

Case Study: Mitford unit, Northgate Hospital, Morpeth

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Photos: Medical Architecture

A bespoke healthcare window stars at the UK's first dedicated adult autism unit

The Mitford unit at Northgate Hospital in Morpeth, Northumberland, where fenestration was led by architectural glazing specialists Polar NE, uses a variety of Kawneer window and framing systems including a bespoke secure healthcare window specially fabricated for the £10 million project - the UK's first dedicated healthcare facility for adults with autism.

Building: Mitford unit, Northgate Hospital

Location: Morpeth, Northumberland

Architect: Medical Architecture

Main Contractor: Kier Construction

Installer: Polar (NE) Ltd

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Kawneer and Polar NE help healing at autism centre

A specialist window - based on the Kawneer AA®3110HW horizontal slider - has been used at the Mitford unit in the bedrooms and some communal areas alongside Kawneer's AA®540 fixed casements in corridors, AA®541 top-hung casements in offices and reception, and 451PT framing in communal areas and corridors. Supplied in moss grey (RAL 7003), they were specified by Medical Architecture in conjunction with Kawneer dealer Polar who had a team of two specialist installers on site for 11 months. The new BREEAM "Excellent" Mitford unit for Northumberland, Tyne and Wear NHS Foundation Trust provides 24-hour inpatient support and treatment for up to 15 adults with severely complex autistic spectrum disorders. Built by Kier under ProCure21+, the accommodation comprises eight single-person and two and three-person shared flats within four fingers of accommodation linked at their southern end by a band of shared spaces interspersed with staff facilities.

Given there was no precedent in the UK for this type of building, the project team had to develop design standards harnessing knowledge gained from visits to other residential buildings for autism patients, information from organisations such as the Autistic Society, and first-hand knowledge from the trust's clinicians. The unit's design has created a calm and protective setting that helps ensure the comfort and privacy of its residents while responding sensitively to the existing established features of the wider hospital site. External materials, forms and overall heights have been carefully matched to the surrounding buildings.

Medical Architecture director Paul Yeomans said: "Mental health inpatient windows are a very specialist product and we have developed designs with one of the few manufacturers/fabricators over a period of 11 years. Polar chose Kawneer's AA®3110HW system components as a basis and we adapted the successful design to the particular needs of the autism unit. Windows in mental health inpatient buildings are complex things. They need to facilitate natural ventilation, preferably be controlled by patients but be extremely safe and robust as well. Creating a ligature-resistant window is a challenge that very few manufacturers/fabricators take on. It also needs to facilitate a challenging cleaning regime and in some cases prevent the passage of contraband, so all in all a complex component that is vital to creating a therapeutic yet safe environment. This particular project required an internal shutter in place of curtains so we were able to adapt the already successful horizontal slider mental health window unit to work in a pocket alongside an internal shutter. The windows were required to incorporate thick toughened and laminated glass for safety reasons so achieving the appropriate thermal performance within the width capacity of the frame was challenging at times. A bedroom window, for example, required a 10mm toughened inner and a 10mm toughened outer as the bedroom windows looked out onto a courtyard area. Aesthetics are definitely secondary to performance in this case. The Kawneer range of components has allowed us and the window designers to achieve innovative and bespoke design where necessary. In this instance the need was for a very simple, discreet appearance from the inside and a clean robust outer appearance. I think we achieved this despite the inherently 'heavy' nature of the unit."

Polar NE director Sandy Baxter said: "This was a unique window design. Using our Wansbeck Secure healthcare window - of which the 'platform' is the existing AA®3110HW horizontal slider from Kawneer - we were required to further develop the design to meet the criteria for this specific project. It was installed so the patient only had access to the internal sliding sash. The rest of the window was concealed inside the wall. The Polar NE Wansbeck Secure windows had night vents as part of the design due to being in service users' bedrooms and manual Teleflexes to open high-position windows were used along staff-only corridors for increased ventilation."

Medical Architecture has specified in conjunction with Polar NE, with whom they have collaborated on 10 other window projects, since 2007.

"Most of the projects have been for the NHS estate so BREEAM compliance has been essential and the aluminium construction has contributed to this," said Paul. "This client has been a close partner in developing these window types for their estate over the past 11 years so is very happy with the window design."

Staff and visitors are happy too. Ward manager Pamela McIntyre said: "Staff are witnessing huge impacts on quality of life. Seeing a mother reacting to her son having his first incident-free days in seven years is very rewarding."

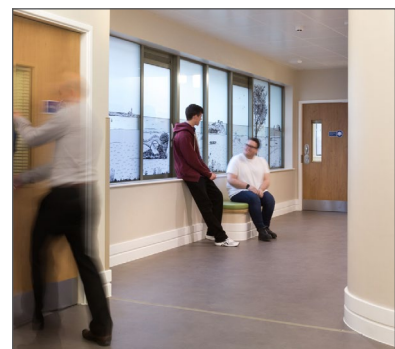
Another staff member said: "In the old building there was one patient who used to live in self-imposed isolation and crawled everywhere. Within a week of moving into Mitford he was having a drink with staff in one of the offices."

And a visitor said: "The design is innovative, forward-thinking, cutting-edge and sets the standard. It is uncomplicated in appearance but sophisticated in its design solutions."

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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The trust engaged a local artist to design artwork on a vinyl film that was incorporated into some key windows for a combination of stimulation and privacy.