

Case Study: CUBRIC Building, Cardiff University

080/Feb17



Elements from all of Kawneer's portfolio have been used on the CUBRIC building

Three versions of Kawneer's AA®100 curtain walling, complemented by two versions of AA®541 windows, and AA®545 and series 190 doors feature on the £24 million CUBRIC (Cardiff University Brain Research Imaging Centre) building, as part of the second phase of the university's Science and Innovation campus.

Building: CUBRIC Building

Location: Cardiff University

Architect: IBI Group

Main Contractor: BAM Construction

Installer: Dudley's Aluminium

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Kawneer helps Cardiff University with its Top 3 status

The new CUBRIC Building is four times larger than Cardiff University's old facilities, meaning staff from different departments now benefit from being housed under one roof, allowing for increased collaboration and innovation. It continues to further the university's world-leading research which has already established Cardiff as one of the UK's top three universities for psychology, psychiatry and neuroscience. The building was Overall Winner and Education & Research category winner in the 2017 RIDBA Awards.

The 6,500m² facility provides a mix of medical research, including a NHS-standard medical suite with drug trial unit and specialist MRI and Magnetoencephalography (MEG) scanning suites, laboratories, office accommodation and large seminar facilities with outside garden terrace.

Kawneer's AA®100 curtain walling as zone-drained capped and SSG (Structurally Silicone Glazed) versions with 50mm sightlines help to form the terracotta-tiled external facades while the AA®110 version with 65mm sightlines has been used as rooflights. These are joined by AA®541 top-hung casement windows as standard and as SSG vents, and by AA®545 medium-duty swing doors and series 190 heavy-duty narrow-style commercial entrance doors.

IBI Group senior architectural technician Anthony Picton said: "We have used Kawneer before. It's one of only a few systems we would specify. The entrance atrium is almost fully glazed and the projecting side wings were fully glazed so the correct solar treatment to the glazing played a big part. The Kawneer systems complied with the aesthetic and performance requirements of the project perfectly. The Kawneer systems are a major element of the external façade and aesthetics of the building and aluminium's sustainability played a major part as the building had to achieve a BREEAM 'Excellent' rating."

The Kawneer systems were installed over nine months by specialist sub-contractor Dudley's Aluminium for main contractor BAM Construction. Sensitive to the local vernacular, the design by IBI Group employs energy-efficient features including photovoltaics, a sedum roof and rainwater harvesting which helped achieve the BREEAM "Excellent" rating. The building also achieved an EPC "A" rating.

Working closely with the core end user team, IBI developed a brief for CUBRIC and a design which responded to the needs of the users while crucially adhering to the masterplan parameters. Through public consultation IBI was aware that overlooking of the 1930s houses opposite was a concern and the design of the building was developed to address this. The Kawneer windows onto Maindy Road are limited and open courtyard spaces have been created along the Maindy Road elevation. These have enabled the use of the extensive Kawneer glazing to provide access to light, views and natural ventilation for the users while reducing the risk of overlooking to the residents.

BAM construction manager Justin Price said: "In theory, it's a simple box but the building had to be future proof. We've installed demountable curtain walling to the scanner areas which allows the university to move large equipment in and out as its research grows, without affecting the building fabric."

Please contact our Architectural Services Team if you have a project you would like to discuss: Tel: 01928 502604 / Email: kawneerAST@arconic.com

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