

C/SIB | | (47) | Ng2 | |
November 2010



Cassius

Thin Leading Edge Clay Slate



Cassius

Cassius is a New Generation clay tile that puts a whole new perspective on using natural roofing materials.

Cassius dramatically cuts the cost of a natural slate roof helping to make colour permanent natural roofing materials more affordable.



Cassius - Antique Slate

Cassius

The Art of Clay



Cassius - Antique Slate



Cassius - Antique Slate

Natural Innovations

Natural materials are growing in popularity but their benefits usually come at a price. A traditional natural material like quarried slate, is a labour intensive and specialised product that must be installed double lapped to perform correctly. This means high labour and material costs and longer completion times.

In recent years these constraints have led to the evolution of alternative concrete slate-appearance products, which utilise interlocking tile design, resulting in considerably less slate per m² of roof. Whilst these products offer major cost savings in installation, they do not provide the aesthetic and 'planning friendly' benefits of natural materials.

When compared to slate-appearance products such as concrete thin leading edge tiles, Cassius not only matches the cost of installation, it also costs no more in material terms. In other words Cassius offers a natural roof at the same price as concrete thin leading edge slate alternatives.

In response, Sandtoft has turned to clay; an incredibly versatile natural material that can be pressed into precise shapes and then fired in a permanent slate colour. This has enabled Sandtoft to create a completely natural product that has the installation costs of concrete large format, thin leading edge, interlocking tiles, thanks to its size and flexible open gauge design.



Cassius

Design Benefits



Cassius - Antique Slate



Cassius - Antique Slate

Design that reduces material, labour & cost

The Cassius is a New Generation clay tile that provides all the benefits of a natural slate roof at an affordable price. This is thanks to two key elements of its innovative design:

Firstly, the large format size gives a covering capacity which is similar to the largest concrete tiles. Secondly, the open gauge ensures that the Cassius is fast and efficient to install, removing all the complications previously associated with interlocking clay tiles and dramatically reducing costs.

In Antique Slate colour, Cassius offers a slate appearance in the form of a clay tile. Once fired in this slate colour, the flat profile and thin leading edge combine to give this clay tile an authentic slate appearance. As an interlocking clay tile, Cassius offers similar aesthetics and weathering properties to natural slate because it is also a natural material. However, unlike slate, clay can be pressed into complex designs during the manufacturing process, and thus offers significant material and labour savings.

The large format interlocking design of the Cassius provides big savings over traditional double lap slate.

So significant are the savings that, at approx. 10 tiles per m², Cassius affords the same economic benefits as concrete large format, thin leading edge, interlocking tiles. For the first time natural materials can be specified at the same price as concrete.

The clean lines and thin leading edge of Cassius in the Tuscan colour option create an attractive natural clay roof, while the large format size and interlocking design reduce material and installation costs compared to traditional clay tiles.



Cassius - Antique Slate

Superior performance moulded in clay

Another benefit of the flexible nature of clay is that it enables weatherproofing features to be pressed into the surface of the tile which improve weather resistance. With the help of wind tunnel testing to simulate the varying extreme conditions of wind driven rain, Cassius has been designed to offer new levels in weatherproofing performance. Each tile is pressed using precision plaster moulds, to form high definition interlocks and weather bars together with protected nail holes to create a clay tile that is highly resistant to all forms of weather.

Cassius is manufactured from natural clay taken from the alluvial plain of the Humber estuary. Sandtoft's abundant reserves of raw clay are excavated immediately adjacent to the manufacturing process requiring minimal transportation. The clay pits are periodically restored as wetland habitats, two of which are now registered as Sites of Special Scientific Interest (SSI).

Features

- New Generation clay tile with easy to lay open gauge design
- Colour permanent clay for the same price as thin leading edge concrete tiles
- Over 20% lighter than flat interlocking concrete tiles and up to 18% lighter than thin leading edge concrete tiles
- Thin leading edge design with hidden interlock
- No tops or eaves tiles required
- 60 year product durability guarantee when fixed according to Sandtoft's recommendations
- Pressed from natural alluvial Humber clay
- High performance weatherproof design developed through intensive wind tunnel testing
- Conforms with all current UK and European standards and fixing requirements
- Easy fix pushclip system also available for fast and efficient mechanical fixing
- Manufactured and independently certified under Quality Management System BS EN 9001
- Certified to Environmental Management Standard EN ISO 14001
- All raw clay is extracted from an abundant source of local reserves located within 1 km of the production process

Cassius

Technical Data



Cassius

Technical Data

Minimum roof pitch	22.5°
Headlap (minimum)	75 mm
Headlap (maximum)	120 mm
Batten spacing at max. gauge	325 mm
Batten spacing at min. gauge	280 mm
Size of tile	400 x 320 mm
Covering capacity at max gauge	10.7 tiles per m ²
Cover width	287 mm
Profile depth	16 mm
Hanging length	360 mm
Weight as laid	39.9 kg per m ² (at 120 mm headlap)
Weight per 1,000	3.8 tonnes
Weight per tile	3.8 kg
Weight per pallet	0.9 tonnes
(including pallet and packaging)	
Quantity per pallet	240
Battens per m ²	2.9 m
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+

Note: Unless otherwise stated, data is based on tiles laid at minimum headlap.

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 on the roof.

Roof

Classification

Type	new generation interlocking 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

Environmental
BS EN ISO 14001: Environmental 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

Cassius achieves a BRE
Green Guide rating of 'A+'

Cassius - Antique Slate

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



Tuscan

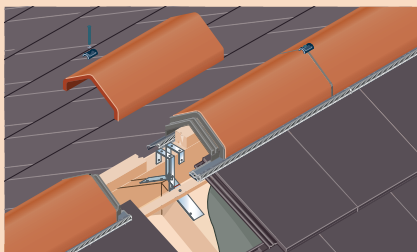


Antique Slate

Cassius

The complete roof system

Profile Ridge system



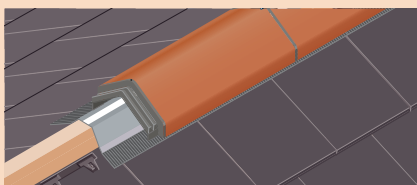
Components

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

Profile mono ridge system components

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

RollRidge system



Components

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

Eaves ventilation system



Components

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

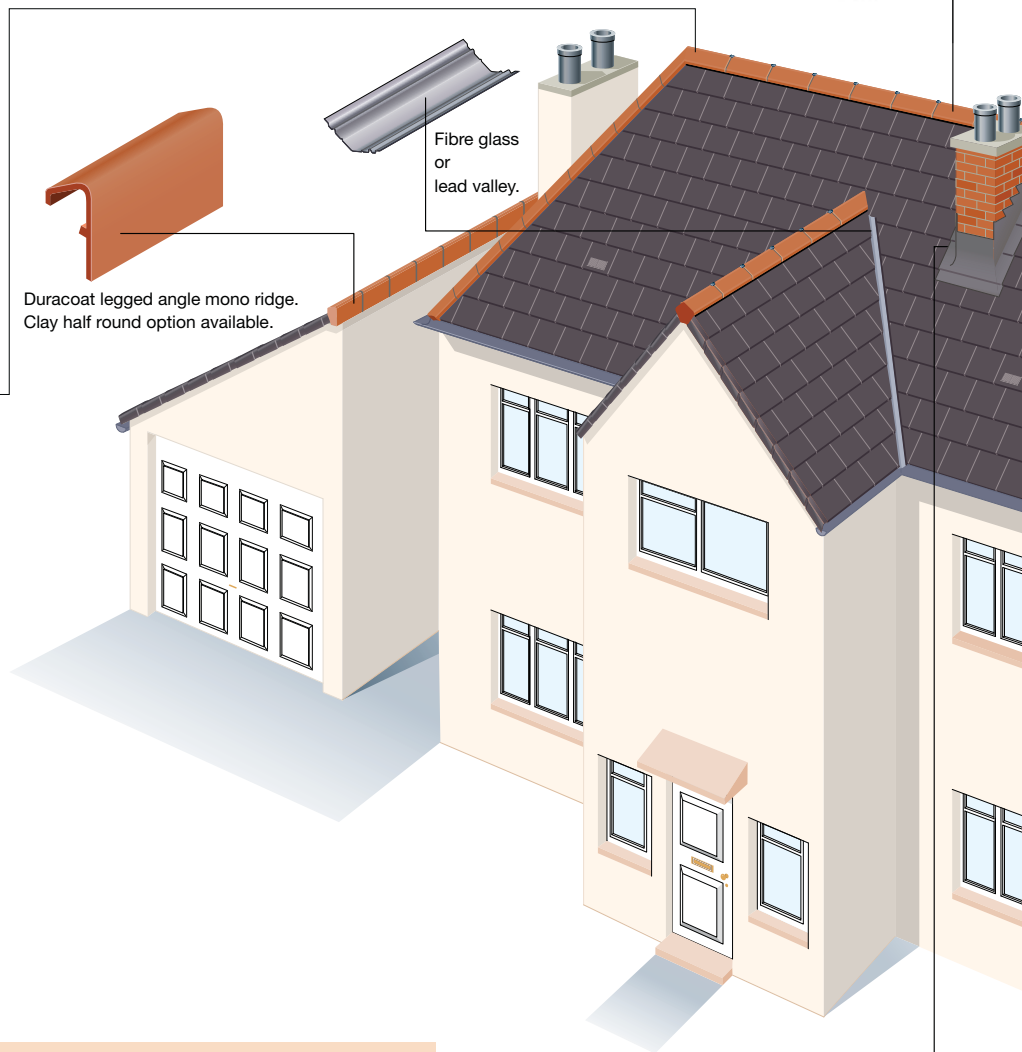
Duracoat Ridge Range

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.

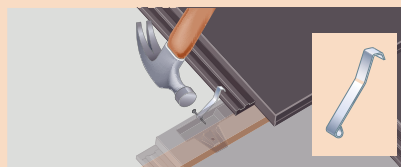
This range of fittings has prolonged weathering properties and has been designed to complement Sandtoft's New Generation range of clay tiles. At a small premium over standard concrete ridges, Duracoat ridges further reduce the cost of a clay roof as they are at least 60% cheaper than clay ridges per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

Clay Ridges

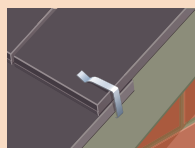
Clay ridges are also available in half round profile for use with Sandtoft dry fix systems and angle profile for wet fix systems.



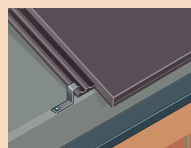
Clip systems



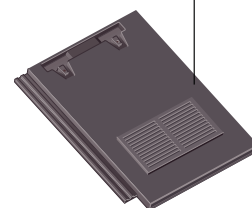
Tile clip (Easy fix push-clip also available - not pictured)



Verge clip

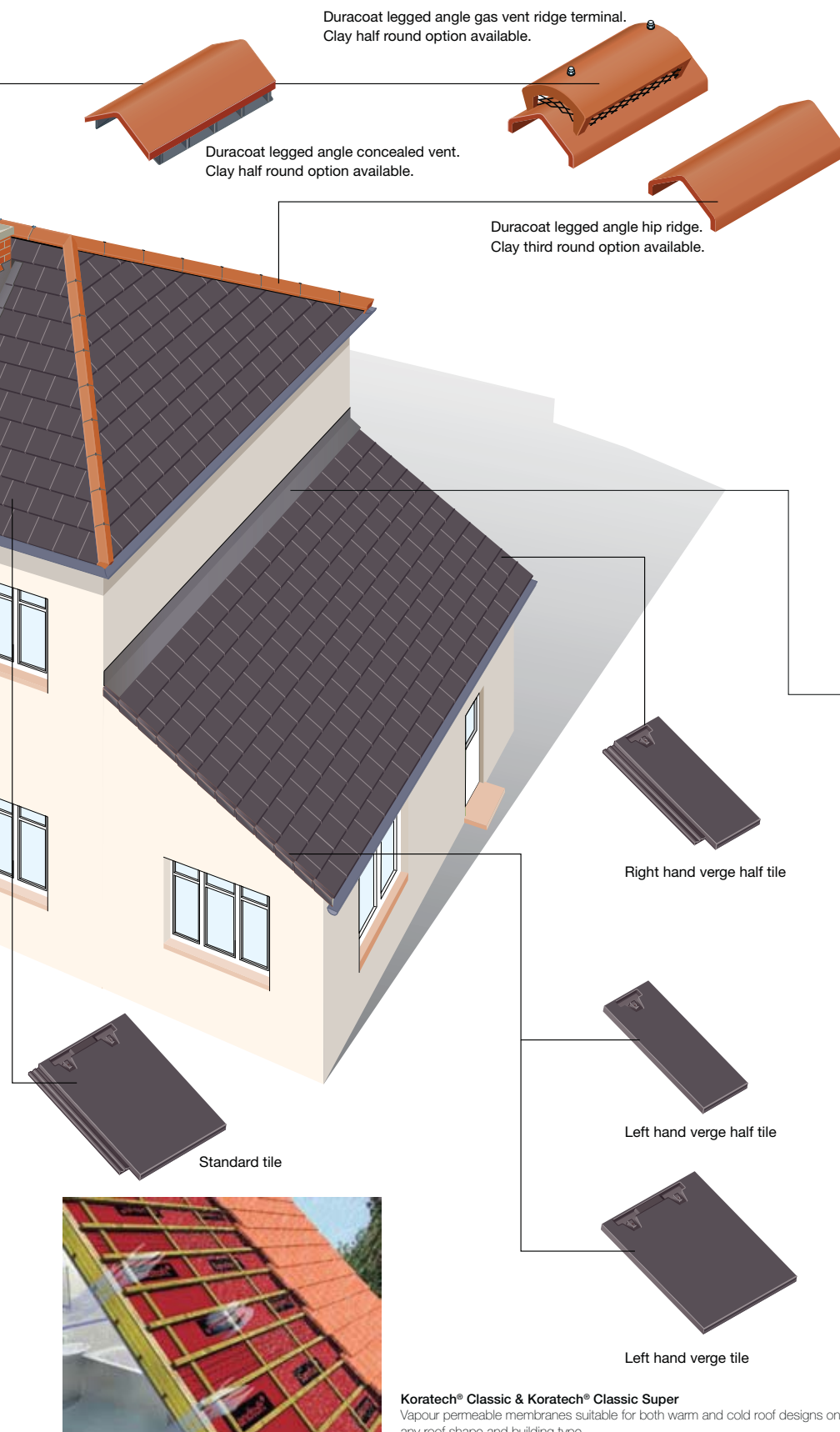


Eaves clip

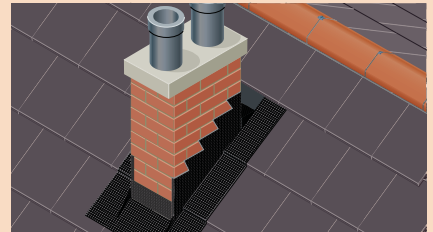


Concealed tile ventilator

*** Important** When gas flue terminals are used in conjunction with dry fix systems a gas vent conversion kit is required. This consists of 4 x 9000 mm long ventilator-closure strips to prevent exhaust gases from entering the roof void at either end of the gas flue terminal

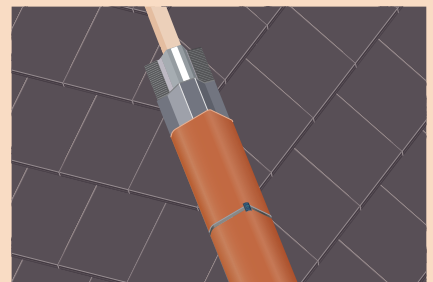


Koraflex



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 three standard colours grey, red and black.

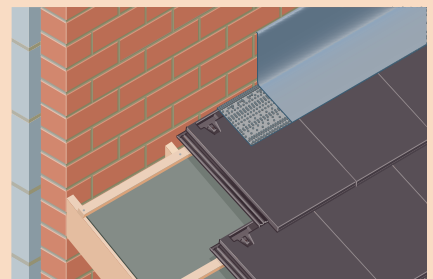
Roll Hip System



Components

Each pack has sufficient components (excluding hip tiles) for 5.0 metres of hip. Trays to be ordered separately. For use with 457 mm Duracoat legged angle or 305 mm clay third round hip ridges.

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.

Dry Verge systems



Large Format Verge System

The LF 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 (Non-ceramic).

Clay Cloaked Verge

A new system is available in clay, suitable for use at both left and right hand verges.

Cassius

Environment



Cassius - Antique Slate

100% Green Commitment

Choosing Cassius 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 CO₂ 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 CO₂ 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.



Cassius - Antique Slate



Cassius - Antique Slate

Cassius

Service & Support



Cassius - Antique Slate

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
orders@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
despatch@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.



Cassius - Antique Slate with Large Format Verge.
Turret is shown in natural 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

Cassius®

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 100% recycled FSC certified paper.