

SITE NOTIFIED TO THE SECRETARY OF STATE ON 31ST JULY 1987

COUNTY: CORNWALL                      SITE NAME: GWITHIAN TO MEXICO TOWANS

DISTRICT: PENWITH

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, Penwith District Council

National Grid Reference: SW 570395                      Area: 371.1 (ha.) 917.2 (ac.)

Ordnance Survey Sheet 1:50,000: 203                      1:10,000: SW 53 NE, SW 54 SE

Date Notified (Under 1949 Act): 1953                      Date of Last Revision: 1973

Date Notified (Under 1981 Act): 1987                      Date of Last Revision: –

Other Information:

Site formerly known as Phillack & Upton Towans SSSI. Boundary amended by extension and deletion.

Description and Reasons for Notification:

Gwithian to Mexico Towans constitutes the second largest dune system in Cornwall, stretching for approximately 3km along the North Cornwall coast from Hayle to Gwithian. These north-west facing dunes rise to a maximum height of over 60 metres. This exposed, dynamic dune system is subject to the full force of Atlantic gales, resulting in several large blow-outs along the seaward margin. This complex and extensive dune system supports a rich and diverse flora.

The dunes are composed of wind-blown calcareous shell sand, giving rise to raw skeletal soils which overlie the fine-grained Devonian slates of the Mylor Series.

This site is important in illustrating successive erosional and depositional phases in coastal development. It contains an assemblage of dunes in the south which are progressively replaced northwards by rock cliffs, caves, stacks and arches; overlain by blown sand and dunes. These erosional features have been exposed, as formerly much larger dunes have eroded. Remnants of former dunes are also preserved on stacks. The site clearly demonstrates the relict nature of the cliffed coastline and allows examination of the interface between dunes and the sub-dune surface.

This extensive dune system supports a number of rare native plant species, including Balm-leaved Figwort *Scrophularia scorodonia* and Hairy-fruited Cornsalad *Valerianella eriocarpa*, also Twiggy Mullein *Verbascum virgatum*, Ivy Broomrape *Orobanche hederæ*, Western Clover *Trifolium occidentale* and Autumn Lady's-tresses *Spiranthes spiralis*. Past industrial and agricultural use of these dunes has created additional habitats and led to the introduction of several alien plants, including Alkanet *Anchusa officinalis*, the garden escape Garden Anchuso *Anchusa azurea*, Yellow Alkanet *Anchusa ochroleuca* and Argentine Dock *Rumex frutescens*.

The unstable foredunes support Sand Couch *Elymus farctus* and are backed by an extensive range of fixed dunes, dominated by Marram Grass *Ammophila arenaria*, with species such as Red Fescue *Festuca rubra*, Kidney Vetch *Anthyllis vulneraria*, Wild Carrot *Daucus carota* and Sand Sedge *Carex arenaria*. In addition Sea Spurge *Euphorbia paralias* and Portland Spurge *Euphorbia portlandica*, which are scarce outside Cornwall, also occur here.

The short turf of the intervening areas of herb-rich calcareous grassland is dominated by grasses, including Meadow-grass *Poa annua*, Spreading Meadow-grass *Poa subcaerulea*, Early Hair-grass *Aira praecox* and Fern grass *Desmazeria rigida* with associated herb species, such as Wild Thyme *Thymus praecox*, Kidney Vetch *Anthyllis vulneraria*, Cowslip *Primula veris*, and Sedge, Pyramidal Orchid *Anacamptis pyramidalis*, Eyebright *Euphrasia officinalis*, Viper's Bugloss *Echium vulgare* and Yellow Rattle *Rhinanthus minor*.

The drier dune-slacks are dominated by Red Fescue and herbs such as Buck's-horn Plantain *Plantago coronopus*, Ribwort Plantain *Plantago lanceolata*, Wild Thyme *Thymus praecox*, Carline Thistle *Carline vulgaris*, and grasses, including Dune Fescue *Vulpia fasciculata*, Upright Brome *Bromus erectus* and Sand Cat's-tail *Phleum arenarium*.

In the wetter dune-slacks Southern Marsh-orchid *Dactylorhiza praetermissa* and Field Horsetail *Equisetum arvense* commonly occur, together with Yellow Bartsia *Parentucellia viscosa*. One particular dune-slack is noted for the occurrence of Variegated horsetail *Equisetum variegatum*.

The small pond on Phillack Towans supports species such as Water Mint *Mentha aquatica*, Soft Rush *Juncus effusus*, Silverweed *Potentilla anserina*, Grey Willow *Salix cinerea* and Adder's Tongue *Ophioglossum vulgatum*.

Species associated with the small cliff flushes include Water Mint, Fleabane *Pulicaria dysenterica*, Common Figwort *Scrophularia nodosa*, Wild Angelica *Angelica sylvestris* and Ragged-Robin *Lychnis flos-cuculi*.

Scrub vegetation is scattered throughout the dune system. Species commonly occurring are Privet *Ligustrum vulgare*, Bramble *Rubus fruticosus*, Elder *Sambucus nigra* and European Gorse *Ulex europeaeus*. Dense stands of Sea Buckthorn *Hippophae rhamnoides* occur at the back of Phillack Towans. Associated with some of these areas of dune-scrub is the rare Balm-leaved Figwort *Scrophularia scorodonia*.

This complex dune system is also of importance for its butterflies and moths, including a form of the Silver-studded Blue butterfly *Plebejus argus*, the Grayling butterfly *Hipparchia semele*, and such notable species as White-letter Hairstreak *Strymonidia album*, Pearl-bordered Fritillary *Boloria euphrosyne*, Silver-washed Fritillary *Argynnis paphia*, and Dark Green Fritillary *Argynnis aglaja*. Also recorded here is the yellow form of Six-spot Burnet Moth *Zygaena filipendulae*.

In addition the small pond on Phillack Towans is one of the few locations in Cornwall for the Great Pond Snail *Lymnaea stagnalis* and an unusual pond snail *Lymnaea glabra*.