

Introduction

Churches provide some of the earliest evidence of building materials that we can see around us. Many in coastal Suffolk have Anglo-Saxon origins and were part of the post-Conquest programme of replacing timber structures with stone. Subsequent alterations, enlargements or restoration work serve to illustrate not only changing fashions and styles of architecture and materials, but also changes in industry, agriculture and commerce, and social and political history.



The flint rubble wall at Leiston Abbey.

Flint

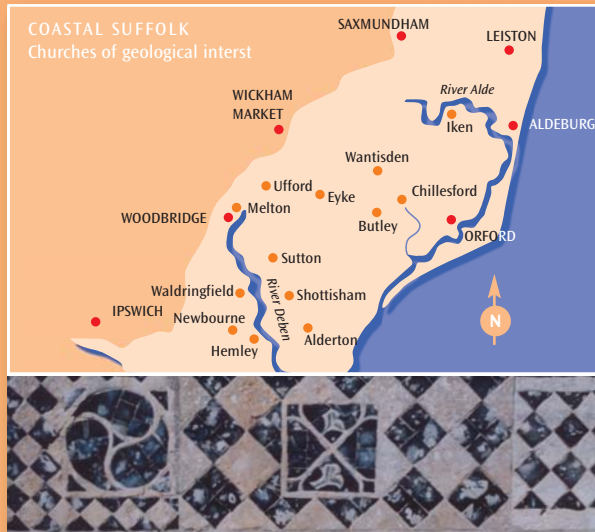
Flints are widely used. They were readily available from beaches and used as cobbles bound with lime mortar to make rubble walls, and then faced with dressed stone. The ruins at Walberswick church and Leiston Abbey show this well. Flints were roughly dressed by splitting, or finely worked by knapping, as seen in the beautiful flushwork at Ufford and Woodbridge churches.

Brick

Bricks were not much used until the reigns of Henry VIII and Elizabeth I, when they became most fashionable - seen for example in the Tudor towers of Waldringfield and Hemley churches. Later, as their use became more widespread, many local clay and brick pits were dug.



The early brick tower and 'exotos' church at Hemley



Fine flushwork at Walberswick

SAFETY

GeoSuffolk takes safety extremely seriously

- ◆ Follow the 'countryside code'.
- ◆ Keep to public footpaths and do not go onto private property.
- ◆ Be aware of uneven ground and trip hazards.
- ◆ Wear appropriate clothing and footwear for the locality and time of year.

FURTHER INFORMATION

This leaflet is published by GeoSuffolk. We aim to promote understanding and appreciation of the geo-resources of Suffolk.

GeoSuffolk wishes to acknowledge the financial support of Natural England.

Ordnance Survey sheets 197, 212 and 231 in the 1:25,000 "Explorer" series cover the area this leaflet.

The Suffolk Coast and Heaths are an Area of Outstanding Natural Beauty.



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GEO Suffolk

goes to

church in Coastal Suffolk



Walberswick Church



Exotos at Burwicks Church



The Coralline Craig tower at Wantisden Church

Exotics

Pieces of igneous and metamorphic rocks, sandstone and limestone are commonly found in the fabrics of Coastal Suffolk churches. Some are re-cycled and their origins impossible to trace - but they are not local. Fine white Caen limestone was imported by the Normans and can often be seen as quoins and door and window surrounds. Some limestones, such as Lincolnshire Barnack, are common in repair work.

Dunwich church was clad in stone in 1839 and over 20 different types of stone can be found. They are mostly flints from the beach and septaria, with Caen stone around windows and doors. Many of the roughly dressed stones are 'exotic' and include red, pink and white granite, black dolerite, basalt and gabbro, white and pink quartzites, gneiss, slate, gritstone, several types of sandstone and limestone, and chalk.

Much of this stone was recycled from the leper hospital and previous Dunwich buildings lost to the sea. The nearby ruin of Greyfriars contain the same materials.

Hemley church, restored in the mid-C19th, is another excellent example of 'exotics' use.

Most 'exotics' were originally imported as shipping ballast. After unloading, merchants sold it as building stone, and it may have been recycled many times. Both the Saxons and Normans had large trading areas over northern and western Europe, but the igneous and metamorphic rocks suggest a Baltic source.

Kentish Rag

This ragstone is a green/brown sandy limestone from the Hythe Beds (Lower Greensand) of the Kent Weald. It was used in Roman times as building stone in London and is widespread in North Kent, but rare in Suffolk. A Victorian fashion, it can be seen making the chancel of St Botolph's, Iken, built in 1853; the stone was evidently brought in by boat. St. Andrew's, Melton, built in 1868, is another example; the stone was transported from source by rail.



Kentish Rag chancel at Iken Church

Septaria

Calcareous mudstone concretions from the Eocene London Clay outcrop on the foreshore from Bawdsey southwards along the coast. They were also obtained by dredging offshore, and were once used for the manufacture of cement.

Impressions and borings by marine organisms can be seen in many church fabric blocks and indicate their provenance. It is widely used in Suffolk's Norman churches, most often in conjunction with Caen stone.



Dark septaria at the ruin of Dunwich Leper Chapel



Septaria blocks at Kirton Church

At Dunwich the stylish Norman/Early English architecture of the Leper Chapel ruin can be seen, with finely carved Caen stone windows and arches and contrasting darker brown septaria.

There are many examples of septaria churches. Unfortunately, septaria fracture and weather easily, sometimes leading to collapse, as the churches of Orford, Bawdsey and, dramatically, Alderton testify. Repair and restoration has been a constant theme!

Boxstones

The 'boxstones' are rounded pebbles of brown Miocene sandstone found at the base of the Coralline and Red Crag areas around the Orwell and Deben rivers. They are the only surviving remains of marine sediments of this age and are unique to Suffolk and north-east Essex.

They were used in the 1859 restoration of All Saints, Sutton, and St. Margaret's, Shottisham, restored in 1867. Many of the flints used are barnacle encrusted or with Red Crag shells adhered to them. The flint and boxstone pebbles were evidently waste material from the mid-nineteenth Century days of nearby 'coprolite' (phosphatic nodules) excavations, forming a cheap, readily available source of building stone.



Coralline Crag blocks at Chillesford Church

Coralline Crag

This is a fossiliferous Pliocene shelly sand, which in places has been cemented to form a hard limestone, known as the Coralline Crag 'Rock Bed'. It is unique to Suffolk, outcropping mainly from Aldeburgh to Gedgrave. It was mainly used from the 14th-16th Centuries for lesser structures on farms and in walls (look in Quay St and the churchyard at Orford) and for repair work, as in Iken and Bawdsey churches. More substantially, sawn blocks were used for an alteration to the nave and forming a buttress at St John Baptist, Butley; and a C15 extension to the chancel at All Saint's, Eyke.

The best examples are found at Wantisden and Chillesford churches where the towers were built of sawn blocks during the mid-14th Century. Blocks used for recent restoration at Chillesford came from a pit near Sudbourne.

Red Crag

This Pliocene shelly iron-stained sand outcrops widely over southern Coastal Suffolk. It is commonly used in mortar in many churches. At the east end of the chancel of St Mary's, Newbourne, whole fossil shells from a local pit can be seen. In some localities the Crag sand has been cemented by iron oxides to form an ironstone, which has been used for building. At Ufford church, rough blocks can be seen in herringbone pattern courses (a Saxon style) in the north wall of the nave, and forming quoins.

At All Saints, Eyke, on the south side of the chancel as much as 5-10% of the fabric is of Red Crag ironstone cobbles, and shelly Crag cobbles can be seen in Falkenham and Newbourne churches.

Red Crag 'herringbone' cobbles and quoins at Ufford Church

