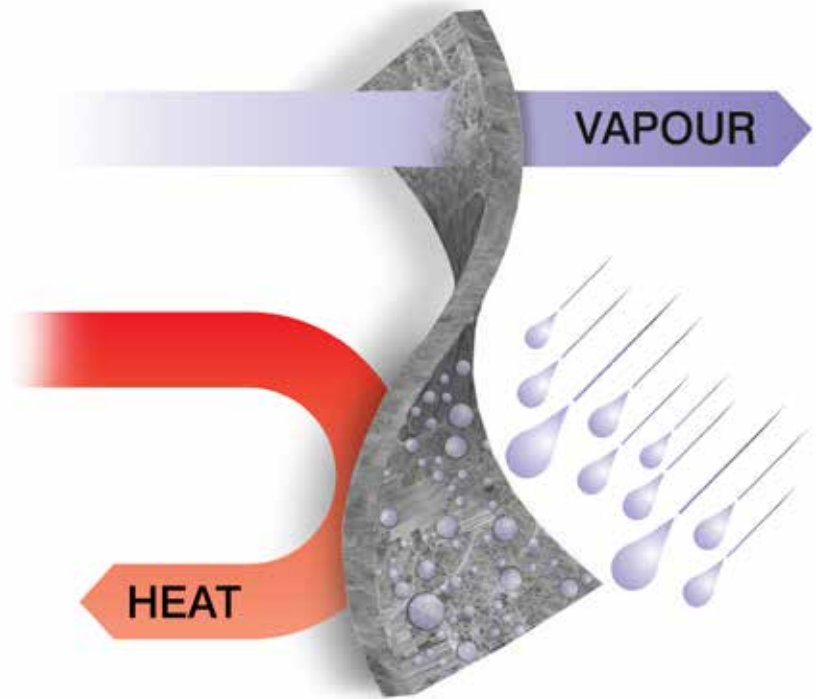


Spacetherm®

AEROGEL INSULATION (For Building & Construction)



Spacetherm: Class leading thermal performance with breathability and water resistance



THE KNOWLEDGE TO PRODUCE SOLUTIONS

The A Proctor Group Ltd has been proudly pioneering thermal solutions for over half a century.

The A Proctor Group's Spacetherm® Aerogel offers specifiers a flexible yet robust insulation blanket solution. Combining a silica aerogel with a fibre matrix, it is a superior material which is suitable for a wide range of challenging applications where thermal performance is crucial.

With a thermal conductivity of 0.015 W/mK, Spacetherm Aerogel's performance credentials qualify it as one of the best insulation materials available worldwide. Engineered for unsurpassed thermal performance in space-critical applications, the product offers low thermal conductivity, and compression strength, plus breathability allied to hydrophobic characteristics. Its flexibility and ease of use has proven it as the insulation material of choice in many unique applications and for a wide variety of clients. It is also comforting for specifiers to know it retains its thermal properties for over 50 years.

The A. Proctor Group works closely with clients to establish requirements and deliver effective, tailored solutions.

Key Features

- Class-leading performance
- Minimum loss of space
- Vapour permeable
- Repels moisture
- Hydrophobic
- 50+ year performance
- European Technical Approval & CE Mark
- Breathable



SPACETHERM MULTI

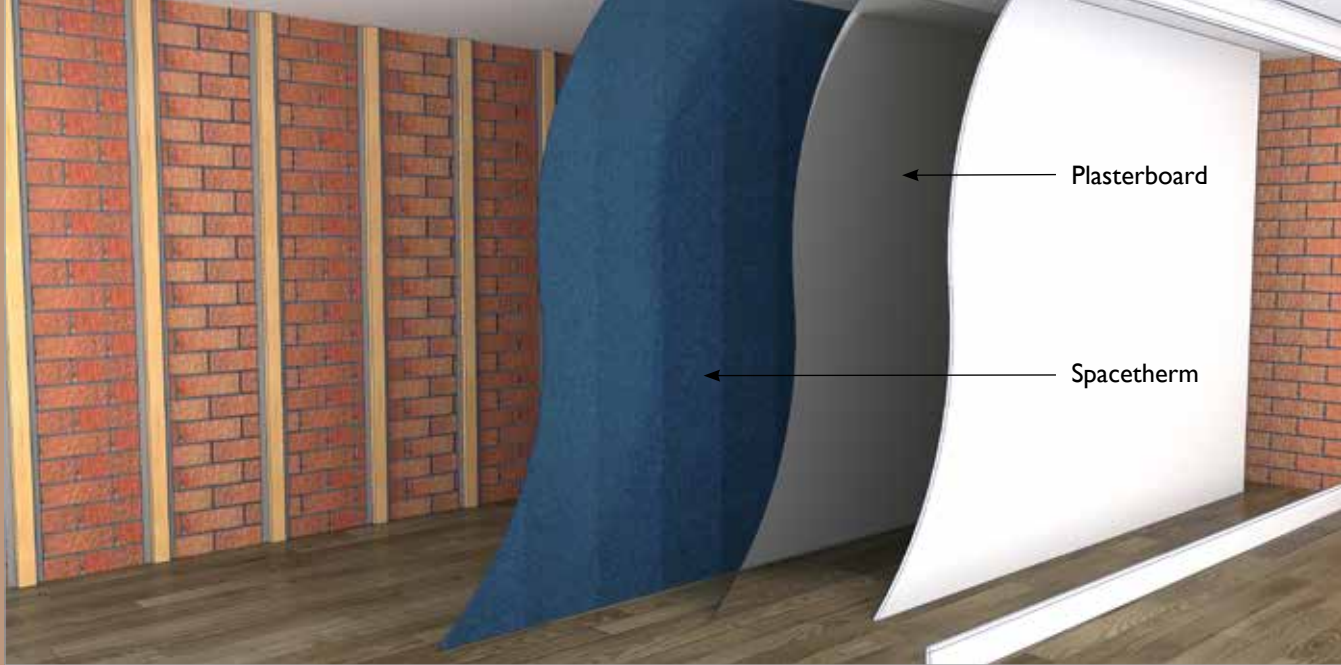
Spacetherm Multi is a high-performance laminate specifically designed to be laid directly onto existing floors & walls. Spacetherm Multi consists of Spacetherm Aerogel insulation blanket bonded to a 6mm Magnesium Oxide Board. Spacetherm Aerogel blanket is available in various thickness from 5mm to 40mm (in multiples of 5). For other thicknesses, or for U-value calculations for your project, please contact Proctor Technical services.

The solution is ideal for use in applications where low U-values are required and room space is at a premium (such as loft conversions). Spacetherm Multi can achieve similar performance to other insulation systems, but at a fraction of the thickness. This allows specifiers greater flexibility and higher performance for refurbishment projects. For floor applications, Spacetherm Multi is partially encapsulated in a metallised Polypropylene vapour control membrane. Full installation guides available to download from the website.

PHYSICAL PROPERTIES	RESULT	
Spacetherm Multi panel sizes	Floors / WRB / Soffit Lining Walls	1200 x 600mm 2400 x 1200mm
Thickness Spacetherm Multi	Floors / WRB / Soffit Lining Walls	From 11mm From 11mm
K-Factor Magnesium Oxide	0.19W/mK	
K-Factor Aerogel	0.015W/mK	
Compressive Strength	80kPa @ 10% deformation	
Vapour Resistance	Sd 0.05m	
Fire Resistance	Aerogel (Class C-s1, d0) Magnesium Oxide Board (Class A1)	

Benefits

- Thin insulation system for floors & walls
- Minimum loss of room space
- Can accept most floor coverings
- Moisture resistant
- One board - multiple applications



SPACETHERM WALLBOARD

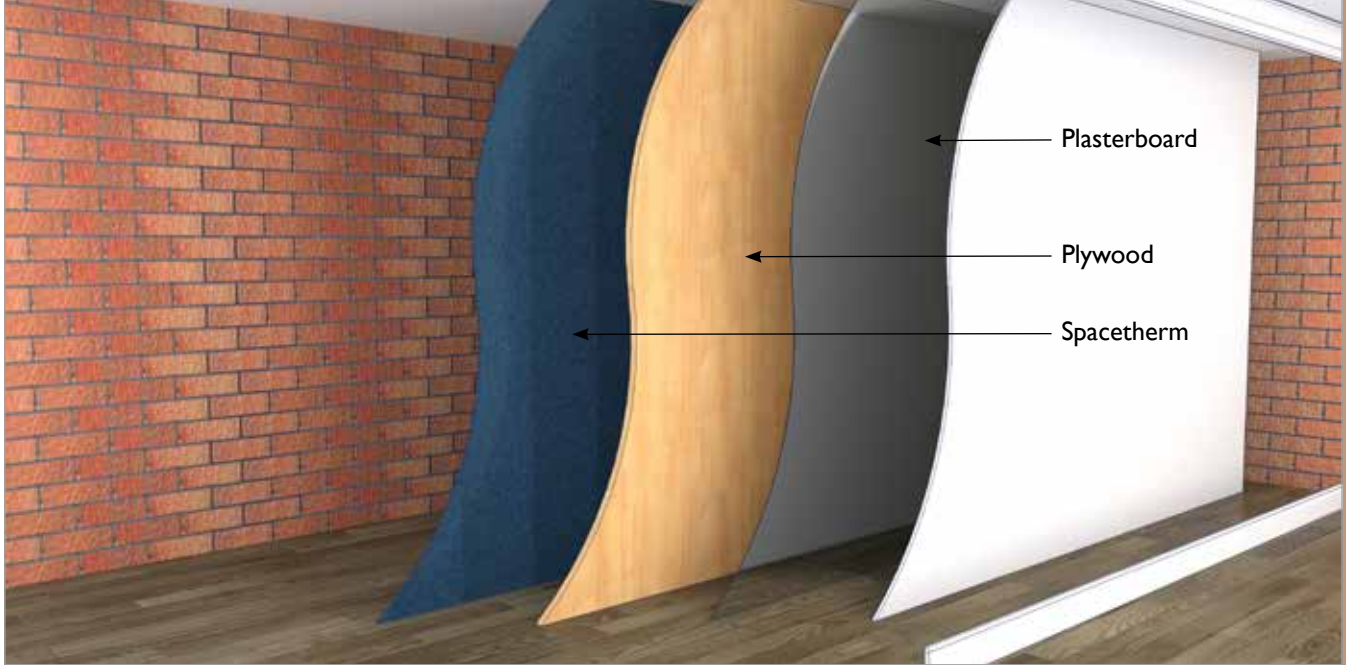
Spacetherm Wallboard is a high performance laminate which is specifically designed to be fixed to timber straps. It consists of Spacetherm Aerogel insulation blanket bonded to plasterboard, and is ideal for use in applications where low U-values are required but space is at a premium. Spacetherm Wallboard is supplied with foil faced plasterboard as standard to reduce condensation. Plain plasterboard is available on request. Spacetherm Wallboard lining boards can achieve similar performance to traditional plasterboard laminates, but at a fraction of the thickness, allowing specifiers greater flexibility and higher performance for refurbishment projects. Due to Spacetherm's unique hydrophobic qualities it is also possible to directly fix Spacetherm Laminates to certain existing wall substrates (see installation guide for details). For other thicknesses, or for U-value calculations for your project, please contact Proctor Technical services.

PHYSICAL PROPERTIES	RESULT
Spacetherm Wallboard panel sizes	2400 x 1200mm
Thickness: Plasterboard	9,5mm
Thickness: Aerogel	5, 10, 15, 20mm*
Vapour Control Layer	Sd 12m
K-Factor: Aerogel	0.015W/mK
K-Factor: Plasterboard	0.190W/mK
Fire Resistance: Plasterboard	Class I (BS476) D-s2, d0
Fire Resistance: Aerogel	Class C-s1, d0 (EN 13501-1)

Benefits

- Can be installed directly to solid walls or onto straps
- Ideal for hard to treat solid walls
- Ideal solution where maximising internal space is critical

*other thicknesses available on request



SPACETHERM DIRECTFIX

Spacetherm Directfix is a high performance laminate which is specifically designed to be fixed directly to the wall. It consists of Spacetherm Aerogel insulation blanket bonded to plasterboard, with an additional pre-bonded plywood reinforcement to the plasterboard. This reinforced laminate will reduce the risk of shot-fired nails failing to create a robust fix and will also reduce the risk of drill bit snagging, should you be using a traditional mechanical fixing method.

Ideal for use in applications where low U-values are required but space is at a premium. Spacetherm Directfix is supplied with foil faced plasterboard as standard to reduce condensation. Plain plasterboard is available on request. Spacetherm Directfix lining boards can achieve similar performance to traditional plasterboard laminates, but at a fraction of the thickness, allowing specifiers greater flexibility and higher performance for refurbishment projects. Due to Spacetherm's unique hydrophobic qualities it is also possible to directly fix Spacetherm Laminates to certain existing wall substrates (see installation guide for details).

PHYSICAL PROPERTIES	RESULT
Spacetherm P panel sizes	2400 x 1200mm
Thickness: Plasterboard Plywood	9.5mm 6mm
Thickness: Aeorgel	5, 10, 15, 20mm*
Vapour Control Layer	Sd 12m
K-Factor: Aerogel	0.015W/mK
K-Factor: Plasterboard Plywood	0.190W/mK 0.13W/mK
Fire Resistance: Plasterboard Plywood	Class 1 (BS476) D-s2, d0
Fire Resistance: Aerogel	Class C-s1, d0 (EN 13501-1)

Benefits

- Thin insulation system for hard to treat walls
- Class Leading Performance
- Minimum loss of room space
- Direct fix to solid walls
- Constant long term thermal performance 50 years
- Includes an integrated vapour control layer
- Non-Hazardous material

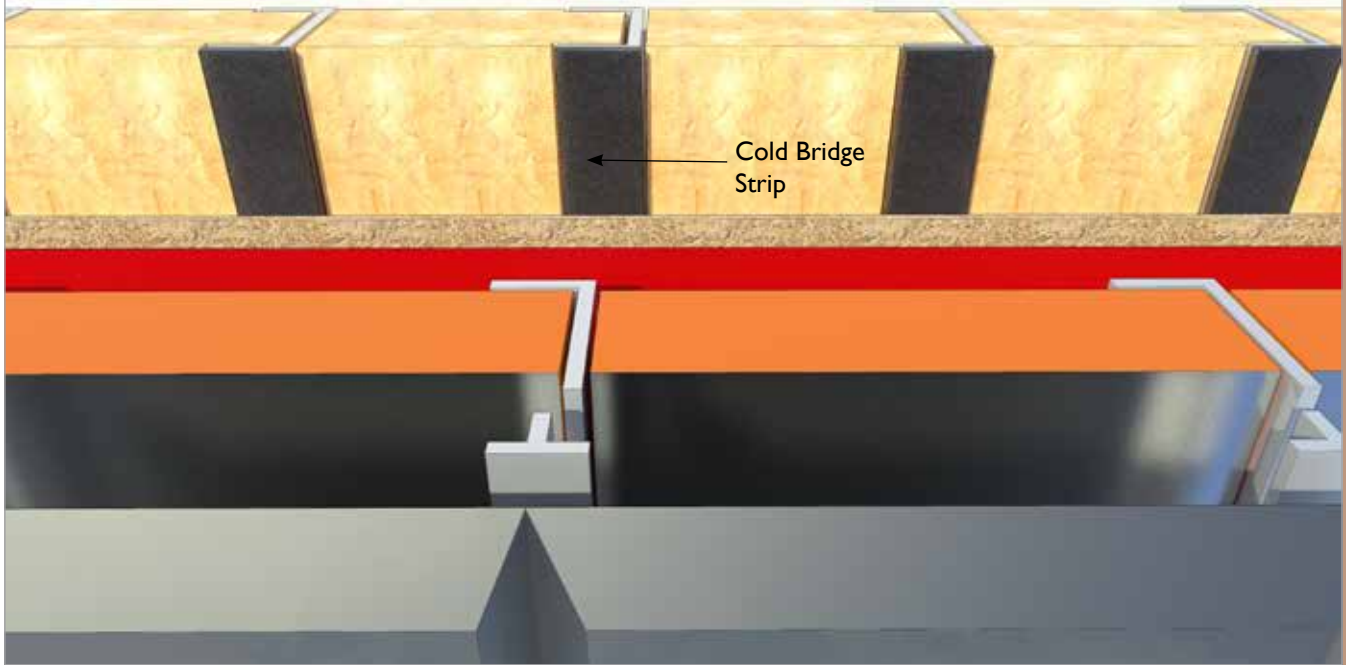
*other thicknesses available on request

SPACETHERM WALLBOARD U-VALUE - PERFORMANCE READY RECKONER

BASE WALL CONSTRUCTION	SPACETHERM WALLBOARD	U-VALUE (W/m ² K)
220mm Brick (no cavity) 13mm Plaster	19.5	0.76
	24.5	0.61
	29.5	0.51
	34.5	0.44
	39.5	0.39
	44.5	0.35
	49.5	0.31
	54.5	0.29
	59.5	0.26
	64.5	0.24
Base Wall Performance 2.12 W/m ² K	69.5	0.23
	74.5	0.21
	79.5	0.20
	84.5	0.19
	89.5	0.18
Spacetherm Wallboard on 25mm battens	69.5	0.23
	74.5	0.21
	79.5	0.20
	84.5	0.19
	89.5	0.18

SPACETHERM DIRECTFIX U-VALUE - PERFORMANCE READY RECKONER

BASE WALL CONSTRUCTION	SPACETHERM DIRECTFIX	U-VALUE (W/m ² K)
220mm Brick (no cavity) 13mm Plaster	25.5	0.84
	30.5	0.67
	35.5	0.55
	40.5	0.47
	45.5	0.41
	50.5	0.36
	55.5	0.33
	60.5	0.30
	65.5	0.27
	70.5	0.25
Base Wall Performance 2.12 W/m ² K	75.5	0.23
	80.5	0.22
	85.5	0.20
	90.5	0.19
	95.5	0.18
Spacetherm Directfix on 25mm battens	75.5	0.23
	80.5	0.22
	85.5	0.20
	90.5	0.19
	95.5	0.18



SPACETHERM COLD BRIDGE STRIP

Designed to prevent cold bridging through a component or element of a structure. Spacetherm CBS (Cold Bridge Strip) consists of Spacetherm Aerogel insulation encapsulated in polyethelene. Spacetherm CBS is an ideal choice for timber or steel frame structures and on request, can be cut to a variety of widths to suit different applications. In addition to timber and steel structures, it can also be used in other applications where cold bridging is an issue.

Full installation guides available to download from the website.

PHYSICAL PROPERTIES	RESULT
Spacetherm CBS length	1.2m or 2.4m
Thickness	10mm or 20mm
Width	38, 50, 75 & 100mm
K-Factor: Aerogel	0.015 W/mK
Fire Resistance: Aerogel	Class C-s1, d0 (EN 13501-1)
Compressive strength	80kPa @ 10% deformation

Benefits

- Thin thermal bridge insulation, ideal for timber or steel frame structures
- Fully encapsulated
- Fast and easy to fix with adhesive backing (temporary)
- Available cut to any width, thickness or length



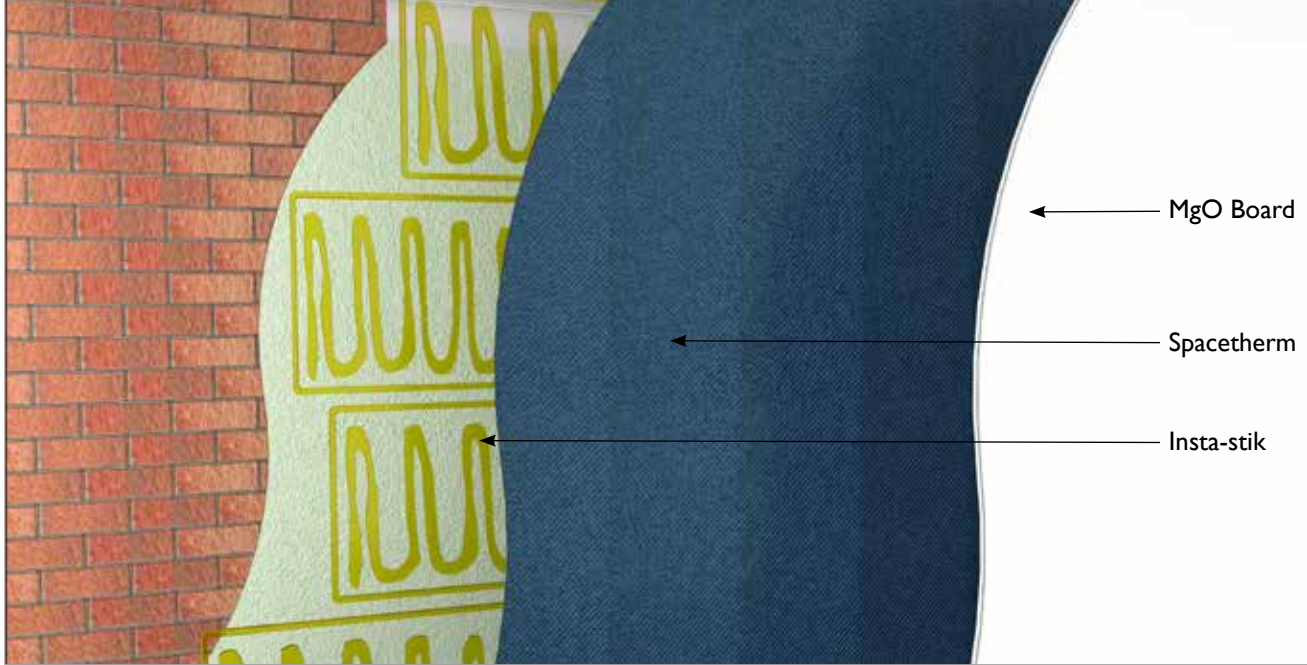
SPACETHERM BLANKET

The Spacetherm Blanket consists of unfaced sheets of high performance aerogel composite insulation. The possible applications of the Spacetherm Blanket are virtually limitless as it has been used in doors, shutters, window reveals, boats, swimming pool covers and numerous other applications where thermal performance, space and thickness are critical.

PHYSICAL PROPERTIES	RESULT
Blanket size	2400 × 1200mm 1200 × 1200mm
Thickness	5mm / 10mm
Density	0.15 g/cm ³
Weight	0.745 - 1.56 kg/m ²
Thermal Conductivity	0.015W/mK
Vapour Resistance	Sd 0.05m
Reaction to fire	C - s1 - d0
Specific Heat Capacity	1kJ / kgK

Benefits

- Thin insulation system for hard to treat walls
- Class leading performance
- Minimum loss of room space
- Direct fix to solid walls
- Non-hazardous material
- Easy to install



SPACETHERM WALL LINER (WL)

Spacetherm WL (Wall Liner) is a high performance laminate specifically designed to be fixed to internal surfaces of existing solid walls without the need for mechanical fixings. Spacetherm WL consists of Spacetherm aerogel insulation blanket bonded to 3mm Magnesium Board (MgO), for use in applications where improved thermal performance is required with limited space. Spacetherm WL can achieve similar performance to traditional plasterboard laminates, but at a fraction of the thickness, allowing specifiers greater flexibility and higher performance for refurbishment projects.

PHYSICAL PROPERTIES	RESULT
Dimensions	1200 x 600mm
Thickness	13mm (10mm Aerogel + 3mm MgO)
Weight	1.15kg
Fire Resistance	Aerogel (Class C-s1, d0) Magnesium board (Class A1)
Thermal Conductivity	Aerogel 0.015 W/mK Magnesium board 0.19 W/mK
Vapour Resistance	Aerogel Sd 0.05m Magnesium board Sd 0.062m

Benefits

- Thin insulation system for hard to treat walls
- Class leading performance
- Minimum loss of room space
- Constant long term thermal performance 50 years+
- Non-hazardous material
- Easy refurbishment
- No specialist trades required
- Allows wall to breathe

Accessories

- MgO Primer
- Insta-stik



Image showing Spacetherm® WRB applied internally to a reveal on an existing external wall structure.

SPACETHERM WRB

Spacetherm WRB (window reveal board) is a high-performance laminate specifically designed to be fixed or glued to the existing solid wall at the window reveals. Spacetherm WRB consists of Spacetherm Aerogel insulation blanket bonded to plasterboard or magnesium board, with or without plywood reinforcement, depending on fixings. It is ideal for use in applications where low U-values are required but space is limited.

Various solutions available from Spacetherm range depending on requirements.

Benefits

- Ultra thin insulation system for window reveals
- The best thermal performance available
- Minimum loss of space around openings
- Can be used in partnership with traditional dry-lining
- Glued or direct fixed depending on substrate



SPACETHERM WALLBOARD MITIGATES THERMAL BRIDGING FOR GRADE II BUILDING

Spacetherm Wallboard has been supplied by the A. Proctor Group to mitigate thermal bridging for the historic Electricity House building in Bristol, recently converted by Crest Nicolson into a series of luxury flats ranging from £230,000 to £530,000. The renowned architect, Sir Giles Gilbert Scott, the creator of the iconic Battersea Power Station, designed the original Grade II listed building.

Developed to prevent thermal bridging through a component or element of a structure, Spacetherm Wallboard is a high performance laminate, which consists of Spacetherm Aerogel insulation blanket bonded to plasterboard, and is ideal for use in applications where low U-values are required, and space is at a premium.

Planning requirements stipulated that the original window opening aperture sizes had to be maintained, and to alleviate thermal bridging on the existing window reveals, a thin insulation solution was crucial. Spacetherm offers superior thermal performance, which enabled the contractor to insulate the existing window reveals with just 17.5mm thickness, whilst still providing a high performing thermal conductivity of 0.015 W/mK.

Engineered for unsurpassed thermal performance in space-critical applications, Spacetherm offers low thermal conductivity, and compression strength, plus breathability allied to hydrophobic characteristics. Spacetherm Aerogel blanket is an ideal choice for timber or steel frame structures and on request can be cut to a variety of widths and sizes to suit different applications. In addition to timber and steel structures, it can also be bonded to a wide range of boards and substrates where thermal bridging is an issue. Its flexibility and ease of use, combined with exceptional thermal performance qualities, which can be retained for up to 50 years, make it a preferred choice for many architects and specifiers.



“I believe the success of the A. Proctor Group is down to a solid foundation of innovation backed up by an excellent loyal and committed team, every one of them playing an important role in our continued success. Scotland provides us with a unique platform to launch our ideas, systems and products. I am fiercely proud of this heritage and our brand.”

Keira Proctor
Managing Director

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