County: Hampshire/West Sussex **Site Name: Woolmer Forest SSSI**

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

Local Planning Authority: Hampshire County Council, East Hampshire District Council, West Sussex County Council, Chichester District Council

National Grid Reference: SU 800322

Ordnance Survey Sheet 1:50,000: 186 **1:10,000:** SU 72 NE, 73 SE, 82 NW, 83 SW

Date Notified (Under 1949 Act): Woolmer Forest 1971 **Date of Last Revision:** 11.09.78
Conford Moor 1959
Blackmoor 1979

Date Notified (Under 1981 Act): Woolmer Forest 1986 **Date of Last Revision:** 28.06.94
Conford Moor 1984
Blackmoor 1985

Area: 1,293.93 (ha)

Other Information:
Passfield Common and Conford Moor are registered commons, largely owned by the National Trust. The SSSI includes two sites listed in the Nature Conservation Review (heathland site L152 and open water site OW7). The site includes land which has been proposed for designation as a Special Protection Area under the EC Directive 79/409 on the Conservation of Wild Birds.

Description and Reasons for Notification:
Woolmer Forest SSSI contains the largest and most diverse area of lowland heathland habitats in Hampshire (outside the New Forest) and is considered the most important area of heathland in the Weald of southern England. It is the only site in Britain known to support all twelve native species of reptiles and amphibians and supports a nationally important heathland flora, with associated birds and invertebrate fauna.

Woolmer Forest is located at the western end of the Weald and straddles the borders of Hampshire and West Sussex. The majority of Woolmer Forest lies on the coarse sands of the Folkestone beds, although Bargate beds outcrops on the sides of Holly Water valley. The SSSI includes the watersheds of two major drainage systems. The largest of these flows north to Holly Water, which forms a tributary of the River Wey. The smaller drainage system flows south from Longmoor Inclosure to form a tributary of the River Rother. The drainage ditches and streams crossing the site have cut broad valleys into the sandy soils, interspersed with rounded hills and ridges.

Extensive areas of dry heathland vegetation occur on the tops of the hills and ridges. These areas are dominated by heather *Calluna vulgaris* and bell heather *Erica cinerea*, commonly with dwarf gorse *Ulex minor*, grasses such as wavy hair-grass *Deschampsia flexuosa* and sheep's fescue *Festuca ovina*, and a rich diversity of lichens. A number of nationally rare and uncommon plants such as tower mustard *Arabis glabra*, mossy stonecrop *Crassula tillaea*, shepherd's cress *Teesdalia nudicaulis* and smooth cat's-ear *Hypochoeris glabra* are found on bare sandy patches within the dry heathland. The invertebrate fauna of the dry heathland is

extremely rich and includes the nationally rare wasps *Andrena congruens* and *Psen spooneri* and the bee-fly *Thyridanthrax fenestratus*. These favour the warmer micro-climate of sandy, south-facing slopes. Dry heathland occurs throughout Woolmer Forest with some of the most extensive areas within Longmoor Inclosure and on Weavers Down.

Humid heath occurs on less free-draining soils, the most extensive areas being around Woolmer Down and Horsebush Hill. These are dominated by heather and characterised by the presence of cross-leaved heath *Erica tetralix* and purple moor-grass *Molinia caerulea*. Silver-studded blue butterflies *Plebejus argus* are particularly abundant within these areas. Humid heath grades into areas of wet heath along the valley bottoms where both cross-leaved heath and purple moor-grass are abundant. These wet heath areas are also characterised by the presence of bog mosses such as *Sphagnum compactum*, carnivorous plants such as sundews *Drosera rotundifolia* and *D. intermedia* and cottongrass *Eriophorum angustifolium*. Hare's-tail cottongrass *E. vaginatum*, which is uncommon in the south of England, also occurs. A number of nationally scarce and uncommon plant species occur in patches of bare wet peat within the wet heath, often along tracks and pathways. These include the club-moss *Lycopodiella inundata*, white-beaked sedge *Rynchospora alba* and all-seed *Radiola linoides*. Areas of wet heathland occur throughout the SSSI with particularly species rich associations at Long Down and Blackmoor.

Where drainage is at its most impeded, the wet heath merges into a series of complex valley mire systems. These show classic patterns of zonation related to the hydrology and management history of the mire. The most extensive and mature valley mire occurs within Cranmer Bottom, where carpets of bog mosses *Sphagnum* spp. have formed to the north and south of Cranmer Pond. These display a well developed hummock and pool structure in which low mounds, dominated by *Sphagnum papillosum* rise above the *S. tenellum* and *S. recurvum* dominated carpet. The *Sphagnum* carpet includes cottongrass, bog asphodel and round-leaved sundew, while trailing plants of cranberry *Vaccinium oxycoccus* grow over the mossy hummocks. The mires of Woolmer Forest and adjacent Shortheath Common support the largest colonies of this species in southern England. The mires and associated bog pools support a rich and specialised invertebrate fauna which includes the raft spider *Dolomedes fimbriatus*, bog bush-cricket *Metrioptera brachyptera* and 22 species of dragonflies and damselflies including the nationally scarce small red damselfly *Ceriagrion tenellum* and downy emerald dragonfly *Cordulia aenea*.

Holly Water valley contains a range of seepage mires associated with spring lines, best displayed at Conford Moor and Passfield Common. Here springs of acidic water rising high on the valley side support wet heath vegetation, whilst, lower down, calcareous springs arising from the Bargate Beds support a species-rich fen vegetation. These base-rich fens contain uncommon plants such as marsh helleborine *Epipactis palustris* and broad-leaved cottongrass *Eriophorum latifolium*, in association with southern marsh orchid *Dactylorhiza praetermissa*, bog pimpernel *Anagallis tenella*, marsh thistle *Cirsium palustre*, devil's-bit scabious *Succisa pratensis* and tawny sedge *Carex hostiana*. The seepage mires in Conford Moor provide one of the few localities of the marsh fritillary butterfly *Eurodryas aurina* in Hampshire.

Extensive areas of open water occur within the SSSI. Woolmer and Cranmer Ponds are dystrophic lakes fed by ground water poor in mineral nutrients. Such lakes are extremely rare in southern England and have more affinity with the meres of Cheshire. Analysis of the peat and organic rich silt deposits from the bottom of Woolmer Pond has shown that it probably originated as peat cutting, and, until the middle of the last century, was a much larger, sandy-bottomed lake. Recent clearance of organic deposits from the bed of the pond has restored it to much of its historic size and reinstated the sandy bottom conditions. Nationally scarce and

uncommon plants such as the small water-pepper *Polygonum minus* and lesser marshwort *Apium inundatum* have colonised the newly restored sandy shores of Woolmer Pond. Around the edges of Woolmer Pond are a number of smaller ponds containing more nutrient rich water. These support an interesting fauna including the water beetle *Graphoderus zonatus*, at its only known location in Britain.

Small acidic streams cross the SSSI, most notably Holly Water and its tributaries. These are largely unmodified by drainage works and follow a natural meandering course. Large colonies of the beautiful demoiselle *Calopteryx virgo* and banded demoiselle *C. splendens* damselflies are associated with these streams. The brook lamprey *Lampetra planeri* has also been recorded.

Ancient semi-natural woodland fringes the northern and western boundaries of the site. Historically this would have formed part of the royal hunting forest of Woolmer. Like other royal forests, Woolmer Forest was traditionally managed as wood pasture in which deer and commoners' stock were permitted to graze. The resulting woodland has a distinctive structure and species composition dominated by beech *Fagus sylvatica* and pedunculate oak *Quercus robur*. Many of the larger trees are several hundred years old and show the classic growth form created by pollarding. The shrub layer is dominated by holly *Ilex aquifolium*, whitebeam *Sorbus aria*, rowan *S. aucuparia* and birches *Betula pendula* and *B. pubescens*. Like the shrub layer, the ground flora contains an abundance of grazing-tolerant species such as wood sorrel *Oxalis acetosella* and mosses such as *Leucobryum glaucum* and *Pleurosium schreberi*. The woodland canopy is discontinuous and, particularly within Holly Hills, is broken into a series of glades dominated by bracken *Pteridium aquilinum*, acid grassland or, in wetter areas, purple moor-grass and cross-leaved heath. The ancient woodland habitat also includes extensive areas of wet alder *Alnus glutinosa* woodland along the course of the Holly Water. This is best developed at Conford Moor where a rich woodland flora includes the nationally scarce marsh fern *Thelypteris thelypteroides* and the uncommon alternate-leaved golden saxifrage *Chrysosplenium alternifolium*.

Woolmer Forest SSSI is of international importance for its rich diversity of breeding and wintering heathland birds including nationally important breeding populations of nightjar *Caprimulgus europaeus*, woodlark *Lullula arborea* and Dartford warbler *Sylvia undata*. All three of these species are internationally threatened and are subject to special conservation measures within the European Community. The heathland also supports up to two breeding pairs of hobby *Falco subbuteo*. Like the woodlark and Dartford warbler, the hobby is given full legal protection in Britain, being listed on Schedule 1 of the Wildlife and Countryside Act. The heathland also supports breeding populations of stonechat *Saxicola torquata*, tree pipit *Anthus trivialis* and linnet *Acanthis cannabina*. In winter up to two roosts of hen harrier *Circus cyaneus*, as well as merlin *Falco columbarius* and great grey shrike *Lanius excubitor* are regularly recorded in the heathland.

The valley mires and wetlands around Woolmer and Cranmer Ponds attract an interesting bird fauna which includes breeding curlew *Numenius arquata*, redshank *Tringa totanus* and snipe *Gallinago gallinago*. All three species have suffered dramatic declines in breeding population in England. The sandy shores of Woolmer Pond also provide habitat for nesting little-ringed plover, another uncommon breeding bird in Britain. Both teal *Anas crecca* and little grebe *Tachybaptus ruficollis* breed within the wetlands of the SSSI. The woodlands of Holm and Holly Hills and Passfield Common support a rich bird fauna including a number of species which breed in tree holes and crevices, such as the great-spotted woodpecker *Dendrocopos major*, green woodpecker *Picus viridus* and restart *Phoenicurus phoenicurus*. These mature pasture woodlands also attract several breeding pairs of wood warbler *Phylloscopus sibilatrix*. The breeding bird fauna of the SSSI includes a small but significant colony of nesting sand

martins *Riparia riparia*. The number of breeding pairs varies considerably with from 12 to 40 pairs recorded between 1989 and 1992.

Woolmer Forest SSSI is the only site in Britain known to support all twelve native species of reptiles and amphibians. It is the last native heathland site in Britain for the natterjack toad *Bufo calamita* and also supports the great crested newt *Triturus cristatus* in the more nutrient enriched pools around the edge of Woolmer Pond. Two separate colonies of sand lizard *Lacerta agilis* are known within the SSSI whilst the distribution of smooth snake *Coronella austriaca* is less well understood. Natterjack toad, great crested newt and all six reptile species are listed under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended).