

CASE STUDY

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Delivering a modern solution for a historic building

Historic buildings form a substantial part of our architectural landscape. Often, listed status means that these ageing buildings continue to be celebrated for their significance to the local area, and appreciated for their architectural beauty – a testament to building techniques and craftsmanship of times gone by.

In order to protect these unique spaces for future generations, a sensitive approach must be taken to restoration, ensuring the original architectural characteristics are preserved, as Andy Lake, UK Projects Director for Pyroguard discusses.



Founded in 1935, Marr College in Troon, Scotland, is one such example. Category B listed, the secondary school is of special historic interest, both due to its architectural style and because it was created with the financial backing of local coal merchant, Charles Kerr Marr. Serving the local community for more than 80 years, an overhaul and expansion was recently required to allow for increased accommodation.

But as the building has listed status, any expansion would need to be carefully considered, allowing the building to become more suited to modern demands without losing its heritage. As part of this, meeting the necessary safety requirements of today's building regulations was crucial – something which could be achieved by specifying materials appropriately.

Adequate fire protection



With increased numbers of students now attending Marr College, achieving improved building circulation was a critical part of the development. This involved a change of use of two existing courtyard spaces to create large multi-use atria, made possible with the installation of an Ethylene Tetrafluoroethylene (ETFE) roof. Alongside creating larger and more practical spaces, ensuring effective fire protection without detracting from the courtyards' architectural features was critical.

That's where Pyroguard came in. Working closely with steel fabrication specialists, Martec Engineering – who provided the steelwork within the courtyards, including Schueco Jansen fire-rated glazed screens – Pyroguard supplied a variety of fire-rated glass solutions to sit within the new screens.

Acting as minimal secondary glazing, these screens allow the building's original 1930s 'Crittall' style metal windows to remain in the spotlight. The screens are designed to have the smallest visual impact possible whilst providing the required protection to the rooms beyond, adhering to EI30 and EI60 ratings as required.

The solution

To ensure a product that could meet all the fire and loading requirements was specified, Pyroguard provided expert technical guidance to cater for the project's constraints of working within a listed building, helping with the specialist design of additional fire-rated glazing to be incorporated in existing timber windows and doors.



Due to the ambitious nature of the project, more than 300m² of Pyroguard toughened glass, including Pyroguard Integrity Plus T EW30/6, Pyroguard Rapide Plus EI30/EI60 and Pyroguard Protect T-EI60, was chosen for its unrivalled quality and safety features. Protecting against flames, smoke and radiant heat, the selected glazing range has the advantage of providing Marr College with additional radiant heat control and greater fire protection. In tests this glass demonstrates the ability to maintain the amount of radiant heat

to below 15 kW/m² on the unexposed face, protecting critical evacuation routes for occupants.

Keith Milne, Design Manager at Martec Engineering, said: *The information and guidance from the technical team at Pyroguard was invaluable on this project, particularly in regards to creating a custom detail for the fire protection within the existing timber windows and doors. We worked hand in hand with Pyroguard through the whole project ensuring the correct specification and design of products to provide the safety and security that this building required.*

“A key requirement of our steel secondary glazing fire screens, was for them to fade into the background and not detract from the character of the building. This was achieved with our manufacture of high quality steel frames with minimal sight lines and Pyroguard’s fire-rated safety glass.”



The result of this collaboration was the creation of a space which is light, airy and elegant, providing all safety protections in the event of a fire without impacting on the architectural language of the original building.

To discover more about Pyroguard Protect please contact our dedicated and experienced Technical Team on +44(0) 1942 710 720 or visit our website www.pyroguard.eu