

DETAILS OF PURBECK'S SACs

The following is taken from the Joint Nature Conservation Committee website:

ISLE OF PORTLAND TO STUDLAND CLIFFS

General site character

*Shingle. Sea cliffs. Islets (40%)
Heath. Scrub. Maquis and garrigue. Phygrana (5%)
Dry grassland. Steppes (55%)*

Annex I habitats that are a primary reason for selection of this site

1230 Vegetated sea cliffs of the Atlantic and Baltic coasts

*Isle of Portland to Studland Cliffs, including the detached peninsula of Portland, with St Albans Head to Durlston Head, forms a single unit of cliffed coastline some 40 km in length. The cliffs are formed of hard limestones, with chalk at the eastern end, interspersed with slumped sections of soft cliff of sand and clays. The cliffs support species-rich calcareous grassland with species that are rare in the UK, such as wild cabbage *Brassica oleracea* var. *oleracea*, early spider-orchid *Ophrys sphegodes* and Nottingham catchfly *Silene nutans*. The Portland peninsula, extending 8 km south of the mainland, demonstrates very clearly the contrast between the exposed western and southern coasts, with sheer rock faces and sparse maritime vegetation, and the sheltered eastern side, with sloping cliffs supporting scrub communities, where wood spurge *Euphorbia amygdaloides* grows in grassland.*

6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia).

*Semi-natural dry grassland occurs at this site in both inland and coastal situations on both chalk and Jurassic limestone. The site contains extensive species-rich examples of CG4 *Brachypodium pinnatum* grassland in the southern part of its UK range. Smaller areas of CG2 *Festuca ovina* – *Avenula pratensis* grassland occur on shallow soils on steeper slopes. Transitions from calcareous grassland to both chalk heath and acid grassland are also present. The site has well-developed terricolous and saxicolous lichen and bryophyte communities associated with open turf, chalk rock and pebbles, and flinty soils.*

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

1210 Annual vegetation of drift lines

Annex II species that are a primary reason for selection of this site

*1654 Early gentian *Gentianella anglica**

*This site on the Dorset coast, together with St Albans Head to Durlston Head, supports important long-standing populations of early gentian *Gentianella anglica* numbering several thousands of plants in floristically-rich calcareous grassland.*

Annex II species present as a qualifying feature, but not a primary reason for site selection

Not applicable.

DORSET HEATHS

General site character

*Inland water bodies (standing water, running water) (1%)
Bogs. Marshes. Water fringed vegetation. Fens (8%)
Heath. Scrub. Maquis and garrigue. *Phygrana* (86%)
Dry grassland. Steppes (1%)
Humid grassland. Mesophile grassland (1%)
Broad-leaved deciduous woodland (1%)
Coniferous woodland (1%)
Mixed woodland (1%)*

Annex I habitats that are a primary reason for selection of this site

*4010 Northern Atlantic wet heaths with *Erica tetralix**

*This is a complex site which includes 37 SSSIs, most of which include fine transitions between 4030 European dry heaths and wet lowland heathland and mires, as well as other habitats such as woodland, grassland, pools, saltmarsh and reedswamp. The common characteristics of the M16 *Erica tetralix* – *Sphagnum compactum* wet heaths are the dominance of cross-leaved heath *Erica tetralix*, heather *Calluna vulgaris* and purple moor-grass *Molinia caerulea*, and the presence of a diverse group of rare species. These include Dorset heath *Erica ciliaris* (which readily hybridises with *E. tetralix*), white beak-sedge *Rhynchospora alba*, brown beak-sedge *R. fusca*, marsh gentian *Gentiana pneumonanthe*, great, round- and oblong-leaved sundews *Drosera anglica*, *D. rotundifolia* and *D. intermedia*, and marsh clubmoss *Lycopodiella inundata*. Typical mosses of the wet heath include *Sphagnum compactum*, *S. pulchrum* and *S. tenellum*. These sites are a stronghold for invertebrates, particularly dragonflies, damselflies, butterflies and spiders, including the Annex II species 1044 Southern damselfly *Coenagrion mercuriale*. Within the UK, some of these invertebrates are restricted to the Dorset heaths.*

4030 European dry heaths

*This site comprises 37 SSSIs with fine transitions between 4010 Northern Atlantic wet heaths with *Erica tetralix*, dry heaths and other habitats. Dry heath NVC types include H2 *Calluna vulgaris* – *Ulex minor*, H3 *Ulex minor* – *Agrostis curtisii*, H4 *Ulex gallii* – *Agrostis curtisii* and H8 *Calluna vulgaris* – *Ulex gallii*. The area of heathland has been reduced and fragmented, with about 86% lost since*

the mid-18th century. However, the Dorset heaths represent some of the biggest and finest remaining areas of lowland heathland in the UK. The dry heath occurs on very infertile soils and is not very diverse botanically, but occasionally some nationally scarce plants occur, such as mossy stonecrop *Crassula tillaea* and yellow centaury *Cicendia filiformis*. In places, where heather *Calluna vulgaris* occurs in mature stands, lichens of the genus *Cladonia* are very abundant. Uncommon features of the south-eastern heathlands are the localised presence of bilberry *Vaccinium myrtillus* and the co-existence in some areas of western gorse *Ulex gallii* and dwarf gorse *U. minor*. The dry heaths support populations of European importance of several species, including rare butterflies (e.g. silver-studded blue *Plebejus argus*), grasshoppers and spiders. Among birds, the dry heath is very important for woodlark *Lullula arborea*, European nightjar *Caprimulgus europaeus*, Dartford warbler *Sylvia undata* and some migrants such as hen harrier *Circus cyaneus* and Eurasian hobby *Falco subbuteo*. All six species of native British reptiles, including the Annex IV species sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*, occur within the Dorset Heaths.

7150 Depressions on peat substrates of the Rhynchosporion

The two Dorset Heaths cSACs, together with the New Forest, support a large proportion of the resource of Depressions on peat substrates of the Rhynchosporion within England. The habitat is widespread on the Dorset Heaths, both in bog pools of valley mires and in flushes. There are numerous valley mires within the Dorset Heaths, and the habitat type is most extensively represented here as part of a habitat mosaic. This location shows extensive representation of brown-beak sedge *Rhynchospora fusca* and is also important for great sundew *Drosera anglica* and bog orchid *Hammarbya paludosa*.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* * Priority feature

7230 Alkaline fens

9190 Old acidophilous oak woods with *Quercus robur* on sandy plains

Annex II species that are a primary reason for selection of this site

1044 Southern damselfly *Coenagrion mercuriale*

This site in south-west England, along with Dorset Heaths (Purbeck and Wareham) and Studland Dunes, represents the Dorset stronghold of southern damselfly *Coenagrion mercuriale*.

Annex II species present as a qualifying feature, but not a primary reason for site selection

DORSET HEATHS (PURBECK & WAREHAM) AND STUDLAND DUNES

General site character

Coastal sand dunes. Sand beaches. Machair (5%)
Inland water bodies (standing water, running water) (4%)
Bogs. Marshes. Water fringed vegetation. Fens (8%)
Heath. Scrub. Maquis and garrigue. Phygrana (79%)
Dry grassland. Steppes (1%)
Broad-leaved deciduous woodland (1%)
Coniferous woodland (1%)
Mixed woodland (1%)

Annex I habitats that are a primary reason for selection of this site

2110 Embryonic shifting dunes

*Embryonic shifting dunes initiate the very clear successional sequence of dune communities at Studland Dunes, which are representative of the habitat type in southern England. This is a part of the UK where this habitat type is rare, partly owing to intensive recreational use of the coast. The site is also of interest in that there are well-developed examples of both sand couch *Elytrigia juncea* and lyme-grass *Leymus arenarius*-dominated communities. The former occurs discontinuously along the whole shoreline, while the latter is locally abundant in disturbed locations at the northern end of the site.*

*2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')*
*Studland Dunes represents shifting dunes along the shoreline in southern England. Shifting dunes form one part of the very well-marked successional sequences. The seaward dune ridge supports marram *Ammophila arenaria* vegetation mainly of NVC type SD6e *Ammophila arenaria* mobile dune, *Festuca rubra* sub-community, though three other types are represented. There are transitions to embryonic dunes, which are rare on the south coast partly because of intense recreational pressure, and extensive transitions to decalcified fixed dunes and dune heath.*

*2150 Atlantic decalcified fixed dunes (Calluno-Ulicetea) * Priority feature*

*Studland Dunes comprises the only large dune heath site in the south and south-west of Britain. The heathland occupies a series of dune ridges, which have developed over a period of several hundred years. The development of these ridges was the subject of a classic study (Diver 1933) and the processes are still active today. Structure and function of the dune heath communities are therefore well-conserved. The dry open heath is an important habitat for rare reptiles such as sand lizard *Lacerta agilis*. At the western margin of the dune ridges the dry dune heath grades into wet heath in which cross-leaved heath *Erica tetralix* is prominent, while at the northern end it grades into the southern heathland types of inland Dorset.*

2190 Humid dune slacks

*Studland Dunes is a large acidic dune system in south-west England with well-conserved structure and function. The site has been intensively studied. The structure and function of dune systems are well-represented with dune-building processes still active. These processes have resulted in the formation of acidic humid dune slack communities with a high water table, which lie in the parallel hollows between the dune ridges. In these slacks, acidic fen and reedbeds have developed. Some areas are dominated by grey willow *Salix cinerea* and birch *Betula* sp. carr with the very local royal fern *Osmunda regalis* a conspicuous element. The dune slacks are linked to an area of open fresh water known as the Little Sea.*

3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)

*Little Sea is a shallow lake at Studland Dunes in south-west England. It is of recent origin (<500 years old), formed as a large body of seawater became landlocked by the growing sand dunes (hence the name Little Sea). This water is now fresh and is replenished by acidic, oligotrophic water draining off the adjacent heathland, which then flows through the dune slacks and into the sea. The submerged vegetation is characterised by communities of alternate water-milfoil *Myriophyllum alterniflorum*, shoreweed *Littorella uniflora* and spring quillwort *Isoetes echinospora*, together with bladderwort *Utricularia australis* and less frequently six-stamened waterwort *Elatine hexandra*.*

4010 Northern Atlantic wet heaths with *Erica tetralix*

*The two Dorset Heaths SACs, together with the New Forest (also in southern England), contain a large proportion of the total UK resource of lowland northern Atlantic wet heaths. The habitat is of the M16 *Erica tetralix* – *Sphagnum compactum* wet heath type and occurs as well-developed transitions between dry heath and valley bog. This habitat type is important for rare plants, such as marsh gentian *Gentiana pneumonanthe*, brown beak-sedge *Rhynchospora fusca* and great sundew *Drosera anglica*. The wet heaths and mires are also important for scarce Odonata, such as small red damselfly *Ceriagrion tenellum* and the Annex II species 1044 Southern damselfly *Coenagrion mercuriale*. The sites are an important transitional area between the more oceanic heathlands of the south-west peninsula and the semi-continental heathlands of eastern England.*

4020 Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* * Priority feature

*The greatest concentration of Dorset heath *Erica ciliaris* in the UK is in Dorset on the heaths south of Poole Harbour, with outlying stands elsewhere in Dorset. Dorset Heaths (Purbeck and Wareham) and Studland Dunes has therefore been selected as it contains a high proportion of the total UK population of *E. ciliaris*.*

4030 European dry heaths

*This site in southern England has extensive stands of lowland dry heath vegetation. The types include H2 *Calluna vulgaris* – *Ulex minor* heath, H3 *Ulex**

minor – *Agrostis curtisii* heath and some areas of H4 *Ulex gallii* – *Agrostis curtisii* heath. The communities are dominated by heather *Calluna vulgaris* growing in association with bell heather *Erica cinerea* and one of the dwarf gorse species – dwarf gorse *Ulex minor* or western gorse *U. gallii*. The heaths are rich in rare plants, invertebrates, birds and reptiles.

7150 Depressions on peat substrates of the *Rhynchosporion*

The habitat is widespread on the Dorset Heaths, both in bog pools of valley mires and in flushes. There are numerous valley mires within the Dorset Heaths, and the habitat type is most extensively represented here as part of a habitat mosaic. This location shows extensive representation of brown-beak sedge *Rhynchospora fusca* and is also important for great sundew *Drosera anglica* and bog orchid *Hammarbya paludosa*.

91D0 Bog woodland * Priority feature

The Dorset Heaths contain small pockets of wet woodland within valley mires but most of these appear to be of recent origin. However, at Morden Bog a Bog woodland stand is of ancient origin, as shown by its pollen record and old maps. The woodland is dominated by downy birch *Betula pubescens* with a ground flora consisting of greater tussock sedge *Carex paniculata* and purple moor-grass *Molinia caerulea*. There is a rich epiphytic lichen assemblage, again indicating the persistence of this area of bog woodland.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* * Priority feature

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Annex II species that are a primary reason for selection of this site

1044 Southern damselfly *Coenagrion mercuriale*

This site in south-west England, along with Dorset Heaths, represents the Dorset stronghold of southern damselfly *Coenagrion mercuriale*.

Annex II species present as a qualifying feature, but not a primary reason for site selection

1166 Great crested newt *Triturus cristatus*

ST ALBANS HEAD TO DURLSTON HEAD

General site character

Shingle. Sea cliffs. Islets (5%)

Heath. Scrub. Maquis and garrigue. Phygrana (20%)

Dry grassland. Steppes (72%)

Other land (inc. towns, villages, roads, waste places, mines, industrial sites) (3%)

Annex I habitats that are a primary reason for selection of this site

1230 Vegetated sea cliffs of the Atlantic and Baltic coasts

*St Albans Head to Durlston Head, with Isle of Portland to Studland Cliffs, form a single unit of cliffed coastline some 40 km in length. The cliffs are formed of hard limestones, with chalk at the eastern end, interspersed with slumped sections of soft cliff of sand and clays. The cliffs support species-rich calcareous grassland with species that are rare in the UK, such as wild cabbage *Brassica oleracea* var. *oleracea*, early spider-orchid *Ophrys sphegodes* and Nottingham catchfly *Silene nutans*.*

*6211 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia) (important orchid sites) * Priority feature*

*This site contains extensive species-rich examples of CG4 *Brachypodium pinnatum* calcareous grassland. The site holds the largest UK population of early spider-orchid *Ophrys sphegodes*. This species has declined very dramatically in the UK since the 1950s, in both population size and range.*

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

Not applicable.

Annex II species that are a primary reason for selection of this site

*1654 Early gentian *Gentianella anglica**

*This site on the Dorset coast, together with Isle of Portland to Studland Cliffs, supports important long-standing populations of early gentian *Gentianella anglica* numbering several thousands of plants in floristically-rich calcareous grassland.*

Annex II species present as a qualifying feature, but not a primary reason for site selection

*1304 Greater horseshoe bat *Rhinolophus ferrumequinum**