

## Habitat Definitions and Coding

Below are definitions used to describe different types of habitats that you will come across when out surveying. Use these definitions along with handout 6 (habitat indicator species tick list) to decide which habitats make up your County Wildlife Site.

Use the headings below and associated coding to write your habitat descriptions on Handout 17 (County Wildlife Site Survey Form).

Categorising the County Wildlife Site into these different habitats is the basis for creating a phase 1 survey habitat map. This will be used to inform conservation management plans for the site.

*For further information, Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit (2007).*

### Habitat Definitions

#### A1 Woodland

Woodland is vegetation dominated by trees forming a distinct, although sometimes open canopy. The percent cover of trees must be 30% or more to categorise an area as a woodland.

There are three main types of woodland:

##### A1.1 Broad-leaved

- Deciduous woodland with 10% or less conifer in the canopy

##### A1.2 Coniferous

- Evergreen and deciduous conifers with 10% or less broadleaved in the canopy

##### A1.3 Mixed

- 10-90% of either broadleaved or conifer in the canopy

Once the type has been decided on a woodland can be further split into two categories:

#### Semi-natural woodland

- Woodland with a canopy of less than 30% planted tree cover should be classified as semi-natural
- Comprises all groups of trees that do not obviously originate from planting. Both ancient and more recent groups are included

Other examples to include in the semi natural category include:

- Woods with planted areas amongst semi-natural coppice
- Mature plantations of native species (over approx. 120 years old) where there is semi-natural woodland ground flora and shrub communities
- Self-sown secondary areas of exotic species (e.g. sycamore)
- Alder carr and willow, where the willows are over 5m tall (Nb\* Grey Willow should always be classified as scrub)
- Well established sweet chestnut coppice (approx. over 25 years old)
- Woods which have been completely under planted, but where the planted trees do not yet contribute to the canopy
- Areas of young trees or coppice regrowth, even when less than 5m tall



### Plantation woodland

- Woodland with a canopy of greater than 30% planted tree cover should be classified as plantation
- Comprises all obviously planted woodland of any age including orchards and arboreta (with exception to those listed above)

NB\* A woodland can be split into three separate layers to help with surveying the different flora; top canopy, under-storey and ground layer.

### A2 Scrub

Scrub can be an intermediate succession stage (from grassland) to woodland, or can settle as the final stage in a succession. It is dominated by locally native shrubs, usually less than 5m tall, occasionally with a few scattered trees.

The following should be included in this category, amongst others not listed:

- Common gorse, common broom and common juniper
- Areas of blackberry and dog rose
- Areas of downy willow, woolly willow, whortle-leaved willow, mountain willow or tea leaved willow
- Areas of hawthorn, blackthorn or grey willow, even if taller than 5m
- All willow carr less than 5m tall; all grey willow carr
- Areas of bog myrtle taller than 1.5m

The following should not be included in this category:

- Hedgerows
- Scrub on dunes
- Areas of introduced shrub species
- Areas of young trees or stump regrowth less than 5m tall, where these comprise more than 50% of the immature canopy cover
- Western gorse or dwarf gorse
- Very low dwarf willow, creeping willow or bog myrtle

### A3 Parkland and scattered trees

Tree cover over the total area must be less than 30%. Lines of trees forming windbreaks or avenues should be marked on the map. Dominant species should be noted.

### A4 Recently felled woodland

This category should only be used when the future land use is uncertain for the area of felled trees.

## B Grassland and marsh

Most grasslands have been subjected to some degree of agricultural improvement by repeated grazing, mowing, fertilising, drainage or herbicide treatment. It is important to try to distinguish unimproved and semi-improved from improved grasslands where possible.

Grassy roadside verges, railway cuttings and embankments may be very important features especially in intensively farmed areas. If they are sufficiently wide enough they should be mapped as the appropriate grassland habitat.

There are 5 main types of grassland:



### B1 Acid grassland

Often unenclosed, as on hill grazing land, and occurs on a range of acid soils (Ph less than 5.5). Generally species poor and often grades into wet or dry dwarf shrub heath of less than 25% cover.

The following are indicative of acidic conditions when frequent or abundant:

- Wavy hair grass
- Matt grass
- Heath rush
- Heath bedstraw
- Sheep's sorrell

### B2 Neutral grassland

Typically enclosed and usually more intensively managed than acid or calcareous grassland (except on roadside verges). Wide range of plant communities occurring on neutral soils (pH 5.5 - 7.0). Hay meadows will typically fall within this category.

The following are indicative of neutral conditions when frequent or abundant:

- Meadow foxtail
- False oat grass
- Crested dog's tail
- Cocksfoot grass
- Tufted hair grass
- Tall fescue grass
- Meadow fescue grass

Included in neutral grassland is a range of grasslands which are periodically flooded, permanently moist or even water logged. The following should be included in this category:

- Flooded grassland with abundant sweet grass species, marsh foxtail, rough meadowgrass and water pepper
- Water meadows and alluvial meadows
- Species poor tufted hair grass grasslands
- Grazed soft rush/hard rush grasslands
- Yorkshire fog/tufted hair grass grasslands
- Wet meadows or pastures where grasses are dominant in the sward but with species such as marsh marigold, meadowsweet, valerian species, rushes or marsh hawk's beard present

### B3 Calcareous Grassland

Often unenclosed, not managed intensively and occur on calcareous soils (pH above 7.0). Mountain avens communities are included in this category.

Where the grass is tall the following are usually dominant:

- Upright brome
- Heath false brome

Where the grass is short, close-grazed and species rich the following are usually dominant:

- Crested hair grass
- Meadow oat grass
- Autumn moor grass
- Common rock rose
- Garden burnet (aka. salad burnet)



## B4 Improved Grassland

Meadows and pastures which have undergone intensive agriculture and as a result have lost many of the species typically found on unimproved grasslands.

They have a very limited range of grasses and a few common flowering plants, mainly those resistant to grazing and needing high levels of nutrients.

Areas of dock, common nettle and thistles indicate local nutrient enrichment of the soil by grazing animals.

Fields which have been reseeded in the past and have since become more diverse are included in this category, but reseeded monoculture grassland and most amenity grassland should be classified under cultivated land (J1).

The following signs usually indicate substantial improvement:

- Bright green, lush and even sward dominated by grasses
- Low diversity of flowering plant species
- Over 50% perennial rye grass, white clover and other agricultural species

The following species are indicative of improved conditions:

- Perennial rye grass
- Crested dog's tail
- White clover
- Sheep's sorrel
- Dandelion
- Common daisy
- Meadow buttercup
- Bulbous buttercup

## B5 Marshy Grassland

Grassland, meadow or pasture that is moist, flooded or damp for most of the year.

Differs from swamp (F1) in that it has a water table above ground for most of the year and is dominated by reed grasses or large sedges. Differs from Fen (E3) in that its water supply is delivered by rain water or river flooding rather than springs/streams.

Occurs on more or less level areas rather than on the banks of water courses.

The following plant communities are included in this category:

- Vegetation with greater than 25% cover of purple moor grass on peat less than 0.5m deep
- Vegetation with less than 25% dwarf shrub cover on peat less than 0.5m deep
- Vegetation with greater than 25% cover of sharp flowered rush, soft rush, hard rush, sedge species or meadowsweet (except for grazed soft rush, tufted hair grass, Yorkshire fog grasslands which are classed under neutral grassland B2)
- Wet meadows and pastures where grasses are less abundant than flowering plants. These communities are often rich in marsh marigold, meadowsweet, valerian species, marsh hawk's-beard, marsh (aka. spotted) orchid species, hemp agrimony, sedges and rushes



## **B6 Poor semi-improved grassland**

Where there is a large amount of semi-improved grassland it may be useful to split this category into:

### **Good semi-improved grassland**

- Reasonable diversity of flowering species, at least in parts of the sward, and is clearly recognisable as calcareous, acid or neutral in origin
- This grassland can be categorised under the correct heading of acid, neutral or calcareous (B1, B2, B3)

### **Poor semi-improved grassland**

- Restricted diversity of flowering species, and being more improved, it is more likely to resemble a species poor neutral grassland

## **C Tall Herb and Fern**

### **C1 Bracken**

Areas dominated by common bracken or with scattered patches of this species.

#### **C3.1 Tall ruderal**

Tall perennial or biennial dicotyledons such as common nettle, globeflower and Japanese knotweed.

#### **C3.2 Non-ruderal**

Non-wooded species such as lemon-scented fern, lady fern, wood fern species or greater wood rush.

## **D Heathland**

Heathland includes vegetation dominated by heather or dwarf gorse species, as well as “heaths” dominated by lichens and bryophytes, dwarf flowering plants, bigelow’s sedge or highland rush.

Generally occurring on well drained acid soils and typically over peat less than 0.5m thick.

### **D1 Dry dwarf shrub heath**

Greater than 25% cover of heather or small gorse species in relatively dry environments.

These heaths can occur on either acid or calcareous soils. Acid heaths usually occur on sands, gravels and clays, whilst basic heaths (alkaline) are more restricted in extent and may have herbs characteristic of calcareous grassland and open habitats.

The following species are indicative of lowland dry dwarf heath:

- Common heather
- Bilberry
- Bell heather
- Dwarf gorse
- Western gorse



The following species are indicative of upland dry dwarf heath:

- Crowberry
- Mountain crowberry
- Common bearberry
- Lingonberry (aka. cowberry)

## **D2 Wet Dwarf Shrub Heath**

Greater than 25% cover of heather or small gorse species (as D1) but with abundant purple moor grass and cross-leaved heath alongside occasional sphagnum species. Common deergrass is occasionally present at lower levels.

The abundance of purple moor grass and cross-leaved heath decreases in abundance in the transition from wet heath to dry heath.

## **D3 Lichen/bryophyte heath**

Comprises bryophyte and lichen dominated heaths such as the Brecklands. Bryophytes and/or lichens must be dominant and there must be less than 30% vascular plant cover.

## **D5 Dry heath/acid grassland mosaic**

A mixture of dry heath (D1) and acid grassland (B1) found on hill and moorland.

## **D6 Wet heath/acid grassland mosaic**

Mixture of wet heath (D2) and acid grassland (B1) found on hill and moorland.

## **E3 Fen**

Fen is a wet area of vegetation that receives mineral rich water supplies from springs or streams that have flown over or through rocks and/or minerals.

Fen can be further separated into 2 categories depending on whether it is acid or calcareous.

### **Poor Fen**

Contains acid water (pH 5 or less) and short vegetation with a high proportion of Sphagnum.

### **Rich Fen**

Contains more calcareous water (pH above 5) with patches of tall vegetation and species such as blunt-flowered rush, black-bog rush and long-stalked yellow-sedge. Sphagnum is often absent.

## **F1 Swamp**

Swamp contains tall vegetation that grows in the water but pierces that surface (emergent) and is typical of the transition between open water and exposed land.

Usually occurs in wet areas for most the year, but during drier seasons may be found on drier land.

If vegetation is dominated by purple moor grass, meadowsweet, mosses, small sedge or rush species this should be classed as marshy grassland (B5).

Swamp vegetation typically includes:



- Reedmace
- Common reed
- Reed canary grass
- Great manna grass
- Greater tussock sedge
- Lesser pond sedge
- Bottle sedge
- Other tall sedge species

## **G Open Water**

This is classed as water lying beyond the boundaries of swamp or emergent vegetation. It may contain submerged, free-floating or floating-leaved vegetation.

Open water is separated into 2 categories:

### **G1 Standing Water**

Includes lakes, reservoirs, pools, flooded gravel pits, ponds, flooded ditches, canals and coastal lagoons.

### **G2 Running Water**

Includes rivers and streams. The direction of flow should be noted on the map by an arrow.

## **J1 Cultivated Land**

### **J1.1 Arable**

Includes farmed cropland, horticultural land (e.g. nurseries, allotments), freshly ploughed land and recently reseeded grassland (e.g. rye grass).

### **J1.2 Amenity grassland**

Includes intensively managed and regularly mown grasslands such as lawns, playing fields and golf courses. Flowering plants such as common daisy, broadleaf plantain and dandelion may be present.

## **J2 Boundaries**

Boundaries can form an integral part of the site and can provide buffer zones for animal and plant species. Certain boundary types are more useful to map than others, these are classified below.

### **J2.1 Intact hedge**

Hedges that are stock-proof, full and entire the whole length of the hedge.

### **J2.2 Defunct Hedge**

Hedges that are gappy, broken and no longer stock-proof.

### **J2.3 Hedgerow with trees**

Hedges that have native tree species interspersed. Trees can be mapped with a cross along the boundary.

### **J2.4 Species-rich Hedge**

Hedges that have a good diversity of native woody species and a good ground flora.





### J2.5 Wall

Communities of lichens, mosses or ferns may be present and can be target noted on the map.

### J2.6 Ditch

Only ditches that appear to be dry for most of the year should be included in this category. Wet ditches should be classified as standing water (G1) or possibly swamp (F1).

### J2.8 Earth Bank

Ditch/bank systems found on ancient woodland and churchyard sites. These can be detected by the presence of mature native trees growing on the bank/ditch.

### J3 Built-up Areas

Includes caravan sites, buildings and sea walls

### J4 Bare Ground

Any type of bare soil or other ground material should be included here

Habitat	Code	Habitat	Code
Woodland	A1	Fen	E3
Scrub	A2	Swamp	F1
<u>Grassland</u>		<u>Heathland</u>	
Acid grassland	B1	Dry dwarf shrub heath	D1
Neutral grassland	B2	Wet dwarf shrub heath	D2
Calcareous grassland	B3	Lichen/bryophyte heath	D3
Improved grassland	B4	Dry heath/acid grassland	D5
Marshy grassland	B5	Wet heath/acid grassland	D6
Poor semi-improved	B6		
<u>Tall Herb &amp; Fern</u>		<u>Cultivated land</u>	
Bracken	C1	Arable	J1.1
Tall ruderal	C3.1	Amenity grassland	J1.2
Non-ruderal	C3.2		
<u>Open Water</u>		<u>Boundaries</u>	
Standing water – ponds/wet ditches	G1	Intact hedge	J2.1
Running water – river/stream	G2	Defunct hedge	J2.2
		Hedgerow with trees	J2.3
		Species-rich hedge	J2.4
		Wall	J2.5
		Ditch	J2.6
		Earth bank	J2.8
Built-up areas	J3	Bare ground	J4

