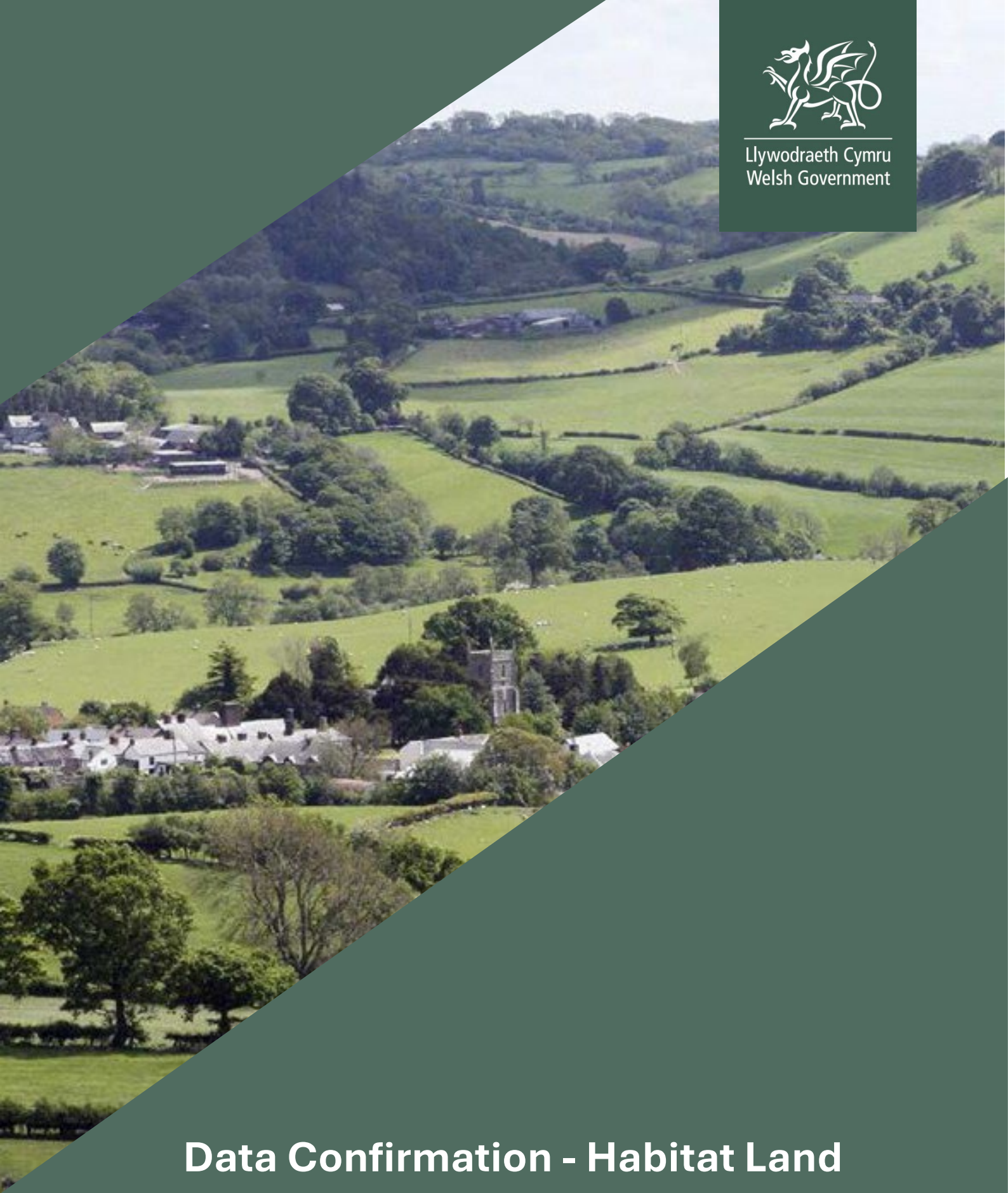

Llywodraeth Cymru
Welsh Government

Data Confirmation - Habitat Land Classification Photograph Guide

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Introduction

The habitat and tree canopy contained within the Data Confirmation form will provide you with maps and information on the following broad habitat classifications:

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- Enclosed wetland and marshy grassland
- Lowland and coastal heath
- Coastal saltmarsh
- Coastal sand dune and shingle beach
- Upland open habitats (including 'mosaics' of heathland, peat bogs and extensive grasslands)
- Dense Bracken
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In many cases you may be able to confirm the habitat classifications are correct based on historic farming practice. However, in some cases you may need to check against our latest aerial photography and use the habitat descriptions provided to determine which classification applies to a specific area.

For the purposes of this Data Confirmation exercise semi-natural **habitat land is defined as land with less than 25% cover of ryegrass and white clover or other agriculturally sown species**. Agricultural improved land is land with more than 25% ryegrass and white clover or other agriculturally sown species.

When reviewing aerial photography, semi-natural land generally has a pale green, yellow or brown colour and will often appear different to the agriculturally improved grasslands which has a bright green colour. However, please note, recently topped habitat or haymeadow aftermaths can have a flush of green growth after cutting as can many semi-natural habitats in the spring.

If a mixture (or mosaic) of different habitats are present within a field parcel which might be complex to map into individual habitat classifications, these should be mapped using the dominant habitat classification (i.e. with the greatest cover over the whole area).

Broad habitat land classifications

Enclosed semi-natural dry grassland (managed as either pasture or hay meadow)

This includes all enclosed (usually lowland) dry grassland with less than 25% ryegrass and white clover, including acid, neutral, calcareous, coastal and Calaminarian (metal mine) grasslands. Saltmarsh and sand dunes are separate habitats.

Land that has not been recently ploughed or reseeded and does not receive high levels of inputs and is more extensively grazed is more likely to be semi-natural. Grassland previously entered into agri-environment low or no input options or haymeadow options is also more likely to be semi-natural.

While flower-rich unimproved grasslands may be easily identified as habitat, species-poor grassy swards may need to be assessed to confirm whether they are semi-natural or agriculturally improved.

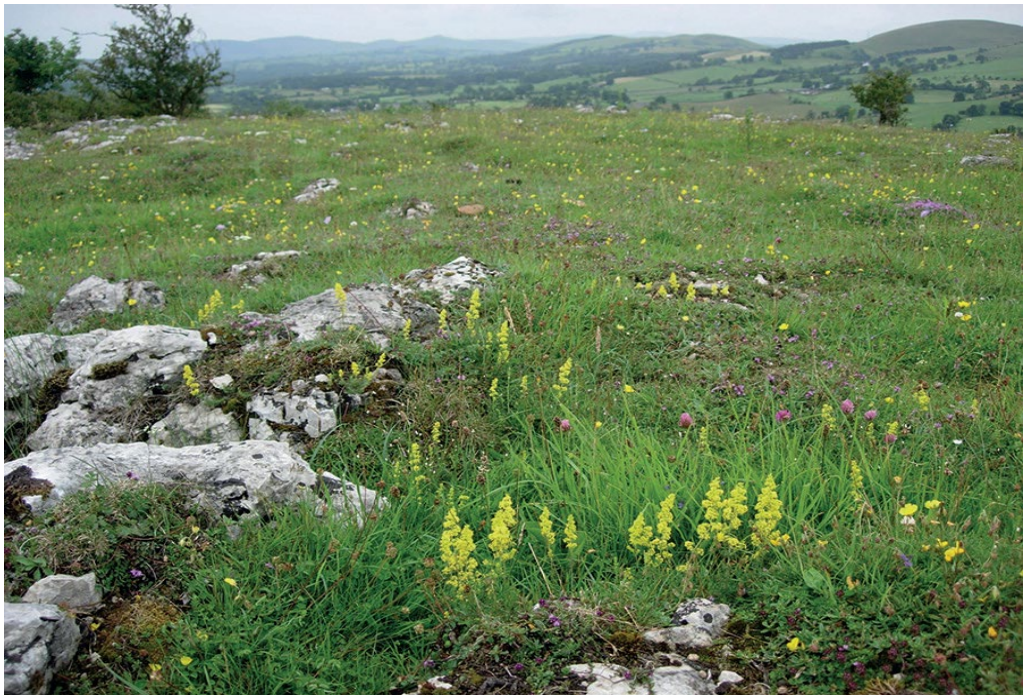
Grasslands with scattered tussocks of soft rush with dry grassland in between may also be included in this category. If the site is predominantly rush or purple moor grass then it should be mapped as enclosed wetland and marshy grassland.

Enclosed semi-natural dry grassland – includes enclosed grassland in the upland fringe below the line of enclosure.

Enclosed semi-natural dry grassland - Lightly grazed and species-poor.

Enclosed semi-natural dry grassland – species poor, regrowth after cutting.

Enclosed semi-natural dry grassland – species rich neutral hay meadow.



Enclosed semi-natural dry grassland - lowland calcareous grassland.

Enclosed semi-natural dry grassland - a lowland dry acid Grassland.

Enclosed wetland and marshy grassland

Applies to semi-natural land.

This habitat classification includes a wide range of habitats including bog, fen, flush, swamp, reedbed, marshy grassland and rhos pasture.

Enclosed wetland and marshy grassland will usually be readily identifiable as clearly semi-natural damp or wet ground with a high cover of rushes, purple moor grass, cotton grass, sedges, reeds and/or mosses usually with much less than 25% ryegrass and white clover.

Vegetation matching the description above on deep peat (more than 50 cm depth) are usually defined as wetland. Marshy grassland occurs on shallower peat (less than 50 cm depth) or other soil types but may appear very similar to some wetland types, particularly those that have been modified or are in poor condition. Land with abundant heather species over deep peat (more than 50 cm depth) should be mapped as enclosed wetland and marshy grassland, where they occur over shallow peat (less than 50 cm) they should be mapped in the lowland and coastal heath class.

Enclosed wetland and marshy grassland - rush dominated marshy grassland.

Enclosed wetland and marshy grassland - Blanket bog while mainly upland can occur in the lowlands, note the high cover of heather species.

Enclosed wetland and marshy grassland – lowland raised bog with purple moor-grass and hare’s tail cotton grass.

Enclosed wetland and marshy grassland - Modified bog with cattle grazed purple moor grass.

Enclosed wetland and marshy grassland – lowland acid mire (fen).

Enclosed wetland and marshy grassland – Lowland fen (wetland) on deeper peat with fringing rush pasture (marshy grassland) on thinner peat.

Enclosed wetland and marshy grassland – with reeds and tall sedges.

Enclosed wetland and marshy grassland – water table is more permanently close to the surface in wetlands (above) compared to marshy grasslands.

Lowland and coastal heath

Lowland heath is identifiable as clearly semi-natural land usually at least 25% cover of heathland dwarf shrubs particularly heathers (heather, bell heather, cross leaved heath), western gorse and sometimes bilberry, occurring in a mix (or mosaic) with grasses, rushes, sedges and mosses (depending on hydrology) over mineral or shallow peat soils (less than 50 cm of peat).

Lowland heathland can have a very variable appearance. Its structure can range from sparse, wind and exposure pruned heather with abundant bare ground in maritime heaths on cliffs, to dense cover of heather and western gorse dominate coastal and dry heaths to wet heaths where dwarf shrubs may be supressed under purple moor grass or give way to deer grass.

Wet heath may appear similar to some types of wetland and can also have less than 25% cover of dwarf shrubs but areas with at least one heathland dwarf shrub and one or more of the following species present: sphagnum moss, bog asphodel, common cotton grass or deer grass and where the underlying peat is less than 50 cm deep should be mapped as Lowland and coastal heath.

Areas that appear to match the description of heathland but are on more than 50 cm depth of peat should generally be mapped in the wetland category for example bogs with abundant heathers. Areas of peat more than 50cm can simply be identified by pushing a bamboo cane or similar item into the ground. If the surface is peat and a 50cm length of a cane can easily be pushed into the ground, this indicates that the peat depth is more than 50cms.

See the Dense scrub classification description to help differentiate between heathland and scrub.

Dune and shingle heath should be mapped in the Sand dune and coastal vegetated shingle classification and not as Lowland and coastal heath.

Heather dominated lowland dry heath with western gorse.

Undermanaged dry heath with dense western gorse (yellow flowers and low cushion-like form), heather (light purple flowers) and bell heather (reddish/purple flowers).

Good condition maritime heath.

Poor condition dry heath should still be mapped as Lowland and coastal heath, this is not scrub.

Humid heath with purple moor grass and western gorse.

Wet heath with purple moor grass, heather and cross-leaved heath.

Coastal saltmarsh

Saltmarshes form when plants colonise sheltered mud between the lowest high tide level and the highest high tide level. They are therefore generally found in sheltered estuarine locations. Vegetation consists of grasses, sedges, rushes and specialist salt tolerant plants with different zones of vegetation reflecting the frequency of inundation with sea water, the upper saltmarsh may appear similar to semi-natural dry grassland. They can be extensive covering large areas of the coast or just small fragments within the tidal range of estuarine river systems.

Saltmarsh - low grazing.

Saltmarsh – more heavily grazed.

Saltmarsh – a relatively narrow strip of ungrazed saltmarsh with abundant sea purslane.

Coastal sand dune and shingle beach

Sand dunes include a range of semi-natural coastal vegetation types growing on sand. They can form dynamic systems with areas of bare sand, coarse marram grass, finer grasses and herbs and heathland. Seasonal pools may form further back from the coast in the dune slacks.

Coastal vegetated shingle occurs where specialist plants colonise coarser material such as pebbles or gravels together with sand and finer sediment. Coastal vegetated shingle may also stabilise over time and support grassland or heathland.

Sand dune and coastal vegetated shingle – an extensive sand dune complex.

Upland open habitats (including 'mosaics' of heathland, peat bogs and extensive grasslands)

Upland is defined as land above the upper limit of enclosure (approx. 300m).

All upland open habitats and habitat mosaics, including heathland, wetland (bog, fen, flush and swamp), marshy grassland and dry grassland including small area of improved land, should be mapped as Upland open habitats. Confirmation that a parcel is upland and predominantly habitat is sufficient for this classification.

To note, care is needed to map areas with dwarf shrub heathland species such as Western gorse and heathers as heathland and not scrub.

Upland open country - heathland and acid grassland (showing the impact of grazing level) in the foreground and montane habitats in the background.

Upland boundary – semi-natural unenclosed land (Upland open habitats) above the enclosed fields.

Dense Bracken

Areas of dense bracken cover are treated as habitat in their own right. Bracken at high cover levels over a dense litter of dead bracken should be mapped as dense bracken. Where the underlying habitat is clearly identifiable under the bracken the whole area should be mapped as the underlying habitat.

Dense Bracken – in the Autumn.

Dense bracken - in Summer (foreground).

Traditional orchards (woody habitat)

Applies to semi-natural land and agriculturally improved land with traditional orchard trees.

These are areas with apple, pear, cherry, plum, damson, walnut trees or cobnut plats usually on grassland managed by grazing or cutting. The tree stocking density depends on the species of tree. For apple, pear and cherry this will usually be less than 150 trees/ha. (approximately 8 m spacing between the trees), but for other species such as plum and damson this density may be higher. Trees should be standard or half standard size, for apple trees this means they would be more than 3m tall at maturity.

Young trees and newly planted orchards that are managed in a low intensity way are also included in the definition.

Intensively managed commercial orchards should not be included. These often are easily identifiable from the modern very short dwarf varieties of trees planted (approx. 2m height) grown over herbicided strips of bare ground.

Traditional orchard - with over mature trees, lightly grazed.

Traditional orchard - more heavily grazed.

Commercial orchards with herbicide strips and irrigation should not be mapped as Traditional orchards.

Scrub (woody habitat)

Scrub is vegetation dominated by shrubs which are usually less than 5 m tall when fully grown. Scrub can be made up of a wide range of species, with the commonest being gorse, blackthorn, hawthorn, elder, bramble and willow.

If the underlying habitat is clearly visible under the scrub (i.e. the scrub is scattered and open with underlying grassland), particularly where grazed, the area should be mapped in line with the underlying habitat, otherwise map as dense scrub.

To note, care is needed to map areas with dwarf shrub heathland species such as Western gorse and heathers as heathland and not scrub (see Lowland and Coastal Heath for pictures of western gorse).

European gorse (see photographs below) should be mapped as scrub. It tends to be much taller than western gorse which is often around knee height at maturity, western gorse often has a dense cushion like form rather than European gorse which can be somewhat straggly. Non-native invasive species such as rhododendron should not be mapped as scrub.

Dense scrub - mixed European gorse and thorn scrub.

Scattered bracken and scrub - European gorse, bramble and willow scrub. The underlying grassland should be mapped as Enclosed wetland and marshy grassland.

Wood pasture (woody habitat)
Wood pasture has a tree cover of less than 30%, occurring as scattered trees. However, trees may be clumped to produce a higher cover than 30% locally. There should be a minimum of 6 trees per ha scattered across the site. Many of the existing trees are of open grown character, with wide, deep crowns and short trunks. It consists of a grazed landscape and has scattered native but sometimes non-native or ornamental trees over 3 metres tall overlying often rough grassland or heathland frequently in a mosaic with scrub and bracken.

Wood pastures are usually the products of historic land management systems and represent a vegetation structure, rather than being a particular plant community. The most environmentally significant examples can include numerous old trees often referred to as veteran trees. This classification applies to semi-natural land. Wood pasture on agriculturally improved or arable land is excluded.

Wood pasture - grazed with tussocky grass and bracken, veteran trees and dead wood.

Wood pasture - in the upland fringe.

Permanent wildlife ponds

Wildlife ponds are defined as areas of open water limited to 1ha or less in size whose primary function is to benefit nature. This does not include features whose primary function is water storage for farming operations e.g. irrigation ponds, storage reservoirs, hydro tanks, sole sources of water for livestock.

Newly Created Habitat Areas on Improved Land

This category covers areas where work is being undertaken to establish habitats on agriculturally improved or formerly afforested land which initially do not meet the habitat descriptions listed above i.e. the land is not identifiable as habitat. However, the management will mean the land is likely to change over time i.e. it will move from newly created habitat classification into the most appropriate habitat classification in the future.

Examples of activities that could fall into this category include in-field wildlife corridors and flower-rich areas that provide habitats for various wildlife, supporting pollinators, invertebrates, small mammals, and birds. These features also protect other habitats, like hedgerows and watercourses, while acting as corridors for wildlife movement.

An example of a streamside corridor on improved land

Intensively managed improved land

Applies to agriculturally improved land and is not classified as habitat land.

Agriculturally improved grasslands with more than 25% ryegrass and white clover and that are intensively managed with high grazing levels or multiple cuts of silage and high inputs of slurry or fertiliser. Extensively managed agriculturally improved land should not be mapped as a habitat type.

Intensively managed improved land - high levels of ryegrass and white clover. Shiny leaves of ryegrass can be visible at field level as in this silage field.