Suggesting an addition or modification to the Priority Habitat Inventory

Our evidence requirements

March 2023

Version 1.4

www.gov.uk/natural-england

Contents

Overview

The descriptions of all UK BAP Priority Habitats can be found on the JNCC website. This document outlines the evidence that should be submitted to Natural England's Priority Habitat Inventory (PHI) email inbox in support of a suggested addition or modification to the PHI for the following Priority Habitat types: lowland calcareous grassland; lowland dry acid grassland; lowland meadows; purple moor-grass and rush pasture; upland calcareous grassland; upland hay meadows; coastal and floodplain grazing marsh; and traditional orchards. Alternatively, if an NVC survey has been carried out, we will also accept NVC evidence which corresponds with a Priority Habitat – see correspondences on page 16. The evidence requirements for the remaining Priority Habitat types are available on request.

Evidence should be submitted along with a signed copy of the data use license, giving Natural England the legal right to use and publish your evidence publicly in the PHI and in other areas of Natural England's work should it be suitable. If you do not wish to agree to these terms, we will be unable to add your evidence to the PHI. The data use license can be obtained by contacting Natural England's Priority Habitat Inventory (PHI) email inbox. A typed signature is acceptable.

Lowland calcareous grassland

Lowland calcareous grassland is species-rich, semi-natural grassland on chalk and limestone in the lowlands and upland fringe, generally below 300m in altitude. Typical grasses include blue moor-grass, cock's-foot, common bent, crested hair-grass, downy oat-grass, meadow oat-grass, quaking grass, sheep's fescue, tor-grass, upright brome and yellow oat-grass. Typical wildflowers include common bird's-foot-trefoil, common rock-rose, cowslip, eyebright, greater knapweed, lady's bedstraw, milkworts, small scabious and wild thyme.

For lowland calcareous grassland submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the grassland feature within the parcel(s).
3. If known, please state if the parcel(s) have been managed previously as arable or improved grassland, or if they are unimproved.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. The number of vascular plant species per m^2, including grasses.
2. An estimate of the cover of rye-grasses and white clover.
3. An estimate of the cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed below and creeping buttercup and white clover) - this should be 30% or more.

4. An estimate of the cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort and common nettle) – this should be no more than 5%.
5. An estimate of the cover of bare ground (including localised areas, for example rabbit warrens) - this should be no more than 10%.
6. An estimate of the cover of trees and shrubs – this should be no more than 5%.
7. Species list/s with frequency data.

From the following list of indicator species, there should be at least:

- Two frequent and three occasional (condition A), or
- Three occasional, or four present (but not limited to field corners or edges) (condition B).

Lowland calcareous grassland wildflower indicator species:

- betony
- beautiful St John's-wort
- bird's-foot-trefoil
- biting stonecrop
- bloody crane's-bill
- carline thistle
- clustered bellflower
- common agrimony
- common rock-rose
- cowslip
- dropworts
- devil's-bit scabious
- eyebright
- fairy flax
- field scabious
- gentians
- greater knapweed
- hairy violet
- harebell
- hawkweed oxtongue
- hoary plantain
- hoary rock-rose
- horseshoe vetch
- kidney vetch
- lady's bedstraw
- marjoram
- milkworts
- mouse-ear hawkweed
- orchids
- ox-eye daisy
- purple milk-vetch
- restharrow
- rough/lesser hawkbit
- sainfoin
- salad burnet
- saw-wort
- small blue-green sedges
- small scabious
- squinancywort
- stemless thistle
- thyme-leaved sandwort
- wild basil
- wild thyme
- yellow-wort

Lowland dry acid grassland

Lowland dry acid grassland is semi-natural grassland, generally dominated by fine leaved grasses on nutrient-poor, free-draining soils in the lowlands and enclosed upland fringe. It is managed primarily by grazing. Typical grasses include common bent, early hair-grass, heath grass, sheep's fescue, sweet vernal grass and wavy hair-grass. Typical wildflowers include common centaury, common stork's-bill, heath bedstraw, heath speedwell, mouse-ear hawkweed, rough/lesser hawkbit, sheep's sorrel, tormentil, violets and wild strawberry.

For lowland dry acid grassland submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the grassland feature within the parcel(s).
3. If known, please state if the parcel(s) have been managed previously as arable or improved grassland, or if they are unimproved.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. The number of vascular plant species per m^2, including grasses.
2. An estimate of the cover of rye-grasses and white clover.
3. An estimate of the cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed below and creeping buttercup and white clover).
4. An estimate of the cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle, rosebay willowherb, marsh thistle, musk thistle and greater plantain) – this should be no more than 5%.
5. An estimate of the cover of bare ground (including localised areas, for example rabbit warrens) – this should be no more than 10%.
6. An estimate of the cover of bracken – this should be no more than 20%.
7. An estimate of the cover scrub and bramble – this should be no more than 5%.
8. An estimate of the cover of course grass species, such as Yorkshire fog and Cock's foot – this should be no more than 20%.
9. Species list/s with frequency data.

From the following list of indicator species, there should be at least:

- One frequent and three occasional (condition A), or
- Three occasional, or four present (but not limited to field corners or edges) (condition B).

Lowland dry acid grassland wildflower indicator species:

- bell heather
- betony
- bilberry
- bird's-foot
- bird's-foot-trefoil
- biting stonecrop
- bitter-vetch
- lousewort
- maiden pink
- milkworts
- mouse-ear hawkweed
- parsley pierts
- pignut
- purple milk-vetch

- blue fleabane
- buck's-horn plantain
- common centaury
- common rock-rose
- common stork's-bill
- devil's-bit scabious
- harebell
- heath bedstraw
- heath speedwell
- heather
- lady's bedstraw
- lichens
- rough/lesser hawkbit
- saw-wort
- sheep's-bit
- sheep's sorrel
- shepherd's-cress
- thymes
- tormentil
- violets
- wild strawberry
- wood anemone
- wood sage

Lowland meadows

Lowland meadows are species-rich, semi-natural grassland on free draining, neutral soils in the lowlands and upland fringes, including species-rich flood plain grassland. They are managed by cutting and/or grazing. Typical grasses include cock's-foot, common bent, crested dog's tail, red fescue, meadow fescue, sweet vernal grass, yellow oatgrass and Yorkshire-fog. Typical wildflowers include common knapweed, common bird's-foot trefoil, common meadow-rue, marsh valerian, meadow vetchling, meadowsweet, narrow-leaved water-dropwort and ragged robin. If a lowland meadow occurs on a floodplain, and meets the criteria listed separately in this document, it may also be recorded as coastal and floodplain grazing marsh priority habitat.

For lowland meadow submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the grassland feature within the parcel(s).
3. If known, please state if the parcel(s) have been managed previously as arable or improved grassland, or if they are unimproved.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. The number of vascular plant species per m^2, including grasses.
2. An estimate of the cover of rye-grasses and white clover.
3. An estimate of the cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed below and creeping buttercup and white clover) - this should be 30% or more.
4. An estimate of the cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle, marsh ragwort, cow parsley and bracken) - this should be no more than 5%.
5. An estimate of the cover of bare ground (including localised areas, for example rabbit warrens) - this should be no more than 10%.
6. An estimate of the cover of trees and shrubs – this should be no more than 5%.

7. An estimate of indicators of waterlogging, such as large sedges, rushes and reeds – this should be no more than 20%.
8. Species list/s with frequency data.

From the following list of indicator species, there should be at least:

- Two frequent and two occasional (condition A), or for flood plain meadows, one frequent **bold** species and three occasional, or
- Three occasional, or four present (but not limited to field corners or edges) (condition B).

Lowland meadows wildflower indicator species:

- agrimony
- **autumn hawkbit**
- betony
- bird's-foot-trefoil
- bitter-vetch
- black knapweed
- bugle
- burnet saxifrage
- **common bistort**
- **common meadow-rue**
- **corky-fruited water-dropwort**
- cowslip
- **devil's-bit scabious**
- dropwort
- Dyer's greenweed
- eyebright
- field scabious
- goat's-beard
- **great burnet**
- greater bird's-foot-trefoil
- lady's bedstraw
- lady's-mantles
- marsh/fen bedstraw
- marsh marigold
- marsh speedwell
- marsh valerian
- meadow vetchling
- **meadowsweet**
- milkworts
- **narrow-leaved water-dropwort**
- orchids
- ox-eye daisy
- **pepper-saxifrage**
- pignut
- ragged robin
- rough hawkbit
- salad burnet
- saw-wort
- sneezewort
- tormentil
- water avens
- water mint
- wood anemone
- yellow rattle
- small blue-green sedges (glaucous, common, carnation)

Purple moor-grass and rush pasture

Purple moor-grass and rush pasture is species-rich, semi-natural grassland with abundant purple moor-grass and/or jointed rushes (sharp-flowered rush, jointed rush or blunt-flowered rush) on poorly drained neutral and acidic soils of the lowlands and upland fringe. Typical grasses include creeping bent, crested dog's-tail, purple moor-grass, quaking-grass, red fescue, sweet vernal grass, tufted hair-grass, velvet bent and Yorkshire-fog. Typical wildflowers include devil's-bit scabious, marsh thistle, fen/marsh bedstraw, common knapweed, lesser spearwort and meadowsweet.

For purple moor-grass and rush pasture submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the grassland feature within the parcel(s).
3. If known, please state if the parcel(s) have been managed previously as arable or improved grassland, or if they are unimproved.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. The number of vascular plant species per m^2, including grasses.
2. An estimate of the cover of rye-grasses and white clover.
3. An estimate of the cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed below and creeping buttercup and white clover).
4. An estimate of the cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle, cow parsley, marsh thistle and marsh ragwort) - this should be no more than 5%.
5. An estimate of the cover of large sedge species - this should be no more than 25%.
6. An estimate of the cover of large grasses such as tufted hair-grass and common reed - this should be no more than 20%.
7. An estimate of the cover of trees and shrubs – this should be no more than 5%.
8. An estimate of the cover of non-jointed rushes (soft, hard and compact) – this should be no more than 50%.
9. Confirmation that there is no artificial drainage designed to dry out the wetland.
10. Species list/s with frequency data.

From the following list of indicator species, there should be at least:

- Two frequent and two occasional, or where purple moor-grass is frequent, one frequent and three occasional (condition A), or
- Three occasional, or four present (but not limited to field corners or edges) (condition B).

Purple moor-grass and rush pasture wildflower indicator species:

- bog asphodel
- bog bean
- bog-mosses
- bog pimpernel
- bugle
- marsh pennywort
- marsh speedwell
- marsh valerian
- marsh violet
- meadow rue

- common valerian
- cross-leaved heath
- devil's-bit scabious
- globeflower
- great burnet
- greater bird's-foot-trefoil
- hemp agrimony
- jointed rushes
- ivy-leaved bellflower
- lesser scullcap
- lesser spearwort
- lesser water-parsnip
- lousewort
- marsh/fen bedstraw
- marsh cinquefoil
- marsh hawk's-beard
- marsh marigold
- meadow thistle
- meadowsweet
- orchids
- purple loosetrife
- ragged robin
- rough hawkbit
- scullcap
- saw-wort
- sneezewort
- tormentil
- water avens
- water mint
- whorled caraway
- wild angelica
- small blue-green sedges (glaucous, common, carnation)

Upland calcareous grassland

This grassland is generally species-rich, semi-natural grassland, usually dominated by fine-leaved grasses, on calcareous soils over Carboniferous limestone in upland areas. It is managed primarily by grazing, and often occurs in parts of large-scale enclosures with other less species-rich grassland types. Typical grasses include blue moor-grass, common bent, crested hair-grass, meadow oat-grass, red fescue, sheep's fescue, sweet vernal grass and quaking-grass. Typical wildflowers include common bird's-foot-trefoil, common rockrose, eyebrights, fairy flax, harebell, horseshoe vetch and wild thyme.

For upland calcareous grassland submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the grassland feature within the parcel(s).
3. If known, please state if the parcel(s) have been managed previously as arable or improved grassland, or if they are unimproved.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. The number of vascular plant species per m^2, including grasses.
2. An estimate of the cover of rye-grasses and white clover.
3. An estimate of the cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed below and creeping buttercup and white clover) - this should be 20% or more.
4. An estimate of the cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle and false oat-grass) - this should be no more than 10%.

5. An estimate of the cover of bare ground (including localised areas, for example rabbit warrens) - this should be no more than 10%.
6. An estimate of the cover of herbs indicative of nutrient enrichment (daisy and creeping buttercup) – this should be no more than 25%.
7. Species list/s with frequency data.

From the following list of indicator species, there should be at least:

- One frequent and three occasional (condition A), or
- Three occasional, or four present (but not limited to field corners or edges) (condition B).

Upland calcareous grassland wildflower indicator species:

- alpine bistort
- bird's-eye primrose
- bird's-foot-trefoil
- carline thistle
- common butterwort
- common rock-rose
- dropwort
- devil's-bit scabious
- eyebrights
- fairy flax
- gentians
- grass of Parnassus
- harebell
- hoary rock-rose
- hoary whitlowgrass
- horseshoe vetch
- lesser club-moss
- mossy saxifrage
- mountain everlasting
- mouse-ear hawkweed
- rough hawkbit
- salad burnet
- small scabious
- squinancywort
- wild thyme
- yellow saxifrage
- small sedges (spring, flea, glaucous, carnation)

Upland hay meadows

This is enclosed land on moist or free-draining neutral soils in the Pennines and Dales of Yorkshire, Durham, Northumberland, Lancashire and Cumbria, and in the eastern Lake District. Meadows are cut for hay, with aftermath grazing. Typical grasses include cock's-foot, common bent, crested dog's-tail, red fescue, rough meadow-grass, soft brome, sweet vernal grass and Yorkshire-fog. Typical wildflowers include common knapweed, eyebrights, hawkbits, meadow vetchling, meadowsweet, pignut and tormentil.

For upland hay meadow submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the grassland feature within the parcel(s).
3. If known, please state if the parcel(s) have been managed previously as arable or improved grassland, or if they are unimproved.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. The number of vascular plant species per m^2, including grasses.
2. An estimate of the cover of rye-grasses and white clover.
3. An estimate of the cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed below and creeping buttercup and white clover) - this should be 30% or more.
4. An estimate of the cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle and cow parsley) - this should be no more than 10%.
5. An estimate of the cover of bare ground - this should be no more than 10%.
6. An estimate of the cover of non-jointed rushes (soft, hard and compact) – this should be no more than 35%.
7. Species list/s with frequency data.

From the following list of indicator species, there should be at least:

- Two frequent and two occasional, or for wet meadows, one frequent and three occasional (condition A), or
- Three occasional, or four present (but not limited to field corners or edges) (condition B).

Upland hay meadows wildflower indicator species:

- bird’s-foot-trefoil
- black knapweed
- bugle
- burnet saxifrage
- common bistort
- changing forget-me-not
- devil’s-bit scabious
- globeflower
- eyebrights
- great burnet
- hawkbits
- lady’s-mantles
- marsh marigold
- marsh valerian
- meadow vetchling
- meadowsweet
- melancholy thistle
- orchids
- pignut
- ragged robin
- saw-wort
- sneezewort
- tormentil
- water avens
- wood anemone
- wood crane’s-bill
- yellow rattle
- small blue-green sedges (glaucous, common, carnation)

Coastal and floodplain grazing marsh

Coastal and flood plain grazing marsh consists of periodically flooded pastures or meadows, with ditches that maintain the water levels, containing brackish or fresh water. The ditches are often rich in plants and invertebrates. Almost all such areas are grazed but some are cut for hay or silage. Parcels submitted for assessment as coastal and floodplain grazing marsh should be:

- low lying and flat
- in the floodplain of a river/stream or the sea (groundwater flooding does not qualify)
- within flood zone 3
- registered as permanent grassland.

For coastal and floodplain grazing marsh submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the coastal or floodplain grazing marsh within the parcel(s).
3. Survey data confirming the presence of either curlew, lapwing, redshank or snipe.
4. Site photographs illustrating flooding and drainage features.
5. Confirmation that the parcel or parcels are registered as permanent grassland.

Please also provide the following evidence on a per parcel (or part-parcel) basis (see notes on page 14 for guidance):

1. An estimate of the combined cover of creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, marsh ragwort and common nettle – this should be less than 5%.
2. An estimate of in-field scrub cover – this should be zero.
3. An estimate of the cover of scrub over the ditches – this should be less than 10%.
4. An estimate of the cover of rushes (including Soft, Hard and Compact, but excluding jointed rushes) – this should be less than 30%.

Traditional orchards

Traditional orchards are defined as five or more trees, where the distance between the crown edges is 20m or less. They are usually characterised by the presence of either standard or half-standard fruit trees (or nut trees), grown on vigorous rootstocks and planted at low densities (usually less than 150 trees per hectare) on permanent grassland.

Decisions regarding the addition of traditional orchards to the PHI are jointly made between Natural England and People's Trust for Endangered Species (PTES), so please be aware that evidence submitted in support of such an addition will be shared with both parties.

For traditional orchard submissions to the PHI, please submit:

1. Field parcel number(s) if available, or central grid reference(s).
2. A map or sketch showing the extent of the traditional orchard within the parcel(s).

Please also provide the following supporting information:

1. How many years the parcel has been an orchard (if known).
2. The number of trees in the parcel (an estimate if very large) and a list of tree species.
3. Information relating to the form, condition and rough ages of the trees (i.e. photographs).
4. Numbers of fruit trees with veteran features (see Q12) and younger fruit trees without veteran features.
5. Information relating to the spacing of the trees (i.e. from recent aerial imagery/photographs).
6. Tree planting evidence: which is most relevant of – a) Entirely new or young orchard; b) Some young trees present in gaps; c) No young trees present in gaps; d) Mature orchard with few or no gaps (mostly stocked).
7. Information relating to the ground cover of the parcel, including estimate of grass sward height and approximate area covered by bare ground, scrub, and injurious weeds (i.e. photographs and recent aerial imagery).
8. Orchard management: which of these options apply – a) Unmanaged; b) Mown; c) Grazed; d) Entirely scrubbed over; e) Neglected (but not scrubbed over); f) Regular chemical treatment.
9. Trees: which of these options apply – a) Standing dead trees left; b) Deadwood retained in canopy; c) Tree replacements or additions; d) Regularly pruned; e) Recent livestock damage to trees (within c.5 years).
10. Orchard floor: which of these options apply – a) Herbicide used beneath trees; b) Deadwood retained on ground; c) Undercropped; d) Orchard floor greater than 20% scrub.
11. Veteran tree features: which of the following features are present – a) Trunk or branch cavities, hollows, rot-holes, crevices, etc b) Dead wood in canopy; c) Standing deadwood; d) Fungal fruiting bodies; e) Mistletoe; f) Crown dieback.
12. Information on the current use of the orchard.

Guidance notes

Note 1: Assessing cover where required

Vegetation cover should be estimated by looking down on the sward rather than across the top. Patchiness across the sward should be averaged out and it will be helpful to estimate cover at stops on a structured walk, as detailed in note 2 below. In meadows that have grown up prior to cutting, it is important to look down through the sward to estimate the cover of herbs below the grass canopy. Tall scrub species will have to be assessed by looking across the site. Use a vantage point if there is one.

For some habitats, an estimate of bare ground cover is required. This should be estimated in a similar manner to herbs, but bare ground must be visible from above without disturbing the sward surface. It does not include rock exposures, stones, pebbles and flints. For all estimates of cover, it may help to visualise a square metre area in front of you (or take a quadrat). An area of 10 cm x 10 cm within this constitutes cover of 1%. Total cover can be over 100% due to layering of the vegetation.

Note 2: Producing species lists with frequency data

The best way to assess species frequency of occurrence within an area of habitat is to undertake a W-shaped, or other representative walk across it, stopping at regular intervals or random points along the way.

For most habitats, stopping ten times will be enough, but for very large blocks of similar vegetation you may need 20 stops and to record survey point locations using a hand held Global Positioning System (GPS) device, for future reference and comparison.

Each time you stop, look at the vegetation within a square metre in front of you and note which species are present.

- A species is rare if it occurs in one or two stops out of ten.
- It is occasional if it occurs in three or four stops out of ten.
- Frequent species occur in five or more stops out of ten.

You will probably find it easiest to carry out this assessment if you record the information in a table like Table 1 below. Write the species names on the left and tick the box in the relevant column when you find each species.

Table 1 Example table to assess whether plants are rare, occasional or frequent

Species name	1	2	3	4	5	6	7	8	9	10	Number of stops	Frequency
Perennial rye-grass	Y	Y	Y	Y		Y	Y	Y	Y	Y	9	Frequent
White clover	Y	Y	Y	Y	Y	Y	Y			Y	8	Frequent
Yorkshire-fog	Y				Y	Y		Y		Y	5	Frequent
Red clover	Y	Y				Y					3	Occasional
Crested dog's-tail	Y	Y		Y	Y		Y		Y		6	Frequent
Daisy	Y		Y		Y			Y	Y		5	Frequent
Creeping thistle	Y			Y			Y				3	Occasional
Creeping buttercup		Y		Y	Y					Y	4	Occasional
Cock's-foot		Y		Y							2	Rare
Common bent		Y			Y	Y					3	Occasional
Common sorrel			Y	Y	Y		Y				4	Occasional
Dandelion				Y			Y	Y			3	Occasional
Rough meadow-grass				Y				Y	Y	Y	4	Occasional
Cuckooflower					Y					Y	2	Rare
Meadow buttercup					Y	Y			Y		3	Occasional
Selfheal							Y				1	Rare
Timothy									Y		1	Rare
Number of species per stop	**7**	**7**	**4**	**9**	**9**	**6**	**7**	**5**	**6**	**6**		

Correspondences between grassland priority habitats and NVC communities

Priority Habitat	Principal NVC stand types
Lowland calcareous grassland	CG1 *Festuca ovina - Carlina vulgaris* grassland* CG2 *Festuca ovina - Avenula pratensis* grassland* CG3 *Bromus erectus* grassland CG4 *Brachypodium pinnatum* grassland CG5 *Bromus erectus - Brachypodium pinnatum* grassland CG6 *Avenula pubescens* grassland CG7 *Festuca ovina - Hieracium pilosella - Thymus praecox/pulegioides* grassland CG8 *Sesleria albicans - Scabiosa columbaria* grassland CG9 *Sesleria albicans - Galium sterneri* grassland* CG10 *Festuca ovina - Agrostis capillaris - Thymus praecox* grassland* *If these occur in a lowland setting
Lowland dry acid grassland	U1 *Festuca ovina - Agrostis capillaris - Rumex acetosella* grassland U3 *Agrostis curtisii* grassland U4 *Festuca ovina - Agrostis capillaris - Galium saxatile* grassland U5 *Nardus stricta - Galium saxatile* grassland
Lowland meadows	MG1c-e *Arrhenatherum elatius* grassland, *Filipendula ulmaria*, *Pastinaca sativa* and *Centaurea nigra* sub-communities MG2 *Arrhenatherum elatius - Filipendula ulmaria* tall-herb grassland MG4 *Alopecurus pratensis - Sanguisorba officinalis* grassland MG5 *Cynosurus cristatus - Centaurea nigra* grassland MG7c-related *Alopecurus pratensis - Poa trivialis - Cardamine pratensis* floodplain grassland MG8 *Cynosurus cristatus - Caltha palustris* grassland and related vegetation MG14 *Carex nigra - Agrostis stolonifera - Senecio aquaticus* grassland MG15 *Alopecurus pratensis - Poa trivialis - Cardamine pratensis* grassland

Purple moor-grass and rush pastures	M22 *Juncus subnodulosus* - *Cirsium palustre* fen-meadow M23 *Juncus effusus/acutiflorus* - *Galium palustre* rush-pasture M24 *Molinia caerulea* - *Cirsium dissectum* fen-meadow M25 *Molinia caerulea* - *Potentilla erecta* mire M26 *Molinia caerulea* - *Crepis paludosa* mire
Upland calcareous grassland	CG1 *Festuca ovina* - *Carlina vulgaris* grassland* CG2 *Festuca ovina* - *Avenula pratensis* grassland* CG9 *Sesleria albicans* - *Galium sterneri* grassland* CG10 *Festuca ovina* - *Agrostis capillaris* - *Thymus praecox* grassland* CG11 *Festuca ovina* - *Agrostis capillaris* - *Alchemilla alpina* grass-heath CG12 *Festuca ovina* - *Alchemilla alpina* - *Silene acaulis* dwarf-herb community CG13 *Dryas octopetala* - *Carex flacca* heath CG14 *Dryas octopetala* - *Silene acaulis* ledge community *If these occur in an upland setting
Upland hay meadows	MG3 *Anthoxanthum odoratum* - *Geranium sylvaticum* grassland Upland forms of MG8 *Cynosurus cristatus* - *Caltha palustris* grassland

Taken from Jefferson, Smith and MacKintosh 2019.

References

Jefferson, R.G., Smith, S.L.N., and MacKintosh, E.J. 2019. *Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidance for Habitats and Species Groups. Chapter 3 Lowland Grasslands.* Joint Nature Conservation Committee, Peterborough.

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