ADVANCED PROTECTION FOR HIGH-RISE BUILDINGS

Non-Combustible Membranes
Limited-Combustible Membranes
Flame-Retardant Membranes

ITP's range of Non-Combustible (NC), Limited Combustible (LC) and Flame Retardant (FR) membranes are designed to enhance fire safety and protect the long-term integrity of the building envelope.

Breather membranes facilitate the release of moisture, prevent internal condensation and protect against rain. Vapour control layers protect the insulation from warm air moisture within the building.

ITP's high specification membrane systems provide full compliance with regulations relating to high-rise and higher-risk buildings.

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ISO 9001 ISOQAR REGISTERED Cert No. 2318
UKAS MANAGEMENT SYSTEMS 0026

Fire safety for high-rise buildings

Laws introduced in response to Grenfell require outer wall systems on buildings over 18m to have a minimum Euroclass A2-s1,d0 fire safety rating, denoting limited combustibility.

In Scotland, this requirement applies to an external wall construction over 11m.

However, breather membranes installed behind the cladding and vapour barriers installed on the inside of the insulation are currently subject to less stringent standards, requiring a minimum Euroclass rating of B-s3, d0.

For best performance Euroclass A2-s1, d0 membranes are recommended.

It is important to use a membrane which complies with fire safety requirements without compromising its primary function and performance attributes.

For breather membrane performance, our recommended requirements are:

- W1 or W2 water tightness to protect against the ingress of rainwater.
- High breathability to allow the release of moisture and control condensation.

For vapour control layer performance, the requirements are effective air tightness restricting the movement of warm, moisture-laden air from the interior to the insulation and fabric of the external wall.

Our range of building membranes combine the necessary technical attributes and are compliant to fire safety standard BS EN 13501-1.

Importantly, they are manufactured for extreme durability to ensure that they perform long-term to extend the lifespan of a building.

Water protection for high-rise buildings

A breather membrane is an essential line of defence against water penetration during the construction stage and the lifetime of the building. Strong resistance to inclement weather is an important attribute, especially for high-rise buildings and exposed locations.

BS EN 13859-2 lists three classifications in descending order of watertightness in breather membranes: W1, W2 and W3.

Class W1 is recommended as good practice for buildings located in areas exposed to high winds and driving, persistent rain.

The Structural Timber Association recommends Class W1 for all projects and cladding types and specifically for open-jointed façade designs.

With the highest of performance credentials, a W1 membrane provides the best protection. It also protects the building during construction avoiding the need for additional temporary protection.

The difference between Class or Euroclass A1 and A2 breather membranes

When selecting Euroclass A fire rated membranes, it is important to consider the differences between A1 and A2 Fire Ratings.

Euroclass A1 membranes are Non Combustible, the highest fire safety rating.

To achieve the highest A1 Non Combustible rating, the outer coating layer needs to be as thin as possible. This results in a higher water vapour transmission rate and therefore a W2 rating is achieved for water tightness.

Euroclass A2 is the second highest fire safety rating. Since the Euroclass A2 membrane incorporates a heavier coating a W1 rating is achieved for water tightness.

Interestingly, Euroclass A2 is considered Non Combustible in Scotland but Limited Combustible throughout the rest of the UK.

In summary, an A2 Fire Rating membrane offers a good all-round combination of fire rating and water protection for buildings which require W1 water tightness – for example, open-jointed façade designs.

Breather membranes

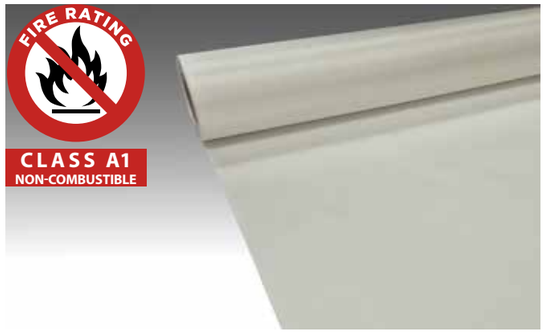
With Euroclass A1, A2 or B ratings which are fully compliant for use in high-rise buildings, our Non-Combustible, Limited-Combustible and Flame-Retardant breather membranes are suitable for all pitched roofs and walls. All systems provide high water vapour permeability to release excess moisture vapour and control internal condensation.

All products offer the following as standard:

- Independently tested to EN 13501-1
- Excellent breathability
- Compliant to Approved Document B
- Compliant for 18m+ buildings in England & Wales
- Compliant for 11m+ buildings in Scotland
- CE approval

Some solutions also provide W1 water tightness for the highest level of rain protection and advanced UV resistance for solar protection on partially open facades.

- W2 water tightness rating
- 336 hours UV ageing prior to the water test
- 10-year warranty



STAMISOL® A1

Stamisol A1 is the foremost solution for closed façades. With a Euroclass A1 (non-combustible) fire rating, the membrane provides maximum fire protection together with smoke protection in the event of evacuation. The membrane is engineered for durability to ensure that its performance is not compromised by degradation over time. Stamisol A1 comes with a lifetime guarantee for its Class A1 rating.

- Suitable for all vertical closed wall applications
- Euroclass A1 fire rating
- Lifetime warranty for its A1 rating

Accessories:

STAMCOLL SAFE ADHESIVE

see page 9

SAFE ONE® A2

Suitable for pitched roof applications and all vertical wall applications, Safe One is an award-winning membrane with a Euroclass A2 fire rating. A combination of W1 water tightness, long-term UV stability and a plain black, unbranded finish makes this membrane ideal for open-joined facades and buildings in locations which are often exposed to sun, severe wind and rain.

- Euroclass A2-s1, d0 fire rating
- W1 water tightness rating
- 7,000mm waterproofing
- 5,000 hours UV resistance
- Extremely heat resistant (up to 250 degrees C)
- Max gaps 50mm, max exposure 50%
- 10-year warranty

Accessories:

STAMCOLL SAFE ADHESIVE

see page 9

FLAMEOUT® BREATHE

FlameOut Breathe is predominantly used in vertical walls, but the product is also suitable for pitched roofs due to its W1-rated water tightness which provides maximum protection against rain water ingress. This weathertight membrane is flame-retardant and self-extinguishing when ignited, ensuring minimal contribution to fire spread. Its B-s1, d0 fire rating is compliant for use on high-rise and higher-risk buildings.

- Euroclass B-s1, d0 fire rating
- W1 water tightness rating
- Self-extinguishing
- Litte or no smoke generation
- Does not product burning droplets
- Wide width available for modular buildings
- 15-year warranty

Accessories:

FLAMEOUT TAPE AND ADHESIVE

see page 9

	Weight	Colour	Fire Rating	Water tightness	Standard sizes
Stamisol® A1 Class A	260gsm	Milky White	Class A1	W2	2.65 x 30m
Safe One ® Class A2	310gsm	Black / White	Class A2-s1,d0	W1	2.65 x 20m
FlameOut ® Breathe Class B	90gsm	Dark Grey	Class B-s1,d0	W1	1.5 x 50m 3.0 x 50m

Vapour Control Layers (VCLs)

FlameOut Block are a range of fire rated vapour control layers suited to high-rise and high risk builds.

These Limited Combustible Class A2 and Flame-retardant Class B vapour control layers are designed for both vertical wall applications and roofs, our Limited Combustible and Flame Retardant and Vapour Control Layers are designed for wall and roof installations. Their function is to prevent moisture within the building's warm air from reaching the insulation layer to form interstitial condensation.

FLAMEOUT® BLOCK CLASS A

Providing the optimum combination of fire safety and performance, FlameOut Block Class A has glass-based woven scrim and aluminium layer with a special coating to protect the aluminium from corrosion.

- Independently tested to EN 13501-1
- Fire rating Euroclass A2-s1,d0
- High tensile strength
- Excellent water vapour resistance
- Reflective surface for extra energy efficiency
- Water tightness rating W1

FLAMEOUT® BLOCK CLASS B

Fire Rated Class B Flame Retardant vapour control layer incorporating a mono-filament reinforcement scrim to provide excellent tensile strength in wall and roof installations.

- Independently tested to EN 13501-1
- Euroclass B-s1-d0 fire safety rating
- High tensile strength
- High water vapour resistance
- Available in Standard and Premium grades
- Water tightness rating W1

Accessories:

POWERBON FR ALUMINIUM TAPE

see page 9

Accessories:

FLAMEOUT TAPE OR POWERBOND FR ALUMINIUM TAPE see page 9

FLAMEOUT	Weight	Fire Rating	Water vapour resistance	Water tightness	Roll size
Block Class A	155gsm	Class A2-s1,d0	20,000 MNs/g	W1	1.5 x 50m
Block Class B Premium	210gsm	Class B-s1,d0	300 MNs/g	W1	2.0 x 50m
Block Class B Standard	140 gsm	Class B-s1,d0	140 MNs/g	W1	2.0 x 50m

Accessories

ITP supplies a range of tapes and adhesives for effective installation of each building membrane in our product range.

FLAMEOUT® TAPE

For the installation of FlameOut Breathe membranes and FlameOut Block vapour control layers. Provides effective air and watertight joins.

- Flame Retardant
- Double-sided tape
- Provides effective air, vapour and watertight joins

POWERBOND FR

Designed for FlameOut Block Class A, Powerbond is a Flame Retardant and thermo-reflective aluminium tape for sealing any gaps or laps to maintain the integrity of the vapour control layer.

- Forms part of fully compliant class A2 rated system
- Thermo-reflective tape used to seal vapour control layers
- Provides effective air, vapour and watertight joins

STAMCOLL SAFE

A water-resistant adhesive and sealant for bonding Safe One. The Safe One and Stamcoll Safe combination has been independently tested as a system.

- Silicone- and solvent-free
- Forms part of fully compliant class A2 rated system
- Excellent primer-free adhesion to numerous surfaces
- Good resistance to weathering, ageing as well as UV resistance

FLAMEOUT PRODUCT	Application	Colour	Flame retardancy	Thickness	Temperature range (°C)	Installation range (°C)	Width (mm)	Roll length (metres)	Roll weight (kg)	Rolls per carton
DOUBLE-SIDED TAPE										
FlameOut Tape	Breathers VCLs	White	FMVSS 302	NA	-20 to +70	+10 to +35	60	25	1.0	20
Powerbon FR Aluminium Tape	VCLs	Silver	Class A2 as system	70 microns	-20 to +70	+10 to +35	50	47.5	0.4	24
ADHESIVES										
Stamcoll Safe Adhesive Cartridge	Breathers		Class A as system	NA	0 to +40	+4 to +35	310 ml	NA	NA	NA

High-rise Projects

References of membranes installed on some major high-rise and higher-risk building projects.

Get Living, Lewisham

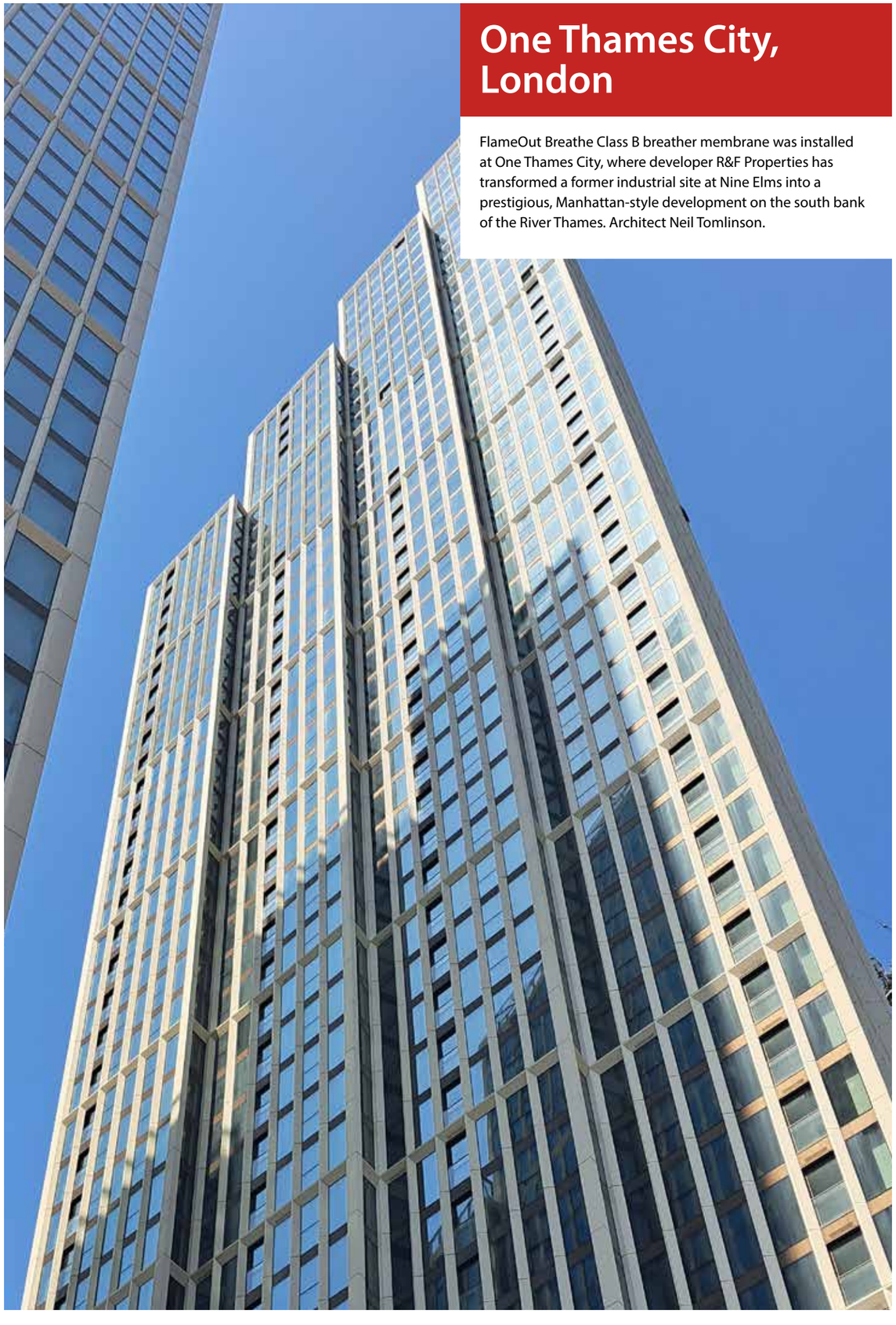
Class B breather membrane was used on this landmark regeneration project, a 649-home scheme from Muse Developments and build-to-rent operator, Get Living PLC.

FlameOut Breathe was installed within the external wall of Get Living's high-rise apartment blocks.

The MC is Balfour Beatty
Muse is the client.
PRP Architects, London

Lewisham, London SE13

View our projects online



One Thames City, London

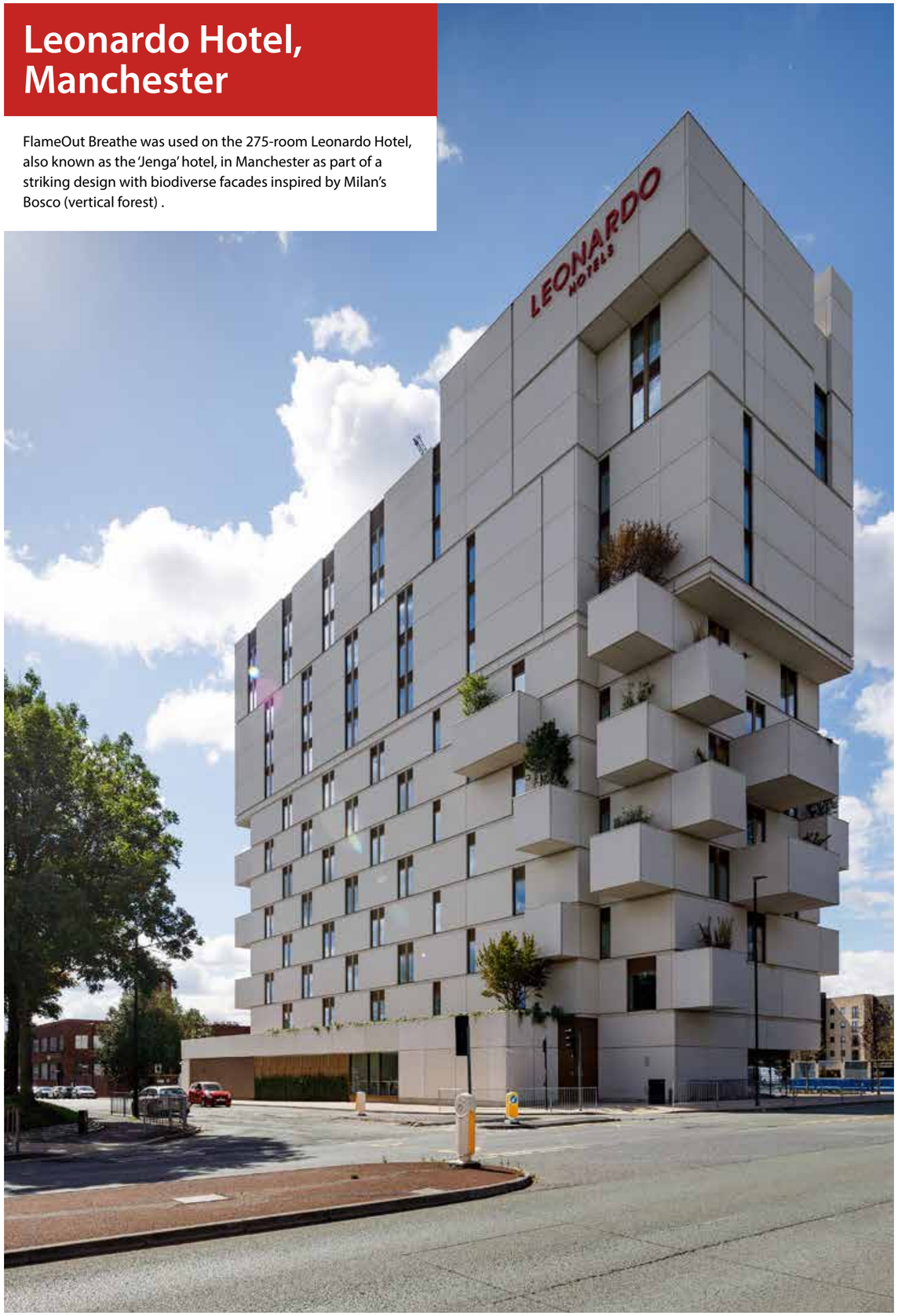
FlameOut Breathe Class B breather membrane was installed at One Thames City, where developer R&F Properties has transformed a former industrial site at Nine Elms into a prestigious, Manhattan-style development on the south bank of the River Thames. Architect Neil Tomlinson.

MediaCityUK, Greater Manchester

FlameOut Breathe Class B breather membrane was installled at Plot D3, a development of 280 apartments in the heart of MediaCityUK in Salford Quays delivering high quality Housing Association properties funded by Latimer & Clarion Housing Group.

Leonardo Hotel, Manchester

FlameOut Breathe was used on the 275-room Leonardo Hotel, also known as the 'Jenga' hotel, in Manchester as part of a striking design with biodiverse facades inspired by Milan's Bosco (vertical forest) .



Harbour Central, London

Safe One Class A2-s1,d0 breather membrane was chosen for Harbour Central, a development from Galliard Homes providing over 640 new homes, a leisure facility, a residential garden and a public square, as well as retail and commercial spaces in London's Docklands.

Architect Rolfe Judd
London City Facade - cladding contractor
MC Galliard Homes

41 storey Maine Tower
Safe One A2 non-combustible membrane used behind the cladding.

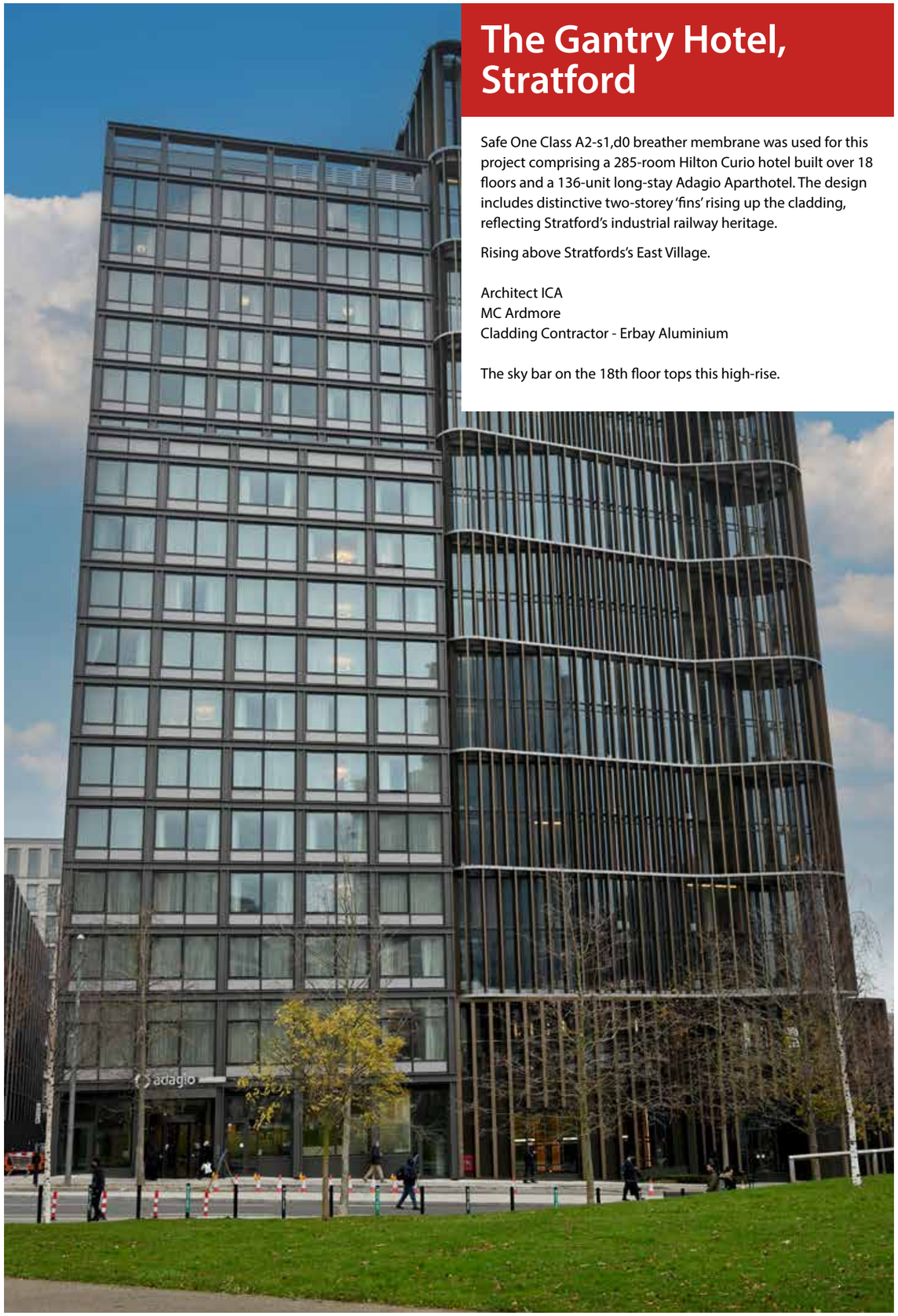
The Gantry Hotel, Stratford

Safe One Class A2-s1,d0 breather membrane was used for this project comprising a 285-room Hilton Curio hotel built over 18 floors and a 136-unit long-stay Adagio Aparthotel. The design includes distinctive two-storey 'fins' rising up the cladding, reflecting Stratford's industrial railway heritage.

Rising above Stratfords's East Village.

Architect ICA
MC Ardmore
Cladding Contractor - Erbay Aluminium

The sky bar on the 18th floor tops this high-rise.



Lucent W1, London

Safe One Class A2-s1,d0 breather membrane was used at this iconic location as part of a £250m project which features the city's famous Piccadilly Lights at its core and comprises 110,000 sq ft of offices, 30,000 sq ft of retail space and 3,000 sq ft residential space including 20 roof terraces.
Architect Fletcher Priest
MC Wates

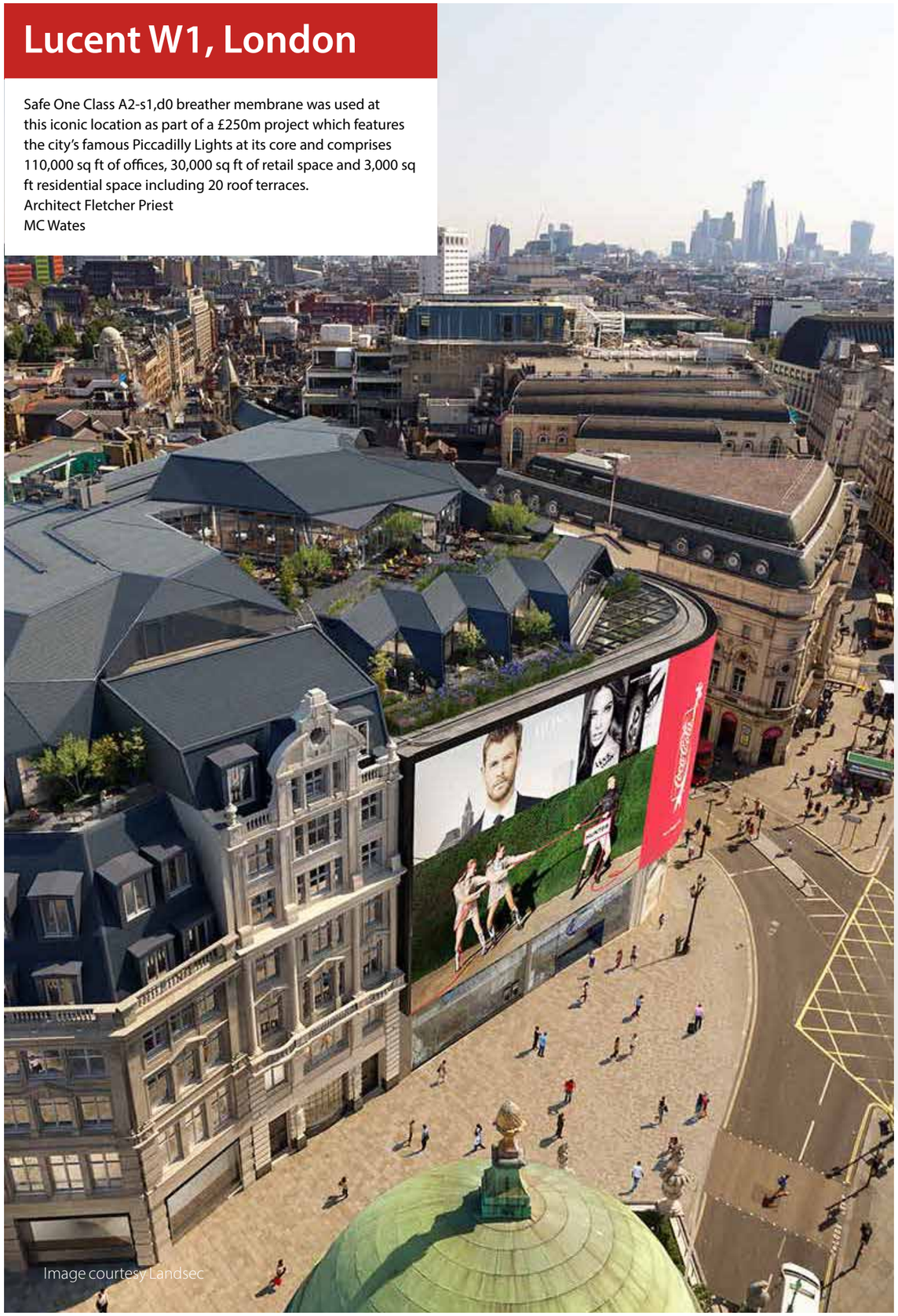
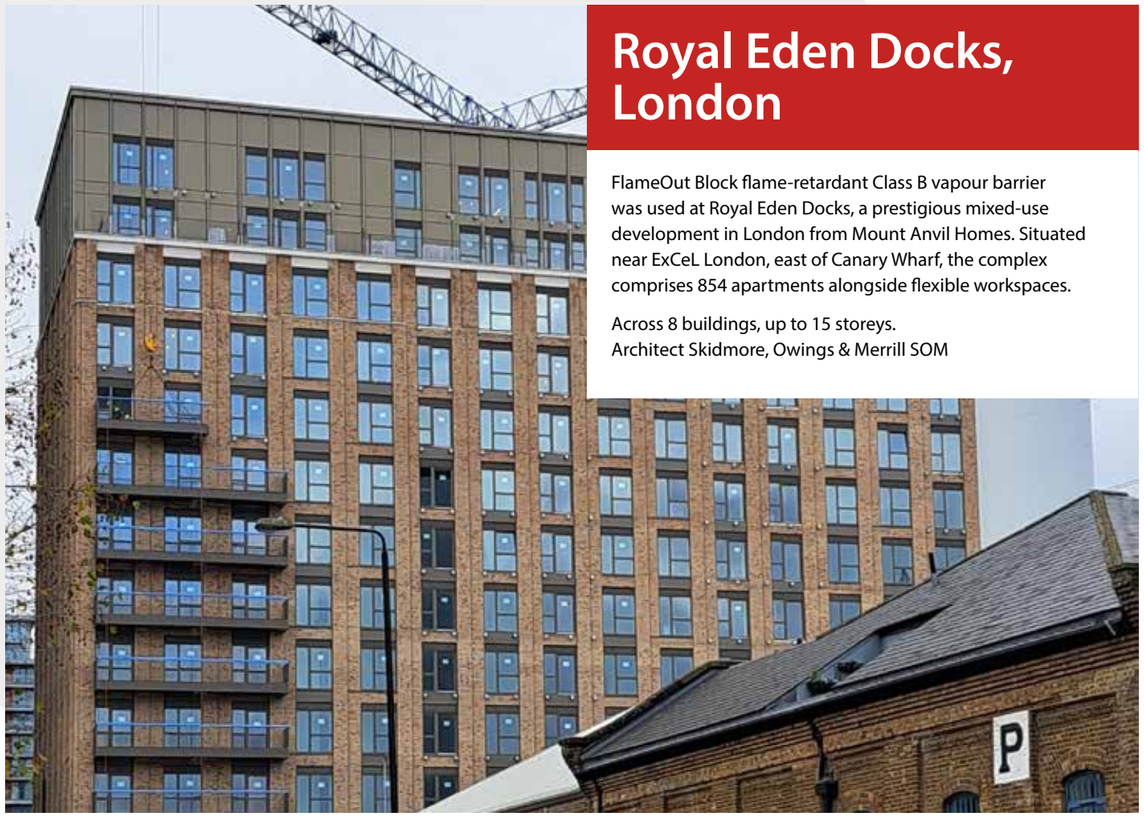


Image courtesy Landsec

Silk District, London

FlameOut Block was used on the Silk District, a complex of over 600 apartments in Whitechapel. The joint venture partnership by Mount Anvil and L&Q. Up to 25 storeys. The scheme comprises of 3 buildings - the Jacquard, the Georgette and the Bouchon.



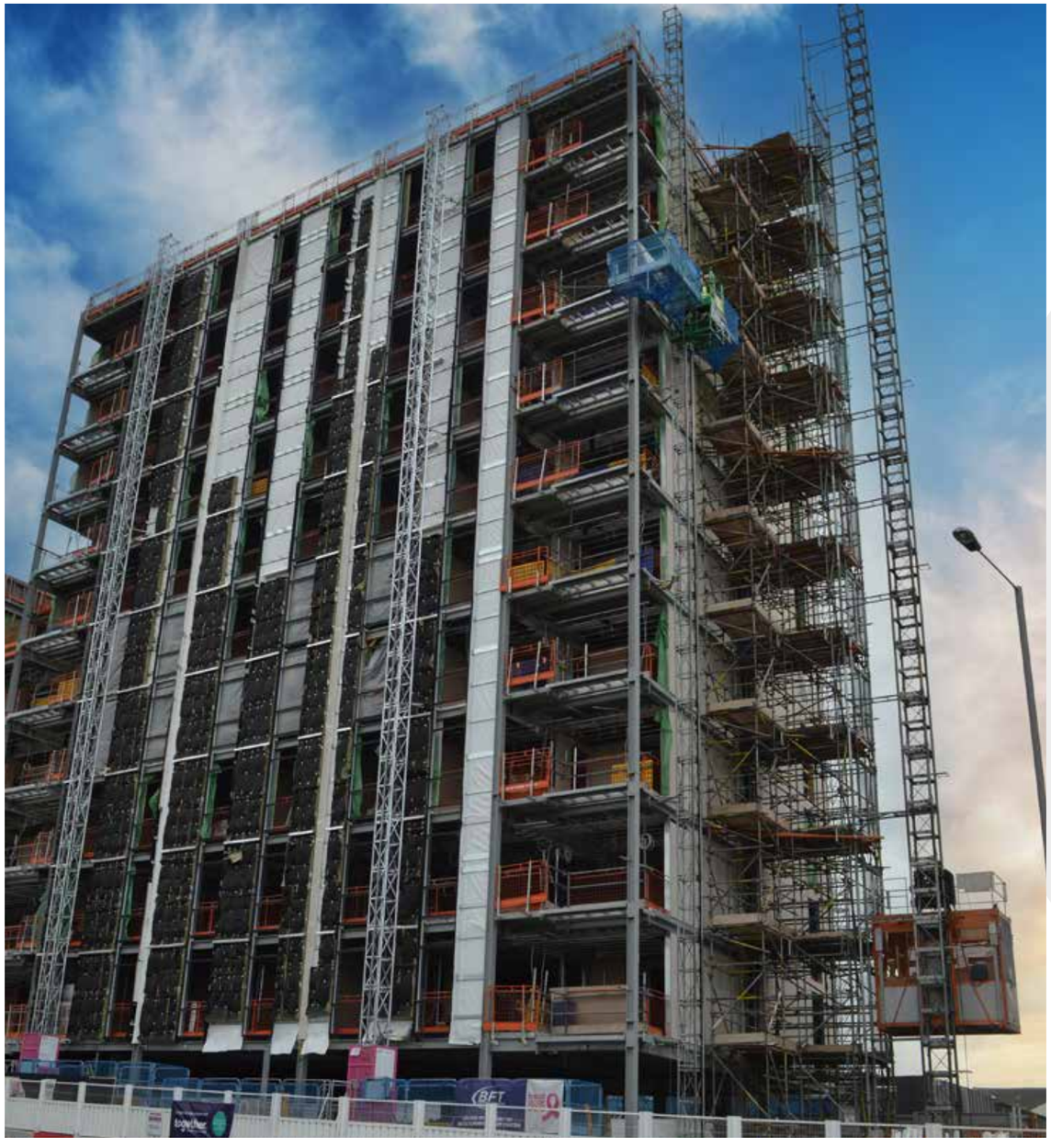
Royal Eden Docks, London

FlameOut Block flame-retardant Class B vapour barrier was used at Royal Eden Docks, a prestigious mixed-use development in London from Mount Anvil Homes. Situated near ExCeL London, east of Canary Wharf, the complex comprises 854 apartments alongside flexible workspaces.

Across 8 buildings, up to 15 storeys.
Architect Skidmore, Owings & Merrill SOM

Parliament Street Apartments, Liverpool

FlameOut Block Standard Class B vapour barrier was used in the wall system on an 11 storey apartment was used on an 11-storey apartment building as part of Phase 2 of the Liverpool Parliament Street redevelopment. The complex includes 145 apartments, ground floor commercial units, and a gym and rooftop gardens for residents' use.



RIU Plaza Hotel, London

FlameOut Block Standard Class B vapour barrier was used for the Riu Plaza Hotel Victoria, the first London hotel to be opened by renowned hotel chain, RIU Hotels & Resorts. Created within an existing building in Neathouse Place, the new 4-star hotel comprises 441 rooms.

Tribe Hotel Manchester

FlameOut Block Class A was installed on the 412-bedroom Tribe Hotel at Manchester Airport built just outside the airport as part of a strategic development by Manchester Airports Group. The 12,300m2 building includes four restaurant and bar areas, working spaces, a gym and a crew lounge for airline staff travelling through Manchester.

Other products from ITP

POWERCLAD
Scaffold and containment sheeting

ITP's Powerclad range includes scaffold sheeting which is independently certified to meet T62 and T63 flame-retardancy standards, making it fully compliant for use in the construction and refurbishment of high-rise buildings.

- Scaffold sheeting
- Keder and temporary roof sheeting
- Vented sheeting
- Insulated sheeting
- Debris netting
- Filter sheeting
- Acoustic barrierss

POWERLON
Roof & building membranes

- Roofing underlays
- Wall & house wrap membranes
- VCLs - air and vapour control layers
- UV stable facade membranes
- Thermo-reflactive membranes

POWERBASE
Gas & hydrocarbon barriers

- Radon gas barriers
- Methane & Carbon dioxide CO2 gas barriers
- Hydrocarbon & VOC barrier membranes
- Prefabricated top hats & corners

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