

Notified to the Secretary of State: 28 June 1996

**County:** Dorset **Site Name:** Valley of Stones

**District:** West Dorset

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

**Local Planning Authority:** West Dorset District Council, Dorset County Council

**National Grid Reference:** SY 600875 **Area:** 79.74 (ha) 196.96 (ac)

**Ordnance Survey Sheet 1:50,000:** 194 **1:10,000:** SY 58 NE, SY 68 NW

**Date Notified (Under 1949 Act):** 1977

**Date Notified (Under 1981 Act):** 1984, June 1996

**Other Information:**

The site boundary has been amended by extensions. The site, including the extensions, is leased by English Nature.

**Description and Reasons for Notification:**

Valley of Stones SSSI is situated approximately 1½ km to the north of Portesham in southern Dorset and consists of dry valleys and slopes on Upper Chalk, with overlying deposits of pebbly clay and sand and Bagshot Beds in the eastern part of the site. The site is famous for its fine train of sarsen stones and also contains a diverse range of unimproved grassland types, uncommon lichens, mosses, liverworts and scarce butterflies.

The southernmost dry chalk valley contains an excellent example of a sarsen blockstream or 'valley train'. Sarsen stones have here been transported downslope during periglacial conditions by the process of solifluction. They have been aligned along the valley floor in what are known as 'valley trains'. The sarsens in the upper valley are typically conglomeratic (flints in a sandy matrix) whilst those in the lower valley are largely sandstone in composition. This site has considerable research potential for studies of sarsens, slope processes and landscape evolution during the late Pleistocene when southern England was subjected to extreme periglacial conditions.

The unimproved chalk grassland on the valley slopes is of high quality and contains a wide variety of herbs. Species which are frequent or abundant include salad burnet *Sanguisorba minor*, small scabious *Scabiosa columbaria*, rough hawkbit *Leontodon hispidus*, devil's-bit

scabious *Succisa pratensis*, betony *Stachys officinalis*, hoary plantain *Plantago media* and wild thyme *Thymus polytrichus*. Less frequent species include clustered bellflower *Campanula glomerata*, autumn gentian *Gentianella amarella* and hairy rock-cress *Arabis hirsuta*. Horseshoe vetch *Hippocrepis comosa* is locally frequent. Grasses and sedges present in the calcareous sward include sheep's fescue *Festuca ovina*, meadow oat-grass *Helictotrichon pratense*, quaking grass *Briza media*, crested hair-grass *Koeleria macrantha*, spring sedge *Carex caryophyllea* and glaucous sedge *Carex flacca*. A variety of mosses occur in the grassland including species characteristic of calcareous conditions such as *Ctenidium molluscum* and *Homalothecium lutescens*.

In the eastern part of the site the soils on the Bagshot Beds support vegetation more suited to acidic conditions. Species present here include bristle bent *Agrostis curtisii*, purple moor grass *Molinia caerulea*, bell heather *Erica cinerea*, heath bedstraw *Galium saxatile* and bracken *Pteridium aquilinum*. Gorse scrub is frequent, with both European gorse *Ulex europeus* and western gorse *Ulex gallii* occurring. On more neutral soils frequent species include common bent *Agrostis capillaris*, sweet vernal-grass *Anthoxanthum odoratum* and devil's-bit scabious, with plants such as salad burnet becoming more frequent towards the calcareous areas of the site.

The sarsen stones support a rich flora of lichens, mosses and liverworts. Lichens present on the stones include the Nationally Rare *Buellia saxorum* and the Nationally Scarce *Parmelia delisei* with *Anaptychia runcinata*, *Lecanora gangaleoides*, *Parmelia verruculifera* and *Ramalina siliquosa*. The Nationally Scarce liverwort *Porella obtusata* also occurs on the sarsen stones and other mosses and liverworts include species which are uncommon in Dorset such as *Pterogonium gracile*, *Hedwigia ciliata* and *Grimmia trichophylla*.

The unimproved chalk grassland supports a variety of butterflies. The Nationally Scarce Adonis blue *Lysandra bellargus* breeds here on the site and two local species, chalk-hill blue *Lysandra coridon* and dingy skipper *Erynnis tages* are present in breeding colonies.