

COUNTY: OXFORDSHIRE

SITE NAME: SHIRBURN HILL

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

Local Planning Authorities: South Oxfordshire District Council

National Grid Reference: SU715955

Ordnance Survey Sheet 1:50,000: 165 **1:10,000:** SU79 NW

Date Notified (Under 1981 Act): 1986 **Date of Last Revision:**

Area: 64.5 ha 159.5 ac

Description and Reasons for Notification

Shirburn Hill supports a mosaic of the chalk downland, chalk heath, scrub and broadleaved woodland habitats formerly widespread in the Oxfordshire Chilterns, but now largely lost following agricultural reclamation and afforestation.

The site occupies a spur of the Chilterns escarpment and has moderate to steep north, west and south-facing slopes. The underlying Middle and Upper Chalk has weathered to produce shallow, well-drained, calcareous soils of the Upton 1 series. The upper slopes are capped in part by clay-with-fiints which supports more clayey soils of the Batcombe Series.

Shirburn Hill contrasts with most other large downlands in the Chilterns because, in the absence of domestic stock, open habitats have been maintained for many years exclusively by rabbits. This has produced a distinct turf which varies in height and composition in conjunction with rabbit densities. The most heavily grazed areas have a sparse flora dominated by short herbs such as biting stonecrop *Sedum acre*, eyebright *Euphrasia officinalis*, wild strawberry *Fragaria vesca* and an abundance of the nationally uncommon candytuft *Iberis amara*, a species which has its British distribution centred on the western scarp of the Chilterns.

Where grazing is less intense there is a dense, species-rich sward dominated by sheep's fescue *Festuca ovina* and supporting a wide range of broadleaved herbs. These include common rockrose *Helianthemum nummularium*, purging & ax. *Linum catharticum*, felwort *Gentianella amarella*, salad burnet *Sanguisorba minor*, dropwort *Filipendula vulgaris* and wild thyme *Thymus praecox*.

Large areas of the slopes are grazed only lightly. These carry a taller sward which includes false oat-grass *Arrhenatherum elatius*, tor-grass *Brachypodium pinnatum* and red fescue *Festuca rubra*, together with quaking grass *Briza media*, ploughman's spikenard *Imtla conyza* and clustered bellflower *Campanula glomerata*.

There are large areas of scrub of varying size and density. The dominant species are hawthorn and buckthorn growing in association with yew, spindle, dogwood and whitebeam. Juniper *Juniperus communis*, a native coniferous shrub with a declining population nationally and a distinct invertebrate fauna, is a prominent member of the scrub community. In addition there are some substantial areas dominated by the dwarf evergreen tree box *Buxus sempervirens*, a rare woodland type nationally which, although widely planted in Britain, may be native to Shirburn Hill.

Heath and bracken have established locally on the upper slopes and plateau where clay-with-flints overlies the chalk, and leaching of minerals and nutrients has produced base-poor soils. The flora here includes ling *Calluna vulgaris*, tormentil *Potentilla erecta* and sheep's sorrel *Rumex acetosella* occurring amongst scrub containing hawthorn, blackthorn and silver birch.

On the north-facing slopes of Shirburn Hill there are extensive areas of semi-natural deciduous woodland dominated by beech, ash, sycamore and pedunculate oak. The heavily-shaded field layer is poorly developed beneath the beech, but becomes lush under more open canopy where carpets of dog's mercury *Mercurialis perennis*, enchanter's nightshade *Circaea lutetiana* and woodruff *Galium odoratum* occur.

Shirburn Hill is extensively used by over-wintering thrushes and finches which feed on the abundant supply of berries and seeds.