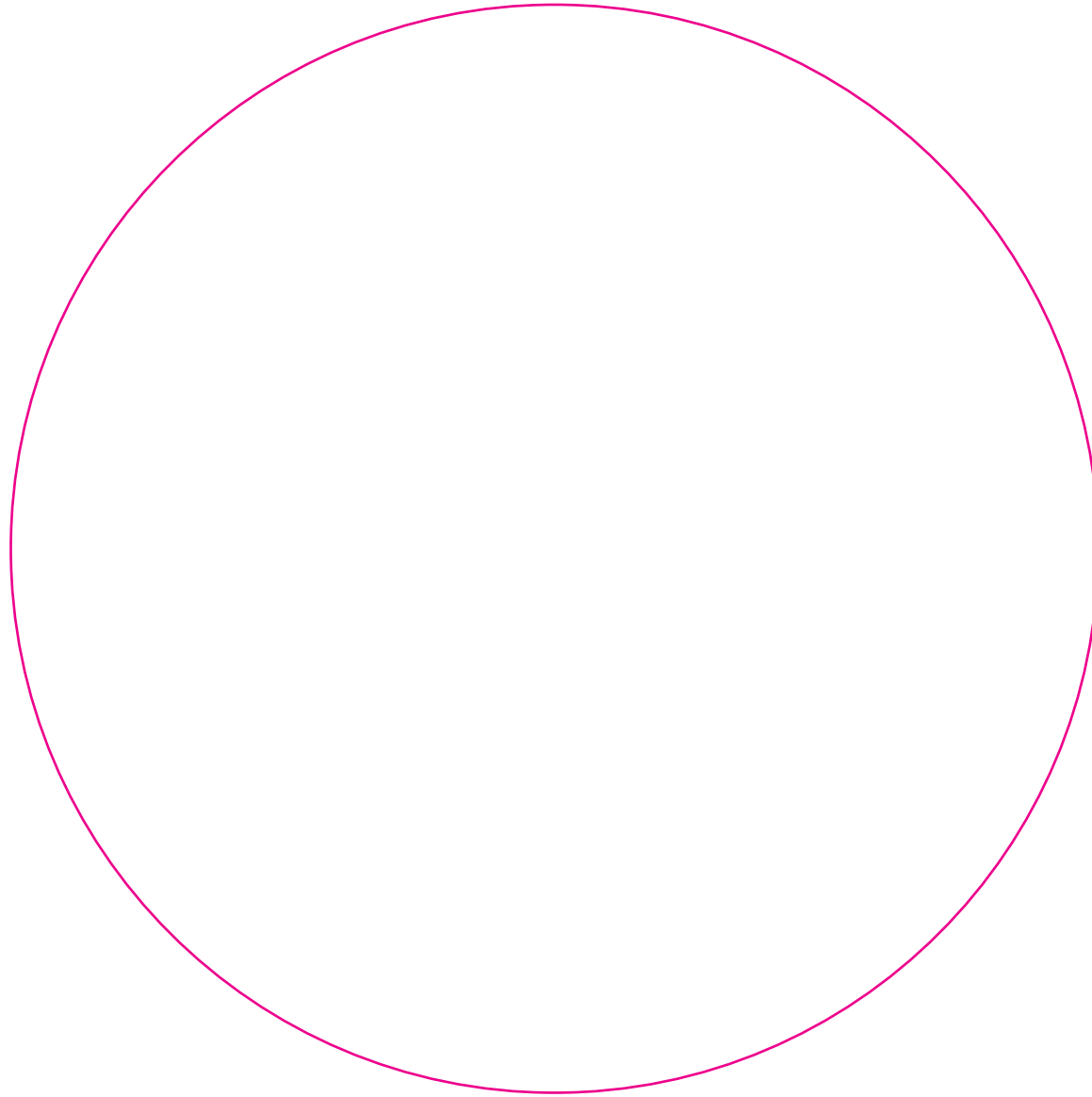


 **PROTEX**<sup>®</sup>  
VOYAGE





 **PROTEX<sup>®</sup>**  
VOYAGE

BY



**Our world needs  
things to last.**







I have always been all or nothing.

I mean – what is the point of going for something in a half-hearted fashion?

You get nowhere because there is no certainty of what you want to achieve.

The vision, for me, has always been to create an environment that empowers people to be their own character, whilst somehow all heading in the same overall direction.

If you tap into the natural but fun & loose part of people's personas, I find it is easy to build on that and things naturally develop from there.

That way the people, the ideas, the products and therefore the business are free to flow in the right direction.

There really is no going back – at all paths along this journey we are free and we have not held back.

And why should you?



**James Firth, CEO**

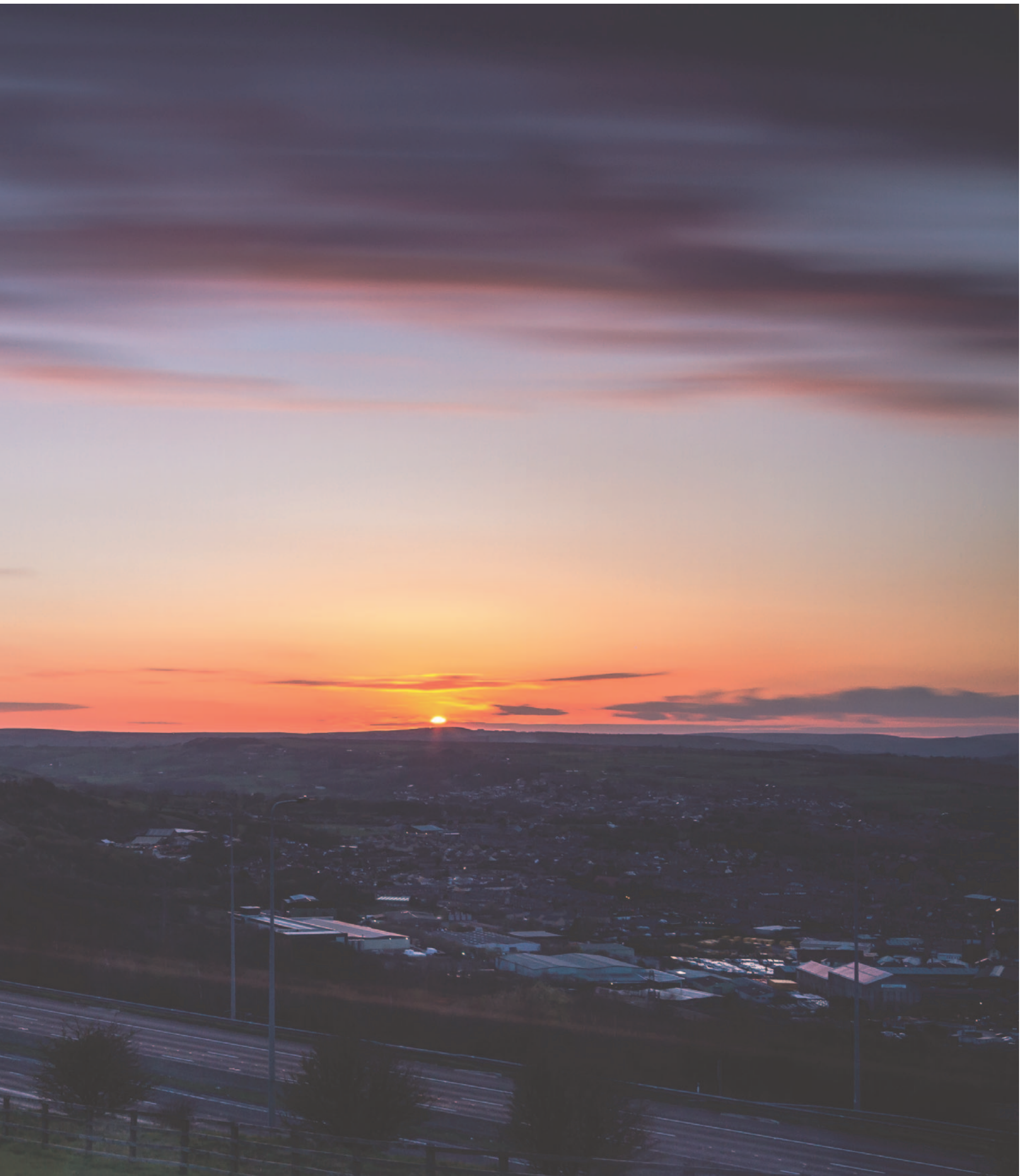
We combine innovative design with passion and soul, respecting the natural environment.

Creating unique spaces that are designed to outlive and outperform others.

Our world class steel profiles and unique built-up systems are thoughtfully crafted in Yorkshire, the home of steel.











# Our people, philosophy & values.

We are a collective of changemakers. Our focus is on our customers, but also on each other, working as a team to nurture positivity and creativity to enable us to achieve amazing things together.

**We believe** in honesty and delivering on promises.

**We are committed** to achieving excellence in everything we do.

**We work together**, support each other and recognise that each and every one of us contributes in different ways.

**We understand** that our customers are our business and are driven by providing exceptional products, services and experiences to them.

**We appreciate** that it's not just about the buildings we deliver, it's what they enable.

**We embrace** our differences and make time to have fun.

**We advocate** a proactive approach to sustainability, embracing an ethos of outset not offset.

# We are pioneers with a purpose.

## Profile Innovation

We are pioneers with a purpose. We see the beauty in making the most of the inherent natural qualities of steel to form thoughtfully designed and manufactured products.

Our steel profile range has been created and engineered to meet the specific needs of our customers, often in the construction industry, but our roll-formed products can add value across a wide range of sectors.

The speed and efficiency of our fast roll-forming techniques over pressed alternatives, the strength and lightness of our profiles, and the increasing sustainability of our products mean we can add value at every stage of the process.

## The process

01

### Research

We do our homework and seek to understand your current solutions and future requirements.

02

### Design

We carefully consider the best ways to meet your needs, and design alternatives that significantly improve upon the previous infrastructure.

03

### Develop

We assess appropriate manufacturing methods, such as roll-forming, pressing or other techniques.

04

### Solution

We work with specialist machinery manufacturers to create a bespoke solution.

# 05

## **Commission**

We install the machinery in our state-of-the-art production facility, fully tested and optimised.

# 06

## **Manufacture**

The product is manufactured in adherence with our demanding quality policy and all relevant industry standards and then shipped to its ultimate location, anywhere in the world.

# 07

## **Review**

We work with our specialist installation partners to ensure your product is expertly constructed, performing constant analysis of product performance.

# 08

## **Enhance**

We continuously examine ways in which we can improve not only your product, but the processes and services that surround it.

## **Working with you**

Our portfolio is strengthened by understanding your business. We work in partnership with you, thus able to help enhance your product performance, improve efficiency and help you to create more sustainable alternatives.

By working together, and by being innovative, we can together really make a difference.

In short, we turn our advantage into your own, allowing you to compete and perform better on design, supply, service, speed, flexibility and other efficiencies.

Over 40 years of traditional steel knowledge fully complements our new fresh engineering style – it allows us to manufacture high-end engineered products efficiently and also allows us to source the steel in the most efficient manner.

In today's ever more competitive and changing markets, Firth Steels continues to look to enhance and diversify its product and customer portfolio, by adding value in design and manufacture.

//

Our ability to provide technical support comes from a solid foundation of reliable test data.

Our ability to innovate comes from a combination of unrivalled enthusiasm and decent coffee.

//

**Sam Hopton - Head of Technical**



# We try. We learn. We perfect.

## **Manufacturing Process Design and Re-evaluation**

Our philosophy is one of continuous improvement. We constantly examine ways we can develop, streamlining our processes, enhancing our products, and investing in our people and technology.

## **World Class Manufacturing**

Located at Brighouse, West Yorkshire, our specialist manufacturing facility has been purpose-designed to ensure an efficient production flow. Close to major road, rail and port networks, we are ideally situated to ship throughout the UK and globally.

## **Collaborative Approach**

We are experts in steel profile design, manufacturing and roll-form. From buying at the right time, price and specification through to delivery, we manage every aspect with meticulous detail. We also work with specialist partners to ensure our customers needs are fully met every time.

## **Product Extension Strategies**

Using the latest technical advances in steel substrate yield, chemical composition and new sustainable external finish types in specific end use combinations ensures our product portfolio is one of the broadest in the UK today and fully expandable.

## **In House, Fully Integrated State of the Art Project and Manufacturing Systems**

Our Bespoke Technology enables an 'all in one' integrated project management, scheduling, call-off, production and delivery system which is fully flexible and automated. This MIS is designed and maintained in house which gives us the flexibility to adapt quickly to the customer and company's needs which are constantly changing, resulting in optimum efficiency combined with supply chain integration and scheduling.

## **Supply Chain and Choice**

Our choice of external finishes, colours, substrates and profiles is unrivalled in the industry. Whatever our customers need, we aim to deliver in a way that no other company can.

## **Personal Touch**

We are a family run business, and a business that values relationships. From the day we started, we have always recognised that caring for our staff and customers is the only way to operate with integrity, honesty and trust. By working in good ways, with good people, we create good things.

## **It's Our Responsibility**

What we do today will impact on future generations. We make every effort to minimise our impact on the environment, and constantly strive to find ways to be greener and leaner.

# Systems Excellence.

We take care of our customers throughout the project lifecycle and beyond. From scheduling and call-off, to production and delivery, we have an automated bespoke technology system which is profiled to their needs.

This integrated project management software is designed and maintained in-house, giving us the ability to quickly adapt to changing circumstances, and effectively manage supply chain integration and scheduling.

Our specialist integrated software system provides real time, detailed information on project status, and enables us to be responsive, flexible and customer focused.



# Firth Steels

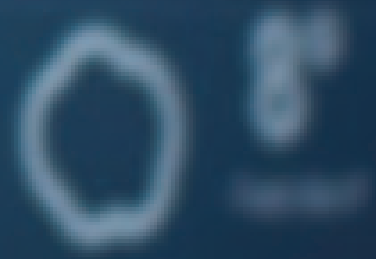
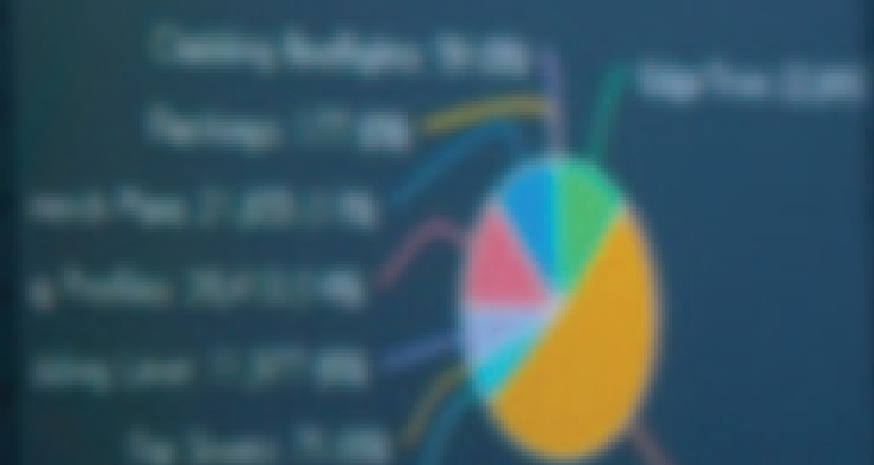
Innovators in Profiled Steel

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## LIVE CALLOFFS SUMMARY



# The only thing that matters... is everything.

## Integrated Management Systems Certification

We are committed to fulfil all relevant compliance obligations, legal and other requirements, and to continually improve the effectiveness of our fully integrated management system to maintain certification to:

BS EN ISO 9001	Quality
BS EN ISO 14001	Environmental
BS ISO 45001	Occupational Health and Safety
EN 1090-1	UKCA and CE-Marking for Structural Steel Products
BES 6001	Environmental and Sustainability – Responsible Sourcing
LPS 1181 & PN111	Fire Loss Prevention for Built-up Cladding Systems

We work closely with our supply chain partners to encourage them to adopt similar disciplines and to provide high-quality, safe, and environmentally sustainable services to enable us to fulfil our commitments to our customers.



## **Quality and Safety**

We have established an exceptional reputation for Service and Quality that is second to none. This is because of our commitment to a personal and professional approach when dealing with our clients.

From initial enquiry to project completion, our dedicated team has the knowledge and skills to ensure we understand your needs and provide solutions that work. Our products and processes are rigorously evaluated by third-party certification bodies to give you confidence that we can deliver on our promises. We safeguard the welfare of everyone on our premises by managing risk, thus minimising downtime, and maximising productivity.

## **Environment**

We are committed to the prevention of pollution and to the protection of the environment. To minimise environmental impacts, consideration is taken of the life cycle of plant and equipment and other physical assets under our control, during acquisition and disposal.

We have already begun the drive to end all fossil fuel use in our operations by replacing the existing fleet of petrol, diesel, and LPG vehicles with electric equivalents.

We minimise the environmental impact of our transport operations through efficient logistical utilisation from raw material to delivered products, by ensuring optimised delivery routes and vehicle specification.

We aim to match the entire electrical consumption of our direct operations with onsite generation from renewable sources, through a combination of solar, wind and battery storage.

## **Responsible Sourcing**

We understand that the purchasing decisions of our organisation can affect society and the environment well beyond the immediate impact of our direct operations. Responsible sourcing involves the promotion and adoption of responsible practices throughout the supply chain.

Working with our supply chain partners, we endeavour to provide product options that support our sustainability aspirations. This includes high-yield materials which allow a reduction in mass for the same performance. High-resilience materials that extend the potential service life of the installation, reducing maintenance costs and end-of-life scrap.



PlanetMark  
Certified Business

**It's a lot more  
than taking  
responsibility  
for our footprint.**

We are thrilled and very proud to announce our attainment of the Planet Mark Business Certification, reinforcing our dedication to minimising our societal footprint. This remarkable milestone reflects the collective effort of our entire organisation.

The Planet Mark Business Certification holds global recognition as a sustainability certification for organisations committed to ongoing improvement, fostering proactive measures, and cultivating a community of individuals with shared values.

To secure this certification, we navigated a rigorous three-step process: assessing our impact, involving every member of our organisation, and transparently communicating our progress.

We've gauged our carbon footprint, taking responsibility for our emissions to positively influence both the planet and society.

Our entire team at Firth played a pivotal role in our journey to becoming Planet Mark certified, and everyone remains integral to our ongoing sustainability pledge.

Our aspiration is to ensure positive change through our business operations, empowering our community to partake in climate action. We extend an invitation for you to join us in this transformative movement. Should you seek further insights into our journey, get in touch, we would love to tell you what we have learned and how we are changing.

**#DoMoreGood**



# The raw ingredients.

We see ourselves as innovators and explorers. We are open to every opportunity and we aren't afraid to go our own way. Like a Michelin starred chef, we are restless to discover the new, and roll our own path. This purpose guides everything we do, and how we do it.

The purchase of raw material is controlled by communicating our precise requirements for each coil. Our coil quality sheets define the specific material expectations and tolerances for each profile type.

All raw materials are sourced from the world's leading strip mills. All steel coils come fully certified with test certificates to 3.1 from the mill.

Our profile manufacturing tolerances are based on, and often more stringent than, the British and European Standards:

## Pre-Painted and Galvanised Strip Steel

<u>BS EN 10346</u>	<u>Yield, chemical and mechanical properties</u>
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<u>BS EN 10143</u>	<u>Tolerances on dimensions and shape</u>
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## Hot Rolled Strip Coil

<u>BS EN 10025-2</u>	<u>Yield, chemical and mechanical properties</u>
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<u>BS EN 10051</u>	<u>Tolerances on dimensions and shape</u>
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## Finished Goods

These manufactured products meet the requirements of the following British Standards:

<u>BS EN 1090-1</u>	<u>Structural Metal Floor Decks</u> <u>Structural Metal Roof Decks</u>
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<u>BS EN 14782</u>	<u>Roofing, Cladding &amp; Liner</u>
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<u>BS EN 10249-1</u>	<u>Trench Sheets</u>
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<u>BS EN 10249-2</u>	<u>Trench Sheets</u>
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## Technical Support

Our Technical department is always on hand to offer comprehensive support and guidance from initial design through the whole life cycle of the project. Our team of technical experts are only a phone call or email away, able to offer a tailored solution to your individual requirements.

- Product recommendations
- Specification assistance
- Site visits
- Product training
- BIM objects
- All our products have been tested by independent testing houses including Lucideon, SCI, WarringtonFire and BRE Global

# We don't rely on just being the best.

## Protex® Voyage System

The Protex® Voyage System offers a full 25 year system guarantee. By combining our Approved Partners knowledge and expertise with ours we can work together to ensure all technical questions are answered quickly and accurately. We are available to assist with:

- Specification guidance
- Protex® Voyage Approved
- 3D thermal calculations & thermal imaging
- Bespoke acoustic calculations
- Fire Wall design & specification

## Roofing and Wall Profiles

Our roofing and wall profile team is always available with a rich depth of knowledge to ensure the right product is selected for your building.

- External finish specification & guidance
- Technical data sheets
- Real life test results
- Installation guidance & fixing details

## Roof Decking

The SR+ roof deck range is fully supported on our analysis software enabling our technical team to offer support and guidance at any stage of a project.

- Roof deck specification
- Structural loading calculations
- Wind load calculations
- Snow load calculations



# Building a better world.

We have helped in shaping the landscape in a positive way for over 40 years. That experience has enabled us to be involved in many of the largest construction projects globally.

## Data & Distribution

Alpha 167 Omega, Warrington  
Amazon, Aylesford  
Amazon, Durham  
Amazon, Gateshead  
Amazon, Gloucester  
Amazon, Leeds  
Avon Headquarters, Northampton  
Boohoo Warehouse, Keighley  
College Trade Park, Leeds  
Egham Royal Mail DO, Wandsworth  
Exeter Logistics Park, Exeter  
M&S Distribution Centre, Bradford  
Magna Park, Warrington  
Microsoft Data Centre, Dublin  
Northern Data Centre, Wakefield  
Ocado Distribution Centre, Tamworth  
Project Fox, Leicester  
Prologis Park, Birmingham  
Prologis Park, Bradford  
Prologis Park, Dartford  
Prologis Park, Glasgow  
Prologis Park, Milton Keynes  
Sports Direct Global HQ, Mansfield

## Defence & Political

Beacon Barracks, Stafford  
Catterick Barracks, North Yorkshire  
ECHQ, Cheltenham  
HMNB Clyde, Faslane  
Normandy Barracks, Aldershot  
RAF Menwith Hill, North Yorkshire  
RAF Northolt, London  
RAF Waddington, Lincoln

## Education & The Sciences

Anderson High School, Shetland  
Avanti School, Leicester  
Elgin High School, Elgin  
Energy Centre, University of Cambridge  
Francis Crick Institute, London  
i54 Strategic Employment, Wolverhampton  
Institute of Hepatology, London  
Kirkby High School, Liverpool  
Littleport Academy, Ely  
Liverpool John Moores University  
Oban High School, Oban  
Repton School, Derby  
Royton & Crompton School, Oldham  
Science Museum, Swindon  
University of Birmingham  
University of Edinburgh  
University of Exeter  
University of Huddersfield  
University of Hull  
University of Leeds  
University of Lincoln  
University of Salford  
University of Sunderland  
University of Ulster  
University of West London  
University of Wolverhampton  
University of York

## Entertainment & The Arts

Backstage Innovation Hub, Wakefield  
BBC Television Centre, London  
Coronation Street ITV Studios, Manchester  
Glasgow Museum of Transport, Glasgow  
Great Yorkshire Showground, Harrogate  
Lyric Theatre, London  
NEC, Birmingham  
O2 Arena, London  
Paris Philharmonic, London  
Royal Shakespeare Theatre, Stratford-upon-Avon  
Shepperton Studios, London  
Space Studios, Manchester  
Warner Bros Studios, Watford  
Yorkshire Sculpture Park, Wakefield

## Export

Al Thumama Stadium, Qatar  
Dalmen City Project, Karachi  
Data Centre, Finland  
Deluxe Office, Kuwait  
Dubai Airport, Dubai  
Eversendai Tiara Twin Towers, Dubai  
Hameau de la Mer, Jersey  
Oman Museum, Oman  
Project Floyd, Geneva  
Ski Dubai, Emirates Mall, Dubai  
The Egypt Shopping Mall, Egypt  
Vice Chancellory, Jamaica

## Healthcare

Bradford Royal Infirmary  
Bristol Royal Infirmary  
Christie Hospital, Manchester  
Harrogate Hospital  
Nightingale Hospital, Sunderland  
Oldham Hospital  
Southmead Hospital, Bristol  
St Monica's Trust Retirement, Keynsham  
Tameside Hospital  
The Northumbria Specialist  
Emergency Care Hospital Royal  
University Hospital, Leeds

## Infrastructure & Travel

ABP - Immingham Docks, Immingham  
ABP - King George Docks, Hull  
Battersea Power Station, London  
Cannon Street Station, London  
Dogger Bank Phase A, South Shields  
Dogger Bank Phase B, Beverley  
Dogger Bank Phase C, Redcar  
Drax Power Station, North Yorkshire  
Edinburgh Airport, Edinburgh  
Joint Derbyshire Police & Fire Headquarters  
Kantor Energy, Atherstone  
MGT Biomass Power Plant, Middlesbrough  
New Street Station, Birmingham  
Ogmore Power, Ebbw Vale  
Project Hercules, Birmingham  
Queen Elizabeth Docks, Hull  
Rookery South Energy Recovery, Bedford  
Seaham Docks, Seaham  
Sevenside Energy Recovery, Hallen  
Southend Airport, Southend-on-Sea  
Terminal 2 & 2B, Heathrow  
Terminal 3, Heathrow  
Terminal 5, Heathrow  
URENCO, Chester  
Yorkshire Water, Leeds

## Manufacturing

Advanced Manufacturing Research Centre, Manchester  
Aerospace Boulevard, Farnborough  
Airbus Industries, Cheshire  
Aston Martin, Gaydon  
BMW, Oxford  
BMW, Swindon  
Bodleian Book Storage, Swindon  
Bunnahabhain Distillery, Isle of Islay  
Caterpillar, North Yorkshire  
Girvan Distillery, Ayrshire  
Glenfiddich Distillery, Dufftown  
Glenlivet Distillery, Ballindalloch  
Ifor Williams, Deeside  
Jaguar Land Rover, Birmingham  
Jaguar Land Rover, Castle Bromwich  
Jaguar Land Rover, Liverpool  
Jaguar Land Rover, Warwick  
Jaguar Land Rover, Wolverhampton  
John Deere, Nottinghamshire  
Leonardo Helicopters, Yeovil  
Lotus Cars, Norwich  
Networld Sports, Wrexham  
Pirelli Tyres, Carlisle  
Rolls Royce, Chichester  
Rolls Royce, Rotherham  
Scania, Newcastle  
Siemens Trains, Goole  
Symphony Group, Barnsley  
Taylors of Harrogate, Harrogate  
Toyota, Scunthorpe  
Warburtons Bread, Widness

## Office & Skyscraper

Aggreko Offices, Dumbarton  
Baby Shard, London  
DFE Offices, Darlington  
First Street, Manchester  
Forthriver Innovation Centre, Belfast  
Kirkstall Forge, Leeds  
Premier Inn, Bristol  
Premier Inn, Headingley  
Scalpel, London  
Selfridge's, London  
The Quay, Salford  
The Shard, London  
Watermark Place, London  
West Medina Mills, Isle of Wight

## Retail & Industrial Park

Audi, Cheltenham  
Birch Coppice Business Park, Tamworth  
Bristol Broadmead Shopping Centre, Bristol  
Bullring Shopping Centre, Birmingham  
Eagles Meadow Shopping Centre, Wrexham  
Eldon Square Shopping Centre, Newcastle  
Ferrari Showrooms, Swindon  
Frontier Business Park, Blackburn  
Hillthorn Business Park, Washington  
Integra 61, Durham  
Mander Shopping Centre, Wolverhampton  
Porsche, Guildford  
Porsche, West London  
Prime Point 14, Stafford  
Princesshay Shopping Centre, Exeter  
Tesla, Norwich  
The Rock, Bury  
Trinity Shopping Centre, Leeds  
Vantage 41, Aston Clinton

## Sport & Leisure

Aston Martin, Silverstone  
Carnegie Pavilion, Headingley  
Carnegie Stadium, Leeds  
Center Parcs, Woburn Forest  
Cheltenham Racecourse  
Chill Factore, Manchester  
Etihad Stadium, Manchester  
Manchester United FC, Carrington  
MK Stadium, Milton Keynes  
Molineux Stadium, Wolverhampton  
National Football Centre, Burton Upon Trent  
New Stand, Doncaster Racecourse  
New Stand, Royal Ascot Racecourse  
Oval Cricket Ground, London  
Red Bull Technology, Milton Keynes  
Riverside Stadium, Middlesbrough  
Rotherham United FC  
Saracens StoneX Stadium, London  
St James Park, Exeter  
Sunseeker Yachts, Poole Harbour  
The Olympic Media Centre  
The Olympic Stadium  
The Olympic Velodrome  
Wimbledon Centre Court, Wimbledon  
Xscape, Castleford







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The only constant in this place is change. Sometimes slowly, sometimes very rapidly, but always pushing our boundaries to expand what we consider to be achievable.

We create an environment where every individual can flourish and contribute to our common goal – applying our strengths to fulfil our customers' requirements and the needs of our stakeholders.

We never stand still, unless it's to look back at how far we have come!

**Edmund Reed - Quality Manager**

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We understand that the journey to success is not a destination, but a continuous pursuit of excellence. With our focus on quality and service, we are forging ahead towards a bright future, where we will continue to exceed expectations and leave a lasting impact on the world.

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**Harry Priestley - Area Sales Manager, North West**





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I was asked for a quote for this page, I can give you a thousand tonnes of perfectly rolled steel faster.

Steve Booth - Operations Director

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PR  
vo

# PROTEX<sup>®</sup> VOYAGE

Complete low embodied carbon building envelope, uniquely designed, fully guaranteed.

The Protex<sup>®</sup> Voyage System is designed to be different.







How your building works is up to you. We're here to offer expertise, advice and choice. We go way beyond steel profiles, giving you the ability to select a range of elements to construct your ideal environment.

Protex® Voyage enables you to customise your low embodied carbon building envelope to offer project specific design and performance enhancements.

From the ground up, we're here to help you work with approved suppliers to achieve your ultimate specification, on time and on budget, making it easier for you and kinder on the planet.

**A legacy that  
has changed  
people's lives.**

At Firth Steels we believe in going beyond, it's a really big statement but it's always grounded in the things we do. We push ourselves and our steel products further to ensure they protect, enhance and enable.

From breakthroughs in science, the euphoria of a stadium concert to the world's largest distribution centres, our products, our systems and our people go way beyond steel.

**Every building tells a different story.**





## Siemens Train Manufacturing Facility

Client: Siemens Mobility  
Architect: AHR Architects Ltd  
Contractor: GMI Construction  
Location: Goole  
Floor area: 250,000 sq ft

Phase 1 of Siemens Mobility state-of-the-art train manufacturing site incorporated both a brand new train manufacturing plant and also supply chain rail village in Goole, East Yorkshire.

New Piccadilly line tube and future main line trains are to be built on Humberside with future plans to provide rolling stock for HS2. The scale to accommodate a large facility and, crucially, ready access to the skilled workforce needed to build and operate the factory – these are two decisive reasons why Siemens chose Goole in East Yorkshire as the site for a new rail factory.







## Net World Sports HQ

Client: Net World Sports  
Architect: C4 Architects  
Contractor: Portal Construction NW Ltd  
Location: Wrexham  
Floor area: 411,000 sq ft

The vision of Net World Sports to create a world class, modern workplace that looks great and can accommodate the rapid growth and ambitions of the business, has been achieved with the creation of the new HQ.

Coming from humble beginnings, the new 411,000 sq ft manufacturing, warehouse and office has been built just over a mile from the current site in Wrexham offering an onsite restaurant, bar, running track, tennis court, football pitch and gym.









## Helicopter Manufacturer Hub

Client: Leonardo Helicopters  
Architect: UMC Architects  
Contractor: GMI Construction  
Location: Yeovil  
Floor area: 215,000 sq ft

The new logistics hub will help support Leonardo Helicopters' global fleet through the warehousing of components and tooling in this state-of-the-art facility. The project enabled the consolidation of eight existing warehouses into one all-encompassing logistics hub.

Sustainability is at the heart of this development with its high-end technologies. The brand new hub will be equipped with rainwater harvesting tanks for grey water services, LED lighting throughout the facility and a heat recovery system that will be used in the main warehouse to complement the modern office temperature control system.







## Exeter Logistic Park

Client: Amazon / DHL / Forgeway  
Architect: AJA Architects  
Contractor: ISG Construction Ltd  
Location: Exeter  
Floor area: 173,500 sq ft

Exeter Logistics Park is located off the M5 close to Exeter Airport. Phase 1 consists of a distribution unit for Amazon of 90,000 sq ft, a 55,000 sq ft parcel distribution centre with integral office space on behalf of an end user and 28,500 sq ft unit developed for Forgeway.

Each unit has been designed to offer a BREEAM 'Very Good' rating, Net Carbon Zero and the inclusion of Photovoltaic Panels within the roof design. The inclusion of Water & Daylight saving control, Electric Vehicle Charging and an EPC A Rating have looked to future-proof the site.







## Hillthorn Business Park

Client: Legal & General Investment,  
Sunderland City Council  
Architect: Hale Architecture Ltd  
Contractor: GMI Construction  
Location: Sunderland  
Floor area: 600,000 sq ft

Designed to support the needs of industrial, advanced manufacturing, storage and distribution businesses in the area and aid economic growth, the £60million development site will complement the International Advanced Manufacturing Park and Turbine Business Park.

The 600,000 sq ft development, incorporating sustainable building technology is the North East's largest speculative industrial scheme in over a decade. The first phase of the £60m Sunderland development has brought 1,600 jobs to the North East.







## BMW MINI Manufacturing Plant

Client: BMW Mini  
Architect: BCR Infinity Architects  
Contractor: Glencar Construction  
Location: Oxford  
Floor area: 50,000 sq ft

BMW, the German car manufacturer combined with investment through the Government Automotive Transformation Fund has invested hundreds of millions of pounds into the BMW MINI Oxford plant, securing future production of the iconic MINI in Britain.

The plant plays a key role in BMW Group's global production network, producing for both BMW and MINI, including engines for some of the latest plug-in hybrid vehicles. More than one finished engine leaves the production line every minute, and more than a million components are machined at the plant each year.



**Control  
changes  
everything.**



We work with industry leading partners to create a site assembled system from a catalogue of verified, tested and approved components. Our carefully curated directory of Protex® Voyage Approved Suppliers and their specific product ranges, provides excellent customer service and specialist technical support. We will collectively work with the design team through to the site team to ensure the project runs efficiently throughout its life span.

Each component within the system can be uniquely specified to suit the individual projects requirements. Sustainability, fire, thermal and acoustic performance combined with a buildings use, location and surrounding environment will all impact the projects design requirements.

The ability for the contractor to maintain established relationships with trusted organisations, ensures a competitive edge and improved efficiency on site.



# Guaranteed Performance.



### Specification Benefits

- Extensive range of external building finishes including embossed, smooth & metallic options
- Low embodied carbon steel
- Suitable for use in aggressive environments
- A1 rated non-combustible finishes
- Bespoke brand colour matches
- Non-fragile Liner Profile options
- Configurations suitable for barrel vault roofs

### Technical Benefits

- Comprehensive site audits during installation
- Dedicated technical support team
- Bespoke project calculations
  - Thermal
  - Acoustic
  - Air Leakage

### Performance Benefits

- U-Values down to 0.1W/m<sup>2</sup>K
- Significantly reduced GWP figures
- Low air leakage as standard
- Enhanced cranked ridge detail available
- Specialist acoustic systems available incorporating perforated profiles
- Specially designed and tested Fire Wall Systems
- LPCB (Loss Prevention Certification Board) Certification

# Together we can go so far.

The integration of industry leading suppliers into the Protex<sup>®</sup> family has enabled the creation of the Protex<sup>®</sup> Approved Scheme. With the combined expertise, customer service, and specialist products and manufacturing capabilities, Protex<sup>®</sup> Approved aims to provide a solution for every building envelope.

**Approved through constant assessment and accreditation.**



Protex® Approved aims to educate and encourage best practices across all aspects of the Protex® System. Working throughout the project team, from specification and design through to Main Contractor and Installation Teams, Protex® Approved aims to ensure each and every project is designed and installed to last.

## Approved Contractors

- Contractors sign up to our Protex® Contractors code of practice
- Protex® training can be provided to both Office & Site teams
- Comprehensive site audits are carried out on all Protex® projects

## Approved Suppliers

- Suppliers sign up to our Protex® Suppliers code of practice
- Industry leading suppliers
- Cutting edge components
- Competitive edge on supply
- Individual product warranties provided
- Full technical support
- Excellent customer service

## Approved Fabricators

- Fabricators sign up to our Protex® Fabricator code of practice
- All fabricated items raw material sourced through Firth Steels
- Ensure Quality & Performance match
- Ensure colour consistency
- Competitive edge
- Regular facility and finished goods inspections

# We take safety very seriously.

The Protex® Systems have been tested and certified by world leading testing houses including Warrington Fire, BRE Global and to Loss Prevention Certification Board (LPCB). The internationally respected Loss Prevention Standards known as LPS gives confidence that the systems comply with the LPC Design guide for the external fire protection of buildings.



LPS 1181: Issue 1.2  
Cert/LPCB ref. 1611a

**RedBookLive**

## LPCB – Loss Prevention Certification Board

The LPS1181 Series of standards were developed by key stakeholders including ABI (Association of British Insurers), developers, building owners and trade associations for the purpose of property protection. The Protex® Systems have been tested and certified to the standard LPS1181 Part 1: Issue 1.2 – Series of Fire Growth Tests for LPCB Approval and Listing of Construction Product Systems. Part 1: Requirements and Tests for Built-up Cladding and Sandwich Panel Systems for use as the External Envelope of Buildings.

The Protex® PRX-RS® Roof Systems and PRX-WS® Wall Systems are certified and listed on Red Book Live. Certification to LPS1181-1 Grade EXT-B can be specified utilising approved components from our enhanced range of approved suppliers.

## RedBook Live

The LPCB Red Book is a key reference for specifiers, regulators, designers and end users of fire and security products and services. For systems to be listed in the Red Book they require independent experts to robustly check that it delivers and will continue to deliver the performance expected.

The Protex® Systems certification and documentation can be found via the RedBook Live website through certificate number 1611a.


www.redbooklive.com

### Certificate of Product Approval

Certificate Number: 1611a      Issue: 01



**FIRTH STEELS LIMITED**

Calderbank  
River Street  
Brighouse  
HD6 1LU

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirements of the standard(s) as detailed below:

**Products**

**Built-Up Cladding**  
Protex ® Roof System PRX-RS  
Protex ® Wall System PRX-WS

**Standards**

**LPS 1181 Part 1: Issue 1.2**  
Series of Fire Growth Tests for LPCB Approval and Listing of Construction Product Systems. Part 1: Requirements and Tests for Built-up Cladding and Sandwich Panel Systems for use as the External Envelope of Buildings.

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

  
 Signed for BRE Global Ltd.

Vida Gaubsaite  
 Certification Scheme Manager

13 January 2021  
 Date of Issue

13 January 2021  
 Date of First Issue




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BF1305 Rev. 1.0
Page 1 of 3
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# The Ultimate in External Finishes.





Mission XP40R®  
GreenCoat® Pural BT Zero

Further external finishes available

## **Steel Reborn®**

We do not engage in the balancing allocation of emission reduction or emission offsetting activities as a solution to achieve Net Zero, we believe this needs to be tackled from the outset. Outset not Offset. The use of Electric Arc Furnace (EAF) technology in the manufacture of steel utilises scrap steel combined with heat generated from an electric arc between electrodes. This method of manufacturing steel can remove up to 99.9% of the carbon emissions typically generated during production, turning waste material into new material. In essence, it is Steel Reborn®.

**Our Steel Reborn® product range is the cornerstone of the Protex® Voyage System.**

The Voyage System offers an EAF based alternative for the internal and external profiled sheets which can significantly reduce the embodied carbon within a project.

## **Mission XP40R®**

Mission XP40R® is the latest upgrade within our Steel Reborn® range. XP40R® utilises Electric Arc Furnace Technology within the manufacture of the substrate to reduce the GWP figure for the product by 60%. The performance and specification of the recycled steel substrate remains identical to the typical blast furnace steel used within the standard XP40® product along with an identical coating specification. To ensure XP40R® is controlled through the life of the project, the external embossment has been updated to include the new Steel Reborn® R logo.

## **GreenCoat® by SSAB**

Our collaboration with SSAB Swedish Steel began over a decade ago, initially with SSAB Dobel as a key supplier of polyesters and plastisol products in the UK market. SSAB subsequently rebranded their coated products for the building envelope into the GreenCoat® range, marking a significant shift away from plastisol-based products towards more sustainable paint systems. Utilising a substantial portion of Swedish rapeseed oil instead of fossil oil, their patented Bio-based Technology (BT) coating represents a pioneering solution in the market, tailored for exterior building applications including roof and wall systems.

## **GreenCoat® Pural BT Zero**

Our enduring partnership with SSAB has positioned Firth Steels as the UK's exclusive metal building envelope supplier of SSAB Zero. SSAB Zero denotes steel manufactured from 100% recycled steel, produced using Electric Arc Furnaces (EAF) powered 100% by renewable energy sources. The scope 1 & 2 emissions for the steel substrate are reduced to world leading 0kgCO<sub>2</sub>e. The painting/coating process for GreenCoat® Pural BT is expected to add a maximum of 800kgCO<sub>2</sub>e/tonne, representing a reduction of over 70% from UK norms. Ongoing development is pushing the boundaries to reduce this further.

Our deep-rooted partnerships with the world's leading mills enables us to ensure we have the most advanced external finishes range available on the market to satisfy your low embodied carbon building envelope needs.

### Specification & performance

	<u>Mission XP40R®</u>	<u>GreenCoat® Pural BT Zero</u>
Product use	External Roof & Wall Profiles	External Roof & Wall Profiles
Guarantee period	Headline 40 Years	Headline 40 Years
Coating type	200 Micron Plastisol	50 Micron Polyurethane
Surface finish	Steon® Embossment	Smooth / Structured
Colour pallet	Standard	Standard, Metallic & Matt
Corrosion Resistance Category (EN 10169)	RC5+	RC5+
UV Resistance Category (EN 10169)	RUV4	RUV4-5
Reaction to Fire Classification - EN13501-1	C-S2,d0	A1
Steel Type	Electric Arc Furnace	Electric Arc Furnace

\*Warranty subject to application and approval.

Our mission is to create the worlds most innovative, protective, most attractive and waste reducing coated steel whilst offering a low embodied carbon solution.

# MISSION XP40R®

From distribution and logistics centres housing millions of products to business parks and manufacturing facilities offering safe and productive environments.

Mission XP40R® has been created to offer ultimate corrosion resistance and colour protection for the entire building envelope.

Mission XP40R® has taken years of innovation, thousands of hours of work and a drive to reduce the waste created by replacing roof and wall systems that are not built to last.

By utilising Electric Arc Furnace technology during the manufacture of the substrate, Mission XP40R® can significantly reduce the embodied carbon within the building envelope without effecting the performance of the external coating.

## SteonR®

Ultimate looks designed to outperform

With our latest SteonR® emboss, Mission XP40R® is controlled through the life of the project. The updated embossment acts a physical differentiator offering proof that XP40R® is manufactured from low embodied carbon from the outset.



# Mission XP40R<sup>®</sup>

XP40R<sup>®</sup> utilises Electric Arc Furnace technology in the manufacture of the steel substrate, significantly reducing the GWP for the product. The upgrade to EAF technology is a change in process, not a change in product therefore the technical and performance characteristics of the product are identical to standard XP40<sup>®</sup>.

## Colour Range

Extensive Colour Range  
Bespoke Colour Match Available\*\*

## Usage

External Profiles  
Flashings & Fabrications  
Flat Sheets

## Coating Specification



Coating Type  
Coating Warranty  
Material Thickness  
Coating Thickness  
Backing Coat Thickness  
Gloss Level  
Appearance / Embossment  
Zinc Coating  
Steel Grade  
Maximum Operating Temperature

## Test standard

High Performance  
40 years\*\*  
0.5mm / 0.7mm  
EN 13523-1  
EN 13523-1  
EN 13523-2  
200 Micron Plastisol  
7 Microns Backing Coat  
10-35GU  
SteonR<sup>®</sup> Embossment  
ZM180 GIX  
S280  
80°C

## Coating Performance

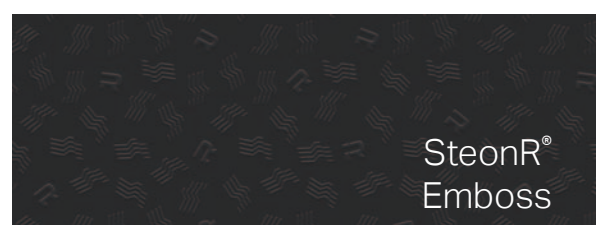
Corrosion Resistance Category  
UV Resistance  
European Fire Classification  
Adhesion Cross Harch  
Adhesion of coating (T-bend)  
Salt Spray Test  
Scratch Resistance  
Abrasion Resistance  
Humidity Resistance

## Test standard

EN 10169  
EN 10169  
EN 13501-1  
EN 13523-6  
EN 13523-7  
EN 13523-8  
EN 13523-12  
EN 13523-16  
EN 13523-25

## Coating Performance

RC5  
RUV4  
C, s2, d0  
100%  
0T (16°C) 1T (0°C)  
1000 Hours  
7kg  
<7mg  
1500 Hours



# 8 reasons to use GreenCoat®

## **Unique combination of steel and external finish**

GreenCoat® products have SSAB Nordic quality steel in the substrate, which is recognised worldwide as one of the best steels available on the market. All of our coatings have excellent technical properties. On top, most GreenCoat® products have a patented, Bio-based Technology (BT) coating using Swedish rapeseed oil instead of traditional fossil fuel oil.

## **Leading, patented technology using Swedish rapeseed oil**

Most of the GreenCoat® products feature a Bio-based Technology (BT) coating with a substantial portion of the traditional fossil oil replaced by Swedish rapeseed oil – a patented SSAB technology – making them the only coatings on the market with a high bio-renewable content. All of our products are of course fully compliant with the REACH regulations. These benefits reduce environmental impact and allow for greener living.

## **Long lasting, superior surface for any weather**

GreenCoat® products provide high colour retention and long lasting finishes that resist rust, white rust and UV radiation as well as scratches and the build-up of dirt, for reduced maintenance.

## **Wide colour offering**

GreenCoat® is available in a wide range of vibrant colours and exclusive finishes, with custom colours available.

## **Colour repeatability**

GreenCoat® products offer coatings with tight colour tolerances ensuring batch-to-batch colour consistency

## **Rigorous outdoor testing**

Over 40 years of extensive outdoor testing at sites located worldwide ensure that GreenCoat® products withstand the harshest weather conditions like wind, rain, snow, saltwater, ice, UV radiation, high humidity and storms. Ensuring quality through real outdoor testing is a priority for SSAB and, therefore, we go far beyond what is required by the EU regulations.

## **The cleanest steel**

GreenCoat® products are made from Nordic quality steels that are among the cleanest in the world with the tightest tolerances and best consistency.

## **Guaranteed performance**

GreenCoat® products all come with extensive performance and finish guarantees.

# GreenCoat® Pural BT Zero

SSAB Zero denotes steel manufactured from 100% recycled steel, produced using Electric Arc Furnaces (EAF) powered 100% by renewable energy sources. The scope 1 & 2 emissions for the steel substrate are reduced to world leading 0kgCO<sub>2</sub>e. The Pural BT Coating is the latest generation of paint systems offering an A1 Fire Classification, suitable for use on both roof and wall systems.

## Colour Range

Extensive Colour Range  
Bespoke Colour Match Available\*\*

## Usage

External Profiles  
Internal Profiles  
Flashings & Fabrications  
Flat Sheets  
  
Temporary Film Protection (Optional) Available

## Coating Specification



	Test standard	
Coating Supplier		SSAB Swedish Steel
Coating Type		GreenCoat® Pural BT Zero
Coating Warranty		40 Years
Material Thickness	EN 13523-1	0.5mm/0.7mm
Coating Thickness	EN 13523-1	50 Microns
Backing Coat Thickness	EN 13523-2	12 Microns
Gloss Level		0-40GU
Appearance / Embossment		Smooth Finish
Zinc Coating		Z275
Steel Grade		S280
Maximum Operating Temperature		100 Degrees

## Coating Performance

	Test standard	Coating Performance
Corrosion Resistance Category	EN 10169	RC5+
UV Resistance	EN 10169	RUV4 / RUV5
European Fire Classification	EN 13501-1	A1
Adhesion of coating (T-bend)	EN 13523-7	≤ 1 T
Resistance to cracking on bending (T-bend)	EN 13523-7	≤ 1 T
Scratch Resistance	EN 13523-12	40N



\*Warranty is available up to 40 years. Terms and conditions apply.

\*\*Subject to Quantities

# Colour has the power to transform our landscape.

Established colours such as the ever reliable Goosewing Grey and other well-known colours are the foundation of our industry. These mainstream industry colours on occasion give way to the bold, evolved colour range.

The evolved colour range allows for bespoke designs to be considered and supplied with ease. Our strong partnership with our suppliers ensures that no project is out of our reach from a bespoke colour perspective including finishes, guaranteeing technical assurance on performance and quality. It is possible to match to any RAL colour required including metallic finishes.







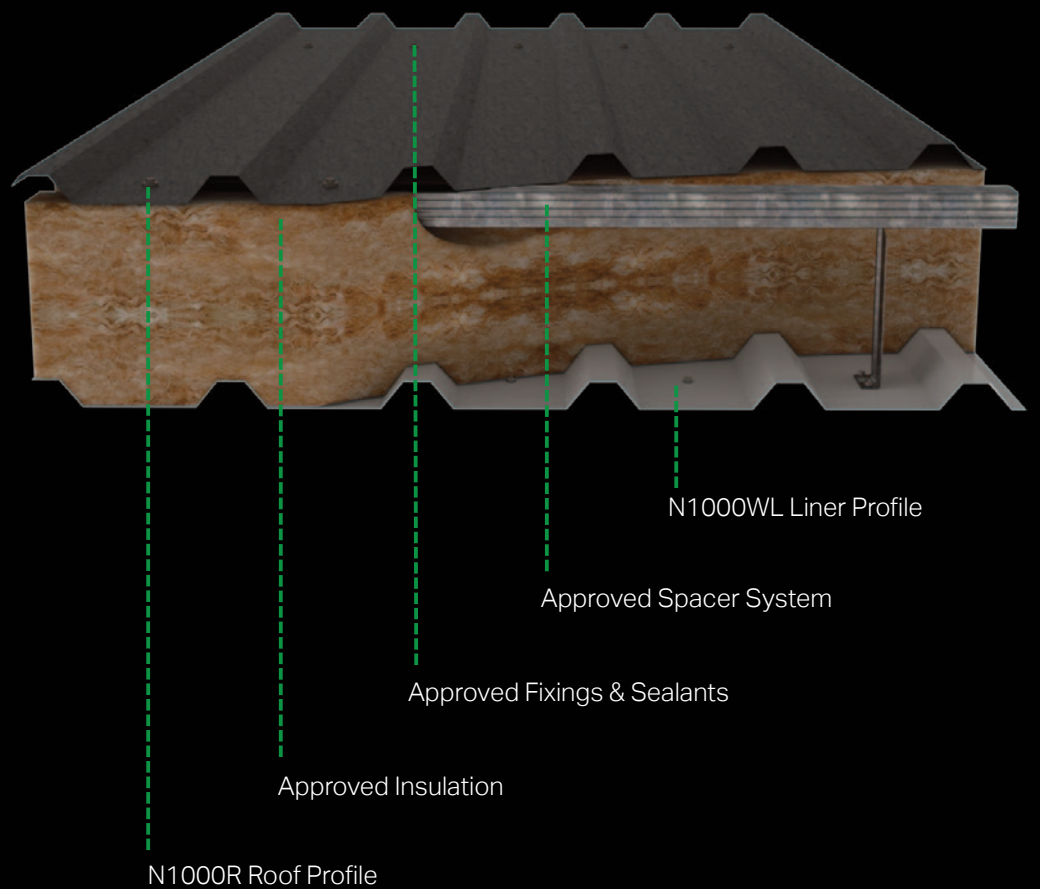
**Build  
your  
system.**

## PRX-RS<sup>®</sup>-01 System Benefits

- 25 Year Full System Guarantee
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- Specifications available for use under PV & Safety Line Systems<sup>#</sup>
- Class B - Non-fragile N1000WL Liner Profile
- Suitable for Roof Pitch down to 4 Degrees
- Suitable for barrel vault roof
- Enhanced curved ridge detail available
- Building Regulations Compliant

## Protex<sup>®</sup> System Benefits

- Protex<sup>®</sup> Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex<sup>®</sup> Approved Fabricator network
- Industry leading Protex<sup>®</sup> Approved supply network



External Profile:  
N1000R Roof Profile



Liner Profile:  
N1000WL Liner Profile



# Protex<sup>®</sup> Roof System 01

The **PRX-RS<sup>®</sup>-01** offers a tailor-made built up roof system combining high performance external finishes, A1 Non-combustible Insulation and a Walkable Liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth and design can be configured to meet the project specific thermal, acoustic, air tightness and fire performance with enhanced system's available.

The external N1000R Roof Profile can be specified in a range of high performance external finishes, offering external finish warranty periods up to 40 years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes.

The N1000WL Walkable Liner profile offers a Class B non-fragile working platform when fully fitted, reducing installation times on site. The N1000WL Profile is available in Bright White as standard and combined with a crank curved ridge detail can offer reductions in air permeability.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
150	120	0.39	33	15.8
170	140	0.33	34	16.0
190	160	0.28	36	16.3
210	180	0.25	37	16.5
230	200	0.22	39	16.8
250	220	0.20	40	17.1
270	240	0.18	42	17.3
290	260	0.18	43	17.6
310	280	0.16	45	17.8
330	300	0.15	46	18.1
350	320	0.14	47	18.4
370	340	0.13	49	18.6
390	360	0.13	50	18.9
410	380	0.12	51	19.1
430	400	0.11	53	19.4

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 1800mm Rail Centres & 1000mm Bracket Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

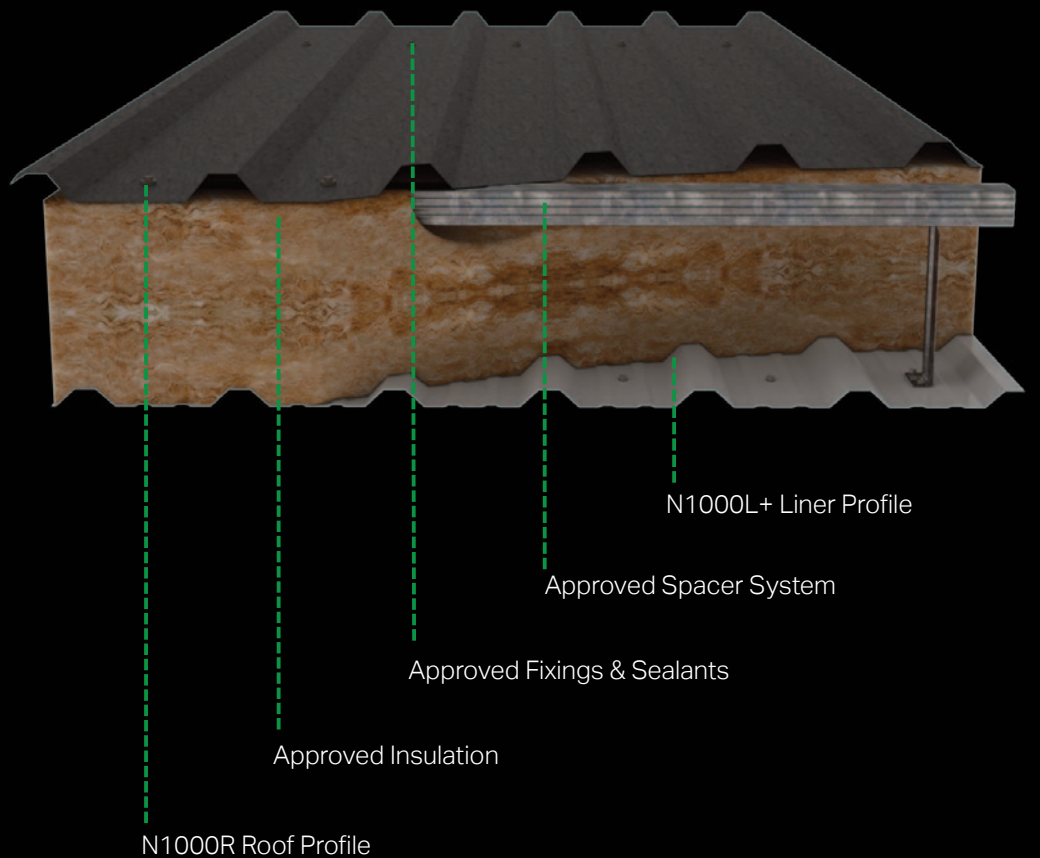
External Finish	Spacer System	Insulation (A1)	Fixings	Sealants	Roof Lights
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl	Brett Martin
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal	Hambleside Danelaw
		Superglass	Fixfast		Filon Products
		Isover	Fixing Point		

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

\*Subject to specification, application & approval

## PRX-RS<sup>®</sup>-02 System Benefits

- 25 Year Full System Guarantee
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- Specifications available for use under PV & Safety Line Systems<sup>#</sup>
- Economic N1000L+ Liner Profile
- Suitable for Roof Pitch down to 4 Degrees
- Suitable for barrel vault roof
- Enhanced curved ridge detail available
- Building Regulations Compliant



## Protex<sup>®</sup> System Benefits

- Protex<sup>®</sup> Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex<sup>®</sup> Approved Fabricator network
- Industry leading Protex<sup>®</sup> Approved supply network

### External Profile:

N1000R Roof Profile



### Liner Profile:

N1000L+ Liner Profile



# Protex<sup>®</sup> Roof System 02

The **PRX-RS<sup>®</sup>-02** offers a tailor-made built up roof system combining high performance external finishes, A1 Non-combustible Insulation and an economical Liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth and design can be configured to meet the project specific thermal, acoustic, air tightness and fire performance with enhanced system's available.

The external N1000R Roof Profile can be specified in a range of high performance external finishes, offering external finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes.

The N1000L+ Liner profile offers an economical solution incorporating a 19mm light weight profile into the system. The N1000L+ Profile is available in Bright White as standard and combined with a crank curved ridge detail can offer reductions in air permeability.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
150	120	0.36	41	12.6
170	140	0.31	43	12.8
190	160	0.27	44	13.1
210	180	0.24	46	13.3
230	200	0.22	47	13.6
250	220	0.20	48	13.9
270	240	0.18	49	14.1
290	260	0.17	50	14.4
310	280	0.15	51	14.6
330	300	0.15	52	14.9
350	320	0.14	53	15.2
370	340	0.13	54	15.4
390	360	0.12	55	15.7
410	380	0.12	55	15.9
430	400	0.11	56	16.2

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 1800mm Rail Centres & 1000mm Bracket Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

External Finish	Spacer System	Insulation (A1)	Fixings	Sealants	Roof Lights
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl	Brett Martin
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal	Hambleside Danelaw
		Superglass	Fixfast		Filon Products
		Isover	Fixing Point		

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

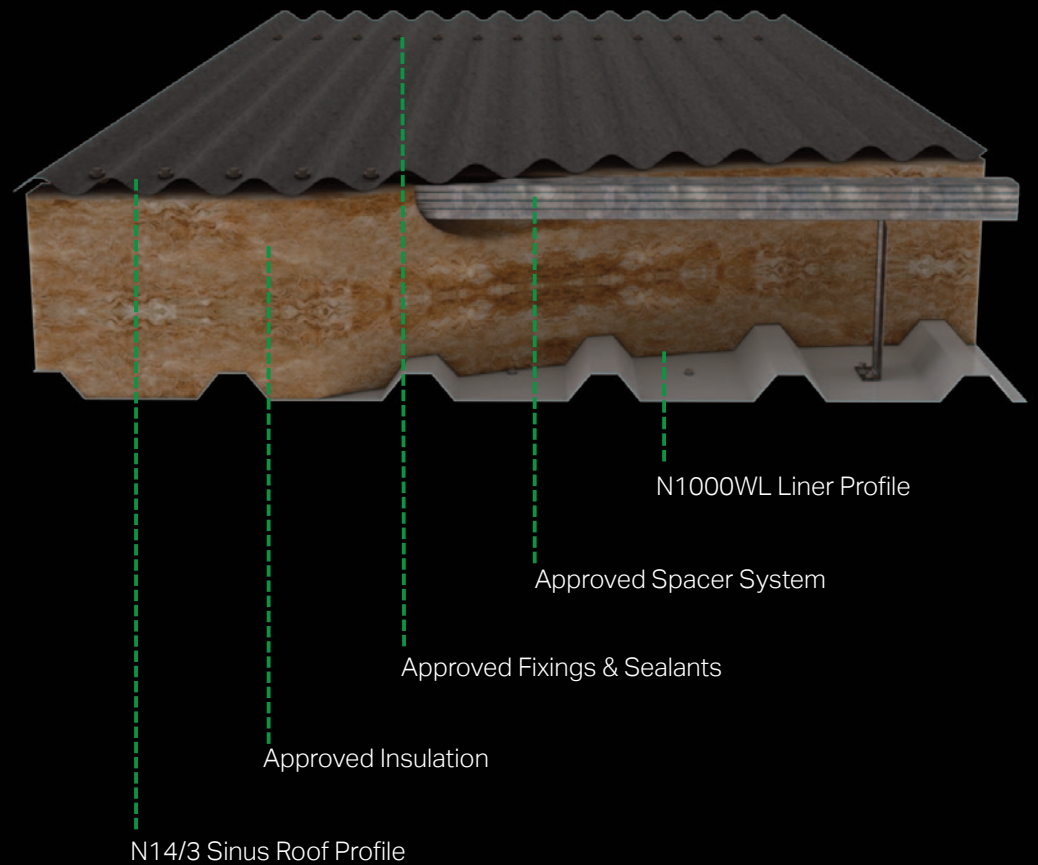
\*Subject to specification, application & approval

## PRX-RS® -03 System Benefits

- 25 Year Full System Guarantee
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- Specifications available for use under PV & Safety Line Systems#
- Class B - Non-fragile N1000WL Liner Profile
- Suitable for Roof Pitch down to 4 Degrees
- Enhanced curved ridge detail available
- Building Regulations Compliant

## Protex® System Benefits

- Protex® Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex® Approved Fabricator network
- Industry leading Protex® Approved supply network



### External Profile:

N14/3 Sinus Roof Profile



### Liner Profile:

N1000WL Liner Profile





# Protex<sup>®</sup> Roof System 03

The **PRX-RS<sup>®</sup>-03** offers a tailor-made built up roof system combining high performance external finishes, A1 Non-combustible Insulation and a Walkable Liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth and design can be configured to meet the project specific thermal, acoustic, air tightness and fire performance with enhanced system's available.

The external N14/3 Sinus Roof Profile can be specified in a range of high performance external finishes, offering external finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes.

The N1000WL Walkable Liner profile offers a Class B non-fragile working platform when fully fitted, reducing installation times on site. The N1000WL Profile is available in Bright White as standard and combined with a crank curved ridge detail can offer reductions in air permeability.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
139	120	0.39	49	15.8
159	140	0.32	51	16.0
179	160	0.28	52	16.3
199	180	0.25	53	16.5
219	200	0.22	54	16.8
239	220	0.20	55	17.1
259	240	0.18	56	17.3
279	260	0.18	57	17.6
299	280	0.16	58	17.8
319	300	0.15	59	18.1
339	320	0.14	60	18.4
359	340	0.13	61	18.6
379	360	0.13	62	18.9
399	380	0.12	62	19.1
419	400	0.11	63	19.4

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 1800mm Rail Centres & 1000mm Bracket Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

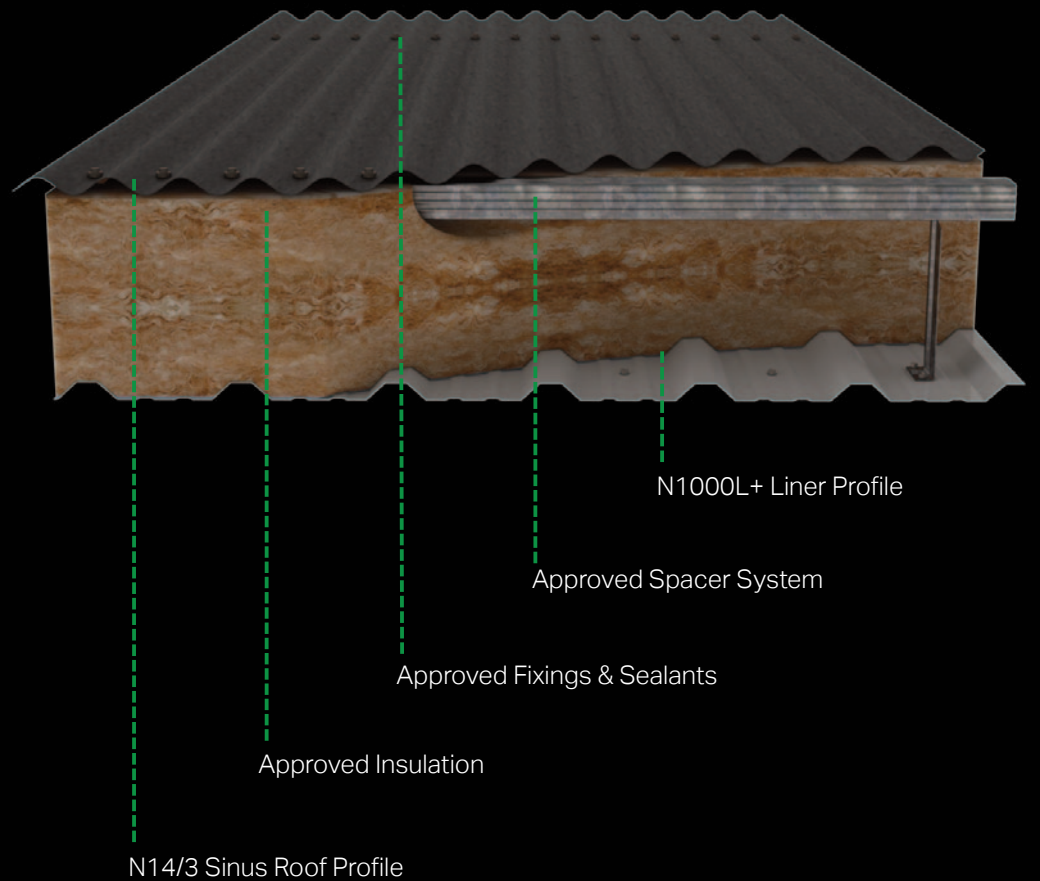
External Finish	Spacer System	Insulation (A1)	Fixings	Sealants	Roof Lights
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl	Brett Martin
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal	Hambleside Danelaw
		Superglass	Fixfast		Filon Products
		Isover	Fixing Point		

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

\*Subject to specification, application & approval

## PRX-RS<sup>®</sup>-04 System Benefits

- 25 Year Full System Guarantee
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- Specifications available for use under PV & Safety Line Systems<sup>#</sup>
- Economic N1000L+ Liner Profile
- Suitable for Roof Pitch down to 4 Degrees
- Enhanced curved ridge detail available
- Building Regulations Compliant



## Protex<sup>®</sup> System Benefits

- Protex<sup>®</sup> Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex<sup>®</sup> Approved Fabricator network
- Industry leading Protex<sup>®</sup> Approved supply network

External Profile:  
N14/3 Sinus Roof Profile



Liner Profile:  
N1000L+ Liner Profile



# Protex<sup>®</sup> Roof System 04

The **PRX-RS<sup>®</sup>-04** offers a tailor-made built up roof system combining high performance external finishes, A1 Non-combustible Insulation and an economical Liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth and design can be configured to meet the project specific thermal, acoustic, air tightness and fire performance with enhanced system's available.

The external N14/3 Sinus Roof Profile can be specified in a range of high performance external finishes, offering external finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes.

The N1000L+ Liner profile offers an economical solution incorporating a 19mm light weight profile into the system. The N1000L+ Profile is available in Bright White as standard and combined with a crank curved ridge detail can offer reductions in air permeability.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
139	120	0.36	38	12.6
159	140	0.31	40	12.8
179	160	0.27	42	13.1
199	180	0.24	44	13.3
219	200	0.21	46	13.6
239	220	0.19	47	13.9
259	240	0.18	49	14.1
279	260	0.17	50	14.4
299	280	0.15	51	14.6
319	300	0.15	52	14.9
339	320	0.14	53	15.2
359	340	0.13	55	15.4
379	360	0.12	56	15.7
399	380	0.12	57	15.9
419	400	0.11	58	16.2

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 1800mm Rail Centres & 1000mm Bracket Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connection.

## Protex<sup>®</sup> Approved Components

External Finish	Spacer System	Insulation (A1)	Fixings	Sealants	Roof Lights
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl	Brett Martin
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal	Hambleside Danelaw
		Superglass	Fixfast		Filon Products
		Isover	Fixing Point		

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

\*Subject to specification, application & approval

## PRX-WS<sup>®</sup>-01 System Benefits

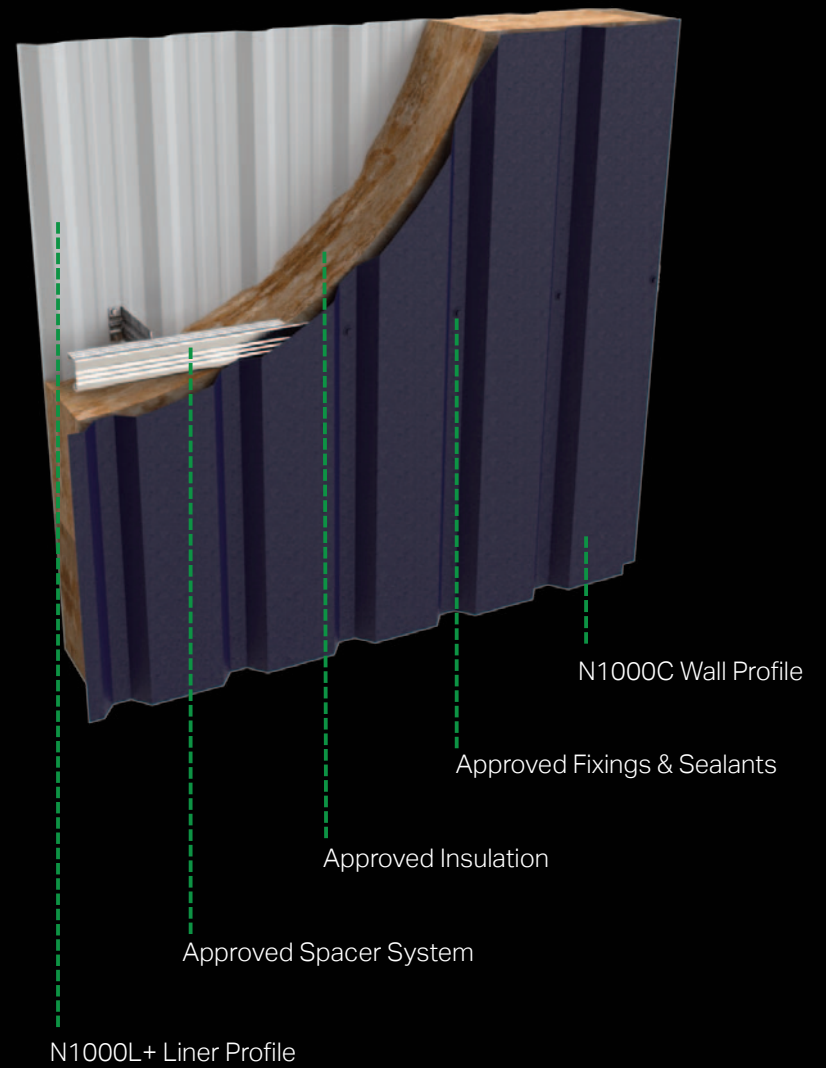
- 25 Year Full System Guarantee
- Can be specified as A1- Non-combustible System
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- A1 – Non-combustible Mineral Wool Insulation
- Building Regulations Compliant

## Protex<sup>®</sup> System Benefits

- Protex<sup>®</sup> Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex<sup>®</sup> Approved Fabricator network
- Industry leading Protex<sup>®</sup> Approved supply network

### PRX-FWS-01-E240/I15 Fire Wall System

The Protex<sup>®</sup> Wall Systems have been tested by industry leading testing houses including Warrington Fire & BRE Global to BS476 Part 22. The PRX-WS<sup>®</sup>-01 can be upgraded to the PRX-FWS-01-E240/I15 System to offer 240 Minutes Integrity and 15 Minutes Insulation. For the latest technical documentation and standard details, contact the technical department.



External Profile:  
N1000C Wall Profile



Liner Profile:  
N1000L+ Liner Profile



# Protex<sup>®</sup> Wall System 01

The **PRX-WS<sup>®</sup>-01** offers a tailor-made built up wall system combining high performance external finishes, A1 Non-combustible Insulation and a light weight liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth can be configured to meet the project specific thermal, acoustic and fire performance with enhanced system designs available.

The external N1000C Wall Profile, vertically orientated, can be specified in a range of high performance external finishes, offering external finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes. The external finish can be specified in an A1 rated finish to offer a complete Non-Combustible Wall System.

The PRX-WS<sup>®</sup>-01 System can be upgraded to the PRX-FWS-01-E240/I15 Fire Wall System. The system has been tested to BS476 Part 22 to offer 240 Minutes Integrity and 15 Minutes Insulation.

The N1000L+ Liner profile offers an economical solution incorporating a 19mm light weight profile into the system. The N1000L+ Profile is available in Bright White Liner as standard with an A1 Fire Classification.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
150	120	0.35	39	10.6
170	140	0.30	40	10.9
190	160	0.26	42	11.2
210	180	0.23	43	11.4
230	200	0.21	45	11.7
250	220	0.19	46	12.0
270	240	0.18	47	12.2

For values above stated figures, contact technical department.

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 0.5mm External Profile, 1800mm Rail Centres & 1000mm Bracket Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

External Finish	Spacer System	Insulation (A1)	Fixings	Sealants
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal
		Superglass	Fixfast	
		Isover	Fixing Point	

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

\*Subject to specification, application & approval

## PRX-WS<sup>®</sup>-02 System Benefits

- 25 Year Full System Guarantee
- Can be specified as A1- Non-combustible System
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- A1 – Non-combustible Mineral Wool Insulation
- Building Regulations Compliant

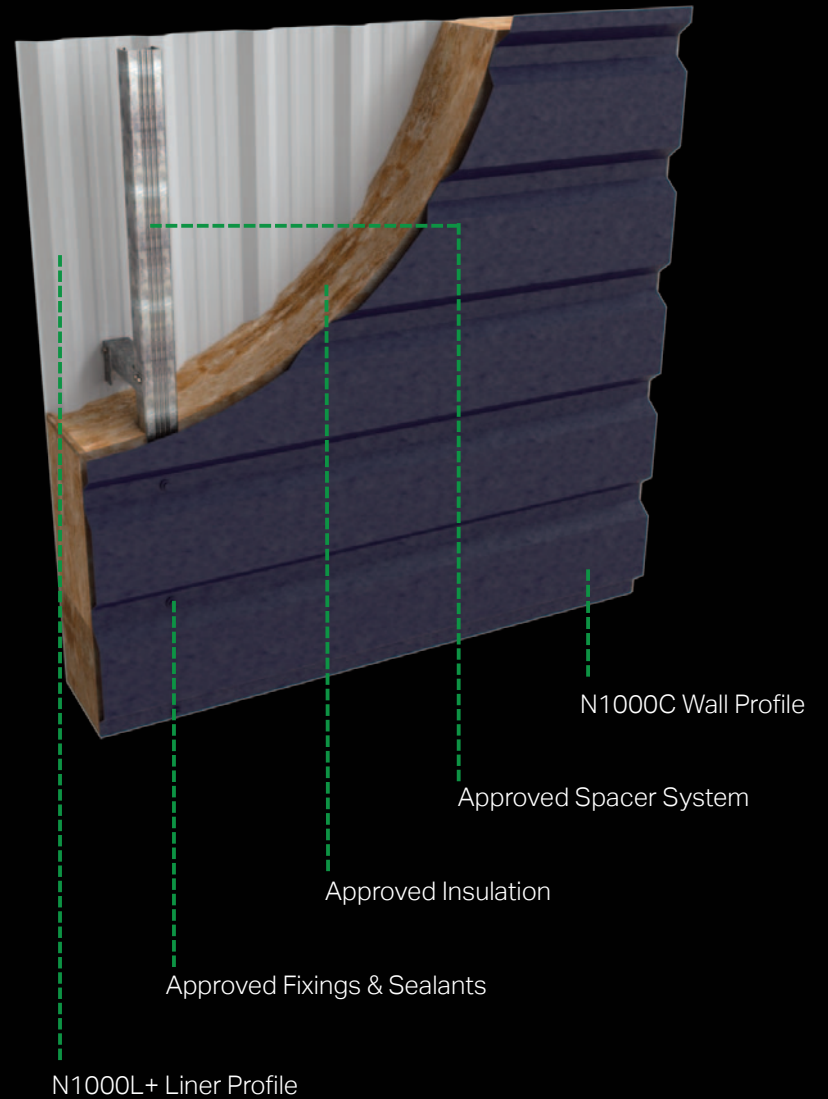
## Protex<sup>®</sup> System Benefits

- Protex<sup>®</sup> Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex<sup>®</sup> Approved Fabricator network
- Industry leading Protex<sup>®</sup> Approved supply network

## PRX-FWS-02-E240/I15 Fire Wall System

The Protex<sup>®</sup> Wall Systems have been tested by industry leading testing houses including Warrington Fire & BRE Global to BS476 Part 22.

The PRX-WS<sup>®</sup>-02 can be upgraded to the PRX-FWS-02-E240/I15 System to offer 240 Minutes Integrity and 15 Minutes Insulation. For the latest technical documentation and standard details, contact the technical department.



External Profile:  
N1000C Wall Profile



Liner Profile:  
N1000L+ Liner Profile



# Protex<sup>®</sup> Wall System 02

The **PRX-WS<sup>®</sup>-02** offers a tailor-made built up wall system combining high performance external finishes, A1 Non-combustible Insulation and a light weight liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth can be configured to meet the project specific thermal, acoustic and fire performance with enhanced system designs available.

The external N1000C Wall Profile, Horizontally orientated, can be specified in a range of high performance external finishes offering external finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes. The external finish can be specified in an A1 rated finish to offer a complete Non-Combustible Wall System.

The PRX-WS<sup>®</sup>-02 System can be upgraded to the PRX-FWS-02-E240/I15 Fire Wall System. The system has been tested to BS476 Part 22 to offer 240 Minutes Integrity and 15 Minutes Insulation.

The N1000L+ Liner profile offers an economical solution incorporating a 19mm light weight profile into the system. The N1000L+ Profile is available in Bright White Liner as standard with an A1 Fire Classification.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
150	120	0.37	41	12.6
170	140	0.32	42	12.8
190	160	0.28	44	13.1
210	180	0.25	45	13.3
230	200	0.22	47	13.6

For values above stated figures, contact technical department.

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 1800mm Rail Centres & 1500mm Bar Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

External Finish	Spacer System	Insulation (A1)	Fixings	Sealants
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal
		Superglass	Fixfast	
		Isover	Fixing Point	

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

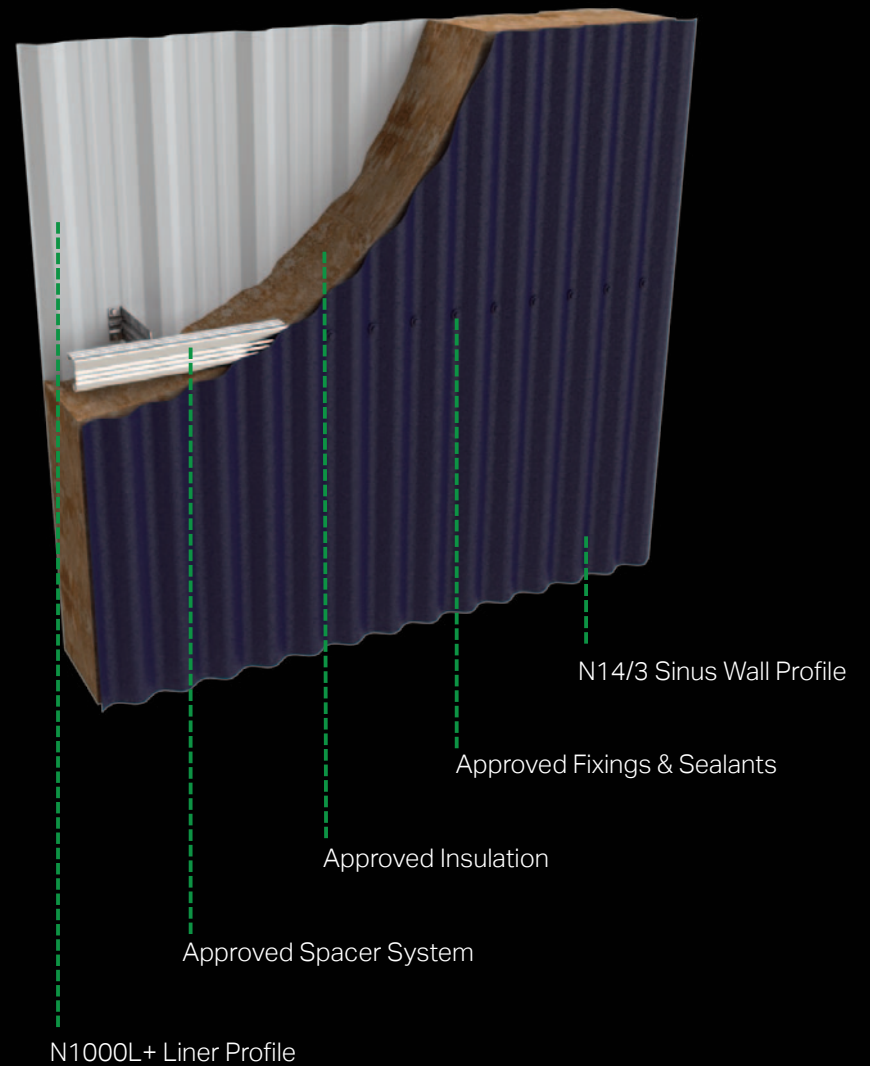
\*Subject to specification, application & approval

## PRX-WS®-03 System Benefits

- 25 Year Full System Guarantee
- Can be specified as A1- Non-combustible System
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- A1 – Non-combustible Mineral Wool Insulation
- Building Regulations Compliant

## Protex® System Benefits

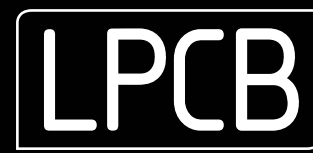
- Protex® Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex® Approved Fabricator network
- Industry leading Protex® Approved supply network



External Profile:  
N14/3 Sinus Wall Profile



Liner Profile:  
N1000L+ Liner Profile





# Protex<sup>®</sup> Wall System 03

The **PRX-WS<sup>®</sup>-03** offers a tailor-made built up wall system combining high performance external finishes, A1 Non-combustible Insulation and a light weight liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth can be configured to meet the project specific thermal, acoustic and fire performance with enhanced system designs available.

The external N14/3 Sinus Wall Profile, vertically orientated, can be specified in a range of high performance external finishes offering finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes. The external finish can be specified in an A1 rated finish to offer a complete Non-Combustible Wall System.

The N1000L+ Liner profile offers an economical solution incorporating a 19mm light weight profile into the system. The N1000L+ Profile is available in Bright White Liner as standard with an A1 Fire Classification.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
139	120	0.36	36	10.6
159	140	0.31	38	10.9
179	160	0.27	40	11.2
199	180	0.24	42	11.4
219	200	0.21	43	11.7
239	220	0.19	45	12.0
259	240	0.18	46	12.2

For values above stated figures, contact technical department.

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 0.5mm External Profile, 1800mm Rail Centres & 1000mm Bracket Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

External Finish	Spacer System	Insulation (A1)	Fixings	Sealants
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal
		Superglass	Fixfast	
		Isover	Fixing Point	

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

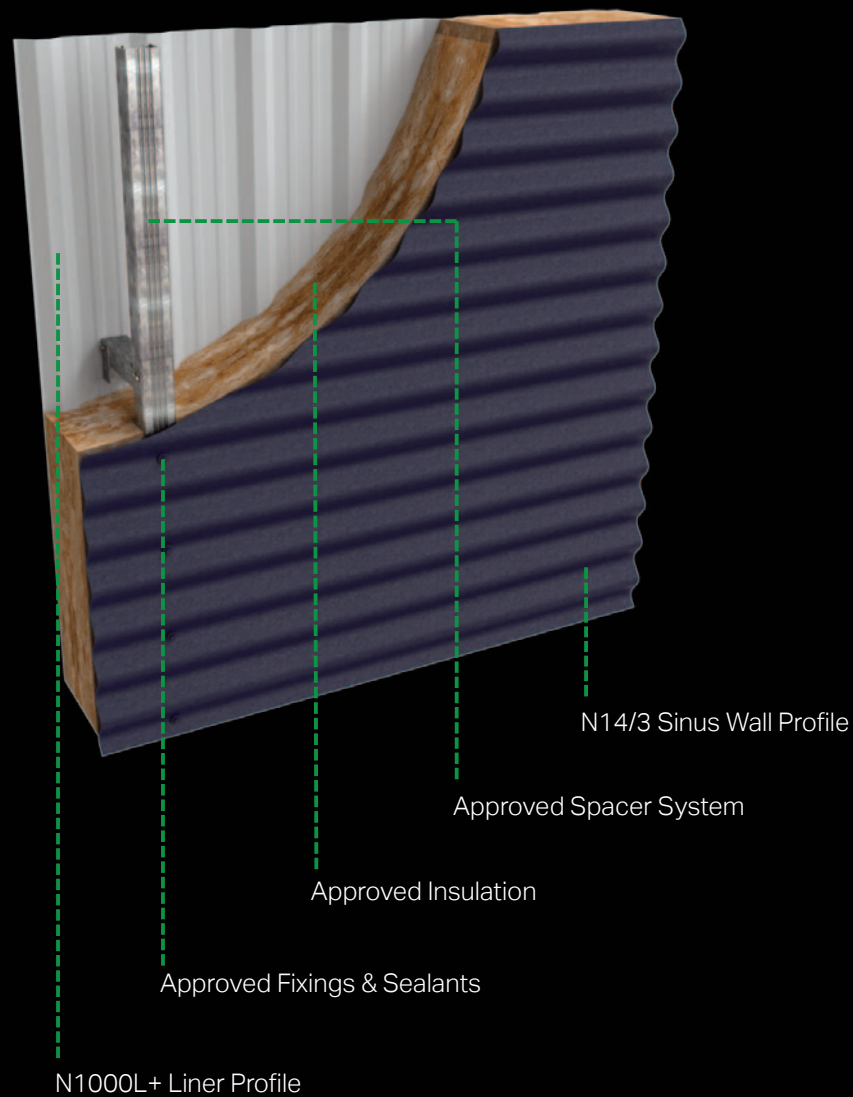
\*Subject to specification, application & approval

### PRX-WS®-04 System Benefits

- 25 Year Full System Guarantee
- Can be specified as A1- Non-combustible System
- LPCB Certification LPS1181 EXT-B (Subject to system specification)
- A1 – Non-combustible Mineral Wool Insulation
- Building Regulations Compliant

### Protex® System Benefits

- Protex® Approved Contractor network
- NBS Specifications
- Approved Standard details
- Bespoke Thermal & Acoustic calculations
- Extensive Technical Support
- Protex® Approved Fabricator network
- Industry leading Protex® Approved supply network



External Profile:  
N14/3 Sinus Wall Profile



Liner Profile:  
N1000L+ Liner Profile



# Protex<sup>®</sup> Wall System 04

The **PRX-WS<sup>®</sup>-04** offers a tailor-made built up wall system combining high performance external finishes, A1 Non-combustible Insulation and a light weight liner profile alongside industry leading Protex<sup>®</sup> Approved Suppliers to offer a complete 25 Year System Guarantee.\*

The system depth can be configured to meet the project specific thermal, acoustic and fire performance with enhanced system designs available.

The external N14/3 Sinus Wall Profile, Horizontally orientated, can be specified in a range of high performance external finishes offering external finish warranty periods up to 40 Years. The range of embossed, textured or smooth external finishes offer a solution to cover a full range of building envelopes. The external finish can be specified in an A1 rated finish to offer a complete Non-Combustible Wall System.

The N1000L+ Liner profile offers an economical solution incorporating a 19mm light weight profile into the system. The N1000L+ Profile is available in Bright White Liner as standard with an A1 Fire Classification.

The Protex<sup>®</sup> Approved components can be sourced directly through our industry leading Protex<sup>®</sup> Approved supply partners to ensure the highest levels of product performance and support.

## Performance

Total System Depth (mm)	Bracket / Insulation Thickness (mm)	Thermal Performance (W/m <sup>2</sup> k)	Acoustic Performance RW (db)	System Weight(Kg/m <sup>2</sup> )
139	120	0.37	43	12.6
159	140	0.32	45	12.8
179	160	0.28	47	13.1
199	180	0.25	49	13.3
219	200	0.23	50	13.6

For values above stated figures, contact technical department.

Data provided for guidance. Contact technical for bespoke calculations and specifications. Data based on 1800mm Rail Centres & 1500mm Bar Centres. Insulation 0.04W/mK Min Thermal Performance / Recommended 10% compression. Acoustic calculations do not include structural connections.

## Protex<sup>®</sup> Approved Components

External Finish	Spacer System	Insulation (A1)	uFixings	Sealants
Mission XP40R <sup>®</sup>	Ash & Lacy	Knauf	SFS Intec	HS Butyl
GreenCoat <sup>®</sup> Pural BT Zero	Fixing Point <sup>1</sup>	URSA	Ejot	Premseal
		Superglass	Fixfast	
		Isover	Fixing Point	

<sup>1</sup> Fixing Point Spacer System not included within LPCB Certification

\*Subject to specification, application & approval

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