

## **Recladding with confidence**

# A safe, effective approach to recladding

The well-publicised fire risks highlighted by the Grenfell Tower tragedy, still exist in many high-rise buildings, however, these risks are rarely apparent as the problems are often embedded in or under the external shell of the building.

Primary fire risks usually stem from either combustible cladding or insufficient fire breaks. Other risks involve inadequately specified componentry such as insulation, sheathing boards or support frames. In many instances the only viable remedy involves stripping off the current rain-screen cladding or external wall insulation and replacing it with improved fire rated solutions.

### Unfortunately, the market for building products in the UK is fragmented and diverse.

Sourcing the correct mix of materials across several suppliers can be problematic. As the Hackitt report has outlined, traceability and the lack of a 'Golden Thread' makes it difficult to determine the provenance and suitability of products in complex building systems.

### Not all buildings pose a fire threat

The façades on some buildings may simply require thermal or general upgrading to improve durability and longevity.

However, the problem still remains: who do you work with and how can you ensure that the products you use, specify or install are suitable and fit for purpose?.

## Benx A-rated cladding solutions

At Benx we have developed an extensive portfolio of tested and certified fire-safe recladding solutions for all build types, from single storey through to high rise-buildings. Our experience in this sector spans 20 years and covers a comprehensive range of A1 and A2 fire rated cladding systems in an array of finishes including render, brick, aluminum and multiple board options with various textures, styles and colours.

Our expertise in fire protected cladding solutions stems from our policy of carefully sourcing each of the components used in our cladding systems and then extensively testing the assembled system.



We work extremely hard to validate each component and how it acts in-extremis alongside the other components in our systems.

This is the start of the Benx "Golden Thread" which links our expertise to the long-term fire safety of your building and most importantly its occupants.

## 'long term safety of your building'

### **Benx** The future of façades

Since its formation in 2002, the Benx Group has grown to become one of the UK's leading specialist providers of building façade systems. Our portfolio is continuously adapted in line with changing legislation, new material technologies and increasingly sophisticated building designs. Furthermore, we offer an unrivalled range of fully tested and certified cladding products. We complement this with a techical support package to ensure your project runs smoothly. The Benx proposition is a singlesource "Golden Thread" for your project.

Our aim is to offer the greatest variety while decreasing your risk in choosing and designing building façades.

Through our group companies RCM and SPSenvirowall, we operate at all levels of the supply chain and across many market sectors. Our valued customers include some of the UK's largest main contractors, as well as installers, architects, specifiers, utilities and social landlords.







## 'tested and accredited systems available'

Key considerations in façade design					
Fire and o	th <mark>er safety cr</mark>	iteria.			
Thermal p	er <mark>formance, t</mark>	h <mark>ermal bridg</mark> i	ing	g & conden:	sation
Durability,	maintenance	a <mark>nd repair</mark>			
Regulator	y a <mark>nd other st</mark>	a <mark>keholder co</mark>	m	pliance	
Design, ae	st <mark>hetics and p</mark>	olanning			
Structural,	w <mark>ind, impact</mark>	, <mark>building and</mark>	d f	acade mov	ement
Cost and b	bu <mark>dget factor</mark>	S S			



## Benx Recladding solutions

Façade construction is complicated. There are multiple considerations to be taken into account when designing a facade solution.

In this highly complex environment, it is not surprising that trying to ensure that all considerations are addressed correctly is daunting. Specifiers, contractors and other professionals are having to deal with multiple suppliers and manufacturers, each offering only partial solutions to the overall picture.

#### There is an added complication:

How can you know that there are not competing interests from different suppliers on the same project? There have been, and still are, conflicts between suppliers seeking to have their products specified and used, even if they are not the most suitable. An impartial overview is difficult to find.

What experience does a sheathing board manufacture have of insulation? What knowledge does a cavity barrier supplier have in a rain screen cladding panels?

Although solutions can be found for most situations, this amalgamation of so many different suppliers makes for, at best, extra complexity, but at worst, far more risk.

#### This is another way. Benx.

Our decades-long specialisation in façade systems allows us a truly unique insight into the primary challenges and risks that façades provide. We know of few companies, if any, that bring together the range of industry leading components and systems that Benx offers, with a focus on certification, testing, performance and transparency.

### One of the UK's widest range of recladding systems with excellent performance characteristics

Benx offers a comprehensive range of Euroclass A1 and A2 fire classified façade systems for all types of recladding projects. Whether you require a rain-screen cladding system or an external wall insulation system with render or brick slips, we can supply a complete recladding solution from the external board outward. Our systems can be utilised on masonry, timber and metal framed structures.

To assist in your decision, our technical support team will ensure that the specified system will meet the highest design and performance expectations. We appreciate that safety is paramount in your choice of recladding systems and you can rest assured that Benx does not compromise on product performance or quality, but we also offer an unrivalled choice of finishes for your project.





### Benx product range

Benx offers a comprehensive range of fire-rated products and industry-leading solutions. Our technical expertise ensures that the specified system will meet the highest design and performance expectations.

sps envirowall



#### Fire classified products

- EWI Cavity System
- Wall System 2
- Supertech Weather Board
- Solid Aluminium Cladding

#### 2 Fire classified products

- RendaClad
- Wall System 2
- EWI Cavity System
- Rockpanel
- Swisspearl
- Aluminum Composite Cladding



kiwa

### A1 non-combustible external wall insulation range

### - EWI - Cavity Systems

This modern method of construction, also referred to as ETIC's, has proven extremely popular over recent years and is now the preferred recladding method for mid-to-high rise structures. Our market-leading Cavity Systems consist of Euroclass BS EN 13501 - A1 components, which are mechanically fixed back to the inner sheathing board to create the designed cavity width with either the insulation board fitted directly to the A1 fillets (CS1 system), or a secondary A1 sheathing board and insulation (CS2 system). Our A1 EWI recladding systems are supplied with a mineral top coat finish.



#### **Cavity System 1**

Minimum 15mm cavity using SPSenvirowall Cavity System A1 fillets

Intumescent fire break

Mineral Wool Insulation

Base coat incorporating plastic glass fibre reinforcing mesh

Mineral top coat finish



#### **Cavity System 2** Minimum 15mm cavity using – SPSenvirowall Cavity System A1 fillets

Intumescent fire break

Fixing type and fixings centres to be project specific

 Mineral Wool Insulation mechanically fixed to CS2 sheathing board

Base coat incorporating plastic glass fibre reinforcing mesh

Mineral top coat finish



### A1 non-combustible external wall insulation range

### **∣** Wall System 2 with Enviromin Finish

KIWA and BBA approved and achieving an A1 non-combustible fire rating, this EWI system can be fixed directly to masonry and is suitable for the recladding of buildings up to and over 18m. The system includes Enviromin, a high-performance, cement based and polymer modified through-coloured mineral thin coat render.



- KIWA BDA tested and certified
- BBA Accredited
- High Windload resistant
- Wide range of finishes, textures and colour options.











### A1 non-combustible rainscreen cladding solutions

An A1, simple to install, fully ventilated rainscreen cladding system which has an appearance similar to that of traditional timber cladding but the durability and strength of cellulose fibre cement. With our state-of-the-art in-house coating facility we can be poke this material to your specific recladding project.

### -Supertech Weather Board





- Fire rated to EN 13501-1 class A1
- State of art, in-house UK coating line
- High levels of weather resistance
- Easy to install and lightweight
- Resistant to rot, fungus or insect attacks
- Colour matching service
- Low maintenance, long performance life
- Integrates with other Benx products
- BBA Accredited



## A selection of Supertech Weatherboard colours

The Supertech colour range has been developed for you to create great building designs. This premium weatherboard is supplied directly from our in-house state of the art coating facility, pre-finished in an array of durable, fade resistant finishes ideal for both traditional and contemporary designs. We also offer a colour matching service based on project size and minimum orders.



#### **Colour Accuracy**

Colour swatches have been reproduced as accurately as possible, however there may be some variations due to technical, colour reproduction and render manufacture reasons. If you require an accurate swatch, please ensure you ask us for a sample of the product and colour chosen prior to commencing any works.





### A1 non-combustible rainscreen cladding solutions

Solid Aluminium Cladding provides an A1 classified, non-combustible, high impact resistant solution with exceptional durability and mechanical benefits. Aluminiums' light weight and high strengthto-weight ratio make it a valuable asset as a recladding facade, while its fire reaction and insulating properties help provide safety and energy efficiency.

### Solid Aluminium



A1 classified non combustible to

vitradua

- Lightweight and easy to install
- Custom designed to a range of
- Highly durable and impact resistant

## A selection of aluminium coating colours

The colours shown below are just a sample of the possible RAL, NCS and NCS-s colours. In addition to out stock range, our products can also be colour matched to almost any RAL colour. (Project size and minimum order may apply).



#### **Colour Accuracy**

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### A2 limited combustibility external wall render or brickslip system

### RendaClad BAR BOPAS

The RendaClad EWI System offers a highly versatile, A2-s1,d0 solution. Suitable for both low-rise and high-rise buildings, RendaClad can be used on LSF and timber frame construction. The primary components of this system - the render carrier board or renders/brick slips - in which products we have decades of experience, are produced to our own formulation or standards, ensuring compatibility with each element.



- Fast method of construction
- Lighweight
- Extensive accreditation: BBA BOPAS
- Weather resistant and durable
- Extensive range of finishes
- Cost effective
- Multiple fixing options on timber or metal stud or Allface support frame
- Render, dash & brick options



# 'Meeting the highest design and performance expectations'

## A selection of finishes and colours

#### SpeedySlip

SpeedySlip comes in a standard range of colours as well as a colour matching service, althought this service is dependednt on project size and takes slightly longer to facilitate.



### Mineral Top Coat

Whether you are looking for a traditional look or a contemporary finish please get in touch - we have the expertise to guide and inspire you in choosing the right colour for your project. This is just a small part of our full colour range.





### A2 limited combustibility external wall insulation range

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Wall system 2 is designed to provide a highly durable, extensively tested and cost effective range of external wall insulation options. Based on a A1 mineral wool insulation, complemented with a wide range of finishes including render, dash and brick, we are able to offer multiple choices to clients to express creativity in building design. All in the knowledge that the systems have full Agrément certification available.



- Robust external wall insulation
- High Windload resistant
- Cost effective
- Fast application
- Tried and tested
- Highly durable and weather resistant
- Wide range of of finishes, textures and colours available
- BBA and KIWA Agrément options



## A selection of dash colours

We have a vast range of both dash receiver colours and aggregate available. These can be used to create both geographically traditional and unique finishes.



#### BrickStick

Below is a small selection of colours available in the BrickStick range, however a colour matching service can be offered on minium quantity orders.

Handform Autumn Leaves	Handform Colorado Flamed	Sanded London Stock	Smooth Staffordshire Blue	Weathered Red Coat	Cambridgeshire Multi Stock	Findon Buff Stock
Himley Blue Smooth Square	Light Brown Stock	Liverpool Stock	Swindon Red	Bingley Orange		

#### **Colour Accuracy**

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### A2 limited combustibility rain screen cladding solutions

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Rockpanel is a leading manufacturer of sustainable, fire rated façade solutions. These A2 fire classified boards are finished with a 4 layer water-based coating to seal in the appearance and colour to provide a lasting finish. Rockpanel facades have the hardness and durability qualities of stone but provide the advantage of a material which has the workability of wood.



- Fire classified of EN 13501-1 class A2-s1, d0
- Easy to install and low maintenance
- Almost 100% recyclable
- Lightweight and easy to install
- Exceptional weather resistance
- More than 200 colours, surface finishes and patterns
- Customised solutions
- Integrates with other Benx products



## A selection of Rockpanel colours

The Rockpanel facades range includes a variety of surface finishes and colours. With 11 different ranges available including Rockpanel Colours, Rockpanel Metallics, Rockpanel Chameleon and Rockpanel Woods. The solid colours, woods and metallics are the most popular ranges used and we have included them below, however, we are able to supply all 11 ranges available.

#### Colours



Colour swatches have been reproduced as accurately as possible, however there may be some variations due to technical, colour reproduction and render manufacture reasons. If you require an accurate swatch, please ensure you ask us for a sample of the product and colour chosen prior to commencing any works.

spsjenvirowall WRCM



### A2 limited combustibility rain screen cladding solutions



KIWA and BBA approved, Swisspearl coloured fibre cement panels give façades what they need: a face, individuality, character, texture, colour and, very importantly, a highly effective protective layer. The range consists of six different style ranges, with the majority integrally coloured.



- Fire classified to EN 13501-1 class A2-s1. d0
- High levels of weather resistance and durability
- Customised colours and colour match fixings available
- Recommended for buildings over 18m
- Integrates with other Benx products



KIWA Agrément as full system from sheathing board to finished Swisspearl panel

## A selection of Swisspearl colours

Swisspearl<sup>™</sup> innovative approach includes a highly demanding production process for integrally coloured cement composite panels which are offered in a wide variety of colours.



#### **Colour Accuracy**

Colour swatches have been reproduced as accurately as possible, however there may be some variations due to technical, colour reproduction and render manufacture reasons. If you require an accurate swatch, please ensure you ask us for a sample of the product and colour chosen prior to commencing any works.



## Benx A2 classified fire recladding portfolio



### A2 limited combustibility rain screen cladding solutions

### 🗆 Aluminium Cladding



Benx's range of A2 fire classified aluminium cladding panels are lightweight metal cladding ideal for external façades and rainscreen cladding systems. Versatile, easily formable and highly resistant to weather, aluminium cladding panels are a cost-effective solution to creating a striking and innovative recladding facade.





- Fire classified option of EN 13501-1 class A2-s1.d0
- High levels of rigidity and impact resistance
- Excellent weather resistance
- Variety of surface finishes and colours
- BBA approved
- Flat versatile panels with high levels of formability
- Easy to work with
- Integrates with other Benx products



## A selection of Aluminium cladding colours

Below is a selcetion of aluminium cladding colour options that give you unlimited design flexibility. We also offer a full colour matching service if you have a non-standard, RAL or Pantone colour to match or just want to create something unique. (Project size and minumium orders may apply)



#### **Colour Accuracy**

Colour swatches have been reproduced as accurately as possible, however there may be some variations due to technical, colour reproduction and render manufacture reasons. If you require an accurate swatch, please ensure you ask us for a sample of the product and colour chosen prior to commencing any works.



## The Benx range of supporting components

We appreciate that you may require specific elements of a recladding system and we are on hand with UK's most extensive range of supplementary components.

### A1 non-combustible sheathing boards

Ywall	High-quality flexible calcium silicate based fibre cement building board		<b>M</b>
Multipurpose	Highly versatile cellulose fibre cement building board		
DensGlass	High performance sheathing board that consists of a fibreglass mat with a gypsum core	Pending	<b>M</b>

### **Cavity Barriers**

Cavity barriers can vary considerably depending on the type of cladding system under consideration. Benx only supply cavity barriers as part of a system, not as standalone products.

Our portfolio	Our assessments focus on a range of factors, including:		
• Regulatory performance • Fixing method			
<b>TENMAT</b> ADVANCED MATERIALS <b>Nullifire</b> Smart Protection	<ul> <li>Interface with other products such as sheathing board</li> <li>Installation details</li> <li>Test performance</li> </ul>		

### **Ancillary Items**

Our portfolio	Product
illbruck	Breather membrane EPDM weather resistant seals Vapour control layer (VCL) tapes
JOINT SEAL	RCM Joint Seal is a fully tested air tightness seal. It has been designed to create an air tightness seal on our external sheathing board range. RCM Joint Seal can also be used independently of RCM products.
INTUSIL	A neutral cure silicon sealant used to seal movement joints, providing up to 4 hours fire protection while allowing a movement accommodation factor of 50%.
Fixings	<ul> <li>Fixings are an integral part of multiple elements of any external cladding system. They are used with:</li> <li>Sheathing boards</li> <li>Insulation</li> <li>Support frame</li> <li>Cavity barriers</li> <li>Trims and flashings</li> <li>External cladding panel</li> </ul>
	depending on various factors.

## The Benx range of supporting components

### Insulation

Benx has considerable experience in the use of multiple insulation types within our external wall insulation (EWI) systems incorporating both render and brick slip options. The development of our rain screen systems is a natural evolution of this knowledge and expertise

Our portfolio	Key Criteria in your choice of Recladding Insulation		
<b>knauf</b> insulation	Fire classification and resistance		
	It is important that fire		
	classification includes the overall wall		
	structure that the insulation is being		
	designed into for the façade or inner		
	wall.		
_			
A ROCKWOOL	Thermal and Condensation Risk		
	Analysis - A key part of any through-		
	wall system assessment is its impact		
	on energy efficiency. Benx has pro-		
	vided U-value calculations to clients		
	for many years on our EWI systems		
	and will shortly offer 3D thermal		
	modelling on our rain screen		
	systems as well.		
80			
Kingspan	Fixing method - Understanding		
Sopart	substrates, sheathing boards, wind		
	loading, building movement and fire		

are all key when securing insulation,

especially for EWI systems.

### Support frame

Smart Fixing Systems

The choice of support frame is a key consideration in façade design. The support frame is a dynamic structure, affected by wind, thermal effects and building movement and secures the entire cladding panel system.



#### Features

- Mutiple solutions available
- Suitable for all substrates
- Compatible for most façade systems
- Cladding accessories available
- Variable support frame dimensions allow for different cavity depths.
- High strength aluminium
- Indicative and full design service available

#### Fixings

We offer a range of support frame options to accommodate different building structures, heights, locations (including marine), the type of cladding panel and cost considerations. A key design consideration is the choice of fixing method:

- Face fix cladding
- Secret fix cladding

Benx offers both these fixing methods with an extensive range of options to provide the most appropriate overall design solution.





# An adaptive recladding **Solution**

Each recladding project is unique, having its own specific requirements. What never changes, is our dedication to helping our clients with the highest quality façade solutions. This philosophy is at the heart of our business.

With such a diverse range of products, systems and solutions it is not possible for us to map out each specific journey we take with our clients. It can be as simple as enquiry-and-purchase to the multi-tiered all-embrassing example illustrated here... and most anything in between

On the right we offers some examples of process flows and the actitivies that the Benx team can provide.

'highest quality
façade solutions,
is at the heart
of our business'



Our approach is quite simple: we do not try and make things fit where they do not fit. However we do try to ensure that we use our considerable expertise to offer practical, robust and evaluated products and services to help our clients to the upmost of our abilities.







## **Extensive testing** is core to our business

Fire is at the forefront of all stakeholders minds and rightly so, but there are many other elements of façade compliance and performance that also are key to safety, durability and building performance.

#### Fire

As a business, our focus is not just on headline fire classifications, but where possible we also look at the relationship between the various tests, products and systems and how they interact. For recladding, although not exclusively, the primary standards or test are :

- BS 8414 combined with the BRE 135 classification report.
- BS EN 13501-1 incorporating BS EN 1716 and EN ISO 1182 and BS EN 13823
- BS EN 1366-4 & principals of ASFP TGD 19
- BS EN 1364 or BS EN 1365- Can become relevant if the sheathing board has to change.

Although each standard is looking at a particular issue relating to that product or system there can be implications on the relationships between them. You may find that on a recladding project, if the building has a sheathing board which is now deemed unsuitable due to the fire classification, and is then replaced, there may be a requirement for the inner wall to achieve say a 60 minute fire rating under BS EN 1364. If so, is there evidence to support this change?

We always work diligently to help clients identify the issues at hand and help find solutions.



benx

## A holistic approach to testing

Recladding considerations can include, wind, impact resistance, pull-out testing, structural loading on the support frame, thermal and condensation calculations, water penetration, durability of the cladding under variable climatic conditions, alternate material interface and more.

The primary testing program for insulated renders (which has multiple tests) is ETAG 004. The primary testing program for rainscreen cladding systems (which also comprises of multiple tests) is ETAG 034 Part 1 and part 2.

Many rainscreen cladding manufacturers complete part 1, which looks at the performance of the cladding panel and the support frame in isolation. However more often than not, the panel suppliers do not include the support frame assessment as part of the Agrément or third party certificate. Why not?

There could be many reasons, but it still leaves a significant gap between ensuring that the system has been assessed holistically as opposed to simply assessing the individual components in isolation.

#### Benx offers a different approach.

We are continually adding more and more fully certified solutions to our portfolio and more and more testing to support the evidential interaction between products, systems and standards.





## Recladding with confidence with Benx

#### A Dedicated Recladding Portfolio : Range + Quality

We provide a dedicated, wide ranging and tested recladding portfolio which negates the need for you to reach out to numerous component and system suppliers; this ensures that you have at your disposal a simple, responsive and reliable supply chain.

#### **Technical Expertise at your fingertips**

We aim to reduce complexity in what has become a confusing sector. Our systems are designed to ensure transparency across design and supply. At the heart of this approach is the provision of an online portal, a secure online back up of your dealings with us. Specifications technical documentation and correspondence are made available to you in real time through the Benx portal

#### **Extensive Certification: Proof of our Competence**

We operate a comprehensive testing and certification process backed by technical and design support. We believe it to be one of the most extensive and far-reaching certification and accreditation processes in the industry.

#### We are never far away.

Benx is headquartered in the centre of the UK, in close proximity to the region's primary routes. From here we can bespoke our portfolio to your specific requirements via our in-house fabrication service where we cut building boards and façades to exact sizes, thereby reducing on-site cutting time, minimising wastage and improving environmental impact. We also create our own renders and coat our own weatherboard. Furthermore we operate a branch network strategically placed close to the UK's main conurbations. This ensures that no matter where you contract is, we are never far away.

#### The Golden Thread

We believe this all-embracing approach, squarely focussed on technical competence, will provide you with a "Golden-Thread" which can link every Benx-sourced component housed deep in the cladding system all the way back to its point of manufacture. We believe that our approach to product provenance can help re-establish confidence in the recladding sector.

Benx works with many of the leading assessment bodies and test houses.







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#### Thank you for taking the time to review our Recladding with Confidence brochure. If you require any further information on our products or services, please contact us.



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