## **10 Thorpeness**

## Grid reference [TM TM 477 606]

The picturesque resort village of Thorpeness was developed as Britain's first purpose built holiday resort in the years before the First World War. Since then the eroding beach front and cliffs have been a growing problem, and several techniques have been used to try to halt or at least slow the rate of erosion.

Despite these efforts, the low, sandy cliffs north of the village will continue to erode and naturally provide sediment for coastal processes — and incidentally fresh information for geologists.

The cliffs contain interesting features. Where not obscured by slumped material, a sequence of pale and dark yellow banded sands can be seen; these are shallow marine deposits from some two million years ago. There is some debate about the climatic conditions under which they were laid down. Fossil shells found in this same unit at nearby Aldringham Common suggest the environment was a cool, northerly type, however fossil pollen suggests warmer temperate conditions, with evidence for oak, alder and hornbeam forest onshore.

By contrast, grey and brown clays at the top of the cliff were deposited by the Anglian ice sheet about 450,000 years ago, in cold, glacial conditions. They are underlain by overlain by rusty-brown glacial meltwater gravels forming a broad channel feature which cuts into the Crag beneath. Intricate looping patterns can be seen in the clay layer, caused by frost disturbance in the subsoil during the Devensian glacial period, perhaps 16,000 years ago.

Northwards towards Sizewell, the beach extends outwards into a broad promontory of shingle ridges. This is Thorpe Ness, one of smallest of the coastal ness landforms in Suffolk. It may partly be formed on an offshore reef of Coralline Crag, as lumps of this honey-coloured, fossil-rich rock are scattered on the beach, though no outcrop is locally visible. The beach has been designated as part of the Leiston to Aldeburgh SSSI as an example of vegetated shingle; horned poppy, sea spurge and sea kale are growing here. The beach grades into low cliffs capped by dunes of windblown sand with marram grass.

Thorpeness cliffs looking north, showing pale sands of the Norwich Crag beneath orange outwash gravels and glacial clays.

A fossil-rich block of Coralline Crag on the beach. It includes reef-building bryozoans ('corallines') after which the rock gets its name.

Thorpe Ness, showing shingle beach bars backed by sand dunes and a line of low cliffs.

## Figure

(Figure 28) Thorpeness cliffs looking north, showing pale sands of the Norwich Crag beneath orange outwash gravels and glacial clays.

(Figure 29) A fossil-rich block of Coralline Crag on the beach. It includes reef-building bryozoans ('corallines') after which the rock gets its name.

(Figure 30) Thorpe Ness, showing shingle beach bars backed by sand dunes and a line of low cliffs.



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Thorpe Ness, showing shingle beach bars backed by sand dunes and a line of low cliffs.