COUNTY: EAST SUSSEX SITE NAME: BRIGHTON TO NEWHAVEN CLIFFS

DISTRICT/BOROUGH: LEWES; BRIGHTON

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

Local Planning Authority: BRIGHTON BOROUGH COUNCIL, Lewes District Council

National Grid Reference: TQ 390015 Area: 167.5 (ha.) 413.7 (ac.)

Ordnance Survey Sheet 1:50,000: 198 1:10,000: TQ 30 SW, SE, TQ 40 SW

Date Notified (Under 1949 Act): –
Peacehaven Cliffs–Castle Hill 1961
Black Rock 1951

Date of Last Revision: –
Peacehaven Cliffs–Castle Hill 1965
Black Rock 1965

Date Notified (Under 1981 Act): 1986 Date of last Revision: –

Other Information:
This site includes the two sites formerly known as Black Rock and Peacehaven cliffs to Castle Hill.

Reasons for Notification:
This coastal site comprises the length of chalk cliff stretching from Black Rock, Brighton in the west to Castle Hill, Newhaven in the east and includes the wave cut platform at the cliff base.

Although the main interest of the site is geological some rare and uncommon plants grow both on the cliff face and in the narrow strip of cliff-top chalk grassland. The cliffs support a locally important colony of breeding seabirds and a diverse community of beetles.

Unimproved chalk grassland grows in small pockets between the cliff top and the adjacent fenceline, and also as a larger expanse in the landslip area at Castle Hill. Amongst the red fescue *Festuca rubra* and sea couch *Agropyron pungens* grow herbs such as wild carrot *Daucus carota*, common bird's-foot trefoil *Lotus corniculatus* and lady's bedstraw *Galium verum*. Several uncommon maritime plants grow both on the top and face of the cliff. These include the rare species hoary stock *Matthiola incana*, rock sea-lavendar *Limonium binervosum* and sea-heath *Frankenia laevis*.

At Castle Hill and Friars Bay there are outstanding assemblages of beetles (Coleoptera), including the nationally rare species *Polistichus connexus* and *Phytobius quadrinosus*. The Meeching Court Farm area supports the only colony of breeding kittiwakes in Sussex together with breeding fulmar and herring gull.

The wave-cut platform is worn into a characteristic pattern of gullies and ridges at right angles to the sea, and supports a variety of typical invertebrates and algae.

Geology

Brighton to Newhaven Cliffs provides the best and most extensive exposure of the *Offaster pilula* Zone in England. The gentle folding and the superb accessibility of the base of the cliff make this an important collecting site for faunas of the upper Santonian and lower Campanian. It is a nationally important reference section for the upper Cretaceous.

Black Rock is a key section of outstanding importance for Quaternary Stratigraphy which has attracted scientific interest for over 150 years. The modern sea cliff at Black Rock obliquely intersects a fossil cliff and abrasion platform cut in the Upper Chalk. The platform is overlain by raised beach deposits of sand and shingle which contain shell fragments. The beach and cliff are generally thought to date from the second half of the last (Ipswichian) interglacial. The angle between the beach and the old cliff is filled by great quantities of coarse chalk rubble apparently derived from the weathering and erosion of the cliff in Devensian times. Chalk muds and fine chalk gravel and grit, are banked against the rubble on the west and may represent fan deposits. The muds contain appreciable quantities of loess and are overlain by further, coarser solifluction deposits. The chalk rubble and solifluction deposits are particularly notable for their fossil remains of many Devensian mammals, including *Elephas primigenius*, *Tichorhinus antiquitatus* and *Equus caballus*. The landforms, stratigraphy and mammal remains at Black Rock provide an extremely valuable record of former sea levels and changing environmental conditions.

An area of the cliff at Saltdean provides probably the finest example of conjugate normal faults in the Chalk of southern England. This exposure of Upper Chalk lies on the southern flank of the Weald Anticline, an upward flexure of the crust and the major geological structure of south-eastern England. The faults run in a north-north-easterly direction, at right angles to the trend of the anticline. These structures were probably formed by stretching of the crust parallel to the axis of the anticline during an episode of crustal compression in the mid-Tertiary Period, at the time of the Alpine mountain building episode.