

BESPOKE INSULATION FOR ASTON UNIVERSITY KNAUF INSULATION



The EBRI building at Aston University. Image © Tim Cornbill

Knauf Insulation has been involved in the design and supply of a bespoke insulation product for the ambitious construction of the low energy and sustainably managed, European Bioenergy Research Institute at Aston University in Birmingham.

The University's new £16.5m European Bioenergy Research Institute (EBRI) building is funded by the European Regional Development Fund. This European Centre of Excellence in bioenergy provides new 'topic' laboratory research facilities, as well as a 0.4MWel (electric megawatt) small scale industrial power plant that will extract energy from multiple low-grade bio-wastes and act as a demonstrator of EBRI's innovative bio-energy technologies.

The scheme incorporates the existing portico of The Art Centre building, retaining the original 1920s façade and combining it with new modern facilities constructed at the rear.

Alan Miller, architectural assistant at Associated Architects comments: “The project is largely new build on the site of a previous building. The retained frontage of the historic building has been used to form the primary entrance for the semi-public areas. The new laboratories and office accommodation are housed beyond, within the new build areas.

“BREEAM ‘excellent’ was a key requirement for this project. As a European centre for bioenergy research, Aston University was keen to maintain the sustainable ethos of EBRI within the building itself and make improvements wherever they could be accommodated.”

During the early stages of the project, Knauf Insulation worked closely with Associated Architects to specify the correct rainscreen insulation product to meet the necessary requirements for a large glazed façade wrapping round the first floor. The insulation layer is a fundamental component of any successful rainscreen cladding system and rock mineral wool insulation delivers a number of advantages over rigid foam boards in this type of application, so Knauf Insulation’s Earthwool RainScreen HD Slab in a bespoke 120mm size was ideal for the project, delivering exceptional thermal, fire and acoustic performance.

On the design of the façade, Alan continues: “Due to its visibility through the glazing, a lot of attention was paid to the appearance of the insulation and its fixings. To successfully mitigate the differing dimensions of the constituent elements of glass channel, blockwork substrate and insulation, the insulation was specified with the help of Knauf Insulation’s regional specification manager and Technical Advice and Support Centre (TASC), to match the module of the glass channels. This resulted in a smaller than standard slab size, allowing for the edge of the slabs to align behind the joints in the glazed façade, providing not only the thermal performance required, but also an aesthetically pleasing appearance.”

The early involvement of the regional specification manager in the project and their relationship with the architects and client at the concept stage made for a very smooth delivery and ensured the required U-value of 0.22W/m²K would be achieved without the need to re-design elements later in the project.

In addition, all of Knauf Insulation's Earthwool rock mineral wool products deliver exceptional environmental performance and are manufactured using the innovative ECOSE® Technology - a revolutionary, bio-based, formaldehyde-free binder technology that is based on rapidly renewable materials, rather than petro-based chemicals. This was a key reason to the insulation being specified for this exceptionally sustainable project.

"The visible insulation has attracted a lot of attention to the project. The involvement of Knauf Insulation at a personal level and as a company helped to maintain the intention from design through to execution," comments Alan Miller.

Alan Charters, executive director of Capital Development at Aston University, said: "Sustainability is at the very heart of all we do at Aston University. Through our research, institutional environmental performance, and through our graduates we are working to develop the technologies and the people to lead the delivery of the low carbon economy for the West Midlands region, the UK and beyond. The new EBRI building will enable the team to expand their research as well as supporting businesses within the region and beyond. We are delighted with the results: an iconic building that conducts sustainable research in a truly sustainable environment."



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