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COUNTRYSIDE COUNCIL FOR WALES**

**SITE OF SPECIAL SCIENTIFIC INTEREST CITATION**

**PEMBROKESHIRE**

**STACKPOLE QUAY – TREWENT POINT**

**Date of Notification:** 1977, 1993

**National Grid Reference:** SR 989952 – SS 016975

**O.S. Maps:** 1:50,000 Sheet number: 158  
1:25,000 Sheet number: SR 99 & SS 09

**Site Area:** 62.9 ha

**Description:**

A cliff coast on the Castelmartin Peninsula of South Pembrokeshire which is of special interest for both its geological and biological features.

**Geological**

- (a) Wenlock – The outcrops on the southern side of Freshwater East Bay have yielded many fossils from the Gray Sandstone Group that have contributed greatly towards assigning a Wenlock age to most of this unit. Many of the fossils, notably the brachiopods, have merited description and illustration, and for many species this is the type locality. Elements of this fauna may be more readily equated with North American species than with those seen in the rest of Wales. This Gray Sandstone site also represents the best exposure of Silurian rocks within the Freshwater structural block. Freshwater East is therefore an important palaeontological biostratigraphical section within the context of the Dyfed Wenlock and Silurian.
- (b) Variscan Structures – The cliffs and foreshore at Stackpole Quay provides important exposures of ‘Old Red Sandstone’ and Carboniferous Limestone strata displaying a suite of structural features formed during the Variscan mountain building episode (orogeny). The limestone layers are contorted by sinuous folds, including a famous example which first appeared as an illustration in a classic geology textbook in 1839. The distortion during the orogeny also produced a host of minor structures such as faults, fractures, shears and cleavages which have been studied in detail at this locality. The assemblage of folds and dislocations in these outcrops exemplifies the overall structure of the southern part of one of the major zones of the Variscan orogenic belt in Pembrokeshire.

## **Biological**

The site consists of a four kilometre length of south-east facing cliffs showing a transition from Carboniferous Limestone to Devonian Old Red Sandstone rocks. Vegetation typical of moderately sheltered sea-cliffs with much bracken and gorse dominated scrub swathes the cliffs. Maritime grassland, crevice communities and maritime heath are a feature of the lower cliffs and many small headlands, and the Red Data Book plant, small restharrow *Ononis reclinata*, occurs on one limestone headland. Breeding birds include peregrine and chough. Much of the foreshore is of marine biological importance.

The limestone cliffs support species-rich crevice communities, typified by plants such as thrift *Armeria maritima*, sea plantain *Plantago maritima*, rock sea-spurrey *Spergularia rupicola* and the noteworthy rock sea-lavender *Limonium binervosum* and golden-samphire *Inula crithmoides*. Above this crevice zone, species-rich maritime grassland occurs, with species such as spring squill *Scilla verna*, buck's-horn plantain *Plantago coronopus*, common bird's-foot-trefoil *Lotus corniculatus*, cowslip *Primula veris*, greater knapweed *Centaurea scabiosa* and red fescue *Festuca rubra*. This maritime grassland is well developed on the limestone, but becomes more fragmented on the ungrazed Old Red Sandstone cliffs, which reach 80 metres in height and support extensive areas of scrub dominate. A mosaic of gorse *Ulex europaeus*, bramble *Rubus fruticosus* and bracken *Pteridium aquilinum* exists, interspersed with grasses such as Yorkshire-fog *Holcus lanatus* and false brome *Brachypodium sylvaticum*. Wind-clipped blackthorn *Prunus spinosa* occurs occasionally, along with a few low ash trees in places. Small areas of maritime heath are located at Greenala and Trewent Points where heather *Calluna vulgaris* and bell heather *Erica cinerea* are locally frequent.

A small but persistent population of the Red Data Book species, small restharrow, grows amongst the therophyte communities of the limestone cliffs and has been monitored for the past 20 years. Other notable plants include Portland spurge *Euphorbia portlandica* and sea stork's-bill *Erodium maritimum*. Narrow-leaved everlasting-pea *Lathyrus sylvestris* grows at Trewent Point and green-winged orchids *Orchis morio* are found above Barafundle Bay.

The variety of habitats encourage an abundance of invertebrates. Butterflies such as the small blue *Cupido minimus*, the dark green fritillary *Argynnis aglaja* and the grayling *Hipparchia semele* have been observed here. Of the other invertebrate species present, ants are particularly noticeable by virtue of their copious nest mounds. It is these and the abundance of other invertebrates that attract feeding chough to the site, and a pair is known to breed here. Other cliff nesting birds include raven, house martin and one pair of peregrines. The extensive scrub attracts a number of other species such as stonechat, grasshopper warbler and whitethroat, all of which are known to breed. Small numbers of fulmar, herring gull, lesser and great black-backed gulls also breed on the sheer cliffs near Greenala Point. The foreshore between Barafundle and Greenala Point supports a diverse flora and fauna, especially on the limestone adjacent to Stackpole Quay, where there is a large number of boulders of varying exposure.

**Remarks:**

The site lies within the Pembrokeshire Coast National Park.

The adjoining sub-littoral habitats are of marine biological importance especially for the features associated with their steep unbroken limestone bedrock.

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