



# Sandtoft Roof Tiles Heritage Service

**SANDTOFT**  
ROOF TILES

# Sandtoft Heritage



The Sandtoft Heritage Service is a specialist conservation and restoration service that creates bespoke handmade roof tiles and fittings.

Part of the charm of our built heritage comes from the wide diversity of roof coverings adorning historic buildings. From cottages and barns to stately homes, many of our older buildings offer a profusion of detail that, today, would be deemed architectural luxury.

Over the centuries, the use of roofing material has varied from place to place, with a diversity determined by local geography and material availability.

One of the most enduring and appealing of these materials was natural clay which became desirable for its mellow appearance and weathering properties. Its popularity as a roof covering was enhanced by its unique ability to be pressed into a multitude of shapes and designs.

This enabled past designers to create an endless landscape of decorative roofs through the inclusion of ornate finials, ridges and hips. Builders of the 17–19th centuries in particular placed great emphasis on appearance and detail and strove to add character to their work.

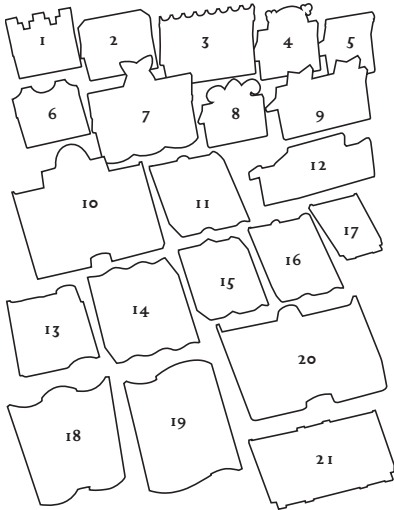
Family homes that would be passed down through generations were often constructed to include bespoke features that reflected the occupants' tastes or even personal wealth. Individuality within a style in keeping with the overall local vernacular was of paramount importance.

*'There is a growing demand for highly trained craftsmen who understand the wide range of skills and methods used in conservation projects. Companies such as Sandtoft play a valuable part in the programme, allowing students to see the techniques being used in a real working environment.'*

RACHEL BOWER, EDUCATION OFFICER,  
THE SOCIETY FOR THE PROTECTION  
OF ANCIENT BUILDINGS



# Service



**Key**

- 1 Castle Crest ridge
- 2 Victorian ridge
- 3 Scorboro' ridge
- 4 St. Hilda's Church ridge
- 5 Georgian ridge
- 6 Scalloped ridge
- 7 3 piece slotted insert angle ridge
- 8 Fleur-de-Lys ridge
- 9 Crested New Forest ridge
- 10 Tegula and Imbrex tiles with axonometric ridge
- 11 Single lapped Double Roman
- 12 'Under and Over' linked ridges
- 13 Bambino tile
- 14 Triple roll tile
- 15 V-Pantile
- 16 Cross lapped Double Roman
- 17 Large reversible vault tile
- 18 'Under and Over' 'Classic' tile\*
- 19 'Under and Over' 'Abbey' tile\*
- 20 Tegula and Imbrex 'Italian' tile†
- 21 Small reversible vault tiles

A selection of other tiles we have made include:

Bridgwater Pantiles, Corrugated Tiles, Italic Pantiles, Roll-Top Ridges, Slotted Decorative Ridges and Inserts, Saddle-Back Ridges, Hogs-Back Ridges, Peg Tiles, Oast-House Tiles, Ornamental Tiles, Continuous Nib Tiles, Mathematical Tiles, Mosaic Tiles, Bonnet and Arris Hips, Tapered Hips, Decorative Finials, Wall-Top Copings.

\* 'Unders and Overs' may also be referred to as Spanish, Classic or Abbey tiles.

† Tegula and Imbrex may also be referred to as Old Roman, Italian or Basilican tiles.

Our experience enables us to take an active role in the development and fulfilment of roofing specifications for conservation and restoration projects.

# Bespoke products for bespoke projects



The production of authentic, bespoke handmade roof tiles and fittings is critical to ongoing conservation and restoration. Whether it involves buildings of national heritage or local interest, the specification of 'lost' roofing materials presents a problem when replacement is necessary.

Use of reclaimed materials is impractical due to the need for absolute authenticity in relation to particular buildings. The Sandtoft Heritage Service therefore provides a specialised design and manufacturing resource to make tiles and fittings no longer in mainstream production. Old designs can be copied to match original tiles and fittings, sometimes from no more than a drawing, using methods which ensure the finished product will meet the highest conservation standards.

## Completed projects

A sample of completed projects includes:

- Crown Estate, Sandringham, Norfolk
- Eton College, Berkshire
- Cambridge University Library, Cambridge
- Minley Manor, MOD College, Camberley, Surrey
- Biddulph Grange, Congleton, Cheshire
- Blackford House, Minehead, Somerset
- Silwood Manor, Imperial College, Ascot, Surrey
- Verulamium Museum, St Albans, Herts
- Victoria and Albert Museum, Kensington, London
- Lyme Hall, Stockport, Cheshire
- West Barn, Bradford-on-Avon, Wiltshire
- London Zoo, Regents Park, London
- All Saints Church, Margaret St, London
- Church of Christ the King, Cork, Eire
- Caldey Island Monastery, Pembrokeshire
- St Hilda's Church, Whitby, North Yorkshire
- Manchester Town Hall
- Settle and Carlisle Railway

More detailed information on some of these sites can be seen on our website [www.sandtoft.com](http://www.sandtoft.com)

**Left** Eton College, 'Under and Over' tiles

**Right** Runnymede Boat House, Brunel University



Great emphasis is placed on the retention of traditional skills, enabling us to produce materials not just to our own exacting standards, but those of conservation bodies and local planners.

# Sandtoft's Heritage

Sandtoft Roof Tiles Limited can track its history in the working of clay back to 1904. Today, it is Britain's largest independent roof tile manufacturer. Sandtoft's clay products are made using Humber alluvial clay, extensive deposits of which are available from the company's own local reserves in Broomfleet.

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Interest in Sandtoft hand made roof tiles is not limited to conservation projects. The standard product range also includes popular hand made profiles such as the Goxhill Plain Tile and the Greenwood hand extruded pantile, both of which continue to enjoy widespread use.





*‘The advantage that Sandtoft had over other manufacturers is, not only the type of clay they use, but their willingness to take criticism constructively to achieve perfection.’*

RHYS BROOKES,  
HARRISON BROOKES ARCHITECTS



#### **Unrivalled product range**

Because of our dedication to pitched roofing, we offer the greatest choice of roof tiles in the industry. The years spent developing such a wide range has helped generate a diversity of expertise needed to carry out heritage work as economically as possible and of the highest complexity. From ‘Under and Over’ tiles to Triple-Rolls and Vault Tiles, each order is unique to the project involved. Today, however, even hand made tiles, though air dried, are fired using the latest in kiln technology. This ensures authenticity of colours and textures without compromising on standards.

In turn the manufacturing process is supported by unrivalled expertise in roof design and fixing.



#### **Complete service**

Guarantee of quality, establishment of firm prices and timing of delivery to avoid costly project extensions are just some of the elements of service specifiers can expect. This will involve full discussion with the client concerning production and design times at the project development stage. A comprehensive site survey will be undertaken to ensure we not only understand the project and site requirements, but those relating to planning restrictions, local by-laws and the needs of conservation bodies. All parties will always then agree any subsequent alterations to the roof tile specification.

**Left** Church of Our Lady of Beauchief and St Thomas of Canterbury, Sheffield

**Left insets** The church roof before and during Heritage Service involvement

**Above middle** Making splitter tiles for Church of Our Lady of Beauchief and St Thomas of Canterbury project

**Above right** Manufacture of ‘Under and Over’ tile

The Heritage Department's team of craftsmen combine their extensive knowledge of the properties of clay with the use of computer aided design.

# Design techniques



The Heritage Service team of craftsmen combines knowledge of the properties of clay with the use of CAD techniques. Working closely with all interested parties, care and attention to detail has become the trademark of our work. This will often be under strict regulatory constraints and criteria that demand products which are genuinely 'like for like'. CAD not only reduces defects and ensures the client gets exactly what is specified, it enables us to identify potential improvements in areas such as weathertightness and fixing.

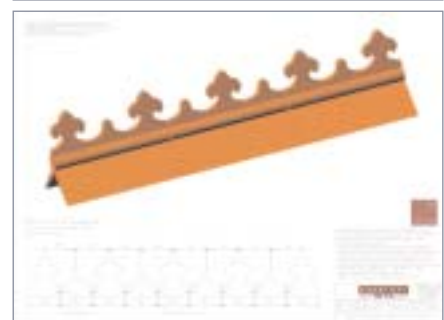
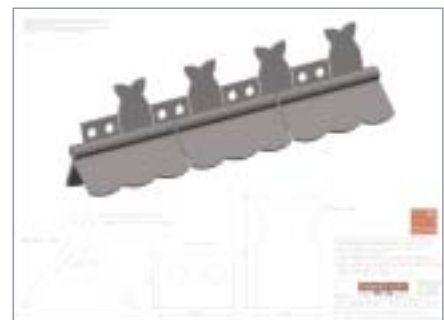
Options available to the architect and planner include full CAD operation from original samples and drawings. Working models and drawings, resin/wood moulds and castings are produced, and in some cases mock roof sections for fixing trials and inspection. Technical specifications (as illustrated) showing recommended batten sizes, gauge, pitch, fixing, coverage and fixing are produced for all non-standard tiles.

The design process begins with inspection of a variety of original samples and, where available, product and structural drawings. An assessment of how best to produce the profile and (importantly) which production method to employ is then made. The choice, from a long list developed over many years, is critical if authentic reproduction and colour matching is to be guaranteed.

**Below left** Use of CAD when matching old profiles

**Main picture right** Handmade tiles air drying in open sheds prior to firing

**Below** Heritage Service technical data sheets – an individual fixing specification will be provided for every Heritage project. Details include coverage, batten gauge and full fixing information, together with CAD detail of the product itself.









# Attention to detail

A clear and detailed record of each project, whether or not it has involved new tile design, is always maintained. This is not only a functional quality assurance discipline; it aids in the planning and implementation of a conservation process if, for example, a project is to be undertaken over a lengthy period. We can readily access and analyse the manufacturing process used in past years.



*‘Caldey Island Monastery could not have been more difficult, owing to its location, nor more complex in its detailing. Throughout we have had great support from Sandtoft, working to the highest standards with a wonderful product’*

PETER HOLDEN,  
ACANTHUS HOLDEN ARCHITECTS

**Below** Caldey Island Monastery, Single Romans and bespoke arris hips

**Bottom** Verulamium Museum, St Albans, ‘Unders and Overs’ and tapered ridges



#### **Professional archiving**

Under the Policy Guidance ‘PPG15 – Planning and Historic Environment’, the importance of recording for listed buildings was reinforced and integrated into the planning process. It states that, if required, applicants involved in the process may be required to provide assessments and justifications for changes to the building. By maintaining records of the original tiles and fittings, our full appreciation of the significance of changes and repairs can be made available, for the benefit of any future reversal of the project.



## Environmental responsibilities

As Britain's largest independent roof tile manufacturer Sandtoft is committed to achieving environmental excellence, thereby reducing the impact of its operations in a responsible and caring manner.

Sandtoft's Environmental Department assesses environmental impacts in all areas of the company's business, but particularly in product development through Environmental Standard ISO 14001. The Department works closely with the Government and industry groups, including architects and developers to tackle the issues of sustainability, reducing waste, conserving energy and protecting the environment.

Following a significant investment in the latest plant and equipment, Sandtoft's Broomfleet factory is one of the most streamlined in Europe. The most energy

efficient kiln is sealed by water pumped from the site's lakes. As the kiln pit overflows, water is fed back into the lake by means of gravity in what is a continuous process. A washdown treatment plant has also been installed, to recycle ceramic engobe colourant from the production line. All soft clay and dry waste is fully recycled and no waste water allowed back into the drains or dykes.

Sandtoft has its own private reserves of naturally occurring alluvial clay on site. With up to 20 million clay tiles plus fittings and accessories made each year, much environmental impact of heavy road vehicles and associated emissions is avoided.

In keeping with the Wildlife and Countryside Act 1981, we have worked hard to restore disused pits. The extensive reed beds and open water have now become a haven for

bird life in particular, resulting in English Nature designating two as Sites of Special Scientific Interest (SSSI). Restrictions on the use of these areas will ensure their long-term success.

On issues of transport and packaging, Sandtoft was a founder member of 'Valpak', which was set up to take an industry lead in reducing packaging waste.

As part of our commitment to wider environmental issues, Sandtoft has signed up to an industry-negotiated agreement committing the company to a specific energy consumption reduction of at least 10% over 10 years. The first of the targets in relation to the scheme has been met with time to spare.

## Maintenance

Sandtoft clay roof tiles do not normally require any maintenance during their design life. In areas where lichen, moss and wind blown vegetation e.g. pine needles are a risk, it is recommended that rainwater channels be kept clear. A roof maintenance programme is always recommended for older buildings.

## Health and safety

Technical data to comply with the Health and Safety Executive Control of Substances Hazardous to Health Regulations is available from the Technical Department on 01427 871200.

## Supply and ordering

Orders for bespoke materials will be supplied to the individual profile and colour agreed with the Sandtoft Heritage Service project staff. Materials will be made to order and delivery time(s) agreed at the time of order.

To order please contact the Broomfleet Heritage Service on telephone 01430 426200

If you would like more information regarding Sandtoft's work in this field, please contact Sandtoft Heritage Service on 01427 871233 or email [heritage@sandtoft.co.uk](mailto:heritage@sandtoft.co.uk)



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Sandtoft Roof Tiles reserves the right to change designs and specifications without notice or to discontinue any of the products. All products are subject to availability and offered for sale under the company's conditions of sale which are available on request.