Cl/SfB | | (47) | Ng2 | |
September 2010

Sandtoft

20/20

Interlocking Clay Plain Tile



Now performs at pitches down as low as 15º

20/20

The 20/20 is a New Generation interlocking clay plain tile that makes a clay plain tile roof more affordable through an innovative design that reduces labour and material costs, and cuts completion times.

This tile has a single lap design providing coverage of approximately 20 tiles per square metre instead of the usual 60 when using traditional plain tiles. This economy of materials together with Sandtoft's use of 100% green electricity combines to offer a **50%** saving in CO_2 per roof when compared with traditional clay plain tiles*.

On cover 20/20 - Natural Red

* A saving of 35% CO_2 is derived from material savings compared with traditional clay plain tiles and a further 15% by using green electricity.



Now performs at pitches
down as low as 15º

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20/20

The Art of Clay



20/20 - Flanders & **Humber -** Flanders



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Building on tradition

The 20/20 was conceived in response to those seeking to achieve the aesthetic and planning-friendly benefits of traditional clay plain tiles without incurring the high cost inherent in their design. By choosing the 20/20 you can achieve the colour permanent benefits of a natural clay roof at a more affordable price.

Clay plain tiles have been used for centuries to create beautiful roofs that are full of character and distinction. However, whilst they give any property added kerb appeal and satisfy planning guidelines, using plain tiles does carry a cost burden in terms of labour and materials.

Making clay affordable

The 20/20 changes all that by using an innovative single lap design that requires fewer tiles and battens.

The 20/20 also features a unique open gauge design that makes interlocking clay tiles as easy to install as concrete tiles. The open gauge allows complete freedom in setting the gauge which together with the elimination of the need for cuts at eaves and ridge, plus enhanced lateral shunt will reduce roof completion times and save labour costs. These healthy savings in installation costs make 20/20 **more cost effective than both clay and concrete plain tiles.**



20/20

Design Benefits



20/20 - Flanders

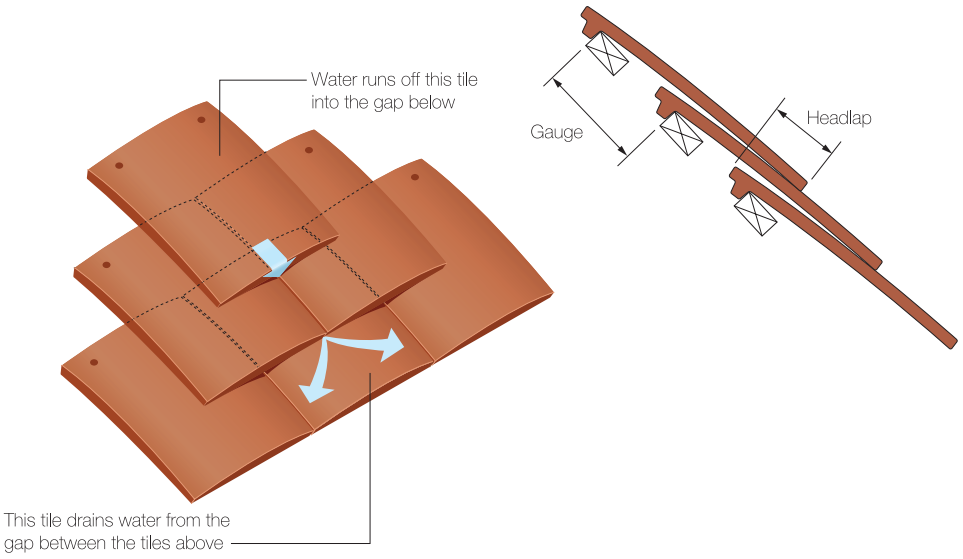
Design that reduces material, labour & weight

Traditional plain tiles

Traditional double lap plain tiles are one of the oldest forms of roof covering in the UK. The term 'double lap' is applied to the way that the plain tiles are laid on the roof to create an effective barrier to water. Plain tiles like slates are uniform in shape and have no side interlocks, allowing the water to enter the gap between the tiles.

To drain this water away safely there must be another tile beneath each joint. This means that at any point on the roof there is at least a double layer of tiles, hence the term ' double lap' – at the headlap there are actually three layers of tiles (see below)

The traditional plain tile system





20/20 - Tuscan



The 20/20 has been designed to emulate traditional plain tiles, particularly when the roof is viewed from ground level.

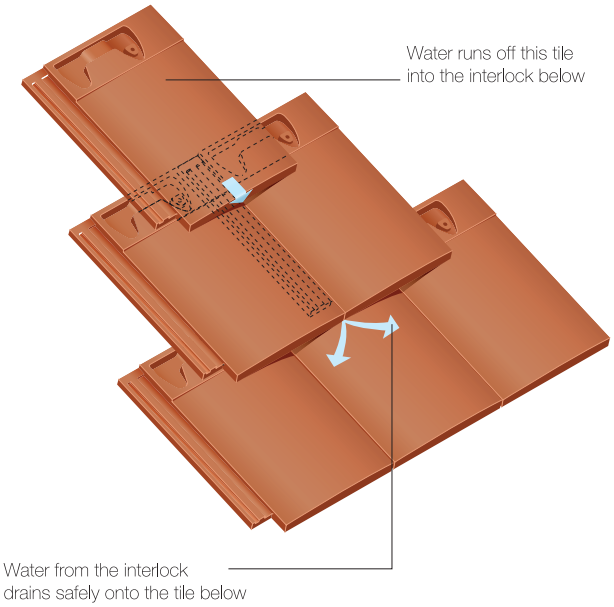
The 20/20 interlocking system

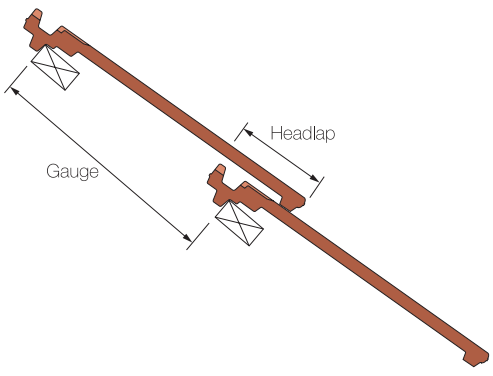
By adding features to the plain tile form, such as side interlocks and drainage channels it is possible to prevent the water from falling between the tiles at the side joint and instead carry it away to the tile below. This means that it is not necessary to have a double layer of tiles, which dramatically reduces the number of tiles required and the weight on the roof. 20/20 is half the weight of concrete plain tiles and over 40 per cent lighter than clay plain tiles.

Installing fewer tiles means less material and labour is required per roof and allows completion times and installation costs to be reduced.

The interlocking system also provides a much greater degree of control over wind and water ingress and this enhances performance. As a result 20/20 can be used on roof pitches as low as 15º.

The 20/20 interlocking system





20/20

Technical Data



20/20

Technical Data	Roof
Minimum roof pitch*	15º @ 100 mm headlap 22.5° @ 75 mm headlap
Headlap (minimum)	75 mm
Headlap (maximum)	120 mm
Batten spacing at max. gauge	255 mm
Batten spacing at min. gauge	210 mm
Size of tile	330 x 226 mm
Covering capacity at max gauge	22.7 tiles per m^2 (at 100 mm headlap) 20.5 tiles per m^2 (at 75 mm headlap)
Cover width	191 mm
Profile depth	16 mm
Hanging length	300 mm
Weight as laid	47.6 kg per m^2 (at 100 mm headlap) 43.1 kg per m^2 (at 75 mm headlap)
Weight per 1,000	2.1 tonnes
Weight per tile	2.1 kg
Weight per pallet (including pallet and packaging)	1.0 tonnes
Quantity per pallet	480
Battens per m^2	4.3 m (at 100 mm headlap) 3.9 m (at 75 mm headlap)
Batten size -	
Up to 450 mm rafter centres	38 x 25 mm
Up to 600 mm rafter centres	50 x 25 mm
Nail size/type for tiles	45 x 3.35 mm aluminium ring shank clout head
Nail size/type for metal / plastic tile clips	55 x 3.35 mm aluminium ring shank clout head
BRE Green Guide rating	A+

Classification

Type	new generation plain tile
Material	natural clay
Fixing	single lap, cross bond

Guarantees

Durability guarantee	60 years
Roof SPEC guarantee	15 years (See P14)

Standards

Quality

BS EN ISO 9001: Quality management systems

Manufacturing

BS EN 1304: Clay roofing tiles
BS EN 1024: Geometric characteristics
BS EN 538: Flexural Strength
BS EN 539-1: Impermeability
BS EN 539-2: Frost resistance

Design & fixing

BS 5534: Code of practice for slating and tiling
BS 8000-6: Workmanship on building sites
BS 5250: Control of condensation

Fire resistance

BS EN 1304: deemed to satisfy
BS 476-3: SAA rated

Note: Unless otherwise stated, data is based on tiles laid at minimum headlap.
*Maximum rafter length at 15º is 9 metres or 6 metres depending upon site exposure.
Rainwater must not discharge onto a 15º roof from upper roofs or gutters etc.
Due to natural drying and firing shrinkage in the manufacturing process small variations in size can occur, therefore it is advisable not to mix tiles of different colour or batches on the roof.
At roof pitches from 15º to 22º the Sandtoft low pitch concealed tile ventilator must be used.



20/20 - Natural Red

In use
The contractor must work in accordance with BS 8000-6 and fix all tiles in accordance with BS 5534. Our Fixing SPEC service, together with installation guides for tiles and systems, are available for download from our website **www.sandtoft.com** or contact Technical Services for assistance on 0844 9395 999.

Maintenance
Extremely low maintenance. Only periodic removal of debris or growth required if in high-risk areas.

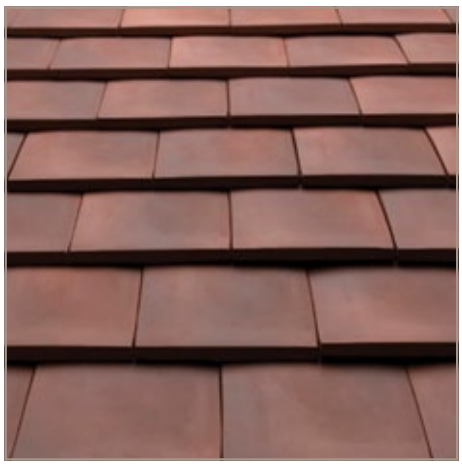
Packaging and storage
Supplied shrink wrapped on pallets. Download Safe Stacking recommendations from our website **www.sandtoft.com** or contact Customer Support for assistance on 0844 9395 900.

Health & safety
Adhere to current health and safety rules at all times. Download COSHH sheets from our website **www.sandtoft.com** or contact Customer Support for assistance on 0844 9395 900.

Colours


Natural Red


Tuscan


Flanders


Antique Slate

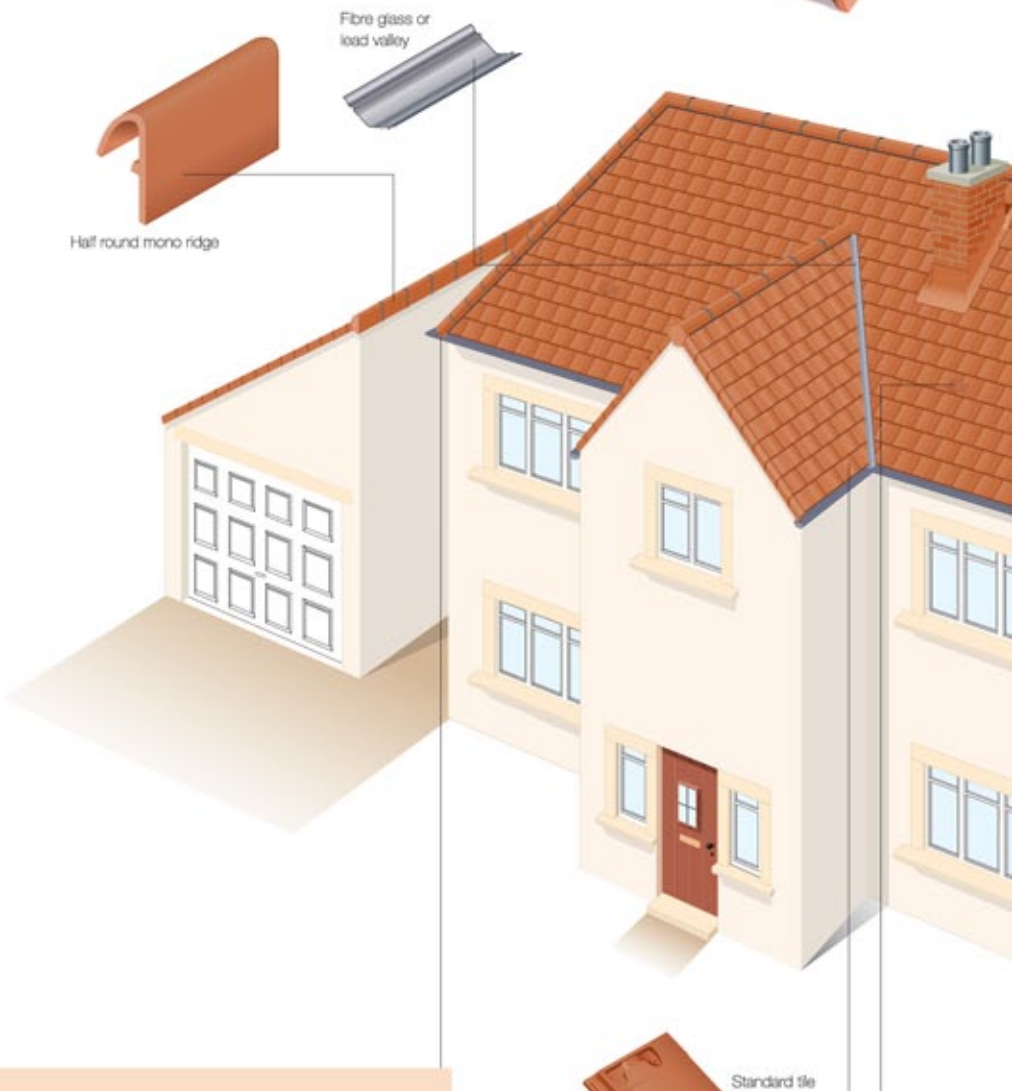
20/20

The 20/20 roof system

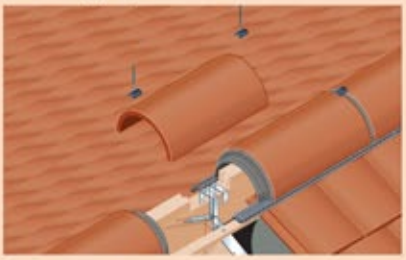
Duracoat Ridge Range
Sandtoft has developed a finish for concrete ridges, hips and related fittings that matches the texture and colour of our clay range. Duracoat gives the appearance of natural clay and is achieved using a highly durable multi-layered acrylic polymer coating.

This new range of fittings has prolonged weathering properties and has been designed to complement Sandtoft's New Generation range of clay tiles. At a small premium over standard concrete ridges, the use of Duracoat ridges further reduces the cost of a clay roof as they are at least 60% cheaper than clay ridges per linear metre and can save up to 5% on the total cost of the roof.





Profile Ridge system



Components
Each pack has sufficient components (excluding ridges) for 2.7 metres of ridge. For use with 305mm clay or 457mm Duracoat half round ridges.

Profile mono ridge system components
Each pack has sufficient components (excluding ridges) for 2.7 metres of ridge. For use with 305mm clay or 457mm Duracoat half round mono ridges.

RollRidge system



Components
Each pack has sufficient components (excluding ridges) for 5.0 metres of ridge. For use with 305mm clay or 457mm Duracoat half round ridges.

Clip systems



Tile clip



Verge clip



Eaves clip

Eaves ventilation system

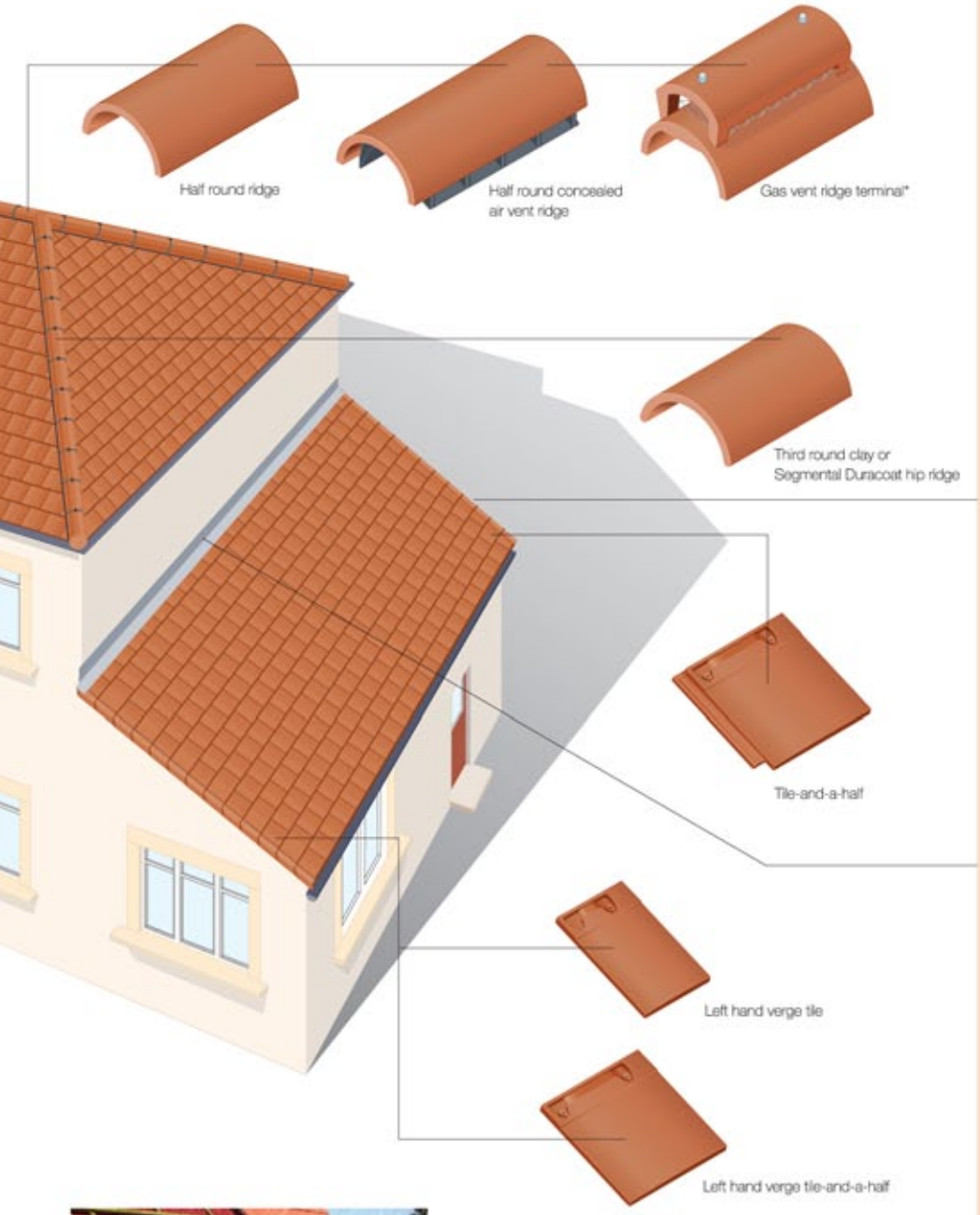


Components
The Sandtoft eaves ventilation system is available in 6 metre packs. Systems are available in 10mm and 25mm.



Concealed tile ventilator (NEW: low pitch version also available for roof pitches down to 15°)

*** Important** When gas flue terminals are used in conjunction with dry fix systems a gas vent conversion kit is required. This consists of 4 no. 900mm long ventilator-closure strips to prevent exhaust gases from entering the roof void at either end of the gas flue terminal.





Koratech® Classic & Koratech® Classic Super
Vapour permeable membranes suitable for both warm and cold roof designs on any roof shape and building type.

Koraflex



Koraflex is an aluminium roll, fully coated with a butyl adhesive backing for superior adhesion. It is an ideal replacement for lead for weatherproofing roof junctions such as side and top abutments around chimneys and dormers. Available in two widths 320mm and 450mm and two standard colours grey and red. See separate brochure.

Medium Format Dry Verge



Components
The MF dry verge system is colour matched to complement the tiles and is easy to fix, providing a neat, secure and mortarless finish at roof verges. The system is suitable for use at both left and right verges.

Abutment ventilation system



Components
The Sandtoft Rollvent top abutment ventilation system comes in 3 metre rolls and is suitable for all profiles. Copper fixing clips are included.

Roll Hip system



Components
Each pack has sufficient components (excluding hip tiles and trays) for 5.0 metres of hip. For use with 305mm clay third round or 457mm Duracoat segmental hip ridges.

20/20

Environment


20/20 - Antique Slate


20/20 - Natural Red

100% Green Commitment

Choosing the 20/20 means choosing the products of a truly eco-conscious company. At Sandtoft, we are passionate about reducing our impact on the environment and providing the construction industry with greener building materials. Our UK manufacturing processes are audited to environmental standard ISO 14001, but on top of this, we have taken radical steps to reduce our CO_2 emissions.

Significantly, we have switched our entire UK operation to 100 per cent renewable electricity, and undertaken a programme of other energy efficiency methods. All of our clay pits are adjacent to our factories, reducing the CO_2 generated through the transportation of raw materials, and we endeavour to source all of our third-party materials from quality local suppliers.

In 2000, the ceramic industry made a pledge to the government that the sector would reduce its carbon emissions by 10 per cent before 2010. Through our proactive environmental policies, Sandtoft achieved this target more than four years ahead of schedule; and since 2001 we have reduced the carbon footprint of our clay business by 40 per cent. However – we don't intend to stop there. We will continue to adapt and evolve our operation to further reduce our carbon emissions.

We are also reducing our landfill waste, working towards becoming a zero landfill business. The vast majority of our waste is already recycled back into the manufacturing process and our fired clay waste is used as hardcore for road construction. Because our clay roof tiles and slates are so durable, they are often reused, either on other installations or for a variety of different applications. We actively encourage this second lifecycle and appreciate the environmental value of reusing building materials.

20/20 - Flanders & **Humber -** Flanders

20/20 - Natural Red & **Humber -** Natural Red

20/20

Service & Support





20/20 - Flanders

Quality products with complete support

To ensure total peace-of-mind, Sandtoft offers a range of support and guarantee packages that encompass design, specification and installation.

Customer Support
Pricing, orders and general enquiries

Tel 0844 9395 900

Fax 0844 9395 950
info@sandtoft.co.uk
www.sandtoft.com

Technical Services
Full range of technical services
Tel 0844 9395 999
Fax 0844 9395 950
technical@sandtoft.co.uk

Despatch Team
Delivery and vehicle information
Tel 0844 9395 955
Fax 0844 9395 950
orders@sandtoft.co.uk

Sandtoft Training and Assessment Centre (STAC)
Tel 0844 9395 900

Durability Guarantee
The roof is the single most exposed element of the building envelope – and as such, it needs to be as durable as it is beautiful. At Sandtoft, we are committed to providing the highest quality roofing solutions, and we are willing to provide the guarantees that will offer you peace-of-mind when investing in our products. All of our clay tiles and slates are guaranteed to last at least 60 years (subject to the standard terms of the guarantee), but we go beyond simple durability guarantees.

Roof SPEC® Guarantee
Sandtoft can also provide a comprehensive design specification for your roof; a design specification that we will guarantee for 15 years under our Roof SPEC guarantee system. With Roof SPEC you can be assured that your roof is designed to comply with all of the relevant building standards and best practices, and is guaranteed to remain weathertight for 15 years.

Fixing Specifications
Sandtoft also offers the Fixing SPEC comprehensive fixing specification service – designed to ensure your roof is fixed correctly and securely in accordance with the relevant British Standards. Using BRE BREV data, our postcode-based system provides quick and accurate fixing recommendations to suit your project's geographical position and design specifics. Fixing SPEC is available through our website at **www.sandtoft.com** – simply fill in your project details and we'll do the rest.

CAD Library
To help save you time, we also offer a vast online library of CAD details through our website, in DWG, DXF and JPEG formats.

Installation
Detailed installation guides and systems video guides are available from our website or contact **Customer Support on 0844 9395 900.**



20/20 - Antique Slate



Sandtoft Roof Tiles Ltd
Belton Road
Sandtoft
Doncaster
DN8 5SY

T 0844 9395 900
F 0844 9395 950

info@sandtoft.co.uk
www.sandtoft.com

Community registered design application No. 000165840
UK patent pending: application No. 0407835.8
European patent pending: application No. 05252150.7

Product colours shown in this brochure are as accurate as the printing process will allow.
Product samples are available upon request.
At Sandtoft we are continually innovating and improving our product range.
We reserve the right to change product specifications without notice.

This brochure is printed on a 100% recycled FSC certified paper.