

Case study

ROCKWOOL® provides non-combustible solution to landmark Salford development

Middlewood Locks, Salford





The project

Middlewood Locks in Salford, Greater Manchester is a £1 billion, 25-acre regeneration project. The canal-side scheme provides city living for over 2,000 residents with 4.5 acres of public realm.

Located where the cities of Salford and Manchester meet, this unique urban development is surrounded by three canal basins and the River Irwell for relaxing and peaceful walks, alongside nearby buzzing bars, shops, restaurants and Salford Central Railway station.

Led by developer Scarborough Group International (SGI) with main contractor BCEGI and delivery architects Whittam Cox, the Middlewood Locks project has planning consent for a mixed-use neighbourhood including 2,215 new homes and 1m sq ft of commercial space, incorporating offices, hotel, retail and leisure uses.

The first two phases of 1,117 homes have now been completed, with Phase 3, The Railings, due to provide a further 189 three-storey townhouses, mews houses and a mix of one, two and three-bedroom apartments in two buildings of 10 and 12 storeys. The new homes will feature full-height glazing, high-specification interiors and private outdoor space overlooking the city and waterways.



The challenge

While construction of the residential development began in 2016 before the ban on combustible materials in the external walls of relevant buildings over 18m in England that came into force in 2018, fire safety was always paramount for the construction team.

SGI wanted to install non-combustible insulation with a low U-value performance on the external façade to provide fire resilience and thermal performance for future residents. Likewise, being located in a thriving urban setting, noise control was a further consideration for the project, particularly for phase three due to its proximity to the railway line and major arterial routes.

With most of the development's buildings constructed using a concrete frame, an internal steel framing system and masonry brick outer, the team needed an insulation component that complemented the construction style and provided fire, thermal and acoustic performance in one.



The team utilised ROCKWOOL RainScreen Duo Slab because of its [Euroclass] A1 non-combustibility and its proven thermal and acoustic qualities in addition to being a well-known and trusted brand for this type of project.

Ajay Parag
Head of Design - BCEGI

The solution

To meet the multifaceted requirements of Middlewood Locks, the construction team opted for ROCKWOOL RainScreen Duo Slab® across the first three phases of the development.

Ajay Parag, Head of Design at BCEGI commented: "The team utilised ROCKWOOL RainScreen Duo Slab because of its [Euroclass] A1 non-combustibility and its proven thermal and acoustic qualities in addition to being a well-known and trusted brand for this type of project."

RainScreen Duo Slab is a dual-density stone wool insulation product specifically developed for use within ventilated cladding systems and sealed systems such as curtain walling.

The outer surface of each slab features a distinctly higher density than the underside, giving a robust surface for the application of fixings, while the resilient underside can accommodate unevenness in the substrate. Once installed, the high-density outer surface works in combination with a factory-applied water-repelling agent to give improved resistance to rain ingress during construction.

As well as offering thermal conductivity of 0.035 W/mK when installed at a thickness greater than 90mm, it has a Euroclass A1 reaction to fire rating and as demonstrated by independent in-situ laboratory testing, helps to reduce the transfer of airborne noise - with results for typical systems as high as Rw 62 dB.

Following the latest specification, over 6,000m² of RainScreen Duo Slab has been installed across the development by contractor Cara Brickwork and combined with vertical and horizontal fire barriers and a range tie system.



The result

The specification of RainScreen Duo Slab, alongside additional passive and active fire protection measures, will help to provide critical fire protection to the development's 2,000 plus residents as well as de-risk the scheme for the building owner.

What's more, the thermal and acoustic capabilities of RainScreen Duo Slab help provide SGI with additional marketable benefits including energy efficiency and acoustic performance.

The installation benefits and water repellence of RainScreen Duo Slab have also supported contractors during the seven-year build: "[the product offers] high resistance to wind and rain during construction, which, together with the minimal number of fixings required, makes installation quicker and easier for contractors," added Ajay.

In recognition of its strong ESG credentials, Middlewood Locks won the much-coveted Sustainability and Social Impact Award at the 2022 Insider North West Residential Property Awards and the Large Apartment Development of the Year (+100 Units) in 2019.