

# Case Study: Gunpowder Mill, Waltham Abbey



## Kawneer systems feature on the new-build part of an explosive commercial conversion

Kawneer's AA®100 zone/mullion-drained curtain walling with 50mm sightlines and AA®605 low/medium-duty swing doors were specified by Pollard Thomas Edwards (PTE) architects for the new-build element of the conversion and refurbishment of an explosives factory to the headquarters of a construction and development company.

## Kawneer glazing forms a window to a watery world

Curtain walling and doors from Kawneer play a primary role in the award-winning success of a busman's holiday of a commercial redevelopment project. Kawneer's AA®100 zone/mullion-drained curtain walling with 50mm sightlines and AA®605 low/medium-duty swing doors were specified for the new-build element of the Gunpowder Mill conversion and refurbishment.

Gunpowder Mill was part of the larger site of the Waltham Abbey Royal Gunpowder Mills heritage attraction, home of explosives manufacture since the 17th Century. But the buildings were unoccupied and deteriorating. The main objective of the development for client Hill Partnerships was to bring back to life these buildings, sensitively convert and refurbish them, and add a contemporary extension to create a sustainable, modern company HQ.

The Royal Gunpowder Mill Trust archives were made available for research and yielded old drawings and photographs of the engine house interior and machinery inspiring the key concept of preserving this space in its original proportions. All new steelwork is exposed in a gesture to the simple detailing of the original industrial buildings and is differentiated from old steel by different shades of colour.

The new-build element of the scheme is a simple glass box that sits beside the existing brick mill building, acting as both complement and counterpoint. Kawneer's curtain walling is its primary material. Installed by one of Kawneer's largest specialist sub-contractors JPJ Installations over three storeys, it sits within a metal-clad hood with a projecting roof that is coloured to match. Along the south façade, a projecting timber louvre and steel walkway is integrated with the Kawneer curtain walling to form solar shading. The eastern façade is entirely Kawneer curtain walling and maximises the view onto the adjacent water meadow. The north façade is a combination of Kawneer's curtain walling and a secret-fix rainscreen cladding system.

PTE project architect Andrew Stokes said: "The Kawneer curtain walling met the aesthetic criteria we were looking for in the project while also offering good value for the client. It maximises views into the surrounding landscape and neighbouring water meadow while reflecting back the surrounding foliage."

As well as the timber louvre solar shading, sustainable development principles included natural ventilation, minimising energy and water demand, integrating photovoltaics in the slate roof, a combined heat and power plant, green roofs, solar thermal panels and permeable paving with tanked/infiltration systems.

Andrew Stokes added: "Aluminium's sustainability did not play a major part in our choice other than were it unsustainable it would have been unlikely to have been chosen for the project."

The resulting campus has won a series of awards including a Civic Trust award, Heritage Project of the Year in the London and South East awards by Constructing Excellence in the Built Environment, and the Architecture Grand Prix award at the Roses Design Awards.

Please contact our Architectural Services Team if you have a project you would like to discuss: Tel: 01928 502604 / Email: [kawneerAST@alcoa.com](mailto:kawneerAST@alcoa.com)

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