HAMPSHIRE NORTH SOLENT SSSI

STATUS: SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI) NOTIFIED UNDER SECTION 28OF THE WILDLIFE AND COUNTRYSIDE ACT 1981

LOCAL PLANNING AUTHORITIES: Hampshire County Council
New Forest District Council

NATIONAL GRID REFERENCE: SZ387957-SU489026

ORDNANCE SURVEY SHEETS: 1:50 000: 196 1:10 000: SZ39 NE SZ49 NE NW SU30 SE SU40 SE SW

HECTARES/ACRES: 1187.69/2934.70

DATE NOTIFIED (1949 ACT): 1951 DATE OF LAST REVISION: 1979

DATE NOTIFIED (1981 ACT) 27 September 1990 DATE OF LAST REVISION:

CONFIRMED 3 June 1991

OTHER INFORMATION 660 ha of the SSSI are subject to a National Nature Reserve Agreement between the Beaulieu Estate and the Nature Conservancy Council; 103 ha are the subject of a similar Agreement with the Cadland Estate. It is proposed as a Wetland of International Importance under the Ramsar Convention, and as a Special Protection Area under the EEC Directive on the Conservation of Wild Birds. The site adjoins the Hurst Castle and Lymington River Estuary SSSI, and was formerly known as the Beaulieu Estuary SSSI.

REASONS FOR NOTIFICATION:

The North Solent Site of Special Scientific Interest extends along approximately 13km of the north shoreline of the West Solent and includes the parallel valleys of the Beaulieu River, Dark Water and the Stanswood Valley. It possesses a remarkable diversity of habitat ranging from coastal mudflats and saltmarshes, shingle beaches and spits, fresh and brackish marshland and pools, maritime grassland, species rich neutral and acidic grassland, valley mire, heathland and a range of ancient semi-natural woodlands. This wide range of habitats is centred on the estuary of the Beaulieu River. Collectively they support a rich flora including many locally distributed rare or diminishing species. The botanical richness of these habitats is reflected in an equally rich and diverse insect fauna including many rare and otherwise notable species. In addition, the site is of international importance for its populations of over-wintering and migratory wildfowl and wading birds and is of national importance for its populations of breeding gulls, terns and waders.

The Beaulieu River's estuary arose as a valley drowned by the post-glacial rises in sea level. The river catchment drains a large part of the adjacent New Forest and enters the North Solent SSSI at North Gate. Its upper freshwater reaches support extensive areas of reedbed and alder woodland developed on fen peat. The river becomes tidal at the village of Beaulieu and forms a long narrow meandering estuary fringed by extensive areas of *Spartina anglica* saltmarsh covering approximately 132 hectares. The *Spartina* saltmarsh forms part of a well

defined saltmarsh zonation extending from a narrow band of brackish marsh near high water mark through mixed saltmarsh dominated by sea-purslane *Halimione portulacoides* and sea-lavender *Limonium vulgare* which forms a mosaic with the more abundant *Spartina* marsh to a low level sea glasswort *Salicornia* species marsh adjacent to the river channel. The range of saltmarsh types contain rare plant species such as the lax flowered sea-lavender *Limonium humile* and marsh sow-thistle *Sonchus palustris*.

The estuary is guarded by two parallel shingle spits which have arisen from the eastward accretion of material across the estuary mouth. Shingle beaches extend eastwards and westwards from the estuary mouth along The Solent shore. These support a rich flora including many rare and uncommon species specifically adapted to this harsh environment. Most obvious is the abundance of sea-kale *Crambe maritima*; in places the very rare little robin *Geranium purpureum fosteri* also occurs. In Britain this sub-species is now confined to The Solent. To the west of the Beaulieu the shingle beach extends inland in a series of stabilised storm ridges collectGravelly Marsh. This supports an interesting transition from pioneer through lichen rich heathland and gorse scrub to mixed oak *Quercus robur*, hawthorn *Crataegus monogyna* scrub. Between the shingle ridges both at Gravelly Marsh and to the east at Lepe Beach, brackish pools and lagoons occur. These are fed by a mix of base deficient freshwater and sea water and support a highly specialised invertebrate community including populations of the nationally rare shrimp *Gammarus insensibilis*.

The shingle spits and associated shell ranks and saltmarshes support extremely important breeding populations of terns, gulls and waders. The number of breeding terns has fluctuated owing to local movements in breeding colonies, but the SSSI generally supports the largest colonies of sandwich tern and common tern on the south coast, and up to 7% of the British population of breeding little tern. In addition there is a very large black-headed gull colony which is considered to be the largest in Britain. The estuary also supports important populations of breeding waders whose range and numbers are restricted or have declined elsewhere on the south coast. The saltmarshes in the estuary support the highest recorded density of wading birds in this habitat in Britain, whilst the estuary also supports nationally important populations of breeding ringed plover and regionally important numbers of breeding redshank and oyster-catcher.

The area of intertidal mudland in the estuary is relatively small, but nevertheless supports substantial populations of over-wintering and migratory birds with numbers of dark-bellied brent geese, teal, ringed plover, grey plover, dunlin, blacktailed godwit and spotted redshank reaching national importance. In addition the mudflats at Beaulieu Mill Pond support an important population of the very rare dwarf spike-rush *Eleocharis parvula*.

Outside of the estuary the intertidal areas of The Solent shore also attract considerable numbers of over-wintering waders and wildfowl including turnstone, ringed plover, oyster-catcher and brent geese. The inter-tidal area at Stanswood Bay supports extensive beds of a wide range of eelgrass *Zostera* forms.

On the west side of the estuary lies an extensive area of secondary vegetation developed on tidal silt. Old creeks may be distinguished and the area may once have carried a former main channel of the estuary. Some of the area has been improved for agriculture but there remains substantial areas of brackish and fresh marsh and unimproved pasture, with numerous pools exhibiting varying degrees of salinity together with areas of alder *Alnus* and sallow *Salix* scrub. It is a vital feeding and roosting area for bird populations centred on the estuary.
The valley sides of the Beaulieu River and the Dark Water are dominated by extensive areas of ancient oak woodland. On the Beaulieu River the woodland reaches down to the upper

limit of the saltmarshes. This transition from ancient woodland to saltmarsh is characteristic of many drowned river valleys around The Solent shore but is otherwise a rare and unusual feature. The valley side woodlands are developed over acidic soils and are dominated by pedunculate oak *Quercus robur* and include a remarkable abundance of the rare wild service tree *Sorbus torminalis*. Narrow-leaved lungwort *Pulmonaria longifolia*, a species confined to The Solent coast and parts of Dorset, is also widespread in these woodlands. Both these species are very good indicators of ancient and possibly primary woodlands. The woodlands contain a very rich insect fauna including large populations of white admiral and silver-washed fritillary butterflies. Smaller numbers of small pearl-bordered, pearl-bordered and Duke of Burgandy fritillaries also occur. These latter three species are all nationally threatened and scarce woodland butterflies. The woodlands also contain populations of the rare wood cricket, a species confined in Britain to ancient woodlands in southern Hampshire and the Isle of Wight.

The river valleys of the Dark Water and Stanswood Valley and the small reclaimed tidal inlet of Thorns Marsh to the west of the Beaulieu River comprise a wide range of wetland habitats including brackish marsh, reed beds, herb-rich wet meadows, alder and willow carr. The wet meadows at the head of the Dark Water, along the Stanswood Valley and in places along the shores of the Beaulieu River, support a remarkably rich flora. Often this comprises an unusual mix of woodland plants such as narrow-leaved lungwort and primroses and plants indicative of ancient agri-culturally unimproved meadows such as a wide range of marsh orchid hybrids *Dactylorhiza* species. The meadow grasslands in these valleys are amongst the richest in southern England. In contrast to the grasslands, the upper reaches of the Stanswood Valley support extensive areas of dry heathland and valley bog. The heathland contains a small but important colony of Dartford warblers and smooth snakes. The site is also of importance for its geological exposures at Stone Point and Calshot Cliffs. Stone Point is important for studies of Quaternary Stratigraphy. A sequence of deposits on the foreshore and in the backing cliff comprises: (1) a lower gravel unit occupying a depression cut in Tertiary bedrock; (2) Peat and estuarine clays of Ipswichian Interglacial (Zone II) age, containing fossil molluscan fauna, pollen and plant macrofossil remains; and (3) an upper gravel unit forming part of a terrace at 7.6m above sea level extensively preserved along the north side of The Solent. The gravels respresent two separate periods of cold-environment fluvial aggradation, the earlier preceding the sea-level rise during the Ipswichian and the latter occuring during subsequent climatic deterioration. The deposits at Stone Point provide an important and rare datum-point to determine the age of the widespread gravel terraces in the southern New Forest and along the shores of Southampton Water. The cliff exposures to the south-west of Calshot represent a lengthy continuous section through terrace gravels of the Solent River system. The gravels here form the lowest of a sequence which can be studied in various cliff sections east from Bournemouth. It is believed that these gravels overlie the important inter-glacial deposits at Stone Point, a few kilometres to the south. Palaeolithic artifacts are recorded from these cliffs; such discoveries provide one of the few lines of evidence for classification and correlation of The Solent terraces. The cliff sections at Calshot are of importance because, in conjunction with similar sites to the west and on the opposite side of Southampton Water, they allow study of the sedimentology and stratigraphy of The Solent terrace gravels. Sedimentological studies, in particular, require access to large, clear exposures over wide areas. The cliffs of The Solent coast provide an opportunity for this type of work which is unique in Britain.