

Carmarthenshire Nature Recovery Plan

Upland habitats include upland heathland, blanket bog, upland flushes, fens and swamps and inland rock outcrop and scree habitats.

Upland heathland occurs on mineral soils and thin peats in upland areas of the county, above the upper limit of agricultural enclosure. It includes both 'wet' and 'dry' heath. Dry heath is characterised by a high cover of species such as heather, bell heather, bilberry, crowberry and western gorse. Wet heath is dominated by mixtures of heather, cross-leaved heath, purple moor-grass and deer grass, alongside carpets of mosses (notably *Sphagnum* species). Good-quality heathland has patches of heather at different stages of growth (i.e. is structurally diverse). In Carmarthenshire, heathland has been lost and declined in quality, mainly as a result of heavy grazing, burning and subsequent conversion to grassland, and afforestation.

Upland heathland often forms a mosaic with other habitats such as blanket bog, mires, grassland, bracken, scree, scrub and woodland. Blanket bog can also be dominated by dwarf shrub vegetation, but this habitat typically occurs over deep peat.

The total extent of upland heathland in Carmarthenshire is relatively small. Much of the upland heathland habitats are concentrated in the north and east. Cwm Doethie–Mynydd Mallaen SSSI supports an extensive area of upland heathland and is designated a SAC for its dry heath vegetation. Mynydd Llanllwni, north of Brechfa, is an important non-designated area, mainly of wet heath/wet heath mosaic, which merits further investigation, although it is somewhat over-grazed.

Blanket bog is a globally rare habitat, approximately 10–15% of which occurs in Britain and Ireland. In the UK it covers large expanses of the uplands in the north and west, where the climate is typically cool and wet. Peat depth generally exceeds 0.5 m, having accumulated through the slow decomposition of plant material under waterlogged conditions. Studies indicate that most blanket peat in the UK began to develop between 5000 and 6000 years ago.

Bog mosses (*Sphagnum* species) are a prominent component of blanket bog vegetation, alongside dwarf shrubs such as heather, bilberry, crowberry and cross-leaved heath. Other common plants include cotton grasses and deer grass. Blanket bogs can support a rich variety of invertebrates and they are often of importance for birds

Uplands

Partneriaeth Natur
SIR GÂR • CARMARTHENSHERE
Nature Partnership



Natural benefits of freshwater habitats

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

- Climate regulation through carbon storage in peat bogs.
- Pollination – upland heathland.
- Natural flood protection via storage of water in upland bogs and fens.
- Supply of clean water - a significant amount of the UK water supply is sourced from upland rivers lakes and reservoirs.
- Regulation of water release – heath, bogs, flushes and fens help prevent runoff, a problem on overgrazed uplands.
- Uplands provide us with food - lamb and beef in Carmarthenshire is often produced on our uplands.
- Uplands hold all sorts of secrets of our human and climate history - ancient monuments, evidence of old agricultural systems, evidence of mineral workings and a pollen record preserved within peat soils - revealing

The carbon trapped in the peat makes this, along with other peat habitats, vital in the challenge to address climate change.

Much of the blanket bog in Carmarthenshire is modified and no longer peat forming. Survey data shows areas of intact blanket bog but much more wet and dry modified bog habitat. Much of this vegetation is concentrated in the upland areas of north Carmarthenshire.

Two SSSIs in Carmarthenshire contain blanket bog vegetation, including the extensive Cwm Doethie–Mynydd Mallaen SSSI. Many areas of blanket bog occur on common land.

Inland rock outcrop and scree habitats are a particular feature of upland areas. They are found on stony ground on cliff ledges, crags, etc. and can develop on a wide range of substrates, from acidic to highly calcareous.

A wide range of vegetation communities can be found on inland rock outcrops and screes, influenced by the rock type they are formed from. Lichens and bryophytes are notable features associated with inland rock outcrop and scree habitats.

Sometimes, especially in limestone areas, caves in rocky outcrops can be used by bats as hibernations sites, which occurs in Carmarthenshire.

Upland flushes fens and swamps

Variations in the ground and geology of upland areas often leads to the appearance of wet ground as water from the surrounding land is channelled into one area encouraging the development of areas of shallow standing water. These can be influenced by human disturbance such as peat cutting.

These all lead to the development of fens and wet flushes in the uplands, often small but important components of the upland landscape. As with most upland habitats, the fens and flushes usually occur as a mosaic with blanket bogs, wet and dry heath/grass areas, bog pools, exposed rock and can be important habitats for localised species of plants, mosses and invertebrates.

Fens and flushes often occur as part of the Ffridd zone.

Ffridd consists of a mosaic of semi-natural habitat types. It is typically dominated by bracken, and includes a number of the following: wet and dry heath, acid grassland, woodland, scrub and marshy grassland. It usually occurs on the area of land between enclosed fields and the open hill or upland conifer plantation, but can be found within enclosed fields where these have been abandoned, and the ffridd habitat has been able to develop, often on steeply sloping land that is difficult

past climatic conditions.

- Uplands are great places to experience the wide outdoors and see the landscape open out below you.

Why are upland habitats changing

(from the *State of Nature* report:

www.rspb.org.uk/stateofnature)?

- Forestry plantations.
- Atmospheric pollution.
- Farming.
- Climate change.
- Some types of habitat management.

Associated priority Section 7 species

(NB this may not be an exhaustive list):

Birds

European nightjar

Skylark

Tree pipit

Common linnet

Cuckoo

Yellowhammer

Grasshopper warbler

Curlew

Ring Ouzel

Lapwing

Golden plover

Mammals

Brown hare

Water vole

Invertebrates - moths

Small Heath

Dark Brocade

Grey Mountain Carpet

Galium Carpet

Neglected Rustic

Heath rustic

The Anomalous

Reptiles - Adder

Plants

Euphrasia rosikoviana montana

Bog orchid

Hieracium spp.

Stag's Horn Club moss

Globeflower

Wood bitter vetch

to farm. As a habitat ffridd can cover fairly large areas and thus makes an important contribution to the Welsh landscape.

Ffridd is also important for breeding bird, including species such as linnets, tree pipit, yellowhammer and stonechat. The large small mammal populations that use the habitat provide food for birds of prey.

Where to see these habitats in Carmarthenshire

Mynydd Mallaen, Mynydd Du, Mynydd Llanllwni



Vision statement and objectives

The overall vision for these habitats is to maintain, restore and extend these habitats and the priority species associated with them. This is especially important within the context of landscape character and habitat connectivity within the Carmarthenshire landscape and for blanket bog in its role of contributing towards climate change mitigation. A priority is to gather more information on these habitats outside designated sites and on their condition and current management status. Any action would seek to meet one or more of the following objectives:

- ▶ To positively manage these upland habitats in Carmarthenshire and connect and expand where possible.
- ▶ To maintain and expand the range and/or population of species associated with these habitat types.
- ▶ To identify and record priority areas of upland habitats within Carmarthenshire outside SSSIs.
- ▶ To raise awareness of upland habitats and the benefits they bring us.

Useful links:

<http://jncc.defra.gov.uk/page-1436>

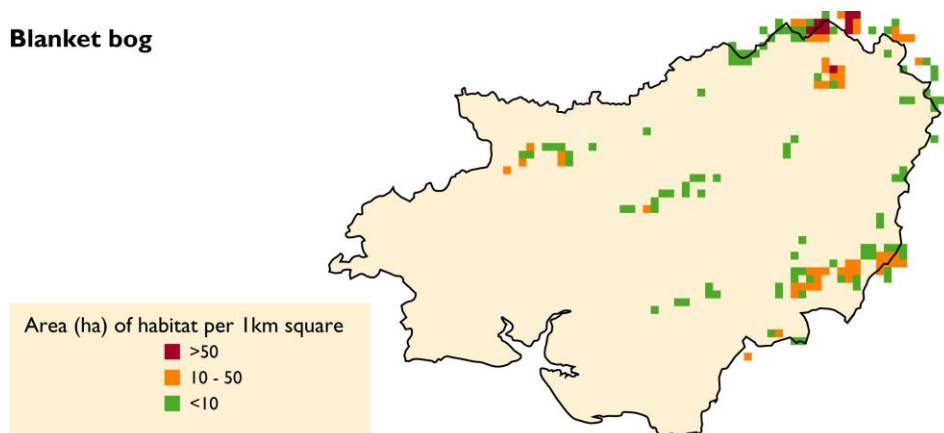
www.wildlifetrusts.org/wildlife/habitats/upland

<https://www.biodiversitywales.org.uk/Uplands>

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.

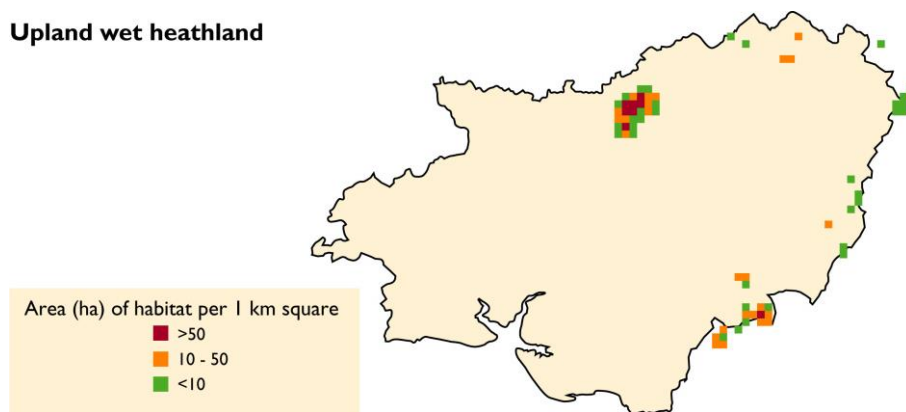
Reproduced from the Ordnance Survey map with the permission of the Controller of HM Stationery Office, Crown Copyright Reserved-LA0997L

Blanket bog



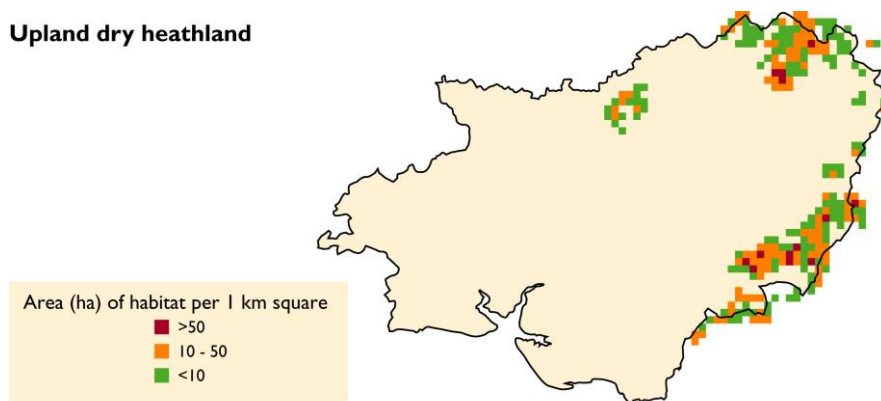
Distribution of 1 km squares with upland and lowland blanket bog within Carmarthenshire. Data are summarised from the NCC/CCW Habitat Survey of Wales (1979-1997) and comprise blanket bog as well as areas of wet and dry modified bog and bare peat assignable to this priority type.

Upland wet heathland



Distribution of 1 km squares with upland wet heathland within Carmarthenshire. Data comprise wet heath and half the cover of grass/wet heath mosaic, and are summarised from the NCC/CCW Habitat Survey of Wales (1979-1997); survey of this habitat was carried out mainly between 1979 and 1989

Upland dry heathland



Distribution of 1 km squares with upland dry heathland within Carmarthenshire. Data comprise acid dry heath and half the cover of grass/dry heath mosaic, and are summarised from the NCC/CCW Habitat Survey of Wales (1979-1997); survey of this habitat was carried out mainly between 1979 and 1989.