



SUSTAINABLE ROOFS MADE SIMPLE.  
LEADING SOLUTIONS AND TURNKEY SERVICE.

[IKOGROUP.CO.UK](http://IKOGROUP.CO.UK)



# WE ARE IKO

IKO is proud to be a trusted and transparent supply partner to the UK's built environment.

With more than 140 years' manufacturing experience, we are firmly established as a leading manufacturer of roofing, insulation, and waterproofing products.

As focus on net zero has intensified, demand for environmentally responsible building materials has gone through the roof. Sustainable roof systems, in particular, are growing in popularity, due to their environmental benefits and carbon reduction capabilities. Given our rich heritage in roofing and commitment to sustainability, IKO is perfectly placed to be the partner of choice for your sustainable roof project, be it green, solar, biosolar or blue.

Integrity and honesty sit at the core of our operations and as we are a UK manufacturer, we can efficiently meet evolving market needs. Over the decades, we have earned a reputation for producing high-performing solutions with minimal environmental impact and forged long-standing relationships with our network of trusted supply chain partners and valued customers.

**The IKO Elements range of sustainable roof systems have been designed to reflect our deep-rooted desire to drive positive change and help fulfil our pledge to protect what matters to people and the planet. By choosing IKO Elements, you too can join us on this journey.**









# THE FUTURE IS GREEN

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Both the private and public sector are under increasing pressure to decarbonise buildings and make them more climate resilient.

Whether it is for a new build or an existing structure, landscaping roofs and installing rooftop solar panels can help to redress climate impacts by significantly improving air quality and maximising energy efficiency.

Sustainable roofs can also improve the acoustics, thermal properties, and aesthetic qualities of a building, and in some cases, provide additional space for recreational and leisure purposes.

But what are the different types of sustainable roofing systems? What are the main considerations when it comes to choosing a system? Can you expect both short-term and long-term benefits?









# SUSTAINABLE ROOFS UNCOVERED



## What is a green roof?

A green roof consists of layers, such as a waterproof membrane, drainage system, growing medium, and vegetation, which work together to manage rainwater, provide insulation, and support plant growth. The solutions are often referred to as eco-roofs, vegetated roofs, living roofs, or even sod roofs. Additionally, they can be categorised as either extensive or intensive green roofs. Green roofs offer various benefits, including improved energy efficiency, stormwater management, air quality enhancement, urban heat island mitigation, habitat creation, and aesthetic appeal.



## What is a solar roof?

The primary components of a solar roof system are solar photovoltaic (PV) panels, which convert sunlight into electricity. The energy generated by the solar panels can be used to power the building's electrical systems, reducing reliance on conventional grid-supplied electricity and, subsequently, lowering energy bills.

While the initial installation cost can be relatively high, the long-term energy cost savings and potential government incentives can offset the upfront investment. Additionally, surplus energy generated by solar panels can be stored in batteries or fed back into the grid, further reducing electricity costs.

Solar roofs can enhance the aesthetic appeal of a building, as they are designed to seamlessly integrate with various roofing materials, styles, and architectural designs, and they can increase the property's resale value, making them a prudent financial investment.



### **What is a biosolar roof?**

A biosolar roof combines a green roof system with a solar roof system. Biosolar roofs offer maximum effectiveness by boosting biodiversity and power output at the same time. The cooling effect of a green roof significantly enhances the efficiency of photovoltaic panels, resulting in higher energy yields. A study by the University of Technology in Sydney, Australia, found that Biosolar roofs can increase solar generation by as much as 107% during peak periods. It also found that the combination system boosted the biodiversity of the roof, with vegetation flourishing during the study period.



### **What is a blue roof?**

Blue roofs help to ensure more sustainable water management and prevent potential flooding. The roofs are designed to buffer large quantities of water and gradually release it into the sewage system or onsite storage, particularly during peak rainfall events. If stored, the water provides the building with a cooling effect through evaporation, as well as additional water for reuse. Blue roofs are compatible with most roof types and can be installed under standard or other sustainable roofing systems.









# IKO ELEMENTS EXPLAINED

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Waterproofing is central to any sustainable roof project. Blue roof systems, green roof finishes and solar panels, once installed, can make it very difficult to identify and repair leaks in a waterproofing membrane – and the expense of fixing an issue is significant.

As a single system roofing provider, you can rely on us to deliver exactly what you are looking for from your sustainable roof project. Our focus on supply chain transparency and environmentally responsible sourcing, combined with a commitment to continuous improvement and innovation, means we can offer smarter, more sustainable solutions that will stand the test of time.

That's where IKO comes in. We have an extensive range of high-performance and durable waterproofing systems that are compatible with your sustainable roof of choice.

These include:

- Reinforced bituminous membranes
- Polymer modified mastic asphalt
- Single ply systems
- Hot melt monolithic systems
- Liquid cold applied





IKO Anti-Root Bituminous Membrane



IKO Permatec Anti-Root



IKO Permaphalt



IKO Armourplan







# IKO ELEMENTS PRODUCT RANGE

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IKO manufactures and supplies a wide range of high-performance waterproofing options which are compatible with sustainable roofs. Key systems include:

## **IKO Anti-Root Bituminous Membrane**

High performance slate surfaced cap sheet consisting of a hi-tensile polyester base and coated with polymer modified bitumen containing a specially formulated root resistant treatment. This cap sheet achieves FLL four-year root penetration.

## **IKO Permateg Anti-Root**

The world's first monolithic hot melt waterproofing system with built-in root protection. Unlike other hot melt systems, Permateg Anti-Root does not require a separate anti-root membrane, making the specification and installation process simpler and more cost-effective. This system achieves FLL four-year root penetration.

## **IKO Permaphalt**

Specially formulated mastic asphalt roofing system, using advanced polymer technology to give the ideal combination of long-term durability, increased fatigue resistance, improved temperature stability and ease of installation.

## **IKO Armourplan**

IKO Armourplan PVC membrane provides heavy-duty protection and the fleece-backed layer adds a separation level for additional functionality. The robustness of the membrane is ideal for busy roofs and the small roll size warrants ease of use for a project of any size, with the added benefit of minimising waste.





# SPOTLIGHT ON OUR SUPPLY CHAIN PARTNERS

At IKO, we take pride in providing total peace of mind through our turnkey service. Working in partnership with our network of trusted roofing specialists, we ensure every element of your sustainable roof system is covered and that you benefit from an array of industry expertise. Here, we introduce you to some of the partners making your sustainable roofing vision a reality.

## Meet the experts



**Eco Green Roofs (EGR)** is one of the UK's leaders in green roof technology and infrastructure. The company has decades of experience in the sustainable roofing sector, with extensive knowledge of optimising new or existing roof areas.

From design and product supply to installation and maintenance, EGR's technical experts and highly trained operatives work closely with a diverse client base to deliver high-performing, long-lasting green, blue, and solar roof solutions.



**ABG** specialises in the design, supply, and installation of a wide range of blue roof, green roof, and biodiverse roof systems. Over the past three decades, it has grown to become the UK's leading manufacturer and supplier of geosynthetics to civil engineering, environmental and sustainable building markets.

Technical support on ABG systems is provided by a highly trained design department, many of whom are Chartered Civil Engineers. The support extends to full design services, design validation, feasibility studies, cost advice and advice on meeting regulatory requirements. Its products are UK manufactured, with a production site located in the heart of the West Yorkshire Pennines.





With over 20 years of green roof experience and tens of thousands of installations across the UK and Europe, **Sky Garden** understand all aspects of green roofing and urban greening, water runoff, imposed loads, plant varieties, substrates, pitch stabilisation and drainage.

As a founding member of GRO (Green Roof Organisation), Sky Garden draw on their extensive industry knowledge and access to a broad range of living roof components using sedum and wildflower plugs and blanket grown on their site in the UK.



**Inspired Energy** has over 15 years' experience installing renewable and low carbon energy systems.

Inspired Energy specialise in the design, implementation, servicing, and maintenance of solar panel solutions across all sectors, offering bespoke and intelligent energy solutions to enable you to meet your unique and specific sustainable roof requirements.



**SolPV Group** have been leaders in the installation of solar PV for over 13 years across a wide variety of commercial sectors.

Their in-depth knowledge and expertise in project management across these sectors enables SolPV to identify and deliver a full-service PV solution that will maximise the output of solar PV, helping your project meet its renewable energy requirements.



# UNLOCKING THE BENEFITS OF SUSTAINABLE ROOFS

We briefly touched on the benefits of these roofing solutions, from improving air quality to enhancing biodiversity. But sustainable roofing systems yield a myriad of economic, ecological, and societal rewards. Here, we take a closer look at what you can expect to gain from going green.



## Rainwater management

Green, biosolar and blue roofs act as nature's sponge, absorbing rainwater through plants, substrate, and drainage layers. This process delays runoff into overburdened sewage systems, purifies rainwater, and promotes evaporation. Consequently, it stabilises groundwater levels, eases stress on drainage systems, and mitigates flood risks.



## Air purity

The vegetation on a green or biosolar roof filters airborne particulate matter and transforms CO<sub>2</sub> into oxygen, contributing significantly to air purification efforts.



## Temperature control

Harnessing the power of plant shade, green and biosolar roofs reduce ambient temperatures. This not only enhances indoor comfort by alleviating the strain on air conditioning systems but also leads to urban temperature reductions of up to 3°C. For blue roofs, if the collected water is stored, it can provide the building with a cooling effect through evaporation,



## Improved solar panel efficiency

By reducing rooftop temperatures, biosolar roofs bolster the efficiency of PV panels, resulting in higher energy savings.



## Noise reduction

Green and biosolar roofs serve as natural sound barriers. The combination of substrate, plants, and the air embedded in the green roof system offers excellent sound insulation. Sound waves are both absorbed and reflected, effectively reducing noise from sources like aircraft, traffic, heavy rain, or hailstorms. This results in a quieter and more pleasant indoor and outdoor environment.





### **Increased property value**

The natural and sustainable aesthetics of sustainable roofs, coupled with reduced energy costs, enhance the overall value of a property.



### **Improved insulation**

Green and biosolar roofs have both cooling and insulation properties. In the winter, green roofs can help conserve energy by retaining moisture. This translates to savings on heating bills.



### **Biodiversity enhancement**

The variety of plant life on green and biosolar roofs, such as sedums, herbs, and grasses, creates habitats for birds, butterflies, and insects, particularly in urban areas dominated by concrete and asphalt.



### **Wellbeing support**

Living and working within green environments has been shown to positively impact wellbeing, reducing stress, and promoting relaxation.



### **Time and cost savings**

Off-grid electricity generation from solar and biosolar roofs also helps to ensure energy efficiency, security, and long-term savings.



### **Improved water quality**

Green and biosolar roofs remove particulates and pollutants. When combined with a blue roof, the water quality is improved further, as it also filters the water. The water can also be repurposed for irrigation and greywater recycling, optimising water usage.



### **Erosion protection**

Vegetation blankets on wind-exposed roofs prevent substrate erosion during storms, ensuring a stable and erosion-resistant green roof surface.

With IKO Elements, sustainability and practicality combine to create a brighter, greener future. Experience the full benefits of sustainable roofing by getting in touch today.

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# MAINTAINING YOUR SUSTAINABLE ROOF

## Top tips on how to look after your roof installation

Sustainable roofs are designed to require minimal maintenance. However, some care is necessary to ensure the long-term vitality of your roof, particularly those that feature rooftop gardens.



### Pruning

Pruning or trimming may be necessary to prevent overgrowth, encourage healthy plant development, and ensure that vegetation does not obstruct drainage paths or cause damage to the roofing membrane.



### Weed Control

Regularly inspect your green roof, preferably in spring and autumn, for weeds and seeds carried by the wind. Manual removal of these unwanted plants will help maintain the aesthetic of the roof. Avoid chemical pesticides where possible.



### Drainage Check

Periodically check the drainage system to ensure proper functioning. Clear any leaves or debris that may have accumulated in gutters and drains.



### Fertilisation

For a thriving green roof, fertilise it twice a year, ideally in late April and early September. Using organic or slow-release fertilisers sparingly can help promote plant health, but excessive fertilisation should be avoided as it can lead to nutrient runoff and water pollution.

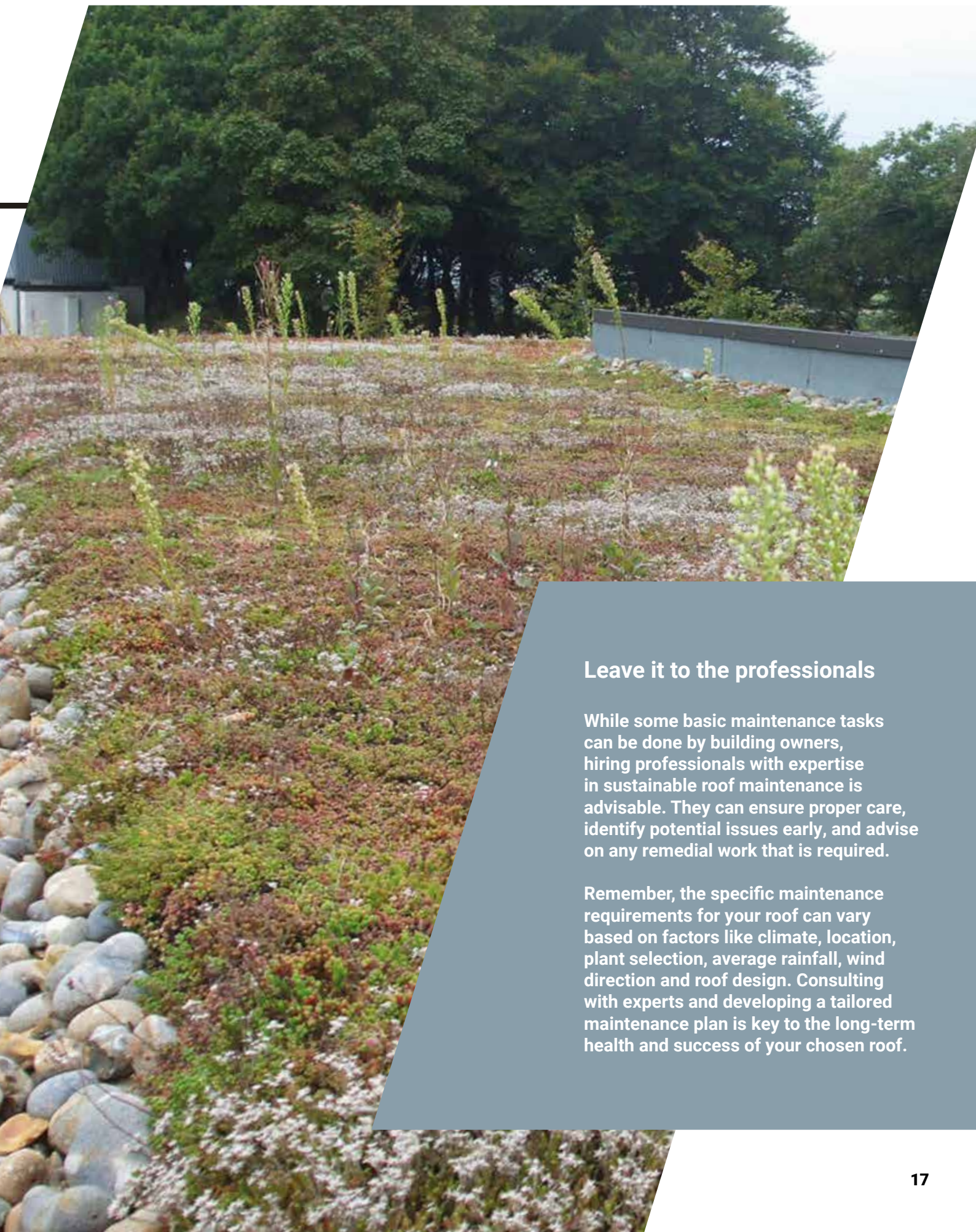


### Irrigation

Proper irrigation is essential, especially during the establishment phase. However, as plants mature, they generally become more drought-resistant and require less water. Irrigation systems should be regularly inspected for efficiency and adjusted as needed.

As with green and biosolar roofs, blue roofs maintenance is required under SuDS legislation, with particular attention given to the drainage outlets, and inspections should be regularly scheduled.





## Leave it to the professionals

While some basic maintenance tasks can be done by building owners, hiring professionals with expertise in sustainable roof maintenance is advisable. They can ensure proper care, identify potential issues early, and advise on any remedial work that is required.

Remember, the specific maintenance requirements for your roof can vary based on factors like climate, location, plant selection, average rainfall, wind direction and roof design. Consulting with experts and developing a tailored maintenance plan is key to the long-term health and success of your chosen roof.









# IKO ELEMENTS IN ACTION

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Over the past 10 years, IKO and its partners have worked together on numerous sustainable roof projects, including iconic British institutions and landmarks, such as Battersea Power Station, Greenwich Square and Chelsea F.C Training Ground.

## **Battersea Power Station: a case study**

Battersea Power Station is an instantly recognisable feature of the London skyline. BriggsAmasco, who are part of the IKO Group, delivered a significant, multiple-application waterproofing programme as part of a multi-million-pound regeneration of the London landmark. Three key elements of the project's second phase were worked on, and measures were taken to ensure the installation was as sympathetic and sustainable as possible.

### **Main Energy Centre**

The combination of asphalt over the primary waterproofing is said to be an industry-first. It meant the below ground waterproofing's protection layer could remain in-situ, saving removal and recycling costs and limiting the environmental impact.

### **Grade II-listed chimneys**

A system was developed to re-waterproof the station's landmark white chimneys, which were taken down and rebuilt in identical fashion. Environmental concerns meant the company specified certified carbon neutral IKO Permaphalt, rather than lead, for the task. A mastic asphalt solution was designed to waterproof and line a Peregrine Falcon's nest, providing the resident birds with a 1m x 1m<sup>2</sup> permanent home within the chimneys.

### **Terrace waterproofing**

A super-slim PIR/VIP panel was devised to ensure a series of apartment terraces achieved the required thermal requirements. The system achieved a lambda value of 0.006 W/mK, eliminating the risk of cold bridging for the long-term protection of the apartments.

A further 8000m<sup>2</sup> of IKO Permasec waterproofing was installed using BriggsAmasco's own fleet of zero-emission plant and IKO Enertherm inverted insulation and sedum green roofs were installed by across the project. The waterproofing programme's carbon-friendly aspect was bolstered by the use of locally sourced products, 99.9% of which were manufactured in the UK.



# GO GREEN WITH EASE: CHOOSE IKO ELEMENTS

IKO provides a full service for sustainable roofing projects, from initial consultation, specification, and design, through to installation, monitoring, and maintenance.

Our ISO 9001 accredited Technical Services Team offer practical and modern design solutions, whilst ensuring that the requirements of the current Building Regulations and British Codes of Practice are adhered to. For over a century, architects, specifiers, installing contractors and building owners have trusted our proven technical expertise for both new build and refurbishment projects nationwide.







IKO Elements builds on IKO's reputation as a reliable, responsive, environmentally responsible roofing partner, offering customers:

- Design assistance
- On-site advice
- Bespoke specifications
- Project monitoring
- Performance guarantees
- Technical and safety information
- Customer training
- Approved contractor/installer network
- Continuing Professional Development (CPD)

IKO's focus on sustainable operations and exceeding decarbonisation requirements means that we can offer smart, integrated sustainable roof systems to help ensure your building is more energy efficient, climate resilient and fit for the future.

Whatever the sector, building type, goal or need, we will work with you every step, seed, and solar cell along the way to guarantee a smooth, seamless, and satisfactory installation – without sacrifice.

**IKO Elements. Exceeding expectations, always.**

# IKO UK LOCATIONS

A champion of UK manufacturing, underpinned by 140 years' experience, we're dedicated to driving positive change to protect what matters to our people and the planet.

From our four strategically located manufacturing plants located throughout the UK, we produce a range of waterproofing and roofing solutions and insulation products, which are distributed to more than 38 countries worldwide.

At our **Appley Bridge plant in Lancashire**, we operate a continuous production line for the manufacture of bituminous roofing membranes. These include a wide range of products offering high performance waterproofing as well as thermal and environmental benefits for flat roofs.

As the only UK manufacturer of single ply PVC membranes, from our manufacturing plant located at **Clay Cross in Chesterfield** we offer a complete range of single ply roofing systems and complementary components to deliver high-performance, long-lasting flat roof solutions.

**Grangemill located in Derbyshire** where we manufacture our hot melt and mastic asphalt products. These versatile, durable products have a proven record for protecting the integrity of roofs, roads and infrastructure restoration projects and the reinstatement of ironworks.

The purpose-built site at **Alconbury** opened in 2018, comprising of a state-of-the-art production line that employs the latest technology and chemistry to manufacture different types of IKO enertherm boards in various dimensions, for use in cavity walls, external walls, floors and roofs and more.

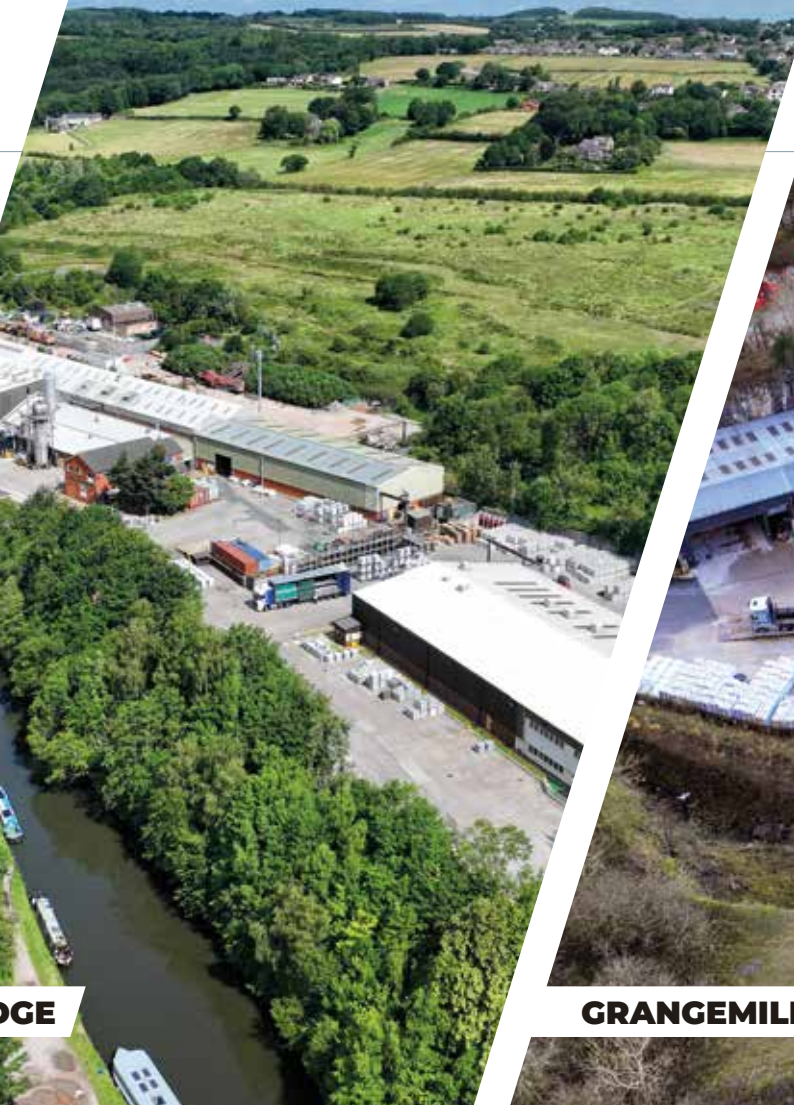


**APPLEY BRIDGE**



**CLAY CROSS**





EDGE



GRANGEMILL



ALCONBURY







# IKO ELEMENTS AND ESG

At IKO, we pride ourselves on offering supply chain transparency and traceability that you can trust. Our commitment to protecting what matters – whether that's the environment, buildings or the local communities that use them – underpins everything that we do. We invest heavily in our people and processes to achieve our ESG goals, as well as support our customers in meeting their own sustainability targets. We are proud to have achieved carbon neutral status for our UK manufacturing sites and are committed to recycling by-products, reducing our packaging, and diverting as much waste as possible away from landfill.



We hold BES 6001 Standard accreditation, which demonstrates that our waterproofing products have been manufactured using responsibly sourced materials, and where possible, we use locally sourced raw materials in our production.

As a champion of sustainability, we expect the same diligence from all our partners, including our sustainable roofing supply chain partners. That's why we only work with trusted and approved contractors who reflect our company values and principles. All the companies we partner with are specialists in their field and have undergone a rigorous vetting process to ensure that they meet IKO's high product quality and responsible sourcing standards.



IKO is also an official partner of the Supply Chain Sustainability School, which further demonstrates our dedication to inspire and advise on more environmentally conscious operations in the construction sector.

## The IKO Guarantee

### Outlining what is covered by the IKO Guarantee

As longevity is one of our values, all our waterproofing systems come with an IKO-backed guarantee of up to 30 years. IKO underwrites its own guarantees, which underlines our confidence in the longevity, durability, and integrity of our systems. Stringent manufacturing processes help to reduce the risk of defect and our detailed inspections ensure the systems are installed correctly and the chance of issues arising are minimal.

This gives our customers the peace of mind they need for the duration of a project and beyond, while demonstrating our commitment to the future performance of our products and the buildings they are designed to protect.





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