / Derbigum Hybrid Upstands

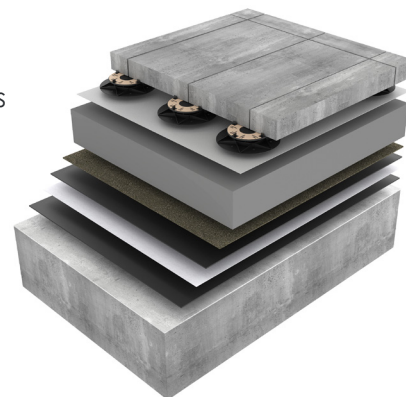
For over half a century Hydrotech Monolithic Membrane has been successfully used by architects and specifiers, ensuring some of the world's most prestigious buildings and structures are kept watertight. With no product failures in over 50 years and guaranteed waterproofing integrity for the lifetime of the structure, Hydrotech offers a total life cycle solution for the building.

Hydrotech was specified on the main roof areas for this project as it easily meets individual requirements of the buildings. In addition, the system is designed to last the lifetime of the building or structure to which it is applied, giving long-term waterproofing integrity and no future replacement costs.

Applied in a hot liquid state to the deck, and including a polyester reinforcement, the bond of Hydrotech MM6125 is 100% absolute. There is no risk of water tracking below the membrane and because it is monolithic, no possibility of lap failure.

### Derbigum Waterproofing

Derbigum sustainable roof system was selected for the upstand areas. This hybrid solution was developed to improve the thermal efficiency in all areas to mitigate against cold-bridging with minimal insulant thickness. Derbigum bituminous membranes are high-performance waterproofing systems offering extended warranties and the highest levels of project support. The upstand zones benefited from Derbigum Mineral which is a mineral surfaced composite reinforced membrane.



## Rooftop Management Strategy

In addition to the waterproofing solution the buildings benefit from the full Alumasc rooftop management service. This included the design and supply of safety systems, accessories, and over 20 AOV smoke hatches meeting all British and European standards.

Specific safe zones were designed by Alumasc Roof-Pro and positioned around all roofs for safe access. Purpose made clips for installing lightning conductor tape without roof penetration were also provided. All rooftop accessories are part of the Alumasc Roofing specification and therefore can be found back-to-back within the Alumasc 35-year system warranty.

## Project Data:

Completion: Autumn 2022

Building Type: Student Accommodation

Product Application: Hydrotech & Derbigum waterproofing systems

Certification: BBA Approved & European Technical Approval

Architect: **Sheppard Robson**

Main Contractor: **Graham Construction**

Alumasc Registered Roofing Contractor: **Tandragee Roofing**

