

SITE NOTIFIED TO THE SECRETARY OF STATE ON 12TH JANUARY 1995

COUNTY: CORNWALL

SITE NAME: WEST LIZARD

DISTRICT: KERRIER

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

Local Planning Authority: CORNWALL COUNTY COUNCIL, Kerrier District Council

National Grid Reference: SW 695125,  
SW 671154,  
SW 685174

Area: 776.28 (ha.) 1917.41 (ac.)

Ordnance Survey Sheet 1:50,000: 203

1:10,000: SW 61 NE, SW 61 SE

Date Notified (Under 1949 Act): 1951, 1968

Date of Last Revision: –

Date Notified (Under 1981 Act): 1986

Date of Last Revision: 1995

#### Other Information:

Partly Biogenetic Reserve. A Nature Conservation Review site. Partly Lizard National Nature Reserve. In Cornwall an Area of Outstanding Natural Beauty. Part owned by National Trust. Site amended by extensions and deletions and to include Kynance Cove, Hayle Kimbro Pool and Ruan Pool SSSIs.

#### Description and Reasons for Notification:

##### Introduction

West Lizard SSSI is situated 10km south of Helston and comprises coastal vegetation between Predannack and Caerthillian and the inland heathlands of the west of the Lizard Peninsula. The site lies on serpentinitised peridotite, altered in parts to talc (or soapstone), with minor intrusions of granite. Caerthillian, at the southern tip of the site lies on schist. The peninsula is a flat plateau representing a former sea floor which now stands above current sea level, meeting the sea with high steep cliffs. In places the serpentinite plateau is overlain with a fine windblown 'loess' deposit laid down during periglacial conditions associated with the last Ice Age. Loess weathers to stagnogley soils. The ultrabasic serpentinite forms shallow poorly drained gley soils. The unusual geology combined with a mild oceanic climate has led to the development of a range of vegetation types which in Britain is unique to the Lizard Peninsula. The site is outstanding botanically with 13 Red Data Book (RDB) species\*, including Cornish Heath *Erica vagans* which is confined in the British Isles to the Lizard Peninsula and County Fermanagh, Northern Ireland. Kynance Cove is of particular geological importance as it exposes one of the most detailed exposures of ophiolitic serpentinite in the country.

##### Biology

The vegetation of the cliffs exhibits a complex of maritime communities. On the exposed lower slopes, a maritime rock-crevice community is found. Levels of salt deposition are high and maritime species including Thrift *Armeria maritima* subsp. *maritima*, Rock Samphire *Crithmum maritimum* and Sea Aster *Aster tripolium* are found. This community is often discontinuous and is displaced further up the cliff by a maritime therophyte community, found on the shallow soils of rock ledges and outcrops. The community is characterised by English Stonecrop *Sedum anglicum*, Least Soft-brome *Bromus hordeaceus* subsp. *ferronii*, Thrift and Buck's-horn Plantain *Plantago coronopus* with Sea Carrot *Daucus carota* subsp. *gummifer* and Kidney Vetch *Anthyllis vulneraria*.

Maritime grassland communities occur on the cliff tops where soils are deeper but maritime influence remains strong. These communities comprise Red Fescue *Festuca rubra* and Yorkshire-fog *Holcus lanatus* together with Thrift and Sea Carrot. Where the grassland is trampled, Buck's-horn Plantain and Daisy *Bellis perennis* thrive producing a 'short-turf' community. Conversely on Asparagus Island where there is no trampling Wild Asparagus *Asparagus officinalis* subsp. *prostratus*\* is abundant.

Maritime Heath also occurs and is dominated by Sheep's-fescue *Festuca ovina* and Heather *Calluna vulgaris* with Wild Thyme *Thymus praecox* subsp. *arcticus*, Autumn Squill *Scilla autumnalis*, Spring Sandwort *Minuartia verna* and Thyme Broomrape *Orobanche alba*. Thrift and Common Dog-violet *Viola riviniana* also occur in abundance. In places the cliffs are strewn with clitter and boulder scree which is typically colonised by Bloody Crane's-bill *Geranium sanguineum*.

The plateau and cliffs are cut by valleys at Caerthillian, Kynance and Gew Graze. The south facing slopes with greater insolation and periodic droughts are of particular importance for many rare plant species. At Caerthillian on the schist/serpentinite boundary, Twin-headed Clover *Trifolium bocconei*\*, Long-headed Clover *T. incarnatum* subsp. *molineri*\*, Upright Clover *T. strictum*\*, Land Quillwort *Isoetes histrix*\*, Hairy Bird's-foot-trefoil *Lotus subbiflorus*, Wild Chives *Allium schoenoprasum* and Spring Sandwort can all be found. Kynance is important for populations of Fringed Rupturewort *Herniaria ciliolata*\*, Spotted Cat's-ear *Hypochoeris maculata*\* Upright Chickweed *Moenchia erecta* and Green-winged Orchid *Orchis morio*, a species found only on the Lizard in Cornwall. Gew Graze has intrusions of steatite or soapstone and is of note as the only site in Devon and Cornwall for Juniper *Juniperus communis*.

Further inland where maritime influence is weaker, heathland communities are found. Cornish Heath is abundant on serpentinite soils and is a dominant species of 'Mixed Heath' which occurs widely throughout the site in better drained areas. Other species include Gorse *Ulex europaeus*, Western Gorse *Ulex gallii*, Bell heather *Erica cinerea*, Tormentil *Potentilla erecta* and Betony *Stachys officinalis*.

'Tall Heath' is also dominated by Cornish Heath but occurs in poorly drained areas. Black Bog-rush *Schoenus nigricans* and Purple Moor-grass *Molinia caerulea* are also found with associated species including Tormentil, Betony, Saw-wort *Serratula tinctoria*, Great Burnet *Sanguisorba officinalis* and Western Gorse.

On the more acidic loess deposits a 'Short Heath' community is dominant. This comprises Heather, Bell Heather, Western Gorse, Purple Moor-grass, Cross-leaved Heath *Erica tetralix* and Bristle Bent *Agrostis curtisii*. Good stands of Short Heath are found on extensive loess deposits on Lizard Downs.

Exposures of serpentinite are also important for rare plant species. These occur naturally on the cliff slopes and within the heathland and grassland as a result of quarrying. The bare rock or thin soils typically support Land Quillwort, Autumn Squill, Hairy Greenweed *Genista pilosa*\* and Western Clover *Trifolium occidentale*. Pigmy Rush *Juncus pygmaeus*\* a very rare plant species found exclusively on the Lizard has been recorded in quarries and cart-tracks.

Hayle Kimbro and Ruan Pools provide good wetland habitat in an area of extensive heathland. Hayle Kimbro Pool comprises five oligotrophic open water bodies varying in size and depth. The largest of the pools retains water even in the driest of years. Ruan Pool is at an advanced stage of hydrosere succession but still retains some open water. Both water bodies support Common Spike-rush *Eleocharis palustris*, Alternate Water-milfoil *Myriophyllum alterniflorum*, Floating Club-rush *Eleogiton fluitans* and Pillwort *Pilularia globulifera*. Hayle Kimbro Pool supports the largest population of Lesser Water-plaintain *Baldellia ranunculoides* in Cornwall where the species has a restricted distribution. North of

the pool at Ponson Joppa the only population of Bog myrtle *Myrica gale* on the Lizard can be found. Three-lobed Crowfoot has been recorded at Ruan Pool.

The cliffs and coastal heaths of West Lizard support a large number of rare lower plant species. The bryophytes *Gongylanthus ericetorum*\* and *Riccia bifurca*\* are found in short turf communities. *Cephaloziella calyculata*\* favours short turf dominated by squill. Areas of moist soil between rock outcrops on the cliff tops are colonised by *Fossombronia angulosa*\* and *Riccia crozalsii*. Many rare lichen species including *Nephroma tangeriense*\* and *Parmelia tinctoria* are also found here.

The diverse topography and vegetation of this site also supports a rich invertebrate community. The weevils (Coleoptera) *Cathormiocerus britannicus* (4), which is endemic to Britain, and *Miarus micros* (RDB 3 rare\*) have been recorded here along with the spiders (Araneae) *Clubiona genevensis* (RDB 3 rare\*), *Lathys stigmatisata* (RDB 3 rare\*) and *Gnaphosa occidentalis* (RDB 1 endangered\*). There is also a rich assemblage of butterflies and moths (Lepidoptera) including the endangered moth *Pterophorus fusolimbatus*\*.

The cliffs and offshore rocks support breeding populations of Fulmar *Fulmarus glacialis*, Shag *Phalacrocorax aristotelis* and Jackdaw *Corvus monedula*, whilst the inland heaths provide feeding grounds for Wheatear *Oenanthe oenanthe* and Peregrine *Falco peregrinus*.

## Geology

### Kynance Cove

The Lizard complex consists of a large serpentinised peridotite body, largely underlain by amphibolites and cut by later gabbros, basic dykes and granitic veins. Recent interpretations consider the complex to represent the tectonically juxtaposed remnants of a disrupted ophiolite complex.

Kynance Cove provides one of the best and most famous exposures of the Lizard peridotite and includes good examples of the two main varieties. Another conspicuous feature of interest is the presence of granite and gneiss pods in the peridotite. These pods provide important evidence in favour of the ophiolite model, as they are considered to represent incorporation of crustal 'xenoliths' during the obduction of the peridotite.

\*These plants and insects are included in the Red Data Book listing of rare and endangered species.