

County: Dorset **Site Name:** Morden Bog and Hyde Heath

District: Purbeck

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

Part National Nature Reserve declared under Section 19 of the National Parks and Access to the Countryside Act 1949.

Local Planning Authority: Purbeck District Council, Dorset County Council

National Grid Reference: SY 915910 **Area:** 662.2 (ha) 1,636.3 (ac)

Ordnance Survey Sheet 1:50,000: 195 **1:10,000:** SY 88 NE, 89 SE, SY 98 NW, 99 SW

Date Notified (Under 1949 Act): NNR: 1954; SSSI: 1977

Date Notified (Under 1981 Act): 1984 (part), 1986 (part), February 1996

Other Information:

Part of the site comprises Morden Bog NNR. The site includes several nature conservation reserves managed by the Herpetological Conservation Trust and land managed for nature conservation by the Forestry Enterprise. The site has been amended by additions and deletions and consolidates three sites previously notified as Gore Heath SSSI, Morden Bog SSSI and Hyde Heath SSSI (part).

Description and Reasons for Notification:

Morden Bog and Hyde 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.

The site lies to the north west of Poole Harbour and consists of a valley mire comprising Hyde Bog and Morden Bog, 6 kilometres in length enclosed by dry, sandy ridges rising to 219 metres on Woolsbarrow Fort. Sands and clays of the Bagshot Beds underlie the site and there are small, discreet deposits of plateau gravels on Gore Heath and Great Ovens Hill. The valley mires have developed on oligotrophic peat laid down during a period of low water levels following post-glacial flooding of the valley. The surrounding heathland drains into the valley and hence into Poole Harbour and the high water table is maintained by springs and ground water movement over underlying impermeable clay. The Sherford River flows from west to east along the northern edge of Morden Heath, feeding the lakes in Morden Park and seasonal flooding of the river at Snailsbridge has created fen meadow and mire. The central valley mire on Morden Bog is fed by a series of secondary mires draining from the west and east and a high proportion of the catchment surrounding the entire site is under conifer plantation. Open water is present in a number of small pools and decoy ponds and historically the mire has been cut for peat.

The topography of the site has provided typical examples of the zonation and succession of vegetation from dry heath on the free draining plateau and highest slopes through humid and wet heath to mire on the valley floor. This variety of topography and associated heath and

mire provides habitats for an outstanding invertebrate fauna with many rare and scarce species represented and is of international importance for rare heathland reptiles and birds.

Free draining sandy podsoils present over the elevated ridges and slopes support dry heath dominated by heather *Calluna vulgaris* with bell heather *Erica cinerea*, dwarf gorse *Ulex minor*, the lichen *Cladonia portentosa*, bristle bent *Agrostis curtisii* and locally western gorse *Ulex gallii*. Great Ovens Hill is one of the few sites where western gorse and dwarf gorse are present in the same community. Open sandy tracks and paths support the nationally scarce annuals mossy stonecrop *Crassula tillaea* and yellow centaury *Cicendia filiformis* with the local semi-parasitic yellow bartsia *Parentucellia viscosa* occasional on damper soils. Grazed acid grassland occurring locally has abundant sheep's sorrel *Rumex acetosella*, squirreltail fescue *Vulpia bromoides*, cat's-ear *Hypochoeris radicata* and the moss *Polytrichum juniperinum* on free-draining sandy soil. Two occasional species present are the nationally scarce clustered clover *Trifolium glomeratum* and the local bird's-foot clover *Trifolium ornithopodioides*.

Dry heath succeeds to humid heath on moister, peatier soils where there is slight impedance of drainage. This nationally scarce community is restricted to Dorset and the New Forest and is characterised by the prominence of purple moor-grass *Molinia caerulea*, cross-leaved heath *Erica tetralix* and heather, common associates are dwarf gorse and bristle bent. Two nationally scarce species are present in this community; pale dog-violet *Viola lactea* and the lichen *Cladonia incrasata* which is locally distributed on purple moor-grass tussocks.

The apparent development of the mire from a series of small lakes in a flat bottomed valley has resulted in an unusually sharp transition from dry heath to mire with wet heath on shallow peat in only a narrow zone. Purple moor-grass is abundant with frequent cross-leaved heath, heather, deer grass *Trichophorum cespitosum* and a bog moss *Sphagnum compactum*. Moister hollows support bog asphodel *Narthecium ossifragum*, round-leaved sundew *Drosera rotundifolia*, oblong-leaved sundew *D. intermedia*, green-ribbed sedge *Carex binervis* and bog moss *Sphagnum tenellum*. Three nationally scarce and declining species are present on the wet heath and on the margins of the valley mire. Marsh club moss *Lycopodiella inundata* is abundant on Hyde Bog and local on Morden Bog, marsh gentian *Gentiana pneumonanthe* is locally distributed on the wet heath whilst brown beak-sedge *Rhynchospora fusca* is present in its largest population in Dorset and the major locus of its British population. The nationally rare Dorset heath *Erica ciliaris* forms a significant component of humid and wet heath communities in the southern part of the site.

Valley mire and associated bog pool communities are present on the permanently waterlogged acid peat which is present to a depth of at least 3 metres. This nationally rare community is distinctive for the extensive lawns of bog mosses dominated by the nationally scarce *Sphagnum pulchrum* and *S. papillosum* with occasional *S. magellanicum* and *S. molle*. Common cottongrass *Eriophorum angustifolium* and bog asphodel are abundant with white-beak sedge *Rhynchospora alba* and many-stalked spike-rush *Eleocharis multicaulis* prominent on pool margins and in wet hollows. Several local species contribute to the flora of the valley mire, namely hare's tail cottongrass *Eriophorum vaginatum*, mud sedge *Carex limosa* and slender sedge *C. lasiocarpa*. The acidic open water in bog pools supports aquatic species such as bog pondweed *Potamogeton polygonifolius*, white water-lily *Nymphaea alba* and bogbean *Menyanthes trifoliata*. Common reed *Phragmites australis* is present in swamp and scattered throughout the valley mire.

Woody species on the mire are represented by bog-myrtle *Myrica gale* with downy birch and more rarely alder buckthorn. A birch wood runs southwards from the decoy pond consisting

of downy birch over tussock sedge *Carex paniculata*. Birch and willow carr are present on drier peaty soil, restricted to the western edge of Morden Bog where alder, willow and oak are present over a mosaic of purple moor-grass tussocks and *Sphagnum* filled pools. Ferns such as broad-buckler fern *Dryopteris dilatata* and lady fern *Athyrium filix-femina* are prominent. Royal fern *Osmunda regalis*, a local species in Dorset, is occasional. A number of nationally scarce epiphytic lichens are present on the birch and willow, namely *Chrysothrix chrysophthalma*, *Melaspila ochrothalamia* and *Ochrolecia inversa*. The local and declining *Lobaria scrobiculata* has been recorded on downy birch in the valley mire.

At Snail's Bridge flood plain mires, carr and swamp have developed on wet peat and silt deposited by the Sherford River. Species rich fen-meadow is characterised by substantial tussocks of purple moor-grass and tussock sedge with tall herbs such as devil's-bit *Succisa pratensis* and fen bedstraw *Galium uliginosum* prominent amongst the tussocks. Other locally abundant species are meadow thistle *Cirsium dissectum*, round-leaved sundew, black bog-rush *Schoenus nigricans* and blunt-flowered rush *Juncus subnodulosus*, the latter two species being indicative of calcareous influence in the water. Rush pasture is extensive, dominated by soft rush *Juncus effusus* and sharp-flowered rush *Juncus acutiflorus* with tubular water dropwort *Oenanthe fistulosa* and skullcap *Scutellaria galericulata*. The nationally scarce and declining chamomile *Chamaemelum nobile* is present where grazing has maintained a short, open sward. Hemlock water-dropwort *Oenanthe crocata* is prominent along the streamsides with alder and willows whilst branched bur-reed *Sparganium erectum* dominates swamp on the deepest waterlogged silt.

The invertebrate fauna of mire and dry heath is outstanding for the assemblages of rare and scarce species, particularly in well recorded groups such as grasshoppers and crickets, moths, spiders and bees, ants and wasps. Morden Bog supports three nationally rare spiders. The endangered wolf spider *Altella lucida* is present on dry heath in its only British locality. Dry sandy soils support the endangered *Alopicosa fabrilis* at one of only two sites in Britain and the vulnerable *Zora amilata* is present on wet heath and mire. Exposed sand provides habitat for solitary bees and wasps and the assemblage present contains nine nationally rare species including the vulnerable bee wolf wasp *Philanthrus triangulum*, the rare ruby tail wasp *Hedychrum memelai*, a spider hunting wasp *Evagetes dubius* and a yellow faced bee *Hylaeus gibbus*. Grasshoppers and crickets characteristic of the heathlands are conspicuous members of the invertebrate fauna. Humid heath and valley mire support the nationally rare and vulnerable large marsh grasshopper *Stethophyma grossum* and nationally scarce bog bush cricket *Metrioptera brachyptera* whilst dry heath and scrub provide habitat for the nationally scarce species dusky cockroach *Ectobius lapponicus* and woodland grasshopper *Omocestus rufipes*.

Moths are well represented with many nationally rare and scarce lowland heathland specialist species present such as the nationally rare dingy mocha *Cylophora pendularia*, a species restricted to the heaths around Purbeck and the New Forest and a vulnerable bagworm *Pachythelia villosella*. Streams and ponds support a variety of dragonflies and damselflies such as the nationally scarce small red damselfly *Ceriagrion tenellum* and hairy dragonfly *Brachytron pratense*. The site supports a number of rare flies such as the nationally rare and endangered horsefly *Chrysops sepulchralis*, a species restricted to heaths around Wareham and the New Forest. The nationally scarce butterfly silver-studded blue *Plebejus argus* is also present.

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 in significant numbers. There are populations of sand lizard on dry heathland throughout

the site and it is estimated that together these comprise some 8% of the national population. Smooth snake is also widely distributed and one particularly large population is known. The heathland birds Dartford warbler *Sylvia undata*^{1,3}, nightjar *Caprimulgus europaeus*¹ and woodlark *Lullula arborea*^{1,3} are all present in nationally significant numbers and these populations make a large 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 and supports breeding shelduck *Tadorna tadorna* and snipe *Gallinago gallinago*, the latter species being a rare and declining wader in Dorset.

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 of the Wildlife and Countryside Act 1981.