

CARMARTHENSHIRE LBAP COASTAL HABITATS GROUPED ACTION PLAN

Introduction

This grouped habitat action plan includes coastal saltmarsh, coastal vegetated shingle, coastal sand dunes and maritime cliff and slope.

Almost Carmarthenshire's entire coast is made up of priority BAP habitats. These habitats are the transition between the land and the sea and can be very dynamic, changing with time. The plants and animals that live here are often restricted to very specific 'zones' between the land and the sea and so are vulnerable to any changes that might adversely affect their habitat. These habitats create one of Carmarthenshire's most distinctive landscapes and contribute to the character of the county.



Although shingle beaches are widely distributed around the coast of the UK, where the shingle remains mobile and any vegetation is restricted to temporary strandline communities, coastal vegetated shingle (*Gro arfordirol gyda llystyfiant*) structures above the reach of wave action are rare, and support specialised communities of plants and invertebrates.

Three stretches of coastal vegetated shingle occur in Carmarthenshire: at Penrhynwyn, Machynys to the south of Llanelli, Morfa Bychan to the west of Pendine and at Cefn Padrig, immediately east of Burry Port.

Coastal saltmarshes (*Morfa heli*) comprise the upper, vegetated parts of intertidal mudflats, located between mean high-water neap tides and mean high-water spring tides. Saltmarshes require an accumulation of sediment, and shelter from strong wave action. Many are therefore found in sheltered estuarine situations.

Many of the plants that occur in saltmarshes are halophytic (salt-tolerant) and are adapted to regular immersion by the tides. They typically are divided into zones determined by the frequency of immersion that particular species can tolerate.

Saltmarshes provide important high-tide roosting areas for wading birds and wildfowl feeding on adjacent mudflats. They also act as breeding sites for a variety of species and provide winter feeding grounds for large flocks of wild duck and geese. Saltmarsh habitat can also support a number of uncommon invertebrate species and provide sheltered nursery sites for several species of fish.

Coastal saltmarshes are dynamic systems which typically experience natural fluctuations, especially along the mobile seaward edge. Erosion and growth in response to natural coastal processes is therefore a characteristic feature of saltmarsh habitats. Despite their dynamic nature, however, saltmarshes often provide an effective means of dissipating wave energy and thus can play a significant role in providing a defence for our coastlines.

One of the most important areas for this habitat in Wales is the Carmarthenshire coast and the Burry Inlet, which supports the second largest continuous area of saltmarsh in the UK, only the Wash having a larger area. The Tywi, Taf and Gwendraeth estuaries also hold significant areas

of saltmarsh. The Carmarthen Bay and Estuaries Special Area of Conservation, includes the Burry Inlet and the Taf, Tywi and Gwendraeth estuaries, has been designated partly because of its saltmarsh habitat.

Of the various saltmarsh communities identified in Carmarthenshire, we are lucky to have a good example of the internationally important 'Atlantic salt meadow' type. Ungrazed saltmarsh, itself a scarce resource, is also well represented on the Taf and Gwendraeth estuaries.

A high proportion of Carmarthenshire's coastline is dominated by sand dune, whilst the built up south-east corner is fringed by man-made sea defences. Although fossil cliff lines (e.g. east of Pendine) may occur behind the dunes and other habitats, there are two main **cliff and slope** (*Clogwyni a llethrau arforol*) concentrations in the county:

- The Old Red Sandstone cliffs west of Llansteffan, between the mouths of the Rivers Tâf and Tywi; with a minor outlier south of Ferryside.
- The more extensively cliffed areas along the Amroth–Marros–Pendine length of coast.

Unlike Pembrokeshire, our cliffs are not home to colonies of seabirds, but on cliff sections such as west of Pendine and on the Llansteffan Peninsula there are scatterings of gulls, fulmars and the predatory peregrine. However there are plants of note such as the native maiden-hair fern on a tufa-cliff near Craig Ddu.

Coastal sand dunes (*Twyni tywod arfordirol*) develop where there is a sufficient supply of sand in the intertidal zone to form an area of beach, the surface of which dries out between tides. The dry sand is blown landwards and deposited above the high tide mark, where it can be trapped by specialised dune-building grasses, before eventually being colonised by more plant communities typical of more stable conditions.

Sand dune systems are typically made up of a number of different zones, including embryonic and mobile dunes, semi-fixed dunes, fixed dune grassland and dune slacks (which occupy damp depressions between dune ridges).

Sand dunes systems, especially calcareous ones, can support an extremely diverse range of plants and animals and provide habitat for a variety of specially adapted species, including a number of uncommon plants, fungi and invertebrates.

Carmarthenshire has a significant proportion of the Welsh sand dune resource. Two major sand dune systems occur, namely Laugharne–Pendine Burrows and the Pembrey Coast SSSI; there are also smaller examples at Llansteffan, Ferryside, Burry Port and Llanelli. Historically, these would have been grazed and far more mobile, and partly because of the cessation of grazing the vegetation has become considerably ranker and the dunes more stabilised. Not only has the invasive sea buckthorn spread, but other trees and shrubs, coarse grasses and perennials have changed the habitat from rather bare open dunes favoured by such rarities as the fen orchid to a far more densely vegetated environment. Fen orchid appears to be extinct at Pembrey and is very close to extinction at Pendine, though discussions to initiate favourable management are still on-going at both sites.

Nevertheless, the dunes are still exceedingly rich in wildlife, with a range of habitats from foreshore, through wet dune slacks ('hollows') to young alder, willow and birch woodland. Hares still have a stronghold on the open areas, whilst a rare beetle *Panageus crux-major* was

discovered at Tywyn Point in 1985. Many other rare or scarce invertebrates have been found in Carmarthenshire's dune systems – with marsh fritillaries in wet slacks at RAF Pembrey and over 30 species of butterfly seen on the same duneland area. Marbled whites are a typical species, but there are also small blues, grizzled skippers and the brown argus. There is also an interesting variety of orchids and other flowering plants.

Natural benefits of coastal habitats

As well as the inherent value of these habitats and for the species they support they provide us with a number of natural benefits:

- Provision of free coastal defences.
- Provision of food - fish and shellfish.
- Tourism and recreation!
- Agriculture - salt marsh lamb, seaweed fertilizer.
- Sand and gravel for industry.

Why are coastal habitats changing (from the *State of Nature* report: www.rspb.org.uk/stateofnature)?

- Habitat loss to development.
- Sea level rise.
- Habitat fragmentation.
- Increased recreational pressure.
- Stabilisation of sand dunes and soft cliffs.

Vision statement and objectives

The overall vision for this plan is to maintain, restore and extend these habitats in the county and the BAP species associated with them. Maintaining these natural systems will also provide benefits in terms of flood defence, fisheries and managing coastal erosion. Any action would seek to meet one or more of the following objectives:

CO1 To positively manage these coastal habitats in Carmarthenshire and connect and expand where possible.

CO2 To maintain and expand the range and/or population of species associated with these habitat types.

CO3 To identify and record priority areas of coastal habitats within Carmarthenshire outside SSSIs.

CO4 To raise awareness of coastal habitats and the benefits they bring us.

Associated BAP/S42species (NB this may not be an exhaustive list):

Birds - Skylark, Common linnet, Yellowhammer, Herring gull, Eurasian curlew, Northern lapwing, Ringed plover, Black-headed gull, Bar-tailed godwit.

Mammals - Brown hare

Invertebrates - Small Heath, Small Blue, Dingy Skipper, Grayling, Wall, Brown-banded carder bee, Red-shanked Carder-bee, Silky Gallows-spider, Crucifix ground beetle, Narrow-mouthed Whorl snail, , Narrow-bordered Bee Hawk-moth, Rosy Minor (moth), Shoulder-striped Wainscot moth, Dark Spinach (moth), Shaded Broad-bar moth, Feathered Gothic (moth), Garden Tiger, Mullein Wave.

Herpetiles - Common lizard, Adder, Common toad.

Plants/lower plants - Dune Gentian, Sea Barley, Fen Orchid, Sea Stock, Prickly saltwort, *Stricta canariensis* (lichen), Sea Bryum, Awl-leaved Ditrichum, Petalwort, Deptford Pink, Maidenhair fern, Fragrant orchid, Wilson's Pottia.

Summary of action achieved by LBAP Partners (for more information contact the biodiversity officer – Biodiversity@carmarthenshire.gov.uk) or visit the national Biodiversity Action Reporting System - <http://ukbars.defra.gov.uk>:

2010–12

- Pembrey Burrows SSSI - Conservation grazing herd established on salt marsh - CCC CO1
- Pembrey Burrows SSSI - dune management - sea buckthorn removal - CCC CO1
- Pendine - dune management undertaken - sea buckthorn removal - Defence Estates CO1
- Pendine - dune slack restoration - Defence Estates CO1
- Pembrey Country Park - dune management undertaken - sea buckthorn removal - CCC CO1
- RAF Pembrey - grazing herd established on salt marsh - MoD CO1
- Pembrey Country Park - dune slack creation - CCC CO1
- Pembrey Forest - dune management undertaken - sea buckthorn removal - FCW CO1
- Beach/shingle litter picks - KWT/CCC CO1
- Coastal bryophytes (mosses) monitored - first record for species in Carms found - CCW CO3
- MoD Pembrey - annual monitoring of dune gentian – BSBI CO3
- Walks for public undertaken – CCC CO4

2013

- Established grazing on dunes at Pembrey Country Park CO1
- REF funding obtained for further sea buckthorn removal – CCC CO1
- Sea buckthorn removal from dunes – MOD Pendine CO1
- Sea buckthorn removal from dunes – NRW CO1
- Beach/shingle litter picks – Llanelli Beach/Tywyn Bach/Pembrey Burrows - KWT/CCC/Vols CO1
- MoD Pembrey - annual monitoring of dune gentian – BSBI CO3
- Walks for public undertaken – CCC CO4
- Fencing at Pembrey Burrows LNR to reinstate grazing – CCC CO1
- Coastal bird counts for BTO – vols CO2
- Creation of fish sculpture from marine litter at Pembrey – Mencap/CCC CO4

2014

- REF funded project to clear sea buckthorn from dune habitat in Pembrey Burrows LNR and Pembrey Country Park - 18 acres cleared and 30 acres flailed so far – CCC/NRW CO1

2015

- Pembrey Burrows LNR – WREN grant fund to clear sea buckthorn from frontal dunes and start dune rejuvenation processes – Plantlife/CCC CO1
- Mencap Cymru volunteers beach cleans to help reduce marine litter CO1
- Pembrey CP - thinning work in the Corsican Pine woodland to help reinstate some of the wetter dune areas. CO1

Future proposed action

- Continue with WREN project

Useful links

www.biodiversitywales.org.uk/en-GB/Coastal
www.wildlifetrusts.org/wildlife/habitats/coastal
<http://jncc.defra.gov.uk/page-1429>

Where to see these habitats in Carmarthenshire:

Coastal vegetated shingle: three stretches of coastal vegetated shingle occur in Carmarthenshire: at Penrh yngwyn, Machynys to the south of Llanelli, Morfa Bychan to the west of Pendine and at Cefn Padrig, immediately east of Burry Port.

Saltmarsh: National Wetlands Centre, Wales, at Penclacwydd and from the Millennium Coastal Park at North Dock Local Nature Reserve, Pembrey Burrows Local Nature Reserve (the latter being one of the best examples of ungrazed saltmarsh)

Sea cliffs: cliffs west of Llansteffan; cliffs along the Amroth–Marros–Pendine length of coast.

Sand dunes: two major sand dune systems occur, namely Laugharne–Pendine Burrows and the Pembrey Coast SSSI; there are also smaller examples at Llansteffan, Ferryside, Burry Port and Llanelli.

Wales Biodiversity partnership priority action areas:

Sand dunes

- Laugharne and Pendine Burrows
- Pembrey Burrows (statutory and non-statutory areas)
- North Dock Dunes (Llanelli breakwater)
- Morfa Uchaf & Ferryside dunes

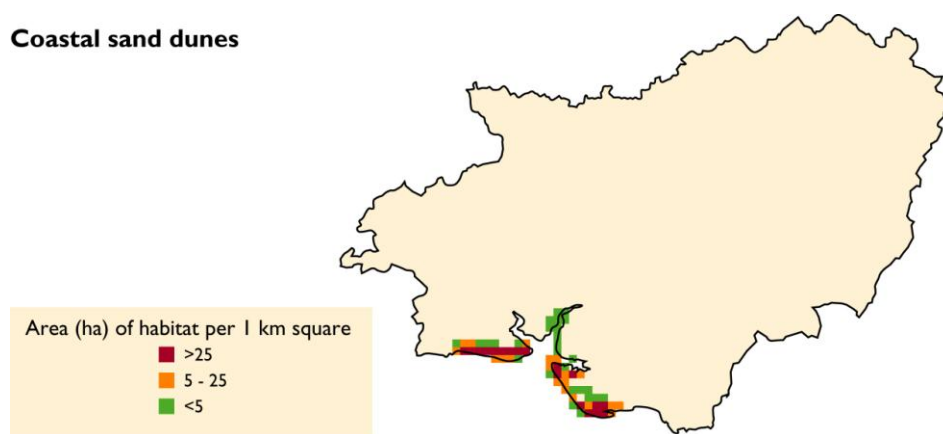
Welsh coastal soft cliff

- Tywyn Bach – Burry Port
- Craig Ddu to Llanstephan Castle
- Marros-Pendine Coast

Maps used with permission of Countryside Council for Wales 2004. Extracted from *Priority Habitats of Wales: a technical guide*, edited by P. S. Jones, D. P. Stevens, T. H. Blackstock, C. R. Burrows and E. A. Howe., 2003.

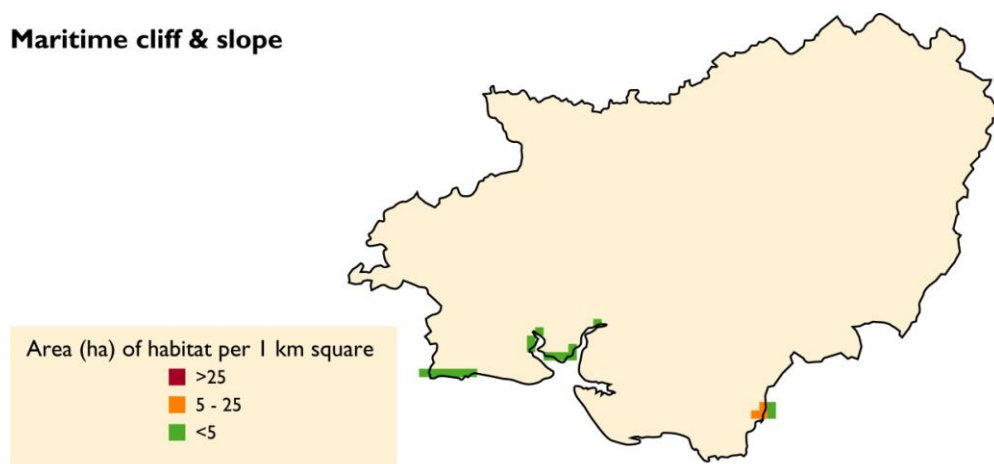
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Coastal sand dunes



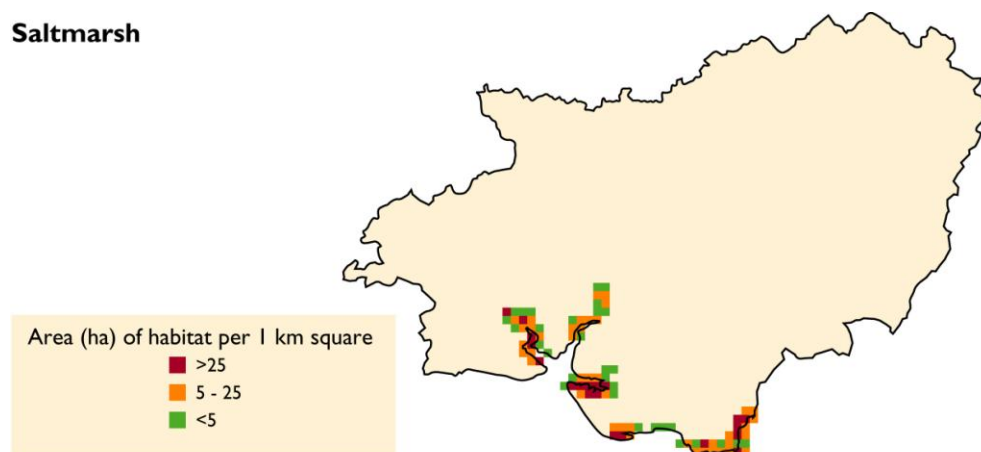
Distribution of 1 km squares with coastal sand dune habitat within Carmarthenshire and sediment cells/sub-cells. Data are summarised from the NCC/CCW Lowland Habitat Survey of Wales (1987-1997) and comprise open dune, dune grassland, dune slack, dune heath and dune scrub.

Maritime cliff & slope



Distribution of 1 km squares with maritime cliff & slope habitat within Carmarthenshire and sediment cells/sub-cells. Data are summarised from the NCC/CCW Lowland Habitat Survey of Wales (1987-1997) and comprise coastal hard and soft cliff, coastal grassland, coastal heath and coastal grass/heath mosaic.

Saltmarsh



Distribution of 1 km squares with saltmarsh within Carmarthenshire and sediment cells/sub-cells. Data are summarised from the NCC/CCW Lowland Habitat Survey of Wales (1987-1997) and comprise dense/continuous saltmarsh.



Partneriaeth Bioamrywiaeth Sir Gaerfyrddin
Carmarthenshire Biodiversity Partnership

www.carmarthenshirebiodiversity.co.uk

The [Carmarthenshire Biodiversity Partnership](#) (CBP) is made up of the following organisations: [Carmarthenshire County Council](#) (CCC), [Wildlife Trust of South and West Wales](#) (WTSWW), [Natural Resources Wales](#) (NRW), [RSPB](#), [Wildfowl and Wetlands Trust](#) (WWT), [Carmarthenshire Bird Club](#) (CBC), [National Botanic Gardens Wales](#) (NBGW), [Butterfly Conservation](#) (BC), [Carmarthenshire Rivers Trust](#) (CRT), [National Trust](#) (NT), [Botanical Society of the British Isles](#) (BSBI), [Llanelli Naturalists](#) (LN), [Bat Conservation Trust](#) (BCT), [West Wales Biodiversity Information Centre](#) (WWBIC), [Amphibian and Reptile Conservation](#) (ARC), [Woodland Trust](#) (WT)