

COUNTY: SOMERSET/DEVON

SITE NAME: BARLE VALLEY

DISTRICT: WEST SOMERSET. NORTH DEVON

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

Local Planning Authority: EXMOOR NATIONAL PARK AUTHORITY, SOMERSET COUNTY COUNCIL, DEVON COUNTY COUNCIL

National Grid Reference: SS 850349–915284

Area: 622.89 (ha) 1539.2 (ac)

Ordnance Survey Sheet 1:50,000: 181

1:10,000: SS 92 NW, 93 SW,  
SS 82 NE, 83 SE, SW

Date Notified (Under 1949 Act): 1954

Date of Last Revision: 1971

Date Notified (Under 1981 Act): 1988

Date of Last Revision: –

#### Other Information:

The site includes the Somerset Trust for Nature Conservation's Mounsey Wood Nature Reserve and Knaplock and North Barton SSSI notified in 1954. Site boundary amended by extension. Site within Exmoor National Park. Part of the site was previously and separately notified as Burrige Wood in 1983.

#### Description:

The Barle Valley contains extensive tracts of ancient upland Sessile Oak woodland which exhibit variations in structure and species composition as a result of difference in past management, geology and topography. There is a wide range of vascular plants including many ancient woodland indicators. The diversity of the site is increased substantially by areas of valley mire, heathland and acid grassland. The richness of lichens and bryophytes is of exceptional national importance and is significant internationally. There is also an outstanding assemblage of breeding woodland birds and high invertebrate interest including nationally vulnerable and scarce species.

The site lies on Devonian sandstones, siltstones and slates from the Pickwell Down Beds and Morte slates which have been deeply incised by the meandering course of the River Barle to form a valley of asymmetric profile. Steeply eroded slopes have thin soils with frequent rock outcrops and boulder scree while flat alluvial terraces have formed through deposition of river sediment in the narrow valley bottom. Soils are from the Manod series being well drained, fine, loamy or silty. The soils over sandstones are thin, leached and predominantly acid increasing in base status over shales, and in nutrients where flushed by river water. Woodland ranges in altitude between 150 and 300m on the valley slopes. These grade into heathland and grassland on Whiterocks Downs and Ashway Side which in turn rise to 360m. Annual precipitation reaches 1500mm.

The majority of woodland is dominated by Sessile Oak *Quercus petraea*. This is predominantly of ancient origin and was formerly coppiced with some stands singled to grow on as high forest. Downy Birch *Betula pubescens* is abundant on the most acid soils over steep sandstone slopes. The field layer comprises highly calcifuge species such as Bilberry *Vaccinium myrtillus* and Wavy Hair-grass *Deschampsia flexuosa*. Holly *Ilex aquifolium* forms a sparse shrub layer in many stands of this type. The range of vascular plants is restricted but rich bryophyte communities thrive under these conditions. On the deeper soils of the lower slopes Oak occurs with Hazel *Corylus avellana* and occasional Rowan *Sorbus aucuparia*. The field layer is more diverse including Creeping Soft-grass *Holcus mollis*, Common Bent *Argostis capillaris*, Wood Sorrel *Oxalis acetosella*, Bracken *Pteridium aquilinum*, Bluebell *Hyacinthoides non-scripta* and *Dryopteris* species as local dominants. Frequent members of this community include Enchanter's Nightshade

*Circaea lutetiana*, Creeping Jenny *Lysimachia nummularia* and Common Cow-wheat *Melampyrum pratense*. Beech *Fagus sylvatica* has invaded this woodland type to varying degrees. Ash *Fraxinus excelsior* and Hazel become much more abundant over the base-rich shales. The well developed shrub layer here includes Hawthorn *Crataegus monogyna* and Blackthorn *Prunus spinosa*. The field layer is much more diverse. Eighty five woodland vascular plant species have been recorded including thirty one ancient woodland indicators from a single compartment. Creeping Soft-grass, Dog's Mercury *Mercurialis perennis*, Bluebell, Lesser Celandine *Ranunculus ficaria* and Common Dog-violet *Viola riviniana* are dominant members of the community. Species of note include Moschatel *Adoxa moschatellina*, Wood Anemone *Anemone nemorosa*, Pignut *Conopodium majus*, Climbing Corydalis *Corydalis claviculata*, Early-purple Orchid *Orchis mascula*, Greater Butterfly-orchid *Plantanthera chlorantha*, Sanicle *Sanicula europaea* and Meadow saxifrage *Saxifraga granulata* which is rare and local in Somerset. Dense groves of Hazel form ribbons along the alluvial terraces with a field layer dominated by Great Wood-rush *Luzula sylvatica* and Greater Stitchwort *Stellaria holostea*. Small stands of Alder *Alnus glutinosa* occur on water-logged flushes with a ground flora of Tufted Hair-grass *Deschampsia cespitosa*, Greater Tussock-sedge *Carex paniculata*, Bog-moss *Sphagnum spp* and the moss *Rhizomnium punctatum*.

Acid grasslands scattered along slopes and in coombes are dominated by Common Bent and Crested Dog's-tail *Cynosurus cristatus*. Frequent members of this community include Heath Bedstraw *Galium saxatile*, Common Sorrel *Rumex acetosa* and Ribwort Plantain *Plantago lanceolata*. The meadows are one of the few sites for Great Burnet *Sanguisorba officinalis* on Exmoor. Springs emerging from the base of sandstone slopes generate nutrient poor acid mires dominated by *Sphagnum* and *Polytrichum* moss carpets, containing a community of Marsh Pennywort *Hydrocotyle vulgaris*, Marsh Violet *Viola palustris*, Meadow Thistle *Cirsium dissectum* and locally, Bog Asphodel *Narthecium ossifragum* and Lemon-scented Fern *Oreopteris limbosperma*. Ashway Side and Whiterocks Down support mosaics of acid grassland and heathland dominated by Purple Moor-grass *Molinia caerulea* and Heather *Calluna vulgaris* on the plateau, while Bracken dominates the slopes with Hawthorn and Gorse *Ulex europaeus* scrub scattered throughout. In wet areas Carnation Sedge *Carex panicea* and Lousewort *Pedicularis sylvatica* are frequent associates while in drier parts Bell Heather *Erica cinerea* and Heath Milkwort *Polygala serpyllifolia* can be found.

The lichen flora is exceptional both for its luxuriance and in the number of rare species. One hundred and sixty five taxa of epiphytic lichens are present containing a remarkably large proportion of ancient woodland indicators giving the Barle a very high index of ecological continuity. Ash and Hazel carry a *Lobarion* community which is particularly rich on old boundary pollards and on trees growing on the river terraces. Species include *Lobarion pulmonaria*, *L. laetevirens* and *L. scrobiculata* the latter two being rare ancient woodland species. Other examples, extremely rare in South West England include *Pseudocyphellaria crocata*, *Parmeliella jamessi*, *P. taylorensis* and *Nephroma parile*. Birch-Oak woodland carries a *Parmelietum* community characteristic of leached, wet, upland woods. Rare members include *Heteroderma obscurata* and *Sphaerophorus globosus*. Alder stands host the rare oceanic lichen *Menegazzia tenebrata* while Hazel possess smooth bark communities including the rare hyper-oceanic lichen *Graphina ruiziana*. In well lit situations in upper branches an *Usneetum* community is well developed including *Usnea articulata*, a species largely confined to South West England. Sandstone outcrops on north-facing slopes under Birch-Oak woods have an extremely rich covering of oceanic bryophytes. Typical species include *Bazzania trilobata*, *Scapania gracilis* and *Plagiochila spinulosa* amongst which are species very rare in Somerset and the South West such as *Lepidoza pinnata*, *Dicranum denudatum*, *Porella pinnata* and *Diphyscium foliosum*. The ground layer is locally dominated by cushions of *Dicranum majus*, *Plagiothecium undulatum* and *Rhytidiadelphus loreus*.

The site contains an outstanding assemblage of woodland breeding birds including particularly high densities of Wood Warbler *Phylloscopus sibilatrix*, Redstart

*Phoenicurus phoenicurus* and Pied Flycatcher *Ficedula hypoleuca*. The River Barle provides an important habitat for Kingfisher *Alcedo atthis*, Dipper *Cinclus cinclus* and Grey Wagtail *Motacilla cinerea*, while scrub and heath have breeding Stonechat *Saxicola torquata* and Whinchat *Saxicola rubetra*. Twenty species of butterfly have been recorded in the valley including the nationally scarce Marsh Fritillary *Eurodryas aurinia* and nationally vulnerable High Brown Fritillary *Argynnis adippe*. This species, in common with three other species of Fritillary in the valley use the plentiful supply of violet leaves under Bracken as a larval food plant. The nationally scarce dipteran *Sciapus longulus* has recently been recorded here. Both Roe Deer *Capreolus capreolus* and Red Deer *Cervus elaphus* graze areas of wood pasture. The presence of Otters *Lutra lutra* on the Barle has been regularly recorded. A colony of Dormice *Muscardinus avellanarius* inhabits at least one of the Hazel coppices.