

Sandtoft 

Neo Pantile™
New generation clay pantile



Neo Pantile™

The Neo Pantile™ is the first of a new generation of 'open gauge' interlocking clay tiles that have been designed by Sandtoft to make a natural clay roof more affordable and accessible.

Clay pantiling is a traditional and attractive form of roofing that has been adding character to Britain's rooftops since the 17th century. This history combined with such a distinctive long lasting appearance has resulted in the pantile becoming an indelible part of the UK's architectural identity.

However with an increasing shortage of skilled labour, and with the cost constraints in modern construction, it has become more difficult to meet planning requirements for the greater use of natural materials.

In response, Sandtoft has developed a ground-breaking new pantile that challenges these issues. Made from natural alluvial clay to the latest environmental standards, the Neo Pantile has been designed to take clay pantiling into a new era.



Colour: Natural Red



Colour: Natural Red





Colour: Natural Red

Neo Pantile™

A New Generation Clay Pantile

Following intensive wind tunnel analysis and contractor feedback, Sandtoft has harnessed the flexible nature of natural clay to design a new generation interlocking clay pantile. The Neo Pantile retains all the charm and visual appeal of a traditional clay pantile with the added benefits of efficient and flexible installation and high performance weatherproofing.

Neo Pantile has a unique 'open gauge' design which provides major benefits in fixing. Firstly, all of the setting-out restrictions imposed by complicated interlocking bars have been eliminated to allow significantly more freedom in setting the gauge – similar to a concrete tile - making it significantly easier to install. This, together with the elimination of cuts at ridges and eaves can dramatically reduce roof completion times on-site by up to 30%. In short, it's a clay pantile to suit the demands of modern construction.

At the same time, a raised nail hole and weather bars, carefully designed with the help of wind tunnel testing, mean the Neo Pantile achieves new levels of performance on the roof.

As with all Sandtoft clay tiles, the Neo Pantile is manufactured from local reserves of alluvial Humber clay which has a natural iron content. When fired, this produces a highly durable tile with a beautiful rich colour which is constant throughout the tile and will never fade, but simply mellow with age.

The Sandtoft clay range complies with the latest British and European standards for clay roof tiles and is manufactured under a rigid quality management system, to the latest environmental standards.

- **Easy to lay open gauge design**
- **Can reduce roof completion times by up to 30%**
- **Makes clay roofing more affordable and accessible than ever before**
- **Double nib feature means each tile sits flatter and more securely on the batten**
- **Pressed from alluvial clay which is easy to cut on-site**
- **Available in three permanent, natural colours**
- **60 year product guarantee**
- **High performance weatherproof design**
- **Conforms with all UK standards and fixing requirements**
- **Easy-fix clip system available for fast and efficient mechanical fixing**
- **Certified to the Environmental Management System ISO 14001**
- **All raw clay is extracted from abundant on-site reserves located within 1km of the production process**
- **Readily available from stock nationwide**



65 Natural Red



66 Flanders



69 Tuscan



Colour: Flanders

Technical data

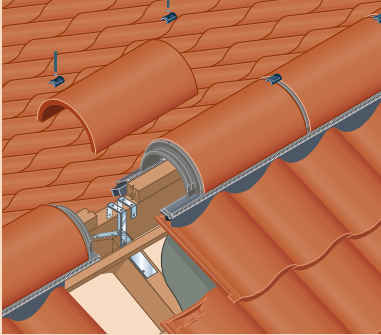
Minimum roof pitch	22.5°
Headlap (minimum)	75 mm
Headlap (maximum)	120 mm
Batten spacing at max. gauge	309 mm
Batten spacing at min. gauge	264 mm
Size of tile	384 x 250 mm
Covering capacity at max. gauge	14.7 tiles per m ²
Cover width	220 mm
Profile depth	69 mm
Hanging length	335 mm
Weight as laid	35.2 kg per m ²
Weight per 1000	2.4 tonnes
Weight per tile	2.4 kg
Weight per pallet (including pallet and packaging)	1.1 tonnes
Quantity per pallet	432
Battens per m ²	3.2 m
Batten size – up to 450 mm rafter centres	38 x 25 mm
Batten size – up to 600 mm rafter centres	50 x 25 mm
Nail size/type for tiles	50 x 3.35 mm aluminium clout head
Nail size/type for tile clips	25 x 3.35 mm aluminium clout head

Note: For projects where the rafters are below the minimum recommended roof pitch, please contact the Sandtoft Technical Support Team for advice.

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

Fittings and accessories

Ventilated dry ridge system

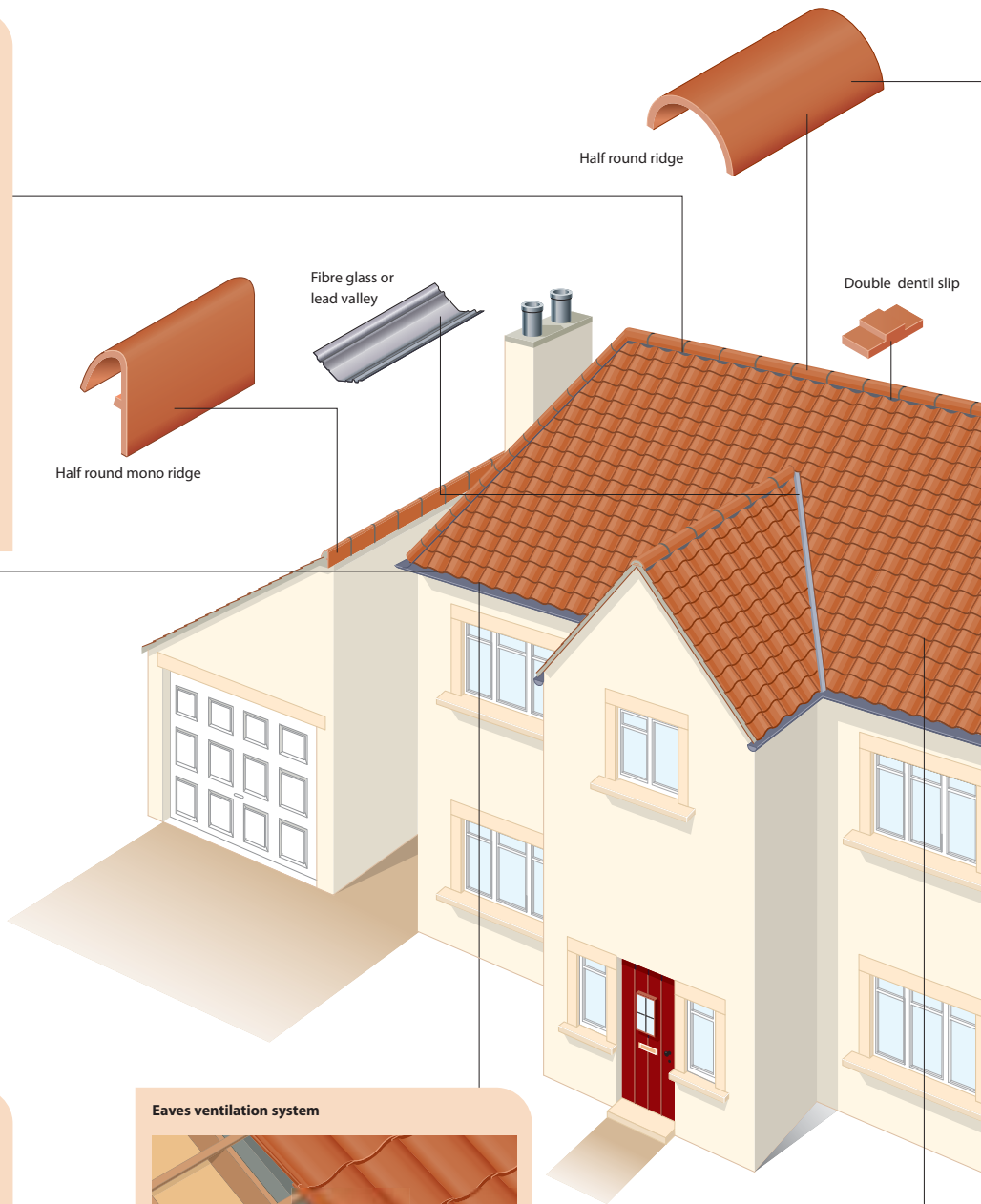


Components

Each pack has sufficient components (excluding ridge tiles) for 2.7 metres of ridge. For use with 305 mm ridge.

Dry mono ridge system components

Each pack has sufficient components (excluding ridge tiles) for 2.7 metres of ridge. For use with 305 mm ridge.



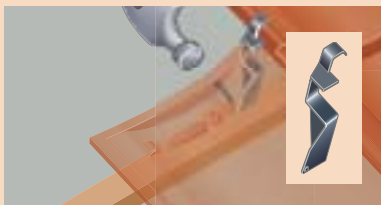
Half round ridge

Fibre glass or lead valley

Double dentil slip

Half round mono ridge

Clip Systems



Tile clip



Verge clip

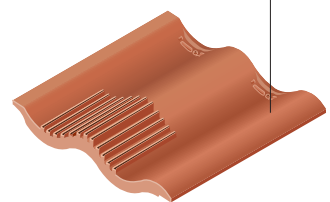
Eaves clip

Eaves ventilation system

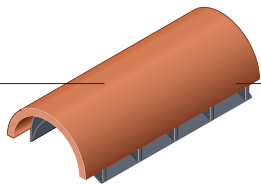


Components

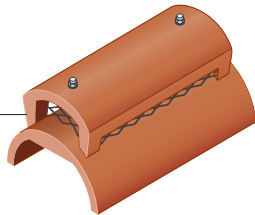
The Sandtoft eaves ventilation system is available in 6 metre packs. The birdcomb filler is available separately to suit the Neo Pantile profile.



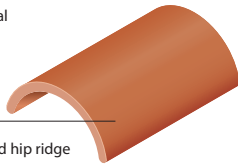
Concealed tile ventilator (Double tile unit)



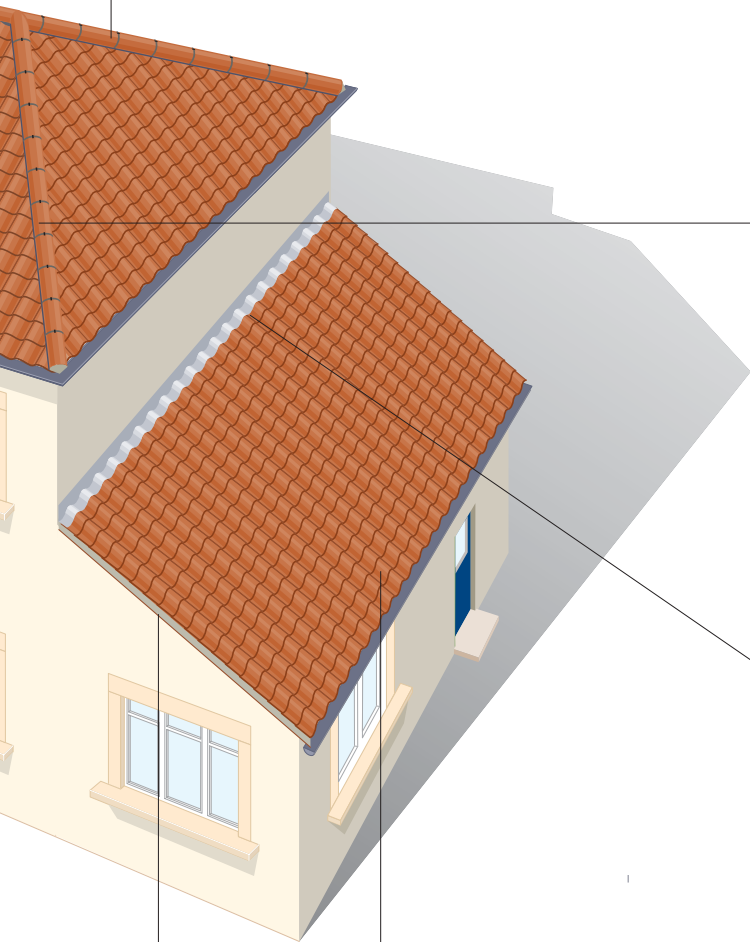
Half round concealed air vent ridge



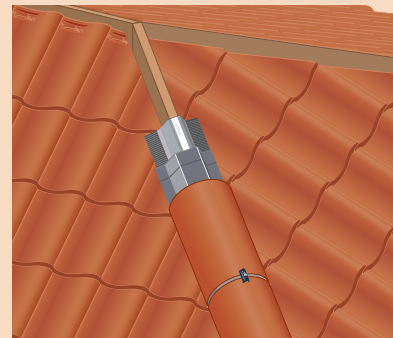
Gas vent ridge terminal



Third round hip ridge



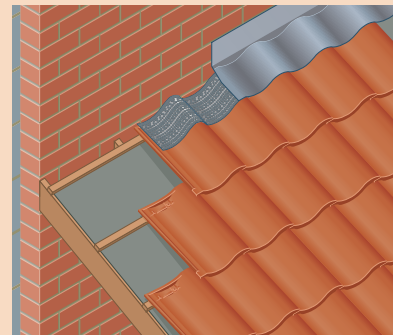
Dry hip system



Components

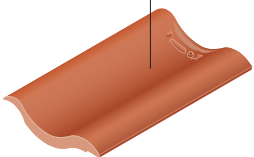
Each pack has sufficient components (excluding hip tiles) for 2.7 metres of hip. For use with 305 mm hip ridge.

Abutment ventilation



Components

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



Left hand verge tile



Standard tile

Sandtoft Technical Support Services

Technical Support

This brochure forms part of a package of technical information designed to provide everything you need to design, specify and install a roof using Sandtoft Neo Pantiles.

Sandtoft provides a number of free and comprehensive technical services that will help ensure that your project is trouble free and complies with the latest standards. To make use of these services simply complete the relevant information on the page opposite and fax back to our Technical Support Team on **0870 145 2019** or visit us online at **www.sandtoft.com**



Roof SPEC

This service is available to assist the specifier by providing a complete roof specification.

- Bespoke specification clauses
- Ensures correct detailing
- Helps defect avoidance
- Achieves compliance with the latest British Standards

Complete Parts 1, 2 and 3 of the data sheet opposite or online at www.sandtoft.com to obtain your bespoke Roof SPEC.

Alternatively, full sets of specification clauses can be downloaded for self-completion from our website.



Fixing SPEC

To ensure your roof is correctly and securely fixed in accordance with British Standards make use of Fixing SPEC, our fixing specification service.

- Project-specific fixing recommendations produced to latest British Standard recommendations
- Sandtoft wind-loading software system uses BRE BREV data
- Postcode based system provides quick and accurate results
- Significantly reduces the long term risk of wind damage

Complete Parts 1 and 3 of the data sheet opposite or online at www.sandtoft.com to obtain your bespoke Fixing SPEC.



CAD library

To complement the widest roof tile range in the industry, Sandtoft has developed an extensive library of CAD details for all our products that will save you time.

- CAD details are available for download at **www.sandtoft.com**
- All drawings in DWG, DXF and JPEG formats
- Bespoke details can be designed on request
- Includes specialist and more unusual details such as change of pitch and cottage eaves details

Complete Parts 1 and 4 of the data sheet opposite or online at www.sandtoft.com to access our CAD library.



Quantity SPEC

A practical service to ensure the complete roof system has been correctly quantified.

- Detailed roofing material schedules ensure that vital components are not missed, thereby avoiding potential delays on-site
- Comprehensive estimating advice and training available for merchants and self builders

Send your drawings to Technical Support to obtain a comprehensive quantity estimate with Quantity SPEC, to the following address:

Technical Support, Sandtoft Roof Tiles Ltd., Belton Road, Sandtoft, Doncaster DN8 5SY.

Specifying Neo Pantile™

To make use of the Roof SPEC, Fixing SPEC, CAD library services or for other information simply complete section 1 and other relevant sections and fax this data sheet to Technical Support on 0870 145 2019.

1. Personal details (please complete for all services)

Name

Position

Company

Address

Postcode

Tel

Fax

E-mail

2. Roof SPEC (please complete this section to enable us to write bespoke specification clauses for your project)

Type(s) of tiling

Project reference (e.g. extension to dwelling):

Base (e.g. trussed rafters at 600 mm centres):

Rafter pitch

Lay underlay over

(e.g. trussed rafters, sarking, counterbattens)

Tile type

Neo Pantile

Tile colour

Vertical tiling (e.g. to gable walls)

Base (e.g. blockwork, vertical battens at 450mm centres)

Ventilated eaves

Fascia ventilator grilles Rafter ventilator trays

Verges

Bedded undercloak Dry verge
 Nailed undercloak

Hips

Mortar bedded hip
 Dry hip
 Mortar bedded and nailed hip

Hip tile (e.g. third round hip ridge):

Colour

Valley

GRP valley Lead valley

Ridge

Dry ventilated ridge
 Mortar bedded ridge
 Mortar bedded and nailed ridge
 Mortar bedded mono ridge
 Dry ventilated mono ridge

Ridge tile (e.g. Half Round ridge, monopitch ridge):

Ridge tile colour:

Roof slope ventilators

Warm roof Cold roof

Position (e.g. high level, eaves level)

Roof slope terminals

Ventilator tile type

To vent (e.g. soil and vent pipes, kitchen ventilation pipes)

General

Change of roof pitch
 Roof window Side abutment
 Top edge abutment Snow guards
 Top edge ventilated abutment

Junction (lead saddle) (e.g. junction of ridge with hip, junction of ridge with valley, junction of ridge with abutment, top junction of two valley gutters)

Sundry accessories (e.g. pipe flashing)

3. Fixing SPEC (to enable us to calculate a tile/slate fixing (i.e. nailing/clipping) specification please supply the following information)

Rafter pitch

Duo or mono pitch roof

Building height to eaves

Building width

Building length

Rafter length

Counterbattens Yes No

Counterbatten depth

Site postcode

4. CAD Library

CAD details can be supplied in the following ways – please tick format required:

Hard copy
 E-mail file
 CD-ROM

alternatively, visit our website

www.sandtoft.com

5. Further technical information

Installation guide

Performance



Guarantee

BS 7543, the British Standard guide to 'Durability of buildings and building elements, products and components' gives the normal design life of buildings to be a minimum of 60 years. Sandtoft clay tiles are guaranteed to remain durable for at least 60 years, subject to the standard terms of the guarantee.

All Sandtoft roof tiles are included in the National Federation of Roofing Contractors Co-Partnership Guarantee Scheme which offers a 10 year guarantee for workmanship (and also underwrites Sandtoft material guarantees for a 10 year period) along with insolvency insurance cover where the work is carried out by an NFRC member, subject to terms.

Quality and Standards

All Sandtoft clay tiles are manufactured under a Quality Management System which is certified to comply with ISO 9001.

Sandtoft Neo Pantiles are manufactured in accordance with the requirements of BS EN 1304, the current British and European standard for clay roof tiles. Tiles comply with all the requirements of the test methods applicable to BS EN 1304 which are set out in:

- BS EN 538 for flexural strength
- BS EN 1024 for geometric characteristics
- BS EN 539-1 for impermeability
- BS EN 539-2 for frost resistance

The tiles achieve results higher than the minimum recommended strength requirement and are classified Category 1 for impermeability. For frost resistance they are deemed suitable for use in geographical Zone D which includes the whole of the United Kingdom.

Sandtoft clay tiles will also meet the relevant performance requirements of BS 5534, the British Standard for Slating and Tiling.

Natural clay tiles are subject to small variations in size due to drying and firing shrinkage in the manufacturing process.

Environmental Management

The manufacture of Sandtoft clay tiles is independently certified to comply with ISO 14001: Environmental Management Systems. This ensures that clay tiles are processed by the most energy-efficient means possible. The raw material is excavated from local reserves, within 1 km of the factory. Old clay pits are restored as wetland habitats, two of which are now registered as Sites of Special Scientific Interest (SSSI).

Appearance

Clay is a natural and sustainable roofing material which is inherently strong and provides richness in colour which will not fade. The rich colouring of natural clay provides roofs with great beauty and character which become more attractive with age.



Colour: Flanders

Neo Pantiles are manufactured to give a harmonious appearance to the finished roof. However, slight colour variations may occur as a consequence of the production process. It is therefore advisable to take tiles from several pallets and mix randomly on the roof.

Minor abrasions may be caused during packaging, loading and transportation. These will not affect the performance of the tiles and will disappear over time through natural weathering.

Composition

Sandtoft clay tiles are manufactured from naturally occurring alluvial clay deposits which are processed, extruded or pressed and fired at high temperatures.

Fire Resistance

Sandtoft Neo Pantiles are classified SAA when tested in accordance with BS 476: Part 3: 1975, with respect to fire penetration and spread of flame.

Environmental and Biological Effects

Sandtoft Neo Pantiles are highly durable and resistant to a wide range of environmental factors. Neo Pantiles are unaffected by frost, extreme temperature variation and prolonged exposure to sunlight. Except in extreme cases, tiles are highly resistant to atmospheric pollution in all areas of the UK. Tiles are not attacked or degraded by birds, rodents, insects or the growth of mosses and lichens.

Fixing Requirements

With Fixing SPEC, our fixing specification service, Sandtoft can carry out a wind loading calculation and provide fixing recommendations in accordance with BS 5534.

Sitework

Sandtoft Neo Pantiles should be laid and fixed to comply with BS 5534: Code of Practice for Slating and Tiling and BS 8000: Part 6: Code of Practice for workmanship on building sites – slating and tiling.

Comprehensive installation guides are available for all Sandtoft products. Contact our Customer Support Team or visit www.sandtoft.com

Maintenance

Sandtoft clay roof tiles do not normally require any maintenance during their design life. However, in areas where mosses, lichen or wind-blown vegetation, such as pine needles are a risk, it is prudent to avoid blockage of the rainwater channels.

Health and Safety

Health and safety rules and regulations must be adhered to at all times before any handling or installation of Sandtoft products. Health and safety and COSHH information is available from our Customer Support Team, and also available on our website.

Packaging and Storage

Sandtoft Neo Pantiles are supplied polythene wrapped on pallets.

Sandtoft products should be stacked on firm, even ground with good drainage. We advise that you consult our Safe Stacking Recommendations for details of recommended stacking heights. Contact our Customer Support Team or visit our website for a copy of our Safe Stacking Recommendations.

General enquiries

Tel 0870 145 2020

Sandtoft Roof Tiles Ltd., Belton Road,
Sandtoft, Doncaster DN8 5SY

E-Mail info@sandtoft.co.uk
www.sandtoft.com

Technical enquiries

Tel 0870 145 2021
Fax 0870 145 2019
E-Mail technical@sandtoft.co.uk

Ordering and deliveries

To order Neo Pantiles contact:

Tel 0870 145 2022
Fax 0870 145 2018

Please state the tile type, fittings and accessories types, all quantities and colours, site address and any specific requirements when placing an order.



Tile 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.
Please contact our Customer Support Team for the latest information or visit www.sandtoft.com

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