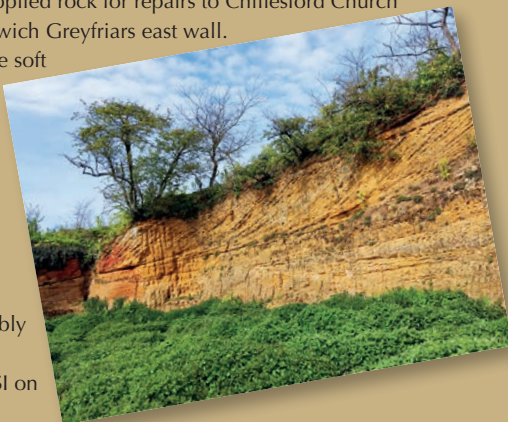


## CATTLEYARD AND QUARRY

Carved out of rising ground to give walls, this and some other Rock-Bed quarries are used to shelter cattle in winter. Cross-stratification, seen in the upper part of the quarry face, also tells us that the rock started off as large underwater sand banks.

This site has supplied rock for repairs to Chillesford Church tower and Dunwich Greyfriars east wall.

The rock is quite soft when dug but given a few days its contained moisture evaporates, and dissolved salts are precipitated which appreciably hardens it. This quarry is an SSSI on private land in Sudbourne.



## FISSURES

This is a large vertical fissure in the Rock-Bed, formed by natural fracturing and solution. Fissures are common in limestone country such as this and pipe-like structures have been



known to collapse, forming hollows in fields. The fissures in the Rock-Bed run across country and quarrying has often used them to facilitate working, with the quarry faces aligned along these.

## QUARRY WORKING

This quarry was worked for farm buildings and walls, and, in the 1830s, to provide rubble to make local river walls. The photograph shows worked faces of the Rock-Bed at Sutton and the 3D structure of the Pliocene sand banks. This is an SSSI on private land.



## ON THE DOORSTEP

A few Coralline Crag quarries (on private ground) have cave-like chambers excavated into the walls. Their origin seems to have passed into history. Similar, but Miocene-age limestones in France have 'troglodyte' caves, but ours are hardly big enough for that! Benjamin Britten lived in 'Crag House' in Aldeburgh 1947-57, not made of, but built on Coralline Crag Rock-Bed. A Sudbourne family related that, in the 1930s, blocks of Coralline Crag Rock-Bed were fetched from a local quarry to scour and clean doorsteps.



## SSSIs

The SSSI at Rockhall Wood, Sutton, is on private ground but is easily viewed from the footpath – the top part of the section is of Rock-Bed. Here it is resistant to erosion and slightly overhangs and protects the underlying loose sands of the lower, non-indurated part of the Coralline Crag, forming a small hill. This is the site of Rock Hall – a cottage long demolished.

Several of the Coralline Crag Rock-

Bed quarries are designated SSSIs by Natural England – Sites of Special Scientific Interest of national or international importance to geology and which are conserved.



*This leaflet is published by GeoSuffolk, 2023.*

*Text by C & R Markham; photographs by C Markham. Visit our website [www.geosuffolk.co.uk](http://www.geosuffolk.co.uk).*

*The Coralline Crag Rock-Bed lies within the Coast & Heaths Area of Outstanding Natural Beauty who are supporting this leaflet through their Community & Conservation Fund. Visit [www.suffolkcoastandheaths.org/](http://www.suffolkcoastandheaths.org/)*

*For your safety while exploring please follow the Countryside Code [www.gov.uk/government/publications/the-countryside-code](http://www.gov.uk/government/publications/the-countryside-code) and the Coastguard Service has a coastal safety code at <https://coastguardsafety.campaign.gov.uk/>*



# SUFFOLK'S CORALLINE CRAG ROCK-BED

This is found only in southeast Suffolk, in the Orford and Aldeburgh areas and at Sutton and was once the basis of local industries. It has been quarried as a building stone, particularly in the 14th century. It has also been used for farming purposes - as late as the 1920s a quarry (now infilled) at Iken was being worked. The rock was crushed and used for tracks across marshy ground and for lime on sandy fields.

## A LIMESTONE

The Rock-Bed is an attractive soft creamy-yellow limestone. Here the distinctive swirl-like bedding features tell us that it started off as migrating underwater sand banks. This was in Pliocene times, some 3.5-4 million years ago. This disused quarry is an SSSI on the north side of the narrow road near Richmond Farm, south of Orford. It is on private land but can be viewed from the roadside.



## HOW DID THE ROCK-BED FORM?

The fossil marine shells are of two forms of calcium carbonate (lime). Those

made of aragonite (which have a chalky consistency) have been dissolved by acidic ground water, and their calcium carbonate has been precipitated to harden part of the Coralline Crag into a Rock-Bed. The original shells are often represented by moulds and hollows. Fossils made of less soluble calcite – scallops, sea urchins, bryozoans – remain. This splendid specimen is in the Ipswich Museum collection.



## WANTISDEN CHURCH

Blocks of Rock-Bed form clean lines of the tower of the Church of St John the Baptist at Wantisden. This photo of the south side of the tower also shows the staircase wall.



This is part of the outside wall of the tower staircase. Both flat bedding and sloping bedding may be seen in the blocks and small pieces of bryozoan occur in places. 14th century stonemasons carefully sawed the blocks of different lengths, curves and angles to fit them together. The wall is about 70cm thick.

## GREYFRIARS WALL DUNWICH

Although it is 9km north of the Coralline Crag outcrop, much of the east wall of Greyfriars Priory in Dunwich is built of blocks of Rock-Bed. The photo looks south along the public footpath on the southeast of the site. Repairs to the northeast part of the wall in 2017 used Rock-Bed from Sudbourne.



## CONSTRUCTION

We are fortunate to have several historic buildings in Suffolk with Rock-Bed blocks used in their construction, enabling us to view and inspect it closely.

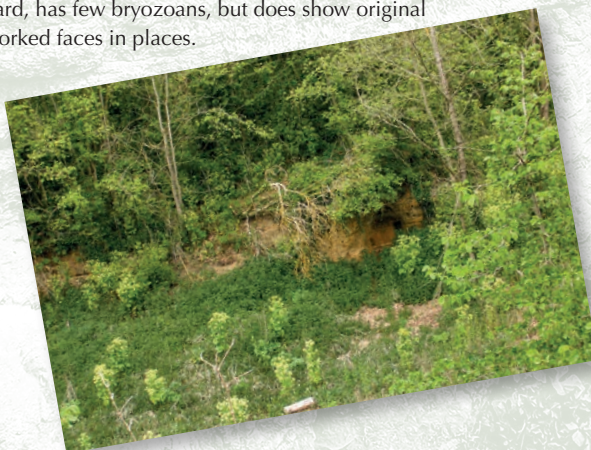
## CRAG IN THE CASTLE

Much Coralline Crag Rock-Bed has been used inside Orford Castle. There are blocks above the fireplace in the upper hall (illustrated), in the vaulting of many ceilings and forming the altar in the chapel. The well in Orford Castle was excavated through sand down into the Rock-Bed where water was reached. The Castle is managed by English Heritage (entry fee).



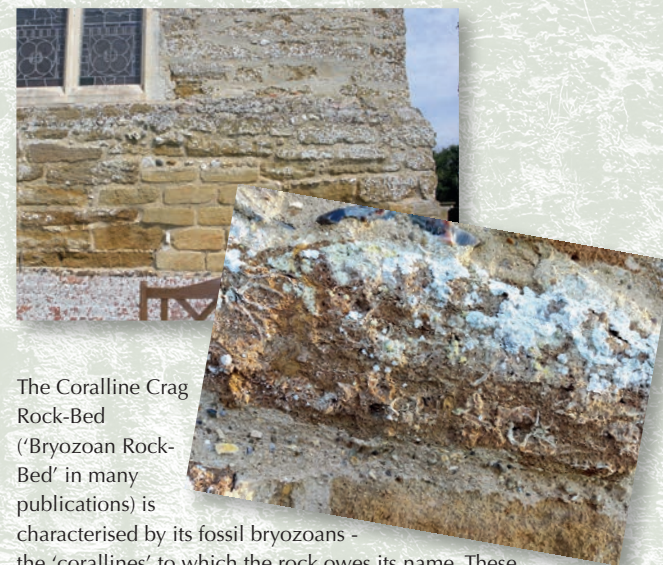
## ORFORD CASTLE QUARRY

A short distance southwest of the Castle Keep, and within the National Scheduled Monument, is a former quarry, one of the few places with public access where the Rock-Bed can be seen in situ. This area may be much overgrown, with trip hazards but is well worth a visit. The Coralline Crag rock here is not very hard, has few bryozoans, but does show original worked faces in places.



## CHILLESFORD CHURCH

The tower of the church of St Peter in Chillesford is mainly made of Coralline Crag Rock-Bed. Here on the west side of the tower, 14th century blocks are weathered and darker coloured whilst more recent repairs show lighter coloured blocks which are from Sudbourne. The original rock was from near Orford, not from Chillesford where pits are in a younger geological deposit.



The Coralline Crag Rock-Bed ('Bryozoan Rock-Bed' in many publications) is characterised by its fossil bryozoans - the 'corallines' to which the rock owes its name. These are colonies of minute box-like or tube-like individuals - well seen with a good hand lens. Colonies include globular, sheet-like (sea mats) and other forms. This block in Chillesford Church shows sections cut through fossil sea mats. These lived 3.5-4 million years ago, in Pliocene times.

## SUNK ROCKS THORPENESS

Thorpe Ness lies at the northeast on-land end of the Coralline Crag outcrop which then extends as undersea rocky ridges for some 3km and has caused hazards to boats. There are records of it being excavated for building stone at low tide in the 1830s. Today, blocks are thrown ashore from the submarine outcrop during storms and can be found on Thorpeness beach - many have fossil shells and bryozoans. At present, the seaward Rock-Bed ridges obstruct southward-moving beach material; this accumulates and helps to protect the Sizewell power stations from erosion.

