The new College Road development in Croydon in south-east London is formed of two towers – it is now the tallest modular building in the whole of Europe. Offsite manufacturing is growing in popularity but nothing on this scale has been seen before. Reynaers Aluminium was used extensively. The project has been entered into the Commercial Installation of the Year category at the G-24 Awards.

A View Of Europe's Tallest Modular Building

The views from Europe's tallest modular buildings are incredible thanks to thousands of windows interspersed with terracotta facades looking out across the south-east of London.

Dual towers create a stunning statement as they stand proud on College Road, in Croydon. The project is up for Commercial Project of the Year at this year's G-Awards.

Enclave Towers

The recently completed 163-metre Enclave Towers, delivered by Tide Construction and Vision Modular, sees the buildings supersede the neighbouring residential tower on George Street as the tallest volumetric structure in the UK.

Showcasing the efficiencies that modular construction can deliver, the 35 and 50-storey buildings were completed within a total build timeframe of 28 months, which saw 1,725 units, all of which were completed offsite, installed in 40 weeks.

To create a building of this scale and ambition demanded the use of high-performance products offering excellent acoustic and weather performance that also supported the stunning geometric visual aesthetic and the project's sustainability aims.

Creating 120 affordable homes and 817 co-living apartments the build-to-rent project also features seven floors dedicated to providing communal amenities for those living in the building.

As with the George Street tower, also delivered by Tide Construction and Vision Modular, HTA Design was appointed as the architect for the project, while Century Facades was engaged by the contractors and worked in conjunction with its main supply chain window fabricator, AGF (Aluminium and Glass Facades Ltd), as well as Reynaers Aluminium to engineer and fabricate SlimLine 38 (SL 38) side hung composite windows for the project.

Wind, water, sound

With a strong track record for performance in high rise buildings, the SL 38 window systems meet the tough air, wind, water and acoustic requirements essential for tall buildings – as well as offering the design options needed to support a complex project, including bespoke adaptations where needed.

With sustainability and quality central to the design of the towers – and with the use of modular construction aiming to reduce CO_2 emissions – thermal efficiency was a key factor in the design. To that end SL 38 is a thermally broken fenestration solution, delivering excellent insulation with fibreglass-reinforced polyamide strips and weather gaskets that feature ribs and hollow chambers to achieve high thermal insulation levels.

The strength and quality of SL 38 is underlined by high levels of protection indicated by project-specific AWW testing, securing Class 4 (600Pa) for air permeability, for watertightness 9A (600Pa) and wind load resistance Class C4 (1600Pa). This was further enhanced with a safety test at 2400Pa.

Meeting the stringent PAS security standard, the windows also achieve a U-value of 1.4 W/m^2K to demonstrate excellent thermal efficiency.

In conjunction with AGF and Century Facades, extensive project-specific testing was carried out at Reynaers Technology Centre in Duffel, Belgium, for AWW (Air, Wind and Water), with all testing undertaken in collaboration with Reynaers' UK technical team and witnessed and verified by an independent notified body.

Reynaers uses an extensive acoustic database to demonstrate acoustic requirements for projects such as this and has access to its own acoustic testing facility.

Partnerships

Produced with a bespoke outer frame the windows were developed in conjunction with Reynaers Aluminium, to ensure they worked most effectively with the specific modular details of the buildings.

With a strong history of working together on large-scale projects for developers such as Tide Construction, the project demonstrates the benefits of the collaborative relationship between AGF, Century Facades and Reynaers Aluminium in producing bespoke systems that deliver quality in aesthetics, performance and service.

Pictures: The College Road development in south-east London is formed of two towers – it is now the tallest modular building in Europe. Reynaers Aluminium was used extensively.
www.reynaers.co.uk

A Simpler Emergency Exit Hardware Range

Kestrel Aluminium Systems has collaborated with ASSA Abloy to create a new range of emergency exit hardware. Crispin Jedrzejewski, head of technical & design, explores the concept behind the new products.

When ASSA Abloy approached us to work together on a new range of emergency and panic hardware, we jumped at the chance to be involved in the design of the new products, writes Crispin Jedrzejewski of Kestrel Aluminium Systems.

Kestrel has a long history with ASSA Abloy going back nearly 30 years. We value this partnership highly because it allows us to leverage each other's expertise, creating better products for our customers. This collaboration has resulted in a new product range that fills a gap in the market. We're proud to say these products are designed and manufactured in Britain.

The Concealed Vertical Rod (CVR) exit hardware range includes a touch bar panic unit, push bar panic unit, push pad emergency unit and outside access device (OAD) and security escutcheon.

Easier product selection and fabrication

Selecting and fabricating emergency exit doors has always been a complicated process. There were so many different variations of hardware on the market, for different profile widths and door types – single, double, thermal, non-thermal. You might even end up sourcing one part of a system from one manufacturer and the accessories from another. There was no 'one size fits all' solution, instead you'd have to leaf through pages and pages of different products. It could be a costly process and it was easy to make the wrong choice.

This was an issue we were keen to address with the new hardware range. We wanted to develop a simpler, more cost-

effective solution that would work across doors of all different widths and types. The new ASSA Abloy CVR exit hardware range offers universal application on all Kestrel Aluminium Systems' commercial door and frame products – no matter the size. In addition, the bar for the touch bar and push bar panic units can be cut to size to accommodate specific projects as we understand that there is rarely a standard size.

Added security

Security was another aspect that we wanted to improve. Emergency exit doors – by their very definition – must be easily opened from the inside in the event of a fire for example. The focus has traditionally been on meeting the regulations for people to safely evacuate a building in the event of an emergency. Preventing people from entering the doors from the outside has been a lesser consideration.

This was a situation we were keen to rectify. Surprisingly, current building regulations for security, only apply to new dwellings, for which commercial emergency exit doors are a rarity. We expect the regulations to change and with this new hardware range we're one step ahead for the wider market. The CVR exit hardware has been tested to PAS 24 with Kestrel Aluminium Systems' single and double thermal commercial doors for added security, including OAD and escutcheon.

Preventing access

With the touch bar, push bar and push pad units the two-point shootbolt locks into the threshold and the transom is withdrawn by pressing down on the bar or pad. The outside access device and security escutcheon has bolt through fixings to provide excellent security when fitted to our aluminium door sets, with solutions to suit different section profiles. Locking the cylinder prevents access into the building but will not prevent escape out of it.

Looking good

Design aesthetics were another key consideration for this product line. While the hardware serves a functional purpose, it is crafted to look good as well. The entire range features an elegant design with fully concealed mechanisms. The touch bar has a low projection from the door face, giving it a modern, streamlined appearance. Although the standard finish is silver, other colours are available upon request to suit specific project needs.

Launch

We're thrilled to be launching this product in partnership with ASSA Abloy. The initial feedback from our customers has been overwhelmingly positive. We believe the new CVR exit hardware range is such a significant improvement over previous options that it will undoubtedly capture huge interest in the market.

Pictures: ASSA Abloy and Kestrel Aluminium Systems have worked together to bring a new range of emergency exit hardware to the market.

www.assaabloy.com/group/en
www.kestrelaluminium.co.uk