



A Definitive Guide to Natural Slate

Everything you need to know – from Rock to Roof





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Natural slate has been utilised for roofs and construction for centuries, valued for its exceptional durability, low water absorption, natural strength, and inherent fire resistance. Formed naturally over millions of years, it offers a level of quality and authenticity that manufactured materials cannot replicate. Its subtle tonal variation and refined texture give buildings a timeless elegance, allowing them to age with dignity and character. As a material of permanence, slate represents a legacy choice, an investment in longevity, sustainability, and architectural integrity that endures across generations.

Choosing expertise and pride in natural slate roofing

INTRODUCING SIG ROOFING

The largest distributor of natural slate in the UK, SIG Roofing supplies a comprehensive range of natural slate products, Spanish, British, Brazilian, American and more. This brochure collates the range of natural slates available through SIG Roofing, includes technical specification, fixing guidance, material warranties, the SIG Roofing ONE Warranty, and solar integration options.

Natural slate offers long life, sustainability, premium appearance and performance for pitched roofs. For specifiers and contractors alike, this document supports product selection, specification and installation.

At SIG Roofing, quality is at the forefront. SIG Roofing works closely with producers to ensure the slate supplied meets performance criteria, aesthetic requirements and budget considerations.

With no two projects alike, every slate is carefully selected to suit roofing requirements and geographical location.





INTRODUCTION TO NATURAL SLATE FROM SIG ROOFING

Natural slate has built an enviable reputation for quality and consistency.

SIG Roofing has brought simplicity to the market through clarity, consistency and efficiency. Long-standing customer relationships are built on transparency for contractors and architects.

SIG Roofing manages everything from rockface to roof. This ensures aesthetic quality, structural strength, consistency and traceability. Close partnerships with quarries and on-site quality control teams ensure slate of the highest standard.

By choosing natural slate from SIG Roofing, you're choosing extensive expertise and pride in natural slate roofing.

WARRANTY OVERVIEW

Natural slate and producing quarries are carefully selected to meet roofing requirements. Due to strict traceability, SIG Roofing provides a product repair or replacement warranty directly to the end user. Warranty period is dependent on natural slate used with 100, 75, 50, 30 year material warranties available. This is in addition to statutory rights. Full terms and conditions are available on request.

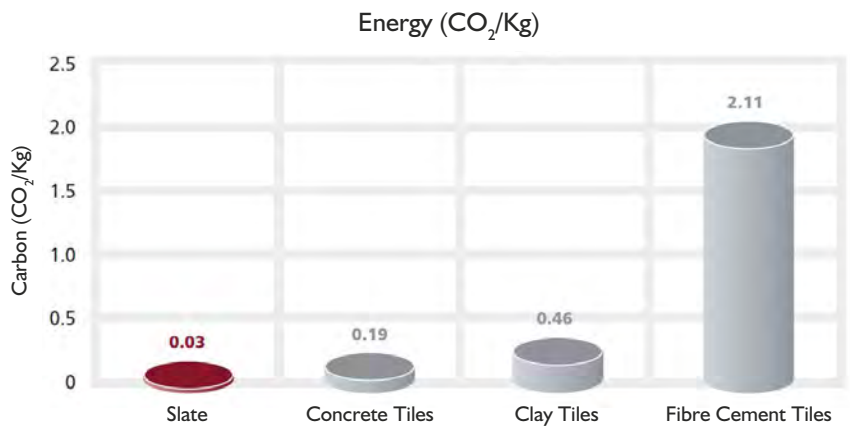


Why Use Natural Slate?

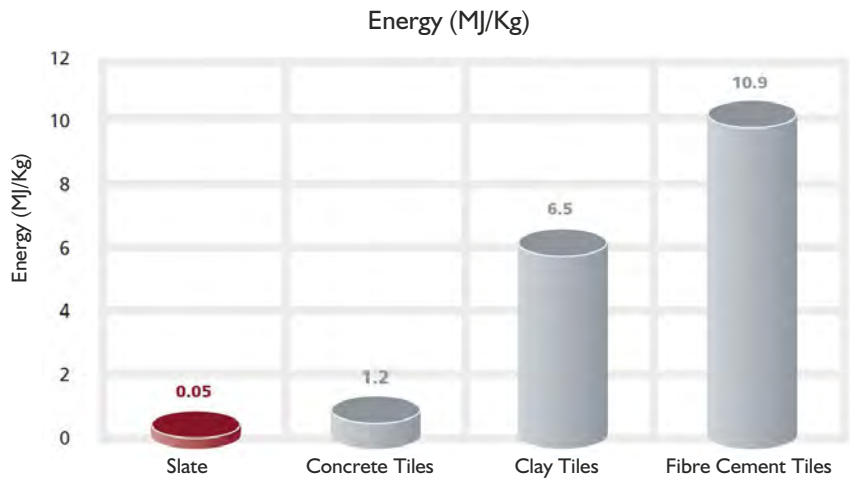
The real attraction of a slate roof is its strength, fire resistance and durability. Natural slate can last a lifetime – often with little or no maintenance. Natural slate has the lowest carbon footprint of any pitched roof covering.

The tables below highlight how much lower natural slate is in terms of environmental impact compared to other roofing materials.

ENVIRONMENTAL CONSIDERATIONS



FOSSIL FUEL DEPLETION



Reference: Inventory of Carbon and Energy, University of Bath, 2006



BS EN 12326 and CE/UK CA Marking

BS EN 12326-1:2014

The main aim of the BS EN 12326 series is to ensure that the products and materials used for roofing and external cladding offer adequate performance and durability.

BS EN 12326-1 is the first part of the series that specifies the requirements for slate and carbonate slater for discontinuous roofing and external cladding, used for assembly into discontinuous roofing and external cladding.

This standard enables specifiers and purchasers to compare the key physical properties of natural slate to ensure the best fit for the project. A broad range of attributes are tested, but the three most critical areas are: Thermal Cycle, Sulphur Dioxide, Exposure and Water Absorption.





Above: An example of a roof covered in T2 or badly sourced slate

THERMAL CYCLE

Essentially, this process assesses the levels of rust or oxidation within the slate. The test involves repeatedly soaking six pieces of slate in water and then drying them out over a period of up to three weeks. The samples are then inspected for corrosion. Assesses oxidation and rust potential through repeated wetting and drying cycles. Results are classified as:

Code	Observation in the test	Conformity to the standard
T1	No changes in appearance. Surface oxidation of metallic minerals. Colour changes that neither affect the structure nor form runs of discolouration.	Acceptable
T2	Oxidation or appearance changes of the metallic inclusions with runs of discolouration but without structural changes.	Acceptable
T3	Oxidation or appearance changes of metallic minerals which penetrate the slate and risk the formation of holes.	Not suitable

All SIGA slates are tested to T1 standard.





SULPHUR DIOXIDE EXPOSURE

This test examines the ability of the slate to resist atmospheric pollutants. The slate samples are placed in a hermetically sealed container for up to three weeks and subjected to extreme acidic and humid atmospheric conditions. These samples are then subjected to a standardised mechanical scraping test to measure any softness caused by the chemical disintegration of any carbonate content. Slates with a carbonate content of <5% have their results showing as S1 (no change), S2 (the slate must be split at least 5% thicker), or S3 (slates must be at least 8mm). Slates containing more than 20% carbonate content are not suitable for roofing or external cladding.

WATER ABSORPTION

Excessive water absorption will result in natural slate being vulnerable to frost damage. If the slate absorbs $\leq 0.6\%$ or less of its mass in water, it is classified as W1 ($\leq 0.6\%$), the highest grade, and needs no further testing. If the absorption is greater than 0.6% it is classified as W2 ($> 0.6\%$) and must be subjected to a separate freeze-thaw test, showing no deterioration in mechanical strength.



CE/UK CA MARKING

Under the Construction Products Regulation, any organisation that products, imports, or sells natural slate must ensure that CE or UK CA Marking and certification are sought and displayed.

BS EN 12326-1:2014 is the Harmonised EU Standard governing Natural Slate and Stone for Discontinuous Roofing and Cladding. All slates, irrespective of their origin, should be tested to the criteria laid down in the standard and thus have a set of test results and carry the CE mark.

On 31st January 2020 the United Kingdom officially left the European Union.

Prior to this Construction Products had been regulated under EU 305/2011 and its associated Harmonised European Standards.

The UK retained a form of Construction Products Regulation and in doing so assigned Designated Standards in support.

BS EN 12326-1:2014 covers slate and stone for discontinuous roofing and external cladding - Part 1 Specification for slate and carbonate slate.

Local Authority Building Control Department enforce these regulations, so we recommend that you ensure that any natural slate you specify carries the CE and/or UK CA mark, and your supplier provides a set of test results.

Purchasers and installers of natural roofing slate can check whether the slates they have purchased, or are using, have been tested to BS EN 12326-1:2014 by looking for the CE and/or UK CA marking on any labels within the packaging.

Please note that CE and UK CA marking does not indicate the quality of a slate, but that conforms to BS EN 12326-1:2014. Actual test methods such as Thermal Cycling (Freeze/Thaw), Water Absorption etc. are described in BS EN 12326-2:2014.

Summary

- All SIGA slates conform to BS EN 12326-1:2014.
- All SIGA slates carry the UK CA mark.
- Every crate of SIGA slates is labelled with the slate's performance.
- All SIGA slates are classified as T1 for minimal surface corrosion.
- All SIGA slates are classified as S1 for strength after corrosive environment exposure.
- All SIGA slates are classified W1 ($\leq 0.6\%$).
- In response to problems caused by poor quality slates on new homes, the NHBC now require that all slates used on NHBC-covered projects are S1, T1, W1 ($\leq 0.6\%$), according to BS EN 12326, and that valid Declaration of Performance and CE and/or UK CA mark are provided. The SIGA range includes a wide variety of W1 ($\leq 0.6\%$), T1, S1 slates to suit local requirements.

Declarations of Performance are updated regularly as new test results are published. All SIGA Declarations of Performance are available upon request from SIG Roofing branches, and from our website www.sigroofing.co.uk



From Rock to Roof: The Slate Journey

THE SLATE DEPOSIT

The extraction of natural slate from the mountain or mine is an expensive operation requiring considerable investment. The site for the quarry is selected after careful analysis of the geological and geotechnical studies that are carried out to ensure the slate is of the right quality and that there are plenty of slate reserves in the vein.

Where necessary, the overburden is removed. This can be millions of tonnes of vegetation, soil and loose rock which sit above the slate deposit, requiring heavy investment in time and materials. Extracting good complete blocks is the goal of any slate quarry.

EXTRACTING THE SLATE

The slate is carefully extracted using a diamond coated wire saw to obtain large blocks of slate. The saw requires a vertical hole to be made in the slate bank and a corresponding horizontal hole so that the diamond saw can be threaded through, a precise process. The saw then takes several hours to cut the block free from the mountain and is water cooled throughout this process. These large blocks are then split into transportable pieces and carried to the factory.



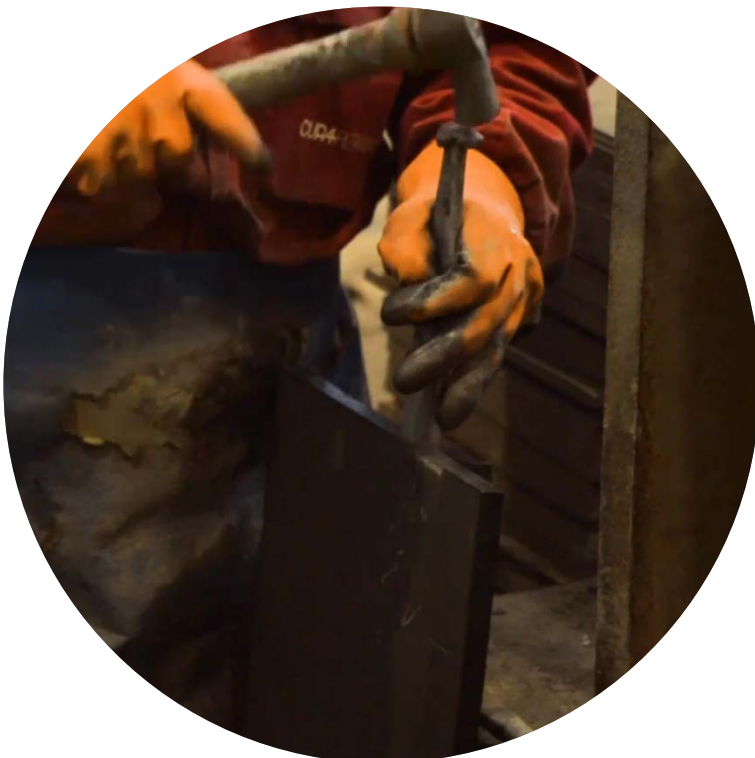
FACTORY PROCESSING

These pieces are then cut into smaller blocks using laser-guided diamond saws. The saw operator's job is challenging – they have to balance the need to produce the maximum yield per piece against the actual orders the quarry may have. Water is used here to cool the saw which reduces dust from the splitting process. The water is recycled and purified to minimise wastage of this important resource.

FORMING THE SLATE

Craftsmen then split these blocks into the final slate sizes and thicknesses required. This is a highly skilled task, and a good craftsman ensures the highest possible yield from the block.

The block is split in half to test the way it splits, and then worked down to quarters, eighths and so on, until they reach the desired thickness. The slate reaches this stage with a sawn edge. To give the slates the traditional dressed edge, they are then put through a dressing machine and holed at the same time.





GRADING & SELECTION

From the user's perspective, selection is the single most important aspect of slate production, and it is entirely manual. Slates are manually sorted and graded for quality. SIG Roofing provides transparency and ease of purchase of its SIGA natural slate through its grading system of qualities from the very best Excellence Range slates through to the Commercial ranges and the Classic range slates. They are then packed, counted, and labelled with the batch number and date of production.

ENVIRONMENTAL

European quarries have to obey very strict environmental obligations which are regulated and overseen by government agencies and environmental groups. The manufacturing of slate requires no chemicals and is a purely mechanical process. The only waste product is water used in the various processes which is purified and recycled. Once the slate seam has been exhausted, the landscape is returned to its original form through hydro-seeding native plants.





Slate Selection and Wastage Rates

Every quarry grades their slates into 'selection' during the production process. As there is no European or industry benchmark, there is little or no consistency across the market defining what makes a particular grade. Every quarry will aim to produce the highest possible proportion of best quality slates, with the lower grade slates more keenly priced. However, it is important to note that any potential savings made from using lower grade slates may be offset by increased time and labour charges involved in additional sorting and grading.

Note: When deciding on the most appropriate slate, we recommend that you consider all of the associated costs. These include wastage rates, grading, sorting, holing and trimming required with the lower quality slates, along with transportation costs needed for distribution

Slate Product Range

To ensure you have greater transparency when selecting natural slate, all SIG and Gallegas by CUPA Natural Slates are categorised into 'Excellence', 'Commercial', 'Classic', and 'Galiza'.

EXCELLENCE RANGE

The finest SIGA slates from the most reputable quarries are selected to provide a long-lasting beautiful roof with minimal grading and sorting. The Excellence range provides exceptional selection with very low wastage. The Excellence range offers a 100-year material warranty (Terms and Conditions apply).

COMMERCIAL RANGE

A range of affordable slates for good quality, ideal for new build projects, refurbishment and the volume developer market. These are recommended for more experienced slaters, as thickness and quality can be more variable than the Excellence range, so careful sorting and grading is strongly recommended for the desired aesthetics. Wastage, while still very reasonable, is generally a little higher than the Excellence range. The Commercial range offers a 75-year material warranty (Terms and Conditions apply).

CLASSIC RANGE

Classic slates require more sorting and grading in order to produce a good roof finish making them ideal for budget conscious projects. All Classic natural slates must meet the same strict testing and certification criteria as the higher grades. The rock used in the Classic range can be the same as the higher ranges, the difference is the selection which can result in slates exhibiting more variation in appearance. The Classic range offers a 50-year material warranty (Terms and Conditions apply).

GALIZA RANGE

Sourced from the Minas Gerais region of Brazil. Produced from a sedimentary stone, the slates are very smooth and come in two colours – Graphite and Grey/Green. The Galiza range offers a 30-year material warranty (Terms and Conditions apply).

Natural Slates from SIG Roofing

Range	Product Name	Origin (Quarry / Country)	Nominal Thickness	Sizes
Excellence	Gallegas 39 by CUPA	San Vicente, Spain	5mm	250 x 500mm, 250 x 400mm, 375 x 500mm, 375 x 400mm
	SIGA Quebec	Canada	7-8mm, 7-9mm, 5-6mm, 4-5mm	Please refer to Product Data Sheet
	Gallegas 35 Heavy by CUPA	North West Spain	7.5mm	200 x 300mm, 200 x 350mm, 200 x 400mm, 250 x 350mm, 250 x 400mm, 250 x 500mm, 300 x 400mm, 375 x 400mm, 375 x 500mm
	SIGA 32	North West Spain	5mm, 7mm	Please refer to Product Data Sheet
	SIGA 32S	North West Spain	5mm, 7mm	Please refer to Product Data Sheet
	SIGA 32S Random Width	North West Spain	7mm	Please refer to Product Data Sheet
	SIGA 50x	North West Spain	5mm	Please refer to Product Data Sheet
	SIGA 62m	North West Spain	5mm	Please refer to Product Data Sheet
	SIGA 67ATG 7mm	North West Spain	7mm	Please refer to Product Data Sheet
	SIGA I 12S	North West Spain	5mm, 6mm, 7mm	Please refer to Product Data Sheet
	SIGA 87	Lugo Region of Spain	5mm, 6mm	Please refer to Product Data Sheet
	SIGA 120	Wales	7-9mm	Please refer to Product Data Sheet
	SIGA 140	USA	7mm	Please refer to Product Data Sheet
	SIGA 150	USA	7mm	Please refer to Product Data Sheet

Range	Product Name	Origin (Quarry / Country)	Nominal Thickness	Sizes
Commercial	SIGA 32C	North West Spain	8-9mm	Please refer to Product Data Sheet
	SIGA 32SC	North West Spain	8-9mm	Please refer to Product Data Sheet
	Gallegas 37 by CUPA	Villarmartin de Valdeorras Orense, Spain	5mm	250 x 500mm, 300 x 400mm, 250 x 400mm, 200 x 400mm
	Gallegas 65 by CUPA	San Vicente Region, Spain	5mm	300 x 500mm, 300 x 400mm, 300 x 600mm, 450 x 600mm, 450 x 500mm
	SIGA 13S	North West Spain	5mm	Please refer to Product Data Sheet
	SIGA 54X	North West Spain	5mm, 6mm	Please refer to Product Data Sheet
	SIGA 53S	North West Spain	7mm, 8-9mm	Please refer to Product Data Sheet
	SIGA 65V	Riodolas Region, Spain	5.5mm	Please refer to Product Data Sheet
	SIGA 112SC	North West Spain	7-8mm	Please refer to Product Data Sheet
	SIGA 4I	North West Spain	5mm, 6.5mm	Please refer to Product Data Sheet
	SIGA 8I	North West Spain	5mm, 6mm	Please refer to Product Data Sheet
	SIGA 67ATG 8mm	North West Spain	8mm	Please refer to Product Data Sheet
	SIGA 3IS	North West Spain	5mm	Please refer to Product Data Sheet
	SIGA 87S	Lugo Region of Spain	5mm	Please refer to Product Data Sheet
Classic	SIGA 35Q	North West Spain	7-8mm	Please refer to Product Data Sheet
	SIGA 56M	North West Spain	4.2mm	Please refer to Product Data Sheet
	SIGA 56S	North West Spain	8mm	Please refer to Product Data Sheet
	SIGA 56V	North West Spain	6mm	Please refer to Product Data Sheet
	SIGA 56X	Zamora, Spain	5mm, 6mm, 5.5mm	Please refer to Product Data Sheet
	SIGA 77	China	5mm, 6mm	Please refer to Product Data Sheet
Galiza	Galiza Graphite	Mina Gerais area of Brazil	6mm	Please refer to Product Data Sheet
	Galiza Grey/Green	Mina Gerais area of Brazil	6mm	Please refer to Product Data Sheet

Slate Case Studies

CUSTOMERS' CRAFTSMANSHIP AT ITS FINEST





REFURBISHMENT – WELSH SLATE

- **Product used:** SIGA I20 (Welsh) random diminishing courses.
- **Location:** Midlothian, Scotland.
- **Outcome:** Premium natural slate finish, backed by SIGA specification and ONE Warranty coverage.

Rosslyn Castle, a partially ruined 14-century Scottish landmark, underwent a £3.5m restoration that included re-roofing its East Range for the first time since 1650, carry out extensive conservation works and make the castle Net Zero Ready. The 160m² heritage roofing project required a slate that could authentically replicate traditional Scottish material while meeting modern low-carbon goals.

The project aimed to make a historic castle more resilient to climate change while preserving its heritage, leading to a conservation-led design agreed with the council and Historic Environment Scotland.

SIGA I20 indigenous Welsh slate closely mimics traditional Scottish slate and was specified as a suitable alternative to the original Scottish Ballachulish slate. The slate offers a natural, locally sourced, low-carbon alternative that suits Scotland's demanding climate while maintaining the heritage of the castle.





INTEGRATED ROOF & SOLAR – NATURAL SLATE + SOLAR SYSTEM

Solar panels can be successfully installed on slate roofs, the results of which are both high-performing and sympathetic to the original roof.

Slate is a durable and long-lasting roofing material, but it can be more brittle compared to concrete tiles. When installing solar panels you need to take a careful and experienced approach to ensure correct methods, UK compliance standards and a successful installation are met.

Specialist mounting systems are used for slate roofs, typically slate hooks or brackets fitted beneath the tiles. This minimises the need for cutting and helps protect the roof's integrity. Where penetrations are necessary, correct flashing must be installed to prevent water ingress, in line with UK best practice.

With the right expertise and compliance in place, solar on slate roofs offers an efficient, reliable, and sympathetic solution for both modern and traditional UK properties.



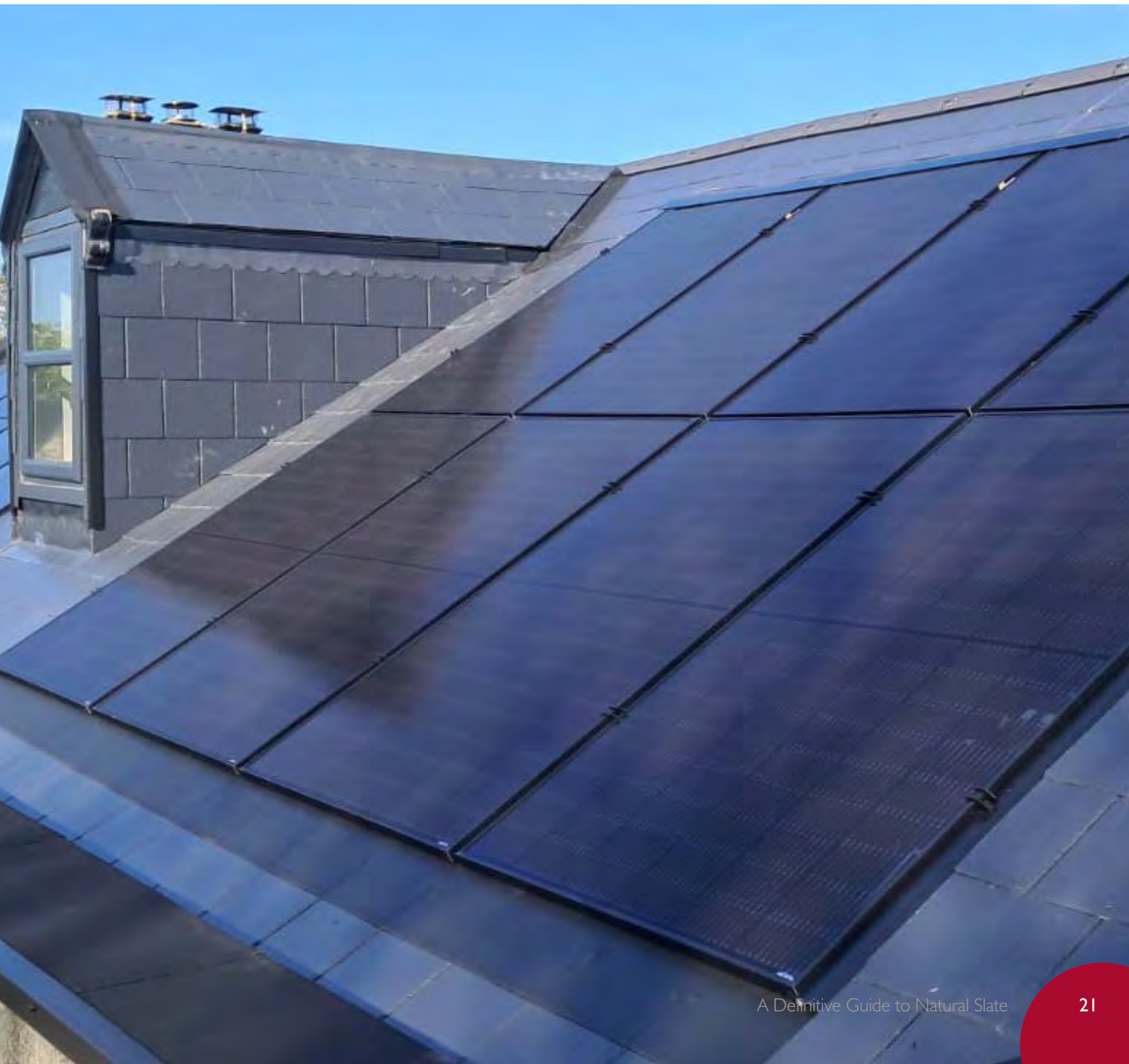
SOLAR + SLATE COMPLIANCE

It is always advisable on solar installation to use installers certified under the Microgeneration Certification Scheme (MCS). This ensures the system meets recognised quality and performance standards and allows eligibility for schemes such as the Smart Export Guarantee (SEG).

Compliance with Building Regulations is essential. The roof structure must be assessed to confirm it can support the additional weight of the system (Approved Document A – Structure), and all electrical work must meet the IET Wiring Regulations (BS 7671).

In most cases, solar panels fall under permitted development, but listed buildings or properties in conservation areas may require planning approval.

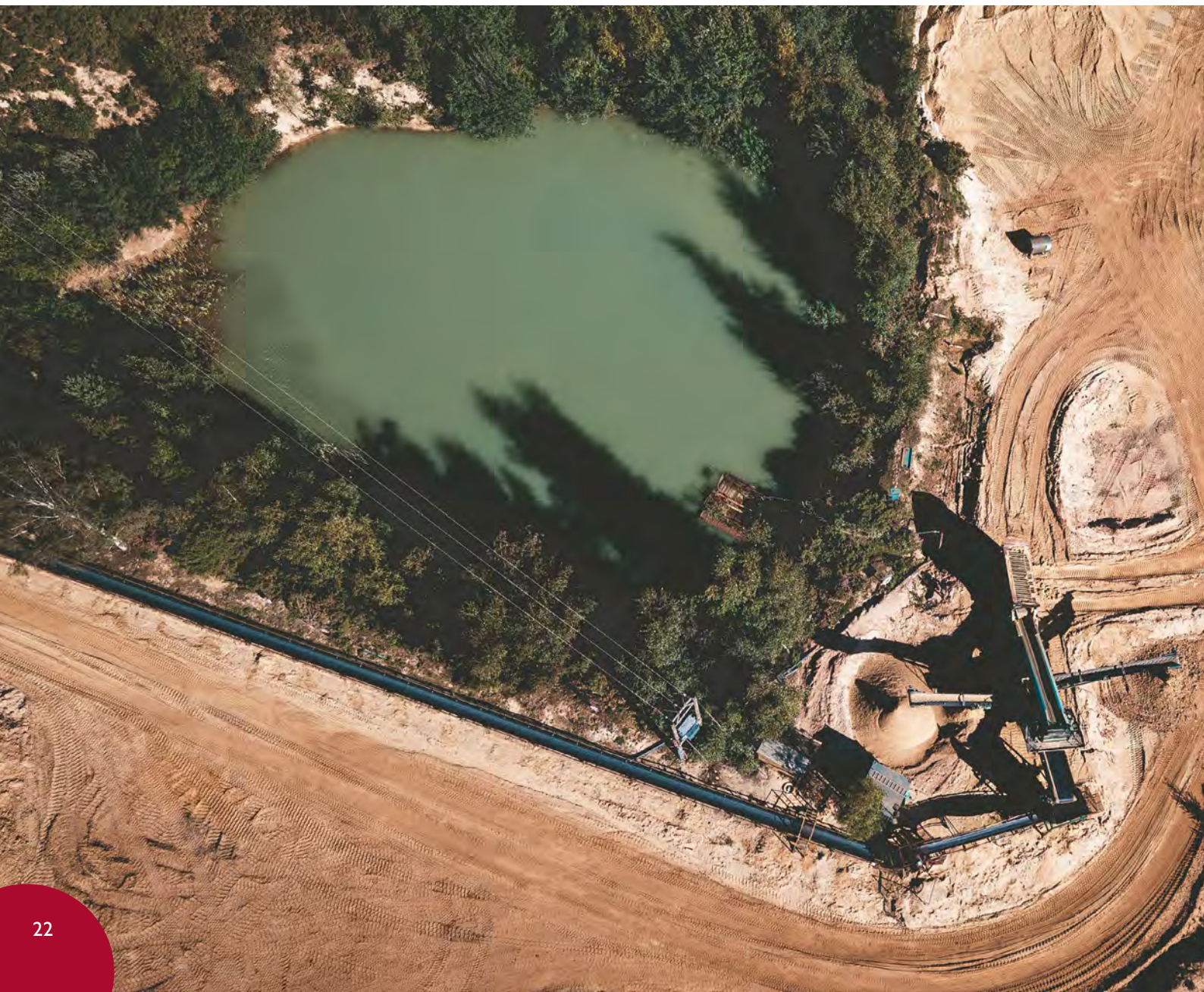
SIG Roofing gives specifiers and contractors everything needed to deliver solar with confidence including roofing specification design, planning and full product supply.



Quality Control and Design Considerations

In order to further strengthen our commitment to supplying high-quality natural slate, we established our dedicated Slate Operations Centre, SIG Pizarras, in 2007.

Located in the heart of the renowned slate quarrying region of León, Spain, SIG Pizarras gives us direct access to the source of some of the world's finest natural slate. This strategic presence allows us to maintain exceptional standards of quality, consistency and supply across our entire range.





Through SIG Pizarras, we benefit from:

- Access to a wide range of carefully selected quarries, offering a variety of slate types to suit different project requirements
- Full-time, on-site quality control personnel, ensuring every slate meets rigorous performance and grading standards
- Highly experienced procurement specialists with in-depth knowledge of slate selection and sourcing
- The ability to offer custom slate sizes, headlaps and grading selections tailored to specific project needs
- Efficient and reliable logistics, ensuring consistent supply from quarry to site



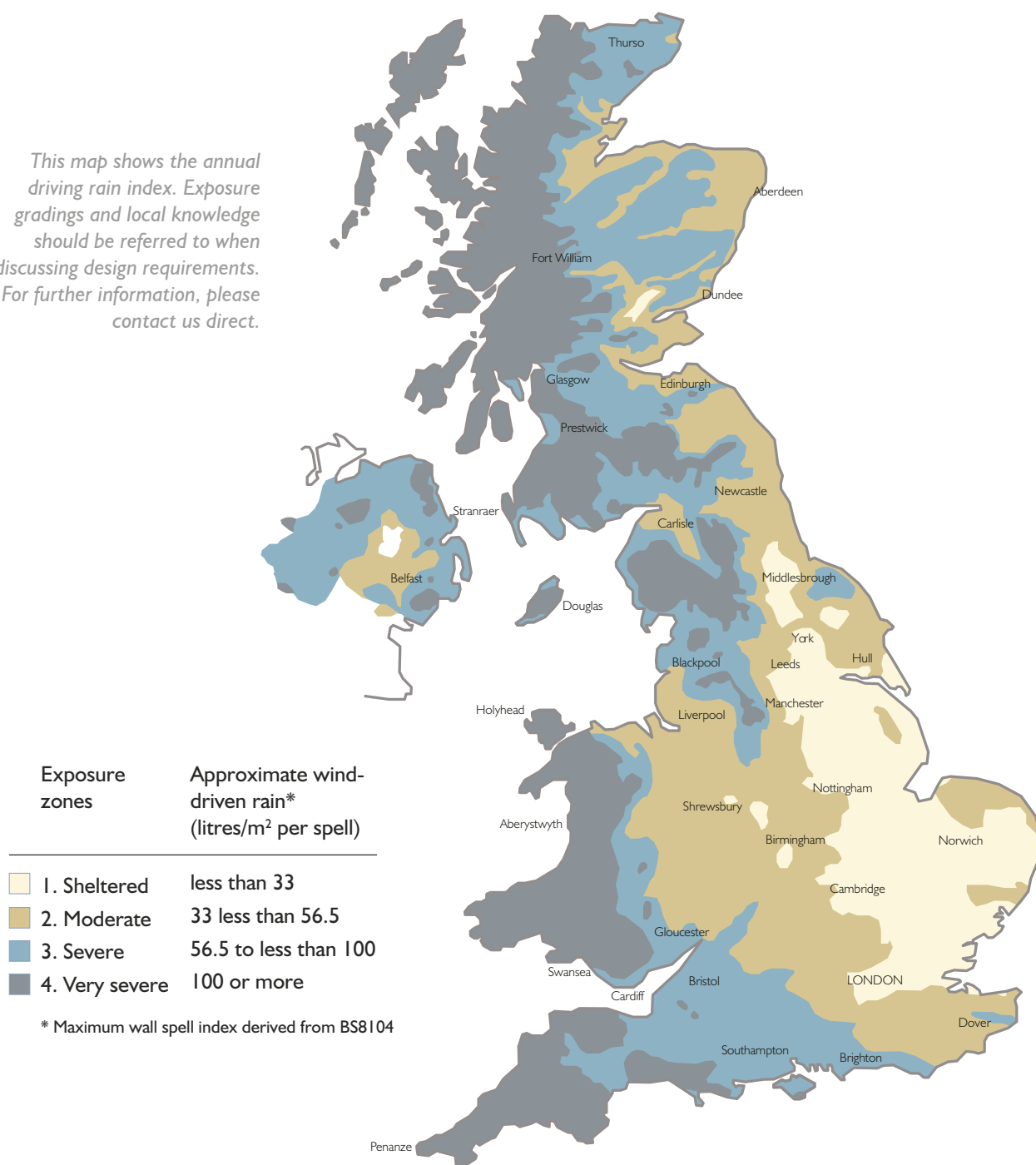
Environmental Conditions

RAIN EXPOSURE

The degree of exposure of a building to driving rain determines the minimum lap which should be specified. The anticipated degree of exposure is given in the adjacent image. Localised factors such as high buildings, buildings on the slopes or tops of hills and coastal sites, can increase the exposure grading which should be applied in a specific project.

The table on pages 27 and 28 shows the minimum recommended head lap for moderation and severe exposure areas.

This map shows the annual driving rain index. Exposure gradings and local knowledge should be referred to when discussing design requirements. For further information, please contact us direct.





PITCH OF ROOF

In general, the lower pitch of the roof, the greater the head lap should be. This longer lap will help to resist both capillary action and wind uplift. On steeper pitches with free-flowing drainage, smaller slates may be used. For exposed sites, wide slates with a greater lap should be used, whereas in sheltered areas pitches as low as 20 degrees can be achieved, but with extended headlap.

LAP

The lap is calculated by taking account of wind uplift, exposure to driving rain and the roof pitch. The table on pages 27 and 28 gives the recommended minimum laps for various roof pitches and building exposure.



Fixing and Head Lap Tables

BS 5534:2014+A2:2018

BS 5534:2014+A2:2018 is the Code of Practice for slating and tiling for pitched roofs and vertical cladding and describes not only the means of installing slates (nailing or hook fixing), but also the 'head laps' required to ensure that the roof remains watertight.

The most used slate size in England and Wales is 500 x 250mm and 400 x 250mm in Scotland (and some parts of Northern England). Most stock slates will be pre-holed at 90mm, allowing you the versatility of different pitches – 25 degrees in moderate exposure zones and 30 degrees in severe exposure zones.

We can pre-hole any head lap to special order. Any bespoke products must be ordered in advance to ensure timely delivery for specific projects.

Notes from BS 5534:2014+A2:2018

1. The minimum Roof Pitch for Natural Slates: 20 degrees (BS 5534:2014+A2:2018). Depending on Size of Slate See Table 9, or here on page 27 & 28..
2. Slates 450mm long or less should not be used on pitches of 27.5 degrees or less (moderate and severe exposure) (BS 5534:2014+A2:2018 table 9).
3. Slates less than or equal to 500mm and greater than 460mm long should not be used at pitches less than 22.5 degrees in severe exposure (BS 5534:2014+A2:2018 Table 9).
4. Slates less than or equal to 460mm and greater than 450mm long should not be used at pitches of 22.5 degrees or less in severe exposure (BS 5534:2014+A2:2018).
5. Generally, the recommendations given on the head lap tables should be followed for rafter lengths of not more than 9m in driving rain exposures of less than 56L/m² per spell and 6m in driving rain exposures of 56L/m² per spell or greater (BS 5534:2014+A2:2018 section 5.5.4).
6. Where abnormal weather conditions might be expected, e.g. on elevated sites, near to the coast, in localities where heavy snow falls are commonly experienced or in conditions of severe exposure, the following recommendations for pitches and laps will not always ensure full protection from the weather. In such conditions, the specifier using generic products should seek guidance from a competent person who is conversant with local conditions and any special precautions that should be taken into account in designing the roof covering (BS 5534:2014 section 5.5.1)
7. Hook fixings should not be used below 25° pitch unless specifically approved.
8. Ensure batten spacing, underlay and rafter length meet project-specific exposure conditions.



RECOMMENDED MINIMUM HEAD LAPS (MM) TABLE

■ ■ Less than 56.5L/m² per spell

Slate size		Roof pitch						
mm	20°	22.5°	25°	27.5°	30°	35°	40°	40 to 75°
600x300			91	83	77	67	60	54
550x300		101	91	83	77	67	60	54
500x300	113	101	91	83	77	67	60	54
500x250			91	83	77	67	60	54
450x250					77	67	60	54
450x220					77	67	60	54
400x300					77	67	60	54
400x250					77	67	60	54
400x200					77	67	60	54
350x300					77	67	60	54
350x250					77	67	60	54
350x200					77	67	60	54
300x200					77	67	60	54
270x180						67	60	54

RECOMMENDED MINIMUM HEAD LAPS (MM) TABLE

■ ■ 56.5L/m² or greater per spell

Slate size		Roof pitch							
mm	20°	22.5°	25°	27.5°	30°	35°	40°	40 to 75°	85°
600x300			**	**	98	86	76	69	69
550x300		128	116	106	98	86	76	69	69
500x300		128	116	106	98	86	76	69	69
500x250			91	83	77	67	60	54	
450x250			**	**	98	86	76	69	69
450x220					98	86	76	69	69
400x300					98	86	76	69	69
400x250					98	86	76	69	69
400x200					98	86	76	69	69
350x300					98	86	76	69	69
350x250					98	86	76	69	69
350x200					98	86	76	69	69
300x200					98	86	76	69	69
270x180						86	76	69	69

**Refer to AccuRoof Slate Specification Manager. Specific fixing calculations can be carried out for projects. For further details please contact us for advice.

BATTEN AND HOLING GAUGES TABLE

mm Inches	300 12	350 14	400 16	450 18	500 20	550 22	600 24	Slate length
50mm lap	125 8.00 185	150 6.67 210	175 5.71 235	200 5.00 260	225 4.44 285	250 4.00 310	275 3.64 335	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
55mm lap	123 8.16 188	148 6.78 213	173 5.80 238	198 5.06 263	223 4.49 288	248 4.04 313	273 3.67 338	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
65mm lap	118 8.51 193	143 7.02 218	168 5.97 243	193 5.19 268	218 4.60 293	243 4.12 318	268 3.74 343	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
70mm lap	115 8.70 195	140 7.14 220	165 6.06 245	190 5.26 270	215 4.65 295	240 4.17 320	265 3.77 345	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
75mm lap	113 8.90 197	138 7.27 222	163 6.15 247	188 5.33 272	213 4.70 297	238 4.22 322	263 3.80 347	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
80mm lap	110 9.09 200	15 7.41 225	160 6.25 250	185 5.41 275	210 4.76 300	235 4.26 325	260 3.85 350	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
85mm lap	108 9.30 203	133 7.55 228	158 6.35 253	183 5.48 278	208 4.82 303	233 4.30 328	258 3.88 353	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
90mm lap	105 9.52 205	130 7.69 230	155 6.45 255	180 5.56 280	205 4.88 305	230 4.35 330	255 3.92 355	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
95mm lap	103 9.76 208	128 7.84 233	153 6.56 258	78 5.63 283	203 4.94 308	228 4.40 333	253 3.96 358	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
100mm lap	100 10.00 210	125 8.00 235	150 6.67 260	175 5.71 285	200 5.00 310	225 4.44 335	250 4.00 360	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
105mm lap	- - -	123 8.16 238	148 6.78 263	173 5.80 288	198 5.06 313	223 4.49 338	248 4.04 363	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
110mm lap	- - -	120 8.33 240	145 6.90 265	170 5.88 290	195 5.13 315	220 4.55 340	245 4.08 365	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
115mm lap	- - -	118 8.51 243	143 7.02 268	168 5.97 293	193 5.19 318	218 4.60 343	243 4.12 368	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
120mm lap	- - -	- - -	140 7.14 270	165 6.06 295	190 5.26 320	215 4.65 345	240 4.17 370	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
125mm lap	- - -	- - -	138 7.27 273	163 6.15 298	188 5.33 323	213 4.17 348	238 4.21 373	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
130mm lap	- - -	- - -	135 7.41 275	160 6.25 300	185 5.41 325	210 4.76 350	235 4.26 375	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)
150mm lap	- - -	- - -	- - -	150 6.67 310	175 5.71 335	200 5.00 360	225 4.44 385	Battening gauge (mm) (M) batten per sq.m Holing gauge (mm)

Slate Coverage

Given the multitude of different sizes and head laps available, and the peculiarities of the production process, the installed cost of any slate can be influenced by the size selected, the quantity of batten and fixings required for that particular slate size. Please contact your AccuRoof Slate Specification Manager for further assistance.

Size (Nominal) mm	Lap (mm)																	
	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	130	150	175
600x350	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.7	11.8	11.9	12.2	12.7	13.4
600x300	12.1	12.2	12.3	12.5	12.6	12.7	12.8	12.9	13.1	13.2	13.3	13.5	13.6	13.7	13.9	14.2	14.8	15.7
550x300	13.3	13.5	13.6	13.7	13.9	14.0	14.2	14.3	14.5	14.7	14.8	15.0	15.2	15.3	15.5	15.9	16.7	17.8
500x300	14.8	15.0	15.2	15.3	15.5	15.7	15.9	16.1	16.3	16.5	16.7	16.9	17.1	17.3	17.5	18.0	19.0	20.5
500x250	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.3	19.5	19.8	20.0	20.3	20.5	20.8	21.1	21.6	22.9	24.6
450x300	16.7	16.9	17.1	17.3	17.5	17.8	18.0	18.3	18.5	18.8	19.0	19.3	19.6	19.9	20.2	20.8	22.2	24.2
450x250	20.0	20.3	20.5	20.8	21.1	21.3	21.6	21.9	22.2	22.5	22.9	23.2	23.5	23.9	24.2	25.0	26.7	29.1
450x220	22.7	23.0	23.3	23.6	23.9	24.2	24.6	24.9	25.3	25.6	26.0	26.4	26.7	27.1	27.5	28.4	30.3	33.1
400x300	19.0	19.3	19.6	19.9	20.2	20.5	20.8	21.2	21.5	21.9	22.2	22.6	23.0	23.4	23.8	24.7	26.7	29.6
400x250	22.9	23.2	23.5	23.9	24.2	24.6	25.0	25.4	25.8	26.2	26.7	27.1	27.6	28.1	28.6	29.6	32.0	35.6
400x220	26.0	26.4	26.7	27.1	27.5	28.0	28.4	28.9	29.3	29.8	30.3	30.8	31.3	31.9	32.5	33.7	36.4	40.4
400x200	28.6	29.0	29.4	29.9	30.3	30.8	31.3	31.7	32.3	32.8	33.3	33.9	34.5	35.1	35.7	37.0	40.0	44.4
350x330	20.2	20.5	20.9	21.3	21.6	22.0	22.4	22.9	23.3	23.8	24.2	24.7	25.3	25.8	26.4	27.5	30.3	34.6
350x300	22.2	22.6	23.0	23.4	23.8	24.2	24.7	25.2	25.6	26.1	26.7	27.2	27.8	28.4	29.0	30.3	33.3	38.1
350x250	26.7	27.1	27.6	28.1	28.6	29.1	29.6	30.2	30.8	31.4	32.0	32.7	33.3	34.0	34.8	36.4	40.0	45.7
350x220	30.3	30.8	31.3	31.9	32.5	33.1	33.7	34.3	35.0	35.7	36.4	37.1	37.9	38.7	39.5	41.3	45.5	51.9
350x200	33.3	33.9	34.5	35.1	35.7	36.4	37.0	37.7	38.5	39.2	40.0	40.8	41.7	42.6	43.5	45.5	50.0	57.1
300x300	26.7	27.2	27.8	28.4	29.0	29.6	30.3	31.0	31.7	32.5	33.3	34.2	35.1	36.0	37.0	39.2	44.4	53.3
300x250	32.0	32.7	33.3	34.0	34.8	35.6	36.4	37.2	38.1	39.0	40.0	41.0	42.1	43.2	44.4	47.1	53.3	64.0
300x200	40.0	40.8	41.7	42.6	43.5	44.4	45.5	46.5	47.6	48.8	50.0	51.3	52.6	54.1	55.6	58.8	66.7	80.0

Values calculated using nominal sizes and incorporating a 5mm joint gap as per BS 8000-6:2023. We recommend the addition of at least 5% wastage allowance. These figures are for guidance only and dependent on the joint gap allowed. This table gives a range of sizes for your information. Other sizes may be available, please contact us for further information.

Slate Storing and Sorting

All natural slates should be sorted and graded in accordance with BS 8000-6:2013. This is most easily done at ground level. Any twisted or bowed slates should be set to one side and be used first for eaves or top slates. This will result in the best possible roof finish. Not sorting slates, particularly amongst the Commercial and Classic ranges, can compromise the aesthetic appeal of the roof.

Slates should be stored in their pallets wherever possible. Once removed from the crate, they should be stacked on their long edge on two pieces of batten. Each slate should be inspected and separated into three piles:

- Thick slates – used on the lower courses of the roof nearest the hip.
- Medium thickness slates – used in the middle courses of the roof.
- Thin slates – used on the upper courses of the roof nearest the ridge.



Scan the code to
watch our video.

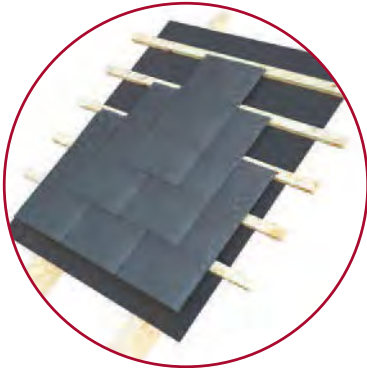


Slating Practices

A short guide to the basic steps is below;

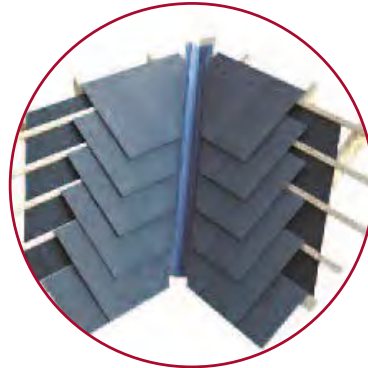
- Slates should be sorted into at least three groups of equal thickness.
- The size of slate, the head lap and hence the holing gauge should be selected to conform to BS 5534. These should be checked to ensure they provide adequate side lap.
- Where required slates should be holed with the thicker end as the tail and from the underside to the topside (as laid) to provide a small counter sink in the face of the slate.
- Fix the underlay as specified.
- Mark out the roof to the correct battening gauge and batten the roof.
- Check the actual width of slates and mark out perpend on battens at correct centres allowing a maximum of 5mm joint gaps between the slates to accommodate variations in the slate width.
- Load out the slates onto the roof so that the thickest slates are in the lowest courses and the thinnest are nearest the ridge.
- The under eaves course should be laid with the dressed edges face down to give the required overhang to the gutter or tilting fillet.
- Slates should be laid with the dressed edge face up. Slates of equal thickness should be laid in any one course, with the thicker slates in the lower courses grading down to the thinner slates in the upper course.
- Fix the slates to perpend lines. In order to maintain adequate laps and allow proper fixing, slates must not be cut too narrow. In general, no slates should be less than 150mm wide, in accordance with BS 5534:2014+A2:2018
- At all verges and abutments, alternate courses must be started either with half width slates or with slate-and-a-half widths to maintain bond. If the half-slate would be less than 150mm, slate-and-a-half widths must be used.
- At valleys, hips and other places where slates must be cut on the rake, it is essential that slates are of an adequate width to accommodate secure fixings.
- All slating should be mechanically fixed in accordance with BS 5534.

For a detailed description of the process of roof slating, reference should be made to code of Practice for Slating and Tiling and BS 8000-6:2023 Workmanship on Building Sites.



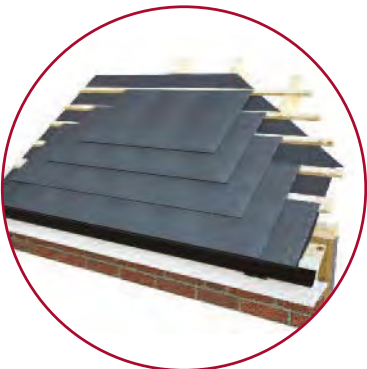
BATTENING

The most common form of roof construction in England and Wales with open rafters. This shows the position of the battens relative to the slates in the main roof areas.



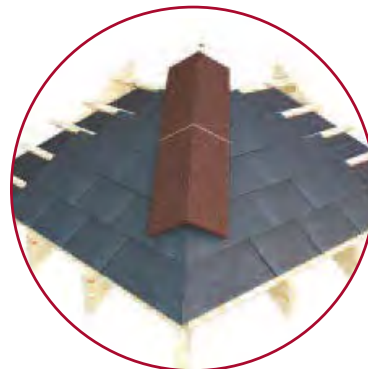
VALLEYS

The use of slate-and-a-half slates is recommended at the valley to ensure secure fixing of the slate.



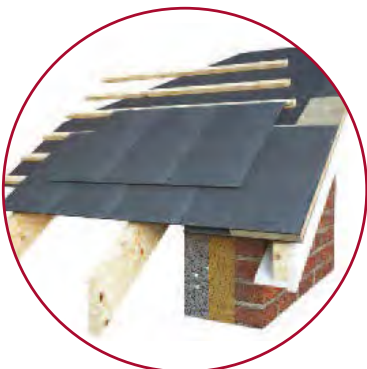
EAVES

The under eaves slate is laid with the dressed edge face down and projecting into the gutter. The eaves course slate are installed dressed edge face up with the tail aligned to the under-eave slate.



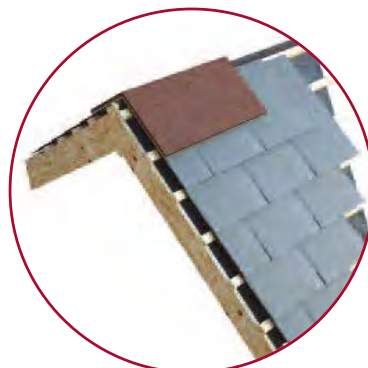
HIPS

The slates must be cut closely at the hip junction with ridge hip tiles of the correct angle used. Wet bedded hips use hip irons to BS 5534 and mortar of the correct mix along with a mechanical fixing to each ridge. Dry hip packs are common in new build applications.



VERGES

The use of slate-and-a-half slates is recommended at the verge. Traditional wet bedded verge must ensure the correct mortar mix is used for this application.



RIDGE

A shorter slate can be used at the ridge to compensate for the gauge and to ensure adequate ridge overlap. Ensure that the minimum head lap is maintained. Dry ridge packs are common in new build applications.





Fixing Natural Slates

BS 5534 specifies two ways of installing slates: nailing or hook fixing. These fasteners fix the slates to either batten which is by far the most common English method, or to sarking board, which is commonly used in exposed areas in Scotland.

FIXING:

Fixing natural slate is straightforward for an experienced slater. They can be fixed by either traditional nailing, or by the modern hook system. Further fixing information is provided below - for a comprehensive guide, please refer to BS 5534.

Most SIGA slates come preholed at a nominal 90mm headlap. By simply moving the location of the slate on a standard 50x25mm batten, these can be fixed to obtain headlaps between 72 and 116mm, allowing them to be used on a variety of pitches.

NAIL SIZE / TYPE FOR SLATES:

Nail fixing is the traditional method of fixing slates and can be used for any slate apart from Galiza Brazilian. Most slates available from SIG Roofing are supplied pre-holed, with these pre-holed slates being holed from the reverse face creating a small countersink around the hole. This allows the nail head to sit flush with the slate.

To comply with BS 5534:

- The slate nails must be copper or aluminium and you would use 2 nails per slate. In corrosive or marine atmospheres copper nails are preferable and in severe conditions silicone bronze nails should be used.
- Nail Shank Diameter = 3.35mm
- Nail Shank Length = 20-25mm + 2x slate thickness (it needs to be long enough to penetrate the batten by 15mm)
- Nail Head Diameter = 10mm

FIXING RANDOM WIDTH SLATES:

If you require guidance or a fixing specification for SIGA Random Width slates, please contact your AccuRoof Slate Specification Manager for advice.

HOOK FIXING:

All natural slates can be hook fixed with “spike-end” nail-in hooks. Only this type of hook is permissible under BS 5534. Crimped spike-end hooks must be used at pitches of 30° or less. Hook fixings should not be used at pitches less than 25°. The hook method offers freedom in design and can reduce labour costs and eliminate breakages.

With hook fixings, the slate is held by the hook and 4 hooks are in contact with each slate, rather than just 2 nails with traditional fixing. This provides increased resistance to wind uplift. To comply with BS 5534, hook should be stainless steel 316 (marine) grade, 2.7mm gauge and at least 5mm longer than the minimum lap required.

CPD Seminars

In response to the challenges specifiers must overcome, we offer informative free CPD Seminars.

SIGA Natural Slate emphasizes traceability and coverage from the rock face to the roof.

Our CPD is designed to equip you with the knowledge to specify good, durable, slate roofs, and to dispel some myths about natural slate. Covering the origin of slate and how it's produced will give you an understanding of the manufacturing process, which directly affects what is available to roofers. We cover the qualities of natural slate, common issues and the key legislation to ensure you make informed buying decisions.

To discuss your requirements with one of our AccuRoof Slate Specification Managers, or to book a CPD seminar at your practice, please contact info@sigaslate.co.uk.



ONE Warranty



The ONE Warranty is SIG Roofing's single-package pitched roof warranty.

Key features:

- Covers eligible pitched roof products when purchased through SIG Roofing and registered within defined timeframe.
- Standard term: 15 years (or as specified) covering product failure, and compatible systems.
- One simple certificate covers the entire roof build-up (where qualifying materials used).
- Transferable if property is sold (subject to conditions).
- Registration process: via SIG website or branch, typically within 4 weeks of completion.
- Tip for contractors: Register early, keep proof of purchase/installation, and ensure product codes included on documentation.





Solar Solutions

SIG Roofing offers a dedicated solar roof solution via its online tools and systems:

- **Solar Calculator:** Enables roof mapping, panel count estimation, layout planning and pay-back assessment.
Example: Visit SIG Roofing Solar Calculator page.
- **Integration with slate roofs:** Compatible fixing systems for natural slate profiles, including hook/nail fixings with minimal penetration.
- **Contractor benefits:** On-site quoting tool, streamlined supply via SIG centres, combined roof and solar package for clients.
- **Sustainability angle:** Leverage natural slate's long life with solar's low carbon generation for premium roofs.

Site Specific NBS Specifications

AccuRoof can provide NBS specifications, CAD details and warranty proposal tailored to ensure your project is compliant with relevant British Standards.

Ordering and Contact Information

- Order via your local SIG Roofing branch – provide product code, required size/quantity and project details.
- Lead-times vary by product and region — contact branch for availability (quotations recommended).
- Technical support: SIG technical helpline or branch contact.
- Datasheets & downloads: Visit SIG Roofing Downloads Hub sigroofing.co.uk
- Warranty registration: Via SIG Roofing website.

Scan the code to visit our website.





Notes

A series of horizontal dotted lines for taking notes.



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