COUNTY : DORSET **SITE NAME : WINFRITH HEATH**

DISTRICT: PURBECK AND WEST DORSET

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

Local Planning Authority: Purbeck District Council/West Dorset District Council/ Dorset County Council.

National Grid Reference: SY 805870 **Area:** 284.9 (ha) 703.9 (ac)

Ordnance Survey Sheet 1:50,000 : 194 1:10,000: 88 NW, 78 NE

Date Notified (Under 1949 Act): 1959 **Date of Last Revision:** 1977

Date Notified (Under 1981 Act): 1985 (part), 1996

Other Information:

Much of the site is in the control of UKAEE and is managed for nature conservation. Tadnoll is managed as a nature reserve by the Dorset Wildlife Trust.

The site has been extended to include additional heathland areas at this notification. Other small boundary modifications have also been made.

Description and Reasons for notification

Winfrith Heath is one of a collection of sites which together comprise the Dorset heathlands. Although these heathlands have declined in extent and now occupy only 14% of their original area they show a high degree of ecological cohesion and clear ecological trends and patterns. This complex is one of the major lowland heathland areas in Britain and is of international importance for its plant and animal communities.

Winfrith Heath is a substantial and varied tract of heathland near the western limit of the Dorset Heaths natural area. Here a small chalk stream - Tadnoll Brook - has cut through early Eocene-aged sands and clays belonging to the Bagshot Beds. A range of heath and mire communities have developed on the valley sides and unimproved wet pastureland occurs on the valley floor. The site is important both for its heath and mire plant communites and for its wet grasslands - these habitats have declined substantially throughout Britain - and for a number of rare or scarce species associated with these habitats.

Where soils are free draining the vegetation is dominated by heather *Calluna vulgaris* with bell heather *Erica cinerea* and dwarf gorse *Ulex minor* also frequent. This community is not botanically diverse but it does support a number of different lichen species (with *Cladonia portentosa* the most common) as well as rare birds, reptiles and invertebrates.

Where there is slight impedence of drainage, heather remains dominant but bell heather is no longer present; cross-leaved heath *Erica tetralix*, purple moor-grass *Molinia caerulea* and dwarf gorse are the other commonest plants. The heathland grass bristle bent *Agrostis curtisii* is also present in both this and the dry heath community. It is an early coloniser, often becoming dominant after fire but then gradually being replaced by heathers. The national distribution of this vegetation type is extremely restricted; it occurs only in the New Forest and Dorset.

Wet heath is found on permanently waterlogged soils. Here cross-leaved heath is abundant and occurs with the bog mosses *Sphagnum compactum* and *S. tenellum*, deergrass *Scirpus caespitosus* and purple moor-grass.

The site also includes areas of valley mire where botanically diverse vegetation has developed on deep peat. Here purple moor-grass, bog asphodel *Narthecium ossifragum*, white-beak sedge *Rhynchospora alba*, common cottongrass *Eriophorum augustifolium* and two species of sundew, oblong-leaved *Drosera intermedia* and round-leaved *Drosera rotundifolia,* are the most frequent higher plants. They occur with several species of bog moss including the nationally scarce *Sphagnum pulchrum*. Other distinctive plants include pale butterwort *Pinguicula lusitanica* and marsh and heath spotted orchids *Dactylorhiza* spp. Again, this is a rare plant community with a restricted national distribution.

Within the mires, local differences in hydrology allow other plant communities to develop. Bog pools with some fluctuation in water table have vegetation where marsh St John's-wort *Hypericum elodes* and bog pondweed *Potomogeton polygonifolius* are common. In other areas with lateral movement of groundwater, purple moor-grass forms large tussocks with dense stands of bog myrtle *Myrica gale.* Mires in the south-eastern part of the site have become largely overgrown with sallow *Salix* sp.

The contrasting, predominantly grassland vegetation of the Tadnoll Valley has developed on peaty soils over valley gravels. It comprises a mosaic of fen communities reflecting the base-rich character of the Tadnoll Brook, in contrast to the surrounding acidic heathland seepages, and the influence of a long history of grazing and mowing. Where grazing does not occur there is sallow scrub over marshy grassland dominated by tussocky purple moor-grass. The much larger areas subject to grazing have extensive areas of more diverse fen meadow with abundant meadow thistle *Cirsium dissectum* and devil's-bit *Succisa pratensis* and several sedges including frequent carnation sedge *Carex panicea* and the local brown sedge *Carex disticha.* This turf also supports greater burnet *Sanguisorba officinalis* in one of very few of its Dorset locations. Nearer the stream the grassland is rush pasture dominated by soft rush *Juncus effusus* and jointed rush *J.articulatus.* The stream banks and other fen areas have tall fen herbs including meadowsweet *Filipendula ulmaria* and wild angelica *Angelica sylvestris*. Several shallow ditches cross the grassland and reflect a transition from acidic heath water to base-rich stream. These wetter depressions support good stands of bottle sedge *Carex rostrata,* marsh cinquefoil *Potentilla palustris* and lesser water-plantain *Baldellia ranunculoides,* all local in Dorset.

The site is important for nationally scarce plants associated with the heath and mire communities. Wet heath holds marsh gentian *Gentiana pneumonanthe* and on bare peat, marsh clubmoss *Lycopodiella inundata*; within the mires, bog orchid *Hammarbya paludosa* and bog hair-grass *Deschampsia setacea* occur; and locally tracks through drier areas support allseed *Radiola linoides* and mossy stonecrop *Crassula tillaea.*

Several nationally rare invertebrates occur. *Graptodytes flavipes* (Red Data Book vulnerable, found in bog pools) and *Hydroporus cantabricus* (RDB rare) are two species of water beetle; *Hylaeus gibbus* (RDB rare) is a bee and *Hedychrum niemelai* (RDB rare) a ruby-tailed wasp. A larger number of nationally scarce species have also been recorded including the butterfly silver-studded blue *Plebejus argus* and small red damselfly *Ceriagrion tenellum.*

The site supports a number of rare heathland reptiles and birds. Both of Britain's endangered and protected reptiles, sand lizard *Lacerta agilis*[2] and Smooth Snake *Coronella austriaca*[2] occur. The heathland birds Dartford Warbler *Sylvia undata*[1,3] and Nightjar *Caprimulgus europaeus*[1] are both present in numbers which make a significant contribution to the internationally important populations of these birds on the Dorset Heathlands. The site forms part of a breeding territory of Hobby *Falco subbuteo*[3]. The rare woodlark *Lullula arborea* [1,3] has also been recently recorded from the site.

1 Species listed in Annex 1 of the EC Birds Directive.
2 European protected species listed on Schedule 2 of the Habitats Regulations 1994.
3 Specially protected species listed in Schedule 1 ot the Wildlife and Countryside Act 1981.