



## The Tapered **Roofing Experts**

SINGLE-LAYER FLAT ROOFING **DESIGN**, IN-HOUSE **MANUFACTURE**,  
**DELIVERY** AND ON-SITE **SUPPORT**

**GRADIENT**  
FLAT ROOFING



AS THE EXPERTS IN **SINGLE-LAYER TAPERED ROOFING**,  
 GRADIENT OFFERS YEARS OF EXPERIENCE AND UNPARALLELED TECHNICAL  
 EXPERTISE TO ENSURE YOUR **BESPOKE** TAPERED ROOF IS THE MOST EFFICIENT,  
**ECONOMICAL AND COST EFFECTIVE** SOLUTION FOR THE JOB.

## Gradient bring style and expertise to your **tapered roofing system**

### What we do

At Gradient, we work closely with our customers to design, manufacture and advise on the installation of bespoke, single-layer tapered roofing solutions. It's a turnkey service that provides everything from initial consultation and design to after sales support. By controlling the whole process from start to finish, we are able to exercise quality control standards for design, manufacture, performance and sustainability that are unmatched in the industry. Benefits we pass on to you in the form of a better conceived, better performing, better value flat roof that complies with all the relevant legislative standards.

### How we do it

Quite simply, by taking pride in delivering quality, individually designed roofing systems that meet customers' precise specifications and exceed their highest expectations. We know how important it is to provide a service that is as personal as it is professional. So throughout the duration of your project, our team will always be on hand to ensure a snag free, 'right first time' experience. We are also keen our customers come to see us as the open, honest and approachable partner. As a company, we are committed to conducting our business in a fair and ethical manner and to treating our staff, customers and suppliers with equal courtesy and respect. On a global scale, we are determined to limit the impact of our activities on the environment by cutting waste and emissions wherever we can and pursuing a greener, more sustainable business agenda.

**By controlling the whole process from start to finish, we're able to exercise quality control standards for design, manufacture, performance and sustainability that are unmatched in the industry.**

#### DESIGN



#### SITE SURVEY



#### PRODUCTION



#### DELIVERY



#### ON-SITE SUPPORT





THE SINGLE-LAYER SYSTEM OF TAPERED ROOFING PROVIDES A **QUICKER, MORE ACCURATE** AND MUCH **MORE FLEXIBLE** WAY OF ACHIEVING THE PRECISE THERMAL PERFORMANCE AND DEGREE OF FALL FOR YOUR ROOFING PROJECT THAN MULTI-LAYER METHODS. HERE'S WHY:

## Why choose a **single-layered system**?

### **Off-site construction**

Having pioneered the design and construction of bespoke roof systems under factory controlled conditions, Gradient continues to set the standard for off-site manufacture. It is a method that allows the finest tolerances to be met, ensuring a perfect fit between roofing components and speeding up set out and installation on site.

### **Reliable adhesive bonding**

Because the individual layers that make up a finished single-layer thickness are carefully bonded under optimum conditions, adhesive reliability and integrity are greatly enhanced. Which means your roof system performs consistently and reliably over the course of its whole life. A single-layer solution saves you money by reducing your flat roof maintenance and refurbishment costs.

### **Lower labour and materials costs.**

In comparison to a multi-layer insulation system, a single-layer solution more than pays its way in time and materials saved on-site. It eliminates the time consuming process of bonding multiple layers and sealing countless joints, so roof sub-surfaces are not left exposed to the elements for as long, and the potential for poor or inconsistent bonding - which can quickly lead to water ingress - is reduced. In refurbishment applications, it can be laid directly onto the original waterproofing; eliminating the need to strip the roof back to deck level. The single-layer boards are delivered in exactly the right size, which reduces wasteful cutting and trimming of materials on-site.

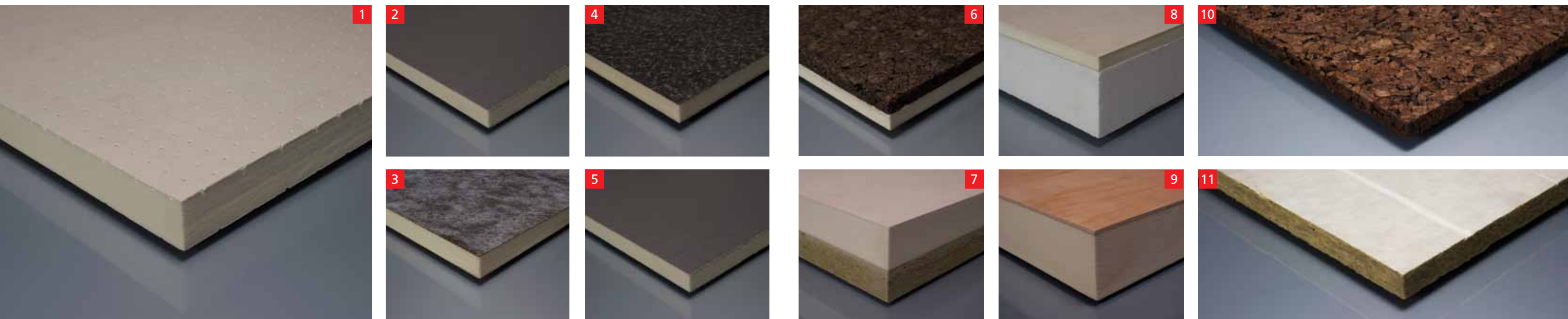


**“ We're committed to conducting our business in a fair and ethical manner and to treating our staff, customers and suppliers with equal courtesy and respect. ”**



## Our Materials

GRADIENT WORKS WITH SOME OF THE MOST **ADVANCED AND VERSATILE** MATERIALS AVAILABLE TO CREATE EFFECTIVE, INNOVATIVE TAPERED ROOF SOLUTIONS THAT CONSTANTLY PUSH THE BOUNDARIES OF **PERFORMANCE AND VALUE.**



1

**Gradient Powerdeck F**

A tapered insulation board incorporating a closed cell rigid PIR (Polyisocyanurate), foam core faced on both sides with a perforated mineral coated glass fibre tissue.

2

**Gradient Eurothane Silver Tapered**

A foil-faced PIR board offering a high degree of thermal efficiency for mechanically fixed single-ply membranes. Suitable for projects requiring LPCB and/or FM certification. Suitable for use with approved liquid membranes.

3

**Gradient Powerdeck B Tapered**

A PIR foam board with a special torch-receivable bituminous facing, covered with a protective and sacrificial polyethylene layer.

4

**Gradient Bi3 Tapered**

A bituminous-faced roof board featuring high performance foam with bitumised glass tissue facings. A tried and tested product primarily used with bitumen membranes.

5

**Gradient Eurodeck**

A foil-faced PIR board offering a high degree of thermal efficiency for mechanically fixed single-ply membranes.

6

**Gradient Cork PIR**

Combining the benefits of natural cork with a high performance PIR foam, intended for use with bonded bitumen membranes. The cork heat sink layer is ideal for fully bonded applications.

7

**Gradient Rockwool PIR**

A composite insulation board which offers the benefits of both mineral wool and a high performance PIR foam. Lightweight and easy to handle, it has an outstanding compressive strength plus excellent fire resistance and acoustic properties.

8

**Gradient EPS PIR**

A lightweight board is an extremely cost-effective combination of high performance PIR foam and expanded polystyrene. Its versatile nature offers great design flexibility.

9

**Gradient Plywood/PIR**

High performance PIR foam and plywood laminate are combined to make this structural decking product. Ideal for vertical applications and suited to many types of roof design it will also accept mechanical membrane fixings.

10

**Gradient Cork Board**

Fire resistance, moisture resistance and good acoustic insulation are key characteristics of this product. The ultimate in environmentally-friendly insulation. Cork board is perfect for use in fully bonded bituminous applications.

11

Other materials: Gradient can use a variety of other materials to create bespoke layer solutions for individual projects. These include:

- **Rockwool** Available in a range of densities Rockwool has excellent fire and acoustic performance characteristics. It also allows great flexibility in roof design.
- **Perlite** Can be laminated to a high performance PIR foam core to create a composite solution designed for torch-on applications.
- **Extruded polystyrene** Suitable for both inverted and composite applications, this is available in both flat and tapered versions.
- **Expanded polystyrene** This is available in a range of composites and facing materials to suit a wide variety of different applications, including tapered roofing.



## Manufacturing and supply chain

By combining the highest quality materials and the latest in advanced manufacturing equipment, we are able to exercise a level of quality control that guarantees customers a proven, reliable product with complete traceability for every last item.



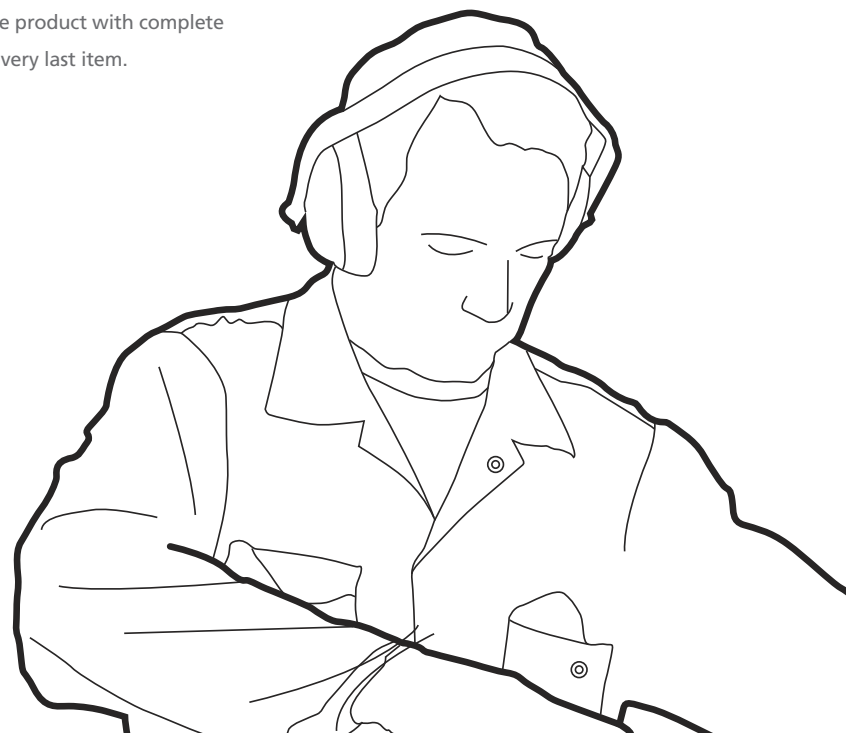
All Gradient tapered roofing systems are manufactured in the UK, using processes that have been refined and improved across our 25 years as a leading provider of roof insulation systems. Our constant policy of investment and innovation means we don't just keep pace with developments in materials and manufacturing technology, in many cases, we dictate it. That is why we have a long list of industry firsts to our name, including pre-cut mitres, the use of single-layer sections and the

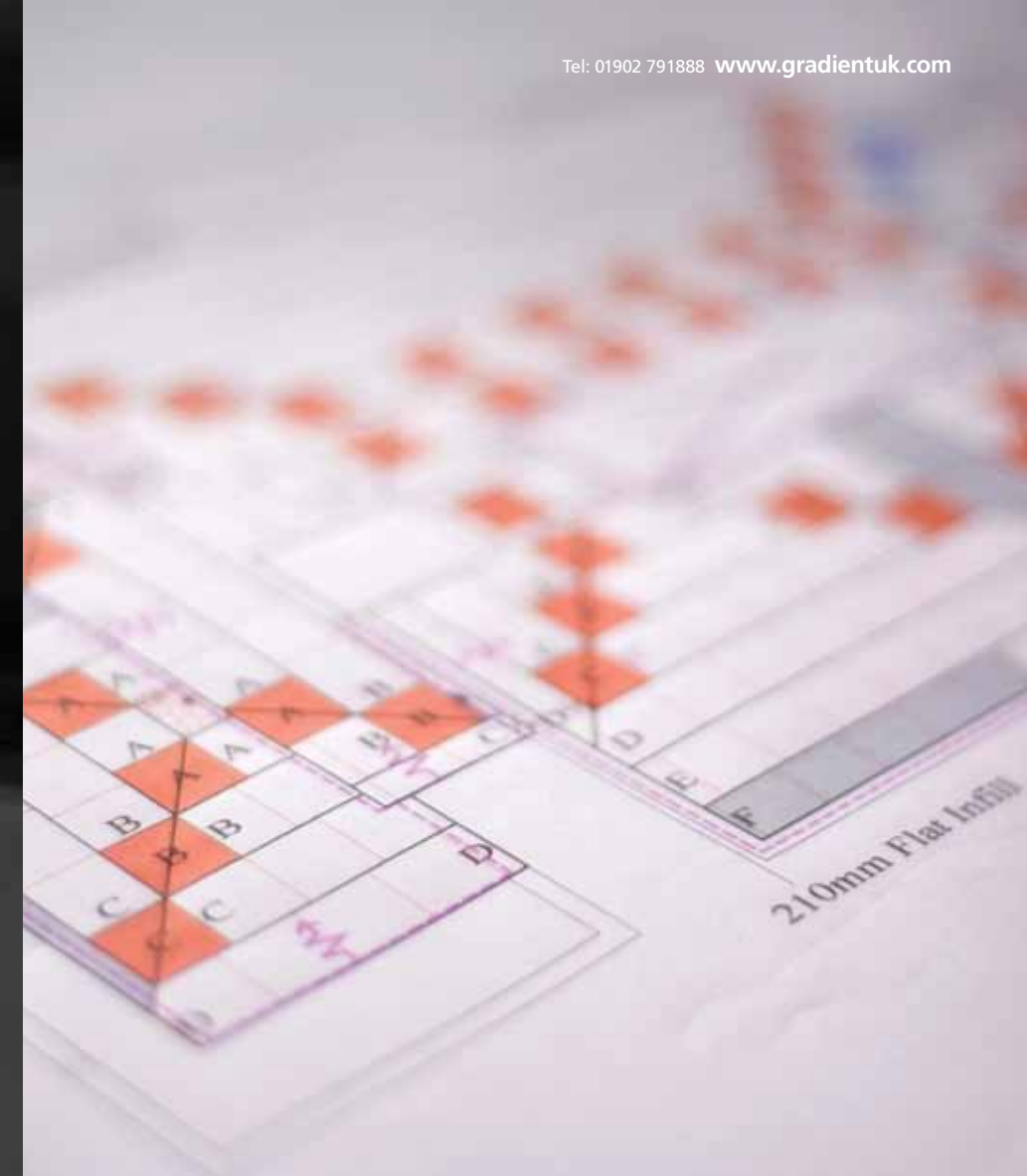
development of composite Rock/PIR insulation boards. All groundbreaking innovations in their time that are now widely integrated as standard practice in roof system manufacture.

By combining the highest quality materials and the latest in advanced manufacturing equipment, we are able to exercise a level of quality control that guarantees customers a proven, reliable product with complete traceability for every last item.

### Supply chain and delivery

The Gradient logistics network offers nationwide on-site delivery wherever and whenever you need it. We operate a flexible fleet of flatbed, curtain-sider and tail lift vehicles that gives us the ability to phase delivery times according to contract schedules.





## Our Services for Specifiers

**/// We are committed to conducting our business in a fair and ethical manner and to treating our staff, customers and suppliers with equal courtesy and respect. ///**

### Bespoke design

The Gradient service is one of teamwork and close co-operation with customers, from the very first conversation to the final installation. It starts with an initial consultation, during which our experienced design team will discuss the unique requirements and specifications of the job with you. Then, we will draw up first stage plans taking into account critical factors like drainage courses, roof fall, thermal calculations, condensation risk analysis and wind uplift calculations. Once these have met with specified approval, we turn them into a wholly bespoke tapered roof design and manufacturing package that represents the most practical, efficient, cost effective and compliant answer to your individual project requirements.

### The mitered joint

Pre-cut mitre joints, a breakthrough innovation when they were brought to market by Gradient in 1994, offer enormous flexibility in bespoke roofing system design. They allow individual pieces of insulation to be produced and positioned with pinpoint accuracy, each one fitting into a specific place on the roof with minimal cutting required. As a result, they simplify the task of insulating awkward or unconventional roof areas and speed up the installation processes while lowering material and installation costs.







“ Our team will make site visits to discuss the installation and to ensure complete accuracy between the dimensions on the drawing board and the ‘real life’ measurements of your building to ensure the best possible fit and performance. ”

## Our Services to contractors

At Gradient, we look on design and installation as a seamless process rather than two distinct and separate functions. That is why our collaboration with contractors begins long before the roof system itself is delivered. Our team will make site visits to discuss the installation and to ensure complete accuracy between the dimensions on the drawing board and the ‘real life’ measurements of your building for the best possible fit and performance. In refurbishment projects, we will take detailed measurements and core samples to assess the suitability of the existing build and roof deck.

We will also survey for backfalls and potential ponding problems, designing underlay schemes to correct and facilitate water run-off. Then when it’s time to begin installation, we will be there to help you with the set out and planning to make things quicker and easier all round. Even after your roof system is installed, you can call on our Technical Service team for follow up support and advice on any issues that arise with your Gradient tapered roofing system.





## The Gradient **commitment to sustainability**



### Plant sustainability

We operate a production process that limits as far as possible our CO<sub>2</sub> emissions and minimises the volume of waste created. Indeed, one of the major environmental benefits of off-site fabrication is that offcuts can be recycled without ever leaving the factory. We also look for responsible environmental agendas in our suppliers and liaise closely with our customers to formulate appropriate waste management plans for each project.

**“ As a business, Gradient puts sustainability best practice at the heart of its operations, both in the manufacturing process and in the management of waste on-site. ”**



### Sustainability on-site

Through careful planning of deliveries and prudent use of materials, we can help you reduce the environmental impact of your project while improving its thermal performance and long-term sustainability:

- Efficient packaging methods allow us to deliver more insulation boards to site in a single trip, reducing emissions and congestion on the roads.
- Because boards are set out from roof high points, any square cuts are made at the thinner end, resulting in a lower volume of offcuts.
- The provision of half boards and the use of infill's in roof design further reduces waste.
- Pre-cut mitered joints make maximum use of available board area and aid accuracy in installation.



AS A BUSINESS, GRADIENT PUTS **SUSTAINABILITY BEST PRACTICE AT THE HEART OF ITS OPERATIONS**, BOTH IN THE MANUFACTURING PROCESS AND IN THE MANAGEMENT OF WASTE ON-SITE.



All reasonable care has been taken in the preparation of this brochure, all information, recommendations and guidance notes on the use of the products are made without guarantee since the conditions of use are beyond the control of Gradient Flat Roofing (The Company). The customer is responsible for ensuring that each product is fit for its intended purpose and that conditions for use are suitable.

The information contained in this brochure and advice arising there from is free of charge and accordingly on the terms that no liability nor liability for negligence will attach to the Company or its servants in relation to any such service arising out of or in connection with this brochure. The Company pursues a policy of constant product development and information contained in this publication is therefore subject to change without notice.



Gradient is part of the Recticel Group,  
one of the world's largest manufacturers  
of Urethane-based products

## **GRADIENT**

FLAT ROOFING

Station Road, Four Ashes,  
Wolverhampton  
WV10 7DB

Tel: (01902) 791888

Fax: (01902) 791886

[enquiries@gradientuk.com](mailto:enquiries@gradientuk.com)

[www.gradientuk.com](http://www.gradientuk.com)