

# Booklet 6 Guide to Recording Mosaic Habitats in Rhondda Cynon Taf



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## Rhondda Cynon Taf habitats mapping project

In order to conserve and enhance our biodiversity we need up-to-date information about habitats and species. Understanding habitats is fundamental to understanding how to protect and manage biodiversity. Between the late 1980s and the mid 1990s, the Countryside Council for Wales (now called Natural Resources Wales) undertook a Phase I Habitat Survey of the whole of Wales. An amazing undertaking, which has proved invaluable to Welsh nature conservation. However, that information is now aging. So perhaps it is time for all of us who have an interest in finding, identifying and recording species, to start thinking about and recording their habitats as well? If that sounds interesting, and perhaps a new way to interpret and understand the biodiversity of Rhondda Cynon Taf (RCT), then read on.

Use this booklet in conjunction with the Introduction to Recording Habitats in RCT and the other 5 habitat booklets in this series.

## RCT Mosaic habitats

Phase I Habitat Mapping is based on identifying, describing and mapping key habitat types, as defined by the JNCC Handbook for Phase I Habitat Survey - a technique for environmental audit (2016) Phase I Habitat Manual. Many of the most important biodiversity landscape features of RCT, occur as complex mixes and mosaics of multiple Phase I Habitats. Some of the CCW Phase I maps of RCT are particularly beautiful tapestries of the different Phase I Habitat colours. A visual indication of habitat and species richness and diversity. This booklet covers some of the key types of habitat landscape mosaics that help to categorise the biodiversity of RCT:

- [Ffridd Mosaic](#) (also known as Coedcae or Upland Fringe)
- [Colliery Spoil](#)
- [Rhôs Pasture](#)
- [Heath Mosaic](#)
- [Rock Exposures: Craggs, Cwms and Scree](#)

## Why are these habitats important?

Mosaic habitats are mixes of more than one habitat type (often multiple habitats) that occur in intricate complexes. The diversity of topography, micro-geology, soil type and depth, hydrology, and localised pH provides the conditions for an assortment of natural or semi-natural habitats to form in close proximity. Mosaic habitats can therefore be very diverse, supporting a complex range of flora and fauna. They also can provide excellent habitat connectivity, reflecting the wealth of semi-natural habitats that is the defining biodiversity feature of the South Wales Valleys. Mosaic habitats also often exhibit dynamic successional change, which in recent years has seen massive encroachments of scrub and woodland within many mosaic sites.

## Identifying and recording a mosaic habitat

In mosaic habitats, vegetation stands blend into one another and can also form a patchwork of different habitats that occur together.

### **Similar Habitats**

- Scattered scrub, woodland (see Booklet 1 Woodlands & Scrub).
- Acid grassland and flushed Rhôs pasture (see Booklet 2 Grasslands).
- Heathlands (see Booklet 3 Heathlands).
- Peatbogs, mires, fens, swamps and flushes (see Booklet 4 Wetlands).
- Watercourses and standing water (see Booklet 5 Waterbodies).

Use the Introduction to Recording Habitats in Rhondda Cynon Taf for step-by-step instructions on recording habitats.

## Staying safe

Please take a common sense approach to recording. We do not advocate any form of trespassing, and please do not take any risks with regards to your own health and safety.

Mosaic habitats can transition quickly. The following additional safety warnings are specific to mosaic habitats:

- Craggs and scree slopes can be unstable and rocks are easily dislodged. Take great care when walking on or below them.
- Check the weather forecast, avoid recording in bad weather.
- Ideally avoid working alone. If not, always tell someone where you are going and when you will be back.
- Carry a mobile phone.
- Carry a basic first aid kit, and maybe a whistle for emergencies.
- Take appropriate equipment and clothing for the weather and site conditions. For example, walking boots or shoes, warm clothes, waterproofs, sunhat, suncream.
- Take an OS map, and a compass if going to remote areas. Don't rely solely on your mobile to know where you are, especially in remote and upland areas with fewer landmarks or areas with limited phone or GPS signal. An OS map may also help you map habitats within an area. If you are not confident in reading maps, stick to established routes.
- Remember to always wash your hands before eating, particularly after touching plants, animals, fungi or water. Some plants and fungi are poisonous so don't be tempted to have a nibble!
- Ticks are small invertebrates that can bite humans and spread Lyme disease. High risk places include grassy and wooded areas. To reduce risk, cover your skin, tuck trousers into socks, and use insect repellent containing DEET. Check your body for any ticks on arriving home, and safely remove any as soon as possible using a tick-removal tool. If you start to feel unwell or develop a rash in the following days, consult a GP. For more information see [nhs.uk/conditions/lyme-disease](https://www.nhs.uk/conditions/lyme-disease)
- Trust your own instincts. If you feel uneasy, leave and return home.

# Habitat Descriptions

## Habitat guide symbols

The following symbols are used in the habitat guides to denote indicator species to record.



A key symbol means that a plant is a key feature of the habitat.



A hand symbol means this species is associated with the habitat, but not always present.



A beetle symbol means these animals are supported in this habitat.



This icon denotes invasive non-native species (INNS) which may cause damage to the habitat.

## Ffridd Mosaic

Ffridd is the zone of uncultivated valley sides, the interface between upland and lowland habitats. It is the transitional zone between the two areas. The ffridd represents some of the most important expanses and connectivity of semi-natural habitat in RCT. All of the main river valleys of the County Borough have long sections of near continuous valley side ffridd, often occurring on both sides of the river above the settlement boundary. These mosaics can run for miles.

An important feature of the ffridd are stands of dense or scattered bracken, a Phase I Habitat Type not described in the other habitat booklets produced in this series. Bracken (*Pteridium aquilinum*) can often be over dominant, and crowd out other habitats, but it can also be an invaluable habitat, particularly if part of managed ffridd mosaic.

When mapping bracken habitat, it is best to try and visit it in the spring, before the Bracken grows too high. At that time of year, under what you might have otherwise considered to be 'wall to wall' Bracken, you may find acid or neutral grassland, marsh or flush, or heath. The tell-tale flowering of Bluebells (*Hyacinthoides non-scripta*) or Dog Violets (*Viola* species) in springtime valley side bracken is a clear indicator that there is a more species-rich understorey grassland beneath the ferns.

Wherever possible try to discern and map the other components of ffridd sites. As clues aerial photos can be very helpful, as can viewing a ffridd hillside from the other side of the valley. If you revisit and look at a ffridd site, over the different seasonal changes and over years, that can help to reveal different habitat components. Therefore, in the late spring the bright green of Wimberry/Bilberry (*Vaccinium myrtillus*) can often stand out, in August the purple of Heather (*Calluna vulgaris*), and in the autumn you may be better able to pick out the orange of Purple Moor-grass (*Molinia caerulea*) which goes white in winter, the russet-brown of Bracken, or the dark green of Bramble (*Rubus fruticosus*). Even Japanese Knotweed (*Reynoutria japonica*) has its own characteristic bright orange 'signature' in September.

For the various Phase I Habitats that make up the ffridd refer to:

- Dry and wet heath: see Booklet 3: Heathlands

- Marshy, neutral or acid grassland: see Booklet 2: Grasslands
- Scattered scrub, woodland: see Booklet 1: Woodland & Scrub
- Flush and bog: see Booklet 4: Wetlands
- Pond: see Booklet 5: Waterbodies

## Ffridd Mosaic: What to look for

Also see habitat descriptions for the different elements of ffridd in the various booklets listed above. A few characteristic highlights are:



Bracken (*Pteridium aquilinum*), a common fern forming dense stands on hillsides, seen all year round, but turns orangey-brown in winter.



Common Gorse (*Ulex europaeus*), Western Gorse (*Ulex galli*), Common Heather (*Calluna vulgaris*), Dog Violet (*Viola riviniana*), Wimberry/Bilberry (*Vaccinium vulgaris*), Bluebell (*Hyacinthoides non-scripta*), Sessile oak (*Quercus petraea*).



**Birds:** Meadow Pipit (*Anthus pratensis*), Tree Pipit (*Anthus trivialis*), Stonechat (*Saxicola torquata*), Cuckoo (*Cuculus canorus*), Linnet (*Carduelis cannabina*).

**Herptiles:** Slow Worm (*Anguis fragilis*), Common Lizard (*Zootoca vivipara*), Adder (*Vipera berus*)\* Note this is a venomous snake

**Invertebrates:** Dark Green Fritillary (*Speyeria aglaja*), Grayling Butterfly (*Hipparchia semele*), Small Pearl-bordered Fritillary (*Boloria selene*).

**Fungi:** Various waxcap species.

## Colliery Spoil

Colliery spoil tips are an industrial and cultural legacy from the south Wales coal industry. They are mixture of mainly reclaimed tips and a few old Victorian and Edwardian tips. Colliery spoil is prime example of the often-undervalued powers of natural seedbank colonisation, regeneration and recruitment. As large sites, with nutrient poor spoils of sometimes different pHs, and often complex topographies, colliery spoil sites support complex habitat mosaics of considerable biodiversity importance. Their wide distribution across the County Borough, often occurring close to, or within ffridd, or adjacent to rhôs pastures, ensures that colliery spoil is part of the functioning wealth of semi-habitats that defines the biodiversity of the South Wales Valleys.

As with the ffridd, wherever possible try to map and discern the different Phase I Habitats within a colliery spoil site. As described in booklets 1 to 4, colliery spoil often has its own fascinating variations of grassland, marsh, heath and wetland vegetation, and these are summarised in those other booklets in the series. However, when thinking about individual colliery spoil sites, it is also important to think of them as individual 'whole' sites, and not just in terms of their component habitats. If you know any of the history of your local tip, that knowledge can help to better inform your understanding and interpretation of the habitats and species that now record there.

## Rhôs Pasture

As explained in *Booklet 2: Recording Grasslands*, Rhôs pasture is a mosaic habitat. Rhôs describes the mainly wet, but often heathy, rough pasture habitats that once characterised so much of south, west and north-west Wales. The primary habitat is marshy grassland with Purple Moor-grass (*Molinia caerulea*) and rush pasture, but Rhôs pasture sites and landscapes will also often support areas of drier acid and neutral grassland, dry and wet heath, flush and bog, bracken and scrub in complex mosaics.

Please see booklet 2 for a detailed description of marshy grassland.

## Heath Mosaic

From booklet 3: Dry heath is often associated with banks and drier ground within large rhôs pastures site and as part of the complex mosaics of ffridd habitat. For a description of dry heath.

Wet heath can form a band between wetter areas of blanket bog, and drier areas of dry heath. In RCT, it often forms patches interspersed with rhôs pasture. Wet heath can grade into blanket bog habitat (see booklet 4: Wetlands).

## Heath Mosaic: What to look for

## Rock Exposures (Crag, Cwm, Scree and Quarries)

RCT is a place marked by glaciation, and then much later quarry and rock extraction. Rock exposures are a particular habitat mosaic for which a number of individual Phase I Mapping categories exists. Although at first glance they may look like sterile areas of little value, ~~however~~, they offer refuges for plant communities, including some more usually associated with mountain or alpine habitats. They are harsh environments with little or no moisture-retaining soil, and the rocky substrate is often unstable, but these conditions allow certain species, and vegetation communities opportunity.

The crags and scree slopes of RCT are glacial features and habitats of considerable biodiversity value at the southern extreme of their UK distribution. Pioneer species such as lichens, bryophytes, and ferns including Parsley Fern (*Cryptogramma crispa*), are first to colonise more stable areas, before other species such as Wavy Hair-grass (*Deschampsia flexuosa*) and Sheep's Fescue (*Festuca ovina*). Other species may be present on the periphery such as Bracken (*Pteridium aquilinum*), Wimberry/Bilberry (*Vaccinium myrtillus*) and Heath Bedstraw (*Galium saxatile*). This successional sequence can be re-set at any time as the rocks periodically give way.

Glacial cwms are the steep-sided hollows or bowls on a mountainside. Scree can be recognised by drifts of broken rock that fan out on slopes beneath crags, and can support a variety of upland fern species as well as club-mosses, and bryophytes.

Quarries are an industrial feature of RCT. Initially, habitat was lost to the excavations, but the quarry activities have created new 'crags and rock faces' onto which Peregrines (*Falco peregrinus*) and Raven (*Corvus corax*) nest, and fern communities establish.

## Rock Exposures, Craggs, Cwms and Scree: What to look for



**Crustose lichens** such as *Porpidia* species and *Stereocaulon* species. Look for scaly grey or white crusts on rock surfaces. Parsley Fern (*Cryptogramma crispa*), an upland specialist seen all year round.

**Bryophytes:** Alpine Haircap Moss (*Polytrichastrum alpinum*), -Woolly Fringemoss (*Racomitrium lanuginosum*) and Green Mountain Fringemoss (*Racomitrium fasciculare*).

**Flowering plants:** Sheep's Fescue (*Festuca ovina*), Wavy Hair-grass (*Deschampsia flexuosa*), Cowberry (*Vaccinium vitis-idaea*), Roseroot (*Sedum rosea*).

**Ferns and fern allies:** Fir Clubmoss (*Huperzia selago*), Oak Fern (*Gymnocarpium dryopteris*), Wilson's Filmy Fern (*Hymenophyllum wilsonii*), Mountain Male-fern (*Dryopteris oreades*).



**Birds:** Peregrine Falcon (*Falco peregrinus*), Raven (*Corvus corax*),

**Invertebrates:** Plaited Door Snail (*Cochlodina laminata*)

## Where to see different habitats in RCT

Become familiar with key habitats in RCT by visiting the network of 29+ sites managed for nature. These important areas are nature hotspots and connected stepping stones in the wider countryside.

For more information click on the links for each site, or see the RCT Living Landscapes website: [www.rctlivinglandscape.wales](http://www.rctlivinglandscape.wales)

± Note: in RCT, ffridd is a complex or mosaic of various habitats. The following relevant booklets should therefore be consulted for suggested National Vegetation Communities (NVC): acid grassland and flushed rhôs pasture (see booklet 2 Grasslands, heath (see booklet 3 Heathlands), scattered scrub and woodland (see booklet 1 Woodlands).

| Habitat                            | Example RCT Sites                                                                               | Location |
|------------------------------------|-------------------------------------------------------------------------------------------------|----------|
| <b>Coal Spoil, Ffridd ±</b>        | <a href="#">Cwm Clydach</a> (Clydach Vale Country Park)<br>Dare Valley Country Park             |          |
| <b>Ffridd ±</b>                    | Billy Wynt,<br>Rhondda & Cynon valley sides (open access land)<br>Cwm Clydach<br>Dare Valley CP |          |
| <b>Crags, Cwms &amp; Scree</b>     | Dare Valley CP<br>Cwm Clydach CP<br>Darran Park                                                 |          |
| <b>Cwm &amp; Crags</b>             | Cwm Saerbren                                                                                    |          |
| <b>Cwm &amp; Crags; Coal Spoil</b> | Dare Valley County Park                                                                         |          |
| <b>Quarry?</b>                     | Llanharary Quarry                                                                               |          |
| <b>Coal Spoil</b>                  | Gelli Tips                                                                                      |          |
|                                    | Cwmaman Tip<br>Aberamen Tip                                                                     |          |
|                                    | Cwm Tips                                                                                        |          |

|  |                             |  |
|--|-----------------------------|--|
|  | Old Smokey (Tylorstown Tip) |  |
|--|-----------------------------|--|

## Summary: Key Species by Habitat

| Habitat                      | Key Species                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Ffridd                       | Bracken ( <i>Pteridium aquilinum</i> )                                                                                 |
| Crags, Scree, Cwms and Scree | Lichens such as <i>Porpidia</i> species and <i>Stereocaulon</i> species<br>Parsley Fern ( <i>Cryptogramma crispa</i> ) |
| Coal Spoil                   | Not applicable                                                                                                         |

## List of key species from mosaic habitats

| Key Species by <b>Common Name</b>                               | Habitat                      |
|-----------------------------------------------------------------|------------------------------|
| Bracken ( <i>Pteridium aquilinum</i> )                          | Ffridd                       |
| Lichens such as <i>Porpidia</i> and <i>Stereocaulon</i> species | Crags, Scree, Cwms and Scree |
| Parsley Fern ( <i>Cryptogramma crispa</i> )                     | Crags, Scree, Cwms and Scree |

| Key Species by <b>Scientific Name</b>     | Habitat |
|-------------------------------------------|---------|
| <i>Cryptogramma crispa</i> (Parsley Fern) | Ffridd  |

|                                      |                              |
|--------------------------------------|------------------------------|
| <i>Porpidia</i> lichens              | Crags, Scree, Cwms and Scree |
| <i>Pteridium aquilinum</i> (Bracken) | Crags, Scree, Cwms and Scree |
| <i>Stereocaulon</i> lichens          | Crags, Scree, Cwms and Scree |

## Useful resources

- **Britain's Habitats:** A field guide to the wildlife habitats of Great Britain and Ireland, Lake, S. *et al.* Wild Guides. 2<sup>nd</sup> Edition, 2020
- [rctlnp.wixsite.com/rct-actionfornature/crags-scree](https://rctlnp.wixsite.com/rct-actionfornature/crags-scree) **RCT Action plan for nature, 2023:** crags, screes, cwms and quarries
- [rctlnp.wixsite.com/rct-actionfornature/ffridd](https://rctlnp.wixsite.com/rct-actionfornature/ffridd) RCT Action plan for nature: ffridd
- [rctlnp.wixsite.com/rct-actionfornature/coal-spoil](https://rctlnp.wixsite.com/rct-actionfornature/coal-spoil) RCT Action plan for nature: coal spoil
- [collieryspoil.com](https://collieryspoil.com) The **Colliery Spoil Biodiversity Initiative**, Raising awareness of the biodiversity value of colliery spoil sites.