COUNTY: KENT SITE NAME: DOVER TO KINGSDOWN CLIFFS

DISTRICT: DOVER

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

Local Planning Authority: DOVER DISTRICT COUNCIL

National Grid Reference: TR 332419–380485 Area: 299.9 (ha.) 741.1 (ac.)

Ordnance Survey Sheet 1:50,000: 178 1:10,000: TR 34 NW, SW, SE

Date Notified (Under 1949 Act): 1951 Date of Last Revision: 1981

Date Notified (Under 1981 Act): 1987 Date of Last Revision: –

Other Information:
Part of the site is owned by the National Trust; part is public open space. The site is included in the Geological Conservation Review.

Reasons for Notification:
The coastline from Dover harbour to Kingsdown is of extreme importance geologically and physiographically, and for its varied floral and faunal communities which include many rare species.

Biology
The vegetation of the cliff tops consists mainly of chalk grassland interspersed with areas of scrub. Much of the grassland is dominated by tor-grass *Brachypodium pinnatum* or upright-brome *Bromus erectus*, though there are numerous areas of species-rich open grassland with a range of typical chalk-turf grass and herb species. These include sheep's fescue *Festuca ovina*, salad burnet *Sanguisorba minor*, wild thyme *Thymus praecox*, and horseshoe vetch *Hippocrepis comosa*. A number of nationally-rare plants occur. These include early spider orchid *Ophrys sphegodes* and ox-tongue broomrape *Orobanche loricata* which are both at the northern extreme of a continental distribution.

Dense areas of scrub occur locally, eg at Fan Hole. The main constituent species are gorse *Ulex europaeus*, wild privet *Ligustrum vulgare*, hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus*. There are a few scattered individuals of juniper *Juniperus communis*, this species now has only a few remaining native sites in Kent.

On the sheerest chalk-cliff faces, vegetation is largely confined to crevices and narrow ledges. In places where gullies have formed (particularly around Langdon Bay), the vegetation is more extensive and consists of mixed communities of plants typical of both maritime and chalk grassland habitats. National rarities include wild cabbage *Brassica oleracea*, hoary stock *Matthiola incana* and

Nottingham catchfly *Silene nutans*, while more locally-rare species include wild madder *Rubia peregrina*.

At the northern end of the site, at Kingsdown beach is a broad shingle plateau with a succession of plant communities influenced in their extent and composition by increasing shingle-stability. Typical species include sea sandwort *Honkenya peploides* and the rare sea pea *Lathyrus japonicus*, while more secure shingle inland supports a sward of sheep's fescue and other grasses together with further colonies of the early spider orchid. Of particular note is a prostrate oak tree *Quercus robur* which instead of a trunk has branches radiating from its root-base.

The invertebrate fauna of the site is rich, including important communities of Lepidoptera (moths and butterflies) and Coleoptera (beetles). Locally-restricted species found here include the adonis blue butterfly *Lysandra bellargus*, the scarlet tiger moth *Callimorpha dominula*, a ground-beetle *Bradycellus distinctus*, and some rare weevils of the family Apionidae.

There are numerous breeding sea birds along the cliffs including fulmars, rock pipits and lesser-black backed gulls; kittiwakes have been established since 1967, their expanding population now exceeds 1100 pairs, but are still found nowhere else in Kent. The South Foreland valley at St Margarets is a significant landfall for migrant birds in the spring and a gathering point for dispersal in the autumn. More importantly many migrants breed here including whitethroat, blackcap, grasshopper and other rarer warblers. Old wartime fortification-systems, of which there are several within the site, attract black redstarts. Near Kingsdown is one of the two cliff-nesting colonies of house martins in Kent.

In addition the site includes important chalk foreshore habitats, particularly those at St Margarets Bay. These support the most species-rich littoral chalk algal flora in south-east England. The wide wave-abrasion platform at the foot of the cliffs provides a diverse range of rock formations and habitats colonised by rich and complex seaweed communities, the lower shore red algae being particularly luxuriant. Examples of algae characteristic of lower salinities are present where freshwater springs emerge on the shore, and the cliff face supports well developed examples of the unusual algal communities characteristic of this habitat, exhibiting clear vertical zonation patterns.

Geology

Dover to Kingsdown is an internationally important stratigraphic reference site which provides extensive and near continuous cliff and shore exposures of the Cenomanian, Turonian and Coniacian Stages (the Lower, Middle and Upper Chalk). The site is historically very important as many geological principles, such as biostratigraphic zonation were tested here during the early development of geology. Many parts of the succession are fossiliferous and, in particular the upper parts of the Turonian and lower parts of the Coniacian are rich in *Micraster*, which have contributed, and still are contributing to our knowledge of evolution.

This is also a key site for coastal geomorphology, providing an excellent example of structural controls on coastal cliff morphology. It also provides significant evidence for understanding contemporary form/process relationships in a cliff-shore platform-beach system. Historically, retreat of the cliffs has averaged 0.5 m per year but, in contrast to Foreness on the Isle of Thanet, erosion takes place mainly as large slides affecting much of the cliff face. The present beach closely relates to contemporary erosion of the cliffs and a well-developed shore platform extending to below low water mark. Geomorphologically, Dover to Kingsdown is an essential member of the network of chalk coastal sites in Britain.