

# Thermaweld Bituminous Waterproofing



**BMI** icopal

**Tested. Trusted. Tailored.**

Layer upon layer of innovations, technology and technical support, Thermaweld gives total peace of mind.

[bmigroup.com/uk](http://bmigroup.com/uk)



# Welcome to BMI Icopal Thermaweld

**We're part of the BMI Group, a world leader in flat and pitched roofing, with the UK's most complete range of roofing, waterproofing and roofing solutions, technical support and services backed by our comprehensive roofing guarantees.**

Icopal Thermaweld is our tried and trusted bituminous waterproofing system, delivering tailored roofing solutions that guarantee longevity.

That's why Icopal Thermaweld is ideal for large-scale commercial and new build projects. Delivering solid performance over a long lifetime of low risk and low maintenance, enabling safe installation practices and peace of mind, it's a complete system backed by the tailored service of Icopal's specification and technical team – from design to handover.



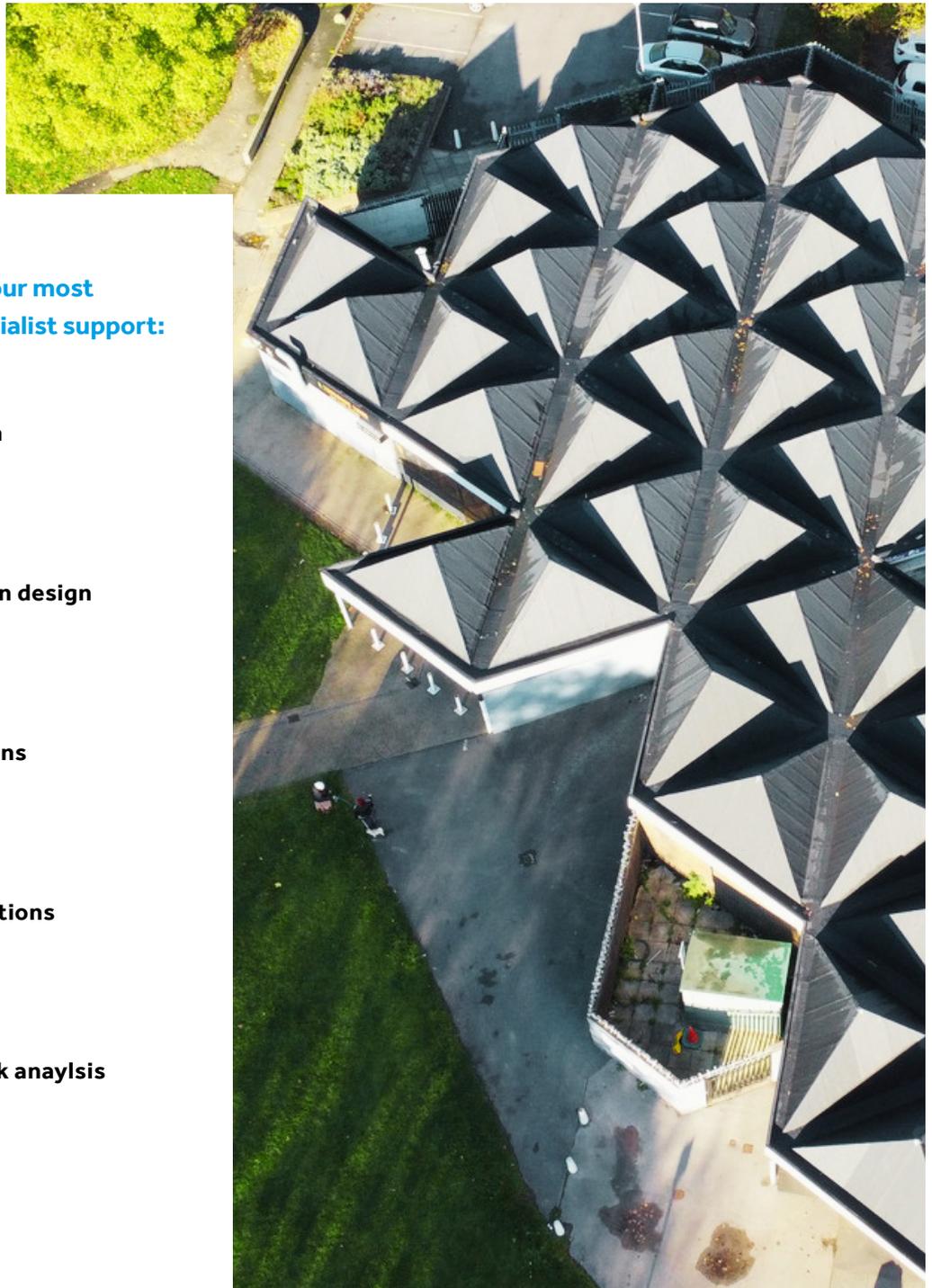
Explore the full scope of our support [for our Thermaweld system](#)

# Why specifiers choose Thermaweld...



**Alongside performance, value and specialist technical support, the proven, full-system consistency of Thermaweld makes it ideal for specifiers.**

Our technical support services include: NBS Specification, Tapered Design Insulation, U Value Calculations, Wind Uplift Calculations, and Condensation Risk Analysis – plus on-site quality control checks, problem-solving and completion review.



Thermaweld is enhanced by our most comprehensive range of specialist support:



**NBS specification**



**Tapered insulation design**



**U value calculations**



**Wind load calculations**



**Condensation risk analysis**

**Guaranteed peace of mind**

Thermaweld can be covered by a BMI Icopal product guarantee of up to 25 years, as well as the option of a full 20-year system guarantee when installed by an Icopal-approved contractor.

# Key benefits



## SAFER

Safer low-flame application, thanks to our technically advanced, low-heat-reactive SBS modified bitumen formulation



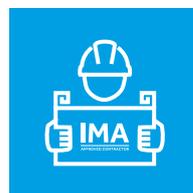
## QUALITY

Thermaweld is tailored and trusted to deliver the quality and finish you demand for every project, with Icopal's full technical support, from design and site monitoring through to guarantees



## SYSTEM

Designed and manufactured in the UK to meet our unique environment and project demands



## INSTALLATION/AVAILABILITY

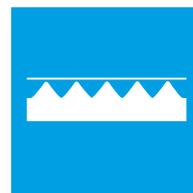
### Installed by IMA and Team Icopal-approved contractors

Project quality monitoring and completion review is provided by the Icopal Site Inspection Team for projects requiring a system guarantee



## PERFORMANCE

Thermaweld is time-tested and proven to deliver outstanding durability, with an expected service life of at least 35 years



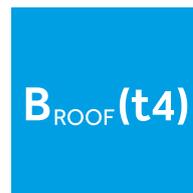
## GROOVE TECHNOLOGY

Our patented groove technology rapidly channels heat along each roll of the low-melt SBS modified bitumen, maximising adhesion and minimising energy usage. The groove profile also increases surface area, while providing a speedier, more secure bond



## SAFE2TORCH TECHNOLOGY

Incorporates FireSmart® technology that incorporates a specialist fire retardant additive. Safe2Torch-compliant systems available, incorporating TorchSafe™ membrane technology, for enhanced safety during application



## B<sub>ROOF</sub>(t4)

Extensive B<sub>ROOF</sub>(t4) fire testing and classification, across all BMI Icopal bituminous roofing systems\*

## 20 YEAR GUARANTEE

### System guarantee

Thermaweld benefits from the robust reassurance of a full Icopal system guarantee, available for up to 20 years, for total peace of mind.

## 25 YEAR GUARANTEE

### Product guarantee

Thermaweld can be covered by an Icopal product guarantee of up to 25 years.

\*B<sub>ROOF</sub>(t4) defines the highest external fire performance for roofs. BMI Icopal flat roofing systems have been extensively tested and attained B<sub>ROOF</sub>(t4) classification. BMI Icopal Technical Services Team are happy to support you with the design and specification of a B<sub>ROOF</sub>(t4) compliant flat roof system to meet the specific needs of your project.



# Expert installation

**Thermaweld can be installed by either of our Approved Contractor schemes - the IMA, our premium approved contractor network and our Team Icopal approved contractor network.**

**Our teams will help you with a specification that's based on your precise project needs, including on-site support, site inspections, technical calculations and certification.**

Our approved installer network, featuring contractors approved by the Intelligent Membrane Association (IMA), is an association of Icopal approved roofing contractors offering an exceptional level of guaranteed service, skill and technical expertise.

Team Icopal is a winning team of Icopal approved contractors who demonstrate quality working standards and installation in Icopal's wide range of roofing systems.



**Find your nearest local approved contractor for your project**

# Robust & proven performance

**Designed and manufactured in the UK, for the UK, Thermaweld is a multi-layer bituminous roofing solution encompassing a broad range of products and systems for different types of projects.**

With its tried and tested longevity, this is a system of choice – particularly for new-build, large commercial projects.

The SBS modified bitumen membrane provides flexibility that's vital for accommodating minor movement and changing temperatures as a result of the freeze thaw process.

FireSmart® membranes incorporate a fire retardant additive offering the highest combination of waterproofing and external fire performance.

To aid installation, the underside of the membrane features a special grooved profile and is finished with a thermofusible film to prevent sticking to the roll.

The different system layers of Thermaweld offer combinations which are best aligned to the substrate and performance needs of any particular roof;



## PRIMER

Primer is used to prepare the substrate for application of the waterproofing system and ensure a secure bond. The type of primer used is dependent on whether a thermally activated or torch-on system is selected and what substrate the primer is being applied to.



## VAPOUR CONTROL LAYER

In a warm roof system, a vapour control layer (VCL) should be used beneath the insulation to control the diffusion of water vapour into the warm roof system.



## INSULATION

High-performance rigid foam insulation (PIR) is used for thermal performance, and specialist board facings ensure compatibility with the membranes. Icopal thermal performance calculations and tapered insulation designs are also available to support your project.



## UNDERLAY

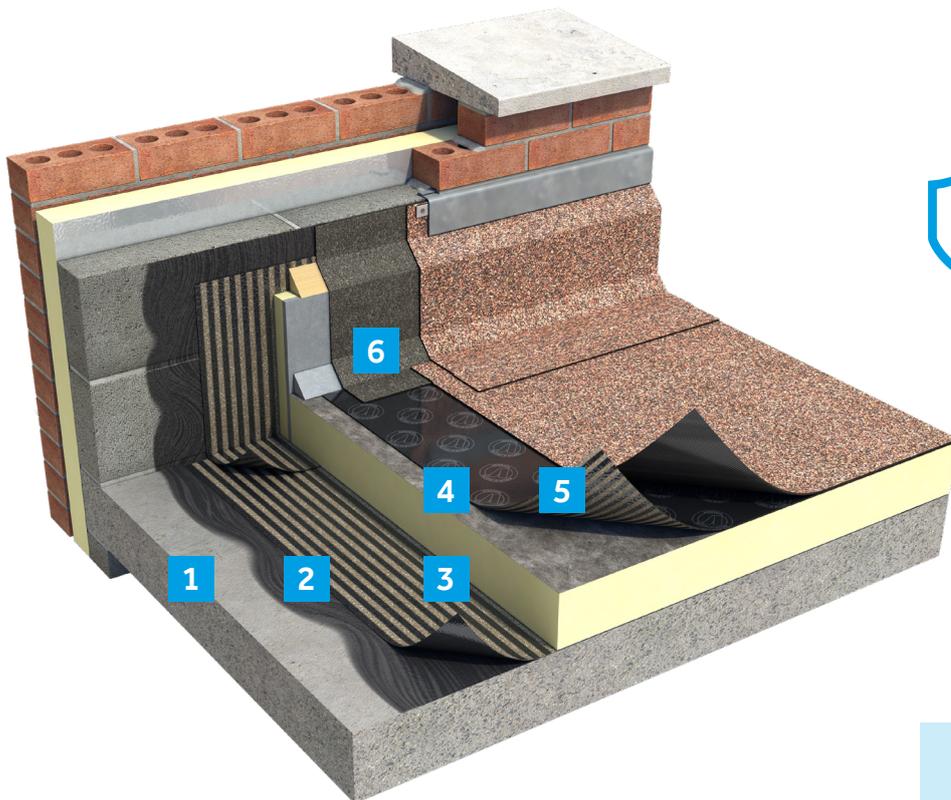
The vapour dispersion underlay features partial bond bitumen stripes to the underside. These play a vital role in the system, allowing trapped water vapour to disperse, providing an optimal pressure equalising effect and blister prevention.



## CAP SHEET

Icopal high-performance, low-melt, reinforced elastomeric bitumen cap sheets, with built-in groove technology, provide the ultimate waterproofing and UV protection, encapsulating the flat roof system.

# Example Thermaweld system



Up to 20 year system guarantee available

## Typical system build up:

	System layer	Product
1	Primer	<b>Siplast Primer</b>
2	Vapour control	<b>Total Torch VCL</b>
3	Insulation	<b>Thermazone Torch-On</b>
4	Underlay	<b>Total Torch VDL</b>
5	Cap sheet	<b>Thermaweld FireSmart</b>
6	Detailing underlay	<b>Tecnatorch Sand</b>

### SAFETY, QUALITY AND ENVIRONMENT

Thermaweld has been independently site and laboratory tested by the British Board of Agrément, and awarded BBA certificate number 07/4409.

Thermaweld is manufactured under a Quality Management System approved to ISO 9001: 2015 (Certificate number 4410021410102) and an Environmental Management System approved to ISO 14001: 2015 (Certificate number 4410021410102) by TÜV NORD CERT GmbH



# Case studies

**CLIENT**

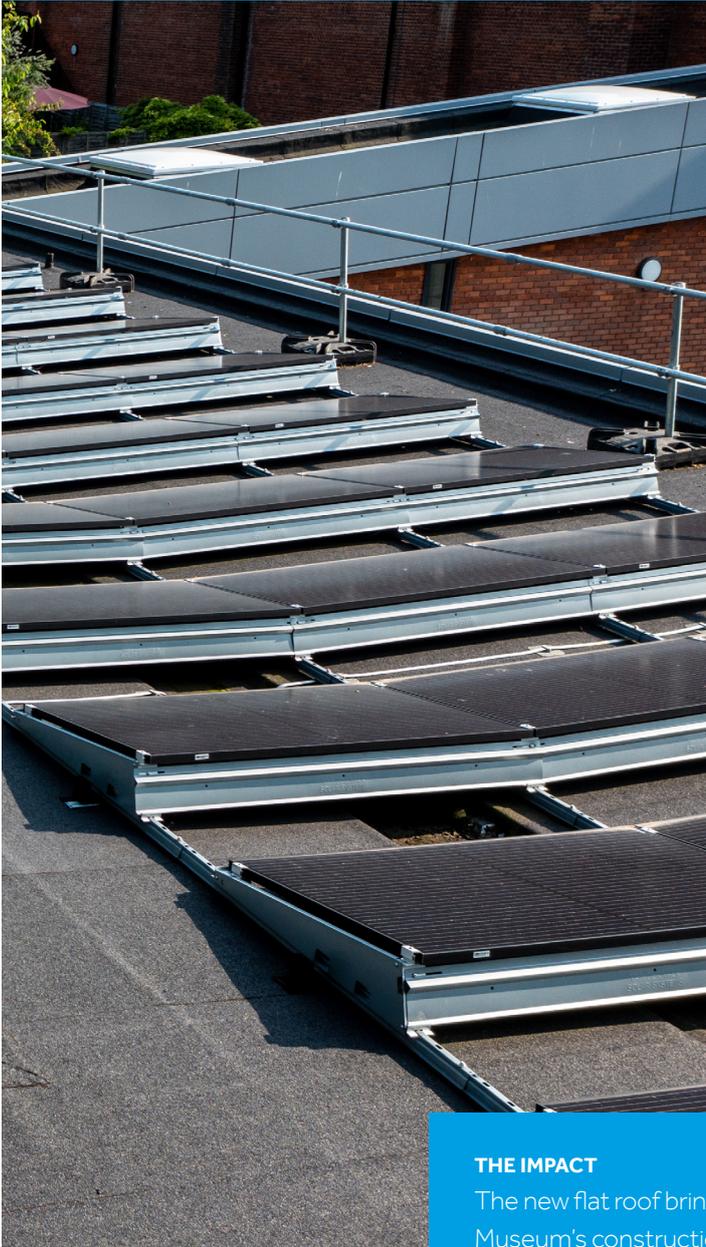
**Natural History  
Museum, Tring**

**ROOFING CONTRACTOR**

**Premier  
Roofing Systems**

**SOLUTION**

**BMI Icopal  
Thermaweld**



**THE CHALLENGE**

As might be expected for a 130-year-old building, the three flat roof sections of this landmark location were nearing the end of their lives. A tall main building and a high-level block both featured vegetation on the roof, making it particularly difficult to strip off the original layers. But the toughest task was the third section: a link roof, requiring an overlay system with tapered insulation. Not to mention the issues involved in completing a project during adverse winter conditions, all while protecting the integrity of the Museum's collection.

**THE SOLUTION**

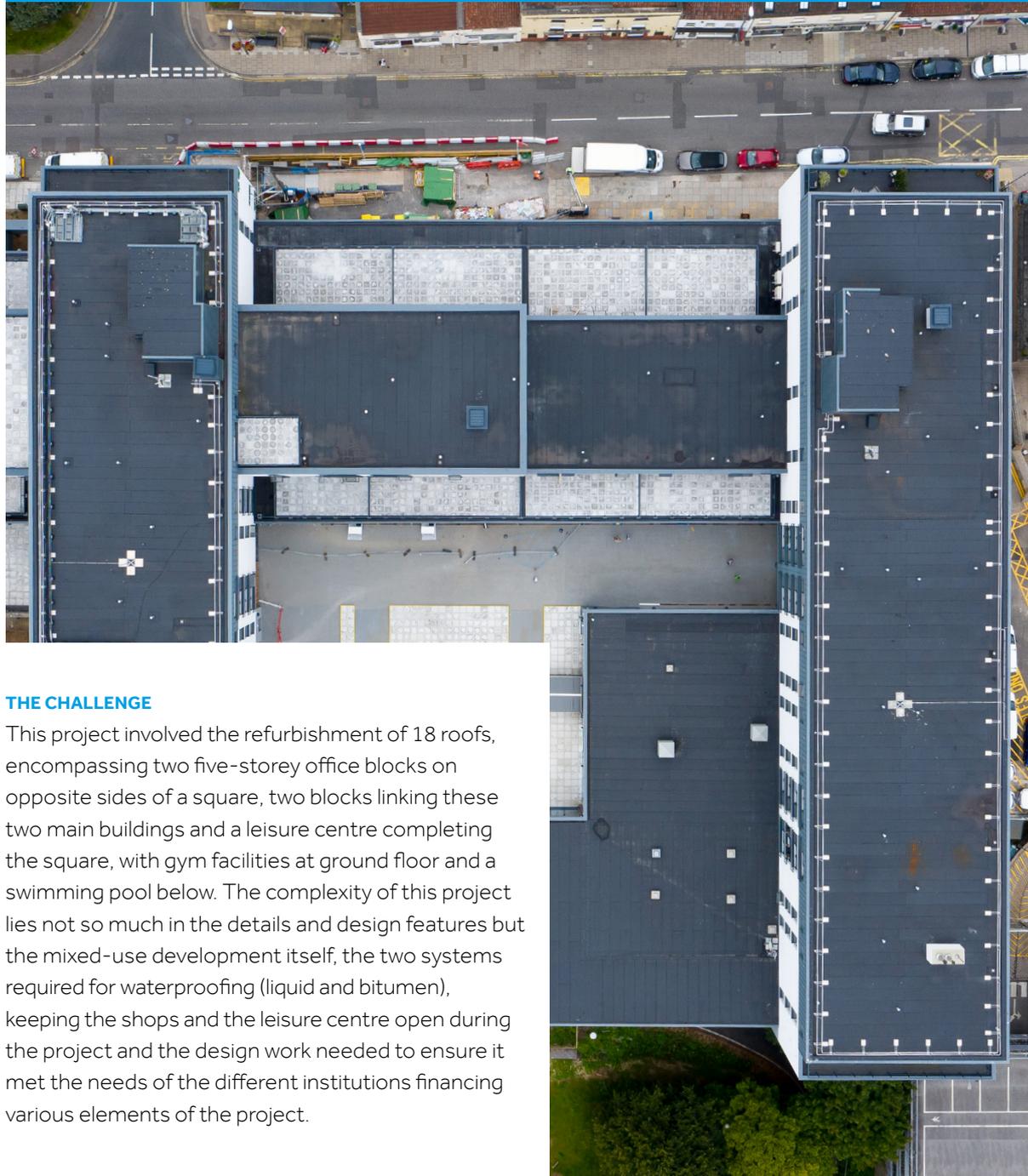
A combination of BMI Icopal Total Torch, and Thermaweld products were used with BMI Thermazone tapered insulation being specified and sourced directly from BMI Icopal. In addition, Icopal carried out all calculations in relation to products. The project was carried out in three phases for the separate roof sections. Excellent site management, as well as clear communication throughout the entire process, were crucial to ensuring that these three phases were completed sequentially, on time, and within budget.

**THE IMPACT**

The new flat roof brings the Natural History Museum's construction up to modern standards and expectations of performance and protection.

# Case studies

CLIENT	ROOFING CONTRACTOR	PROJECT	SOLUTION
AHR Architects	Span Roofing Contractors Ltd	Riverside View Keynsham	BMI Icopal Thermaweld



## THE CHALLENGE

This project involved the refurbishment of 18 roofs, encompassing two five-storey office blocks on opposite sides of a square, two blocks linking these two main buildings and a leisure centre completing the square, with gym facilities at ground floor and a swimming pool below. The complexity of this project lies not so much in the details and design features but the mixed-use development itself, the two systems required for waterproofing (liquid and bitumen), keeping the shops and the leisure centre open during the project and the design work needed to ensure it met the needs of the different institutions financing various elements of the project.

**THE SOLUTION**

All of the development has been upgraded to 21st century standards using two of the BMI Icopal suite of roofing systems: a liquid install Sealoflex Ultima and BMI Icopal Thermaweld FireSmart bituminous felt system. The plaza, or podium, is waterproofed with Sealoflex Ultima Liquid Applied Waterproofing system, protecting the roof of the swimming pool while also providing a robust anti-skid surface for pedestrians on its own or supporting decorative paving, while Thermaweld FireSmart was selected for the residential blocks. Span Roofing installed Total Torch Vapour Control Layer, Thermazone Torch-On Insulation, Total Torch Vapour Dispersion Layer and a BMI Icopal Thermaweld FireSmart Mineral Cap Sheet on top of existing BUR (Built Up Roofing) that laid on top of the cast concrete decking.

**THE IMPACT**

The development itself is now protected with a new roof that comes with a 20-year System Plus guarantee. The residents in the new apartments will also enjoy greater comfort and lower energy bills with the Thermaweld FireSmart warm roof build-up.



Layer after layer of innovations, technology and technical support gives customers absolute certainty and confidence from initial design, through to installation and handover. Whether your project is for a smaller commercial new roof right through to a large-scale refurbishment, **Thermaweld gives you total peace of mind.**

# Thermaweld system components

	Product Name	Product Code	Dimensions	Kg per m <sup>2</sup>	Thickness	Torch-Applied or Self Adhesive	Description
<b>Cap Sheets</b>	Thermaweld FireSmart Mineral	10001243	7x1m	 6	4.5mm		Thermaweld FireSmart Mineral is intended for use as a torch-applied top sheet in a bitumen built-up roof system.*
	TorchSafe TA Detailing	10001356	7x1m	 5.7	4.5mm		TorchSafe TA Detailing Mineral is intended for use as a heat activated cap sheet at details where used as part of a built-up bitumen roof system.*
<b>Detailing Underlays</b>	TorchSafe TA Detailing Underlay	10001356	10x1m	 3.4	3mm		TorchSafe TA Detailing Underlay is intended for use as a fully bonded underlay at details in a bitumen built-up roof system.
	Tecnatorch Sand	10001252	8x1m	 4.5	3.8mm		Tecnatorch Sand is intended for use as a torch-applied top sheet or underlay in a bitumen built-up roof system.
<b>Underlays</b>	TorchSafe TA Underlay	10001232	10x1m	 2.8	3mm		TorchSafe TA Underlay is intended for use as an underlay/base layer in a bitumen built-up roof system.
	Total Torch Vapour Dispersion Layer	10001117	8x1m	 3.9	3.4mm		Total Torch Vapour Dispersion Layer is intended for use as a torch-applied underlay/base layer in a bitumen built-up roof system.
<b>Vapour Control Layers</b>	Total Torch Vapour Control Layer	10001153	8x1m	 3.9	3.5mm		Total Torch Vapour Control Layer is a glass reinforced SBS-modified bitumen membrane with bitumen bonding stripes on the upper surface.
	TorchSafe TA VCL Stripes	10001442	7.5x1m	 3.5	3.5mm		TorchSafe TA VCL Stripes is intended for use as an air & vapour control layer in a warm roof system build-up.
	TorchSafe TA VCL Sanded	10001443	15x1m	 3.8	3.5mm		TorchSafe TA VCL Sanded is intended for use as an air & vapour control layer in a warm roof system build-up.
<b>Primers</b>	SA Primer	20000725	 25L	-	-	-	SA Primer is designed to improve the bond adhesion of self adhesive/heat-activated bituminous membranes to a variety of substrates including plywood, OSB, metal and insulation.
	Siplast Primer	10001450	 25L	-	-	-	Siplast Primer is designed to penetrate and seal substrates of masonry, concrete, cementitious screeds or renders, existing bituminous or asphalt waterproofing, structural steelwork and other metals, prior to the application of torch-applied bituminous membranes.
<b>Preparation Layers</b>	HT 125 Taping Strip	10001147	16x0.15m	 1.8	1.7mm	-	HT 125 Taping Strip is a polyester reinforced bitumen membrane used at plywood and OSB board joints.
	HT 180 Sand	10001144	20x1m	 1.9	1.8mm	Nailed layer	HT 180 Sand is a polyester reinforced bitumen membrane used for close boarded timber decks.

	Product Name		Description
<b>Insulation Layers</b>	Thermazone Roofboard	 <p>Contact our <a href="#">technical services department</a> for bespoke tapered insulation schemes.</p>	PIR is one of the most efficient insulation materials used in construction, it provides acoustic and thermal properties. It is rigid and durable and is commonly used in warm roof build ups. Thermazone Roofboard is available in flat or tapered formats.
	Thermazone Torch-On		PIR is one of the most efficient insulation materials used in construction, it provides acoustic and thermal properties. It is rigid and durable and is commonly used in warm roof build ups. Thermazone Torch-On is available in flat or tapered formats.

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