

Site Name: Powerstock Common and Wytherston Farm
Dorset

County:

District: West Dorset

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 and subsequently varied under Section 28A of the Wildlife and Countryside Act 1981, as inserted by Schedule 9 to the Countryside and Rights of Way Act 2000.

Local Planning Authorities: Dorset County Council, West Dorset District Council

National Grid reference: SY537970
161.68 ha

Area:

Ordnance Survey Sheets: 1:50 000: 194 1:10 000: SY 59 NW

Date notified (under 1949 Act): 1952, 1977

Date notified (under 1981 Act): 1986, 25 February 2000 (with extensions)

Date of variation: 3 February 2004

Reasons for Notification:

Powerstock Common and Wytherston Farm is of special scientific interest by reason of its oak *Quercus robur*, ash *Fraxinus excelsior* and alder *Alnus glutinosa* woodland, acid, neutral and calcareous grassland, fen meadow and rush pasture, rare and scarce invertebrates; rare and scarce lower plants, dormouse *Muscardinus avellanarius* and a population of great crested newts *Triturus cristatus* at the south-western edge of their range.

General Description:

Powerstock Common and Wytherston Farm comprises enclosed and unenclosed woodland, grassland, fen meadow and rush pasture, and a series of ponds. The site lies on soils derived from Fullers Earth Rock, which is overlain on the higher, eastern slopes and plateau by Upper Greensand and Gault Clay. Numerous springs and seepages arise at the junction of the greensand and clay feeding streams which dissect the site; landslips are a characteristic feature in this landscape. The varied geology and soils are reflected in the pattern of land use within the site. Well drained brown earth soils are present on outcrops of free-draining greensand, where bracken *Pteridium aquilinum* is abundant, but are quickly replaced by waterlogged stagnogleys on the impermeable Gault Clay over which much of the woodland and grassland is situated.

Woodland

Powerstock Common remained unenclosed until 1866 and many of the multi-stemmed ash and alder date from this time when rights to collect firewood and graze stock were finally extinguished. The railway divided the Common and Wytherston

Wood in 1857 and several phases of oak regeneration followed enclosure until post war felling and coniferisation from the 1950's until 1973. Historically the woods were more open than at present and many of the veteran oak, ash and field maple *Acer campestre* present originated in wood pasture, which has through natural regeneration developed into high forest.

The following woodland National Vegetation Classification (NVC) communities have been identified: *Quercus robur-Pteridium aquilinum-Rubus fruticosus* woodland (W10); *Fraxinus excelsior-Acer campestre-Mercurialis* woodland (W8); *Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum* woodland (W7) and *Salix cinerea-Galium palustre* woodland (W1).

Oak high forest is the predominant community on the brown earth soils across the site. The drier stands have an understorey of hawthorn *Crataegus monogyna* and holly *Ilex aquifolium*, and bluebell *Hyacinthoides non-scripta* is a frequent vernal species, with occasional bramble *Rubus fruticosus*, tway blade *Listera ovata* and ground ivy *Glechoma hederacea*. Oceanic species such as broad buckler fern *Dryopteris dilatata*, scaly male fern *D. affinis*, soft shield fern *Polystichum setiferum* and wood sorrel *Oxalis acetosella* are abundant on damper soils and in stream gullies in stands of high forest and hazel coppice.

Calcareous clay soils support ash woodland in high forest, coppice or as standards over hazel coppice. Oak, maple and alder are common associates in the canopy and understorey with occasional shrubs such as spindle *Euonymus europaeus*, privet *Ligustrum vulgare* and wayfaring tree *Viburnum lantana*. Dog's mercury *Mercurialis perennis*, primrose *Primula vulgaris* and bugle *Ajuga reptans* are frequent in the driest soils and are replaced by anemone *Anemone nemerosa*, celandine *Ranunculus ficaria* and locally abundant pendulous sedge *Carex pendula* on the moister, seasonally water-logged soils. Ramsons *Allium ursinum* are locally frequent, with occasional thin-spiked wood-sedge *Carex strigosa*, herb paris *Paris quadrifolia* and broad-leaved helleborine *Epipactis helleborine*.

Stands of willow *Salix cinerea* and alder replace ash and oak on the wettest soils on seepages, springs and landslips. Alder high forest which has developed from coppice has occasional ash and oak, with willow and rarely hawthorn in the understorey. Saturated, slumping soils with deep runnels support abundant remote sedge *Carex remota*, opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium*, yellow pimpernel *Lysimachia nemorum* and creeping buttercup *Ranunculus repens*, with wood sorrel and broad buckler fern occasional species on the spreading alder roots. Willow carr is restricted to areas of deep silt and open water with tall herbs, such as hemlock water dropwort *Oenanthe crocata*, water mint *Mentha aquatica* and occasional great horsetail *Equisetum telmateia*. The bog moss *Sphagnum palustre* is locally frequent in pools.

The woodland rides and glades contain many species found in the surrounding fen meadows elsewhere on the site and provide important habitat for invertebrates such as butterflies, moths and hoverflies. Purple moor grass *Molinia caerulea* is frequent with betony *Stachys officinalis*, saw-wort *Serratula tinctoria* and devil's bit scabious *Succissa officinalis*, whilst common dog violet *Viola riviniana* is abundant on more free draining soils.

Grassland, fen meadow and rush pasture

The following grassland, fen meadow and rush pasture NVC communities have been identified: *Festuca ovina-Agrostis capillaris-Galium saxatile* grassland (U4); *Centaurea nigra-Cynosurus cristatus* meadow(MG5); *Festuca ovina -Avenula pratensis* grassland (CG2), *Bromus erectus* grassland (CG3), *Juncus subnodulosus-Cirsium palustre* fen meadow (M22); *Molinia caerulea-Cirsium dissectum* fen meadow (M24) and *Juncus effusus/acutiflorus -Galium palustre* rush pasture (M23).

Fen meadow dominated by tussocky purple moor grass and occasionally tufted hair grass *Deschampsia caespitosa* forms much of the rough grazing on peaty mineral soils which are seasonally waterlogged. Grasses such as velvet bent *Agrostis canina*, heath-grass *Danthonia decumbens* and red fescue *Festuca rubra* are frequent and sedges are a distinctive component of the community and include glaucous sedge *Carex flacca* and carnation sedge *C. panicea* with occasional tawny sedge *C. hostiaana* and flea sedge *C. pulicaria*. Herbs which are frequent in the shorter, grazed turf include meadow thistle *Cirsium dissectum*, devil's-bit scabious and betony with occasional petty whin *Genista anglica*, dyer's greenweed *G. tinctoria* and pepper saxifrage *Silaum silaus*. The low growing shrubs cross-leaved heath *Erica tetralix* and ling *Calluna vulgaris* are locally frequent whilst thickets of taller scrub contain western gorse *Ulex gallii*, blackthorn *Prunus spinosa*, downy birch *Betula pubescens* and eared willow *Salix aurita*.

Outcrops of free draining soils on greensand have stands of bracken over abundant bluebell with greater stitchwort *Stellaria holostea* and sweet vernal grass *Anthoxanthum odoratum*. Bracken is suppressed where grazing and trampling have maintained an open sward of fine grasses with frequent sheep's-fescue *Festuca ovina* and common bent *Agrostis capillaris* with herbs such as mouse-ear *Pilosella officinarum*, common dog violet, tormentil *Potentilla erecta* and adder's-tongue *Ophioglossum vulgatum*. The open, acid grassland is restricted in its distribution to the sandy brown earth soils and is quickly replaced by neutral grassland with rush pasture and fen meadow on the seepages and heavier clay soils with impeded drainage, which cover much of the site. This succession of grassland communities is found in pastures at Wytherston Farm on south and west facing slopes influenced by landslips, which have created a range of conditions in microtopography and soil moisture. The dry neutral pasture has frequent sheep's fescue, red fescue, sweet vernal grass and common bent. Heath-grass is occasional with frequent glaucous sedge and spring sedge *Carex caryophylla*. Devil's bit scabious and bird's foot trefoil *Lotus corniculatus* are abundant with frequent betony and hardhead *Centaurea nigra* whilst saw-wort is rare. Fen meadow and rush pasture replaces the dry grassland community on seepages and soils with impeded drainage. Rushes and tall herbs are characteristic and frequent and include hard rush *Juncus inflexus*, sharp-flowered rush, *J. acutiflorus*, fleabane *Pulicaria dysenterica*, ragged-robin *Lychnis flos-cuculi* and locally meadowsweet *Filipendula ulmaria*. Meadow thistle is locally frequent with square-stalked St John's wort *Hypericum tetrapterum*, creeping-Jenny *Lysimachia nummularia* and southern marsh orchid *Dactylorhiza cf. praetemissa*.

Free draining calcareous soils on the railway cutting support a sward dominated by tor grass *Brachypodium pinnatum* and scrub such as dogwood and blackthorn. Tor grass is suppressed in areas of short turf maintained by rabbit grazing and here is replaced by meadow oat-grass *Helictotrichon pratense*, glaucous sedge, heath grass and quaking grass *Briza media*. Frequent herbs include bird's foot trefoil, stemless thistle

Cirsium acaule, wild thyme *Thymus polytrichous* and salad burnet *Sanguisorba minor* with occasional hairy violet *Viola hirta*, yellow wort *Blackstonia perfoliata* and lesser centaury *Centaurium pulchellum*. The calcicolous mosses *Ctenidium molluscum* and *Homalothecium lutescens* are occasional in the sward whilst wood small-reed *Calamagrostis epigejos* and great horsetail are locally dominant on seepages.

Invertebrates

The rare and protected marsh fritillary *Eurodryas aurinia* is present at Powerstock in fen meadows containing devil's-bit scabious and the nationally scarce wood white *Leptidea sinapis* is present in the woodland and scrub fringing the disused railway line. The declining small pearl-bordered fritillary *Boloria selene* occupies woodland glades and edges and silver-washed fritillary *Argynnis paphia* and purple hairstreak *Quercusia quercus* both local butterflies are present in the oak woodland. The diverse moth fauna includes the nationally scarce species small eggar *Eriogaster lanestris* on blackthorn and mere wainscot *Photodes fluxa* found in damp open woods, the notable waved carpet *Hydrelia sylvata* and the rare micro moth *Cosmoites stabiella*. The notable hazel leaf roller *Byctiscus betulae* is present in the hazel understorey and the hoverfly fauna includes the rare *Cheilisia carbonaria* and the nationally scarce species, *Epistrophe diaphana* and *Cheilisia soror*.

Lower plants

Epiphytic lichens indicative of ecological continuity and associated with old forest conditions are present through the site such as the rare New Forest lichen *Parmelia minnarum* on alder and *Japewia carrollii* on willow at one of only two localities in Dorset. Other species are present on ash, hazel, holly, elder and oak including *Phaeographis dendritica*, *Catillaria atropurpurea* and *Dimerella lutea*. Bryophytes include the nationally scarce moss *Leptodon smithii*, the local moss *Zygodon baumgartneri* and the liverwort *Frullania tammariisci*.

Dormouse

The woodland and scrub supports the rare and protected dormouse.

Great crested newt

On the northern edge of Powerstock Common a series of ponds supports a population of great crested newts. The ponds range from heavily shaded to unshaded and most are sparsely vegetated by floating sweet-grass *Glyceria fluitans* and common duckweed *Lemna minor* communities. Some ponds have an unusual flora which includes branched bur-reed *Sparganium erectum*, bog pondweed *Potamogeton polygonifolius*, bogbean *Menyanthes trifoliata*, lesser water-plantain *Baldellia ranunculoides* and submerged floating club-rush *Eleogiton fluitans*, all of which are rare in west Dorset. The particular combination and juxtaposition of aquatic and terrestrial habitats provide ideal breeding, foraging and hibernation conditions for the great crested newt.

In addition to the reasons for notification, otters *Lutra lutra* have been recorded in a stream that lies in the headwaters of the River Hooke.

Other Information:

Powerstock Common and Wytherston Farm SSSI lies in the Wessex Vales Natural Area within an area of exceptional biodiversity. Whetley Meadows SSSI, Drakenorth SSSI and Eggardon Hill and Luccas Farm SSSI adjoin the site whilst Toller Porcorum SSSI, Woolcombe SSSI and Mapperton and Poorton Vales SSSI are approximately 350 m, 700 m and 1400 m away respectively.