COUNTY: KENT SITE NAME: THANET COAST

DISTRICT: CANTERBURY; THANET

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981

Local Planning Authority: CANTERBURY CITY COUNCIL, Thanet District Council

National Grid Reference: TR 132675–TR 394656 Area: 818.7 (ha.) 2023.0 (ac.)

Ordnance Survey Sheet 1:50,000: 179 1:10,000: TR 16 NE, NW; TR 26 NE, NW; TR 36 NE, NW; TR 37 SE, SW

Date Notified (Under 1949 Act): 1981 (part)

Date Notified (Under 1981 Act): 1984 (part) 1987 (part) 1989 (part) Date of Last Revision: 1990

Other Information:
Thanet Coast amalgamates four SSSIs: Bishopstone Cliffs Plumpudding Island and North Thanet Coast previously notified under the 1981 Act, and North Cliff Broadstairs notified under the 1949 Act. The site incorporates large extensions, and part is managed by Canterbury City Council as a Country Park. Parts of this site will also be noted in 'A Geological Conservation Review'.

Reasons for Notification:
This site, extending almost uninterrupted from Swalecliffe to Ramsgate, comprises mainly unstable cliff and foreshore (including shingle, sand and mudflats), with smaller areas of saltmarsh, coastal lagoons, coastal gill woodland and cliff-top grassland. There are a number of biological, geological and geomorphological features of interest within the site.

Biological Interest
The Thanet Coast is particularly noted for its bird populations, supporting both internationally and nationally important numbers of wintering birds, with one species breeding in nationally important numbers. Associated with the various constituent habitats of the site are outstanding assemblages of both terrestrial and marine plant species, including communities of marine algae that are of limited occurrence elsewhere in the British Isles. Invertebrates are also of interest and there are recent records of three nationally rare** and one nationally scarce* species.

The ornithological interest of the Thanet Coast is centred on the large numbers of waders and wildfowl which use the area in winter and the many species of birds that feed and rest during the spring and autumn passage. Turnstones *Arenaria interpres* regularly overwinter in numbers of international importance, whilst sanderlings *Calidris alba* and ringed plovers *Charadrius hiaticula* and grey plovers *Pluvialis squatarola* are present in nationally important numbers. A colony of little terns *Sterna albifrons*, a species specially protected by law and listed on Schedule 1 of the 1981 Wildlife and Countryside Act, breed in nationally important numbers at Plumpudding Island.

The cliff section at Epple Bay is of considerable historic scientific interest, since it is the type locality for one genus and six species of algae. It forms part of the survey area where chalk cliff algal communities were first studied in Britain, and the remaining natural cliff exemplifies this type of vegetation. Botany Bay and White Ness exhibit a variety of geomorphological features such as stacks, promontories, caves and a tunnel and arch formation which are no longer common on Thanet, and which also support a variety of cliff algal communities. Of particular interest are the cave communities of algae of the group *Chrysophyceae*; these communities are not known from the caves in the harder rocks of western Britain. The North Thanet cliff algal communities are complementary to those of the chalk cliffs at Pegwell Bay, within the Sandwich Bay and Hacklinge Marshes SSSI, the only other notable site for chalk cliff algal communities in south-east England.

The littoral and subtidal plant and animal communities of Kent are generally impoverished compared with other parts of Britain; this is principally attributed to the extremes of sea and air temperatures, the turbid sea water and the soft, unstable substrates which are prevalent. However, the foreshore at Fulsam Rock is clean and silt-free, and supports a diverse fauna on the lower shore especially in the laminarian zone, which has a well developed crevice fauna. The algal flora is well developed, and includes species which have not been recorded elsewhere in Kent, such as *Chondria dasyphylla*, *Hecatonema maculans* and *Griffordia secunda*.

The shingle substrate occupying part of the foreshore has given rise, in places, to a distinctive flora with species including yellow horned poppy *Glaucium flavum*, viper's bugloss *Echium vulgare* and the nationally scarce* plants sea kale *Crambe maritima* and sea pea *Lathyrus japonica*. The nationally rare** hog's fennel *Peucedanum officinale* has also been recorded from the shingle at Swalecliffe. Small areas of saltmarsh are dominated by sea purslane *Halimione portulacoides* with sea aster *Aster tripolium* and sea worm *Artesmia maritima* also present, whilst at Plumpudding Island the western coastal lagoon contains abundant growth of the nationally scarce* aquatic plant, spiral tassel-weed *Ruppia cirrhosa*.

The exposed cliffs themselves are of interest for terrestrial plants, supporting populations of the nationally rare** hoary stock *Matthiola incana* and sea stock *Matthiola sinuata* as well as the nationally scarce* wild cabbage *Brassica oleracea* and sea heath *Frankenia laevis*.

Bishopstone Glen is a short steep-sided valley cut through the clays and sands of Bishopstone and is the only feature of its kind on the North Kent Coast. The sheltered head of the Glen is dominated by ash *Fraxinus excelsior* and field maple *Acer campestre* woodland which is replaced further down the valley by hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa* scrub. Young smooth-leaved elm *Ulmus minor* is abundant throughout.

The exposed cliff top east of Bishopstone supports a large area of coastal grassland. It is mown for hay and contains a wide range of species including early hair grass *Aira praecox*, barren fescue *Vulpia bromoides*, meadow vetchling *Lathyrus pratensis*, bulbous buttercup *Ranunculus bulbosus* and thrift *Armeria maritima*.

Within this site strips of grassland along the seawalls are dominated by couches *Elymus* species and fescues *Festuca* species. Other flowering plants include the nationally rare** hog's fennel, found along the seawall at Plumpudding Island, and some nationally scarce* species such as slender hare's ear *Bupleurum tenuissimum* and sea clover *Trifolium squamosum*. Some of the more common species recorded include spiny restharrow *Ononis spinosa* and grass vetchling *Lathyrus nissolia*.

The drift line debris in the vicinity of Swalecliffe supports the only population of the nationally rare** isopod (woodlouse) *Eluma purpurescens* on mainland Britain, and the cliffs around Bishopstone support two nationally rare** digger wasps *Ectemnius ruficornis* and *Alysson lunicornis*. It is likely that further survey may reveal additional rare or scarce invertebrate species in the site. These particular cliffs also support one of the two largest sand martin *Riparia riparia* colonies in Kent.

Geological Interest
The section of coast between Beltinge and Reculver exposes the Thanet Formation, the Woolwich and Reading Beds Formation, the Oldhaven Formation and the London Clay Formation. It is the key on-land Palaeocene site in the London Basin, and is one of Britain's most important palaeobotanical localities.

The Thanet Beds contain a range of plant organs including as-yet-undescribed fruits and seeds. In addition, this section is the only locality to yield determined wood from the Woolwich Beds and one of only two sites to have yielded plant material from the Oldhaven Beds.

The clays here contain a substantial assemblage with two families, six genera and numerous species unique to this site in the London Clay flora. Three genera *Palaeobruguier* (mangrove), *Shrubsolea* (Rutaceae) and *Jenkinsella* (Ceridiphyllaceae) are unique to this site.

A rich invertebrate and vertebrate fossil fauna also occurs within the site and the section has been extensively studied over many years. The best exposures

currently occur on the foreshore, and many of the best are towards the Spring tide and Low Water mark.

The stretch of coastline between Epple Bay and Ramsgate is the national reference locality for the Santonian stage of the Upper Cretaceous chalk in Britain.

The exposed sections at North Cliff together with the nearby Pegwell Bay complement the Folkestone Warren and Dover to Kingsdown Cliffs SSSIs and include several stratigraphically important marker beds such as Bedwell's Columnar Band and Whitaker's Three Inch Band. The top parts of the Santonian stage are very fossiliferous and the *Marsupites* zone contains a distinctive and famous band of the pyramidal-shaped sea urchin *Echinocorys*.

The North Cliff is also important for Quaternary studies. It provides lithostratigraphic and biostratigraphic evidence for environmental changes during the Middle and late Devensian in SE England. The sequence of sediments exposed in the cliff overlies frost-disturbed chalk and comprises: 1) Middle Devensian Solifluction deposits; 2) Late Devensian loess and brickearths; 3) a series of Late-glacial Solifluction deposits separated by fossil soil horizons considered to represent the Bolling and Allerod Interstadials; 4) Postglacial hillwash.

Foreness Point is a key site for coastal geomorphology and an essential member of the suite of chalk coastal sites. It is a classic cliff-shore platform system and contains the most extensive intertidal chalk shore platform in Britain. It has been studied in greater detail than most other cliff-platform sites and demonstrates particularly well the links between cliff and platform erosion and beach development. Cliff recession, historically at a rate of 0.3 m per year, contributes flint and chalk pebbles to the beaches, which also contain locally important accumulations of sand, much of it organic in origin. The cliffs and platform also show interesting relationships with bedrock structure.

The cliffs at Walpole Bay and Grenham Bay consist of Upper Chalk, cut by a swarm of closely-spaced, vertical extension joints, striking NW-SE. The joints, which are well-developed here, are oblique to the main Thanet fold trend (E-W). They are particularly good examples of fractures formed in the 'Late Cenozoic Stress Domain', that is, structures formed as a result of extension related to late Alpine plate collision.

* Nationally scarce species are those which occur in 16–100 10 km squares in Great Britain.
** Nationally rare species are those which occur in 1–15 10 km squares in Great Britain.