# ECOFACT Volume 1

## Introduction and Approach:

### Introduction

The vegetation and land cover of the British countryside were surveyed in 1990 by the Institute of Terrestrial Ecology under a contract from the former Department of the Environment, with additional funding from the former Nature Conservancy Council and core support from the Natural Environment Research Council (NERC). The survey repeated and extended the baseline established by a similar survey of the countryside and its vegetation in 1978. The principal results were published by the then Department of the Environment in the Countryside Survey Main Report (Barr *et al.* 1993).

Further detailed analysis of the vegetation data from the survey, including the development of the vegetation classification, was carried out as part of the ECOFACT (ECOlogical FACTors controlling biodiversity in the British countryside) research programme funded by the Department of the Environment, Transport and the Regions (DETR). This classification and its supporting analyses are now termed the Countryside Vegetation System (CVS). Other ECOFACT modules have been concerned with various topics, such as the causes of botanical change and changes in farm management practices, and will be reported separately. Work was also carried out on various aspects of the survey procedures which were subsequently incorporated into the work programme for CS2000. The field work is being carried out in 1998, and will report its findings in 2000. The CVS will be used to provide a framework for the principal analyses.

### Approach

While the CVS considers the vegetation of Great Britain as a whole, other systems construct classifications for regions or habitats. Such differences make comparisons between various classifications difficult. Further problems may arise because of differences in data collection, the structure of the sampling programme, or from analytical procedures. However, comparisons may be made in various ways eg by expert judgement, the comparison of average composition of the classes or by simulation of the classification process.

During the course of ECOFACT such comparisons have been made for the major classification systems in use in Great Britain and two of these, based on the C-S-R (Competitor-Stress tolerator-Ruderal) growth strategy model (Grime, Hodgson and Hunt 1988) and the National Vegetation Classification (NVC) (Rodwell 1992), are included in the descriptions in this volume. The CVS differs from the most widely used system, the NVC, because the plots are placed at random whereas NVC relevees are selectively placed in homogeneous vegetation. The two systems have a different primary objective; the NVC being primarily designed to describe semi-natural vegetation whereas the CVS is appropriate for the more disturbed wider countryside and for monitoring vegetation change. Rare associations of restricted distribution in Britain, which may be of conservation importance, are described in the NVC but may not correspond to individual CVS classes.

The main objectives of the work which produced the present book were therefore:

- to produce a robust system of vegetation classification for the British countryside;
- to provide accessible and easily understood results by producing the vegetation class descriptions;
- to enable pre-existing and new datasets to be fitted into the classification.

This is the first time that statistical techniques have been used to classify the commonly occurring vegetation of a whole country in one integrated system. This book describes the field recording programme and subsequent analyses, and presents the results in a form which will be widely accessible to those concerned with managing the British countryside. The classification is presented here with supporting descriptions, and estimates of the extent of the classes.

The sampling and classification procedures used in the Countryside Survey were adapted from the approach developed for the classification of vegetation in British woodlands (Bunce 1982, 1989), which was also based on a stratified random sample.

The short descriptions provided here together with a procedure for estimating the area of the classes, will be included in the Countryside Information System, a tool for viewing and analysing spatial data sets. Help files will subsequently be provided to support the use of the CVS at the landscape level. A computer program for allocating samples to the classification is now available on the World Wide Web (http://www.ceh.ac.uk/products/software/CEHSoftware-CVS.htm).

**Field recording Programme:**

The vegetation of the British countryside was surveyed using a 1 km square as the basic sampling unit. The squares were located by reference to the ITE Land Classification of Great Britain (Bunce *et al*. 1996). This method uses environmental parameters, such as altitude and climate, to classify the British landscape into land classes and provides the area of each class in Great Britain. The squares chosen for survey were distributed in a predetermined way among the different land classes to form a random stratified sampling programme. In 1978, 256 1 km squares were recorded and in 1990, 508 squares (Barr *et al*. 1993). All of the 256 squares recorded in 1978 were re-recorded in 1990. Neither non-vegetated shorelines nor highly urbanised environments were included.

In 1990 the vegetation was recorded in up to 27 plots within each of the 508 1 km sample squares. These plots were of three types (main, habitat, linear), differing in size and in the way in which they were distributed within each square. Photographs of representative examples are shown on pages 13–14. The plot types were located as follows:

- Five **main plots** – 200 m2 vegetation plots located at random within five equal-sized sectors of the 1 km square. The plots were relocated at random if they fell on a linear feature.
- Five **habitat plots** – 4 m2 vegetation plots placed only within semi-natural habitats not covered by the larger random plots.
- Up to 17 10 m x 1 m **linear plots** placed alongside:
    - field boundaries: 5 **boundary plots** were placed at the nearest field boundary to each of the main plots (if within 100 m);
    - hedges: 2 **hedge plots** were placed separately at random on one side of a hedge within each 1 km square with hedges present;
    - watercourses: 5 **streamside plots** were placed at the edge of running water; two of the streamside plots were located at random within the square and three more were placed to sample different sizes of watercourses;
    - roads/tracks: 5 **roadside plots** were placed immediately adjacent to the road edge; two were located at random and three were placed to sample different road types.

The main plots were placed at random within the 1 km squares so the numbers occurring in a given vegetation class were proportional to the extent of that class; this was also true of those linear plots placed at random. The habitat plots were not located at random, but were targeted at semi-natural habitats and, whilst they can be used to give a measure of the relative diversity and abundance of the habitats concerned, they cannot be used in a statistical sense to estimate relative area. In each plot the presence and percentage cover of vascular plants to the nearest five per cent was recorded. Selected mosses and liverworts (bryophytes) were also recorded. Variable and taxonomically disputed plants, such as bramble (*Rubus fruticosus*), were considered as single species.

**Analyses and Results:**

Analysing the vegetation of the wider countryside at the national scale would have been difficult using existing tools, as no classification can handle the full range of variation of the many highly disturbed situations. Furthermore, classifications split according to habitats and landscape elements run into the problem that similar assemblages of species, eg dandelions (*Taraxacum* spp.), daisies (*Bellis perennis*) and rye-grass (*Lolium perenne*), can grow in a range of situations, such as roadsides, along streamsides, or in fields. It was therefore decided to construct a new classification of British vegetation, updating the procedures followed in the statistical analyses of the vegetation data described in the Countryside Survey (CS) 1990 Main Report (Barr *et al.* 1993). This analysis of vegetation in the wider countryside is known as the **Countryside Vegetation System** (CVS).

The procedure used to derive the CVS involved two steps:

- The vegetation data for all 13614 individual samples (regardless of the plot type) in both 1978 and 1990 (except for those boundary plots not adjacent to hedgerows), were included in the analysis and grouped into the **100 vegetation classes** described here using a standard statistical method (TWINSPAN, Hill 1979a). The decision to employ 100 classes was arbitrary.
- The 100 classes were then analysed using a statistical ordination technique to measure the degree of similarity between them. The classes were distributed along the multi-variate axis derived from DECORANA (Hill 1979b) which accounted for the greatest degree of variation among them. The classes were then orientated along a second axis which accounted for the greatest degree of remaining variation, and so on. Those vegetation classes which were close together on the resulting axis were more similar than those which were far apart. **Eight aggregate classes** (AC) were then generated by clustering the individual classes according to their relative positions on the first four DECORANA axes:

    - I Crops/weeds
    - II Tall grassland/herb
    - III Fertile grassland
    - IV Infertile grassland
    - V Lowland wooded
    - VI Upland wooded
    - VII Moorland grass/mosaic
    - VIII Heath/bog

The possibility of the plot types introducing bias into the ordination as a whole was tested by correlating the percentage of plot types in the aggregate classes with the first axis DECORANA (Hill 1979b) scores for the constituent plots. Three out of ten possible correlations were not significant and the remainder showed very weak correlations, with less than 10% of the variation explained. Plot type therefore accounted for only a small proportion of the variation within the classification.

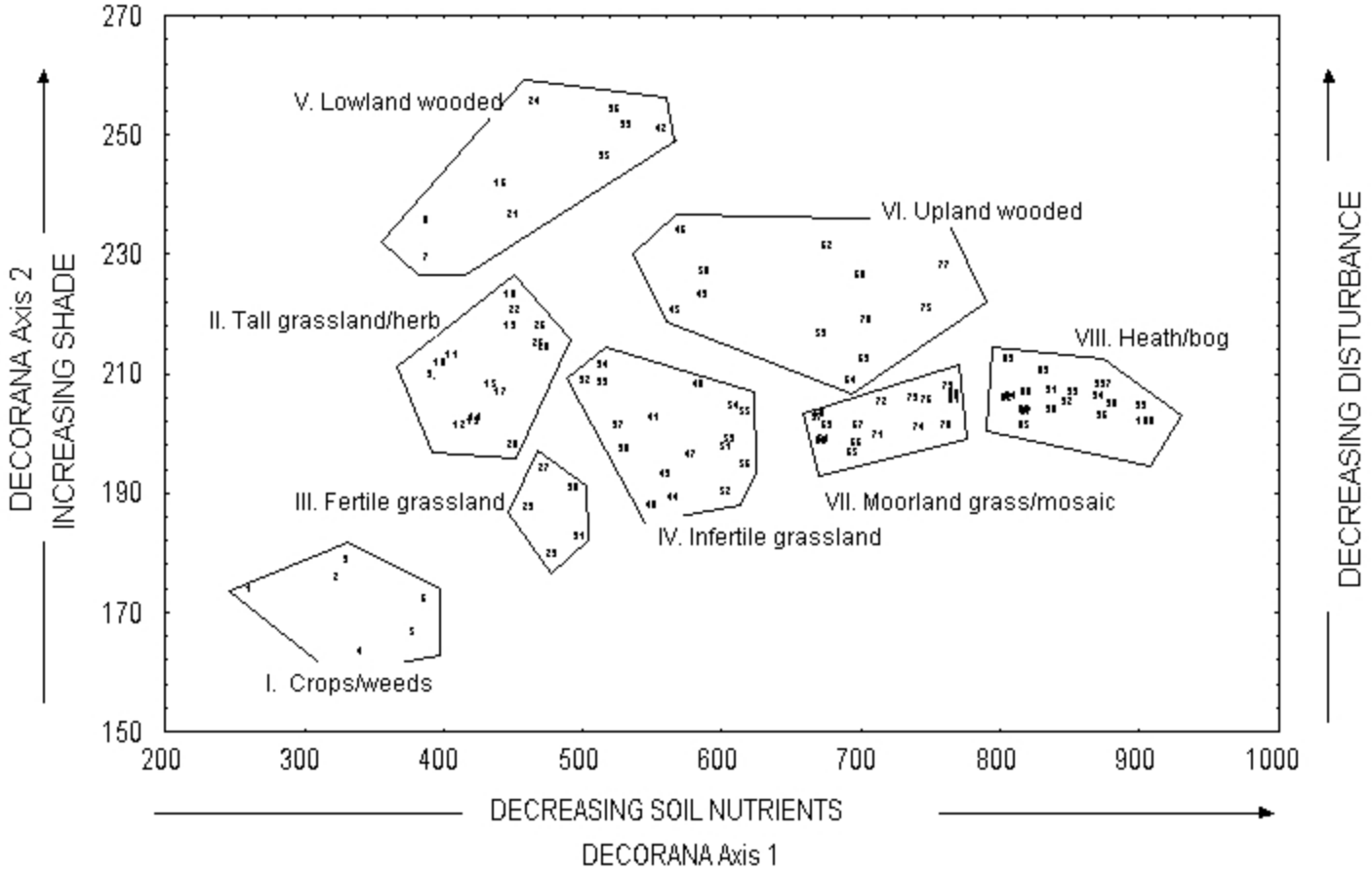



*Figure 1. Distribution of the 100 vegetation classes, grouped by aggregate classes, on the first two axes of the DECORANA ordination.*

The DECORANA ordination was designed to show the relationships between the vegetation classes purely in terms of their botanical composition, with no additional environmental data. However, the results can be interpreted clearly in terms of environmental gradients. On axis 1 (the x-axis of Figure 1), the vegetation plots show a gradation from arable fields on the left-hand side, through rotational grassland, fertile grassland, grassy marsh/moorland to heath and bog on the right-hand side. The vegetation of arable fields is known to consist of species associated with highly disturbed and nutrient-rich soils, whereas at the opposite extreme (heath and bog) the vegetation is made up of species associated with nutrient-poor peats and podzols. Axis 1 can therefore be interpreted as a gradient of soil nutrient status. Axis 2 (the y-axis) represents another gradient. At the bottom, close to the x-axis, the vegetation classes contain short-lived, herbaceous species tolerant of disturbance. At the other extreme is woodland vegetation consisting of large, long-lived plants associated with much less frequent disturbance. The structure of the vegetation along this axis also affects the light reaching the ground; thus, we may interpret axis 2 as representing a gradient of disturbance and shade. Although it cannot easily be seen in Figure 1, there is a third axis arising from a smaller number of classes distinguished by association with soil moisture. Thus classes which appear close together in Figure 1, are probably differentiated by association with moisture.

These three gradients of nutrient level, shade/disturbance and soil moisture appear to dominate the main vegetation gradients and the relationships have been confirmed by subsequent statistical analysis in the ECOFACT programme. Changes in land management can therefore be visualised in

terms of movement within the ordination diagram. For example, heathland and moorland vegetation is usually maintained by management (disturbance), and, where this management is relaxed, succession typically occurs, with the vegetation moving diagonally higher and to the left, towards woodland (Figure 1).

## The Countryside Vegetation System:

This book contains a two-page summary for each of the 100 CVS vegetation classes, preceded by two reference lists containing names in numerical and aggregate class order. The summary provides a description of each class and depicts its extent in GB, its association with the four landscape types based upon the ITE Land Classification of GB, details of plant species composition, comparisons with the National Vegetation Classification (NVC) (Rodwell 1992), a characterisation in terms of functional strategy theory (CSR) (Grime *et al*. 1988), and its relationship to Ellenberg's indicator values (Ellenberg 1974). The values in the text are those that have been recalibrated for GB (Hill *et al.* in prep). The layout has been chosen to provide as much information as possible to enable the classification to be used effectively. Each section in the two-page summary is summarised below.

### Description

This section includes the number and name of the vegetation class, and of the aggregate class to which it belongs. The names are designed to provide a clear indication of the type of vegetation and an impression of the composition of each class. The naming is as consistent as possible, depending upon the availability of precise ecological terms, and the style follows that of Barr *et al*. (1993). Distinct combinations of habitats are used wherever possible, and in other cases species or soil types are included as descriptors. The continuous nature of vegetation inevitably means that arbitrary, but reproducable, divisions are made, and, whilst the names appear similar, the statistical procedure used to allocate samples is discriminatory. A short paragraph of text summarises the main features. The names of species given in the description of most frequent, cover or characteristic species do not always coincide with the lists, as a degree of interpretation was used to select those indicative of the ecological character of the vegetation class. All species names are listed according to Dony, Jury and Perring (1974), Clapham, Tutin and Moore (1989) and Watson (1955).

### Associated features

- **Soils and land cover**

In Countryside Survey 1990 the land cover, landscape features and soils of each 1 km square were mapped and described using a predetermined list of codes**.** These maps were overlaid with the locations of the plots sampled and the results are summarised in the descriptions, giving the degree of coincidence between the vegetation classes, soil types and land cover types. These were simplified eg by joining all crops into one type from the list provided by Barr *et al.* (1993).

### Distribution

- **Total number of plots**

The number of plots recorded in 1990 which make up each of the classes provides an objective measure of their abundance. The larger vegetation classes were relatively uniform and clearly defined; for example, vegetation class 10 (tall grass/herb boundaries) consisted of over 800 plots. However, most of the classes contained only 30–50 plots.

- **Landscape association**

The ITE land classes were aggregated into four broad landscape types (arable, pastural, marginal upland and upland), as described by Barr *et al.* (1993), and these have been used to summarise the distribution of the vegetation classes. The **arable** landscape is dominated by AC I (crops/weeds), AC II (tall grassland/herb) and AC III (fertile grassland), but it has a small element of AC VII (moorland/grass mosaic) and VIII (heath/bog). The **pastural** landscape is similar, but is dominated by AC III and has a higher proportion of moorland grass/mosaic. The **marginal uplands** also have AC III as the most abundant aggregate class, but all the other

aggregate classes are well represented, indicating the inherent variability of this landscape. The **upland** landscape is dominated by AC VII and AC VIII.

**• Plot types**
Percentage frequency of the six plot types, (ie main, habitat, boundary, hedge, streamside and roadside).

**Distribution maps, areas and lengths**

The average area (for main plots) and length (for linear plots) per land class were entered into a Geographical Information System (GIS) together with the land class of each 1 km2 in Great Britain, in order to produce the predictive distribution maps. For main plots, this figure was weighted according to the relative area of vegetated land in the sample 1 km squares. A statistical procedure was used to estimate the area of the CVS classes and their associated standard errors. A similar procedure was followed for the relative lengths of the four linear features, except that the weightings were by length rather than area. Estimates of lengths of the CVS classes along roadsides, streamsides, hedges and boundaries are also provided. Where a class is not represented by a plot type, the map for that plot type is blank or has negligible area or length.

**Floristic characteristics**

**• Species number**
A figure is given for the total number of species recorded in all the plots found within the vegetation class.

**• Number of species groups**
The species recorded from the plots were classified into 37 species groups (Table 1), according to their ecological demands (Bunce 1977; Prieto & Sanchez 1992). Each species occurs in only one group and all the species in any given group have similar habitat requirements. The vegetation classes vary in their species complexity. Management associated with crop production creates a narrow, uniform range of ecological conditions suitable for only a few species of a restricted ecological range, so that only crop and weeds are present, eg species group 1. In contrast, the woodland plots often contain mixtures of species tolerant of a variety of ecological conditions, such as grassland, eg species group 27, or dense woodland, and plots on the edge of woodlands may contain species from grassland, scrub and tall woodland, eg species group 25. The number of species groups provides a useful measure of the diversity of the vegetation.

Both the vegetation classes and species groups were simultaneously arranged (ordered) according to the principal gradient described by DECORANA (ie Axis 1 in Figure 1), so that they were ranked in the same way in the listings, and so that users would know that adjacent numbers had more in common that those further apart.

*Table 1. Brief descriptions of the 37 species groups (defined by applying Ward's minimum variance clustering of DECORANA scores). Three examples of the list of species belonging to each group are given in order to provide an overall picture of the composition; the groups are ordered according to their average DECORANA scores.*

| Species group | Species group name | Characteristic species |
|---|---|---|
| 1 | Crop or crop edge plants on fertile soils | *Bromus sterilis, Convolvulus arvensis, Lamium album* |
| 2 | Crops, crop edge or grassland on eutrophic | *Elymus repens, Rumex crispus, Sonchus* |

| | | |
|---|---|---|
| | soils | *oleraceus* |
| 3 | Woods, tall grasslands or wood edge plants on brown earth soils | *Heracleum sphondylium, Anthriscus sylvestris, Hedera helix* |
| 4 | Tall grassland plants on calcareous brown earths | *Tragopogon pratensis, Reseda lutea, Carduus nutans* |
| 5 | Wood edge, tall grassland or grassland plants on brown earths, often humus rich | *Urtica dioica, Arrhenatherum elatius, Galium aparine* |
| 6 | Water edge plants on wet alluvial soils | *Epilobium hirsutum, Polygonum persicaria, Phalaris arundinacea* |
| 7 | Crops or crop edge plants on brown earth soils | *Stellaria media, Polygonum aviculare, Veronica arvensis* |
| 8 | Woodland edge or scrub plants on brown earth soils | *Crataegus monogyna, Prunus spinosa, Tamus communis* |
| 9 | Grassland, tall grassland plants on wood edges on variable soils | *Cirsium arvense, Poa trivialis, Rumex obtusifolius* |
| 10 | Maritime saline or fresh water edge plants on gleyed brown earths | *Oenanthe crocata, Phragmites australis, Apium graveoleus* |
| 11 | Water edge plants on saturated gleyed alluvial soils | *Sparganium erectum, Glyceria maxima, Bidens tripartita* |
| 12 | Grassland or tall grassland plants on brown earth soils | *Dactylis glomerata, Lolium perenne, Poa annua* |
| 13 | Grassland plants on brown earths, often skeletal and calcareous | *Medicago lupulina, Daucus carota, Leucanthemum vulgare* |
| 14 | Wood or wood edge plants on calcareous or neutral brown earths | *Rubus fruticosus, Fraxinus excelsior, Geranium robertianum* |
| 15 | Tall grassland plants on damp gleyed brown earths | *Potentilla anserina, Carex hirta, Juncus inflexus* |
| 16 | River edge or aquatic plants on wet alluvial soils | *Apium nodiflorum, Nasturtium officinale, Polygonum amphibium* |
| 17 | Woodland or wood edge plants on brown earth soils | *Stellaria holostea, Corylus avellana, Hyacinthoides non-scripta* |
| 18 | Grassland plants on semi-fertile, sometimes rocky, brown earths | *Taraxacum agg., Poa pratensis, Achillea millefolium* |
| 19 | Grassland plants on calcareous brown earths | *Campanula rotundifolia, Galium verum, Heiracium pilosella* |
| 20 | Wood or wood edge plants on damp fertile brown earths | *Filipendula ulmaria, Angelica sylvestris, Epilobium montanum* |
| 21 | Water edge or aquatic plants on hydromorphic soils | *Glyceria fluitans, Veronic beccabunga, Alopecurus geniculatus* |
| 22 | Grassland wood edge or scrub plants on brown earths | *Holcus lanatus, Agrostis stolonifera, Ranunculus repens* |
| 23 | Marsh, wood edge or woodland plants on wet gleyed brown earths | *Cardamine pratensis, Stellaria alsine, Lotus uliginosus* |
| 24 | Marsh or water edge plants on soil water gleys | *Galium palustre, Juncus bufonius, Caltha palustris* |
| 25 | Woodland or woodland edge plants on acid brown earths | *Primula vulgaris, Digitalis purpurea, Oxalis acetosella* |
| 26 | Plants of maritime habitats on variable soils | *Plantago maritima, Plantago coronopus, Armeria maritima* |
| 27 | Wood, wood edge, scrub, grassland or heath plants on acid or neutral brown earths | *Agrostis capillaris, Pteridium aquilinum, Lotus corniculatus* |
| 28 | Grassland marsh or water edge plants on moist brown earth or gleyed soils | *Juncus effusus, Ranunculus acris, Deschampsia cespitosa* |
| 29 | Grassland or wood edge plants on acid or brown podzolic soils | *Anthoxanthum odoratum, Galium saxatile, Festuca ovina* |

| | | |
|---|---|---|
| 30 | Water edge or aquatic plants on wet humic soils | *Potamogeton polygonifolius, Carex rostrata, Potentilla palustris* |
| 31 | Flush, moorland or water edge plants on soil water gleys | *Juncus articulatus/acutiflorus, J.bulbosus, Ranunculus flammula* |
| 32 | Moorland plants on peaty gley soils | *Carex nigra, C.echinata, Viola palustris* |
| 33 | Moorland or grassland plants on gley or peaty podzolic soils | *Potentilla erecta, Nardus stricta, Deschampsia flexuosa* |
| 34 | Moorland plants on wet peaty gley soils | *Molinia caerulea, Carex panicea, Dactylorhiza maculata* |
| 35 | Heath or moorland plants on podzols or brown podzolic soils | *Calluna vulgaris, Juncus squarrosus, Vaccinium myrtillus* |
| 36 | Bog, water edge or aquatic plant on peaty soils | *Pedicularis sylvatica, Pinguicula vulgaris, Myrica gale* |
| 37 | Bog or heath plants on deep, raw peat soils | *Erica tetralix, Eriophorum angustifolium, Trichophorum cespitosum* |

**• Most frequent group**
The figure given here indicates the number of the species group (out of 37) that has the highest frequency in the class.

**• Most frequent species**
The five most frequently occurring species in all the plots of the class are listed, in decreasing order.

**• Species with highest cover**
The five species with the highest average cover in all the plots of the class are listed, in decreasing order.

**• Characteristic species**
A maximum of five species are listed which are significant ($p<0.05$) in all the plots of that class, according to chi-square positive associations only.

**• Similarity with the National Vegetation Classification (NVC)**
The computer program SIMIL (produced at Lancaster Univerity) was used to assign the average composition of the CVS classes to the NVC communities (Rodwell 1992). Comparisons were made between the CVS classes and NVC associations as shown in the summary descriptions, those completely different being 0 and those the same 1. Almost all the similarity coefficients are below 0.6, the level generally set as acceptable for good comparisons. This is because the plots in the CVS were placed at random within the 1 km squares (except for the habitat plots) whereas those used to derive the NVC were selectively placed in homogeneous vegetation. Nevertheless, some direct comparisons can be made, eg with NVC calcicolous grassland association (CG2) and CVS class 44 calcareous grassland. Other comparisons can also be usefully drawn, eg:

- CVS class 40 – rye-grass/Yorkshire-fog grassland and MG7 – rye-grass (*Lolium perenne*) leys,
- CVS class 26 – tall grassland/scrub by roadsides and MG1 – false oat-grass (*Arrhenatherum elatius*) grassland
- CVS class 65 – herb-rich acid grassland/heath and CG10 – sheep's fescue (*Festuca ovina*), bent grass (*Agrostis capillaris*) and wild thyme (*Thymus praecox*) grassland.

The radar diagrams will enable users experienced in the use of the NVC to identify comparable assemblages in the CVS vegetation classes, further supported by the descriptions available for each class.

**• Competitor-Stress tolerator-Ruderal characterisation (CSR)**

Plant strategy theory, developed by Grime and his co-workers (Grime *et al.* 1988), postulates two main determinants of plant distribution in most habitats. The first determinant is stress, which constrains growth (productivity), and the second is disturbance, which destroys biomass. If both these factors are absent and the conditions become optimal for plant growth, then the composition of a plant community is determined by competition between species. As a consequence, it is possible to classify plant species into functional types based on their responses to gradients of productivity and disturbance. The extremes on the gradients of productivity and disturbance are occupied by competitors (C) (under conditions of high productivity and low disturbance), stress-tolerators (S) (plants that can withstand continuously low productivity imposed by light, moisture or nutrient stress) and ruderals (R) (exploiting severely disturbed, productive habitats). To represent these functional types, Grime *et al*. (1988) have developed a triangular model (CSR) in which the functional types are represented by the corners of a triangular ordination with intermediate types in-between (19 types in total). Each functional type can be represented within the triangular ordination by a set of C, S and R co-ordinates. The C, S and R co-ordinates, therefore, relate to, and can be defined by, a whole set of attributes that contribute to a species' ability to survive under given conditions of productivity and disturbance. The figures shown are the percentage of plots in each of seven C, S, R types.

**• Relationship of vegetation and aggregate classes to Ellenberg values**

In a detailed analysis, Ellenberg (1974) expressed what he called the ecological behaviour of over 2000 species of vascular plants. To each species he assigned scores (values) which represented the behaviour of the species with respect to the main environmental factors. The first three factors were related to climate: light, temperature and continentality of the distribution range. For instance, plants which grow in full shadow were assigned a score of 1 while plant growing in full light received a score of 9. The next three factors represented soil moisture, soil acidity and fertility. Thus, plants growing only in soils very poor in available nitrogen and other nutrients were scored 1 and those growing only in very rich soils were scored 8. Ellenberg pointed out that the ecological behaviour of the plant was different from its environmental demands. For instance, species such as heather (*Calluna vulgaris*), when cultivated alone, grows well in soils with a higher pH than those in which it grows in the wild, where it is confined to the more acid soils through competition with other species. The values have been recalibrated for British conditions (Hill *et al.* in prep) and are on the following scales:

| | |
|---|---|
| Light | 1 (shaded) – 9 (open) |
| Moisture | 1 (dry) – 12 (wet) |
| pH | 1 (acid) – 9 (basic) |
| Fertility | 1 (infertile) – 9 (fertile) |
| Continentality | 1 (least continental) – 9 (most continental) |

The average Ellenberg scores for each CVS class have been ranked and divided into three percentile bands: low score (0.1–33.3%); medium (33.4–66.6); and high score (66.7–100%). Thus it is possible to see at a glance how the CVS classes compare with each other.

**Assigning new vegetation plots to classes within the CVS and exceptions:**

In order to allocate vegetation plots (quadrats or relevèes) to the existing hierarchical classification, a binary decision tree was constructed. At each node of the tree a decision method was implemented, appropriate to the classification being emulated. The decisions were based on a partition of multidimensional species-space. The resulting decision tree produced a deterministic result, allocating each vegetation plot to a single vegetation class. It should be emphasised that this procedure gives a precise allocation of each individual plot to the appropriate class of the CVS, based on the entire information available on the species content of that plot.

This structure has been implemented as a software package running under Microsoft WindowsTM. So far this package has been made available on request for testing, and has performed well. It is currently available on the World Wide Web (http://www.ceh.ac.uk/products/software/CEHSoftware-CVS.htm). This package enables a user to classify sample plots for a variety of objectives.

The classification has also been incorporated into MAVIS (Modular Analysis of Vegetation and Interpretation System), a package currently being tested which provides ready access to the vegetation analysis procedures of CVS, NVC, CSR and Ellenberg values. This software allows the user to enter species lists for vegetation units either interactively or in batch mode from a data file. Once a vegetation unit or units have been allocated to a class or classes, the software allows the user to determine their positions on the three main vegetation gradients in Great Britain, as determined from the CVS.

The CVS allocation software provides a means of sorting the different assemblages, using the whole list of species present. The major exception is saltmarsh, which was excluded from the analysis as it was represented by only 38 plots and is not robustly described within the range of CVS classes. The five most frequently recorded species were common saltmarsh-grass (Puccinellia maritima), sea plantain (Plantago maritima), annual sea-blite (Suaeda maritima), sea aster (Aster tripolium) and Spartina spp., but others such as glasswort (Salicornia spp.) may be locally important. However, if exceptional plots are being observed, eg amongst scrub on sea cliffs, and/or if plots are being examined out of season, then users should be aware that problems could arise in the allocation.

Tests have been done, e.g. on limestone pavements, where no plots were placed in the random survey, and the system assigned the list of species to an appropriate group. It is difficult to provide statistical rules that are easy to apply in order to verify whether a class is appropriate, and judgement must be involved in applying the above guidelines. In critical studies appropriate statistical analyses should be carried out in order to confirm intuitive interpretation.

**Illustrations of each aggregate class:**

A series of photographs representive of each aggregate class showing views of vegetation, typical species and species indicative of conservation significance.

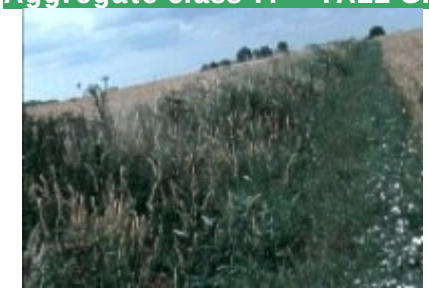
## Aggregate class I – CROPS / WEEDS

A field of sugar beet with some bare ground and individual seedlings germinating.

Common poppy *(Papaver rhoeas)*. A species characteristic of this aggregate class, but which is no longer abundant. It is able to recover quickly, however, if fields are not sprayed and it is present in the seed bank.

Corn marigold *(Chrysanthemum segetum)*: although probably introduced, this plant would still be regarded as an indicator species because of its decline in abundance in arable fields across Britain. It is now uncommon in the south and south east of England, and is more often seen in fields in Scotland.

## Aggregate class II – TALL GRASSLAND / HERB



A typical location for tall grass/herb vegetation along a field edge: the immediate edge of the field would not fall into this category, but the tall grass behind would be typical, with common nettle *(Urtica diocia)* and a species of thistle *(Cirsium* spp.) in the background.

Hogweed *(Heracleum sphondylium)*, a species typical of tall grassland/herb vegetation, whether it occurs beside roads, hedges or fields. It is able compete with the taller grasses and is very common. It is also important as a food plant for a number of insect species.

Melancholy thistle *(Cirsium helenioides),* a species which is regarded as an indicator species because of its restricted distribution. Originally present in meadows its most frequent habitat is now by roadsides within tall grass/herb vegetation.

## Aggregate class III – FERTILE GRASSLAND

A grassland dominated by

White clover *(Trifolium repens),*

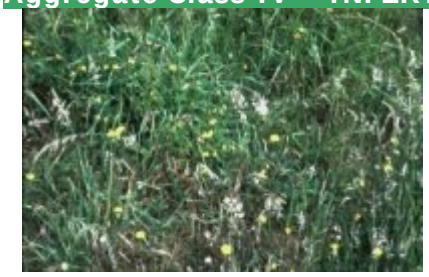
In this class of grassland there

perennial rye-grass *(Lolium perenne)*. The species poverty of the vegetation is typical of the intensively managed swards included within this class.

a typical species often present in this class of grassland. The species occurs naturally within this vegetation class, but various cultivars are also often planted within it, a practice which has declined in recent years due to the increase in application of nitrogen fertilizer to replace the fixation of nitrogen by clover species.

are few characteristic indicator species because of the high fertility. However, on some motorway verges, cowslip (*Primula veris*) has spread away from the edge of fields. This species would therefore be regarded as an indicator within the vegetation class, since it has disappeared from many of its former locations.

## Aggregate Class IV – INFERTILE GRASSLAND



An example of the more species poor end of the range of variation described by this aggregate class, containing relatively few species such as Yorkshire-fog *(Holcus lanatas)*, creeping buttercup *(Ranunculus repens)* and rough meadow-grass *(Poa trivialis)*. Other members of this class would contain many more species and are discussed in the details of the individual classes of the CVS.

Oxeye daisy *(Leucanthemum vulgare)*, a typical species of infertile grasslands, together with several grass species such as red fescue *(Festuca rubra)* and yellow oat-grass *(Trisetum flavescens)*.

Meadowsweet *(Filipendula ulmaria)* and marsh woundwort *(Stachys palustris)*, two indicator species of the wetter CVS classes. These were formally widespread species, but are now often restricted to small fragments of semi-natural habitat.

## Aggregate Class V – LOWLAND WOODED

Lowland wooded vegetation is often poor in species because of dense shade. This photograph however is on the edge of a wood where the vegetation is more species rich with red campion (*Silene dioica*) and wild angelica (*Angelica sylvestris*).

The greater stitchwort *(Stellaria holostea)*, a common species on brown earth soils in woodlands often flowers prolifically if there is adequate light.

Hemp-agrimony *(Eupatorium cannabinum)*, a species which although not rare, is indicative of specific conditions within woodlands, especially on moist to wet woodland edges with a relatively high nutrient status. It is attractive to insects.

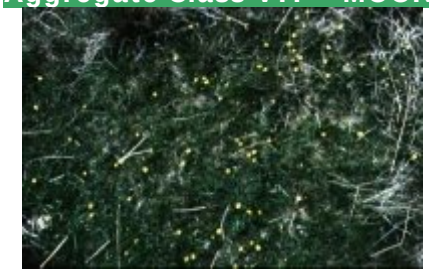
## Aggregate Class VI – UPLAND WOODED

This photograph of the upland wooded aggregate class, with birch (*Betula* sp.), is taken in the west of Scotland along the edge of a loch and illustrates the complexity in such semi-natural woodland vegetation. However, other classes of woodland in this category include coniferous plantations with few species, as well as native pine forests.

A patch of vegetation in one of the fertile sections of an upland wooded area of vegetation; such woodlands would typically contain trees such as ash *(Fraxinus excelsior),* shown at the back of the photograph, and also ground flora species such as marsh hawk's-beard *(Crepis paludosa)* and male-fern *(Dryopteris filix-mas).*

Wild angelica (*Angelica sylvestris*), a species which in NW Scotland is indicative of high quality, species rich semi-natural woodland.

## Aggregate Class VII – MOORLAND GRASS/MOSAIC

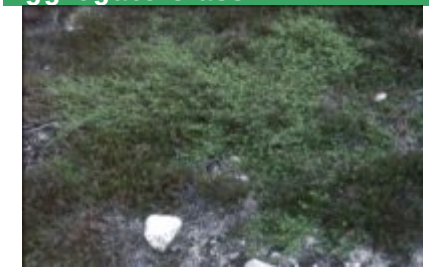


Moorland grass/mosaic is a complex aggregate class covering a diverse range of largely upland vegetation types. The photograph shows acid grassland with matt grass (*Nardus stricta*) sheeps fescue (*Festuca ovina*) and tormentil (*Potentilla erecta*).

Wild thyme (*Thymus praecox*), typical of some of the more species rich classes of vegetation within the aggregate class.

Heath spotted-orchid (*Dactylorhiza maculata*) which grows on moist acid peaty soils in moorland vegetation and would be a quality indicator for more species rich vegetation classes.

## Aggregate Class VIII – HEATH/BOG



A patch of heath vegetation on a freely drained exposed mountain summit with ling heather (*Calluna vulgaris*) and bearberry (*Arctostaphylos uva-ursi*)

An example of some typical species of this class with bell heather *(Erica cinerea)* prominent, which is present in bogs in the north west of Scotland. Also shown is purple

Alpine lady's-mantle *(Alchemilla alpina),* a species which would be regarded as an indicator of high quality within this aggregate class. Another arctic-alpine species is also present, the

moor-grass *(Molinia caerulea)* and the moss *(Racomitrium lanuginosum)*.

parsley fern *(Cryptogamma crispa*). Both these species would enable an assessment of quality, in this case of arctic-alpine affinities.

**Illustrations of CVS characteristics:**

A series of photographs concerning certain characteristics of the Countryside Vegetation System discussed in the Introduction.

A plot that would be regarded as uniform vegetation because it is solely dominated by bracken (*Pteridium aquilinum*). Plots of this kind occurred in many of the sample locations of the Countryside Survey 1990 and are allocated by the statistical procedure into the appropriate CVS class.

A patch of heterogeneous vegetation; to the right is grassland dominated by Yorkshire-fog (*Holcus lanatus*). In the centre there is yellow iris (*Iris pseudacorus*), and to the left a marsh area with various species of rush (*Juncus* spp.). A single CVS quadrat of 200 m2 could encompass all these elements, and plots of this type would have been classified into their appropriate class according to the balance of species present.

The bare ground of cropped land in the autumn, another category which is excluded. There are no species present on the land on the left of the photograph, although the narrow strip of grassland in the centre would be included as a boundary plot.

Vegetation that was included in the survey but which has a high degree of internal complexity. It is along the edge of a road which has been regularly treated with salt, so that the vegetation on the immediate edge of the road is relatively sparse. Further back there is a cover of perennial rye-grass (*Lolium perenne*), common couch (*Elymus repens*) and daisy (*Bellis perennis*). Such complex vegetation though rather hetrogeneous, would be correctly allocated by the Countryside Vegetation System.

A photograph of sea beet (*Beta maritima*). Such plots were excluded from the CVS and are not covered by the plot allocation

A comparable situation in the west of Scotland, with vegetation dominated by sea campion (*Silene maritima*). Localised vegetation

software. Extreme coastal plots are readily identified because of the dominance of the maritime influence and their location in the landscape.

of this type may not fit within the classification unless sufficient other species are present to allocate it to an appropriate class.

**Data provided within the PDF files for each vegetation class is as follows:**

These PDF files contain a two-page summary for each of the 100 CVS vegetation classes. The summary provides a description of each class and depicts its extent in GB, its association with the four landscape types based upon the ITE Land Classification of GB, details of plant species composition, comparisons with the National Vegetation Classification (NVC) (Rodwell 1992), a characterisation in terms of functional strategy theory (CSR) (Grime *et al*. 1988), and its relationship to Ellenberg's indicator values (Ellenberg 1974). The values in the text are those that have been recalibrated for GB (Hill *et al.* in prep). The layout has been chosen to provide as much information as possible to enable the classification to be used effectively. Each section in the two-page summary is summarised below.

**Description**

This section includes the number and name of the vegetation class, and of the aggregate class to which it belongs. The names are designed to provide a clear indication of the type of vegetation and an impression of the composition of each class. The naming is as consistent as possible, depending upon the availability of precise ecological terms, and the style follows that of Barr *et al*. (1993). Distinct combinations of habitats are used wherever possible, and in other cases species or soil types are included as descriptors. The continuous nature of vegetation inevitably means that arbitrary, but reproducable, divisions are made, and, whilst the names appear similar, the statistical procedure used to allocate samples is discriminatory. A short paragraph of text summarises the main features. The names of species given in the description of most frequent, cover or characteristic species do not always coincide with the lists, as a degree of interpretation was used to select those indicative of the ecological character of the vegetation class. All species names are listed according to Dony, Jury and Perring (1974), Clapham, Tutin and Moore (1989) and Watson (1955).

**Associated features**

**Soils and land cover**
In Countryside Survey 1990 the land cover, landscape features and soils of each 1 km square were mapped and described using a predetermined list of codes**.** These maps were overlaid with the locations of the plots sampled and the results are summarised in the descriptions, giving the degree of coincidence between the vegetation classes, soil types and land cover types. These were simplified eg by joining all crops into one type from the list provided by Barr *et al.* (1993).

**Distribution**

**Total number of plots**
The number of plots recorded in 1990 which make up each of the classes provides an objective measure of their abundance. The larger vegetation classes were relatively uniform and clearly defined; for example, vegetation class 10 (tall grass/herb boundaries) consisted of over 800 plots. However, most of the classes contained only 30–50 plots.

**Landscape association**
The ITE land classes were aggregated into four broad landscape types (arable, pastural, marginal upland and upland), as described by Barr *et al.* (1993), and these have been used to summarise the distribution of the vegetation classes. The **arable** landscape is dominated by AC I (crops/weeds), AC II (tall grassland/herb) and AC III (fertile grassland), but it has a small element of AC VII (moorland/grass mosaic) and VIII (heath/bog). The **pastural** landscape is similar, but is dominated by AC III and has a higher proportion of moorland grass/mosaic. The

**marginal uplands** also have AC III as the most abundant aggregate class, but all the other aggregate classes are well represented, indicating the inherent variability of this landscape. The **upland** landscape is dominated by AC VII and AC VIII.

### Plot types

Percentage frequency of the six plot types, (ie main, habitat, boundary, hedge, streamside and roadside).

### Distribution maps, areas and lengths

The average area (for main plots) and length (for linear plots) per land class were entered into a Geographical Information System (GIS) together with the land class of each 1 km2 in Great Britain, in order to produce the predictive distribution maps. For main plots, this figure was weighted according to the relative area of vegetated land in the sample 1 km squares. A statistical procedure was used to estimate the area of the CVS classes and their associated standard errors. A similar procedure was followed for the relative lengths of the four linear features, except that the weightings were by length rather than area. Estimates of lengths of the CVS classes along roadsides, streamsides, hedges and boundaries are also provided. Where a class is not represented by a plot type, the map for that plot type is blank or has negligible area or length.

### Floristic characteristics

### Species number

A figure is given for the total number of species recorded in all the plots found within the vegetation class.

### Number of species groups

The species recorded from the plots were classified into 37 species groups (Table 1), according to their ecological demands (Bunce 1977; Prieto & Sanchez 1992). Each species occurs in only one group and all the species in any given group have similar habitat requirements. The vegetation classes vary in their species complexity. Management associated with crop production creates a narrow, uniform range of ecological conditions suitable for only a few species of a restricted ecological range, so that only crop and weeds are present, eg species group 1. In contrast, the woodland plots often contain mixtures of species tolerant of a variety of ecological conditions, such as grassland, eg species group 27, or dense woodland, and plots on the edge of woodlands may contain species from grassland, scrub and tall woodland, eg species group 25. The number of species groups provides a useful measure of the diversity of the vegetation.

Both the vegetation classes and species groups were simultaneously arranged (ordered) according to the principal gradient described by DECORANA (ie Axis 1 in Figure 1), so that they were ranked in the same way in the listings, and so that users would know that adjacent numbers had more in common that those further apart.

### Most frequent group

The figure given here indicates the number of the species group (out of 37) that has the highest frequency in the class.

### Most frequent species

The five most frequently occurring species in all the plots of the class are listed, in decreasing order.

### Species with highest cover

The five species with the highest average cover in all the plots of the class are listed, in decreasing order.

**Characteristic species**
A maximum of five species are listed which are significant ($p<0.05$) in all the plots of that class, according to chi-square positive associations only.

**Similarity with the National Vegetation Classification (NVC)**
The computer program SIMIL (produced at Lancaster Univerity) was used to assign the average composition of the CVS classes to the NVC communities (Rodwell 1992). Comparisons were made between the CVS classes and NVC associations as shown in the summary descriptions, those completely different being 0 and those the same 1. Almost all the similarity coefficients are below 0.6, the level generally set as acceptable for good comparisons. This is because the plots in the CVS were placed at random within the 1 km squares (except for the habitat plots) whereas those used to derive the NVC were selectively placed in homogeneous vegetation. Nevertheless, some direct comparisons can be made, eg with NVC calcicolous grassland association (CG2) and CVS class 44 calcareous grassland. Other comparisons can also be usefully drawn, eg:

- CVS class 40 – rye-grass/Yorkshire-fog grassland and MG7 – rye-grass (*Lolium perenne*) leys,
- CVS class 26 – tall grassland/scrub by roadsides and MG1 – false oat-grass (*Arrhenatherum elatius*) grassland
- CVS class 65 – herb-rich acid grassland/heath and CG10 – sheep's fescue (*Festuca ovina*), bent grass (*Agrostis capillaris*) and wild thyme (*Thymus praecox*) grassland.

The radar diagrams will enable users experienced in the use of the NVC to identify comparable assemblages in the CVS vegetation classes, further supported by the descriptions available for each class.

**Competitor-Stress tolerator-Ruderal characterisation (CSR)**
Plant strategy theory, developed by Grime and his co-workers (Grime *et al.* 1988), postulates two main determinants of plant distribution in most habitats. The first determinant is stress, which constrains growth (productivity), and the second is disturbance, which destroys biomass. If both these factors are absent and the conditions become optimal for plant growth, then the composition of a plant community is determined by competition between species. As a consequence, it is possible to classify plant species into functional types based on their responses to gradients of productivity and disturbance. The extremes on the gradients of productivity and disturbance are occupied by competitors (C) (under conditions of high productivity and low disturbance), stress-tolerators (S) (plants that can withstand continuously low productivity imposed by light, moisture or nutrient stress) and ruderals (R) (exploiting severely disturbed, productive habitats). To represent these functional types, Grime *et al*. (1988) have developed a triangular model (CSR) in which the functional types are represented by the corners of a triangular ordination with intermediate types in-between (19 types in total). Each functional type can be represented within the triangular ordination by a set of C, S and R co-ordinates. The C, S and R co-ordinates, therefore, relate to, and can be defined by, a whole set of attributes that contribute to a species' ability to survive under given conditions of productivity and disturbance. The figures shown are the percentage of plots in each of seven C, S, R types.

**Relationship of vegetation and aggregate classes to Ellenberg values**
In a detailed analysis, Ellenberg (1974) expressed what he called the ecological behaviour of over 2000 species of vascular plants. To each species he assigned scores (values) which represented the behaviour of the species with respect to the main environmental factors. The first three factors were related to climate: light, temperature and continentality of the distribution range. For instance, plants which grow in full shadow were assigned a score of 1 while plant growing in full light received a score of 9. The next three factors represented soil moisture, soil acidity and fertility. Thus, plants growing only in soils very poor in available nitrogen and other nutrients were scored 1 and those growing only in very rich soils were scored 8. Ellenberg pointed out that the

ecological behaviour of the plant was different from its environmental demands. For instance, species such as heather (*Calluna vulgaris*), when cultivated alone, grows well in soils with a higher pH than those in which it grows in the wild, where it is confined to the more acid soils through competition with other species. The values have been recalibrated for British conditions (Hill *et al.* in prep) and are on the following scales:

| | |
|---|---|
| Light | 1 (shaded) – 9 (open) |
| Moisture | 1 (dry) – 12 (wet) |
| pH | 1 (acid) – 9 (basic) |
| Fertility | 1 (infertile) – 9 (fertile) |
| Continentality | 1 (least continental) – 9 (most continental) |

The average Ellenberg scores for each CVS class have been ranked and divided into three percentile bands: low score (0.1–33.3%); medium (33.4–66.6); and high score (66.7–100%). Thus it is possible to see at a glance how the CVS classes compare with each other.

In order to allocate vegetation plots (quadrats or relevèes) to the existing hierarchical classification, a binary decision tree was constructed. At each node of the tree a decision method was implemented, appropriate to the classification being emulated. The decisions were based on a partition of multidimensional species-space. The resulting decision tree produced a deterministic result, allocating each vegetation plot to a single vegetation class. It should be emphasised that this procedure gives a precise allocation of each individual plot to the appropriate class of the CVS, based on the entire information available on the species content of that plot.

This structure has been implemented as a software package running under Microsoft Windows. So far this package has been made available on request for testing, and has performed well. This package enables a user to classify sample plots for a variety of objectives.

The classification has also been incorporated into MAVIS (Modular Analysis of Vegetation and Interpretation System), a package currently being tested which provides ready access to the vegetation analysis procedures of CVS, NVC, CSR and Ellenberg values. This software allows the user to enter species lists for vegetation units either interactively or in batch mode from a data file. Once a vegetation unit or units have been allocated to a class or classes, the software allows the user to determine their positions on the three main vegetation gradients in Great Britain, as determined from the CVS.

The CVS allocation software provides a means of sorting the different assemblages, using the whole list of species present. The major exception is saltmarsh, which was excluded from the analysis as it was represented by only 38 plots and is not robustly described within the range of CVS classes. The five most frequently recorded species were common saltmarsh-grass (*Puccinellia maritima*), sea plantain (*Plantago maritima*), annual sea-blite (*Suaeda maritima*), sea aster (*Aster tripolium*) and *Spartina* spp., but others such as glasswort (*Salicornia* spp.) may be locally important. However, if exceptional plots are being observed, eg amongst scrub on sea cliffs, and/or if plots are being examined out of season, then users should be aware that problems could arise in the allocation.

Tests have been done, eg on limestone pavements, where no plots were placed in the random survey, and the system assigned the list of species to an appropriate group. It is difficult to provide statistical rules that are easy to apply in order to verify whether a class is appropriate, and judgement must be involved in applying the above guidelines. In critical studies appropriate statistical analyses should be carried out in order to confirm intuitive interpretation.

## Vegetation class 1

**AGGREGATE CLASS I**
**CROPS/WEEDS**

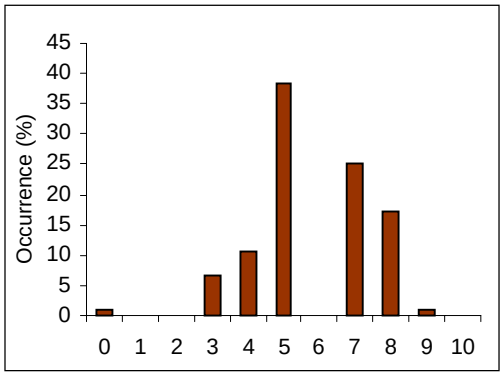
# Almost weed-free wheat/ other crops

## Description

This class occurs almost exclusively in fields on cultivated soils. It is quite common and has wheat as the main cover. It is very poor in plants with no one characteristic species. This class is found mainly in the core cereal landscapes of East Anglia but may also be present elsewhere in the lowlands.

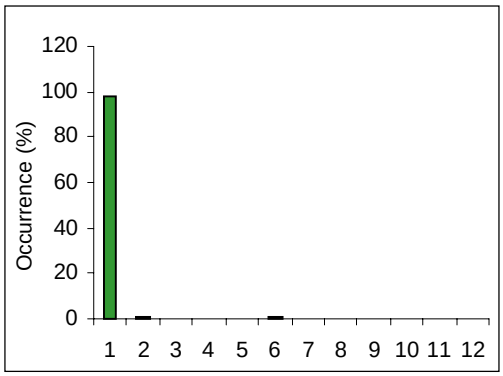
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

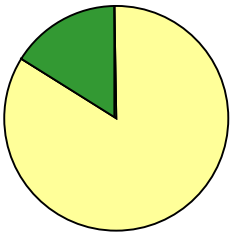
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

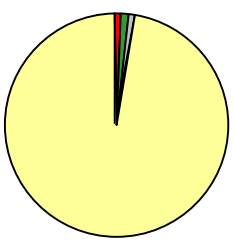
## Distribution

**Total number of plots** 106



| | % |
|---|---|
| Arable | 84 |
| Marginal upland | 0 |
| Pastural | 16 |
| Upland | 0 |

### Landscape association



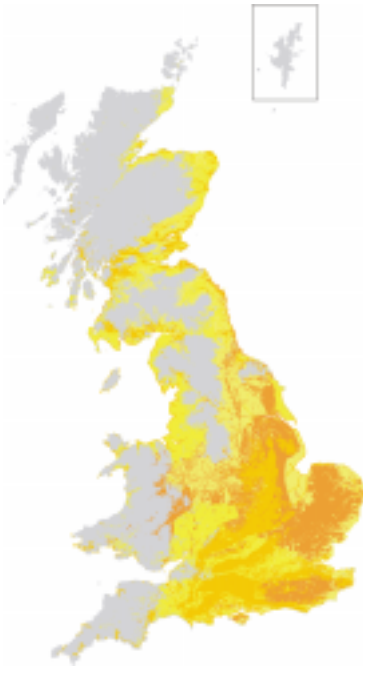
| | % |
|---|---|
| Boundary | 1 |
| Hedge | 1 |
| Roadside | 1 |
| Streamside | 0 |
| Main | 97 |
| Habitat | 0 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





**Main**
Area 7.36 SE 0.97

**Boundary**
Length 1.09 SE 1.09

## Floristic characteristics

**Species number:** 62 (Low)

**No. of species groups:** 1 (Low)

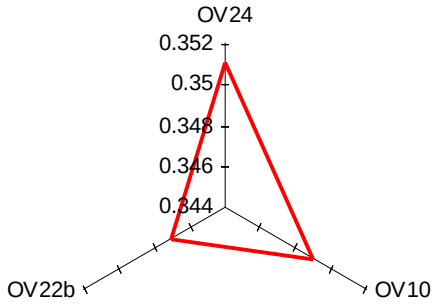
**Most frequent group:** 1

| *Most frequent species* | % |
|---|---|
| *Bromus sterilis* | 16 |
| *Poa annua* | 12 |
| *Galium aparine* | 10 |
| *Alopecurus myosuroides* | 8 |
| *Avena fatua* | 8 |

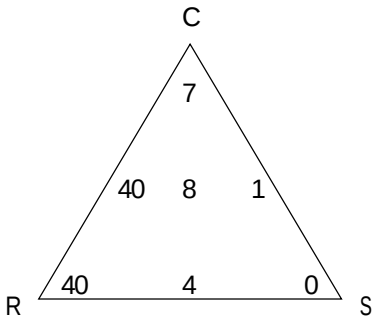
| *Species with highest cover* | % |
|---|---|
| *Crataegus monogyna* | 0.6 |
| *Convolvulus arvensis* | 0.5 |
| *Bromus sterilis* | 0.3 |
| *Agrostis gigantea* | 0.2 |
| *Hedera helix* | 0.2 |

| *Characteristic species* |
|---|
| *Bromus sterilis* |
| *Alopecurus myosuroides* |

### Similarity with National Vegetation Classification (NVC) types



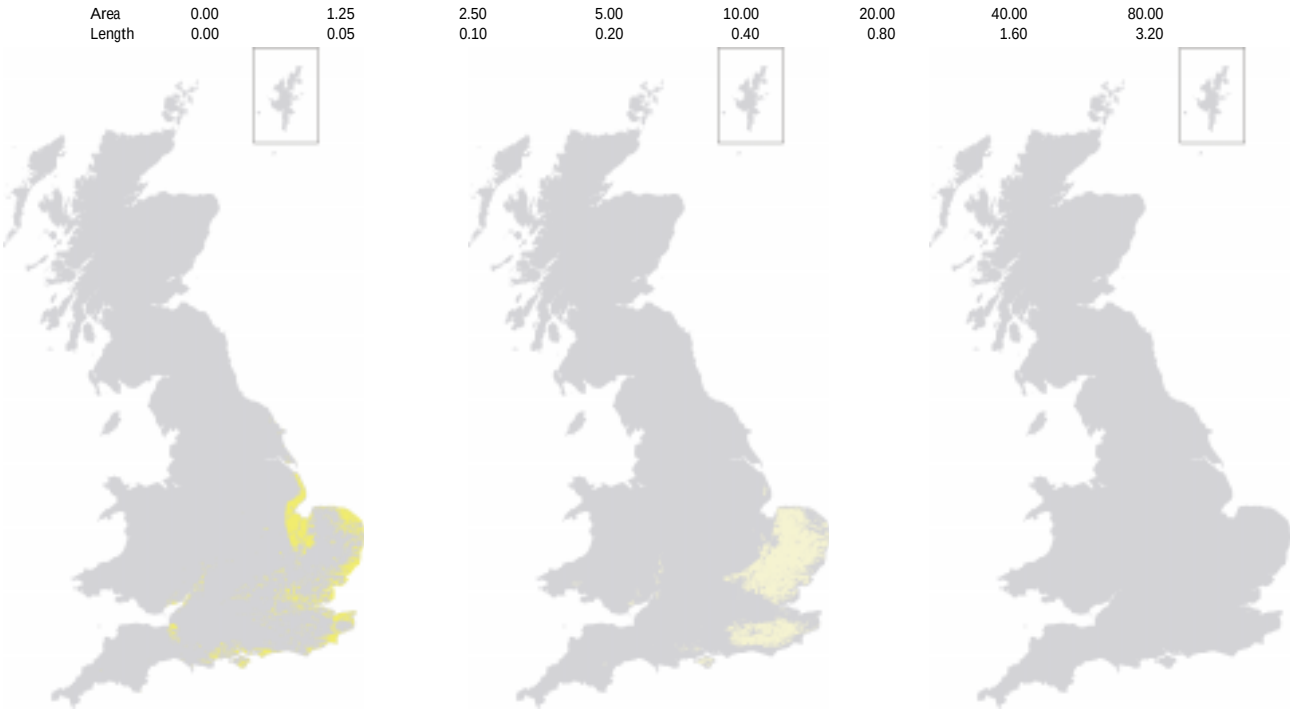

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 4.4 Low | Mean 6.9 High | Mean 7.3 High | Mean 4.6 High |

## Distribution




**Hedge**
Length 0.57 SE 0.57

**Roadside**
Length 0.35 SE 0.35

**Streamside**
Length *absent* SE *n/a*

**Vegetation class 2**

**AGGREGATE CLASS I**
**CROPS/WEEDS**

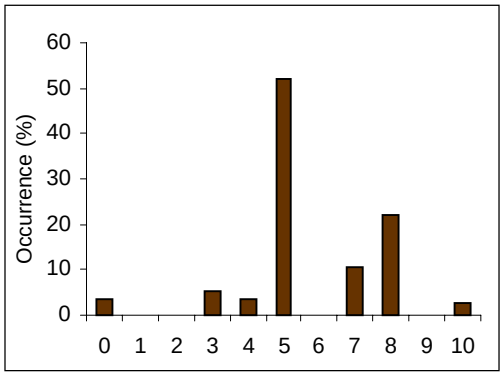
# Various crops with scattered weeds

## Description

This class mainly occurs in fields on cultivated soils, but also in highly disturbed small patches of vegetation or occasionally by roadsides, as well as field margins. It is quite often associated with various crops, wheat being the most common. Several weed species may be present, especially fat-hen (*Chenopodium* spp.), common couch (*Elymus repens*) and chickweed (*Stellaria media*). This class occurs throughout the lowlands of Britain but especially around the Wash in East Anglia.

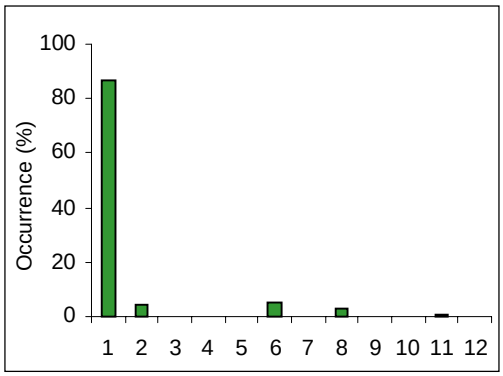
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

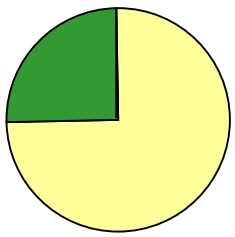
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

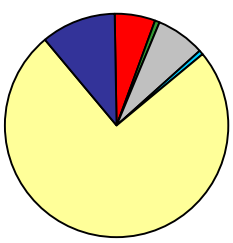
## Distribution

**Total number of plots** 118



| | % |
|---|---|
| Arable | 75 |
| Marginal upland | 0 |
| Pastural | 25 |
| Upland | 0 |

### Landscape association



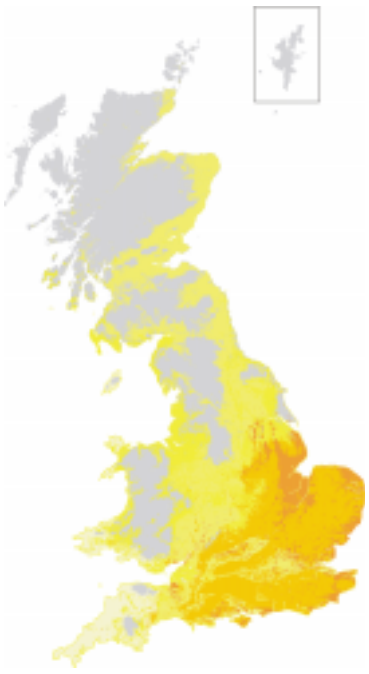
| | % |
|---|---|
| Boundary | 6 |
| Hedge | 1 |
| Roadside | 7 |
| Streamside | 1 |
| Main | 75 |
| Habitat | 11 |

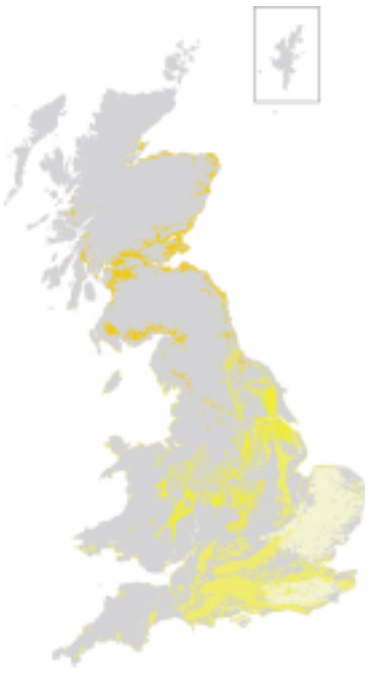
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





**Main**
Area 5.73 SE 0.88

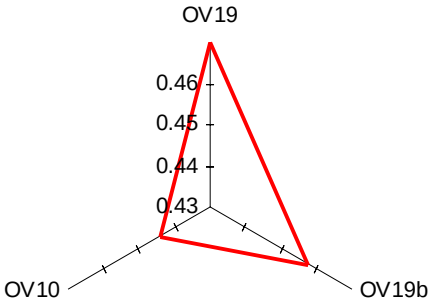
**Boundary**
Length 4.53 SE 2.02

## Floristic characteristics

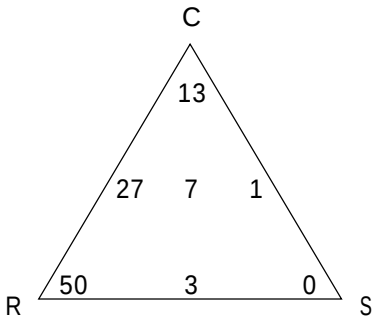
**Species number:** 140 (Medium) **No. of species groups:** 4 (Low) **Most frequent group:** 2

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Polygonum aviculare* | 35 | *Lolium perenne* | 2.6 | *Urtica dioica* |
| *Stellaria media* | 29 | *Polygonum persicaria* | 1.6 | *Fallopia convolvulus* |
| *Urtica dioica* | 26 | *Stellaria media* | 1.0 | *Artemisia vulgaris* |
| *Fallopia convolvulus* | 23 | *Crataegus monogyna* | 0.9 | *Arrhenathrum elatius* |
| *Capsella bursa-pastoris* | 22 | *Matricaria matricarioides* | 0.8 | *Sisymbrium officinale* |

### Similarity with National Vegetation Classification (NVC) types



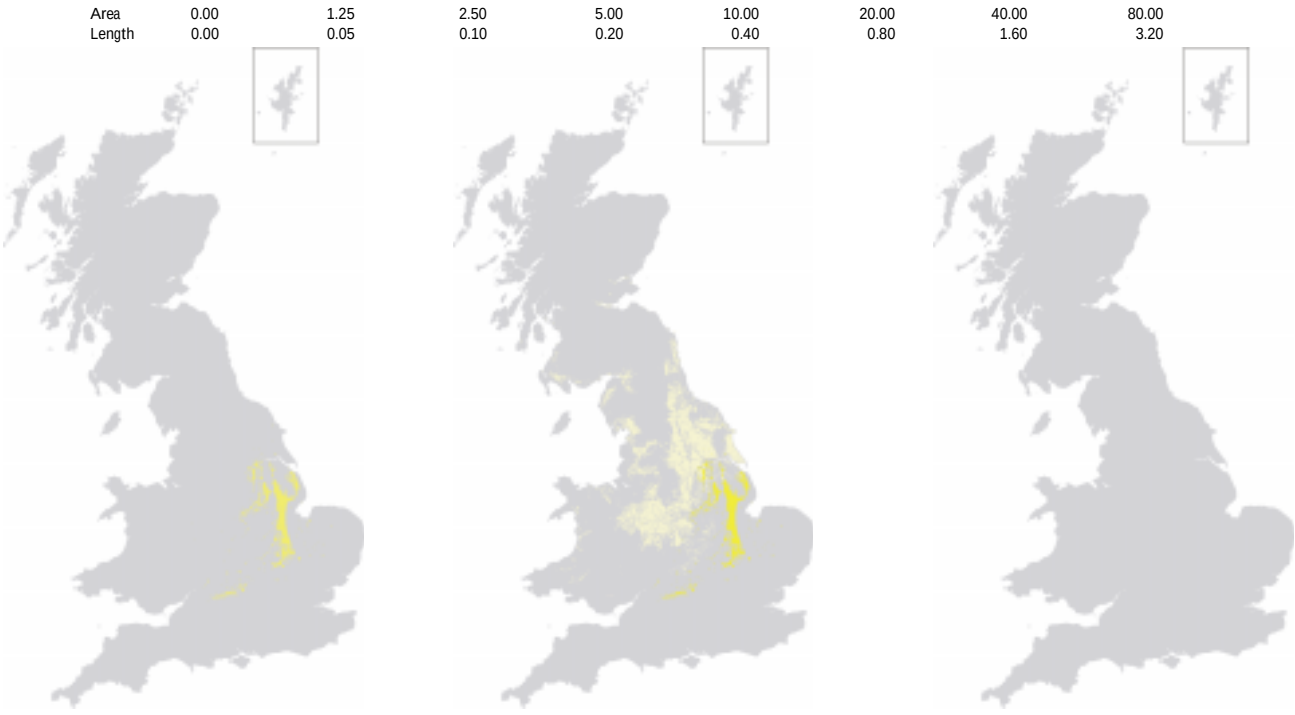

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 4.9 Low | Mean 6.7 High | Mean 6.5 High | Mean 4.1 High |

## Distribution




**Hedge**
Length 0.17 SE 0.17

**Roadside**
Length 1.06 SE 0.62

**Streamside**
Length 0.00 SE 0.00

**Vegetation class 3**

**AGGREGATE CLASS I**
**CROPS/WEEDS**

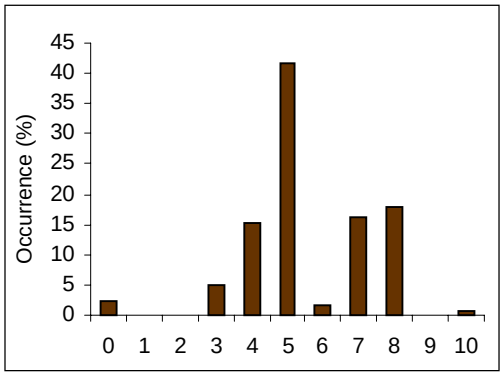
# Cereal crops with scattered grass weeds

## Description

This class is common and occurs almost exclusively in crop fields of wheat or barley on cultivated soils. Scattered weeds may be present, especially common couch (*Elymus repens*), chickweed (*Stellaria media*) and annual meadow-grass (*Poa annua*). This class occurs mainly in East Anglia, southern England and the north Midlands, but also elsewhere in the lowlands.

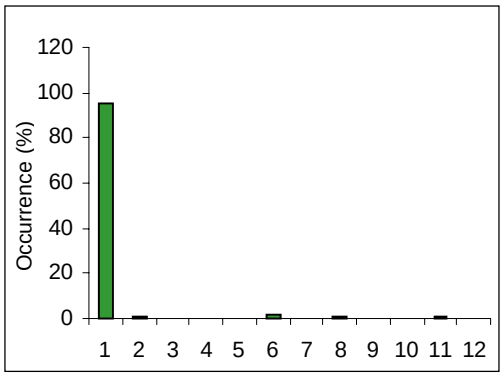
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

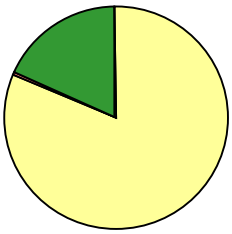
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

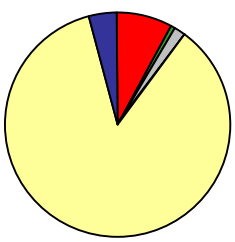
## Distribution

**Total number of plots** 186



| | % |
|---|---|
| Arable | 81 |
| Marginal upland | 1 |
| Pastural | 18 |
| Upland | 0 |

### Landscape association



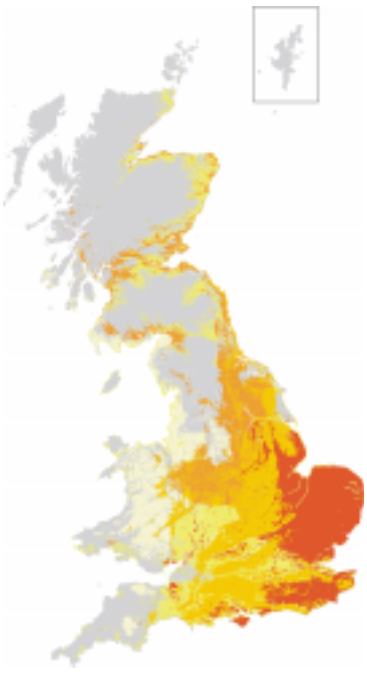
| | % |
|---|---|
| Boundary | 8 |
| Hedge | 1 |
| Roadside | 2 |
| Streamside | 0 |
| Main | 86 |
| Habitat | 4 |

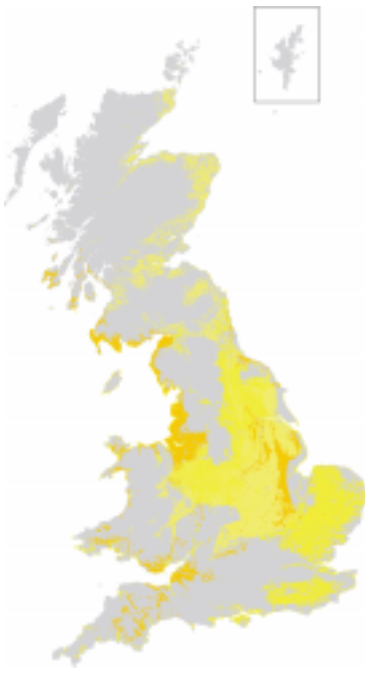
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





**Main**
Area 9.53 SE 1.24

**Boundary**
Length 10.71 SE 3.26

## Floristic characteristics

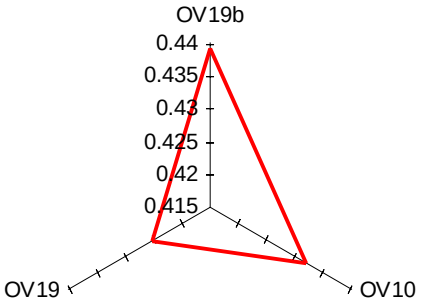
**Species number:** 133 (Low)

**No. of species groups:** 4 (Low)

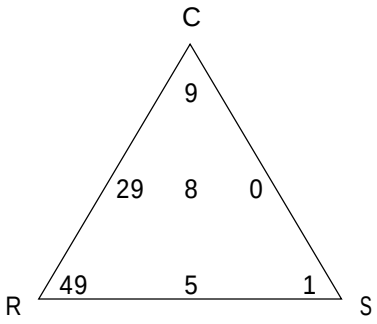
**Most frequent group:** 1

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Stellaria media* | 36 | *Poa annua* | 2.2 | *Galium aparine* |
| *Poa annua* | 36 | *Lolium perenne* | 1.1 | *Avena fatua* |
| *Galium aparine* | 35 | *Polygonum aviculare* | 1.1 | *Bromus sterilis* |
| *Polygonum aviculare* | 34 | *Stellaria media* | 1.0 | *Alopecurus myosuroides* |
| *Avena fatua* | 24 | *Arrhenathrum elatius* | 0.8 | *Papaver rhoeas* |

### Similarity with National Vegetation Classification (NVC) types



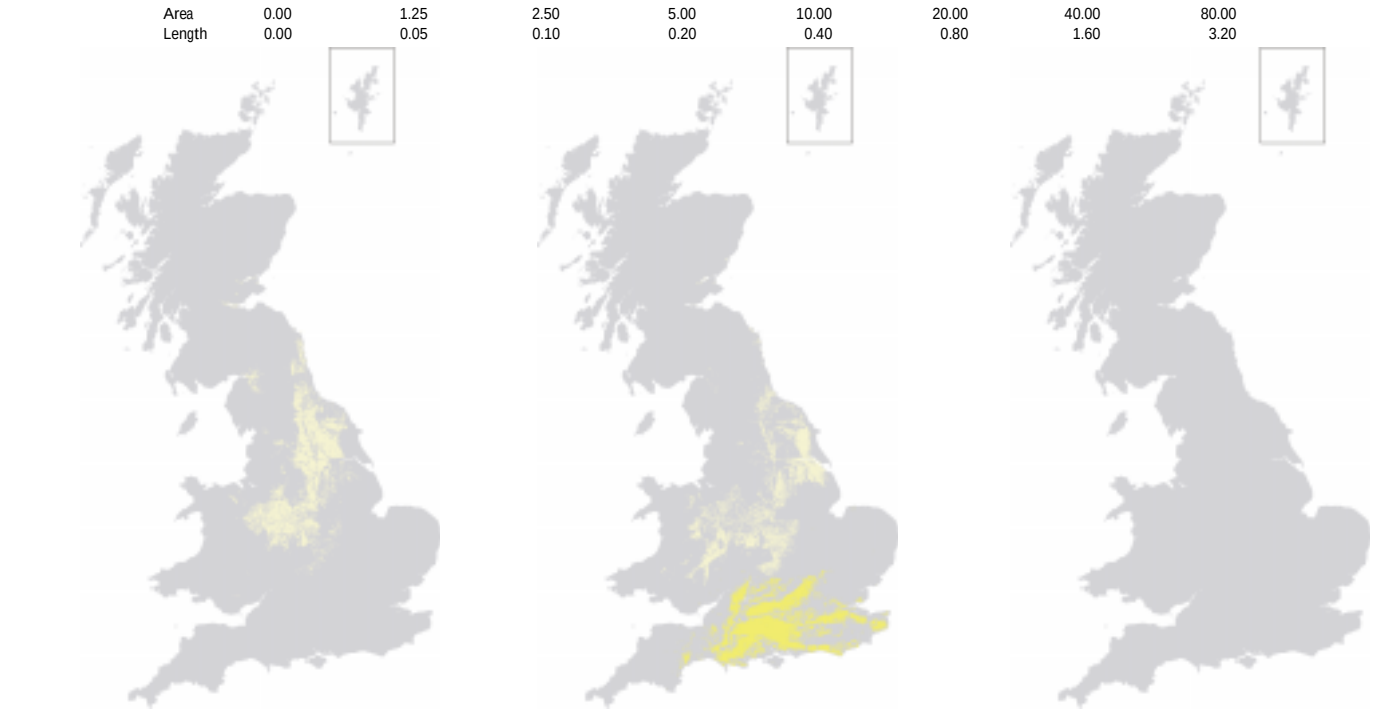

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 4.9 Low | Mean 6.7 High | Mean 6.6 High | Mean 4.1 High |

## Distribution




**Hedge**
Length 0.26 SE 0.26

**Roadside**
Length 1.37 SE 0.98

**Streamside**
Length *absent* SE *n/a*

**Vegetation class 4**

**AGGREGATE CLASS I**
**CROPS/WEEDS**

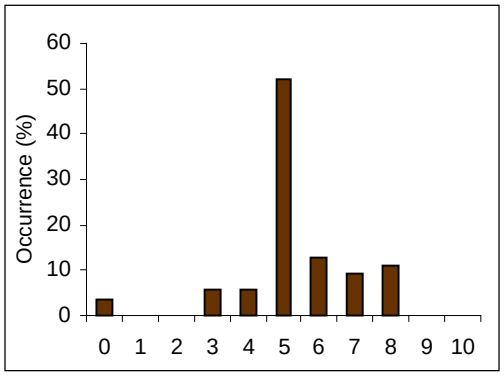
# Mixed crops with broadleaved weeds

## Description

This class is present almost exclusively in fields on cultivated soils, but may also be present in residual fragments of disturbed vegetation. It is not common and a variety of crops form the main cover. Several weed species may be present, such as groundsel (*Senecio vulgaris*), knotweed (*Polygonum aviculare*) and field pansy (*Viola arvensis*). This class is present throughout the lowlands of Britain, except in north-west England.

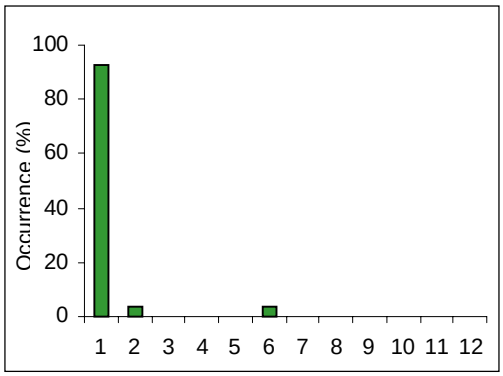
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

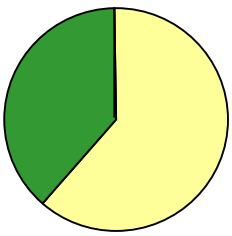
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

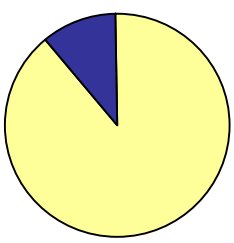
## Distribution

**Total number of plots** 54



| | % |
|---|---|
| Arable | 61 |
| Marginal upland | 0 |
| Pastural | 39 |
| Upland | 0 |

### Landscape association

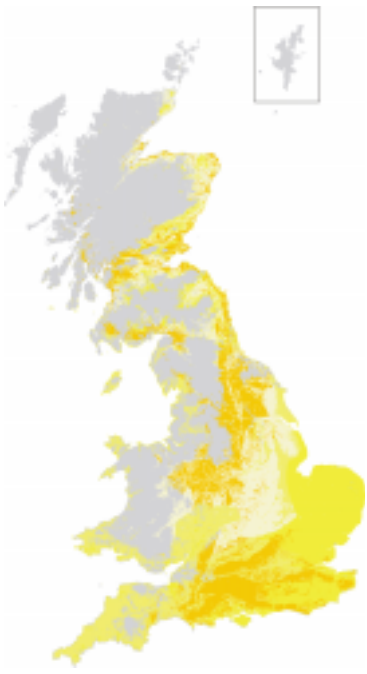


| | % |
|---|---|
| Boundary | 0 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 0 |
| Main | 89 |
| Habitat | 11 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km

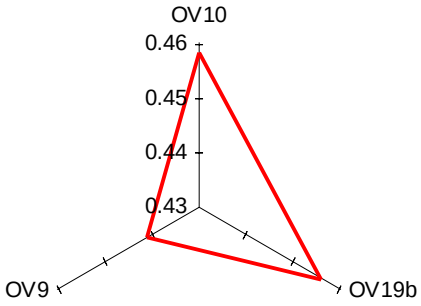
**Main**
Area 3.58 SE 0.72

**Boundary**
Length *absent* SE *n/a*

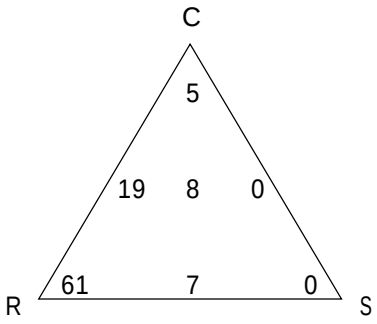
## Floristic characteristics

| **Species number:** | 105 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 1 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Poa annua* | 53 | *Stellaria media* | 2.3 | *Viola arvensis* | |
| *Viola arvensis* | 49 | *Viola arvensis* | 2.1 | *Senecio vulgaris* | |
| *Stellaria media* | 47 | *Polygonum aviculare* | 1.6 | *Cerastium fontanum* | |
| *Polygonum aviculare* | 47 | *Lolium perenne* | 1.3 | *Holcus lanatus* | |
| *Capsella bursa-pastoris* | 36 | *Poa annua* | 0.9 | *Sonchus asper* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.0 | High | Mean 4.9 | Low | Mean 6.5 | HIgh | Mean 6.2 | High | Mean 4.0 | High |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length *absent* SE *n/a*

**Vegetation class 5**

**AGGREGATE CLASS I**
**CROPS/WEEDS**

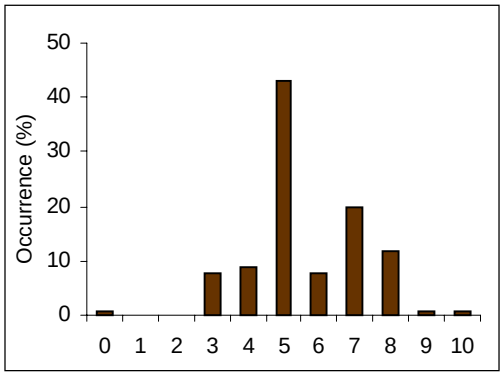
# Cereal crops with mixed weeds

## Description

This class is generally found in crop fields that have often been in rotation with grass on cultivated soils. It is very common and barley is the main crop species. A few weed species may be present, such as chickweed (*Stellaria media*), pineappleweed (*Matricaria matricarioides*) and parsley-piert (*Aphanes* spp.). This class is distributed throughout the lowlands of Britain.

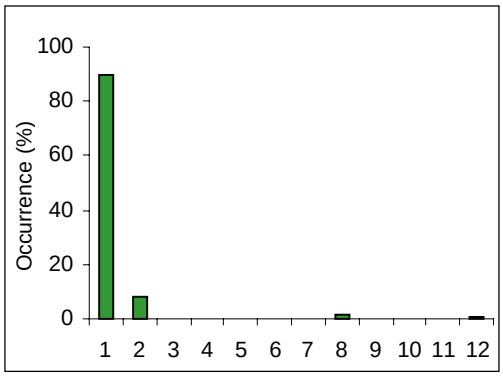
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

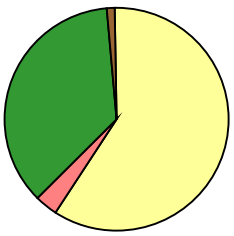
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

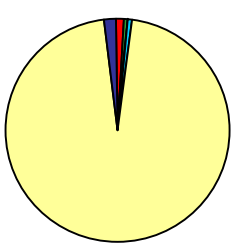
## Distribution

**Total number of plots** 173



| | % |
|---|---|
| Arable | 59 |
| Marginal upland | 3 |
| Pastural | 37 |
| Upland | 1 |

### Landscape association



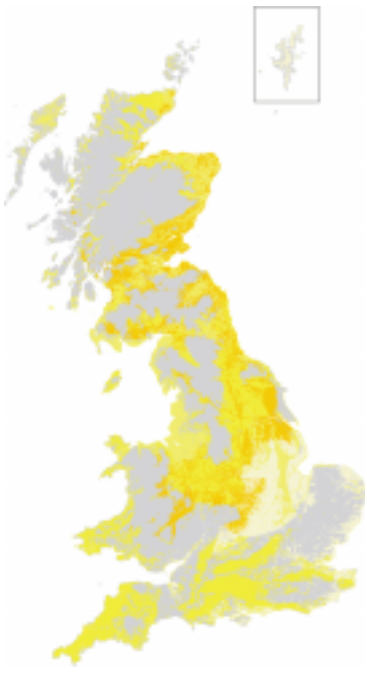
| | % |
|---|---|
| Boundary | 1 |
| Hedge | 1 |
| Roadside | 0 |
| Streamside | 1 |
| Main | 96 |
| Habitat | 2 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



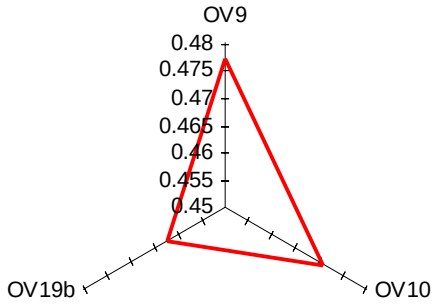
**Main**
Area 3.51 SE 0.66

**Boundary**
Length 2.34 SE 1.72

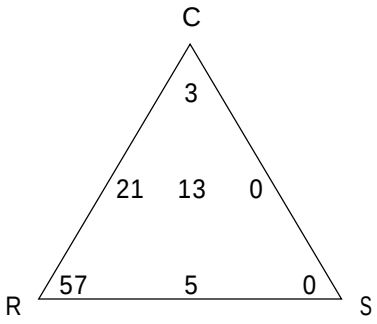
## Floristic characteristics

| **Species number:** | 112 (Low) | **No. of species groups:** | 4 (Low) | **Most frequent group:** | 7 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Poa annua* | 65 | *Poa annua* | 9.4 | *Viola arvensis* | |
| *Stellaria media* | 56 | *Lolium perenne* | 8.4 | *Poa annua* | |
| *Polygonum aviculare* | 50 | *Stellaria media* | 4.7 | *Stellaria media* | |
| *Viola arvensis* | 42 | *Lolium multiflorum* | 3.6 | *Holcus lanatus* | |
| *Matricaria matricarioides* | 27 | *Matricaria matricarioides* | 3.5 | *Veronica arvensis* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.0 | Medium | Mean 4.9 | Low | Mean 6.4 | High | Mean 6.2 | High | Mean 3.9 | High |

## Distribution


**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 0.36 SE 0.36

**Vegetation class 6**

**AGGREGATE CLASS I**
**CROPS/WEEDS**

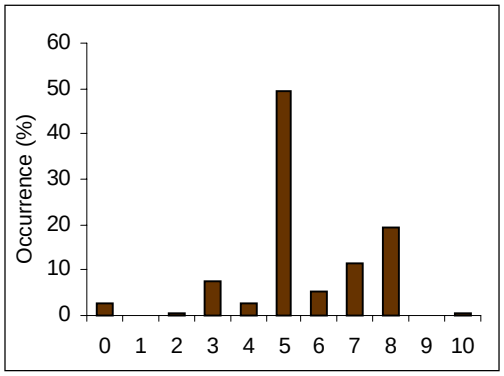
# Weedy leys/ undersown cereal crops

## Description

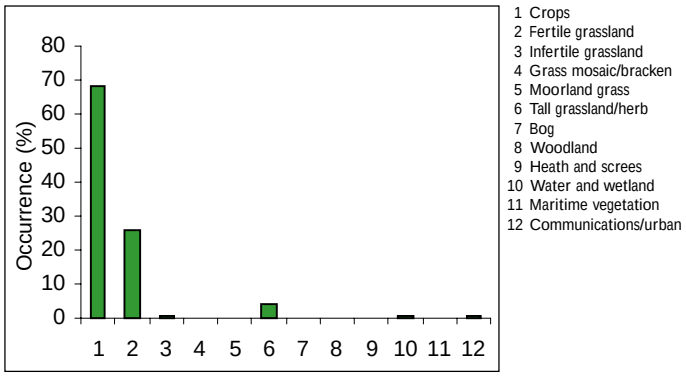
Although this class is mainly in fields, it may occur in small fragments of residual vegetation or by recently reseeded or disturbed roadsides on brown soils. It is very common and has mainly rye-grass *(Lolium perenne)*, as the cover species or alternatively Italian rye-grass (*Lolium multiflorum*) with much bare ground. A range of annual or perennial weeds may be present, such as knotgrass (*Polygonum aviculare*), greater plantain (*Plantago major*) and broad-leaved dock (*Rumex obtusifolius*). This class occurs throughout Britain, except for the high Pennines and north-west Scotland.

## Associated features

### Soils

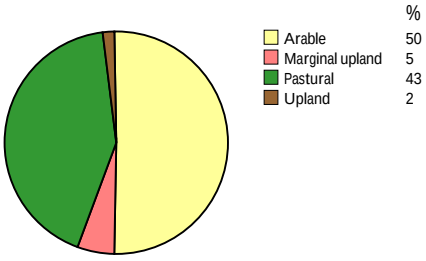



### Land cover

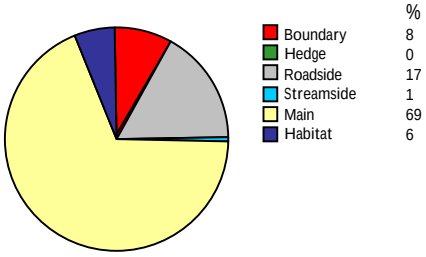



## Distribution

**Total number of plots** 192




### Landscape association

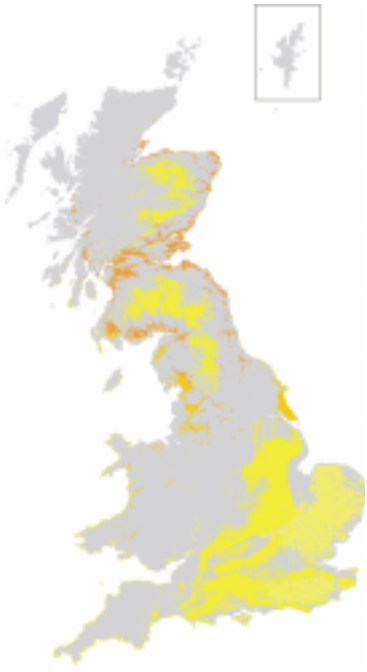



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 6.27 SE 0.88

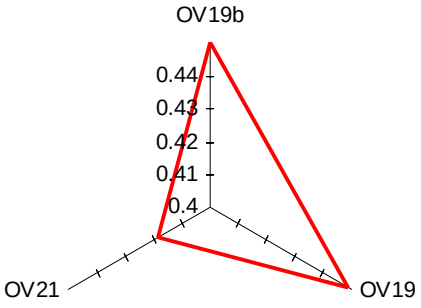
**Boundary**
Length 9.76 SE 3.02

## Floristic characteristics

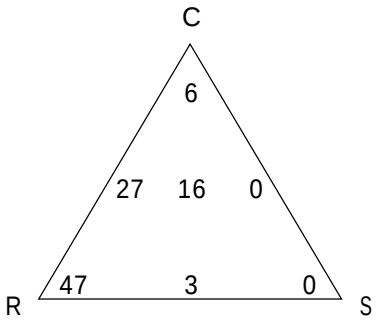
**Species number:** 183 (Medium) **No. of species groups:** 6 (Medium) **Most frequent group:** 12

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Lolium perenne* | 76 | *Lolium perenne* | 26.4 | *Lolium perenne* |
| *Polygonum aviculare* | 71 | *Poa annua* | 4.1 | *Trifolium repens* |
| *Poa annua* | 63 | *Lolium multiflorum* | 4.0 | *Rumex obtusifolius* |
| *Stellaria media* | 48 | *Polygonum aviculare* | 3.8 | *Plantago major* |
| *Capsella bursa-pastoris* | 44 | *Trifolium repens* | 2.4 | *Capsella bursa-pastoris* |

### Similarity with National Vegetation Classification (NVC) types



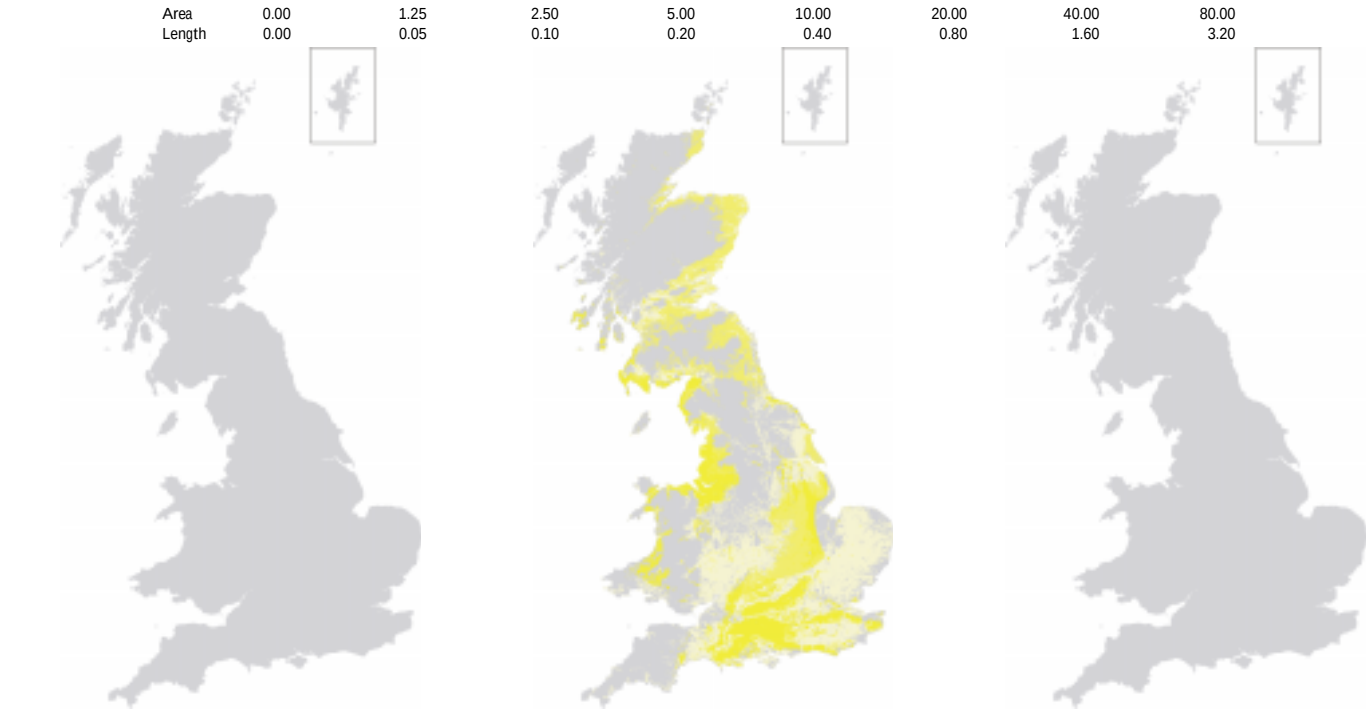

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 5.0 Low | Mean 6.4 High | Mean 6.1 High | Mean 3.9 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 5.13 SE 1.48

**Streamside**
Length 0.00 SE 0.00

**Vegetation class 7**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

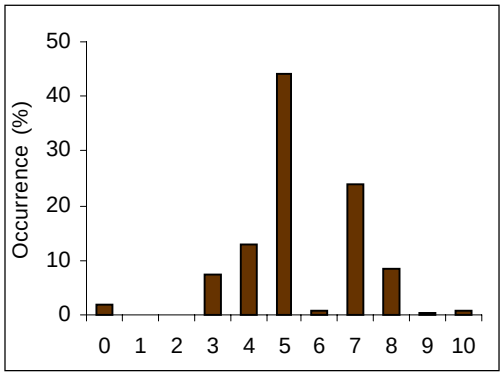
# Fertile open hedges/crop boundaries

## Description

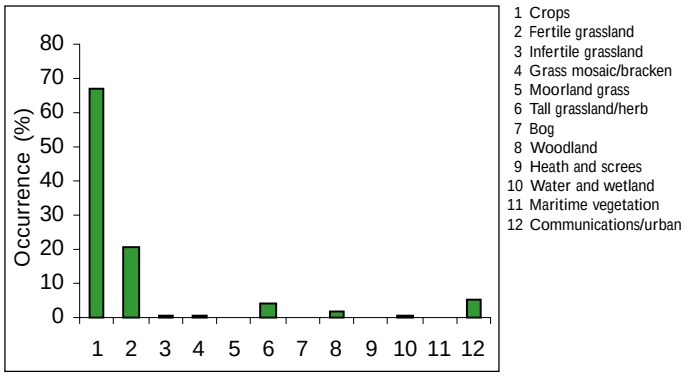
This class is virtually restricted to hedgerows or boundaries, but occasionally can be found by other linear features, usually between crops on brown soils. It is very common and the canopy consists almost entirely of hawthorn (*Crataegus monogyna*) although other woody species, notably blackthorn (*Prunus spinosa*), may be present. The ground cover is mainly of false oat-grass (*Arrhenathrum elatius*), but common nettles (*Urtica dioica*) and brambles (*Rubus fruticosus*) may also be present. The class is not diverse, and plants such as barren brome (*Bromus sterilis*), cleavers (*Galium aparine*) and pineappleweed (*Matricaria matricarioides*) are characteristic species. The distribution of this class is centred on southern England, East Anglia and the Midlands but it extends into the lowlands elsewhere.

## Associated features

### Soils

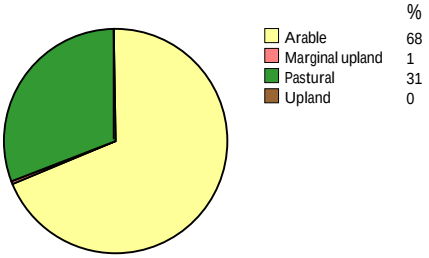



### Land cover

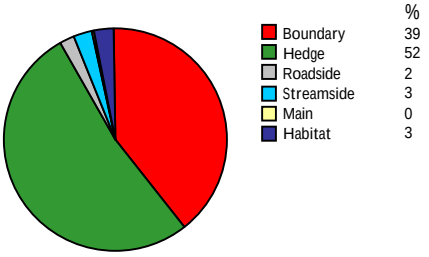



## Distribution

**Total number of plots** 319




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.09 SE 0.09

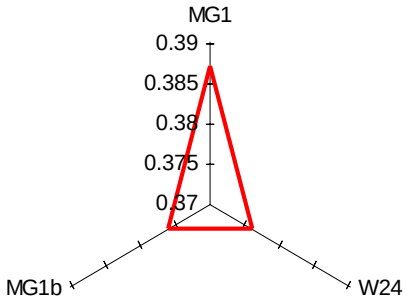
**Boundary**
Length 100.11 SE 11.17

## Floristic characteristics

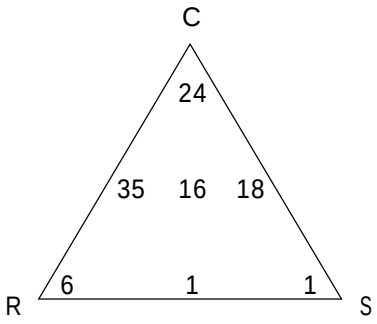
**Species number:** 189 (Medium) **No. of species groups:** 7 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Galium aparine* | 81 | *Crataegus monogyna* | 30.3 | *Bromus sterilis* |
| *Crataegus monogyna* | 77 | *Prunus spinosa* | 17.7 | *Convolvulus arvensis* |
| *Urtica dioica* | 74 | *Arrhenathrum elatius* | 12.0 | *Arrhenathrum elatius* |
| *Arrhenathrum elatius* | 73 | *Galium aparine* | 8.7 | *Prunus spinosa* |
| *Bromus sterilis* | 58 | *Hedera helix* | 8.0 | *Cirsium arvense* |

### Similarity with National Vegetation Classification (NVC) types



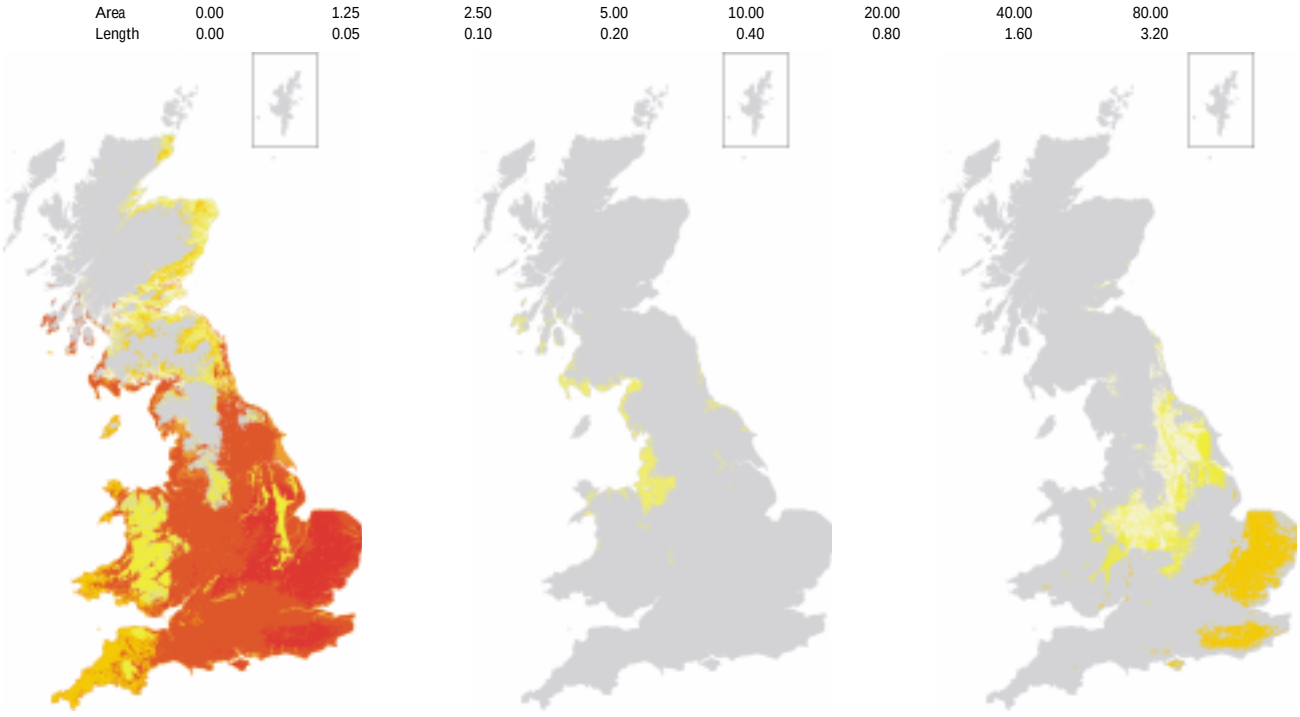

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.4 Low | Mean 5.2 Low | Mean 6.9 High | Mean 6.6 High | Mean 3.7 High |

## Distribution




**Hedge**
Length 122.07 SE 13.58

**Roadside**
Length 0.39 SE 0.28

**Streamside**
Length 4.75 SE 1.85

**Vegetation class 8**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

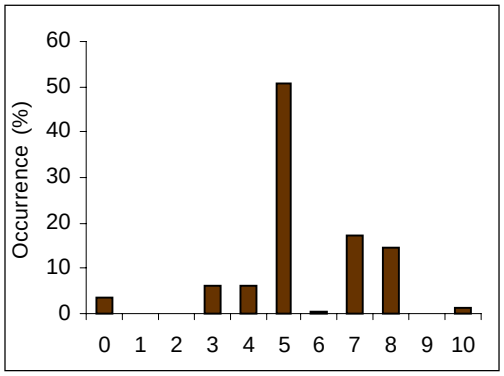
# Fertile hedges/ boundaries

## Description

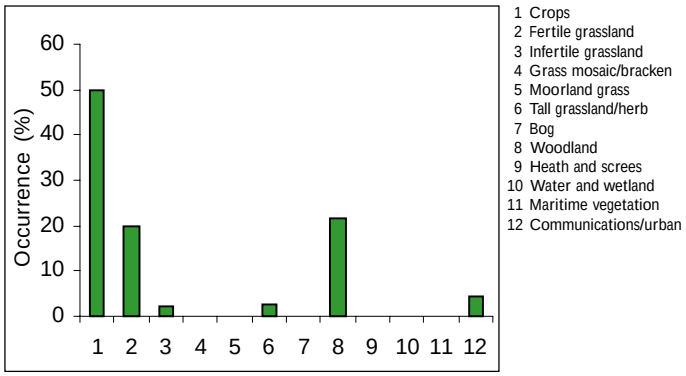
This class is virtually confined to hedgerows or boundaries but is occasionally present in small relict patches of vegetation or by streams on brown soils. It is very common; the hedges usually consist of hawthorn (*Crataegus monogyna*) but elder (*Sambucus nigra*) is also widespread. The ground cover is typically formed by common nettles (*Urtica dioica*) and false oat-grass (*Arrhenatherum elatius*), with cleavers (*Galium aparine*) and brambles (*Rubus fruticosus*) less frequent. The class is not diverse and plants such as white dead-nettle (*Lamium album*), barren brome (*Bromus sterilis*) and garlic mustard (*Alliaria petiolata*) are characteristic species. It is mainly restricted to southern England, the Midlands and East Anglia, occuring less frequently in the lowlands elsewhere.

## Associated features

### Soils

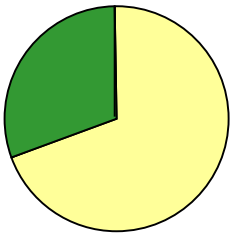



### Land cover



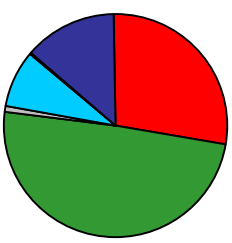

## Distribution

**Total number of plots** 236



| | % |
|---|---|
| Arable | 69 |
| Marginal upland | 0 |
| Pastural | 31 |
| Upland | 0 |

### Landscape association



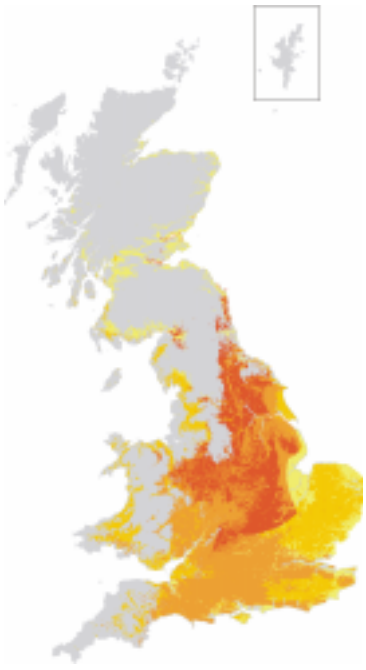
| | % |
|---|---|
| Boundary | 28 |
| Hedge | 49 |
| Roadside | 1 |
| Streamside | 8 |
| Main | 0 |
| Habitat | 14 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area *absent* SE *n/a*

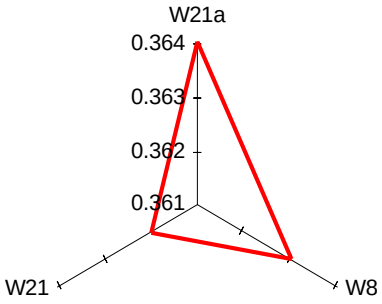
**Boundary**
Length 53.57 SE 8.92

## Floristic characteristics

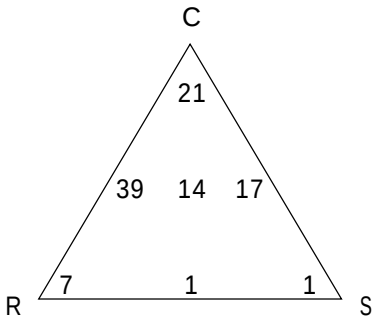
**Species number:** 178 (Medium) **No. of species groups:** 6 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Galium aparine* | 84 | *Crataegus monogyna* | 37.0 | *Sambucus nigra* |
| *Urtica dioica* | 83 | *Hedera helix* | 15.1 | *Lamium album* |
| *Crataegus monogyna* | 64 | *Urtica dioica* | 11.9 | *Alliaria petiolata* |
| *Sambucus nigra* | 53 | *Galium aparine* | 11.4 | *Bromus sterilis* |
| *Hedera helix* | 45 | *Sambucus nigra* | 9.7 | *Galium aparine* |

### Similarity with National Vegetation Classification (NVC) types



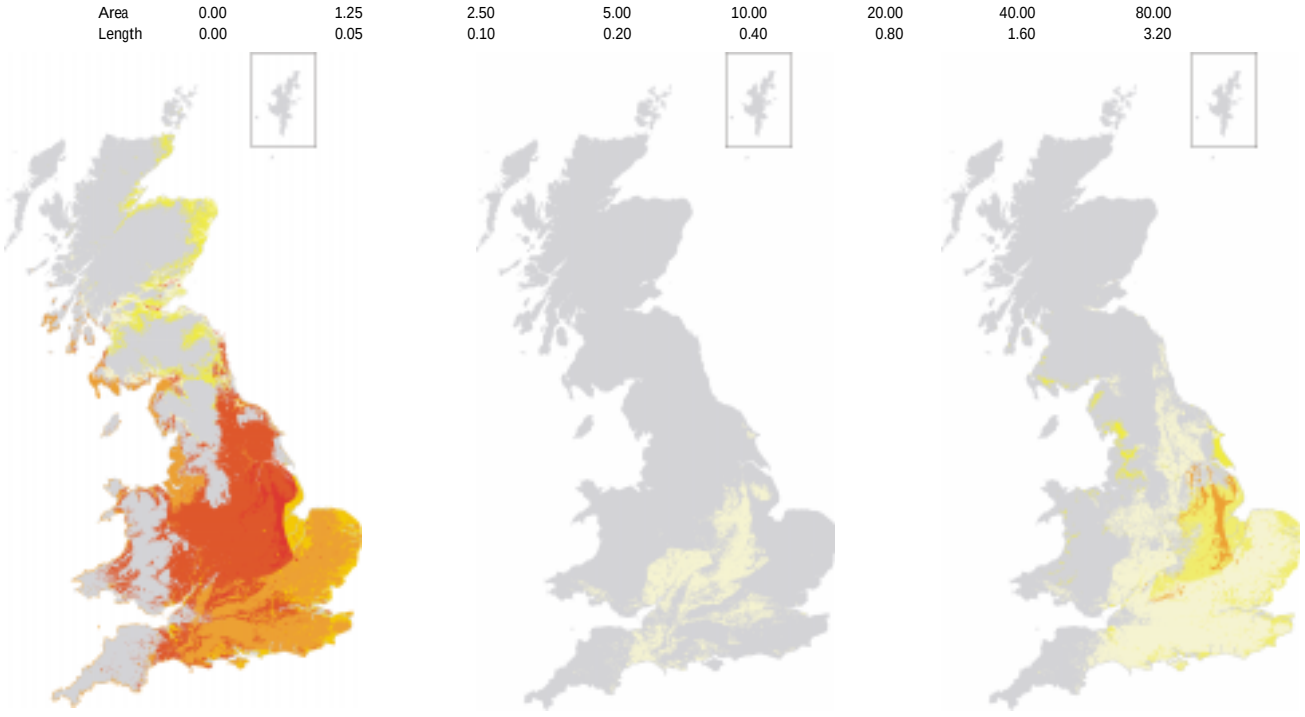

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.2 Low | Mean 5.4 Low | Mean 6.9 High | Mean 6.8 High | Mean 3.5 High |

## Distribution




**Hedge**
Length 79.76 SE 10.89

**Roadside**
Length 0.35 SE 0.25

**Streamside**
Length 4.84 SE 1.88

**Vegetation class 9**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

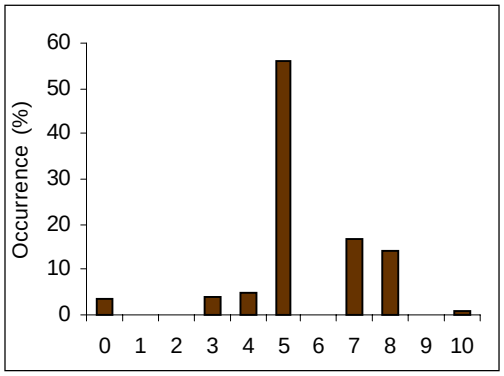
# Fertile tall grassland/ open crop hedges

## Description

This class occurs mainly in boundaries or by hedges between crops but occasionally beside grassland, small patches or other linear features on brown soils. If the vegetation is a hedge, then hawthorn (*Crataegus monogyna*) is the usual species, and the ground cover is usually common couch (*Elymus repens*), nettles (*Urtica dioica*), cleavers (*Galium aparine*) or barren brome (*Bromus sterilis*). It is a quite common class and not diverse, with plants such as creeping thistle (*Cirsium arvense*), cock's-foot (*Dactylis glomerata*) and white dead nettle (*Lamium album*) as characteristic species. This class occurs widely throughout lowland Britain except the extreme south-west of England.

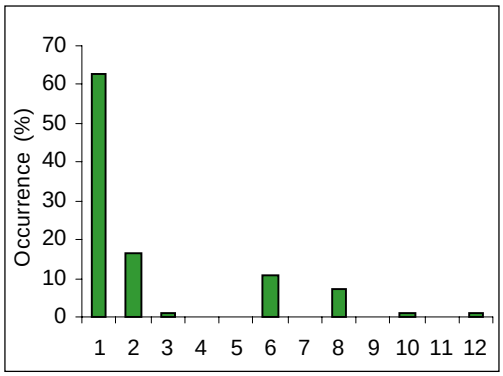
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

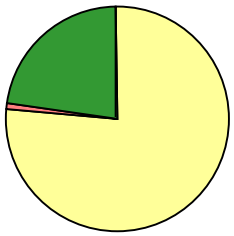
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

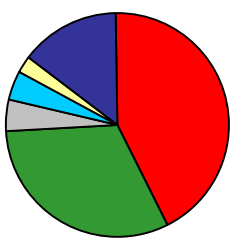
## Distribution

**Total number of plots** 122



| | % |
|---|---|
| Arable | 76 |
| Marginal upland | 1 |
| Pastural | 23 |
| Upland | 0 |

### Landscape association



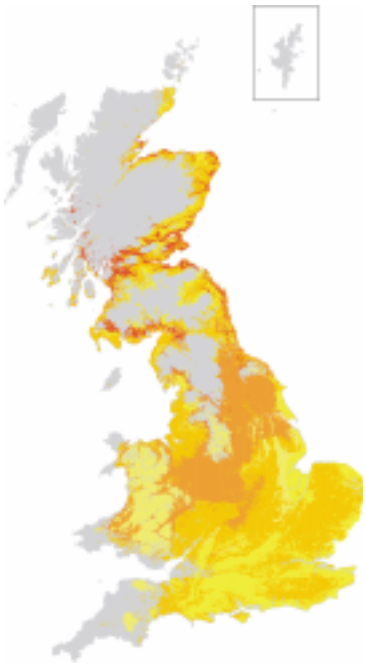
| | % |
|---|---|
| Boundary | 43 |
| Hedge | 31 |
| Roadside | 5 |
| Streamside | 4 |
| Main | 2 |
| Habitat | 15 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.25 SE 0.15

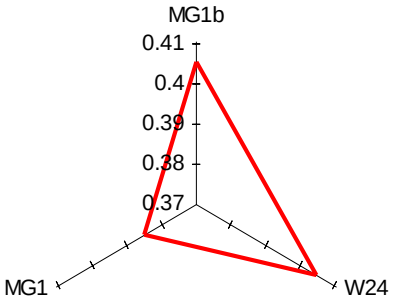
**Boundary**
Length 42.35 SE 7.19

## Floristic characteristics

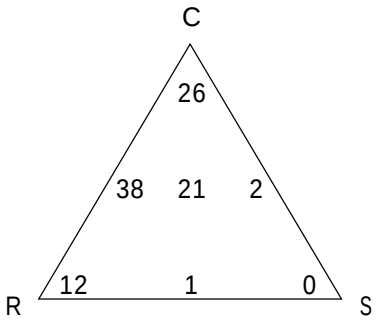
**Species number:** 143 (Medium) **No. of species groups:** 6 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 76 | *Crataegus monogyna* | 21.6 | *Crataegus monogyna* |
| *Galium aparine* | 73 | *Arrhenathrum elatius* | 16.4 | *Bromus sterilis* |
| *Arrhenathrum elatius* | 66 | *Urtica dioica* | 7.7 | *Galium aparine* |
| *Bromus sterilis* | 51 | *Galium aparine* | 7.5 | *Lamium album* |
| *Crataegus monogyna* | 45 | *Bromus sterilis* | 6.6 | *Sonchus asper* |

### Similarity with National Vegetation Classification (NVC) types



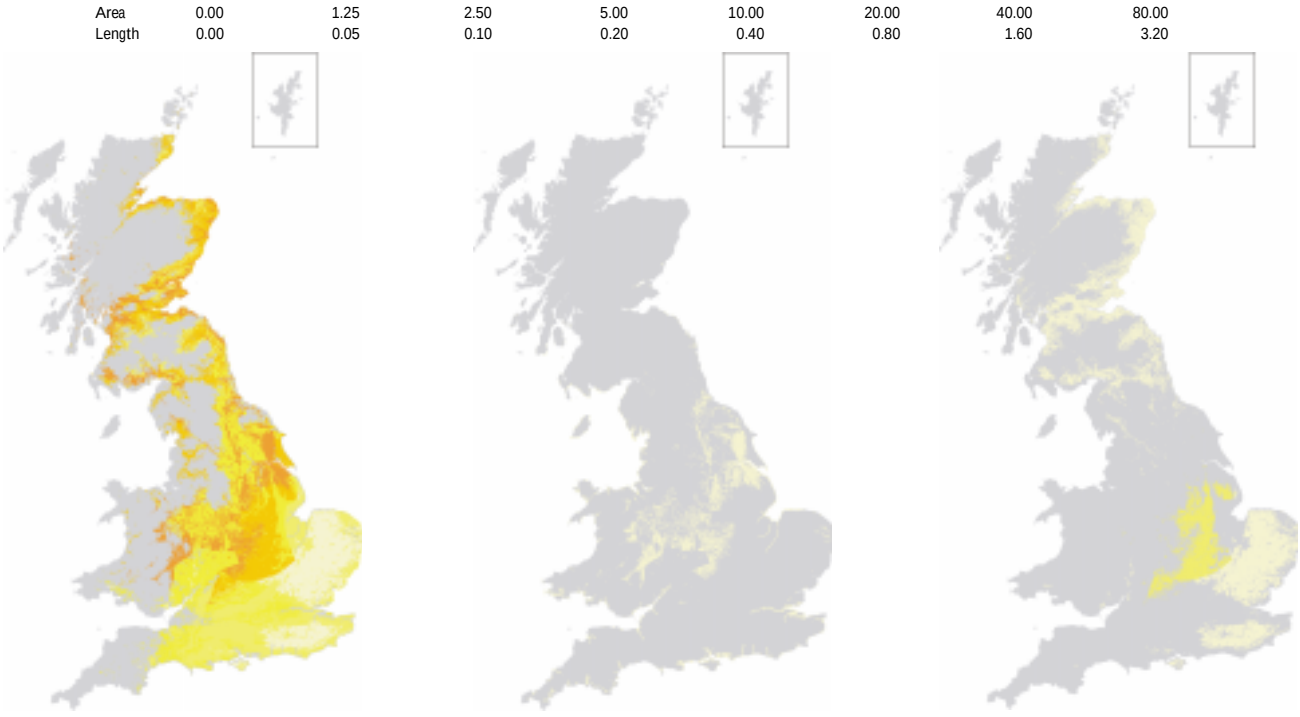

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 5.3 Low | Mean 6.8 High | Mean 6.6 High | Mean 3.9 High |

## Distribution




**Hedge**
Length 20.80 SE 4.94

**Roadside**
Length 0.20 SE 0.19

**Streamside**
Length 1.18 SE 0.65

**Vegetation class 10**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

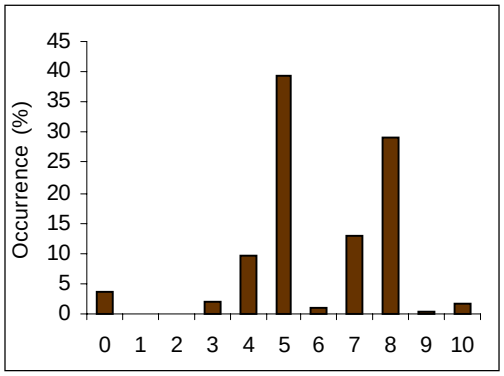
# Tall grassland/ herb boundaries

## Description

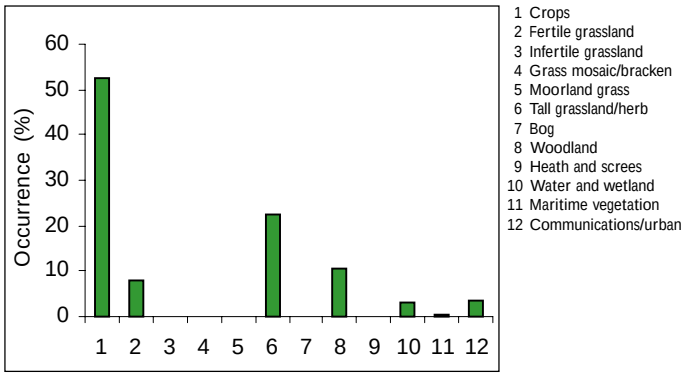
This class usually occurs in boundaries between crops but may also be on streamsides or in relict fragments of vegetation and sometimes in hedgerows on a range of soil types. The class is common and mainly consists of a ground cover of false oat-grass (*Arrhenatherum elatius*), cleavers (*Galium aparine*) and, to a lesser extent, common nettles (*Urtica dioica*). Creeping thistle (*Cirsium arvense*) and field bindweed (*Convolvulus arvensis*) are characteristic species and common reed (*Phragmites australis*) is present if the vegetation is on the water's edge. The distribution of this class is centred on East Anglia and southern England although it also occurs in the lowlands elsewhere, except in south-west England.

## Associated features

### Soils

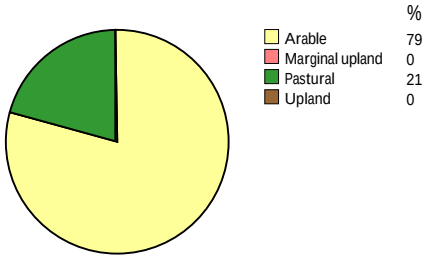



### Land cover

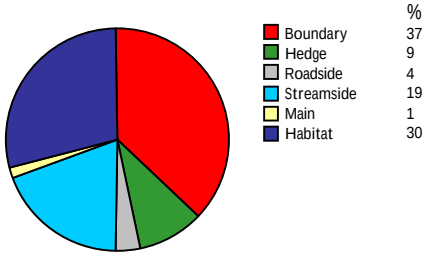



## Distribution

**Total number of plots** 244




### Landscape association

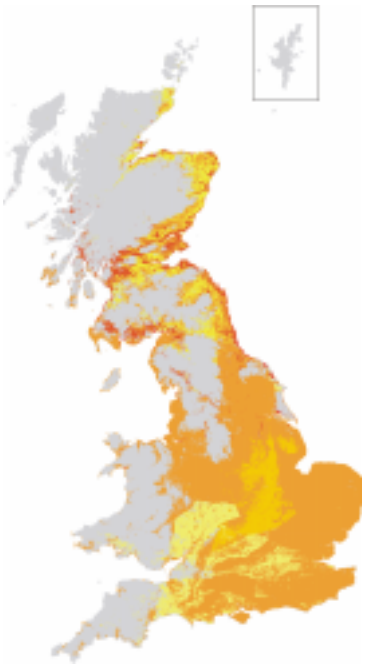



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.28 SE 0.16

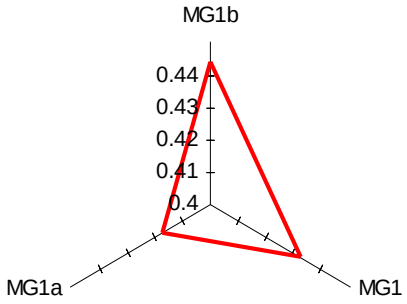
**Boundary**
Length 53.41 SE 7.13

## Floristic characteristics

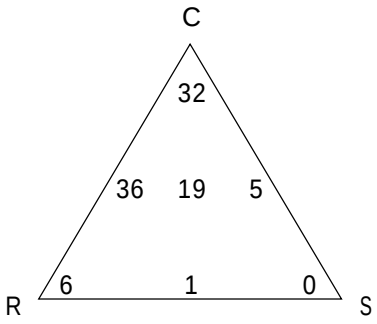
**Species number:** 198 (Medium) **No. of species groups:** 6 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Arrhenathrum elatius* | 83 | *Arrhenathrum elatius* | 23.9 | *Convolvulus arvensis* |
| *Urtica dioica* | 75 | *Urtica dioica* | 10.9 | *Phragmites australis* |
| *Galium aparine* | 63 | *Galium aparine* | 6.4 | *Cirsium arvense* |
| *Cirsium arvense* | 58 | *Crataegus monogyna* | 4.7 | *Arrhenathrum elatius* |
| *Heracleum sphondylium* | 51 | *Dactylis glomerata* | 3.5 | *Bromus sterilis* |

### Similarity with National Vegetation Classification (NVC) types



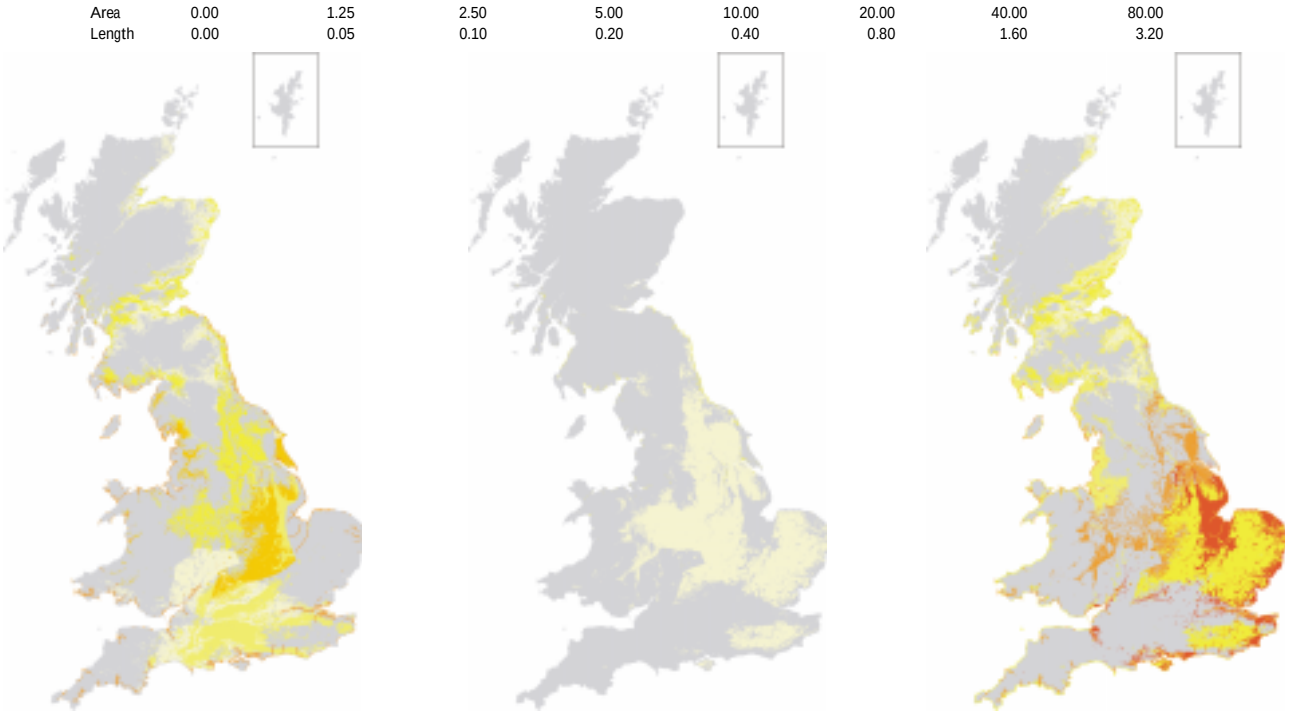

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.7 Medium | Mean 5.4 Low | Mean 6.8 High | Mean 6.6 High | Mean 3.8 High |

## Distribution




**Hedge**
Length 8.74 SE 2.97

**Roadside**
Length 0.95 SE 0.44

**Streamside**
Length 19.24 SE 5.10

**Vegetation class 11**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

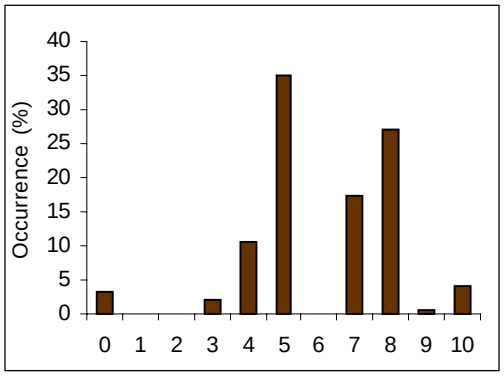
# Streamsides within crops

## Description

This class mainly occurs on streamsides but may also be found along boundaries or in small relict fragments of vegetation on variable soil types. It is common and has false oat-grass (*Arrhenathrum elatius*), cleavers (*Galium aparine*) and common nettle (*Urtica dioica*) as the main cover species. The class is quite diverse with characteristic plants such as great willowherb (*Epilobium hirsutum*), creeping thistle (*Cirsium arvense*) and hedge bindweed (*Calystegia sepium*). The distribution of this class is mainly in East Anglia, southern England and the Midlands, with outliers elsewhere in the lowlands.

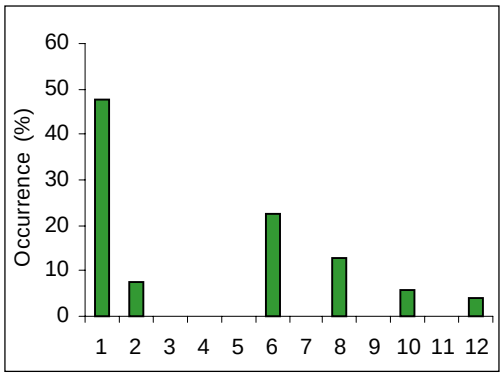
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

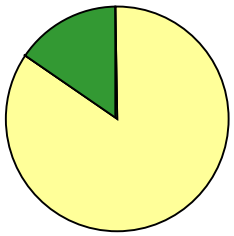
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

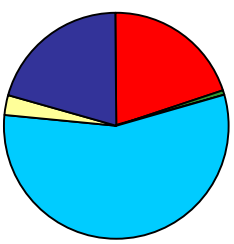
## Distribution

**Total number of plots** 160



| | % |
|---|---|
| Arable | 84 |
| Marginal upland | 0 |
| Pastural | 16 |
| Upland | 0 |

### Landscape association



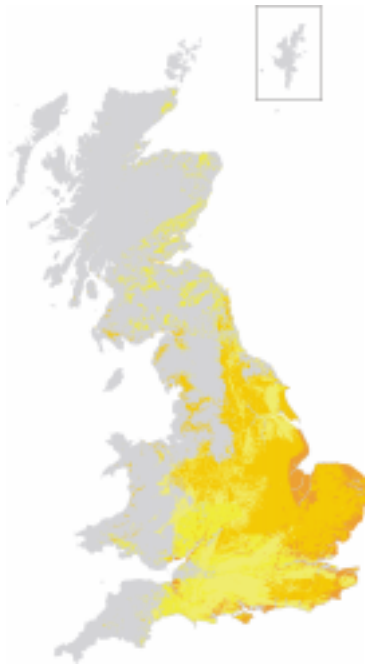
| | % |
|---|---|
| Boundary | 20 |
| Hedge | 1 |
| Roadside | 0 |
| Streamside | 56 |
| Main | 3 |
| Habitat | 21 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.43 SE 0.22

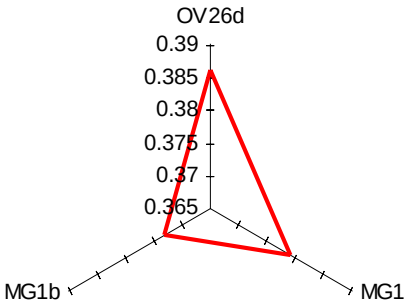
**Boundary**
Length 17.98 SE 4.27

## Floristic characteristics

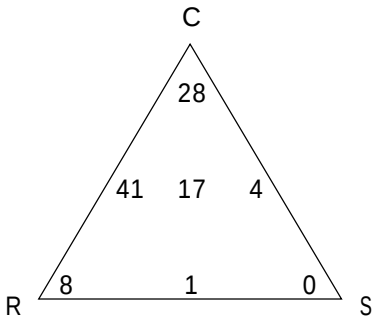
**Species number:** 200 (High) **No. of species groups:** 8 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 84 | *Arrhenathrum elatius* | 16.0 | *Epilobium hirsutum* |
| *Arrhenathrum elatius* | 79 | *Urtica dioica* | 11.5 | *Calystegia sepium* |
| *Galium aparine* | 73 | *Epilobium hirsutum* | 7.3 | *Phalaris arundinacea* |
| *Epilobium hirsutum* | 61 | *Galium aparine* | 5.8 | *Bromus sterilis* |
| *Cirsium arvense* | 54 | *Cirsium arvense* | 3.0 | *Alliaria petiolata* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.7 Medium | Mean 5.9 Medium | Mean 6.8 High | Mean 6.7 High | Mean 3.7 High |

## Distribution


**Hedge**
Length 0.26 SE 0.26

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 41.17 SE 6.23

**Vegetation class 12**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

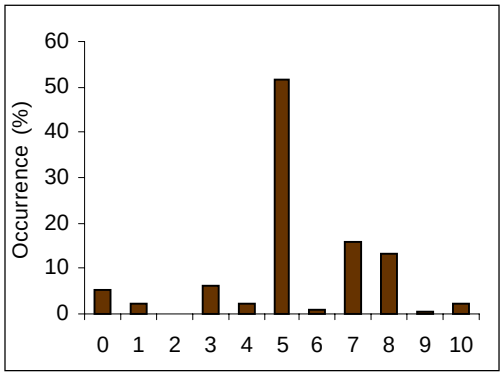
# Fertile roadsides

## Description

This class occurs mainly along roadsides but occasionally in other linear features or fields, usually on brown soils. It is quite common and has common couch (*Elymus repens*) as the most abundant cover species, but false oat-grass (*Arrhenathrum elatius*), perennial rye-grass (*Lolium perenne*) and cock's-foot (*Dactylis glomerata*) are also common. The class is quite diverse; characteristic plants are common dandelion (*Taraxacum officinale*), white dead-nettle (*Lamium album*) and cow parsley (*Anthriscus sylvestris*). This class occurs throughout lowland Britain, but especially in the north Midlands.

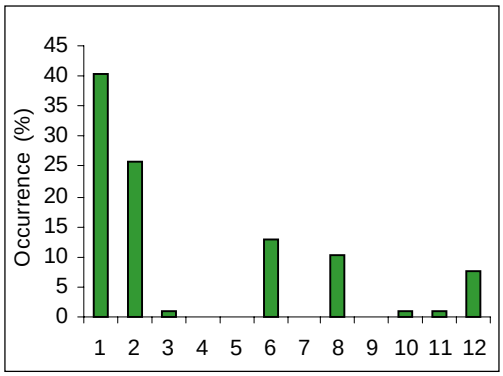
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

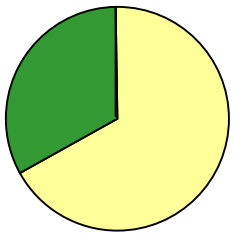
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

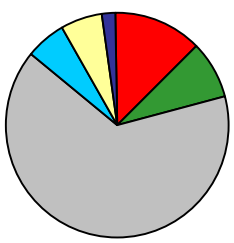
## Distribution

**Total number of plots** 198



| | % |
|---|---|
| Arable | 67 |
| Marginal upland | 0 |
| Pastural | 33 |
| Upland | 0 |

### Landscape association



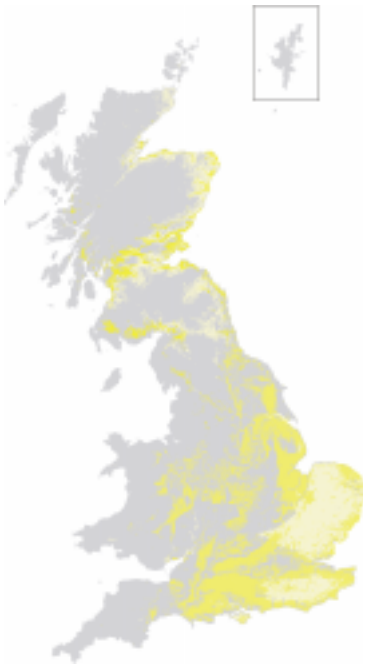
| | % |
|---|---|
| Boundary | 13 |
| Hedge | 8 |
| Roadside | 65 |
| Streamside | 6 |
| Main | 6 |
| Habitat | 2 |

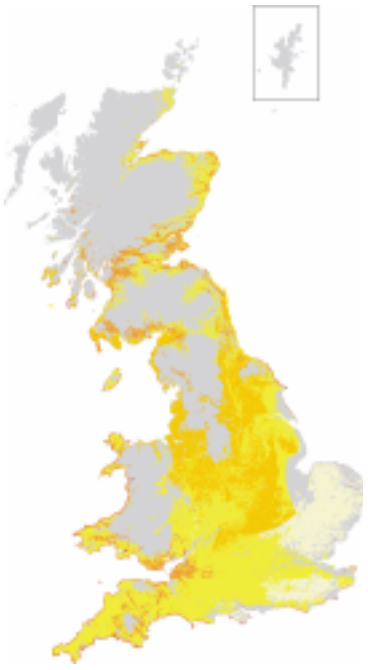
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km





**Main**
Area 0.84 SE 0.28

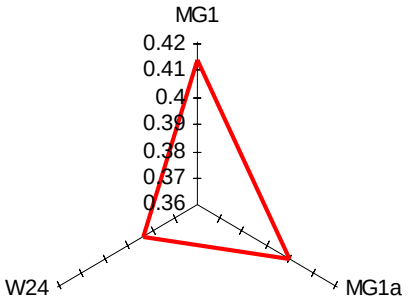
**Boundary**
Length 20.50 SE 4.65

## Floristic characteristics

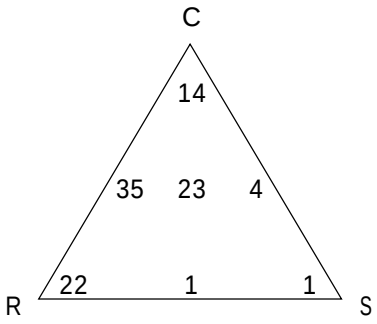
| **Species number:** | 240 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 5 |
|---|---|---|---|---|---|

| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** |
|---|---|---|---|---|
| *Dactylis glomerata* | 79 | *Arrhenathrum elatius* | 9.8 | *Polygonum aviculare* |
| *Urtica dioica* | 78 | *Lolium perenne* | 8.8 | *Sonchus oleraceus* |
| *Arrhenathrum elatius* | 68 | *Dactylis glomerata* | 7.1 | *Stellaria media* |
| *Lolium perenne* | 63 | *Agrostis stolonifera* | 6.5 | *Lamium album* |
| *Anthriscus sylvestris* | 61 | *Crataegus monogyna* | 5.3 | *Poa pratensis* |

### Similarity with National Vegetation Classification (NVC) types



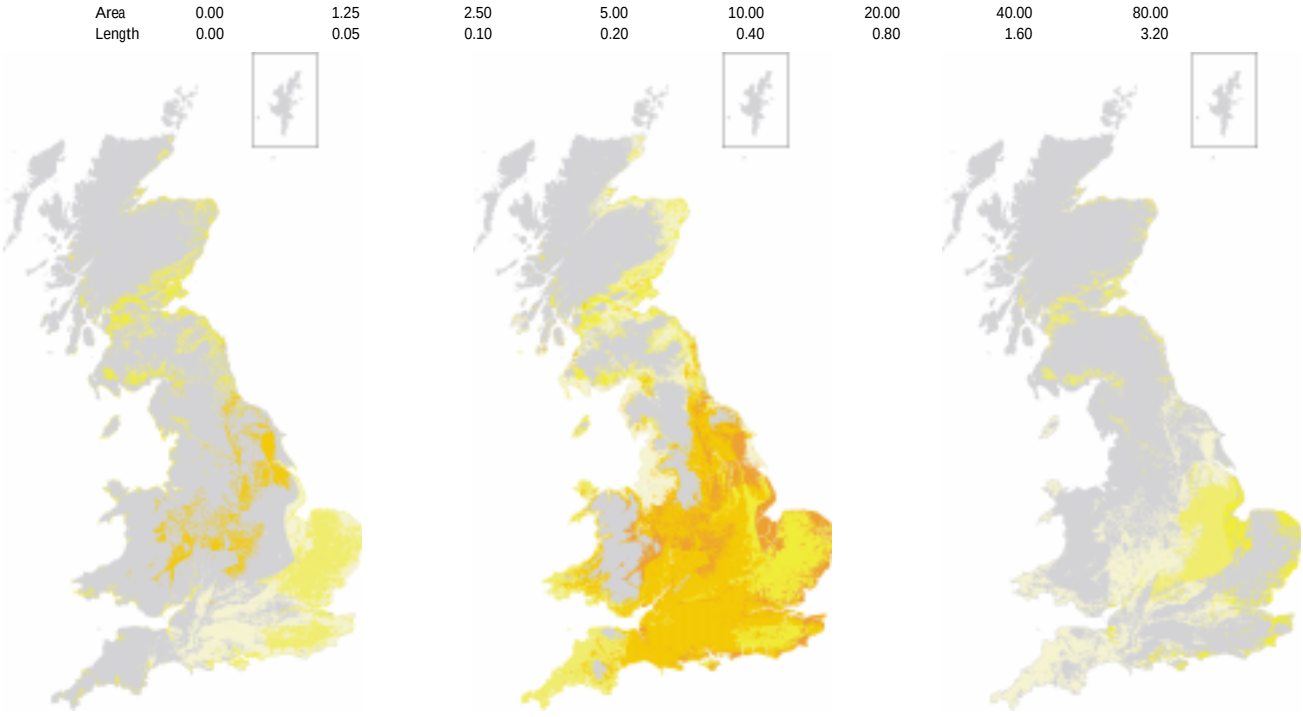

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 5.2 Low | Mean 6.6 High | Mean 6.3 High | Mean 3.8 High |

## Distribution




**Hedge**
Length 5.70 SE 2.54

**Roadside**
Length 28.45 SE 3.60

**Streamside**
Length 3.05 SE 1.26

**Vegetation class 13**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

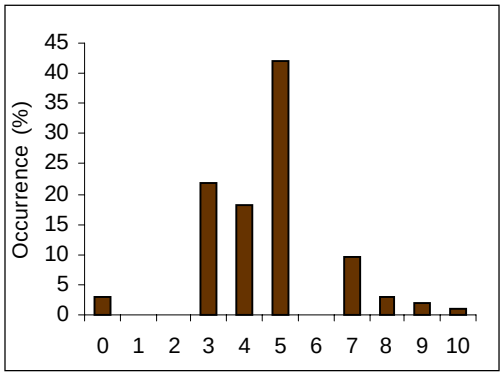
# Lowland neutral roadsides

## Description

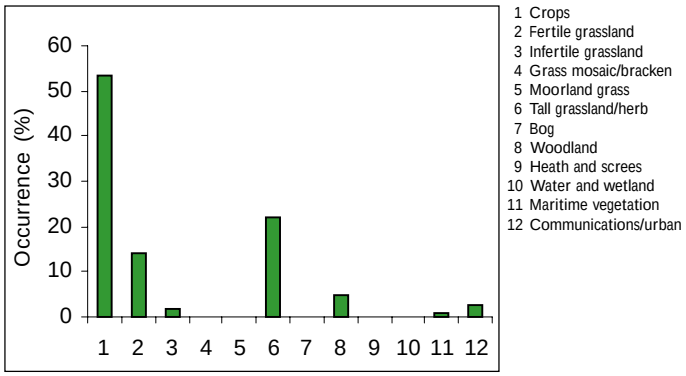
This class mainly occurs along roadsides, but is also common along boundaries hedges, as well as sometimes on fields and it is mainly on brown soils. It is quite common and has false oat-grass (*Arrhenathrum elatius*) and common couch *(Elymus repens*) as the main cover species, with red fescue (*Festuca rubra*) often important. The class is of average diversity with plants such as field bindweed (*Convolvulus arvensis*), common knapweed (*Centaurea nigra*) and yarrow (*Achillea millefolium*) as characteristic species. This class is present throughout lowland Britain, but is especially common in the south and east.

## Associated features

### Soils

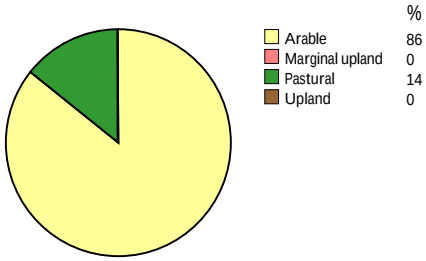



### Land cover

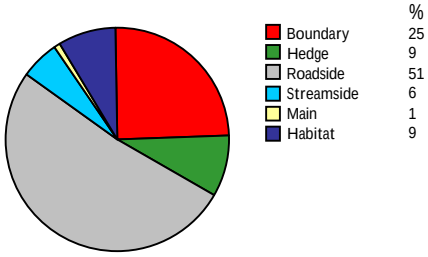



## Distribution

**Total number of plots** 105




### Landscape association



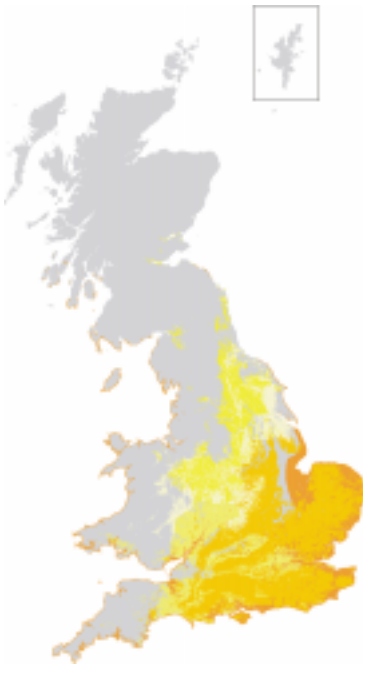

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

**Main**
Area 0.11 SE 0.11

Key units
Area 000's $km^{-2}$
Length 000's km



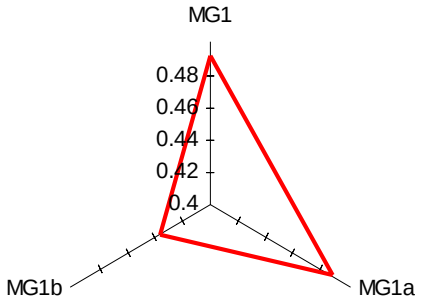
**Boundary**
Length 19.84 SE 5.76

## Floristic characteristics

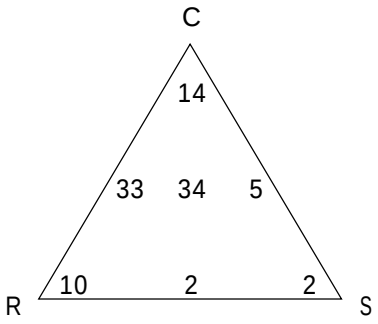
**Species number:** 168 (Medium) **No. of species groups:** 9 (High) **Most frequent group:** 12

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Dactylis glomerata* | 92 | *Arrhenathrum elatius* | 13.7 | *Convolvulus arvensis* |
| *Arrhenathrum elatius* | 89 | *Festuca rubra* | 12.8 | *Achillea millefolium* |
| *Festuca rubra* | 83 | *Lolium perenne* | 8.4 | *Festuca rubra* |
| *Convolvulus arvensis* | 82 | *Dactylis glomerata* | 7.3 | *Potentilla reptans* |
| *Agrostis stolonifera* | 66 | *Crataegus monogyna* | 7.0 | *Centaurea nigra* |

### Similarity with National Vegetation Classification (NVC) types



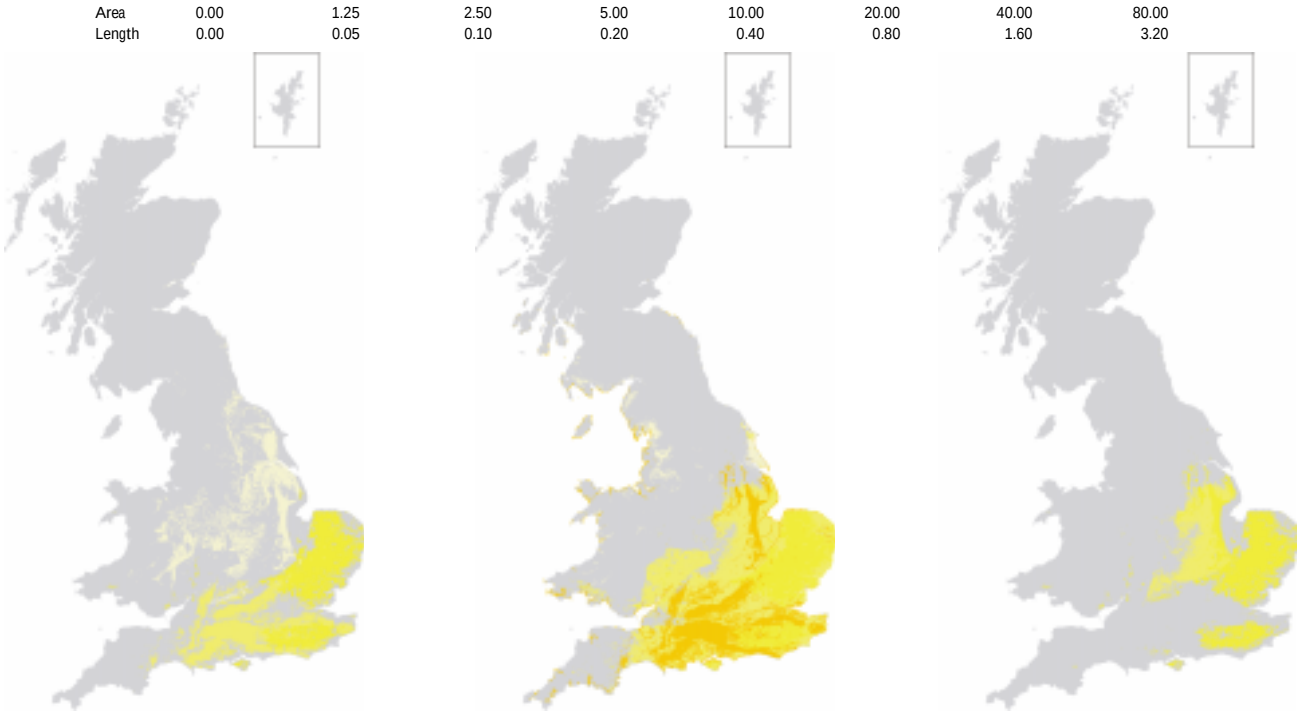

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.0 Low | Mean 6.7 High | Mean 6.1 Hig | Mean 3.9 High |

## Distribution




**Hedge**
Length 3.95 SE 1.91

**Roadside**
Length 8.28 SE 1.87

**Streamside**
Length 2.92 SE 1.43

**Vegetation class 14**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

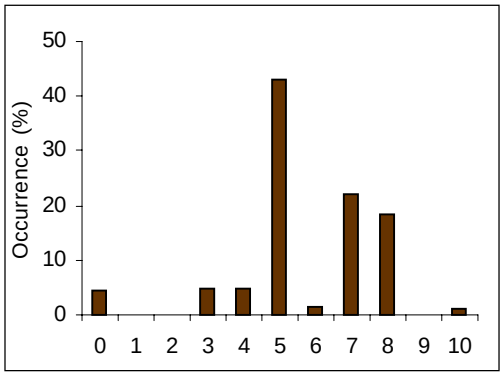
# Lowland roadsides/ crop boundaries

## Description

This class mainly occurs along roadsides but also in boundaries between crops or small fragments of vegetation or hedgerows, mainly on brown soils. The class is common with a range of different cover species, typically rye-grass (*Lolium perenne*), false oat-grass (*Arrhenathrum elatius*), cock's-foot (*Dactylis glomerata*) and creeping bent (*Agrostis stolonifera*). It is not usually diverse and has characteristic species such as annual meadow-grass *(Poa annua)*, pineappleweed (*Matricaria matricarioides*) and creeping thistle (*Cirsium arvense*). This class is present throughout lowland Britain but is especially abundant in the south and east.

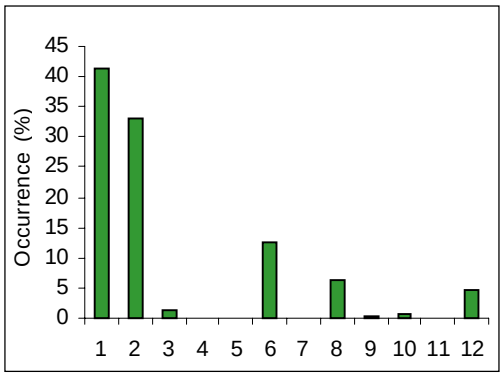
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

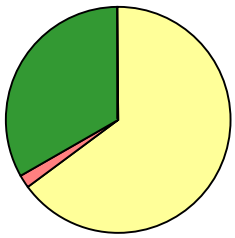
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

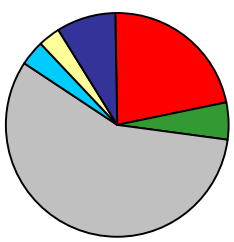
## Distribution

**Total number of plots** 543



| | % |
|---|---|
| Arable | 65 |
| Marginal upland | 2 |
| Pastural | 33 |
| Upland | 0 |

### Landscape association



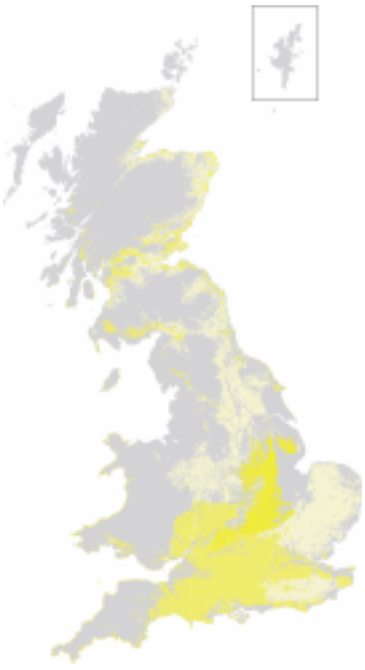
| | % |
|---|---|
| Boundary | 22 |
| Hedge | 5 |
| Roadside | 57 |
| Streamside | 4 |
| Main | 3 |
| Habitat | 9 |

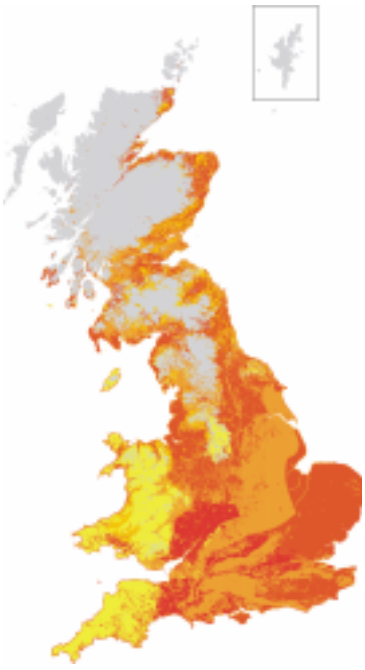
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km





**Main**
Area 1.06 SE 0.30

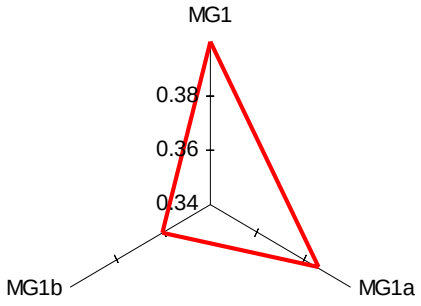
**Boundary**
Length 105.48 SE 12.45

## Floristic characteristics

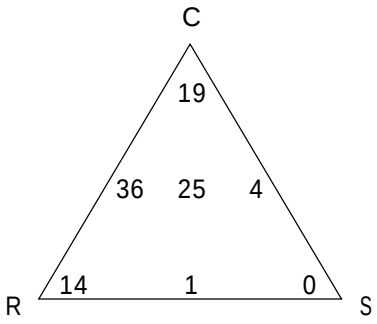
**Species number:** 270 (High) **No. of species groups:** 8 (Medium) **Most frequent group:** 12

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Dactylis glomerata* | 86 | *Lolium perenne* | 14.9 | *Poa annua* |
| *Urtica dioica* | 76 | *Arrhenathrum elatius* | 11.8 | *Matricaria matricarioides* |
| *Lolium perenne* | 68 | *Dactylis glomerata* | 8.7 | *Lolium perenne* |
| *Arrhenathrum elatius* | 67 | *Agrostis stolonifera* | 8.2 | *Plantago major* |
| *Agrostis stolonifera* | 63 | *Urtica dioica* | 4.2 | *Polygonum aviculare* |

### Similarity with National Vegetation Classification (NVC) types



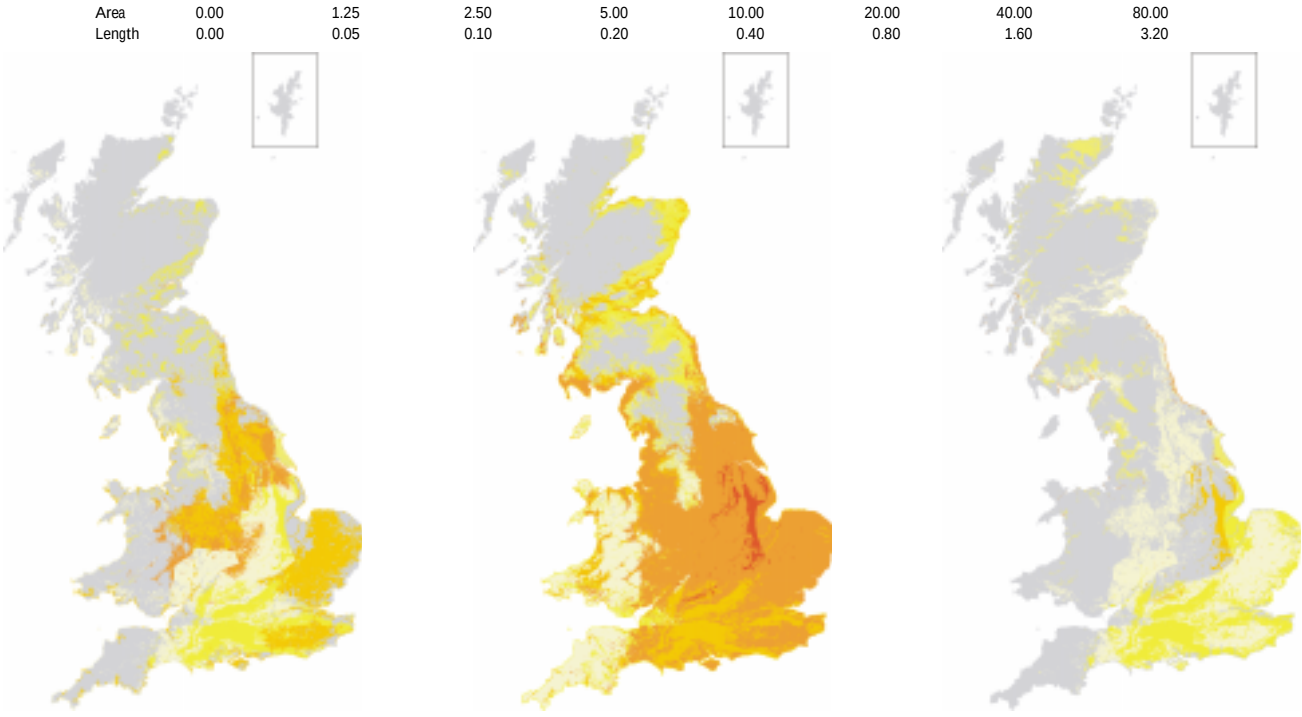

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 5.3 Low | Mean 6.6 High | Mean 6.4 High | Mean 3.8 High |

## Distribution




**Hedge**
Length 17.33 SE 4.82

**Roadside**
Length 50.81 SE 4.31

**Streamside**
Length 5.58 SE 2.10

**Vegetation class 15**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

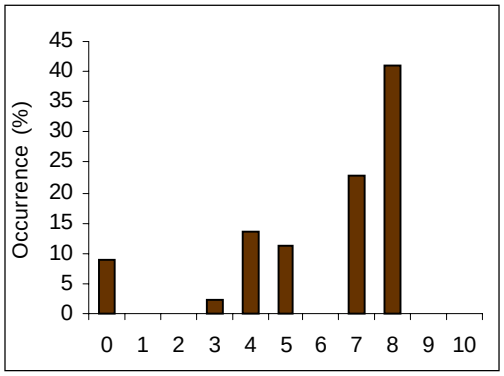
# Lowland streamsides

## Description

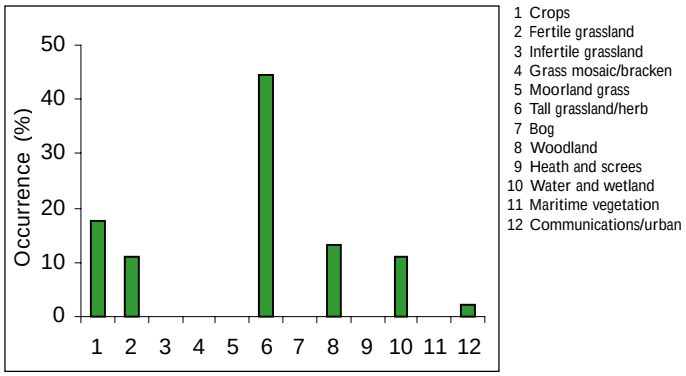
This class is mainly found on streamsides, ditches, by boundaries or in small patches of vegetation, usually on groundwater gley soils. It is not common; false oat-grass (*Arrhenathrum elatius*) is the major cover species, with creeping bent (*Agrostis stolonifera*), common nettles (*Urtica dioica*) and common reed (*Phragmites australis*) as other cover species. It is of restricted diversity and has characteristic fast-growing species such as great willowherb (*Epilobium hirsutum*), canary-grass (*Phalaris arundinacea*) and common nettles (*Urtica dioica*). This class is virtually restricted to East Anglia and southern England.

## Associated features

### Soils

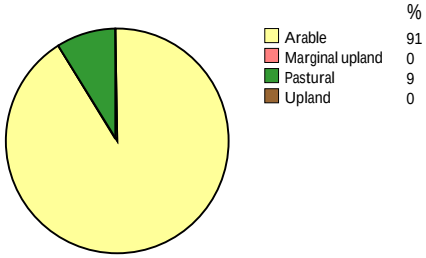



### Land cover

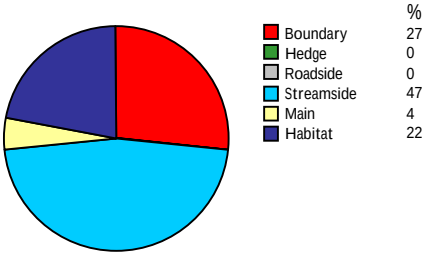



## Distribution

**Total number of plots** 45




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.10 SE 0.08

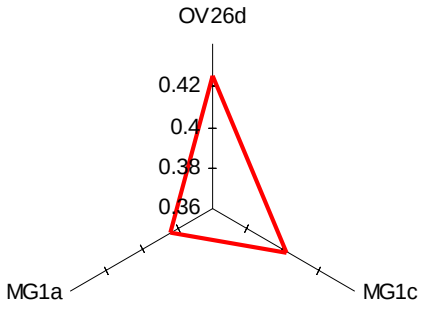
**Boundary**
Length 6.17 SE 2.18

## Floristic characteristics

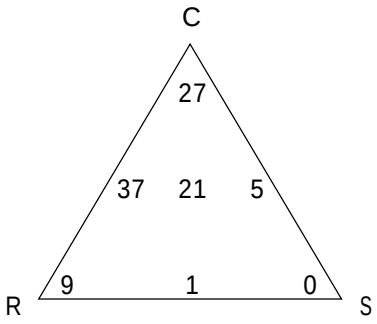
**Species number:** 105 (Low) **No. of species groups:** 7 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Arrhenathrum elatius* | 73 | *Arrhenathrum elatius* | 21.8 | *Phragmites australis* |
| *Agrostis stolonifera* | 66 | *Agrostis stolonifera* | 10.4 | *Sonchus asper* |
| *Cirsium arvense* | 50 | *Phragmites australis* | 8.5 | *Phalaris arundinacea* |
| *Galium aparine* | 45 | *Urtica dioica* | 5.3 | *Deschampsia cespitosa* |
| *Phragmites australis* | 41 | *Festuca rubra* | 3.2 | *Agrostis stolonifera* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.9 Medium | Mean 6.7 High | Mean 6.5 High | Mean 3.8 High |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 15.02 SE 5.10

**Vegetation class 16**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

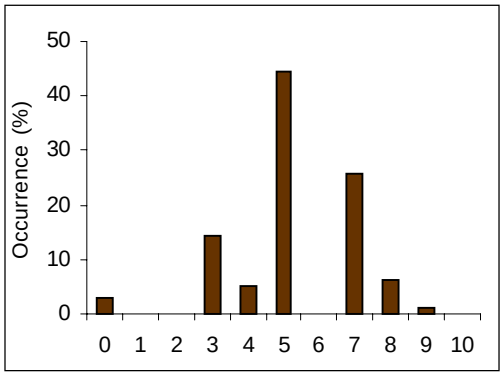
# Moist fertile scrub/ woodland

## Description

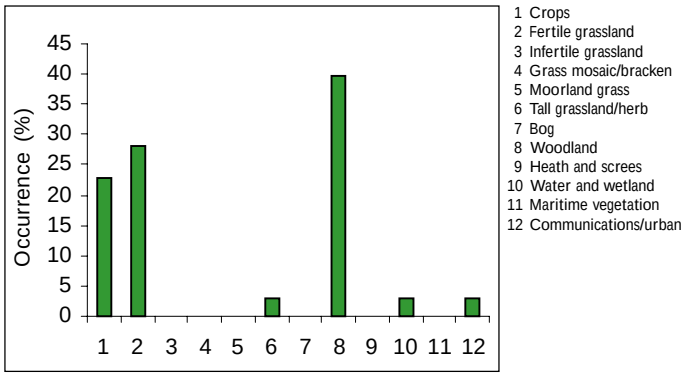
This class occurs in a wide range of landscape elements, wherever the appropriate combination of ecological factors occur, ie rich, moist soils with some tree cover. It is quite common, with trees such as hawthorn (*Crataegus monogyna*) and ash (*Fraxinus excelsior*) in the canopy and a ground cover of ivy (*Hedera helix*), bramble (*Rubus fruticosus*) and common nettles (*Urtica dioica*). The class is quite diverse and has characteristic species such as ground-ivy (*Glechoma hederacea*), hedge woundwort (*Stachys sylvatica*) and herb-robert (*Geranium robertianum*) present. This class has a lowland distribution pattern but is absent in the northern Scottish lowlands.

## Associated features

### Soils

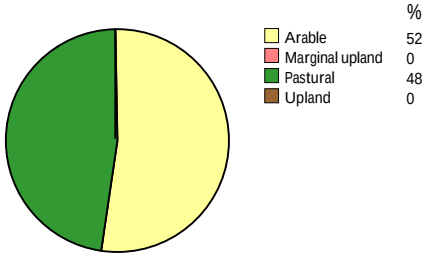



### Land cover

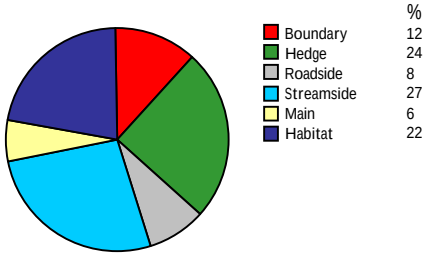



## Distribution

**Total number of plots** 98




### Landscape association

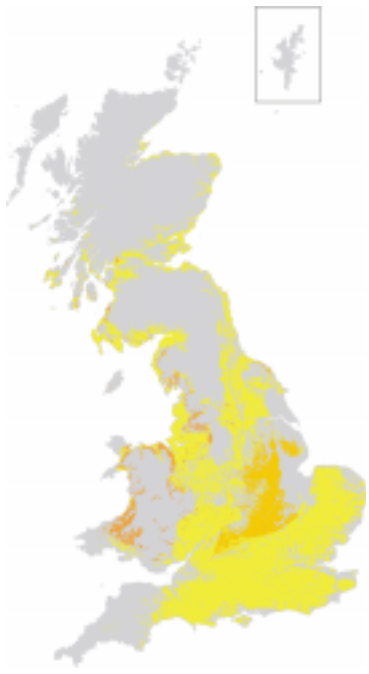



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.28 SE 0.14

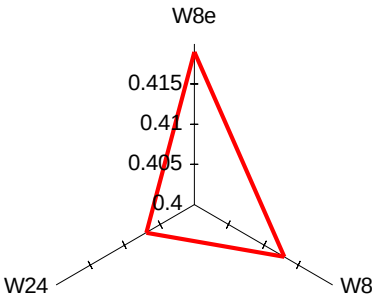
**Boundary**
Length 13.49 SE 4.06

## Floristic characteristics

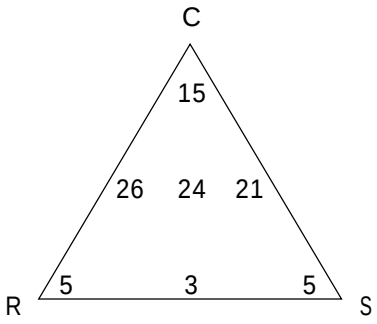
**Species number:** 170 (Medium) **No. of species groups:** 7 (Medium) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Galium aparine* | 85 | *Hedera helix* | 18.7 | *Glechoma hederacea* |
| *Urtica dioica* | 82 | *Crataegus monogyna* | 14.7 | *Stachys sylvatica* |
| *Hedera helix* | 81 | *Urtica dioica* | 12.4 | *Epilobium hirsutum* |
| *Glechoma hederacea* | 60 | *Corylus avellana* | 8.4 | *Arum maculatum* |
| *Crataegus monogyna* | 51 | *Fraxinus excelsior* | 7.8 | *Geranium robertianum* |

### Similarity with National Vegetation Classification (NVC) types



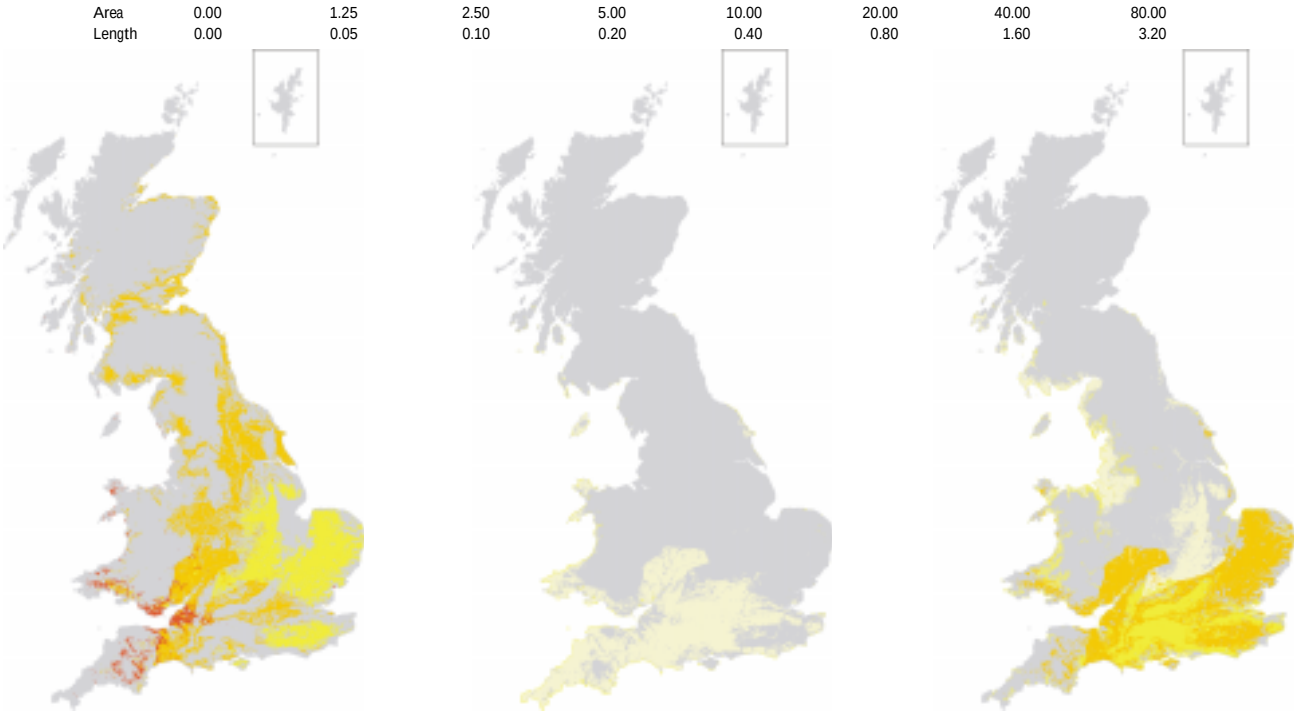

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.9 Low | Mean 5.7 Medium | Mean 6.6 High | Mean 6.5 High | Mean 3.3 Medium |

## Distribution




**Hedge**
Length 15.21 SE 5.19

**Roadside**
Length 1.09 SE 0.57

**Streamside**
Length 12.58 SE 3.01

**Vegetation class 17**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

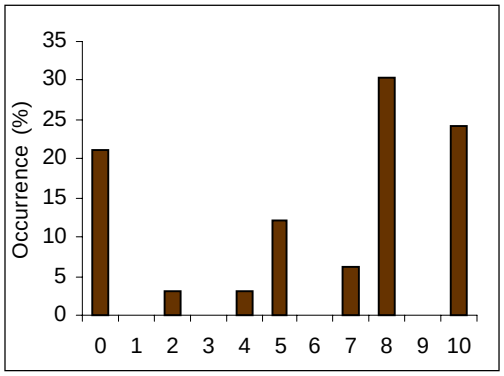
# Lowland wetland/ streamsides

## Description

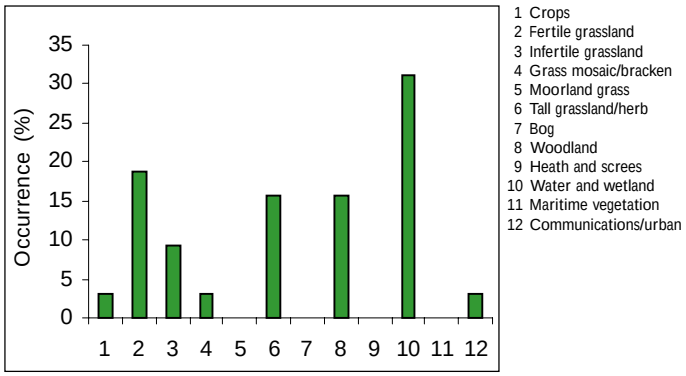
This class, which is not common, occurs mainly by rivers but may be in wet patches elsewhere, mainly on water-affected soils. Reed sweet-grass (*Glyceria maxima*) is the major cover species, as well as reed canary grass (*Phalaris arundinacea*). It is not very diverse but has some distinctive characteristic species, such as water forget-me-not (*Myosotis scorpioides*), trifid bur marigold (*Bidens tripartita*) and bittersweet (*Solanum dulcamara*). The class is restricted to the Midlands and southern England.

## Associated features

### Soils

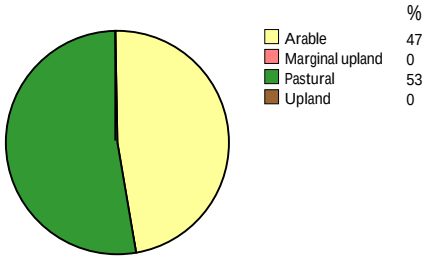



### Land cover

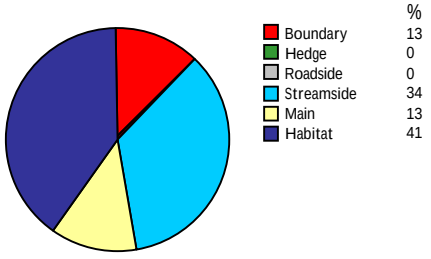



## Distribution

**Total number of plots** 32




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km

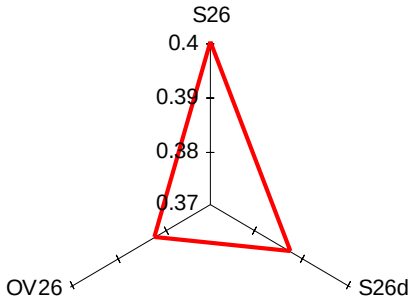
**Main**
Area 0.06 SE 0.05

**Boundary**
Length 1.45 SE 1.32

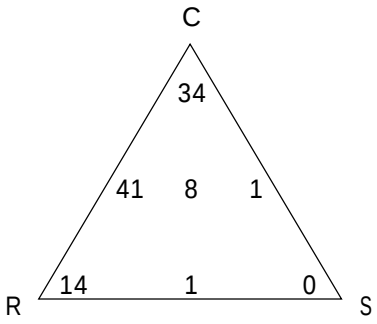
## Floristic characteristics

| **Species number:** | 58 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 11 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Glyceria maxima* | 62 | *Glyceria maxima* | 45.6 | *Phalaris arundinacea* | |
| *Urtica dioica* | 50 | *Phragmites australis* | 16.0 | *Phragmites australis* | |
| *Phalaris arundinacea* | 42 | *Phalaris arundinacea* | 9.7 | *Apium nodiflorum* | |
| *Bidens tripartita* | 38 | *Agrostis stolonifera* | 4.8 | *Calystegia sepium* | |
| *Rorippa sylvestris* | 27 | *Urtica dioica* | 4.1 | *Epilobium hirsutum* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.2 | High | Mean 8.1 | High | Mean 6.7 | High | Mean 6.5 | High | Mean 3.8 | High |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 5.54 SE 2.64

**Vegetation class 18**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

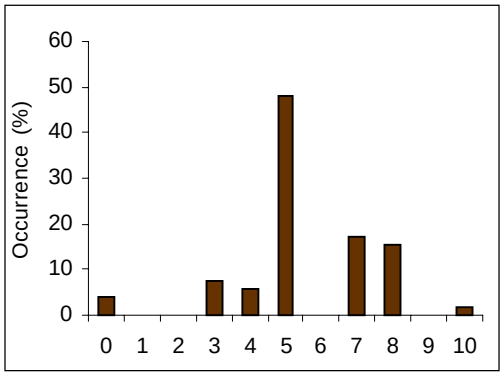
# Fertile shaded streamsides

## Description

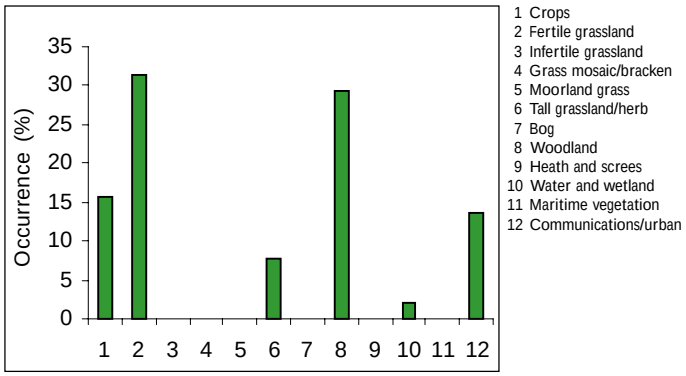
This class occurs mainly on streamsides, in small patches or in roadsides with ditches, and is often shaded. It is not very common and has common nettles (*Urtica dioica*) as the main cover species, but also creeping bent (*Agrostis stolonifera*) and Yorkshire-fog (*Holcus lanatus*), especially where it occurs in grasslands. It is diverse, with characteristic species such as wood avens (*Geum urbanum*), herb-robert (*Geranium robertianum*) and blood-veined dock (*Rumex sanguineus*). This class is present almost throughout southern Britain but in low frequencies.

## Associated features

### Soils

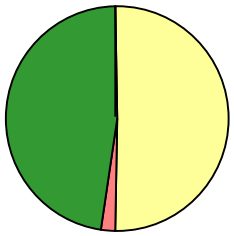



### Land cover

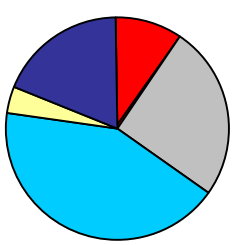



## Distribution

**Total number of plots** 52




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.16 SE 0.11

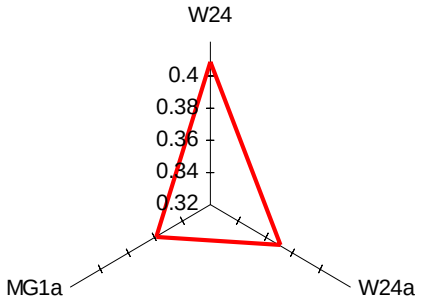
**Boundary**
Length 5.98 SE 2.73

## Floristic characteristics

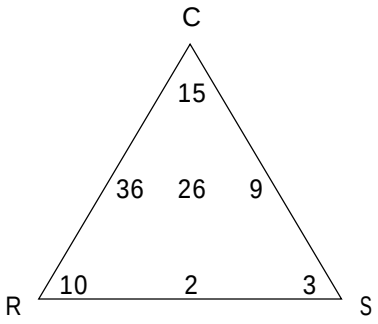
**Species number:** 172 (Medium) **No. of species groups:** 10 (High) **Most frequent group:** 5

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 96 | *Urtica dioica* | 14.9 | *Geum urbanum* |
| *Agrostis stolonifera* | 68 | *Agrostis stolonifera* | 10.9 | *Geranium robertianum* |
| *Ranunculus repens* | 60 | *Fraxinus excelsior* | 6.2 | *Brachypodium sylvaticum* |
| *Galium aparine* | 60 | *Holcus lanatus* | 5.2 | *Alliaria petiolata* |
| *Holcus lanatus* | 54 | *Galium aparine* | 4.8 | *Silene dioica* |

### Similarity with National Vegetation Classification (NVC) types



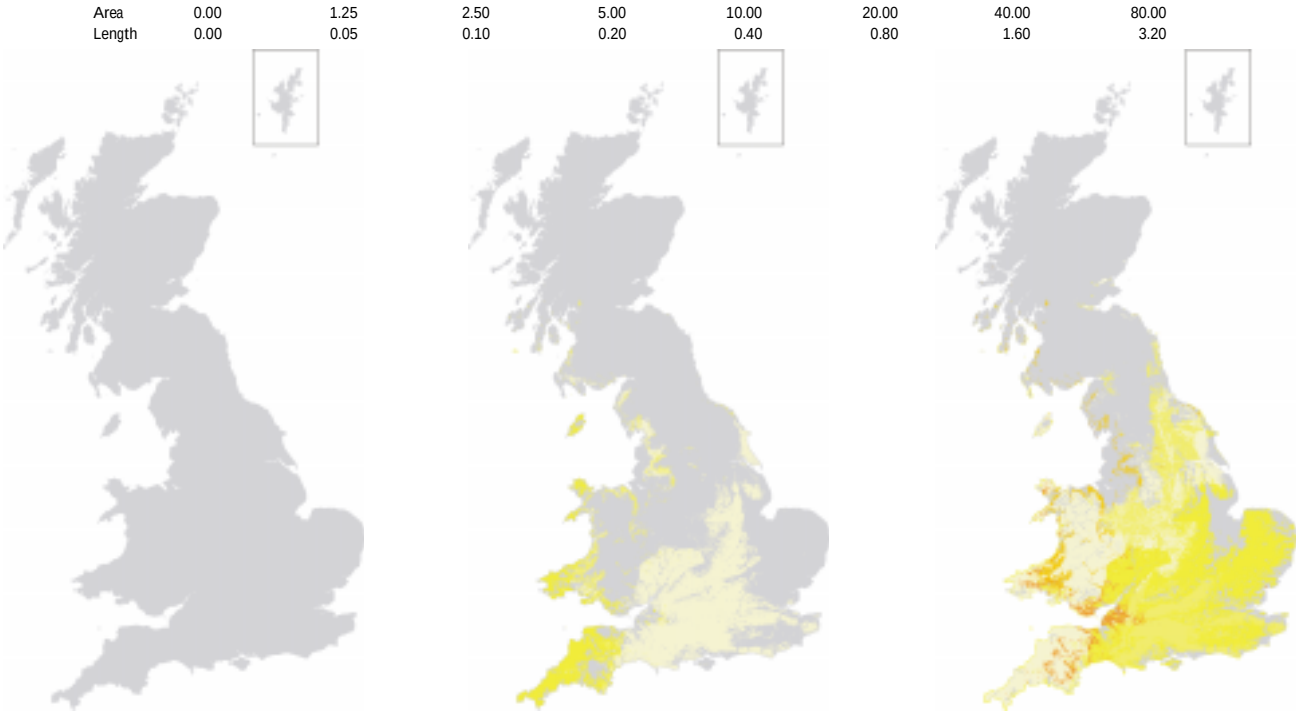

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.3 Low | Mean 5.9 Medium | Mean 6.6 High | Mean 6.4 High | Mean 3.5 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 2.67 SE 0.87

**Streamside**
Length 10.22 SE 2.79

**Vegetation class 19**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

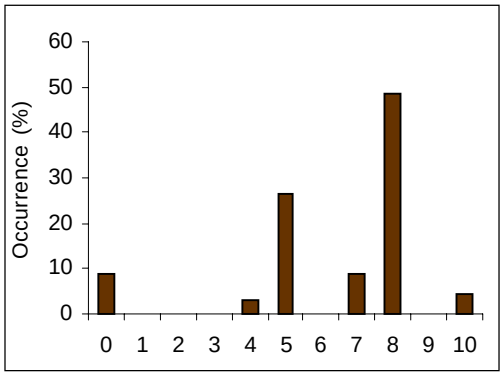
# Fertile streamsides/ wetland tall herb

## Description

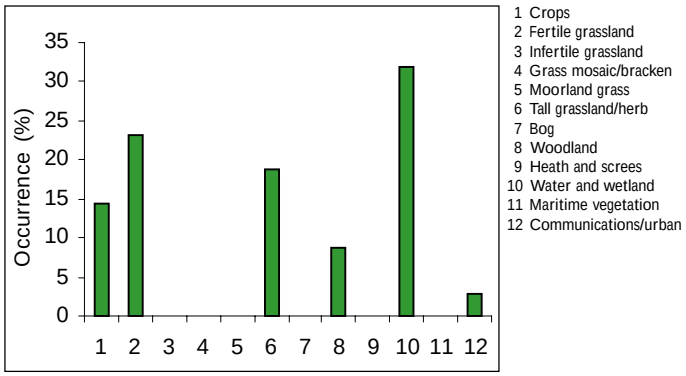
This class occurs mainly by slow-flowing rivers but also in small patches of marshland with groundwater gley soils. It is quite common; common nettles (*Urtica dioica*) are the main cover species but great willowherb (*Epilobium hirsutum*) and reed canary-grass (*Phalaris arundinacea*) are also abundant. The class is quite diverse reflecting variable ground conditions and characteristic species include bittersweet (*Solanum dulcamara*), meadowsweet (*Filipendula ulmaria*) and fool's water-cress (*Apium nodiflorum*). This class occurs throughout lowland Britain, except north-west England and south-west Scotland.

## Associated features

### Soils

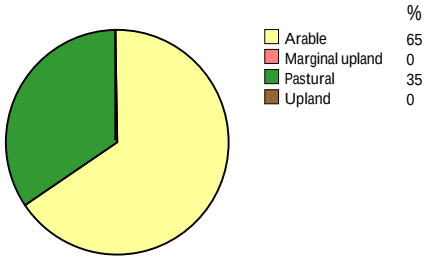



### Land cover

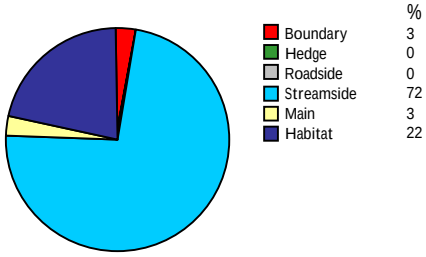



## Distribution

**Total number of plots** 69




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km

**Main**
Area 0.08 SE 0.08

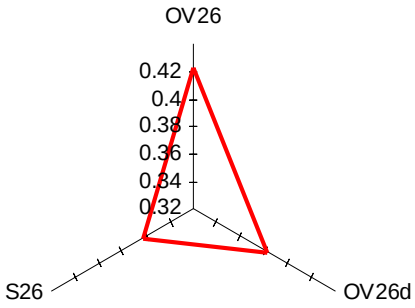
**Boundary**
Length 2.77 SE 2.00

## Floristic characteristics

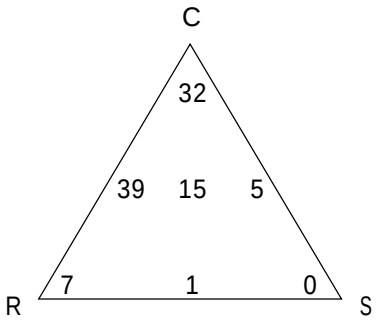
**Species number:** 157 (Medium) **No. of species groups:** 8 (Medium) **Most frequent group:** 6

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 85 | *Urtica dioica* | 12.4 | *Phalaris arundinacea* |
| *Epilobium hirsutum* | 72 | *Phalaris arundinacea* | 9.3 | *Epilobium hirsutum* |
| *Phalaris arundinacea* | 55 | *Epilobium hirsutum* | 9.2 | *Apium nodiflorum* |
| *Galium aparine* | 45 | *Phragmites australis* | 4.9 | *Filipendula ulmaria* |
| *Sparganium erectum* | 43 | *Apium nodiflorum* | 4.2 | *Juncus effusus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 7.2 High | Mean 6.6 High | Mean 6.4 High | Mean 3.6 High |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 23.89 SE 5.51

**Vegetation class 20**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

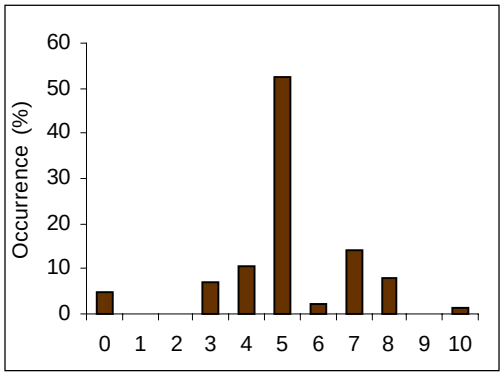
# Grassy roadsides

## Description

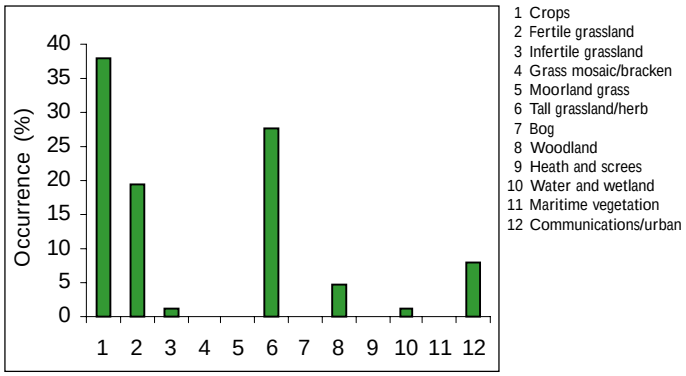
This class is usually found on roadsides or in small patches of vegetation, sometimes in boundaries and occasionally in other linear features, invariably on brown soils. It is quite common and has red fescue (*Festuca rubra*), false oat-grass (*Arrhenathrum elatius*) and cock's-foot (*Dactylis glomerata*) as the main cover species. It is not very diverse and its characteristic species include ribwort plantain (*Plantago lanceolata*), yarrow (*Achillea millefolium*) and creeping cinquefoil (*Potentilla reptans*). This class is present throughout Britain, except in the uplands.

## Associated features

### Soils

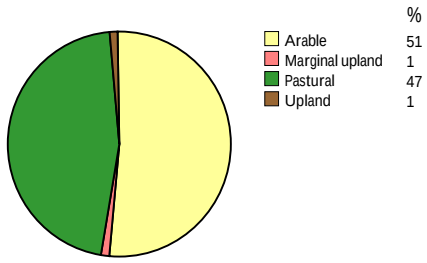



### Land cover

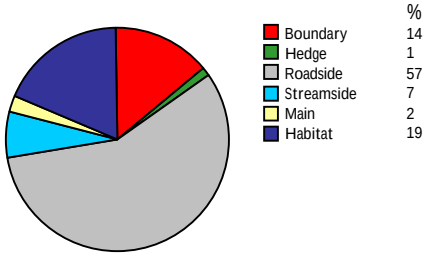



## Distribution

**Total number of plots** 90




### Landscape association

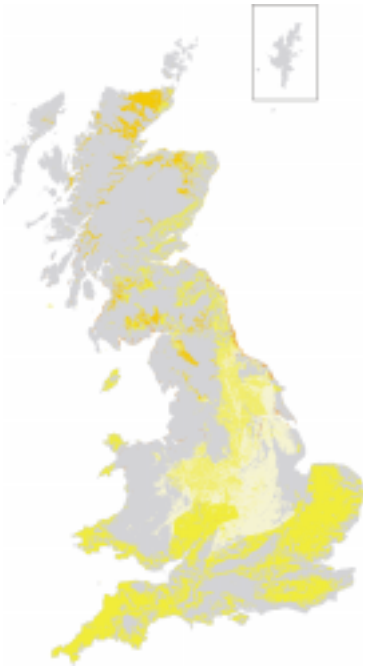



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.20 SE 0.14

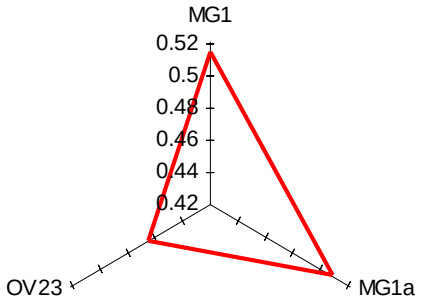
**Boundary**
Length 8.76 SE 3.14

## Floristic characteristics

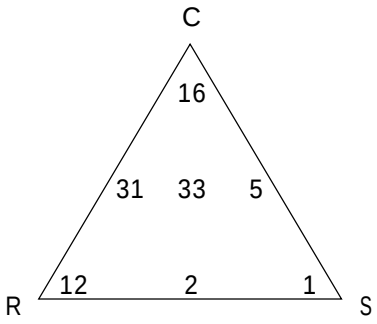
**Species number:** 169 (Medium) **No. of species groups:** 8 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Dactylis glomerata* | 88 | *Festuca rubra* | 14.8 | *Plantago lanceolata* |
| *Arrhenathrum elatius* | 75 | *Arrhenathrum elatius* | 12.8 | *Achillea millefolium* |
| *Plantago lanceolata* | 75 | *Dactylis glomerata* | 8.0 | *Festuca rubra* |
| *Festuca rubra* | 74 | *Lolium perenne* | 5.7 | *Potentilla reptans* |
| *Cirsium arvense* | 59 | *Agrostis stolonifera* | 5.5 | *Centaurea nigra* |

### Similarity with National Vegetation Classification (NVC) types



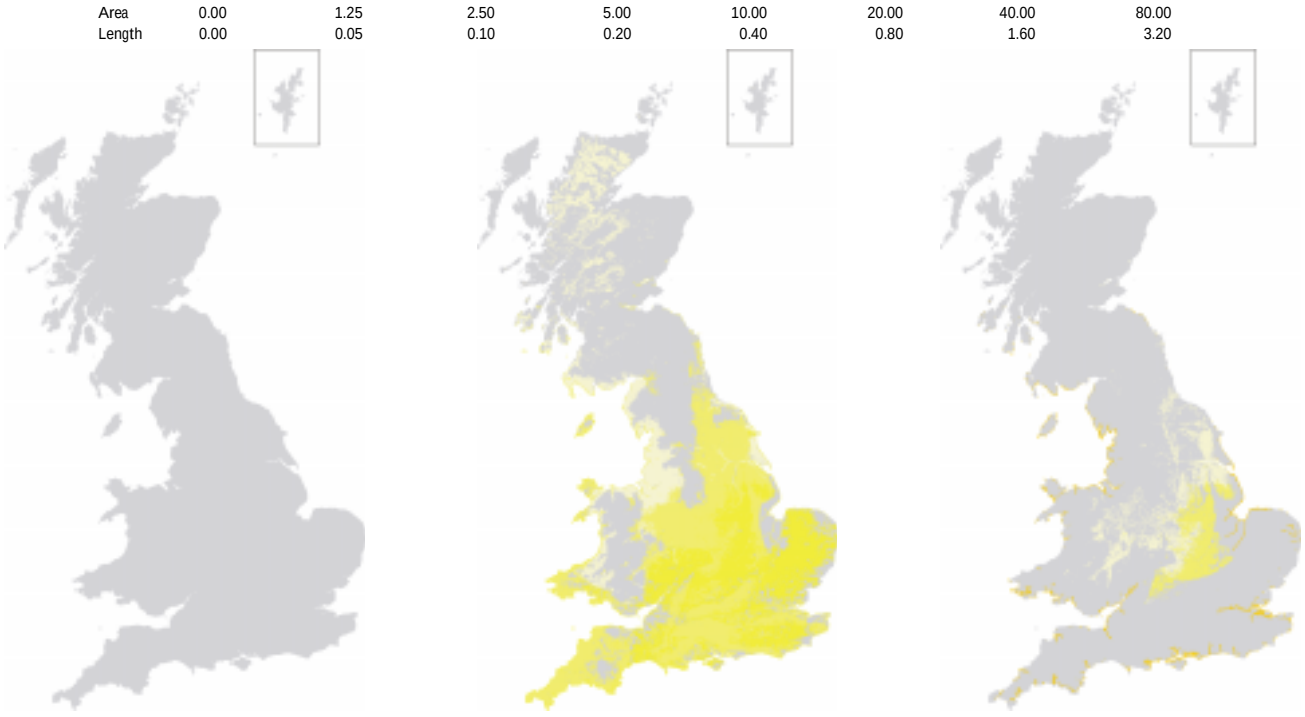

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.1 Low | Mean 6.5 High | Mean 5.9 High | Mean 3.8 High |

## Distribution




**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length 8.84 SE 1.74

**Streamside**
Length 1.30 SE 0.71

**Vegetation class 21**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

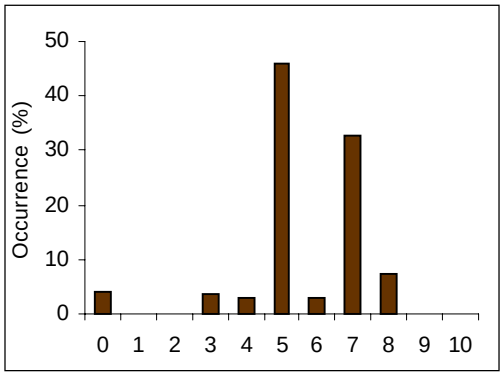
# Species-rich lowland hedges

## Description

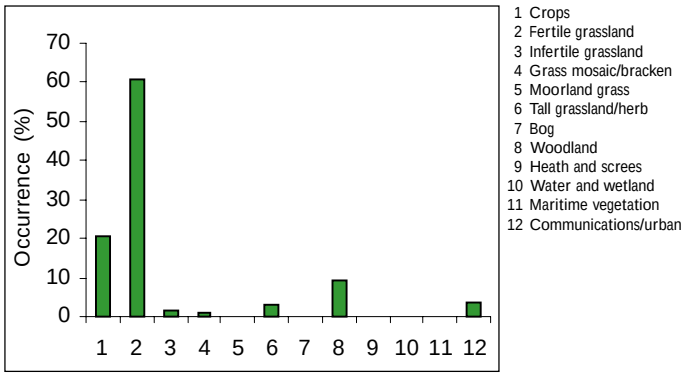
Although this class mainly occurs in hedgerows, usually on brown soils, it may also be found in woodland fragments or by other linear features, especially boundaries. It is very common and often has several woodland species, especially hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*) and hazel(*Corylus avellana*), with a ground cover of ivy (*Hedera helix*), brambles (*Rubus fruticosus*) and false oat-grass (*Arrhenathrum elatius*). It is quite diverse and usually has several shade-loving species, but the main characteristic species are from non-wooded habitats, eg cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*) and black bryony (*Tamus communis*). Although this class is distributed almost throughout lowland Britain, it has its centre of distribution in the West Country.

## Associated features

### Soils

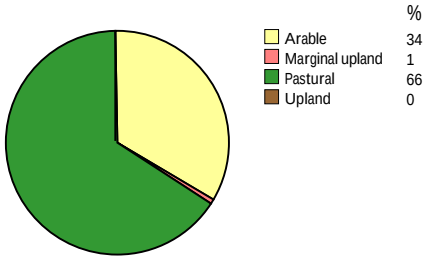



### Land cover

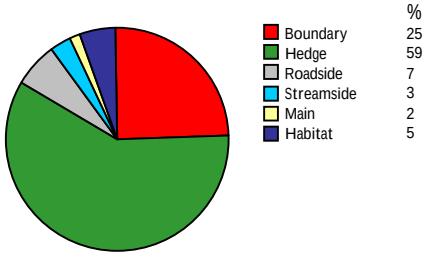



## Distribution

**Total number of plots** 191




### Landscape association

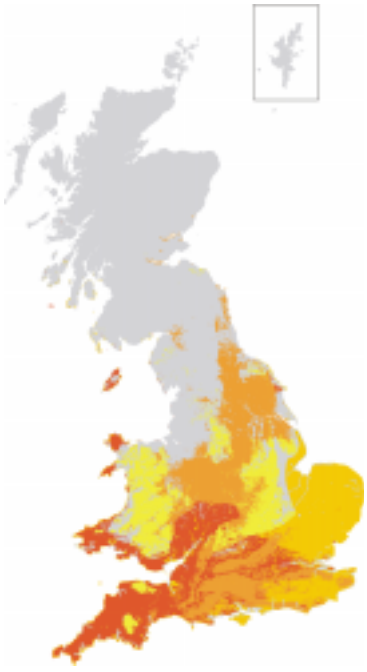



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.15 SE 0.11

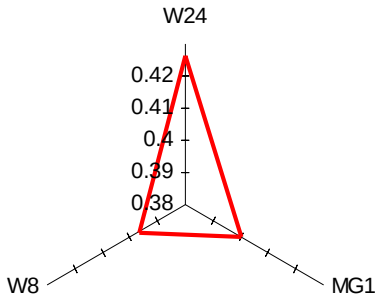
**Boundary**
Length 55.15 SE 10.71

## Floristic characteristics

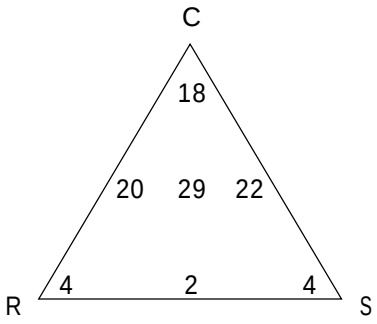
| **Species number:** | 209 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 5 |
|---|---|---|---|---|---|

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Hedera helix* | 81 | *Crataegus monogyna* | 26.2 | *Holcus lanatus* |
| *Crataegus monogyna* | 78 | *Hedera helix* | 17.2 | *Stellaria holostea* |
| *Arrhenathrum elatius* | 71 | *Prunus spinosa* | 17.1 | *Prunus spinosa* |
| *Prunus spinosa* | 70 | *Corylus avellana* | 10.7 | *Dactylis glomerata* |
| *Galium aparine* | 68 | *Arrhenathrum elatius* | 10.1 | *Arrhenathrum elatius* |

### Similarity with National Vegetation Classification (NVC) types



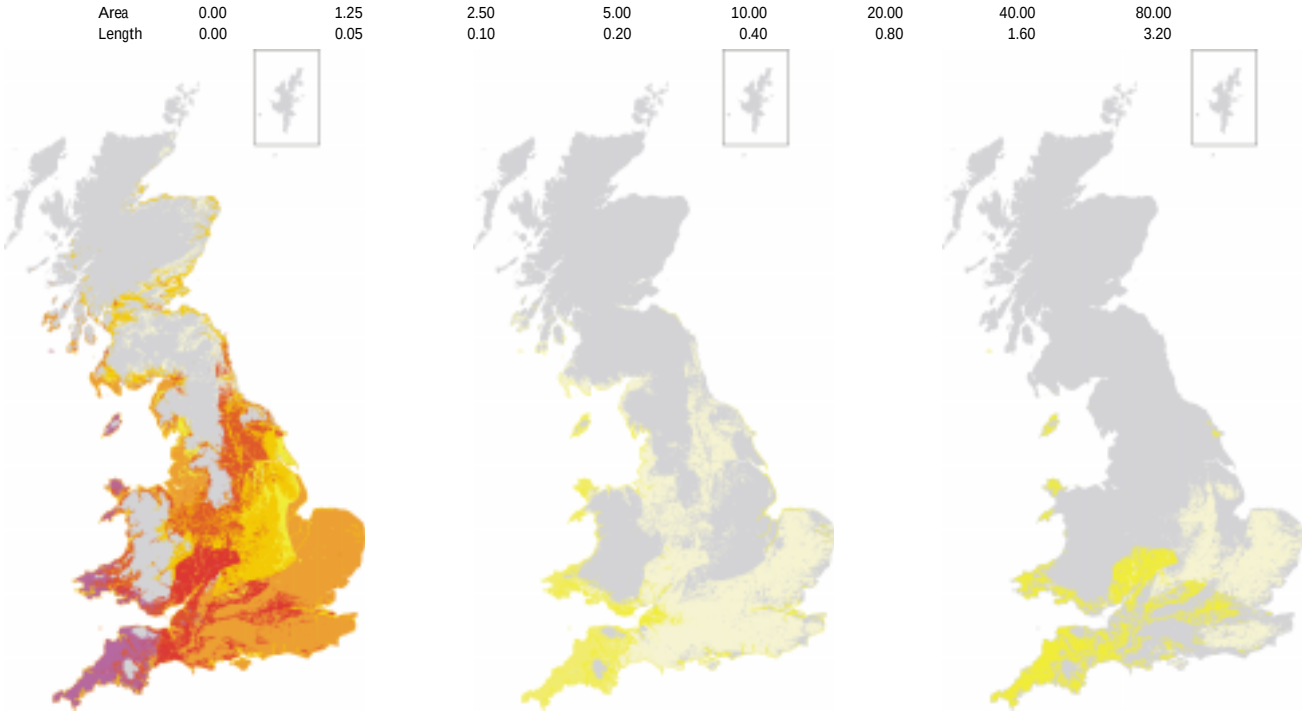

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.1 Low | Mean 5.4 Low | Mean 6.5 High | Mean 6.1 High | Mean 3.5 High |

## Distribution




**Hedge**
Length 104.87 SE 15.17

**Roadside**
Length 2.64 SE 0.90

**Streamside**
Length 3.54 SE 1.83

**Vegetation class 22**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

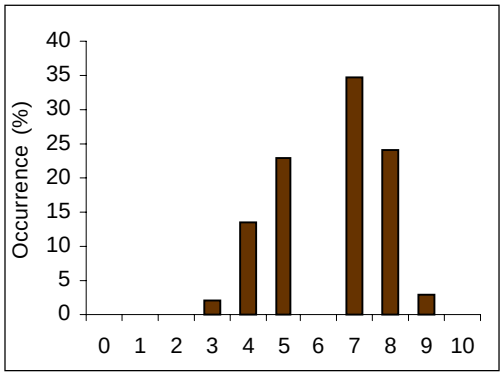
# Fertile wood edges/ streamsides

## Description

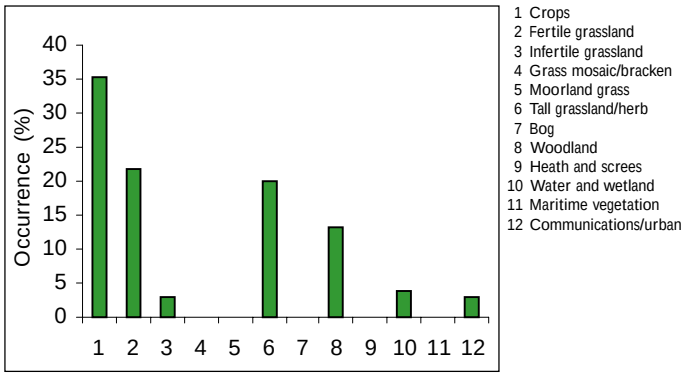
This class occurs mainly on the banks of rivers or ditches, but it can also be found in small relict patches of vegetation on gley soils. It is quite common and has false oat-grass (*Arrhenathrum elatius*) as the main cover species, with common nettles (*Urtica dioica*) and great willowherb (*Epilobium hirsutum*) as other major cover plants. It is quite diverse, with some species from wetter situations, although most plants are more generally distributed, such as Yorkshire-fog (*Holcus lanatus*), blood-veined dock (*Rumex sanguineus*) and hedge woundwort (*Stachys sylvatica*). This class is restricted to the lowlands of southern Britain and is especially concentrated in East Anglia.

## Associated features

### Soils

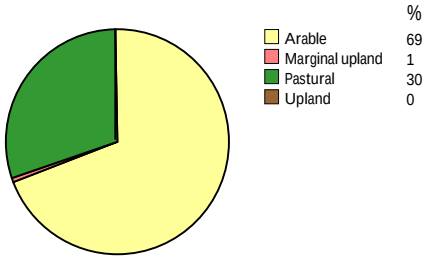



### Land cover

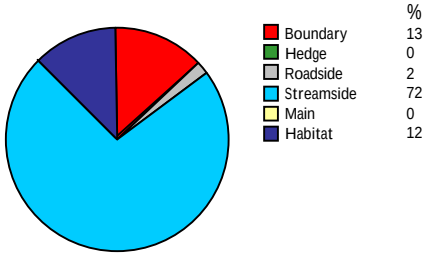



## Distribution

**Total number of plots** 105




### Landscape association

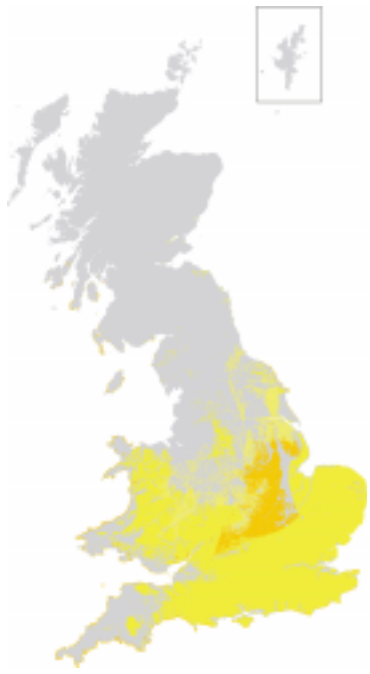



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area *absent* SE *n/a*

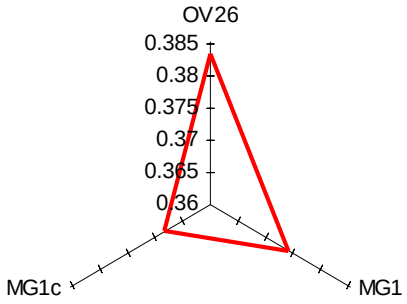
**Boundary**
Length 10.80 SE 3.32

## Floristic characteristics

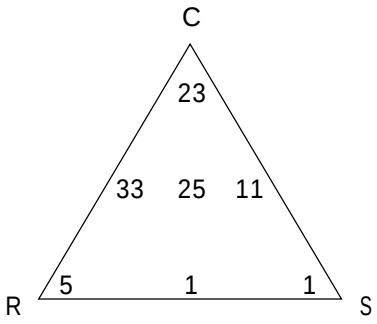
| **Species number:** | 216 (High) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 5 |
|---|---|---|---|---|---|

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 77 | *Arrhenathrum elatius* | 12.5 | *Epilobium hirsutum* |
| *Epilobium hirsutum* | 75 | *Urtica dioica* | 7.7 | *Apium nodiflorum* |
| *Arrhenathrum elatius* | 68 | *Epilobium hirsutum* | 7.0 | *Stachys sylvatica* |
| *Dactylis glomerata* | 62 | *Holcus lanatus* | 4.6 | *Juncus effusus* |
| *Holcus lanatus* | 60 | *Agrostis stolonifera* | 3.6 | *Angelica sylvestris* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.5 Low | Mean 6.1 Medium | Mean 6.6 High | Mean 6.4 High | Mean 3.6 High |

## Distribution


**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length 0.25 SE 0.18

**Streamside**
Length 34.27 SE 5.70

**Vegetation class 23**

**AGGREGATE CLASS III**
**FIRTILE GRASSLAND**

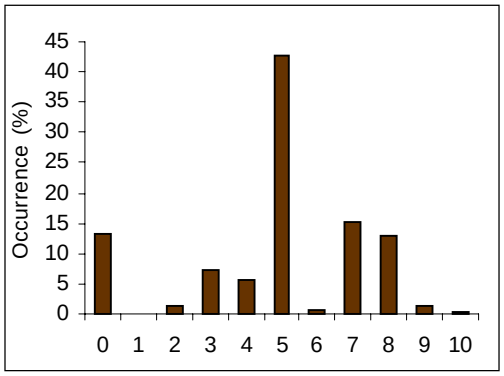
# Fertile grassland

## Description

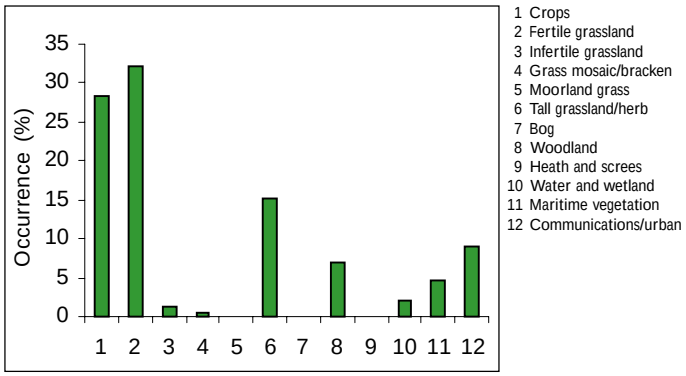
This class occurs in all the plot types, except hedges, but it is especially common on roadsides and is usually on brown soils. It is very common and represents fertile grassland dominated by perennial rye-grass (*Lolium perenne*), red fescue (*Festuca rubra*) and creeping bent (*Agrostis stolonifera*). It is somewhat diverse and has characteristic species such as ribwort plantain (*Plantago lanceolata*), white clover (*Trifolium repens*) and creeping cinquefoil (*Potentilla repens*). Although the centre of the distribution of this class is in south and east England, it occurs widely throughout the lowlands elsewhere.

## Associated features

### Soils

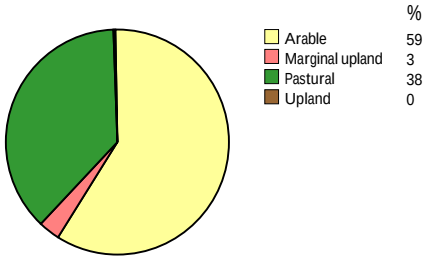



### Land cover

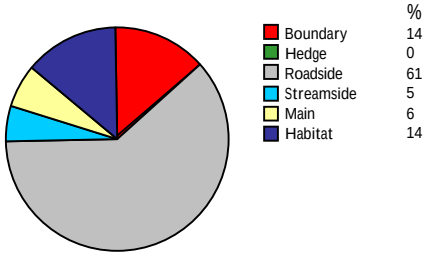



## Distribution

**Total number of plots** 258




### Landscape association

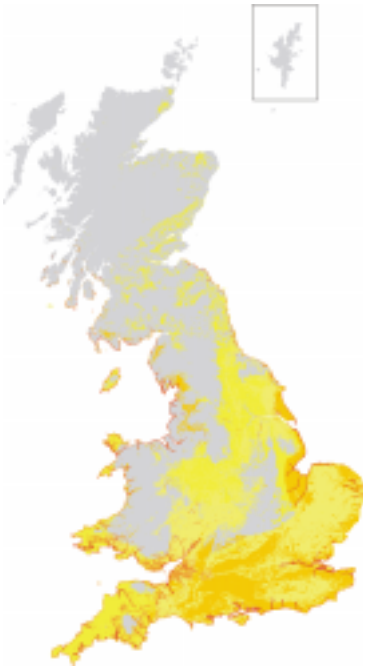



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.80 SE 0.25

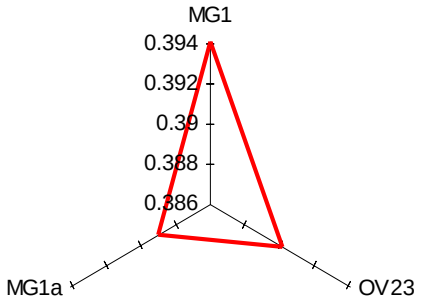
**Boundary**
Length 17.22 SE 4.02

## Floristic characteristics

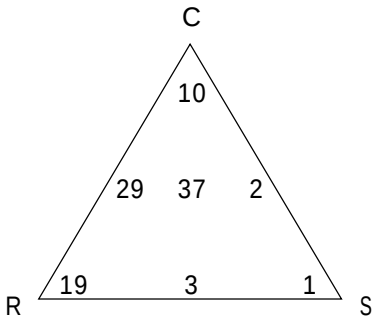
**Species number:** 261 (High) **No. of species groups:** 7 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Lolium perenne* | 85 | *Lolium perenne* | 23.0 | *Plantago lanceolata* |
| *Dactylis glomerata* | 82 | *Festuca rubra* | 13.0 | *Tragopogon pratensis* |
| *Agrostis stolonifera* | 64 | *Agrostis stolonifera* | 10.2 | *Convolvulus arvensis* |
| *Plantago lanceolata* | 62 | *Dactylis glomerata* | 6.4 | *Festuca rubra* |
| *Festuca rubra* | 61 | *Arrhenathrum elatius* | 3.6 | *Plantago coronopus* |

### Similarity with National Vegetation Classification (NVC) types



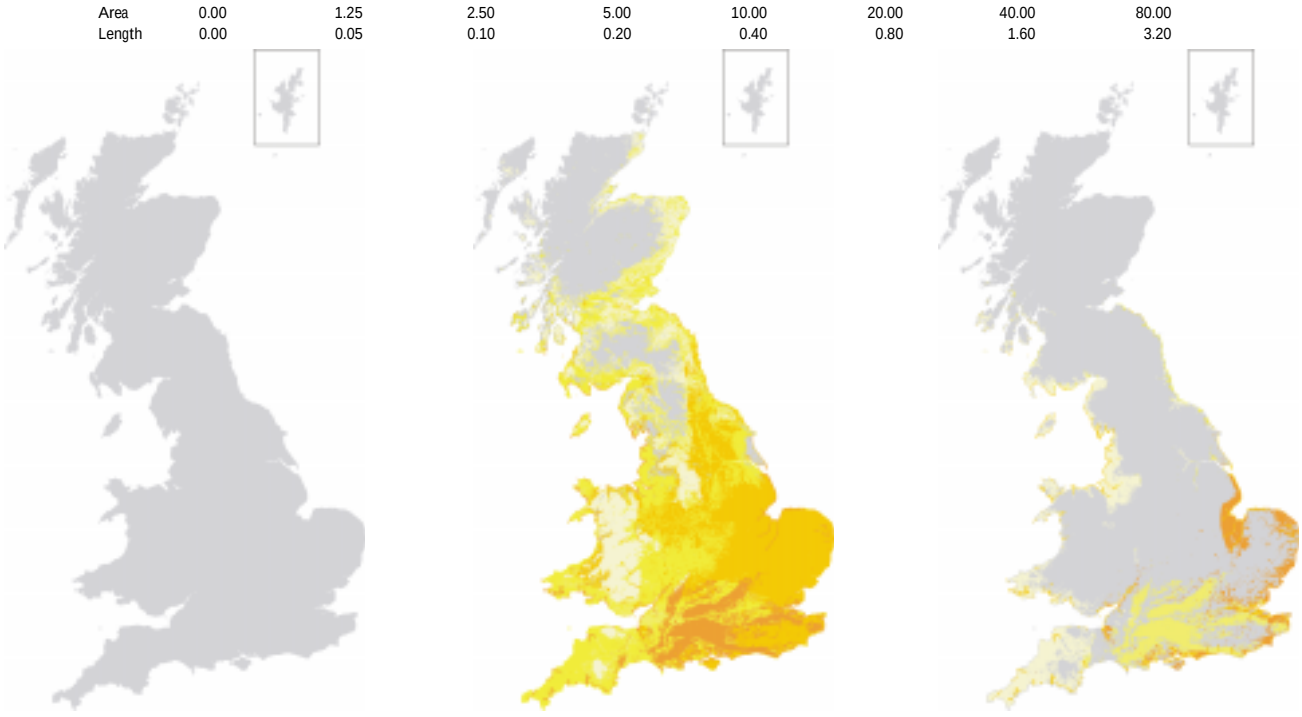

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.1 High | Mean 5.1 Low | Mean 6.4 High | Mean 5.7 Medium | Mean 3.8 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 31.99 SE 5.39

**Streamside**
Length 6.21 SE 3.50

**Vegetation class 24**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

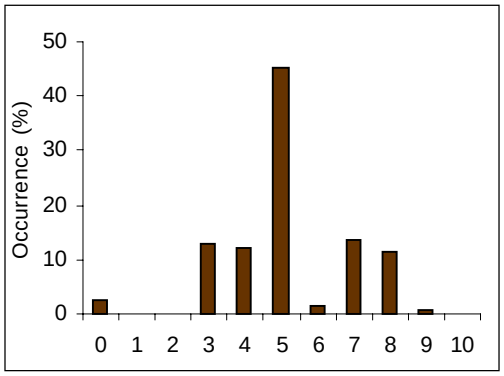
# Dry base-rich woodland

## Description

Although this class occurs mainly in woodlands, it is also found occasionally elsewhere in the landscape eg on streamsides or roadsides, where the soil is base-rich and woodland species are able to survive. The class is quite common, with ash *(Fraxinus excelsior)* as the major canopy species and a ground cover of ivy (*Hedera helix*), dog's mercury (*Mercurialis perennis*) and common nettles (*Urtica dioica*). The class is not very diverse but it often has a range of true woodland species, such as ground-ivy (*Glechoma hederacea*), bluebells (*Hyacinthoides non-scripta*) and wood avens (*Geum urbanum*). This class is restricted to the lowlands of southern Britain, especially East Anglia and southern England.

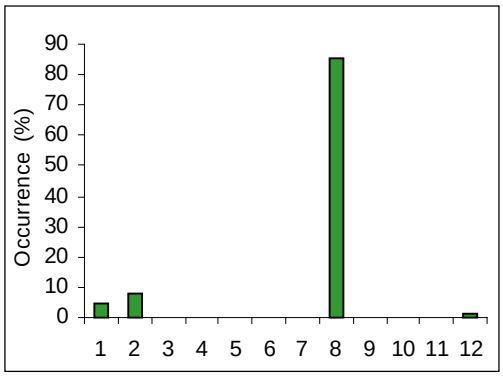
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

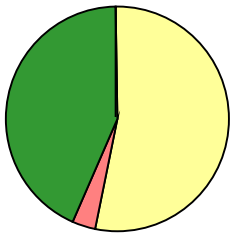
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

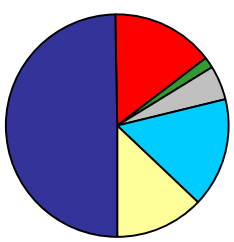
## Distribution

**Total number of plots** 121



| | % |
|---|---|
| Arable | 53 |
| Marginal upland | 3 |
| Pastural | 44 |
| Upland | 0 |

### Landscape association



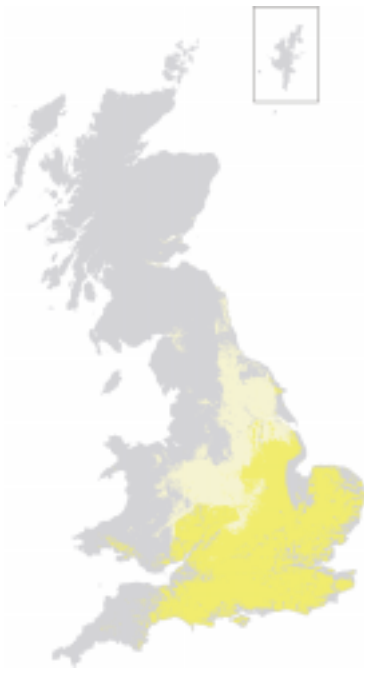
| | % |
|---|---|
| Boundary | 15 |
| Hedge | 2 |
| Roadside | 5 |
| Streamside | 16 |
| Main | 12 |
| Habitat | 50 |

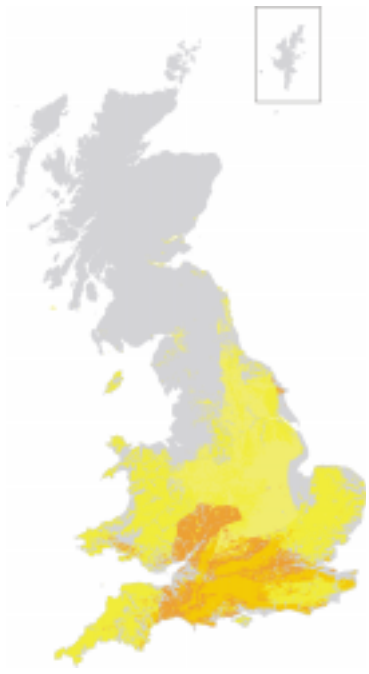
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km





**Main**
Area 1.16 SE 0.32

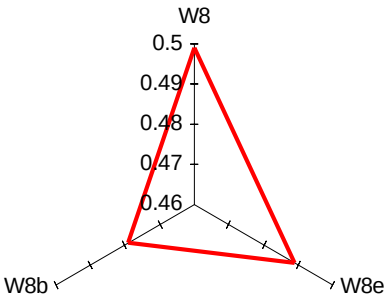
**Boundary**
Length 16.26 SE 4.38

## Floristic characteristics

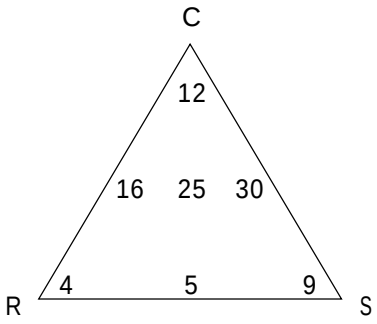
**Species number:** 152 (Medium) **No. of species groups:** 5 (Low) **Most frequent group:** 14

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 59 | *Hedera helix* | 17.7 | *Fraxinus excelsior* |
| *Fraxinus excelsior* | 55 | *Acer pseudoplatanus* | 8.0 | *Mercurialis perennis* |
| *Hedera helix* | 55 | *Fraxinus excelsior* | 8.0 | *Hyacinthoides non-scripta* |
| *Mercurialis perennis* | 37 | *Mercurialis perennis* | 7.6 | *Lamiastrum galeobdolon* |
| *Sambucus nigra* | 34 | *Urtica dioica* | 6.7 | *Acer pseudoplatanus* |

### Similarity with National Vegetation Classification (NVC) types



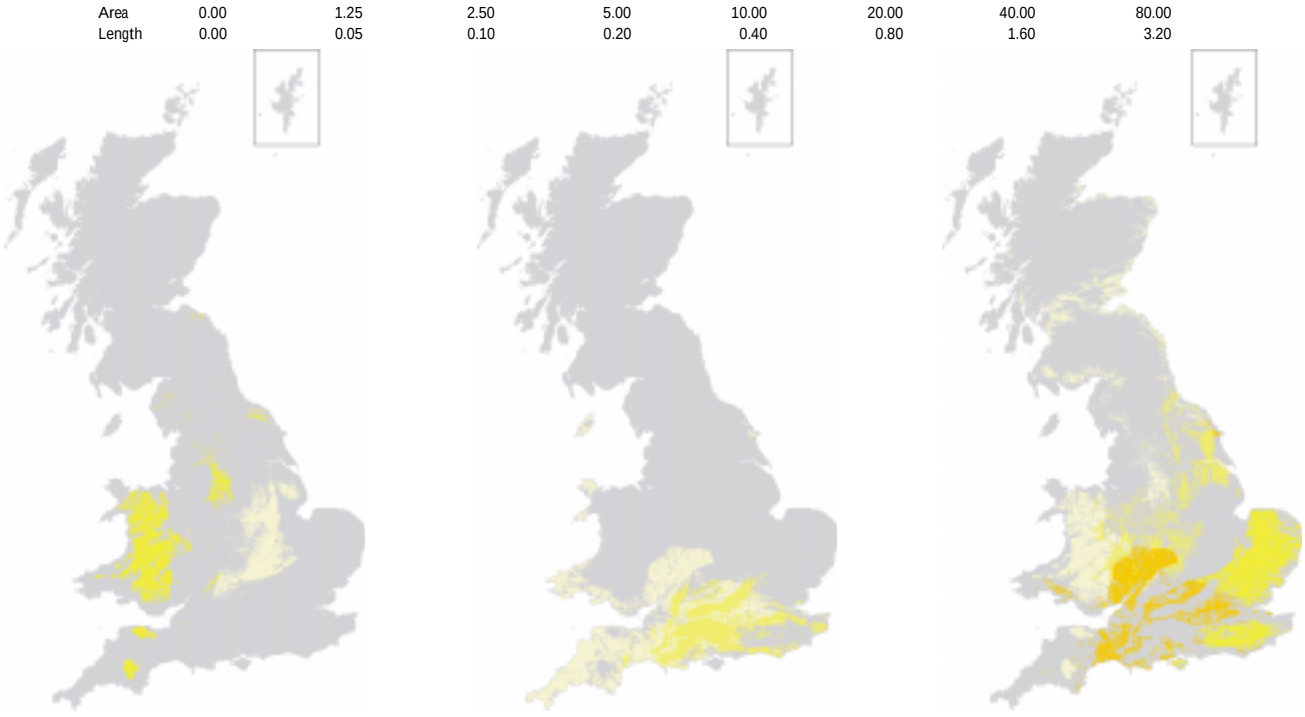

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.4 Low | Mean 5.5 Low | Mean 6.5 High | Mean 6.3 High | Mean 3.2 Medium |

## Distribution




**Hedge**
Length 1.55 SE 1.34

**Roadside**
Length 1.34 SE 0.82

**Streamside**
Length 6.51 SE 1.91

**Vegetation class 25**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

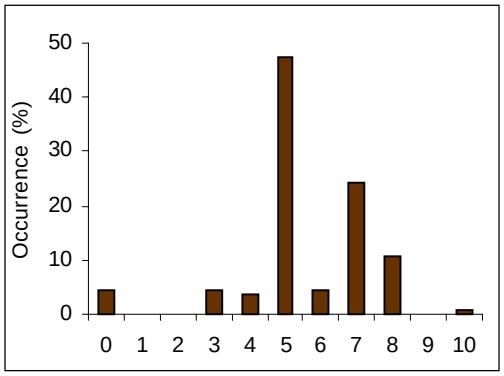
# Shaded grassland/ hedges

## Description

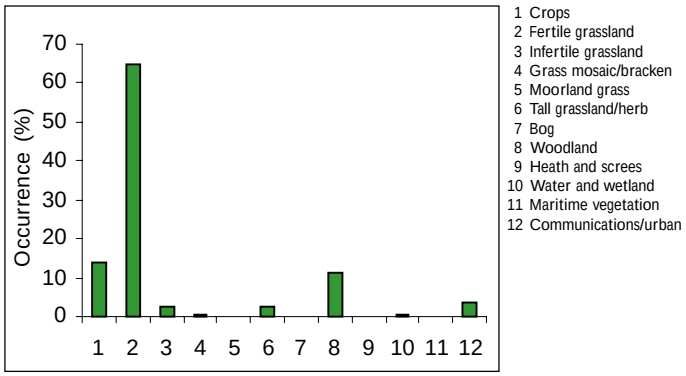
Although occurring mainly along linear habitats, such as hedges and roads, this class can occur in a wide variety of situations where there is some shade and more robust woodland species are able to survive. It is very common, and hawthorn (*Crataegus monogyna*) is the main hedgerow species with dog-rose (*Rosa* spp.) and blackthorn (*Prunus spinosa*). The ground cover is mainly grasses; perennial rye-grass (*Lolium perenne*), creeping bent (*Agrostis stolonifera*), cock's-foot (*Dactylis glomerata*) and false oat-grass (*Arrhenathrum elatius*). The type is quite diverse in structure and species, and has characteristic plants such as bramble (*Rubus fruticosus*), ivy (*Hedera helix*) and hogweed (*Heracleum sphondylium*). This class occurs throughout lowland Britain.

## Associated features

### Soils

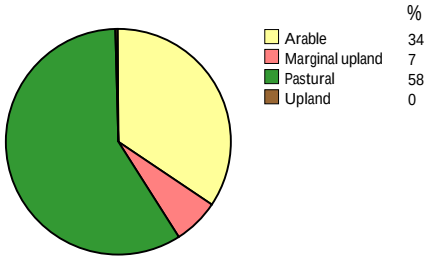



### Land cover

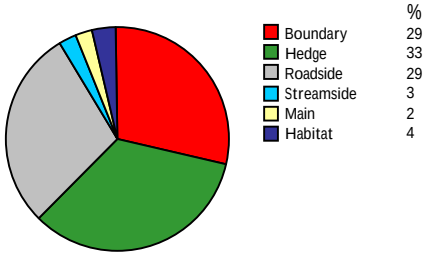



## Distribution

**Total number of plots** 325




### Landscape association

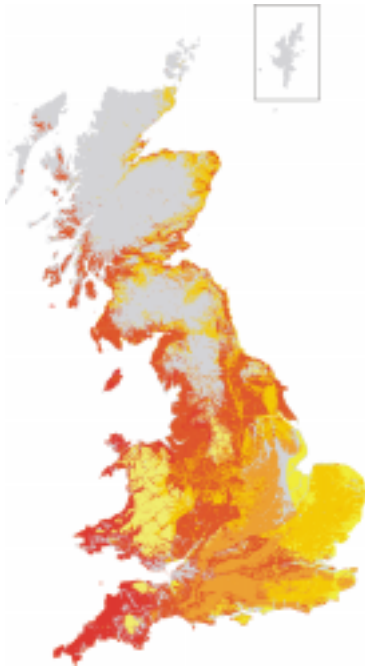



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



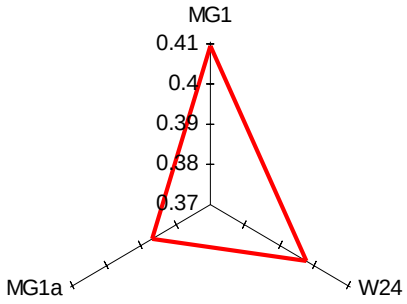
**Main**
Area 0.61 SE 0.25

**Boundary**
Length 110.38 SE 14.68

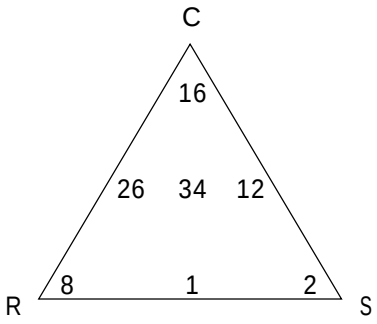
## Floristic characteristics

| **Species number:** | 257 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Dactylis glomerata* | 90 | *Crataegus monogyna* | 20.3 | *Crataegus monogyna* | |
| *Urtica dioica* | 75 | *Lolium perenne* | 10.6 | *Hedera helix* | |
| *Lolium perenne* | 73 | *Agrostis stolonifera* | 10.0 | *Lolium perenne* | |
| *Holcus lanatus* | 67 | *Dactylis glomerata* | 9.8 | *Prunus spinosa* | |
| *Agrostis stolonifera* | 65 | *Arrhenathrum elatius* | 7.7 | *Agrostis capillaris* | |

### Similarity with National Vegetation Classification (NVC) types



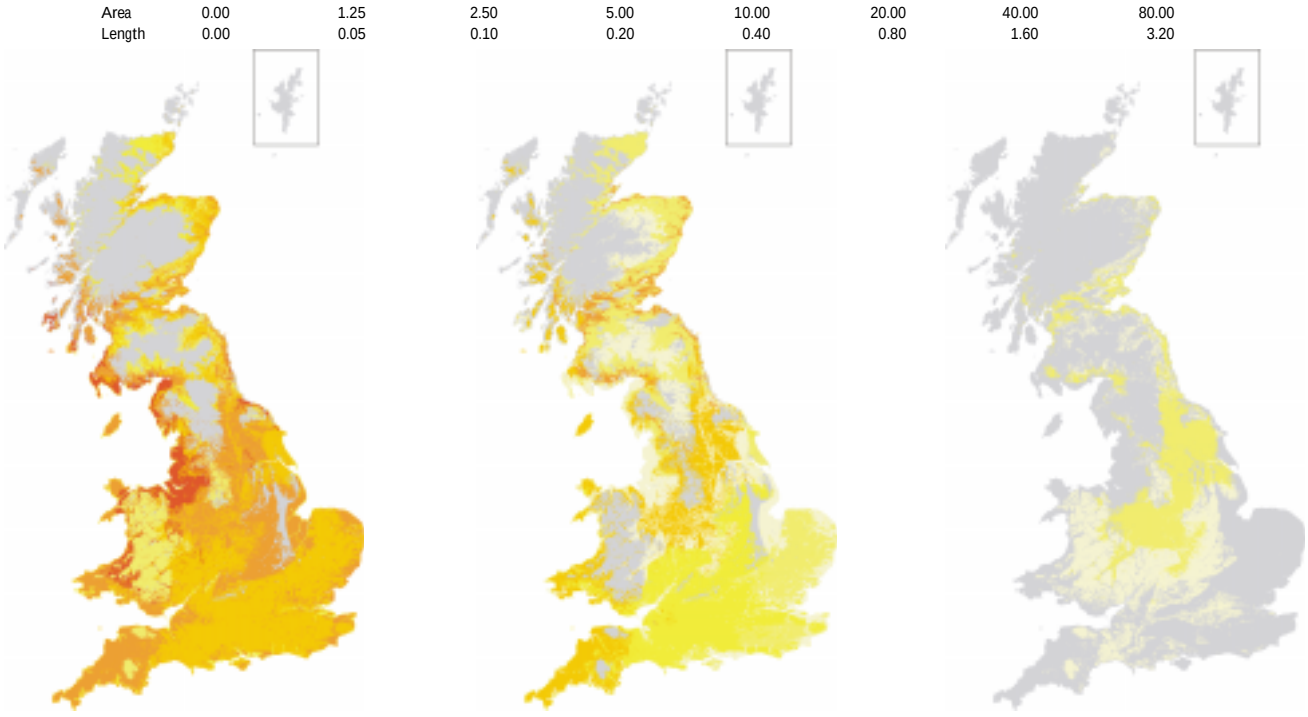

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.5 Low | Mean 5.4 Low | Mean 6.3 High | Mean 6.0 High | Mean 3.6 High |

## Distribution




**Hedge**
Length 58.74 SE 9.72

**Roadside**
Length 18.71 SE 2.77

**Streamside**
Length 2.76 SE 1.04

**Vegetation class 26**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

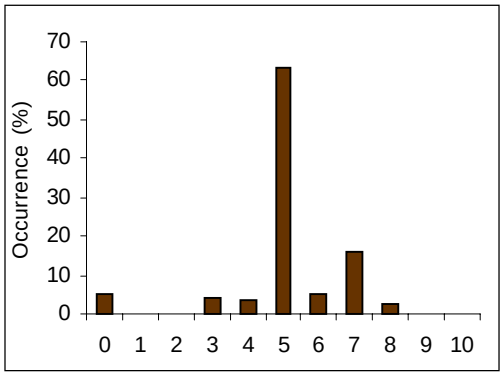
# Tall grassland/ scrub by roadsides

## Description

This class is mainly present along roads but is occasionally found elsewhere and invariably on brown soils. It is quite a common type, with creeping bent (*Agrostis stolonifera*) forming the main cover but with a range of other species contributing, such as cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), false oat-grass (*Arrhenathrum elatius*), common nettles (*Urtica dioica*) and brambles (*Rubus fruticosus*). The class is diverse, depending upon local soil conditions and the successional stage of the site, with species such as nipplewort (*Lapsana communis*), greater stitchwort (*Stellaria holostea*) and red campion (*Silene dioica*) being characteristic. This class is present in the lowlands of Britain, but especially in south-west England and west Wales.

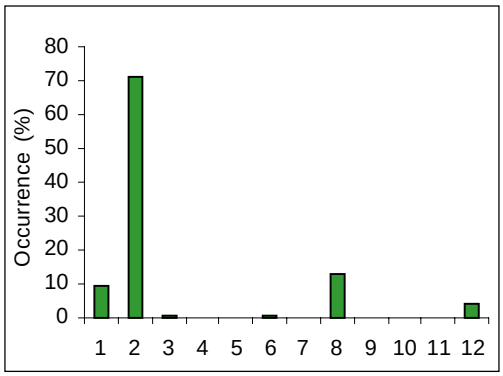
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

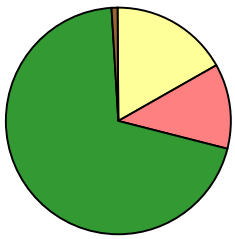
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

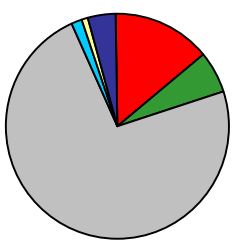
## Distribution

**Total number of plots** 118



| | % |
|---|---|
| Arable | 17 |
| Marginal upland | 12 |
| Pastural | 70 |
| Upland | 1 |

### Landscape association



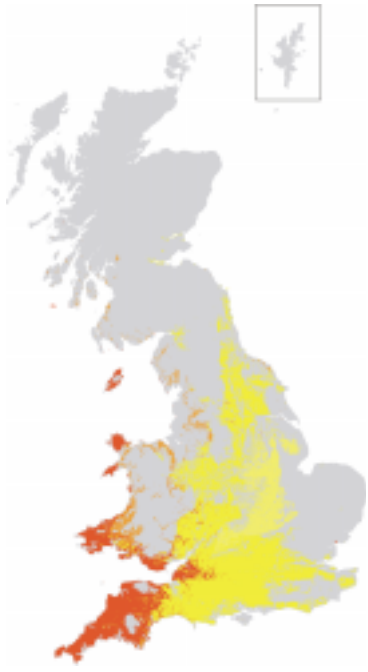
| | % |
|---|---|
| Boundary | 14 |
| Hedge | 6 |
| Roadside | 73 |
| Streamside | 2 |
| Main | 1 |
| Habitat | 4 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



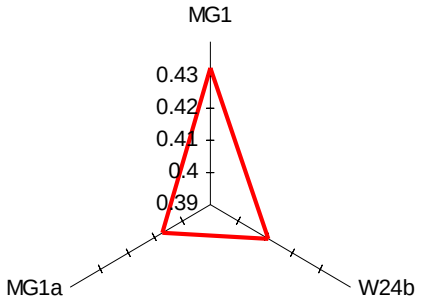
**Main**
Area 0.00 SE 0.00

**Boundary**
Length 18.74 SE 5.49

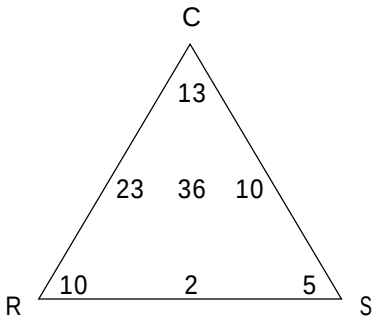
## Floristic characteristics

| **Species number:** | 220 (High) | **No. of species groups:** | 11 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Dactylis glomerata* | 91 | *Agrostis stolonifera* | 12.2 | *Stellaria holostea* | |
| *Urtica dioica* | 86 | *Dactylis glomerata* | 9.1 | *Geranium robertianum* | |
| *Agrostis stolonifera* | 79 | *Holcus lanatus* | 7.0 | *Geum urbanum* | |
| *Arrhenathrum elatius* | 69 | *Arrhenathrum elatius* | 6.8 | *Rumex acetosa* | |
| *Holcus lanatus* | 68 | *Lolium perenne* | 6.5 | *Lapsana communis* | |

### Similarity with National Vegetation Classification (NVC) types



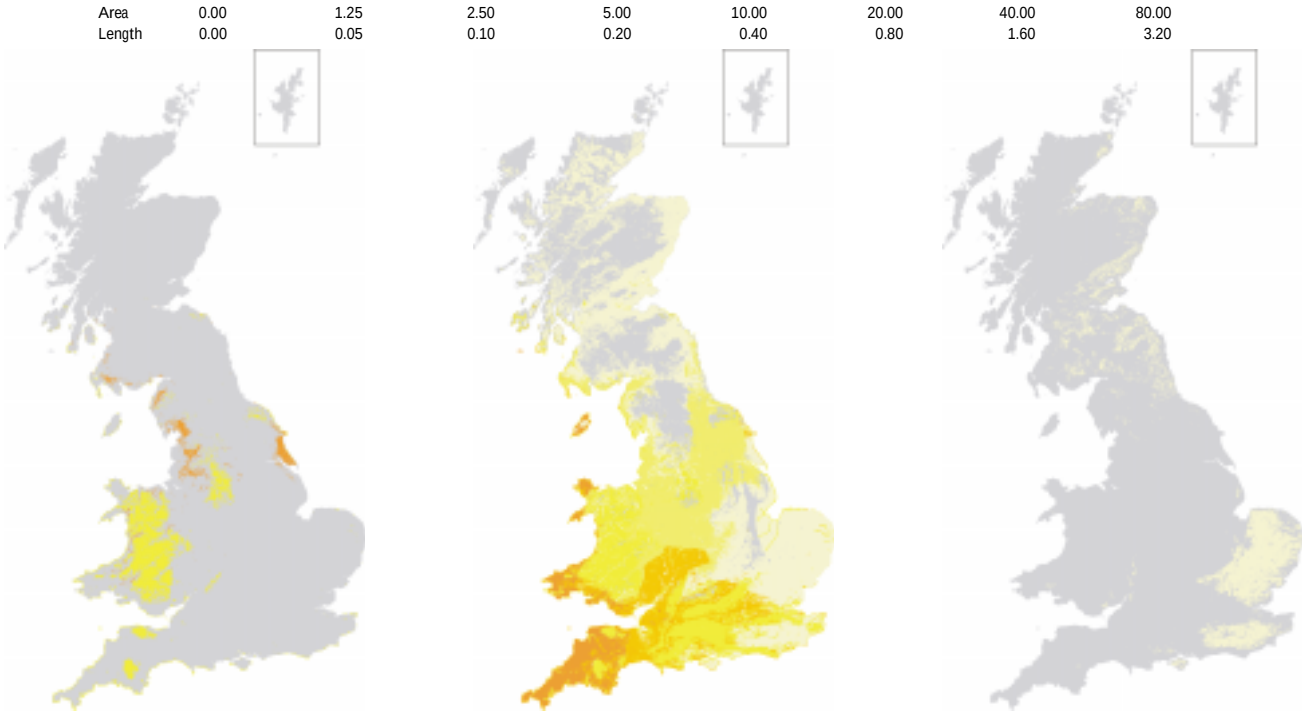

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 6.3 | Low | Mean 5.4 | Low | Mean 6.3 | High | Mean 6.0 | High | Mean 3.5 | High |

## Distribution




**Hedge**
Length 3.24 SE 2.10

**Roadside**
Length 17.73 SE 2.92

**Streamside**
Length 0.36 SE 0.29

**Vegetation class 27**

**AGGREGATE CLASS III**
**FERTILE GRASSLAND**

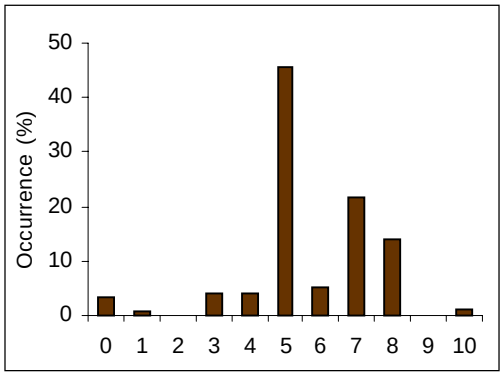
# Rye-grass roadsides

## Description

This class is mainly on roadsides but can occasionally occur in other linear elements, and is mainly on brown soils. It is the commonest class beside roads, with a high cover of perennial rye-grass (*Lolium perenne*) and other grasses such as cock's-foot (*Dactylis glomerata*), creeping bent (*Agrostis stolonifera*), red fescue (*Festuca rubra*) and false oat-grass (*Arrhenathrum elatius*), depending upon the cutting regime. It is of average diversity and characteristic species are bush vetch (*Vicia sepium*), cow parsley (*Anthriscus sylvestris*) and meadow vetchling (*Lathyrus pratensis*). This class is present throughout Britain, except north-west Scotland, but reaches its highest frequency in the lowlands.

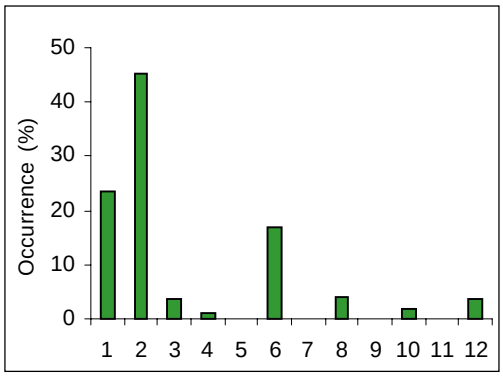
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

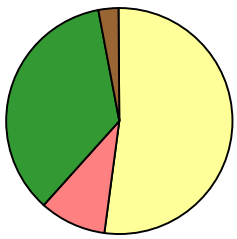
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

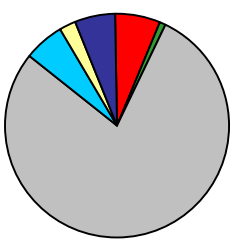
## Distribution

**Total number of plots** 320



| | % |
|---|---|
| Arable | 52 |
| Marginal upland | 10 |
| Pastural | 36 |
| Upland | 3 |

### Landscape association



| | % |
|---|---|
| Boundary | 7 |
| Hedge | 1 |
| Roadside | 78 |
| Streamside | 6 |
| Main | 3 |
| Habitat | 6 |

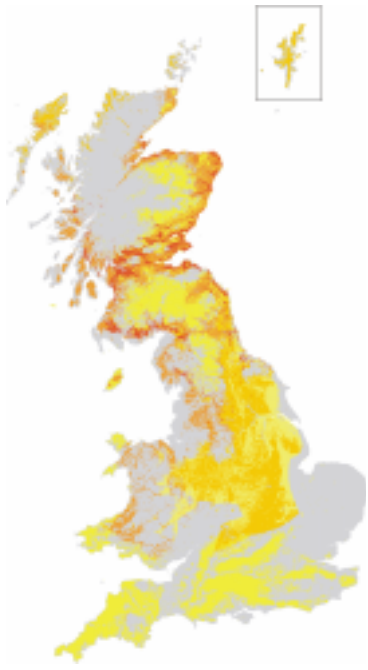
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.50 SE 0.20

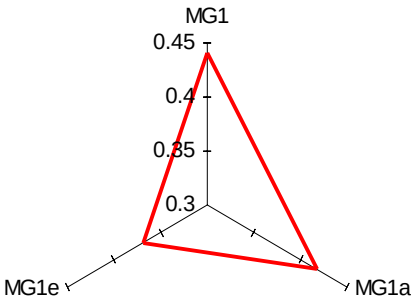


**Boundary**
Length 27.53 SE 7.36

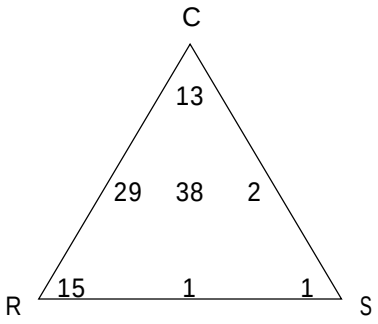
## Floristic characteristics

| **Species number:** | 274 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Dactylis glomerata* | 91 | *Lolium perenne* | 20.5 | *Arrhenathrum elatius* | |
| *Urtica dioica* | 86 | *Dactylis glomerata* | 12.2 | *Heracleum sphondylium* | |
| *Agrostis stolonifera* | 79 | *Agrostis stolonifera* | 10.0 | *Anthriscus sylvestris* | |
| *Arrhenathrum elatius* | 69 | *Festuca rubra* | 9.1 | *Lathyrus pratensis* | |
| *Holcus lanatus* | 68 | *Arrhenathrum elatius* | 7.8 | *Vicia sepium* | |

### Similarity with National Vegetation Classification (NVC) types



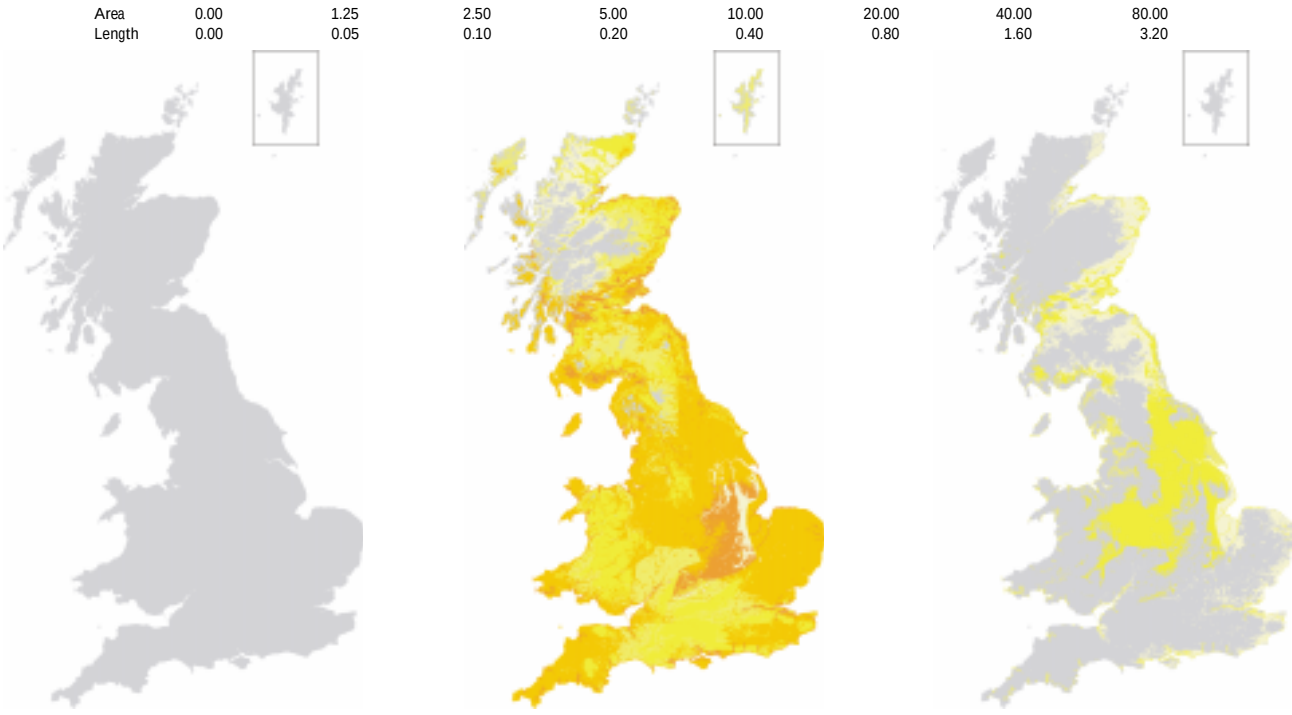

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.3 Low | Mean 6.3 High | Mean 5.8 High | Mean 3.7 High |

## Distribution




**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length 41.77 SE 4.23

**Streamside**
Length 5.30 SE 1.79

**Vegetation class 28**

**AGGREGATE CLASS II**
**TALL GRASSLAND/HERB**

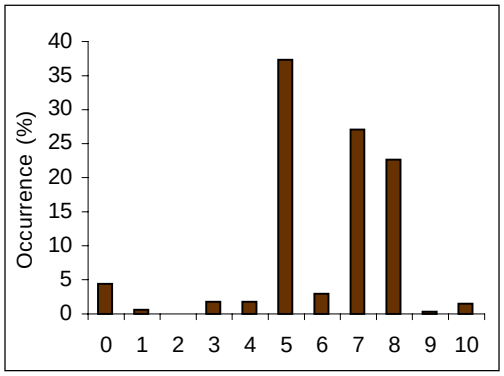
# Fertile tall herb/ grassland

## Description

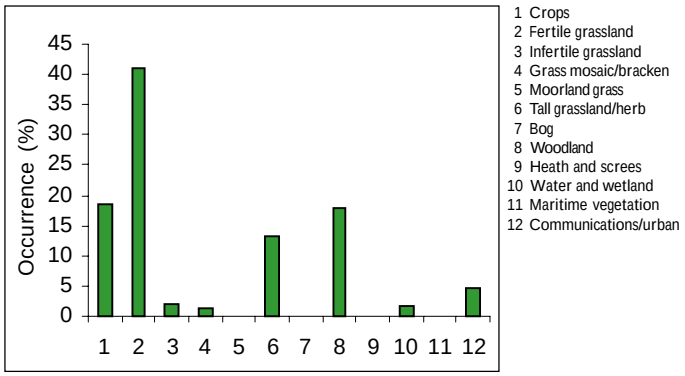
This class occurs most commonly by streams but also in small fragments or beside linear features. The vegetation is not usually managed intensively and grows mainly on brown soils or those affected by surface or groundwater. It is extremely common and has a high ground cover with a range of species such as common nettle (*Urtica dioica*), Yorkshire-fog (*Holcus lanatus*), false oat-grass (*Arrhenathrum elatius*), creeping bent (*Agrostis stolonifera*) and bramble (*Rubus fruticosus*). The class is not diverse and has characteristic species such as blood-veined dock (*Rumex sanguineus*), creeping buttercup (*Ranunculus repens*), and soft-rush *(Juncus effusus)* where it is beside streams. This class is present throughout Britain except in the far north-west of Scotland, but is most widespread in the lowlands.

## Associated features

### Soils

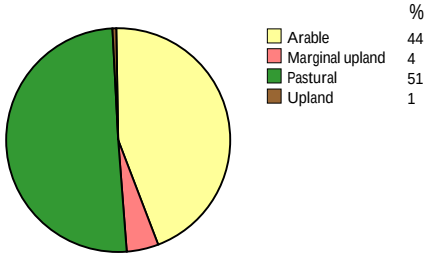



### Land cover

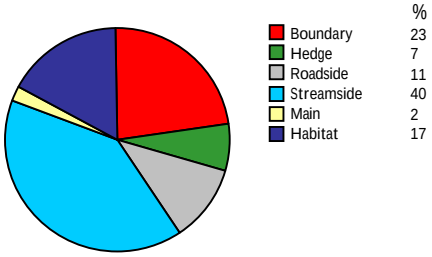



## Distribution

**Total number of plots** 515




### Landscape association



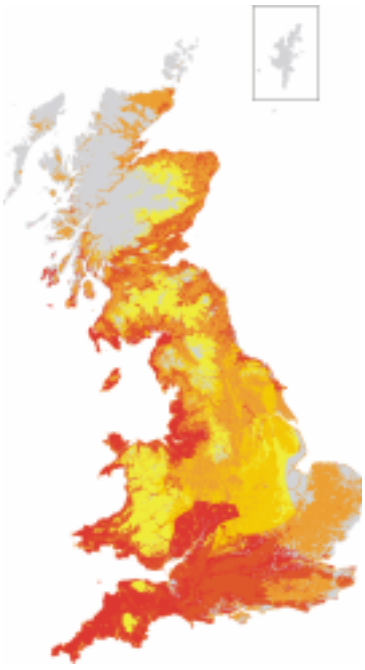

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

**Main**
Area 0.60 SE 0.23

Key units
Area 000's km$^{-2}$
Length 000's km



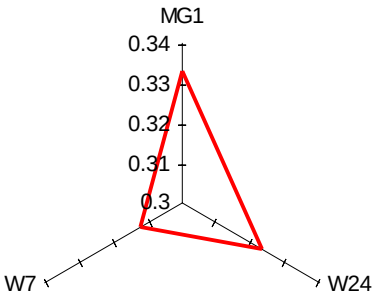
**Boundary**
Length 118.42 SE 12.13

## Floristic characteristics

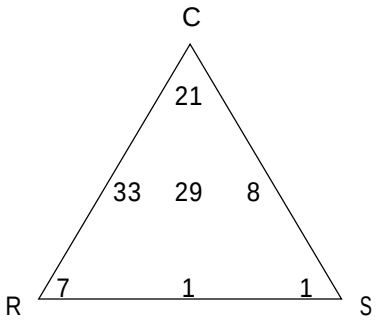
**Species number:** 335 (High) **No. of species groups:** 8 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Urtica dioica* | 82 | *Urtica dioica* | 10.5 | *Ranunculus repens* |
| *Holcus lanatus* | 70 | *Holcus lanatus* | 9.7 | *Holcus mollis* |
| *Galium aparine* | 62 | *Arrhenathrum elatius* | 9.4 | *Holcus lanatus* |
| *Dactylis glomerata* | 60 | *Agrostis stolonifera* | 9.3 | *Juncus effusus* |
| *Agrostis stolonifera* | 58 | *Dactylis glomerata* | 5.0 | *Silene dioica* |

### Similarity with National Vegetation Classification (NVC) types



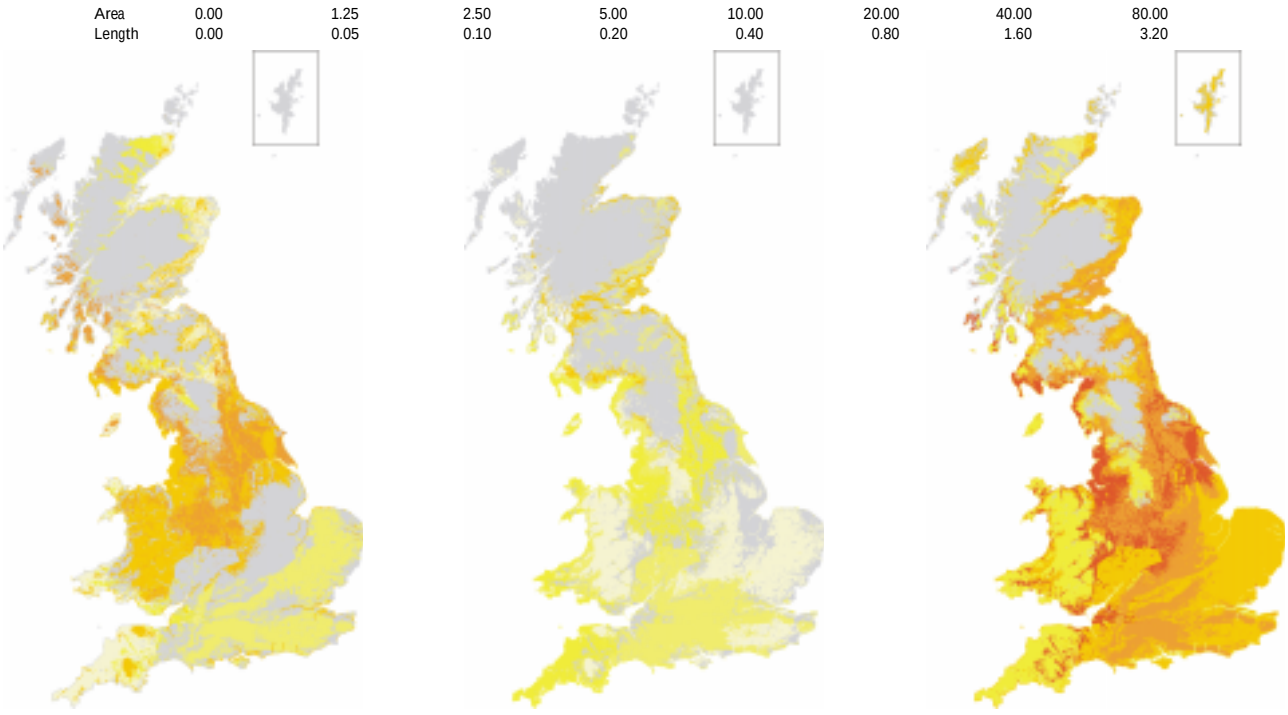

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Low | Mean 5.2 Medium | Mean 6.1 High | Mean 5.8 High | Mean 3.8 High |

## Distribution




**Hedge**
Length 22.03 SE 6.24

**Roadside**
Length 8.74 SE 1.58

**Streamside**
Length 59.98 SE 6.08

**Vegetation class 29**

**AGGREGATE CLASS III**
**FERTILE GRASSLAND**

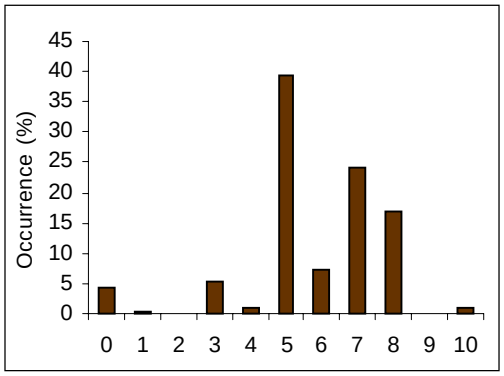
# Rye-grass grassland

## Description

This class is almost entirely restricted to fields and mainly on brown soils. It is a common class and has perennial rye-grass (*Lolium perenne*) as the main cover species, but white clover (*Trifolium repens*) and Italian rye-grass (*Lolium multiflorum*) are also often present. It is not diverse and often has some weed species, such as common chickweed (*Stellaria media*), dandelion (*Taraxacum* agg.) and creeping buttercup (*Ranunculus repens*). This class occurs throughout lowland Britain but especially in northern England and Scotland, where it is probably often involved in rotations with crops.

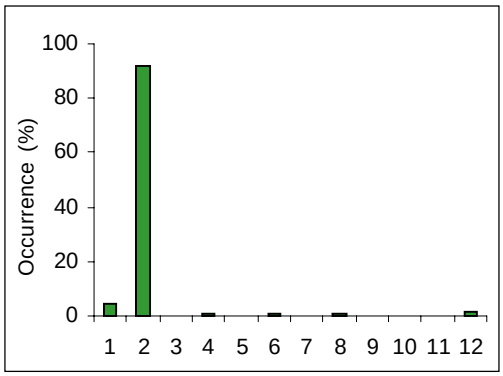
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

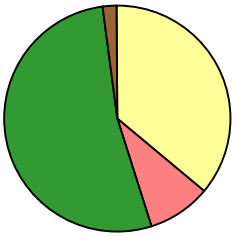
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

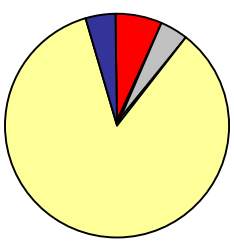
## Distribution

**Total number of plots** 205



| | % |
|---|---|
| Arable | 36 |
| Marginal upland | 9 |
| Pastural | 53 |
| Upland | 2 |

### Landscape association



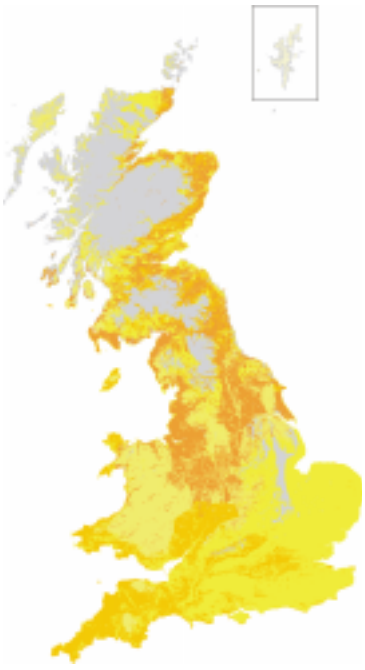
| | % |
|---|---|
| Boundary | 7 |
| Hedge | 0 |
| Roadside | 4 |
| Streamside | 0 |
| Main | 85 |
| Habitat | 4 |

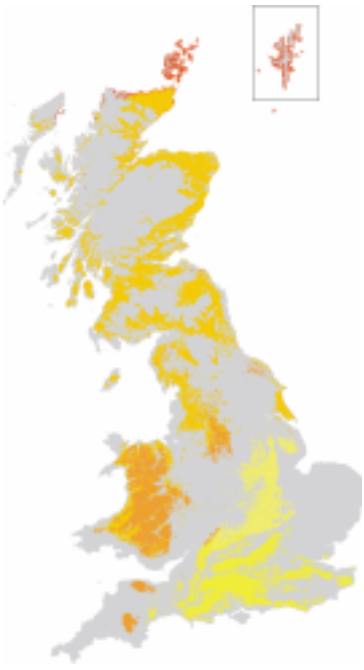
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





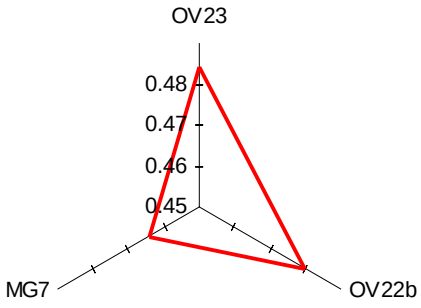
**Main**
Area 9.74 SE 1.05

**Boundary**
Length 18.57 SE 5.83

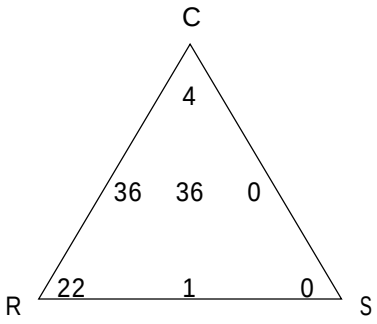
## Floristic characteristics

| **Species number:** | 99 (Low) | **No. of species groups:** | 4 (Low) | **Most frequent group:** | 12 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Lolium perenne* | 98 | *Lolium perenne* | 71.4 | *Lolium multiflorum* | |
| *Trifolium repens* | 80 | *Trifolium repens* | 9.9 | *Stellaria media* | |
| *Poa annua* | 53 | *Lolium multiflorum* | 7.9 | *Trifolium repens* | |
| *Rumex obtusifolius* | 47 | *Poa annua* | 2.3 | *Rumex obtusifolius* | |
| *Stellaria media* | 39 | *Dactylis glomerata* | 1.8 | *Rumex crispus* | |

### Similarity with National Vegetation Classification (NVC) types



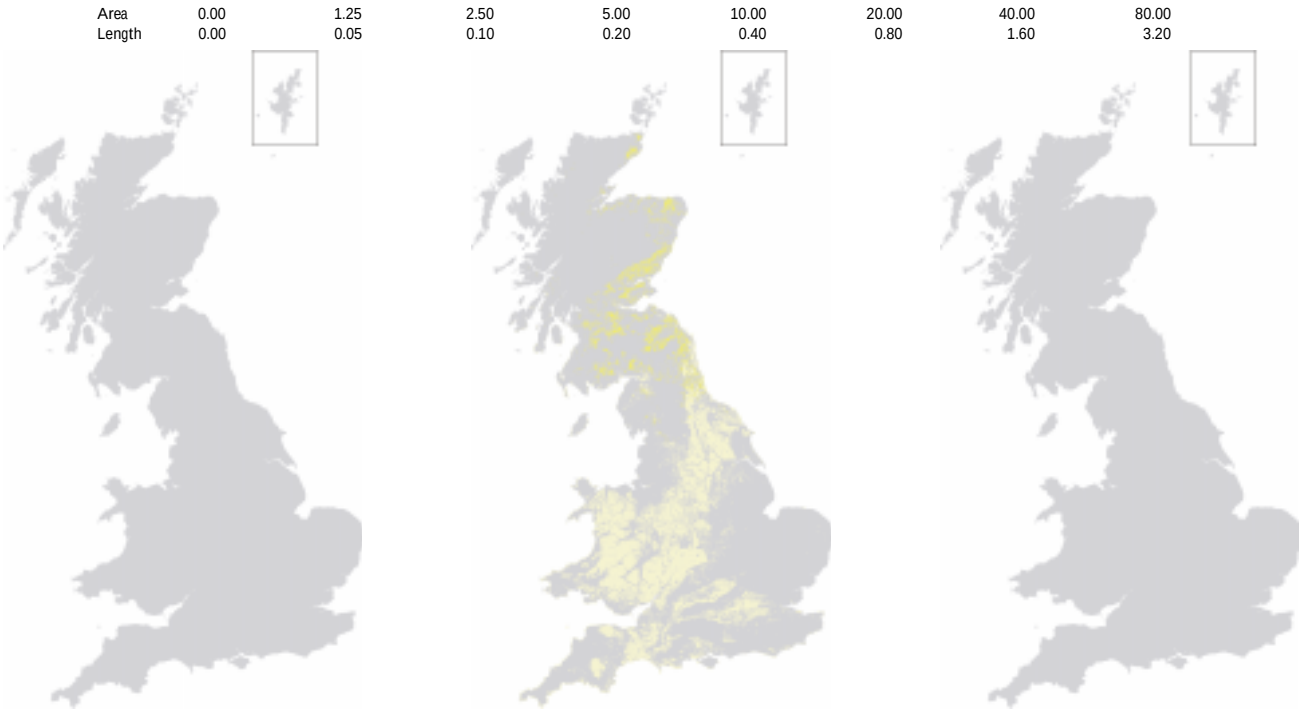

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.6 High | Mean 5.8 Low | Mean 6.3 Medium | Mean 6.1 High | Mean 3.6 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.83 SE 0.45

**Streamside**
Length 0.00 SE 0.00

**Vegetation class 30**

**AGGREGATE CLASS III**
**FERTILE GRASSLAND**

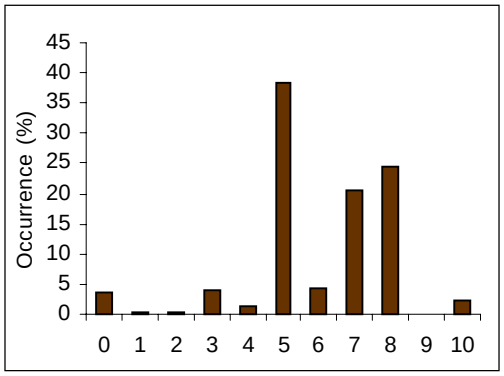
# Fertile mixed grassland

## Description

This class occurs in many parts of the landscape, but is mainly present in fields and associated boundaries. Although it occurs mainly on brown soils, it is also found in water-affected soils. It is one of the commonest classes of vegetation in Britain. Although perennial rye-grass (*Lolium perenne*) is the major cover species, other species such as creeping bent (*Agrostis stolonifera*), Yorkshire-fog (*Holcus lanatus*) and cock's-foot (*Dactylis glomerata*) may also be present. The class is not diverse and has characteristic species such as white clover (*Trifolium repens*), floating sweet-grass (*Glyceria fluitans*) and even some wetland species by streams such as brooklime (*Veronica beccabunga*). This class occurs throughout Britain, except for the high mountains and north-west Scotland.

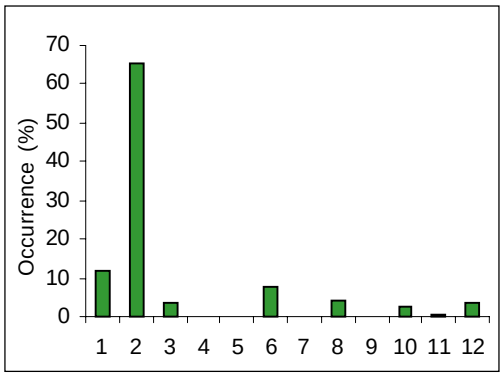
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

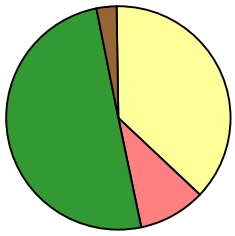
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

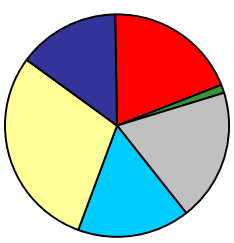
## Distribution

**Total number of plots** 807



| | % |
|---|---|
| Arable | 37 |
| Marginal upland | 9 |
| Pastural | 51 |
| Upland | 3 |

### Landscape association



| | % |
|---|---|
| Boundary | 20 |
| Hedge | 1 |
| Roadside | 19 |
| Streamside | 16 |
| Main | 30 |
| Habitat | 15 |

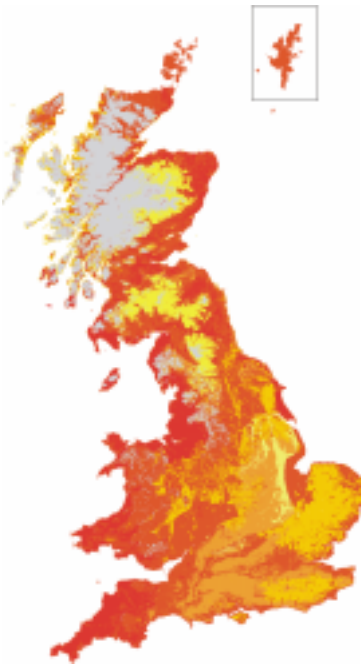
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 14.57 SE 1.22



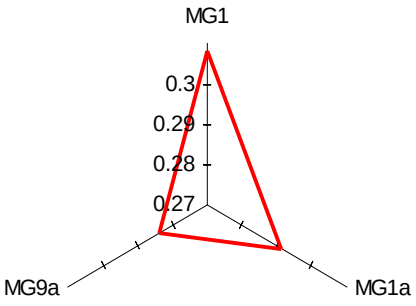
**Boundary**
Length 164.12 SE 16.17

## Floristic characteristics

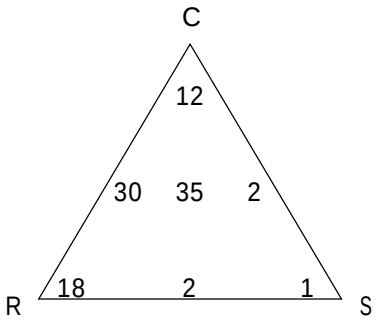
**Species number:** 391 (High) **No. of species groups:** 7 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Lolium perenne* | 82 | *Lolium perenne* | 28.4 | *Holcus lanatus* |
| *Agrostis stolonifera* | 71 | *Agrostis stolonifera* | 11.3 | *Cirsium arvense* |
| *Holcus lanatus* | 69 | *Holcus lanatus* | 9.2 | *Apium nodiflorum* |
| *Ranunculus repens* | 64 | *Dactylis glomerata* | 5.3 | *Glyceria fluitans* |
| *Dactylis glomerata* | 59 | *Trifolium repens* | 3.8 | *Veronica beccabunga* |

### Similarity with National Vegetation Classification (NVC) types



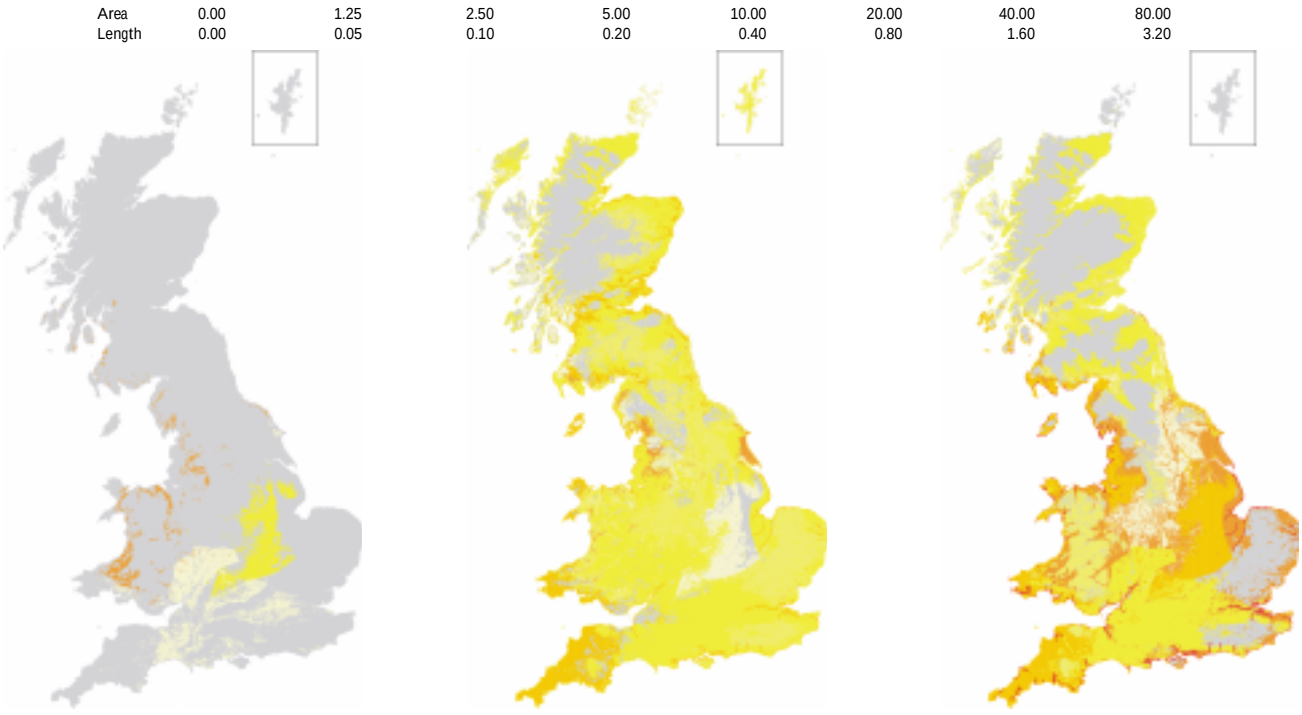

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 5.6 Low | Mean 6.1 High | Mean 5.7 High | Mean 3.7 High |

## Distribution




**Hedge**
Length 3.47 SE 2.36

**Roadside**
Length 23.23 SE 2.66

**Streamside**
Length 31.91 SE 4.48

**Vegetation class 31**

**AGGREGATE CLASS III**
**FERTILE GRASSLAND**

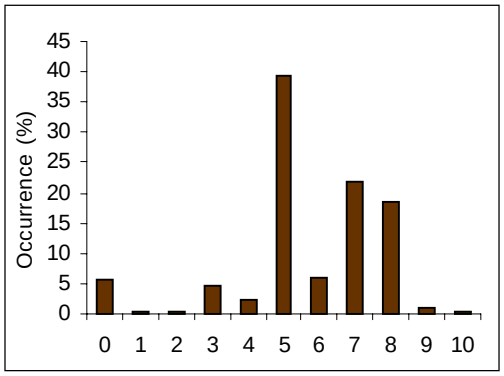
# Rye-grass/ clover grassland

## Description

This class is present mainly in fields and on roadsides and occasionally elsewhere. It is very common and has on average over 75% cover of perennial rye-grass (*Lolium perenne*) with some white clover (*Trifolium repens*). It is not diverse, being fertile grassland with species such as creeping buttercup (*Ranunculus repens*), daisy (*Bellis perennis*) and thyme leaved speedwell (*Veronica serpyllifolium*). This class occurs throughout Britain, but especially in the north and west and in coastal areas.

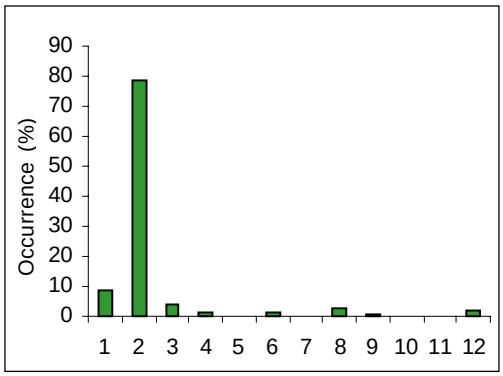
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

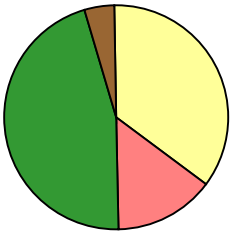
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

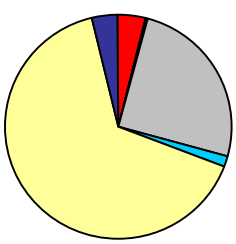
## Distribution

**Total number of plots** 354



| | % |
|---|---|
| Arable | 35 |
| Marginal upland | 14 |
| Pastural | 46 |
| Upland | 5 |

### Landscape association

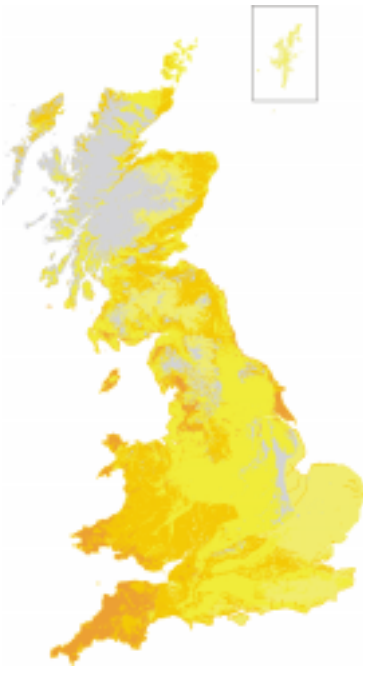


| | % |
|---|---|
| Boundary | 4 |
| Hedge | 1 |
| Roadside | 25 |
| Streamside | 1 |
| Main | 66 |
| Habitat | 4 |

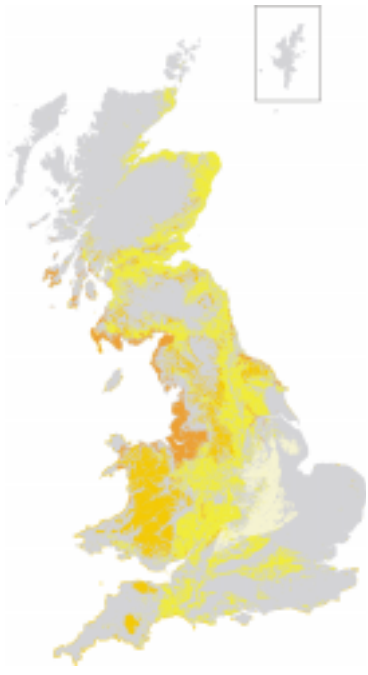
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 8.82 SE 0.94

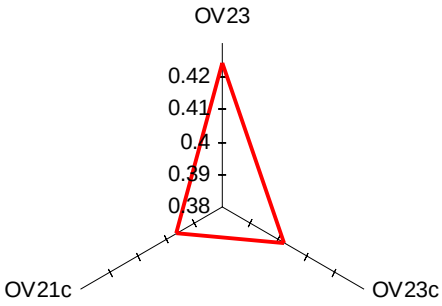
**Boundary**
Length 15.11 SE 4.40

## Floristic characteristics

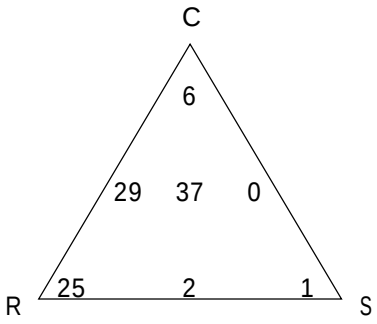
**Species number:** 199 (Medium) **No. of species groups:** 6 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Lolium perenne* | 95 | *Lolium perenne* | 77.3 | *Bellis perennis* |
| *Trifolium repens* | 88 | *Trifolium repens* | 13.2 | *Veronica serpyllifolia* |
| *Poa annua* | 63 | *Poa annua* | 6.9 | *Trifolium repens* |
| *Ranunculus repens* | 63 | *Dactylis glomerata* | 6.1 | *Cerastium glomeratum* |
| *Dactylis glomerata* | 55 | *Agrostis stolonifera* | 5.1 | *Cerastium fontanum* |

### Similarity with National Vegetation Classification (NVC) types



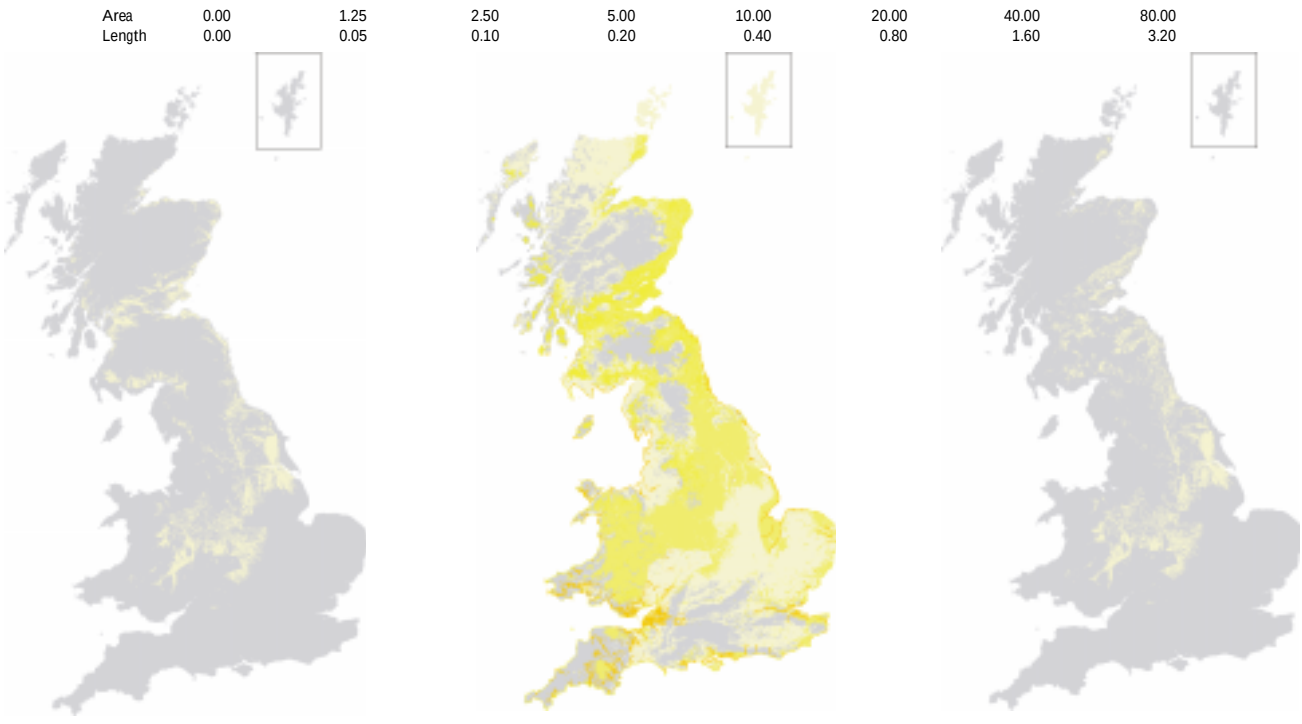

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.1 High | Mean 5.2 Low | Mean 6.0 Medium | Mean 5.5 Medium | Mean 3.7 High |

## Distribution




**Hedge**
Length 0.23 SE 0.19

**Roadside**
Length 8.96 SE 1.81

**Streamside**
Length 0.39 SE 0.28

**Vegetation class 32**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

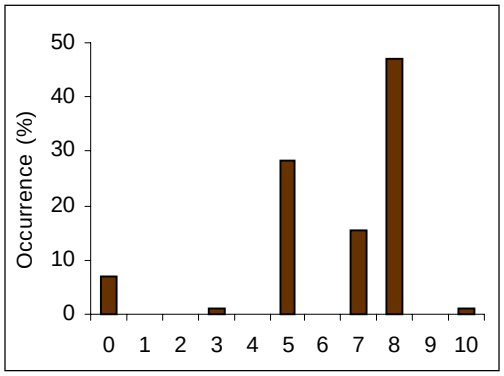
# Gravel reedbeds by streamsides

## Description

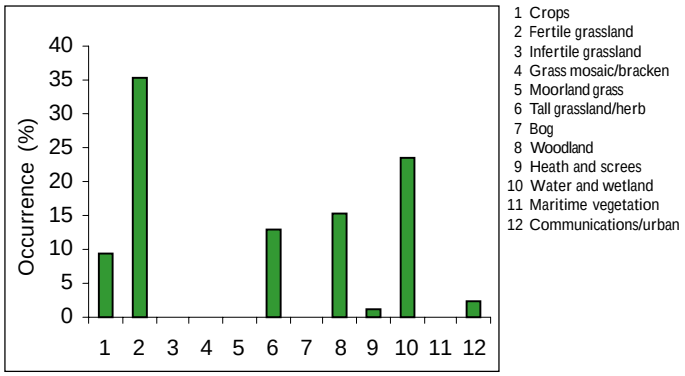
This class occurs almost exclusively by streamsides or in small wet patches, mainly on groundwater gley soils or surface-water gley soils, but may also occur on brown soils. It is quite common and has canary-grass (*Phalaris arundinacea*) as the main cover species, with soft-rush (*Juncus effusus*) and common nettles (*Urtica dioica*) often also forming cover. It is not a diverse class and has characteristic species such as brooklime (*Veronica beccabunga*), marsh-bedstraw (*Galium palustre*) and water mint (*Mentha aquatica*). This class is virtually restricted to lowland Britain but it can occasionally occur in river valleys at higher altitudes.

## Associated features

### Soils

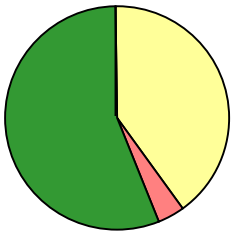



### Land cover



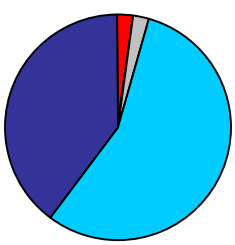

## Distribution

**Total number of plots** 85



| | % |
|---|---|
| Arable | 40 |
| Marginal upland | 4 |
| Pastural | 56 |
| Upland | 0 |

### Landscape association



| | % |
|---|---|
| Boundary | 2 |
| Hedge | 0 |
| Roadside | 2 |
| Streamside | 55 |
| Main | 0 |
| Habitat | 40 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.00 SE 0.00

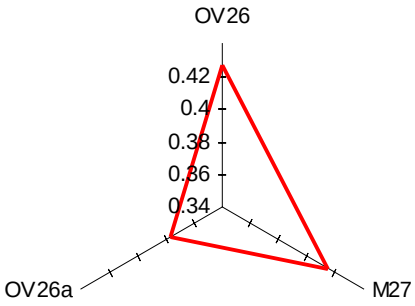
**Boundary**
Length 1.37 SE 1.14

## Floristic characteristics

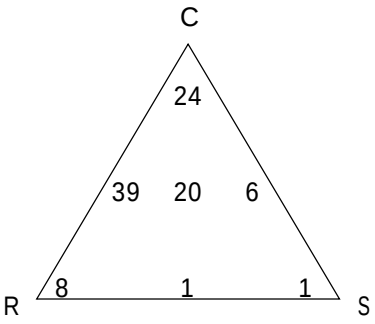
**Species number:** 201 (High) **No. of species groups:** 8 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Agrostis stolonifera* | 69 | *Phalaris arundinacea* | 17.3 | *Phalaris arundinacea* |
| *Urtica dioica* | 67 | *Agrostis stolonifera* | 10.3 | *Urtica dioica* |
| *Phalaris arundinacea* | 59 | *Urtica dioica* | 7.0 | *Rumex obtusifolius* |
| *Ranunculus repens* | 51 | *Juncus effusus* | 6.3 | *Glyceria fluitans* |
| *Juncus effusus* | 48 | *Holcus lanatus* | 4.3 | *Juncus effusus* |

### Similarity with National Vegetation Classification (NVC) types



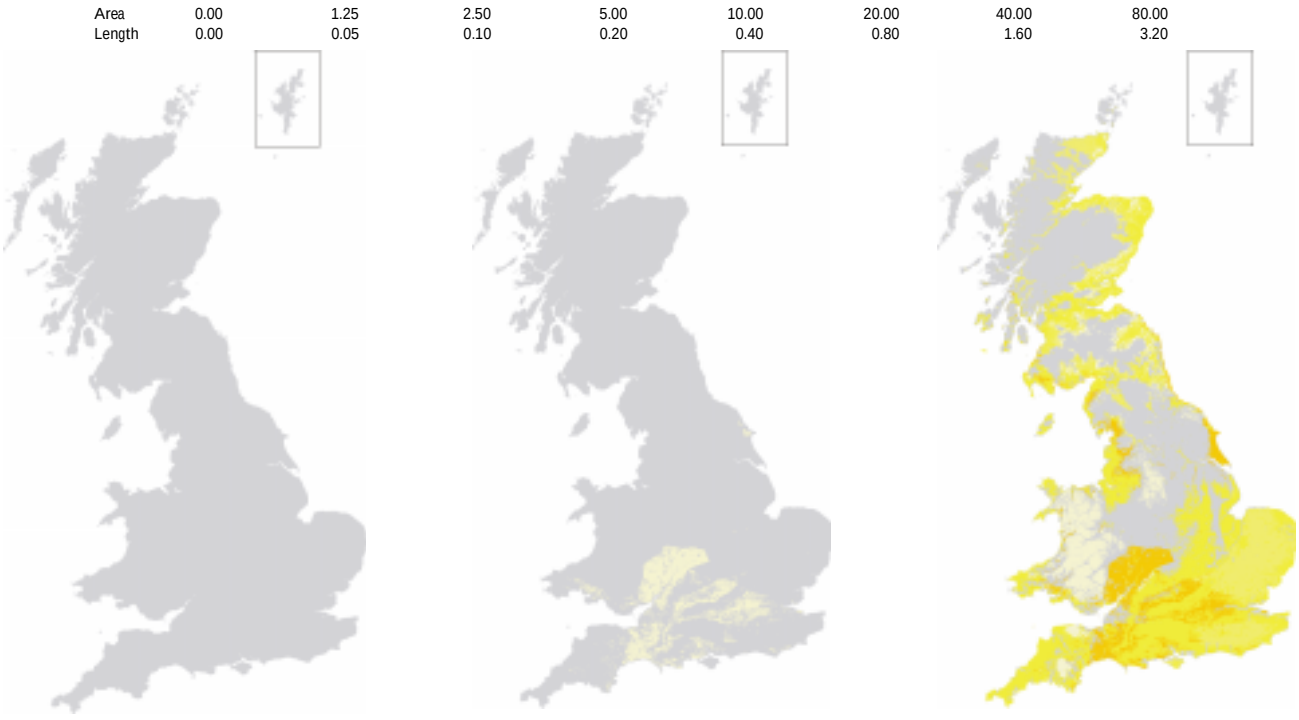

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 7.1 High | Mean 6.2 High | Mean 5.8 High | Mean 3.6 High |

## Distribution




**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length 0.51 SE 0.37

**Streamside**
Length 15.39 SE 3.39

**Vegetation class 33**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

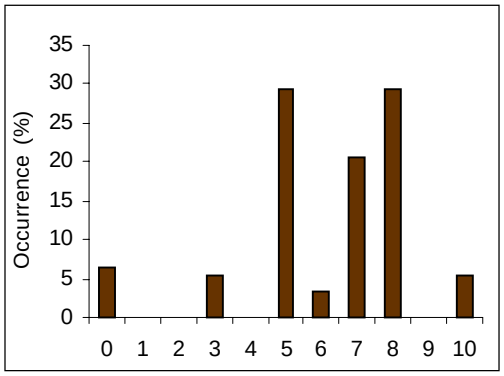
# Wet neutral grassland

## Description

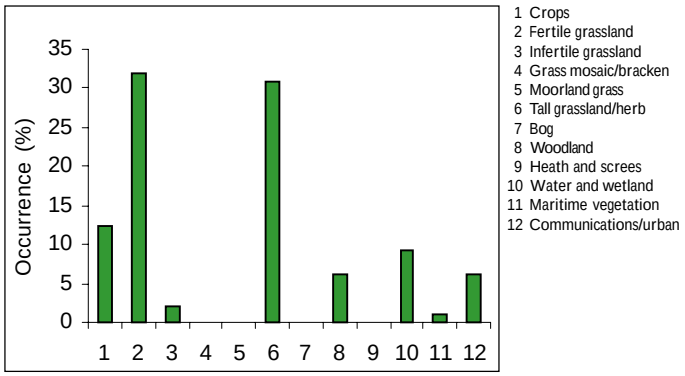
This class occurs mainly along streamsides but may also be found in wet patches in field corners or, rarely, by linear features. It is quite common, often with a range of cover species such as false oat-grass (*Arrhenathrum elatius*), Yorkshire-fog (*Holcus lanatus*), and meadowsweet (*Filipendula ulmaria*). It is quite diverse, and has species from a range of conditions such as meadow vetchling (*Lathyrus pratensis*), common knapweed (*Centaurea nigra*) and wild angelica (*Angelica sylvestris*). Although this class is widely distributed in lowland Britain, it also extends to the marginal uplands and is most common in the north.

## Associated features

### Soils

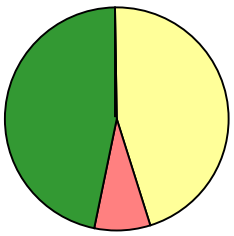



### Land cover



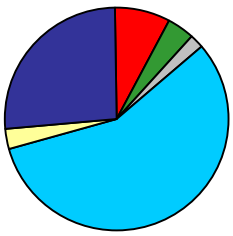

## Distribution

**Total number of plots** 98



| | % |
|---|---|
| Arable | 45 |
| Marginal upland | 8 |
| Pastural | 47 |
| Upland | 0 |

### Landscape association



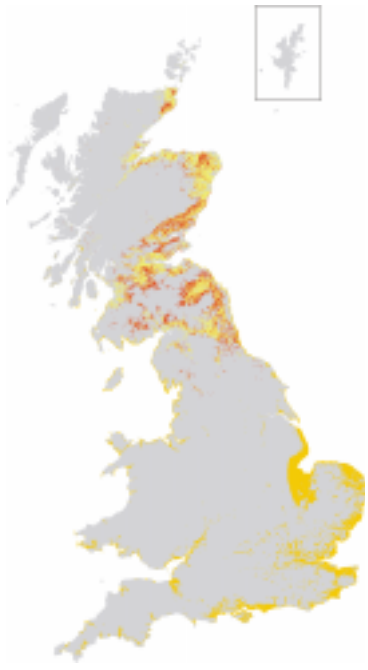
| | % |
|---|---|
| Boundary | 8 |
| Hedge | 4 |
| Roadside | 2 |
| Streamside | 56 |
| Main | 3 |
| Habitat | 27 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



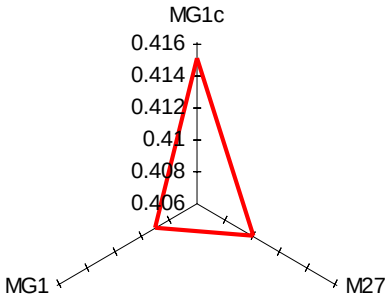
**Main**
Area 0.14 SE 0.09

**Boundary**
Length 8.26 SE 3.99

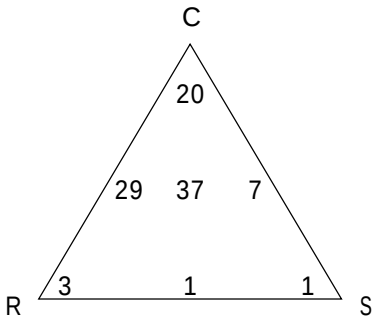
## Floristic characteristics

| **Species number:** | 218 (High) | **No. of species groups:** | 11 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Holcus lanatus* | 71 | *Arrhenathrum elatius* | 11.2 | *Galium aparine* | |
| *Arrhenathrum elatius* | 70 | *Holcus lanatus* | 7.7 | *Filipendula ulmaria* | |
| *Urtica dioica* | 67 | *Filipendula ulmaria* | 7.0 | *Arrhenathrum elatius* | |
| *Dactylis glomerata* | 59 | *Urtica dioica* | 6.3 | *Urtica dioica* | |
| *Galium aparine* | 58 | *Agrostis stolonifera* | 6.1 | *Equisetum arvense* | |

### Similarity with National Vegetation Classification (NVC) types



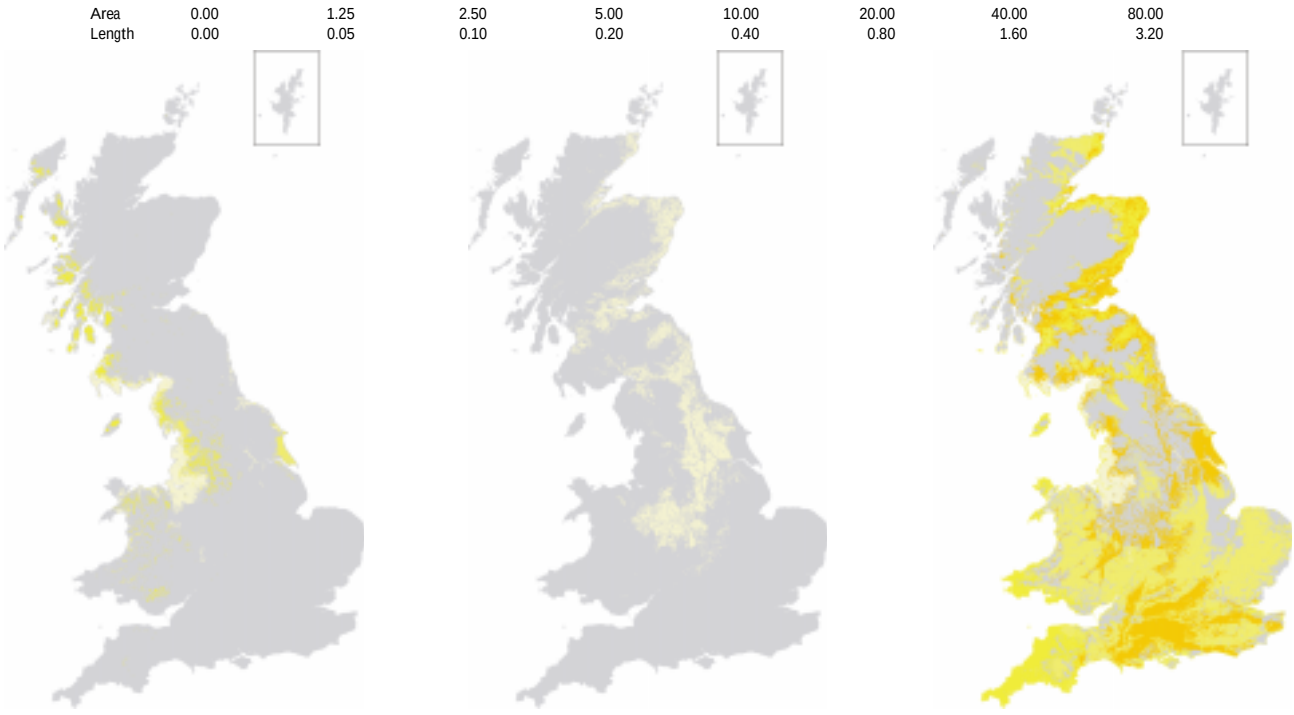

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.7 Medium | Mean 6.1 Medium | Mean 6.1 Medium | Mean 5.6 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length 1.14 SE 0.87

**Roadside**
Length 0.20 SE 0.14

**Streamside**
Length 17.29 SE 3.46

**Vegetation class 34**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

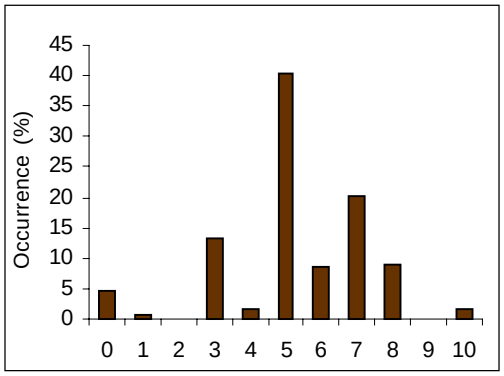
# Mixed grassland/ scrub/hedges

## Description

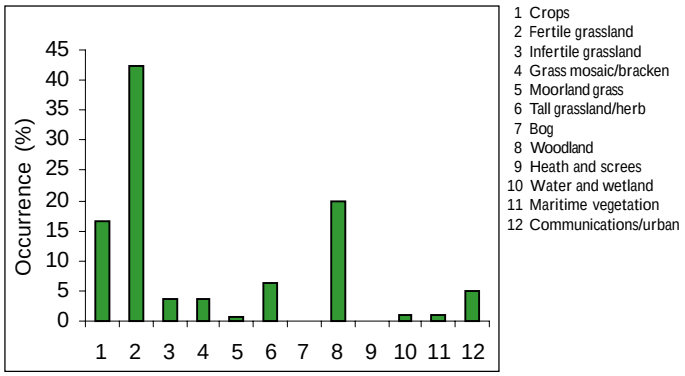
This class occurs in a variety of situations but mainly by linear features; it is therefore developed from several starting points on mainly brown soils. The vegetation usually contains some woody species, mainly hawthorn (*Crataegus monogyna*), and may be managed as a hedgerow. The ground cover is variable, including cock's-foot (*Dactylis glomerata*), false oat-grass (*Arrhenathrum elatius*), red fescue (*Festuca rubra*), bramble (*Rubus fruticosus*) and common bent (*Agrostis capillaris*). The species composition is diverse with characteristic species such as hogweed (*Heracleum sphondylium*), bracken *(Pteridium aquilinum),* common dog-violet (*Viola riviniana*) and foxglove (*Digitalis purpurea*). This class occurs widely in the lowlands but is especially common in south-west England and west Wales. It also extends into the marginal uplands.

## Associated features

### Soils

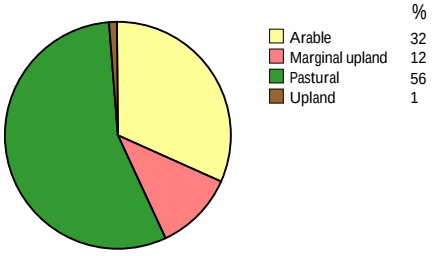



### Land cover

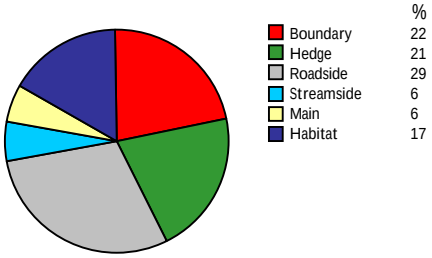



## Distribution

**Total number of plots** 190




### Landscape association

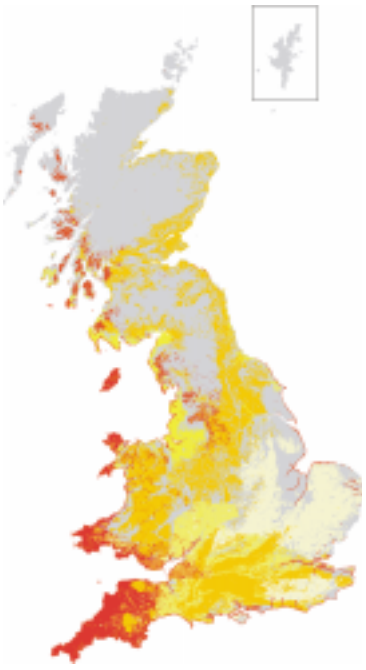



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



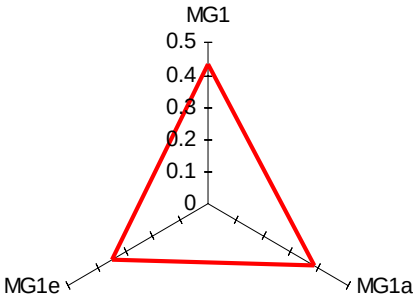
**Main**
Area 0.21 SE 0.12

**Boundary**
Length 40.62 SE 8.51

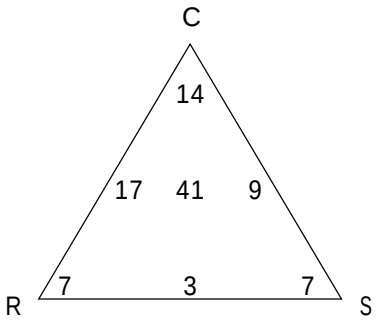
## Floristic characteristics

| **Species number:** | 304 (High) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Dactylis glomerata* | 84 | *Crataegus monogyna* | 10.6 | *Crataegus monogyna* | |
| *Arrhenathrum elatius* | 69 | *Dactylis glomerata* | 10.2 | *Arrhenathrum elatius* | |
| *Holcus lanatus* | 64 | *Arrhenathrum elatius* | 10.1 | *Pteridium aquilinum* | |
| *Festuca rubra* | 61 | *Agrostis capillaris* | 7.7 | *Galium aparine* | |
| *Agrostis stolonifera* | 52 | *Holcus lanatus* | 7.6 | *Heracleum sphondylium* | |

### Similarity with National Vegetation Classification (NVC) types



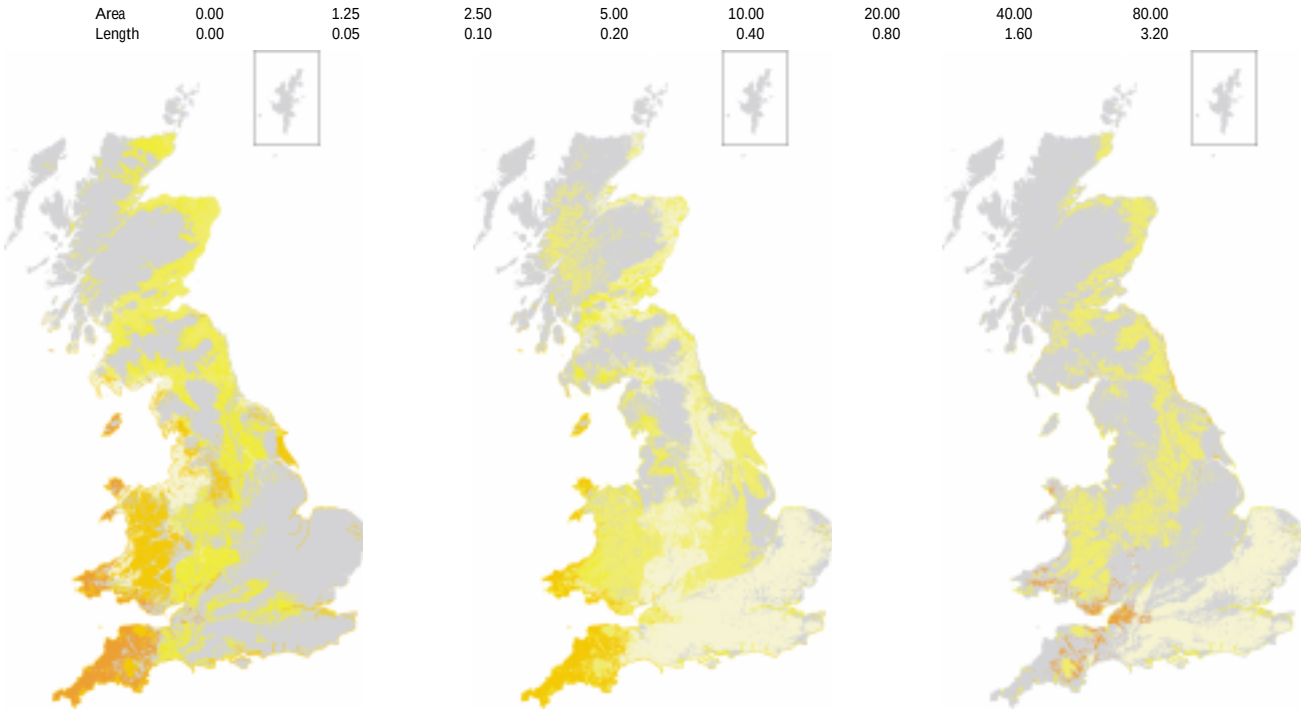

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.6 Low | Mean 5.5 Low | Mean 6.0 Medium | Mean 5.7 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length 17.30 SE 4.56

**Roadside**
Length 8.48 SE 1.67

**Streamside**
Length 4.92 SE 1.99

**Vegetation class 35**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

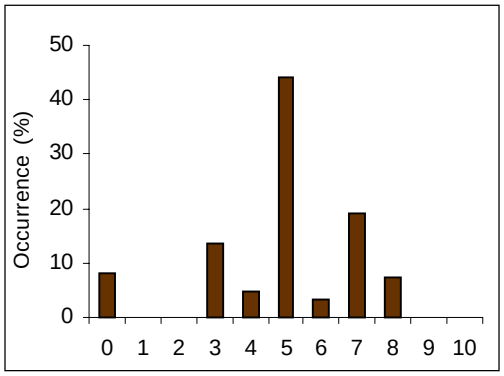
# Diverse base-rich woodland/ hedges

## Description

This class is present mainly within woods but also includes some hedges with woodland species such as hazel (*Corylus avellana*), blackthorn (*Prunus spinosa*) and holly (*Ilex aquifolium*). It may occur by other linear features and is usually on brown soils. It is quite common and has ivy (*Hedera helix*) as the main cover species, followed by bramble (*Rubus fruticosus*). The class is diverse, with a wide range of species from different situations reflecting the complexity of ground conditions, such as honeysuckle (*Lonicera periclymenum*), dog's mercury (*Mercurialis perennis*) and bluebells (*Hyacinthoides non-scripta*). This class mainly occurs in the lowlands of southern Britain, especially in the West Country, but it extends to the marginal uplands and to some northern lowlands.

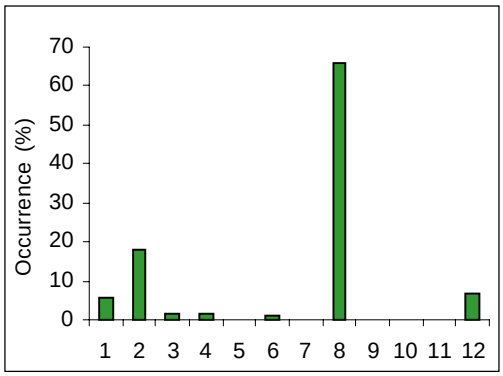
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomoprhic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

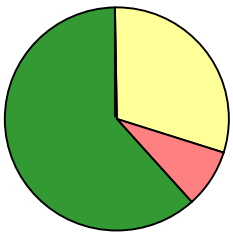
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

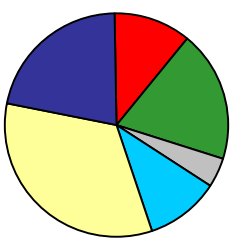
## Distribution

**Total number of plots** 123



| | % |
|---|---|
| Arable | 30 |
| Marginal upland | 8 |
| Pastural | 62 |
| Upland | 0 |

### Landscape association

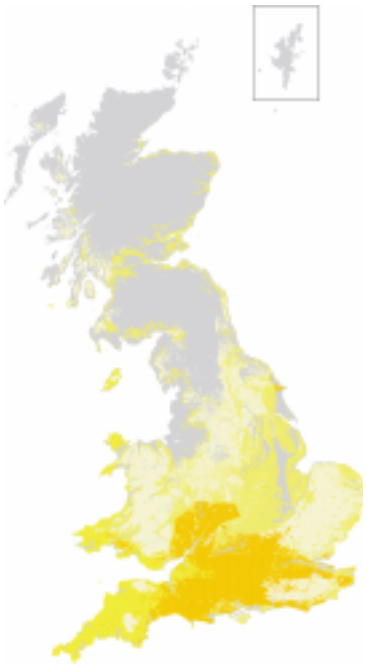


| | % |
|---|---|
| Boundary | 11 |
| Hedge | 19 |
| Roadside | 4 |
| Streamside | 11 |
| Main | 33 |
| Habitat | 22 |

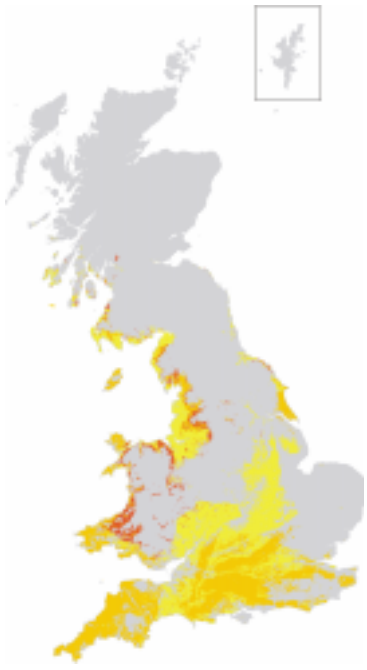
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km



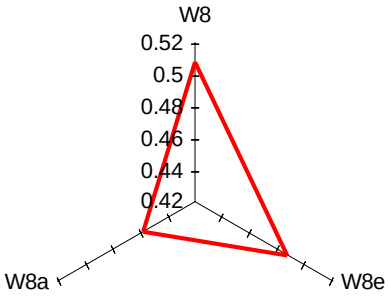
**Main**
Area 3.10 SE 0.64

**Boundary**
Length 13.80 SE 3.93

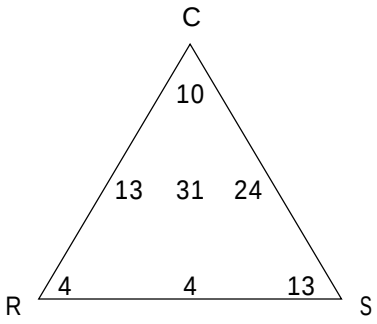
## Floristic characteristics

| **Species number:** | 240 (High) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 14 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Hedera helix* | 65 | *Hedera helix* | 13.3 | *Primula vulgaris* | |
| *Crataegus monogyna* | 63 | *Corylus avellana* | 12.9 | *Deschampsia cespitosa* | |
| *Fraxinus excelsior* | 58 | *Fraxinus excelsior* | 7.4 | *Lonicera periclymenum* | |
| *Corylus avellana* | 47 | *Crataegus monogyna* | 6.6 | *Circaea lutetiana* | |
| *Geranium robertianum* | 44 | *Mercurialis perennis* | 5.0 | *Geranium robertianum* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.6 Low | Mean 5.3 Low | Mean 6.0 Medium | Mean 5.4 Medium | Mean 3.2 Medium |

## Distribution


**Hedge**
Length 24.38 SE 6.07

**Roadside**
Length 1.14 SE 0.59

**Streamside**
Length 4.70 SE 1.70

**Vegetation class 36**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

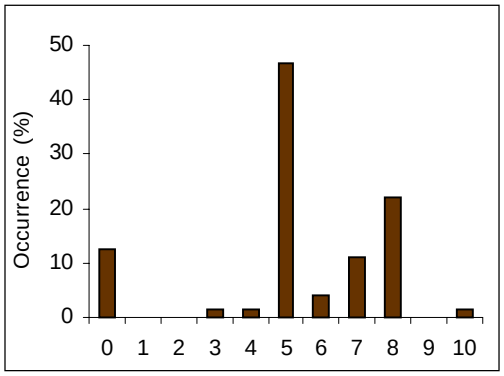
# Shaded moist streamsides

## Description

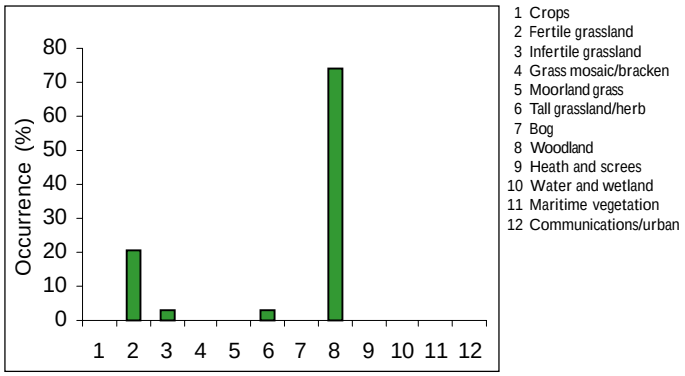
This class occurs mainly by streamsides with high humidities, or in small woodland patches with alder (*Alnus glutinosa*) and other broad leaves as canopy. It is fairly common and usually has bare ground or a high cover of ivy (*Hedera helix*), bramble (*Rubus fruiticosus*) and male-fern (*Dryopteris filix-mas*). The class is quite diverse, especially in mosses and liverworts, and also has characteristic species such as herb robert (*Geranium robertianum*), opposite-leaved golden-saxifrage (*Chrysosplenium oppositifolium*) and hart's-tongue (*Phyllitis scolopendrium*). This class is present mainly in south-west England but occasionally elsewhere in the lowlands and marginal uplands.

## Associated features

### Soils

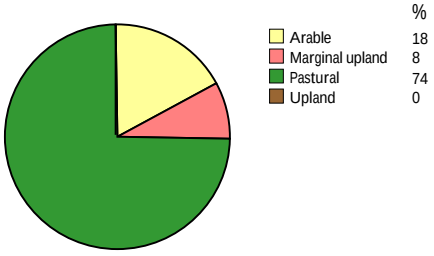



### Land cover

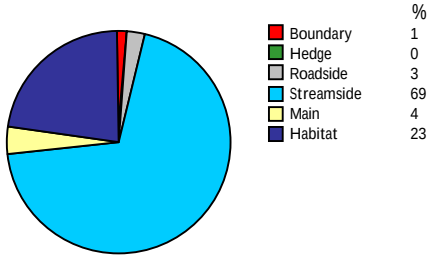



## Distribution

**Total number of plots** 74




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

**Main**
Area 0.18 SE 0.13

Key units
Area 000's km$^{-2}$
Length 000's km

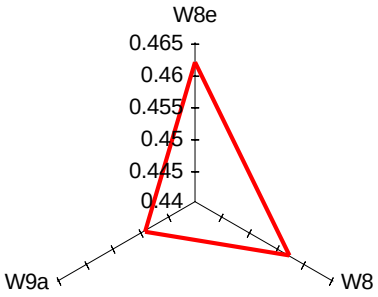
**Boundary**
Length 1.36 SE 1.36

## Floristic characteristics

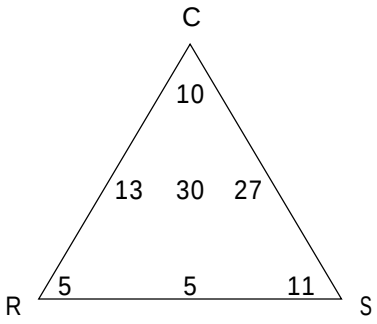
**Species number:** 140 (Medium) **No. of species groups:** 7 (Medium) **Most frequent group:** 14

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Hedera helix* | 72 | *Hedera helix* | 13.9 | *Asplenium scolopendrium* |
| *Urtica dioica* | 65 | *Alnus glutinosa* | 8.3 | *Geranium robertianum* |
| *Silene dioica* | 41 | *Corylus avellana* | 7.5 | *Chrysosplenium oppositijolium* |
| *Geranium robertianum* | 38 | *Acer pseudoplatanus* | 7.1 | *Veronica montana* |
| *Mnium hornum* | 38 | *Fraxinus excelsior* | 6.8 | *Silene dioica* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.1 Low | Mean 5.9 Medium | Mean 5.9 Medium | Mean 5.9 High | Mean 3.1 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.65 SE 0.65

**Streamside**
Length 17.18 SE 3.66

**Vegetation class 37**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

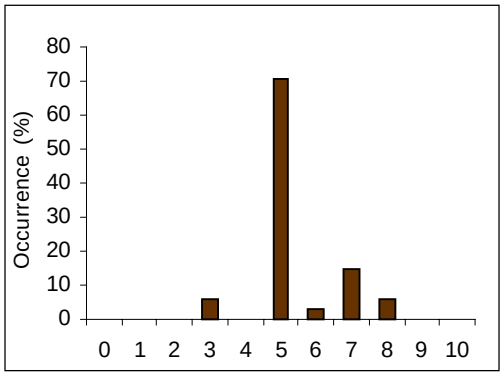
# Neutral grassland/ scrub

## Description

This class occurs most often on roadsides but may also be found in other linear features and open vegetation, almost exclusively on brown soils. It is uncommon and has Yorkshire-fog (*Holcus lanatus*) as the most frequent species, with other grasses such as cock's-foot (*Dactylis glomerata*), false oat-grass (*Arrhenathrum elatius*) and perennial rye-gross (*Lolium perenne*) also common. The class is diverse, reflecting variability in ground and management status, with species such as ribwort plantain (*Plantago lanceolata*), bramble (*Rubus fruticosus*) and lesser stichwort (*Stellaria graminea*). It is distributed mainly in the West Country, but also in coastal areas and occasionally elsewhere in the lowlands.

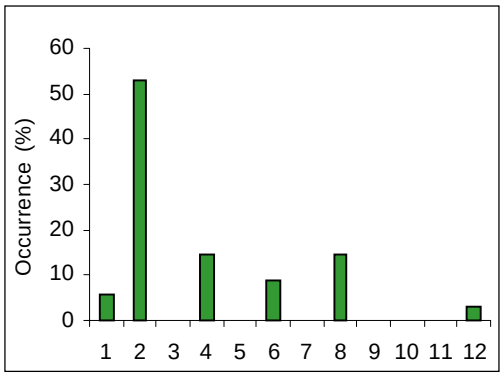
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomoprhic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

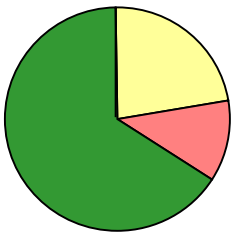
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

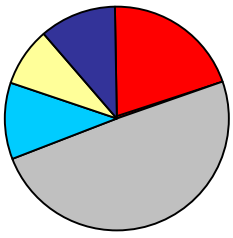
## Distribution

**Total number of plots** 35



| | % |
|---|---|
| Arable | 23 |
| Marginal upland | 11 |
| Pastural | 66 |
| Upland | 0 |

### Landscape association



| | % |
|---|---|
| Boundary | 20 |
| Hedge | 0 |
| Roadside | 49 |
| Streamside | 11 |
| Main | 9 |
| Habitat | 11 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.00 SE 0.00

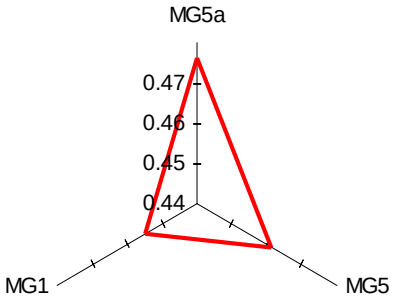
**Boundary**
Length 9.65 SE 3.88

## Floristic characteristics

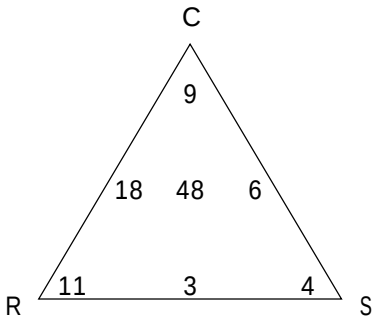
**Species number:** 179 (Medium) **No. of species groups:** 13 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Holcus lanatus* | 90 | *Hedera helix* | 13.9 | *Stellaria graminea* |
| *Arrhenathrum elatius* | 86 | *Alnus glutinosa* | 8.3 | *Arrhenathrum elatius* |
| *Agrostis stolonifera* | 83 | *Corylus avellana* | 7.5 | *Potentilla reptans* |
| *Dactylis glomerata* | 83 | *Acer pseudoplatanus* | 7.1 | *Heracleum sphondylium* |
| *Trifolium repens* | 79 | *Fraxinus excelsior* | 6.8 | *Plantago major* |

### Similarity with National Vegetation Classification (NVC) types



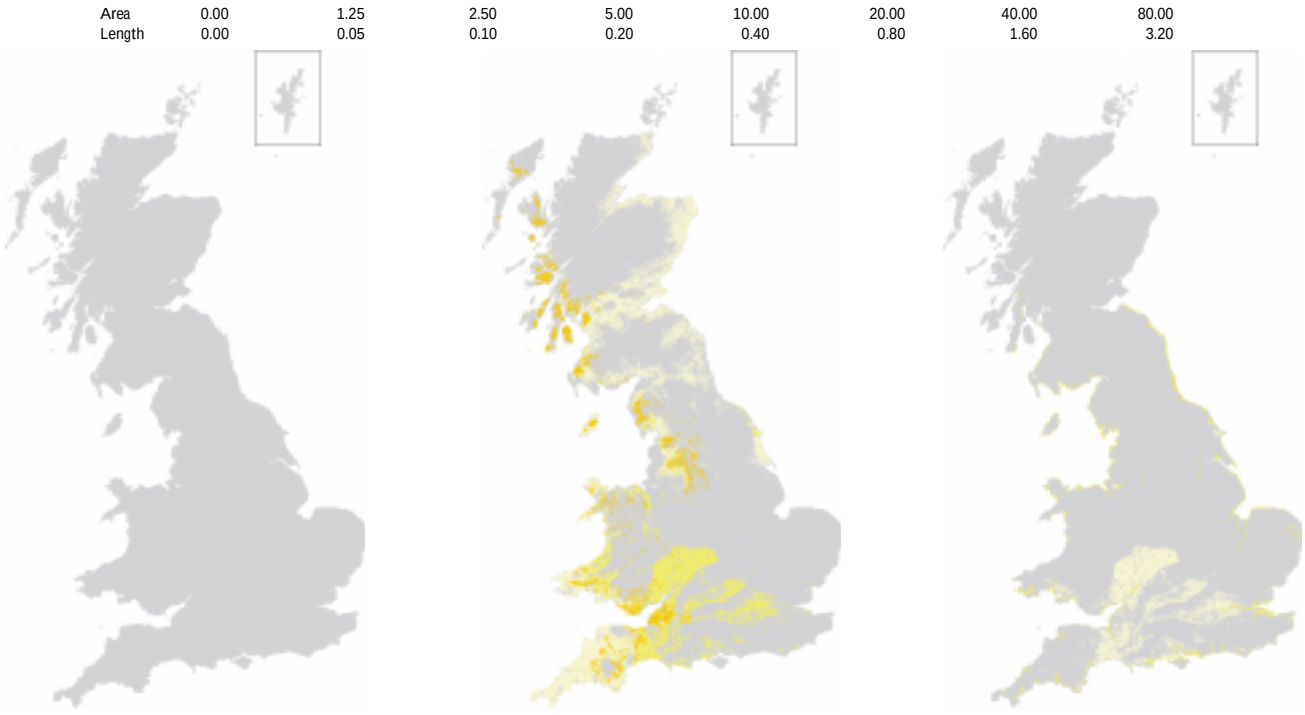

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.4 Low | Mean 5.9 Medium | Mean 5.2 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 4.31 SE 1.95

**Streamside**
Length 0.53 SE 0.36

**Vegetation class 38**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

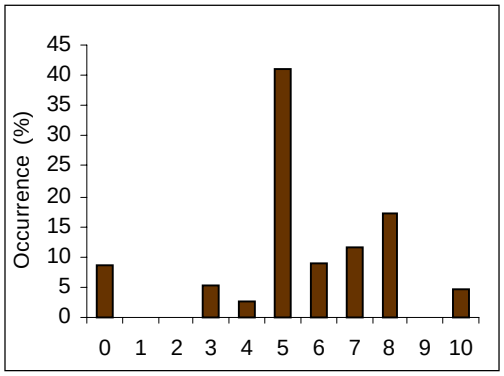
# Fertile/ neutral grassland on roadsides

## Description

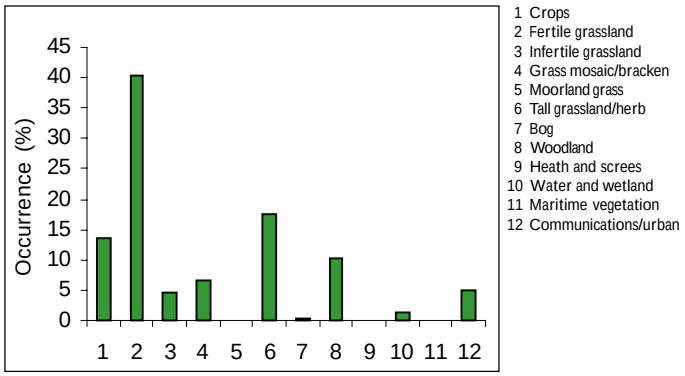
This class mainly occurs on roadsides, but may also be by other linear features or in open vegetation; it is mainly on brown soils. It is common and the cover is mainly of grass species, principally red fescue (*Festuca rubra*), cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*) and, to a lesser extent, false oat-grass (*Arrhenathrum elatius*). It is of average diversity, often with internal variability away from the road, and contains characteristic species such as common mouse-ear (*Cerastium fontanum*), cow parsley (*Anthriscus sylvestris)* and common ragwort (*Senecio jacobea*). This class occurs throughout Britain, except the highest mountain areas, but is most common in the lowlands of the north and west.

## Associated features

### Soils

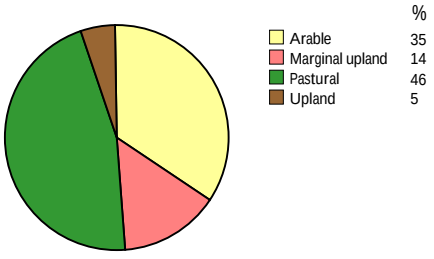



### Land cover

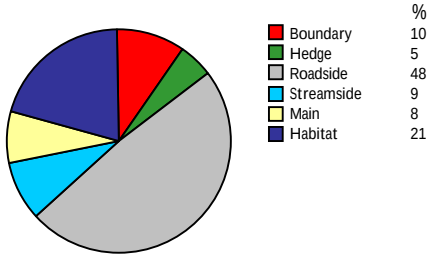



## Distribution

**Total number of plots** 220




### Landscape association

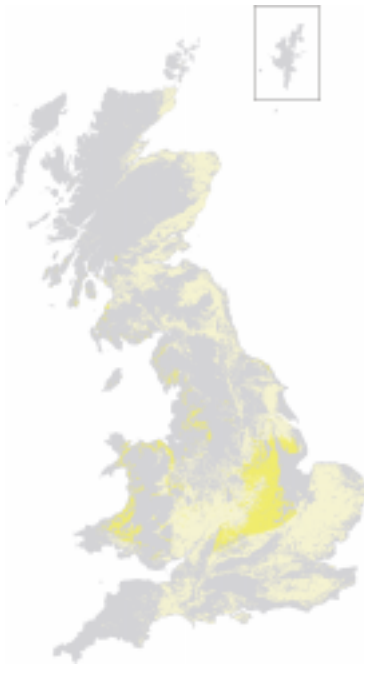


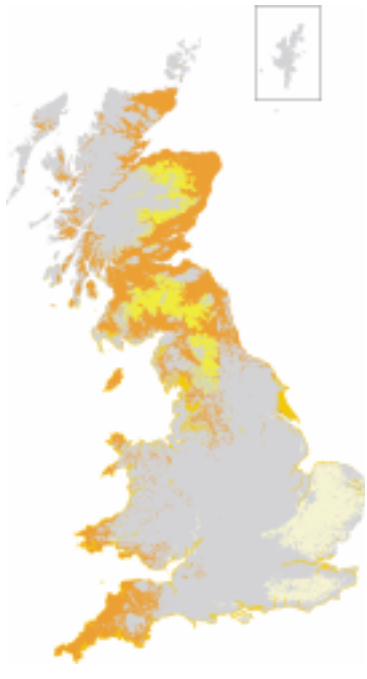

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





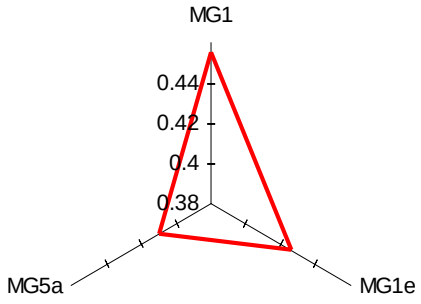
**Main**
Area 0.56 SE 0.20

**Boundary**
Length 25.82 SE 6.41

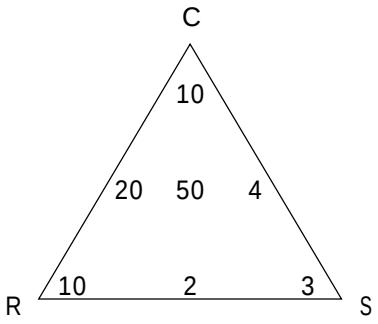
## Floristic characteristics

| **Species number:** | 263 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Dactylis glomerata* | 93 | *Dactylis glomerata* | 14.2 | *Heracleum sphondylium* | |
| *Festuca rubra* | 84 | *Festuca rubra* | 13.8 | *Arrhenathrum elatius* | |
| *Holcus lanatus* | 81 | *Holcus lanatus* | 11.1 | *Lathyrus pratensis* | |
| *Plantago lanceolata* | 70 | *Agrostis capillaris* | 7.6 | *Anthriscus sylvestris* | |
| *Heracleum sphondylium* | 65 | *Lolium perenne* | 7.5 | *Centaurea nigra* | |

### Similarity with National Vegetation Classification (NVC) types



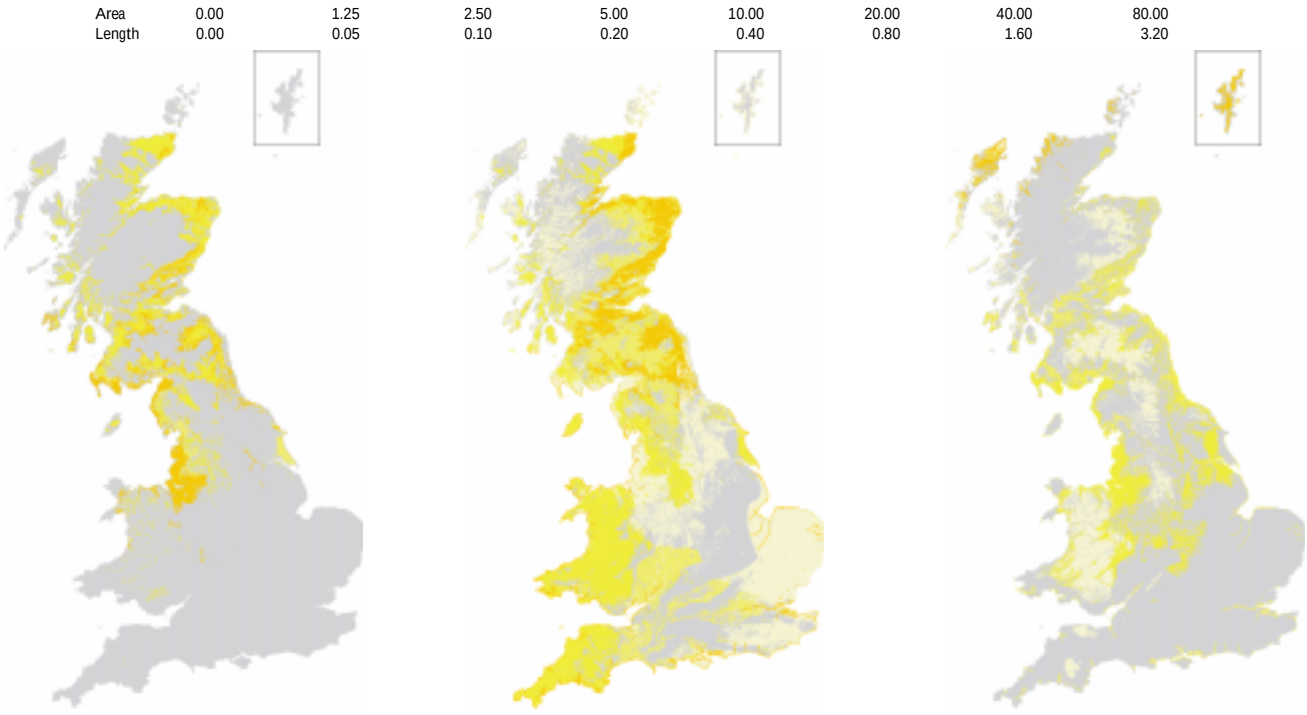

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 5.4 Low | Mean 5.9 Medium | Mean 5.3 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length 6.50 SE 2.83

**Roadside**
Length 14.55 SE 2.14

**Streamside**
Length 5.69 SE 1.78

**Vegetation class 39**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

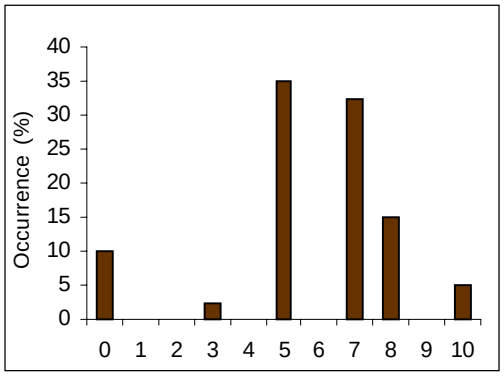
# Fertile wooded streamsides

## Description

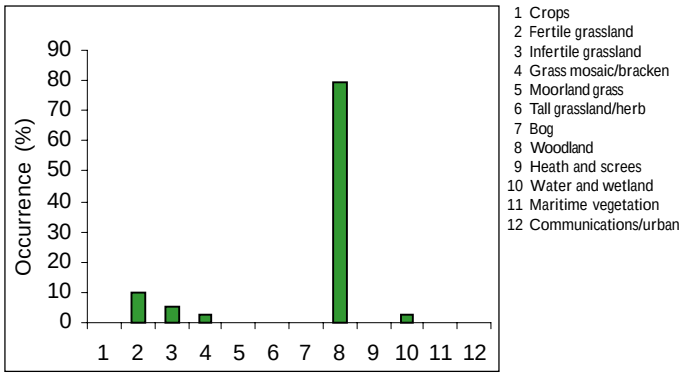
This class is restricted to streamsides in woodland or on the edge of tree cover and is found on a variety of soil types. It is uncommon and usually has ash (*Fraxinus excelsior*), alder (*Alnus glutinosa*) or sycamore (*Acer pseudoplatanus*) as canopy species, with ground cover of dog's mercury (*Mercurialis perennis*), enchanter's-nightshade (*Circaea lutetiana*) and wood speedwell (*Veronica montana*). The class is quite diverse and characteristic species are lady fern (*Athyrium filix-femina*), wood speedwell (*Veronica montana*) and ramsons (*Allium ursinum*). This class mainly occurs in central England, with outliers elsewhere.

## Associated features

### Soils

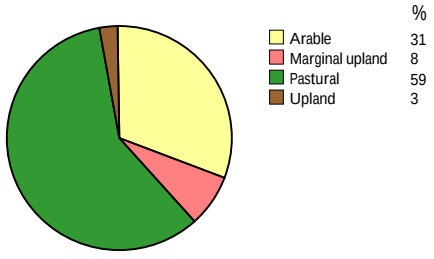



### Land cover

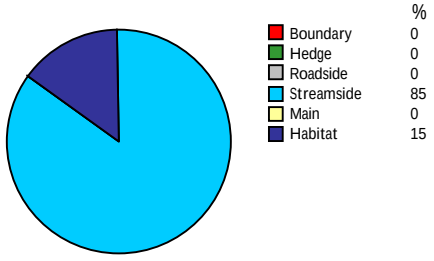



## Distribution

**Total number of plots** 39




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area *absent* SE *n/a*

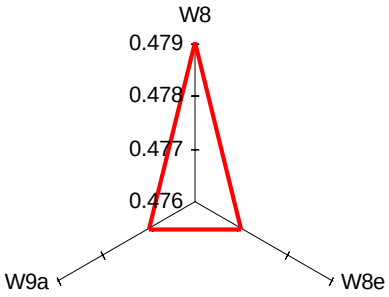
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

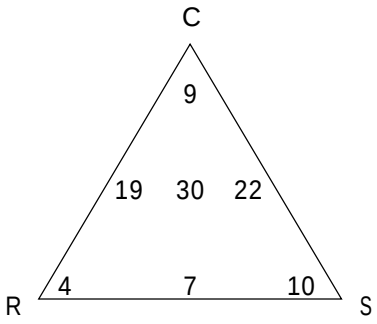
**Species number:** 142 (Medium) **No. of species groups:** 9 (High) **Most frequent group:** 14

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Mercurialis perennis* | 81 | *Fraxinus excelsior* | 17.0 | *Circaea lutetiana* |
| *Hedera helix* | 73 | *Corylus avellana* | 14.7 | *Veronica montana* |
| *Fraxinus excelsior* | 58 | *Mercurialis perennis* | 13.8 | *Mercurialis perennis* |
| *Chrysosplenium oppositifolium* | 58 | *Alnus glutinosa* | 12.0 | *Deschampsia cespitosa* |
| *Circaea lutetiana* | 58 | *Acer pseudoplatanus* | 11.3 | *Plagiomnium undulatum* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.2 Low | Mean 6.1 Medium | Mean 6.2 High | Mean 6.0 High | Mean 3.2 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 6.50 SE 2.51

**Vegetation class 40**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

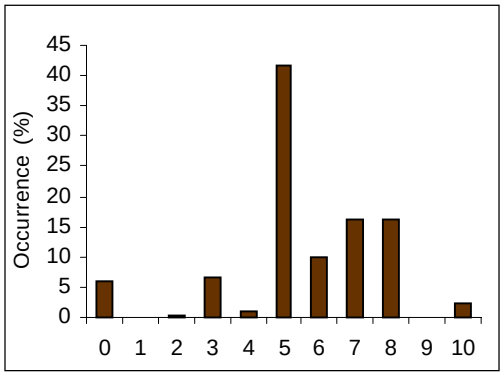
# Rye-grass/ Yorkshire-fog grassland

## Description

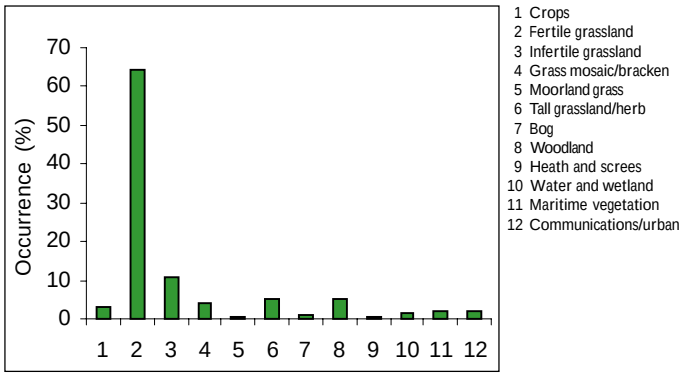
This class is representive of the most widespread ordinary grassland type in Britain and is mainly present in fields, but may also be present by roads and occasionally elsewhere. The main cover species is perennial rye-grass (*Lolium perenne*) but Yorkshire-fog (*Holcus lanatus*) is also important, as well as white clover (*Trifolium repens*) and sometimes common bent (*Agrostis capillaris*). The class is not very diverse; its characteristic species are crested dog's-tail (*Cynosurus cristatus*), daisy (*Bellis perennis*) and yarrow (*Achillea millefolium*). This class occurs throughout Britain except at high altitudes in Scotland, but is most frequent in south-west England and west Wales.

## Associated features

### Soils

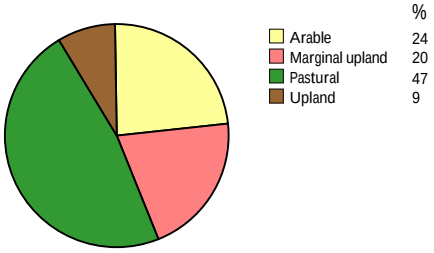



### Land cover

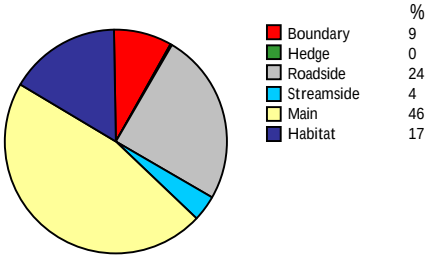



## Distribution

**Total number of plots** 699




### Landscape association

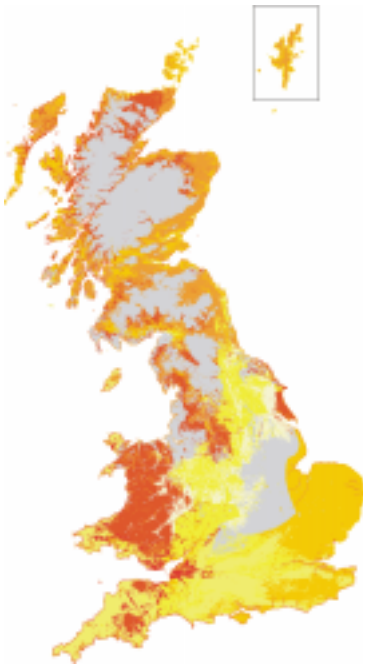



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 14.00 SE 1.24

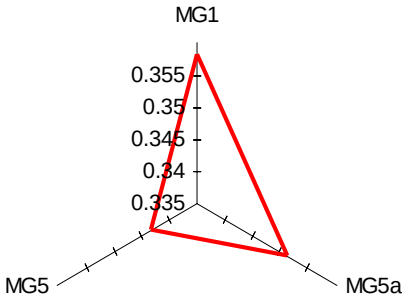
**Boundary**
Length 68.43 SE 10.93

## Floristic characteristics

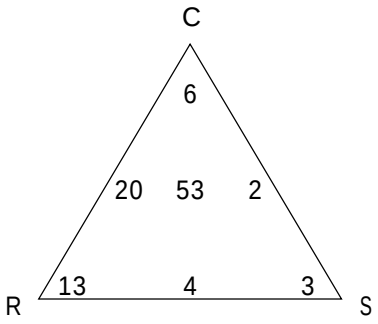
**Species number:** 366 (High) **No. of species groups:** 8 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Lolium perenne* | 86 | *Lolium perenne* | 25.1 | *Bellis perennis* |
| *Trifolium repens* | 82 | *Agrostis capillaris* | 11.9 | *Trifolium pratense* |
| *Holcus lanatus* | 81 | *Festuca rubra* | 9.8 | *Lolium perenne* |
| *Plantago lanceolata* | 76 | *Trifolium repens* | 9.8 | *Plantago lanceolata* |
| *Cerastium fontanum* | 72 | *Holcus lanatus* | 8.8 | *Cynosurus cristatus* |

### Similarity with National Vegetation Classification (NVC) types



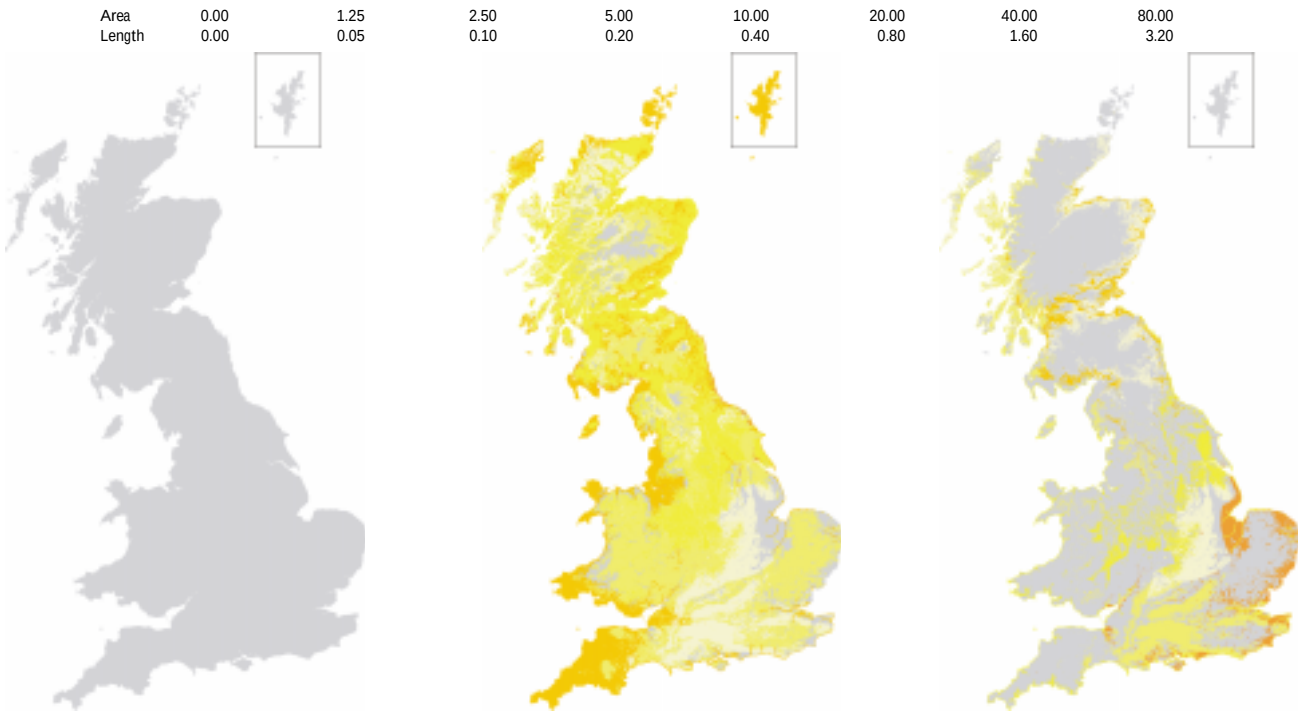

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.1 High | Mean 5.3 Low | Mean 5.8 Medium | Mean 5.0 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 22.39 SE 2.91

**Streamside**
Length 9.75 SE 3.98

**Vegetation class 41**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

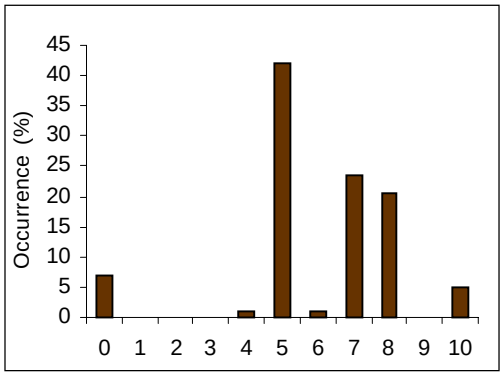
# Species-rich streamsides/ wet grassland

## Description

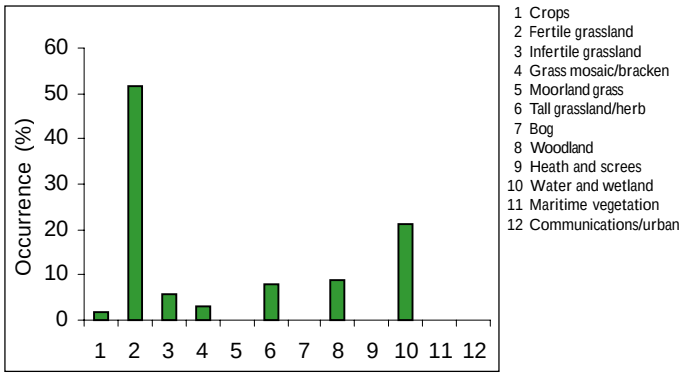
This class occurs by rivers and ditches and beside wetlands, usually on waterlogged soils. It is quite common and has creeping bent (*Agrostis stolonifera*) and Yorkshire-fog (*Holcus lanatus*) as the main cover species but also soft-rush, (*Juncus effusus*), floating sweet-grass (*Glyceria fluitans*) and creeping bent (*Agrostis stolonifera*). It is quite diverse and has characteristic species such as fool's water-cress (*Apium nodiflorum*), marsh stitchwort (*Stellaria palustris*) and brooklime (*Veronica beccabunga*). This class is present but infrequent throughout lowland Britain but also extends to the marginal uplands.

## Associated features

### Soils

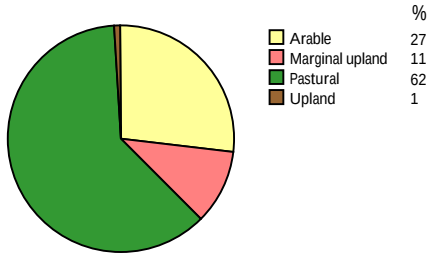



### Land cover

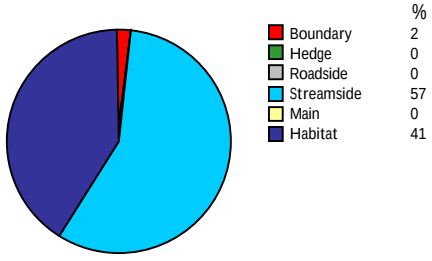



## Distribution

**Total number of plots** 104




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

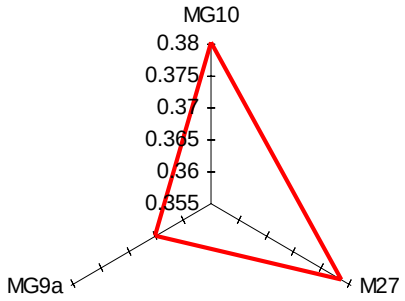
**Main**
Area *absent* SE *n/a*

**Boundary**
Length 1.65 SE 1.17

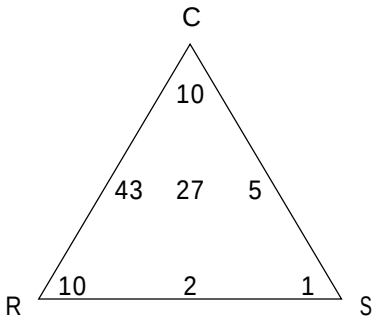
## Floristic characteristics

| **Species number:** | 210 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Ranunculus repens* | 90 | *Agrostis stolonifera* | 17.4 | *Glyceria fluitans* | |
| *Agrostis stolonifera* | 77 | *Holcus lanatus* | 13.8 | *Veronica beccabunga* | |
| *Holcus lanatus* | 70 | *Glyceria fluitans* | 8.7 | *Alopecurus geniculatus* | |
| *Juncus effusus* | 62 | *Juncus effusus* | 7.6 | *Stellaria alsine* | |
| *Glyceria fluitans* | 59 | *Ranunculus repens* | 5.8 | *Juncus effusus* | |

### Similarity with National Vegetation Classification (NVC) types



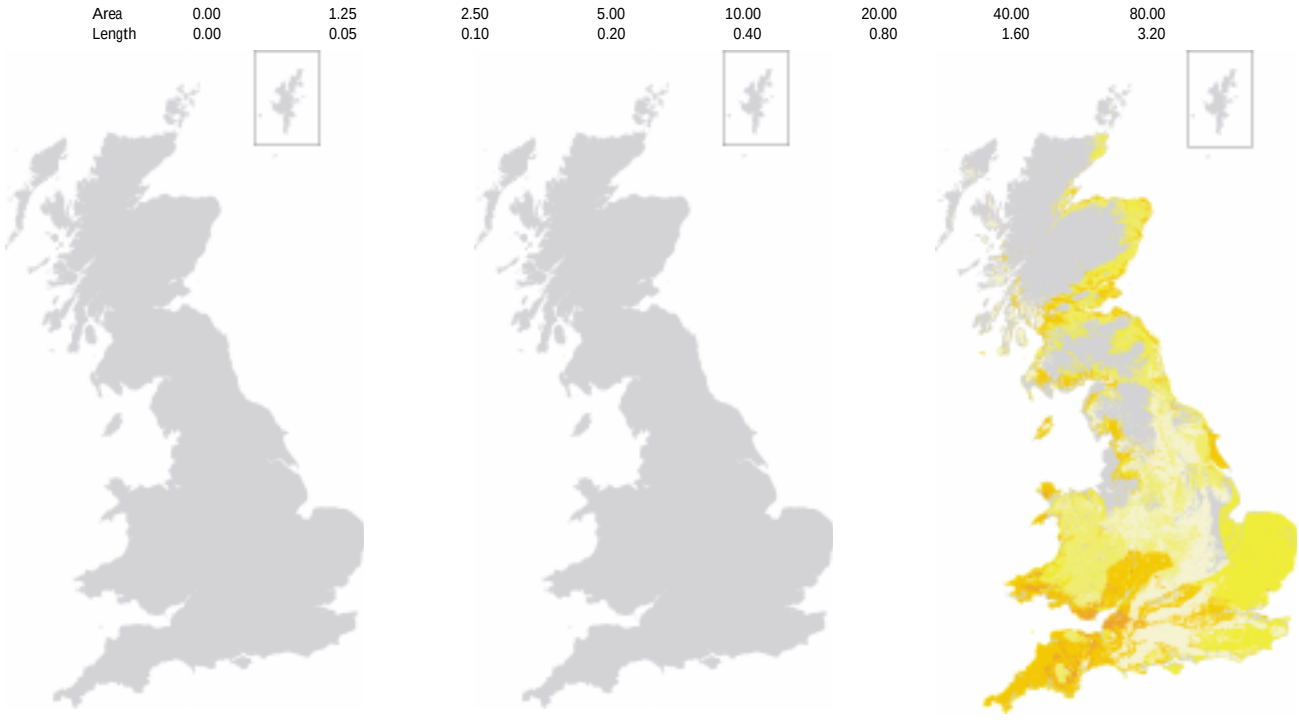

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 7.2 High | Mean 5.8 Medium | Mean 5.3 Medium | Mean 3.4 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 18.57 SE 4.94

**Vegetation class 42**

**AGGREGATE CLASS V**
**LOWLAND WOODED**

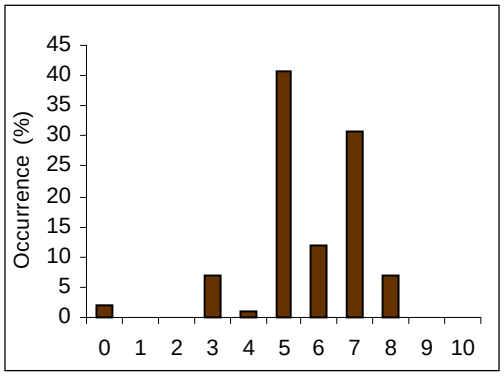
# Woodland on heavy soils

## Description

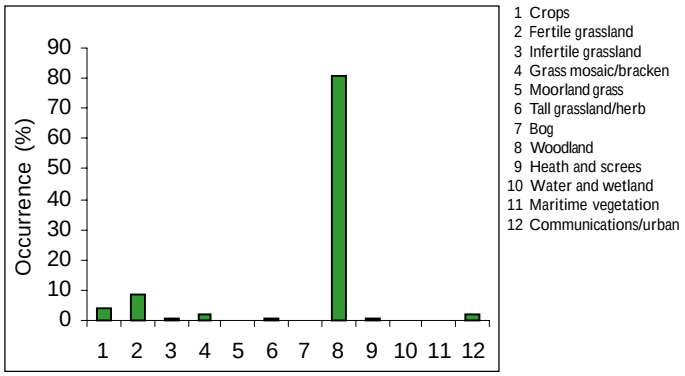
This class is quite common and is usually present in woodlands on clay soils, and occassionally in dense hedgerows, and by streamsides may be convergent within that vegetation. The canopy is typically oak (*Quercus* spp.), birch (*Betula* spp.) and beech (*Fagus sylvatica*), often with an understorey of hawthorn (*Crataegus monogyna*) and birch (*Betula* spp.). The ground vegetation is sparse, with bramble (*Rubus fruticosus*) and ivy (*Hedera helix*) as the main cover species, although bracken (*Pteridium aquilinum*) may be locally important. The class has few species present, most of which are tolerant of shade, eg broad buckler-fern (*Dryopteris dilatata*), honeysuckle (*Lonicera periclymenum*) and bluebells (*Hyacinthoides non-scripta*). This class is present throughout lowland Britain in low frequency, but extends into the marginal uplands.

## Associated features

### Soils

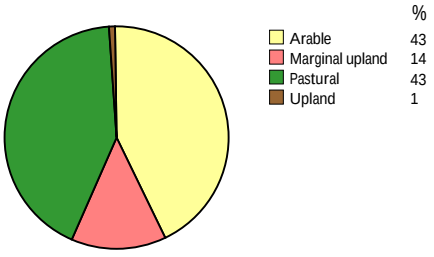



### Land cover

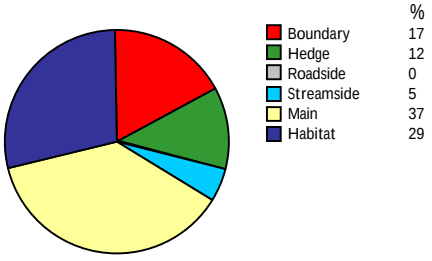



## Distribution

**Total number of plots** 103




### Landscape association

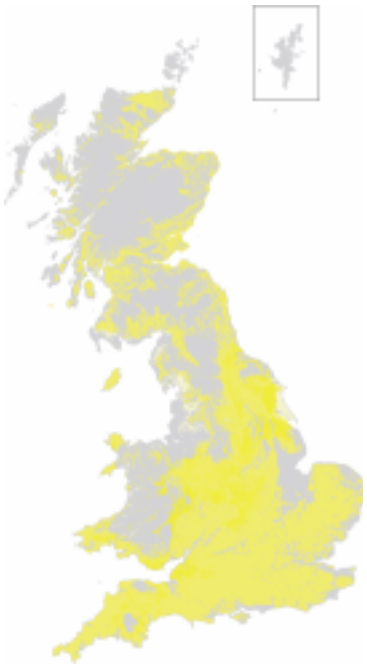


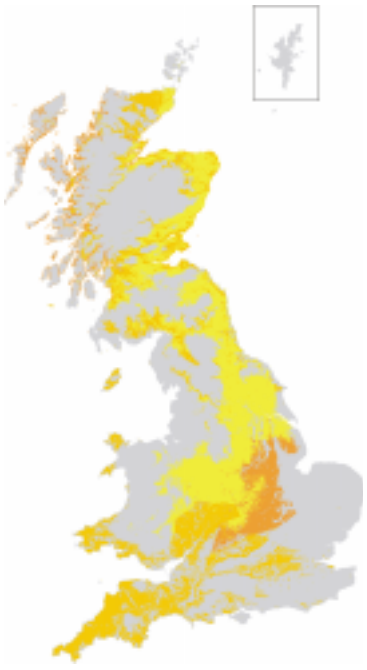

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





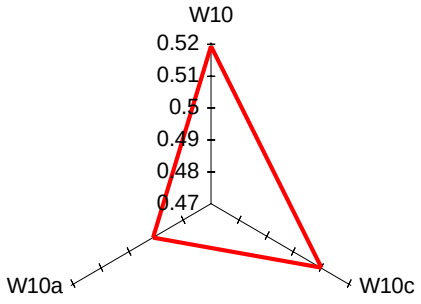
**Main**
Area 2.20 SE 0.56

**Boundary**
Length 20.55 SE 6.35

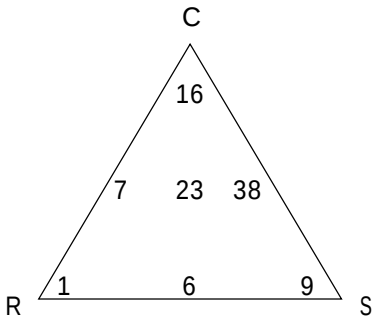
## Floristic characteristics

| **Species number:** | 128 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 17 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Pteridium aquilinum* | 40 | *Fagus sylvatica* | 9.2 | *Pteridium aquilinum* | |
| *Ilex aquifolium* | 38 | *Pteridium aquilinum* | 9.1 | *Ilex aquifolium* | |
| *Holcus mollis* | 36 | *Crataegus monogyna* | 7.6 | *Holcus mollis* | |
| *Hedera helix* | 36 | *Hedera helix* | 7.2 | *Agrostis capillaris* | |
| *Acer pseudoplatanus* | 31 | *Holcus mollis* | 6.5 | *Fagus sylvatica* | |

### Similarity with National Vegetation Classification (NVC) types



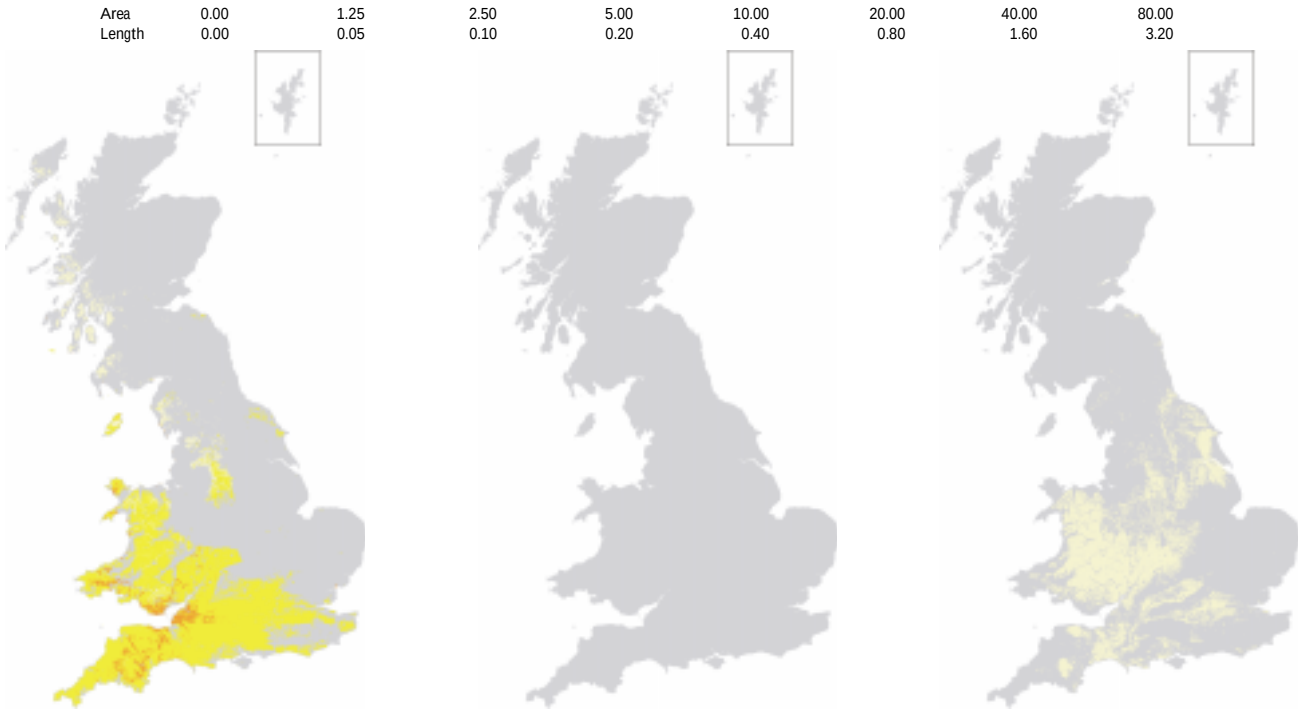

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.4 Low | Mean 5.4 Low | Mean 5.2 Medium | Mean 5.1 Medium | Mean 3.2 Medium |

## Distribution




**Hedge**
Length 8.82 SE 3.78

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 1.03 SE 0.63

**Vegetation class 43**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

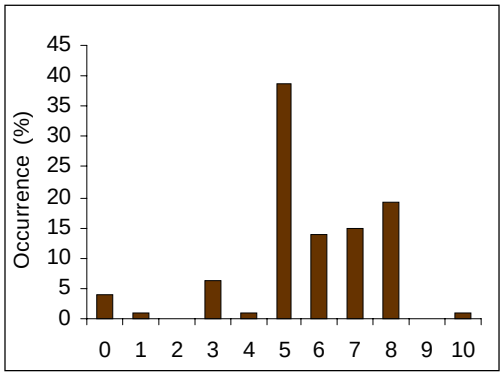
# Rye-grass/ bent grass grassland

## Description

This class is common and occurs especially in fields, but also under similar conditions beside linear features, mainly on brown soils. Perennial rye-grass (*Lolium perenne*) and common bent (*Agrostis capillaris*) are the main cover species, but Yorkshire-fog (*Holcus lanatus*) and white clover (*Trifolium repens*) are also widespread. The class is not very diverse and its characteristic species include common mouse-ear (*Cerastium fontanum*), sorrel (*Rumex acetosa*) and meadow buttercup (*Ranunculus acris*). This class occurs throughout Britain except the highest mountains of Scotland, but is most common in the marginal uplands and in the northern lowlands.

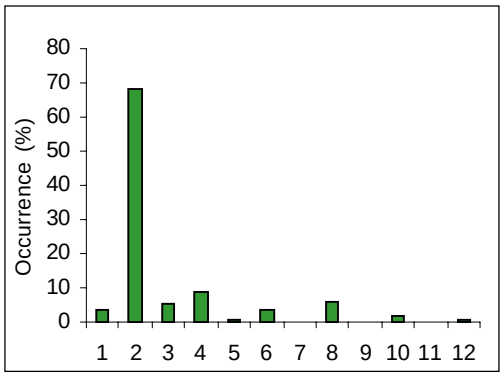
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomoprhic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

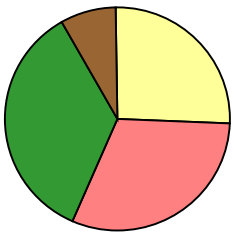
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

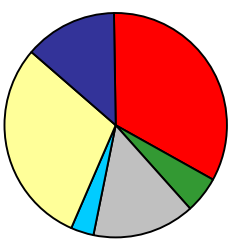
## Distribution

**Total number of plots** 354



| | % |
|---|---|
| Arable | 26 |
| Marginal upland | 31 |
| Pastural | 36 |
| Upland | 8 |

### Landscape association



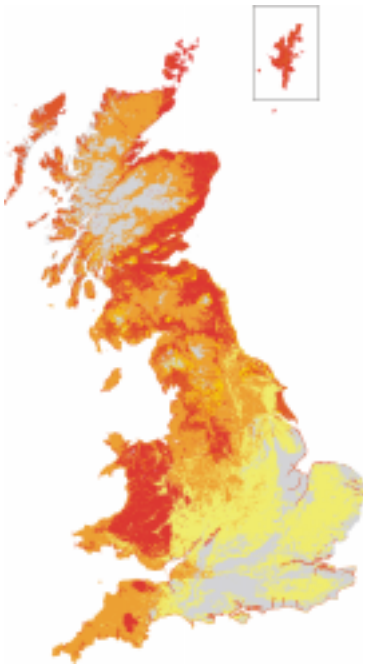
| | % |
|---|---|
| Boundary | 33 |
| Hedge | 5 |
| Roadside | 14 |
| Streamside | 3 |
| Main | 30 |
| Habitat | 14 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 5.46 SE 0.69

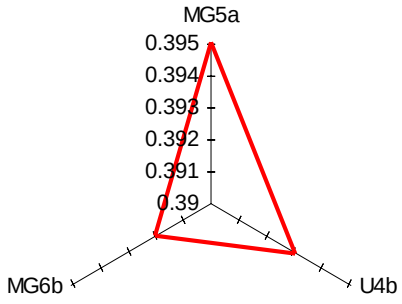
**Boundary**
Length 141.82 SE 16.46

## Floristic characteristics

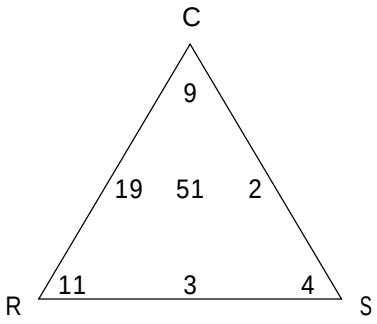
**Species number:** 230 (High) **No. of species groups:** 7 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Lolium perenne* | 84 | *Lolium perenne* | 21.1 | *Lolium perenne* |
| *Agrostis capillaris* | 83 | *Agrostis capillaris* | 18.2 | *Agrostis capillaris* |
| *Holcus lanatus* | 79 | *Holcus lanatus* | 10.8 | *Poa annua* |
| *Cerastium fontanum* | 77 | *Trifolium repens* | 7.5 | *Alopecurus pratensis* |
| *Trifolium repens* | 74 | *Festuca rubra* | 6.5 | *Cerastium fontanum* |

### Similarity with National Vegetation Classification (NVC) types



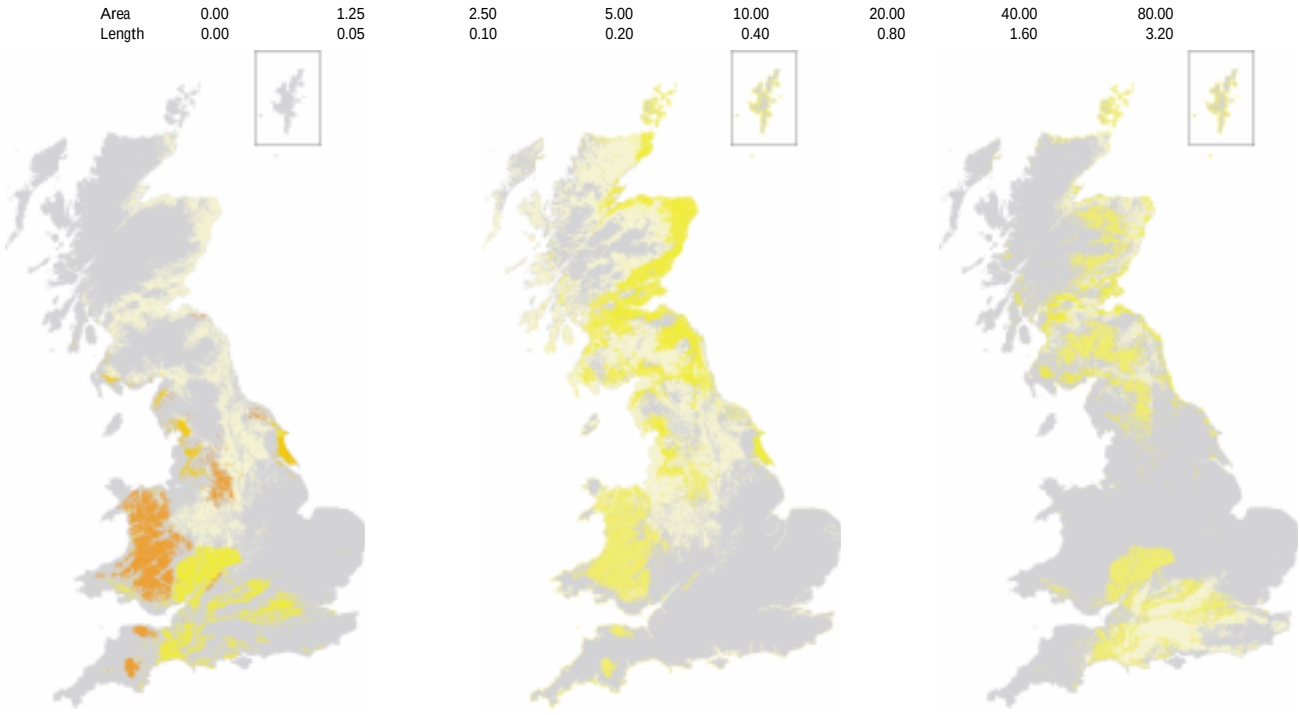

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.4 Low | Mean 5.6 Medium | Mean 5.0 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length 8.03 SE 3.18

**Roadside**
Length 6.42 SE 1.32

**Streamside**
Length 3.02 SE 1.15

**Vegetation class 44**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

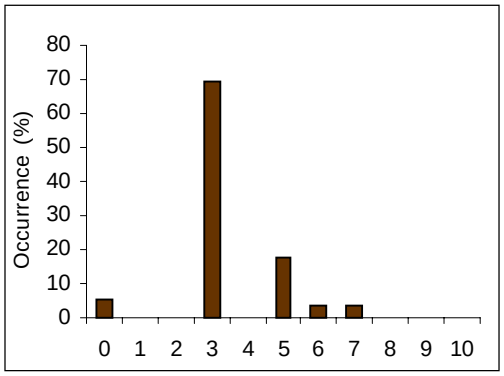
# Calcareous grassland

## Description

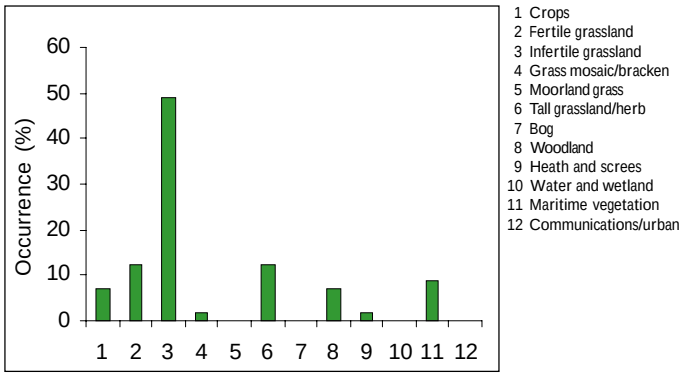
This class is not common and the floristic variation reflects local conditions. Red fescue (*Festuca rubra*), sheep's-fescue (*Festuca ovina*) and creeping bent (*Agrostis stolonifera*) can all occur at high cover. It occurs mainly in fields or open vegetation and occasionally in linear features, always on calcareous soils. It is a very diverse class and has many classic calcicoles, such as salad burnet (*Sanguisorba minor*), dwarf thistle (*Cirsium acaule)* and quaking-grass (*Briza media*). There is considerable regional variation in species composition. This class is most widespread in southern England, with outliers in the lowlands elsewhere.

## Associated features

### Soils

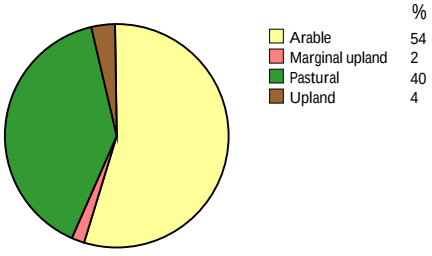



### Land cover

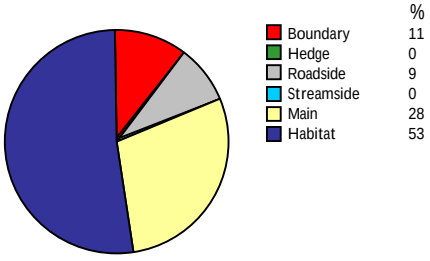



## Distribution

**Total number of plots** 57




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

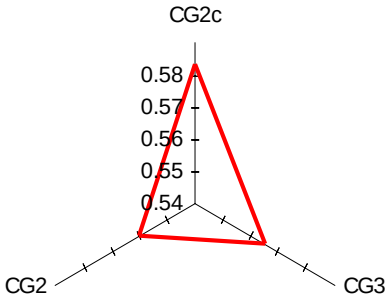
**Main**
Area 0.80 SE 0.39

**Boundary**
Length 3.01 SE 1.77

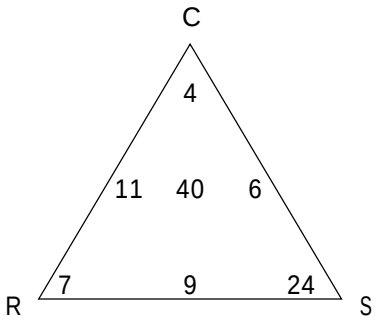
## Floristic characteristics

| **Species number:** | 222 (High) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 19 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Plantago lanceolata* | 94 | *Festuca rubra* | 16.4 | *Galium verum* | |
| *Lotus corniculatus* | 87 | *Festuca ovina* | 10.7 | *Carex flacca* | |
| *Festuca rubra* | 81 | *Agrostis stolonifera* | 7.8 | *Lotus corniculatus* | |
| *Dactylis glomerata* | 71 | *Bromus erectus* | 6.1 | *Ranunculus bulbosus* | |
| *Agrostis stolonifera* | 63 | *Sanguisorba minor* | 5.1 | *Festuca ovina* | |

### Similarity with National Vegetation Classification (NVC) types



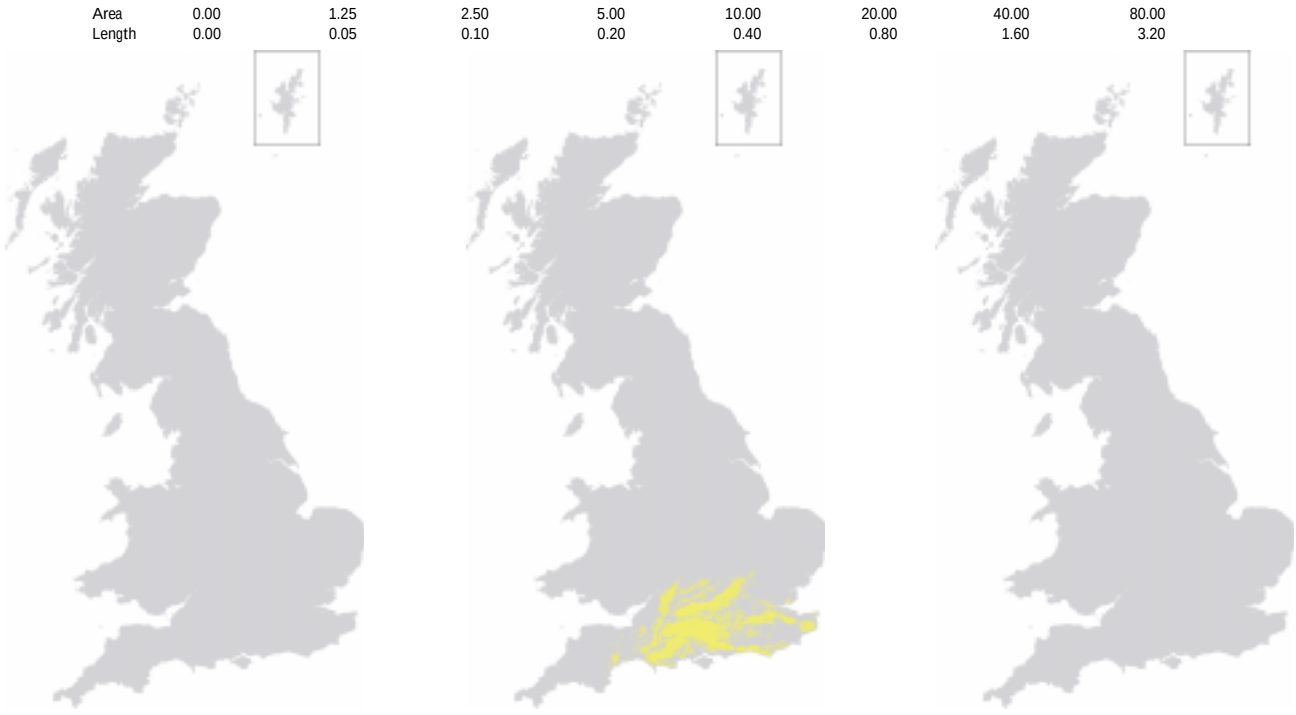

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.3 High | Mean 4.8 Low | Mean 6.1 HIgh | Mean 4.1 Medium | Mean 3.5 High |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.76 SE 0.56

**Streamside**
Length *absent* SE *n/a*

**Vegetation class 45**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

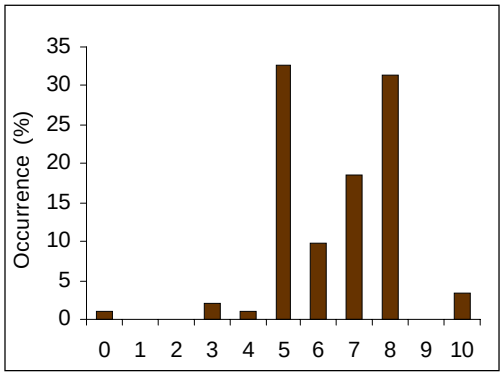
# Shaded rushy streamsides

## Description

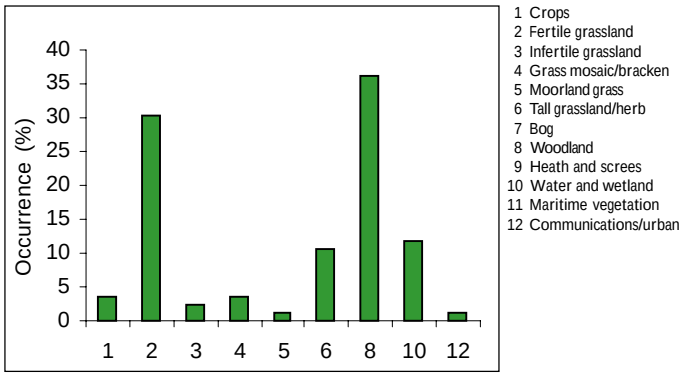
This class is found on overgrown streamsides, or on water-saturated soils within grasslands, but may also be present in small, wet patches. There is usually a high cover of soft-rush (*Juncus effusus*), Yorkshire-fog (*Holcus lanatus*) and nettles (*Urtica dioica*). The class is not common and has an average diversity, characteristic plants being marsh thistle (*Cirsium palustre*), meadowsweet (*Filipendula ulmaria*) and common marsh-bedstraw (*Galium palustre*). It occurs especially in south-west England and south-west Wales, but also in the northern lowlands and occasionally elsewhere.

## Associated features

### Soils

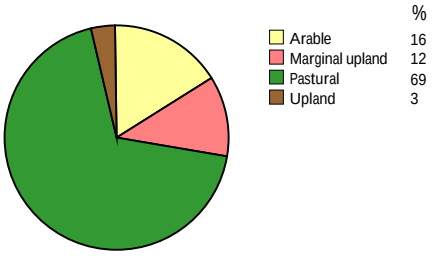



### Land cover

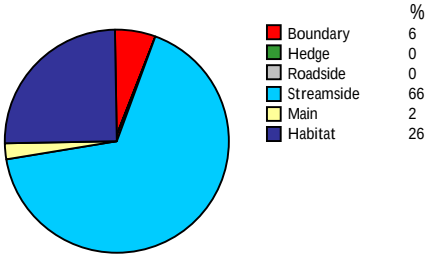



## Distribution

**Total number of plots** 86




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

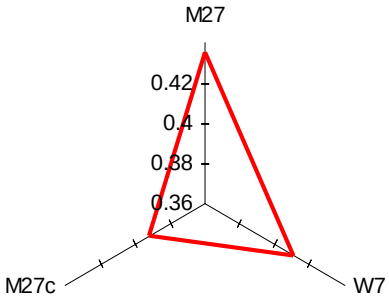
**Main**
Area 0.09 SE 0.09

**Boundary**
Length 6.29 SE 3.03

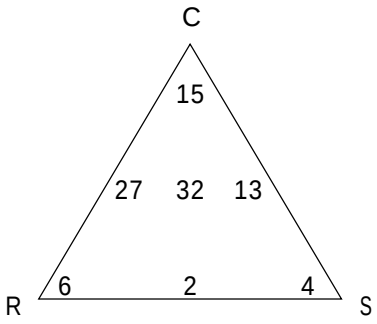
## Floristic characteristics

| **Species number:** | 206 (High) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Juncus effusus* | 78 | *Juncus effusus* | 10.6 | *Juncus effusus* | |
| *Ranunculus repens* | 68 | *Holcus lanatus* | 9.7 | *Galium palustre* | |
| *Holcus lanatus* | 66 | *Agrostis stolonifera* | 5.4 | *Ranunculus repens* | |
| *Urtica dioica* | 58 | *Urtica dioica* | 4.1 | *Urtica dioica* | |
| *Cirsium palustre* | 51 | *Filipendula ulmaria* | 3.8 | *Cirsium palustre* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.8 Low | Mean 6.2 High | Mean 5.6 Medium | Mean 5.4 Medium | Mean 3.3 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 15.03 SE 2.99

**Vegetation class 46**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

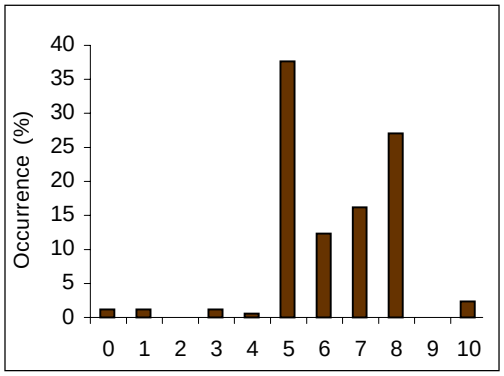
# Species-rich wooded streamsides

## Description

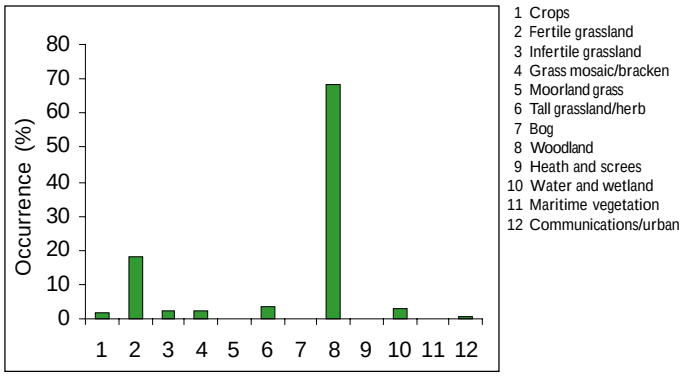
This class is found by shaded streamsides, usually on quite nutrient-rich soils within a grassland context. The tree cover is usually alder (*Alnus glutinosa*) and the ground cover mainly creeping bent (*Agrostis stolonifera*), brambles (*Rubus fruticosus*) and common nettles (*Urtica dioica*). The class is relatively common with a high diversity, species such as wood-sorrel (*Oxalis acetosella*), herb-robert (*Geranium robertianum*) and opposite-leaved golden-saxifrage (*Chrysosplenium oppositifolium*) being characteristic. It occurs especially in south-west England and west Wales, in the lowlands of northern Britain, but also occasionally elsewhere.

## Associated features

### Soils

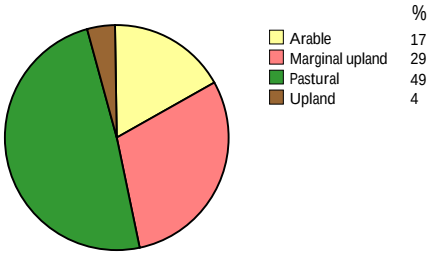



### Land cover

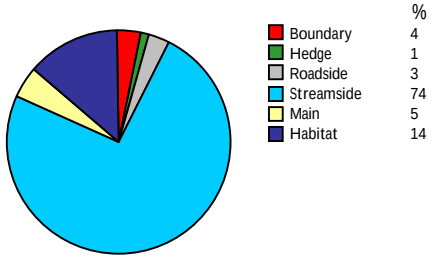



## Distribution

**Total number of plots** 168




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

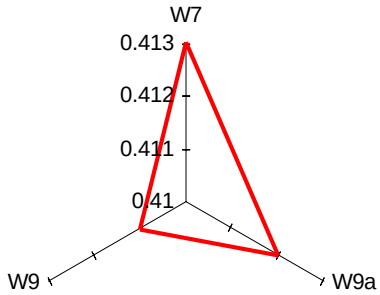
**Main**
Area 0.42 SE 0.19

**Boundary**
Length 13.49 SE 8.47

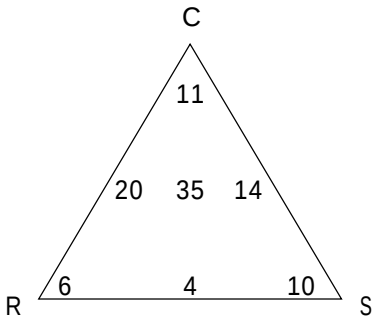
## Floristic characteristics

| **Species number:** | 267 (High) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Ranunculus repens* | 69 | *Agrostis stolonifera* | 6.2 | *Geranium robertianum* | |
| *Oxalis acetosella* | 64 | *Alnus glutinosa* | 5.8 | *Chrysosplenium oppositifolium* | |
| *Agrostis stolonifera* | 60 | *Chrysosplenium oppositifolium* | 5.1 | *Ranunculus repens* | |
| *Geranium robertianum* | 53 | *Holcus mollis* | 4.3 | *Circaea lutetiana* | |
| *Urtica dioica* | 53 | *Urtica dioica* | 3.7 | *Athyrium filix-femina* | |

### Similarity with National Vegetation Classification (NVC) types



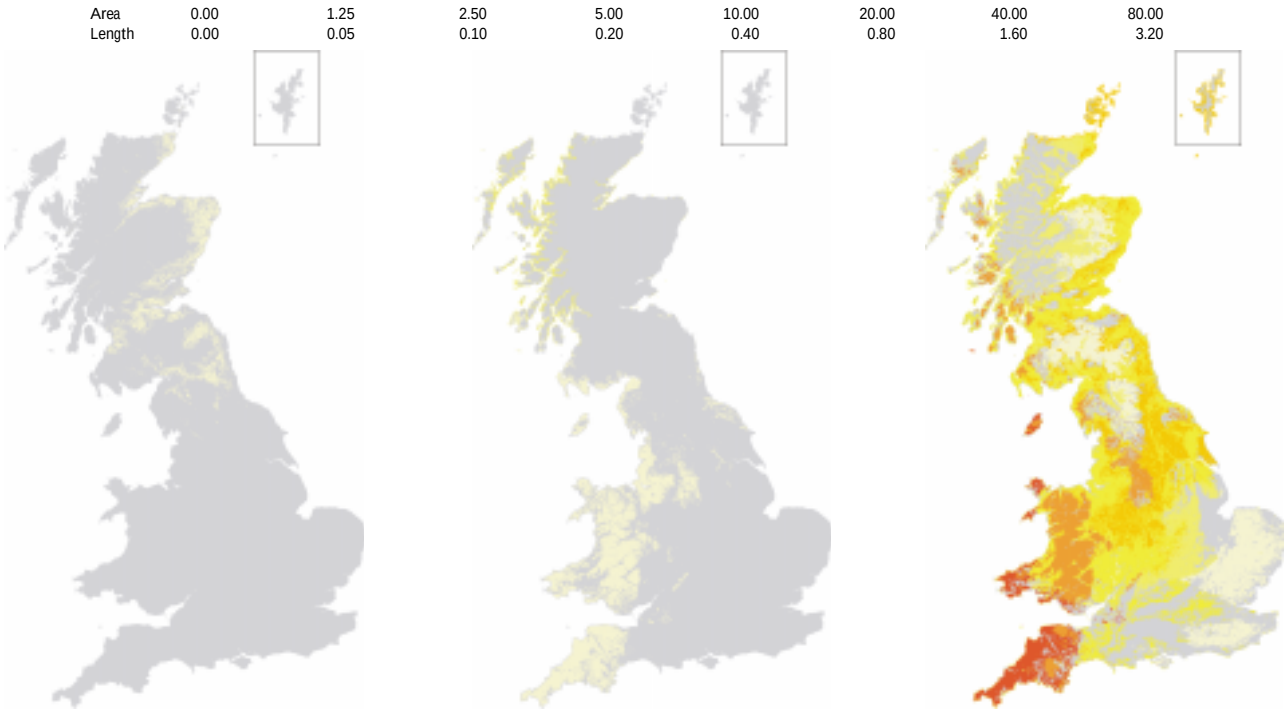

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.8 Low | Mean 6.2 Medium | Mean 5.6 Medium | Mean 5.4 Medium | Mean 3.2 Medium |

## Distribution




**Hedge**
Length 0.25 SE 0.25

**Roadside**
Length 0.86 SE 0.52

**Streamside**
Length 31.18 SE 4.09

**Vegetation class 47**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

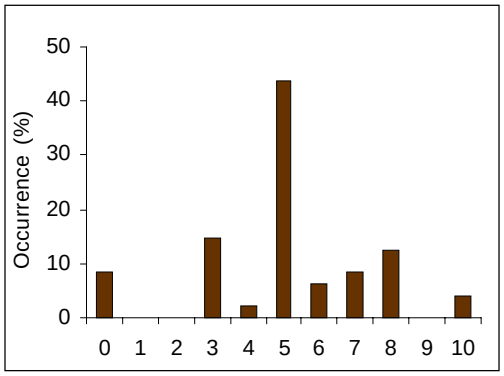
# Species-rich neutral grassland

## Description

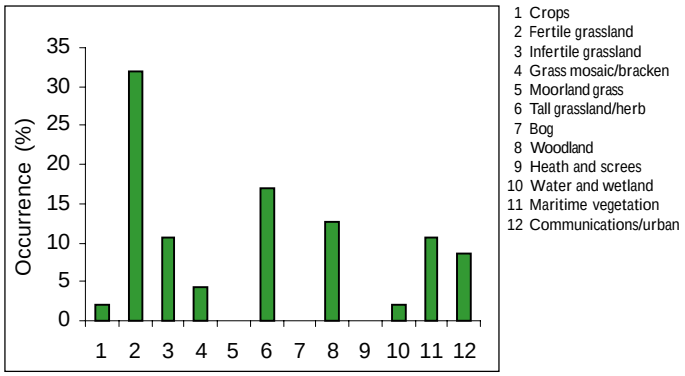
This class mainly occurs in small patches of open vegetation or on roadsides, but may also be found by other linear features, on a range of different soils types. The class is not common, and red fescue (*Festuca rubra*) is the main cover species together with common bent (*Agrostis capillaris*), though cock's-foot (*Dactylis glomerata*) and white clover (*Trifolium repens*) are also locally important. It is a diverse class, with species such as common bird's-foot-trefoil (*Lotus corniculatus*), red clover (*Trifolium pratense*) and meadow vetchling (*Lathyrus pratensis*). This class is present throughout lowland Britain, except for East Anglia, but also occurs in upland valleys.

## Associated features

### Soils

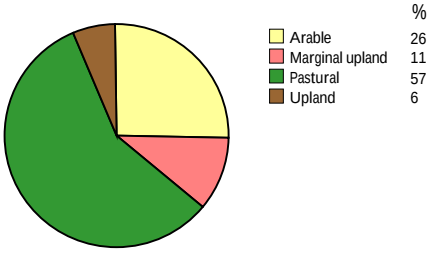



### Land cover

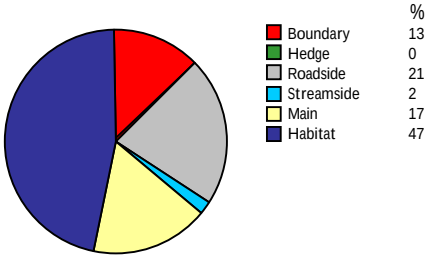



## Distribution

**Total number of plots** 47




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.34 SE 0.16

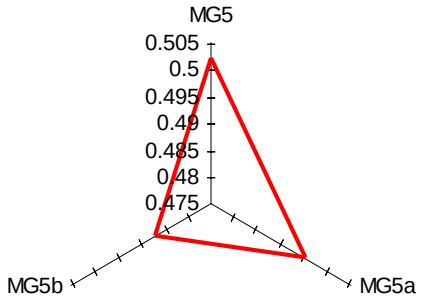
**Boundary**
Length 5.05 SE 2.63

## Floristic characteristics

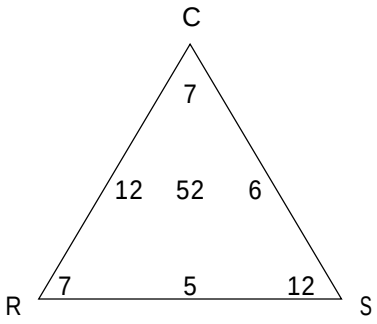
**Species number:** 185 (Medium) **No. of species groups:** 11 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Plantago lanceolata* | 96 | *Festuca rubra* | 18.4 | *Lotus corniculatus* |
| *Festuca rubra* | 89 | *Agrostis capillaris* | 11.0 | *Pseudoscleropodium purum* |
| *Dactylis glomerata* | 78 | *Dactylis glomerata* | 7.8 | *Centaurea nigra* |
| *Holcus lanatus* | 78 | *Holcus lanatus* | 6.3 | *Galium verum* |
| *Agrostis capillaris* | 69 | *Centaurea nigra* | 3.9 | *Potentilla erecta* |

### Similarity with National Vegetation Classification (NVC) types



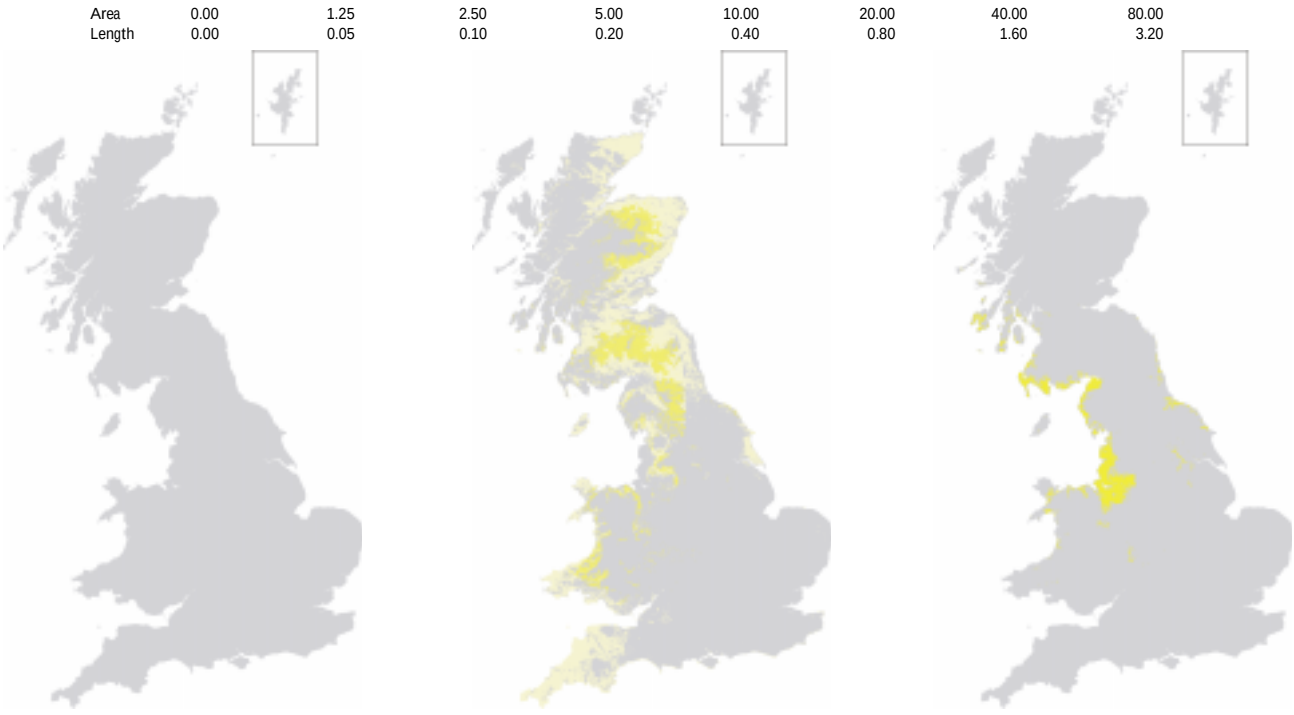

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 HIgh | Mean 5.3 Low | Mean 5.6 Medium | Mean 4.6 Medium | Mean 3.4 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 1.73 SE 0.63

**Streamside**
Length 1.06 SE 1.06

**Vegetation class 48**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

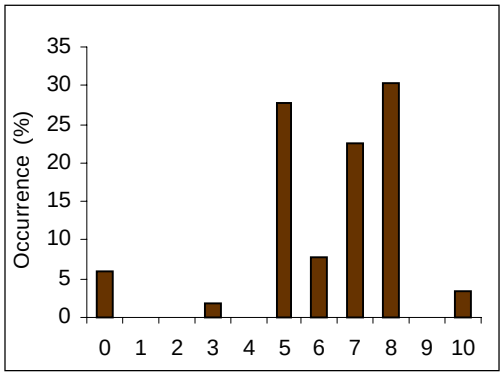
# Marsh/ streamsides

## Description

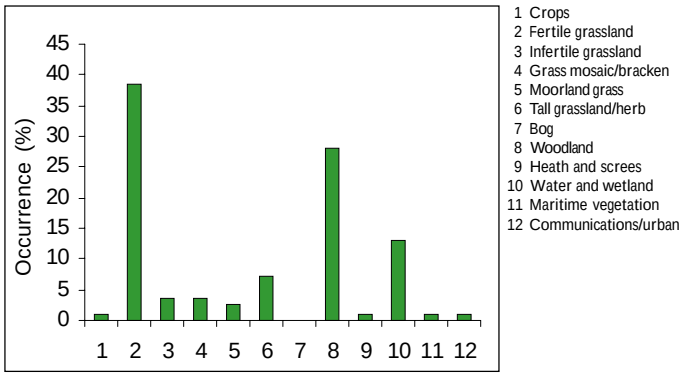
This class occurs mainly on streamsides but also in small, badly drained patches and sometimes by other linear features. It is quite a common class and, although Yorkshire-fog (*Holcus lanatus*) is the main cover species, it often has a high cover of soft-rush (*Juncus effusus*) and creeping bent (*Agrostis stolonifera*). It is very diverse and its characteristic species are marsh thistle (*Cirsium palustre*), bog stitchwort (*Stellaria alsine*) and cuckooflower (*Cardamine pratensis*). This class occurs throughout lowland Britain, but also in favourable situations in marginal and upland landscapes.

## Associated features

### Soils

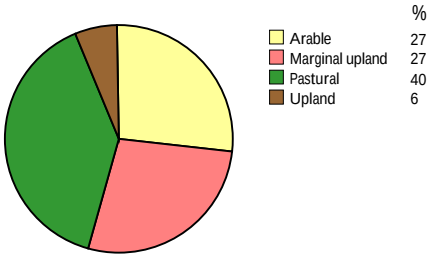



### Land cover

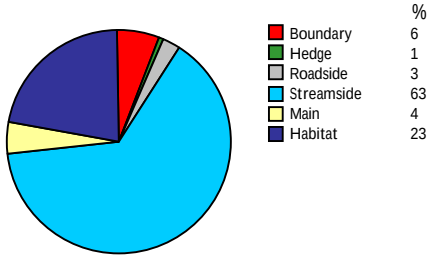



## Distribution

**Total number of plots** 115




### Landscape association

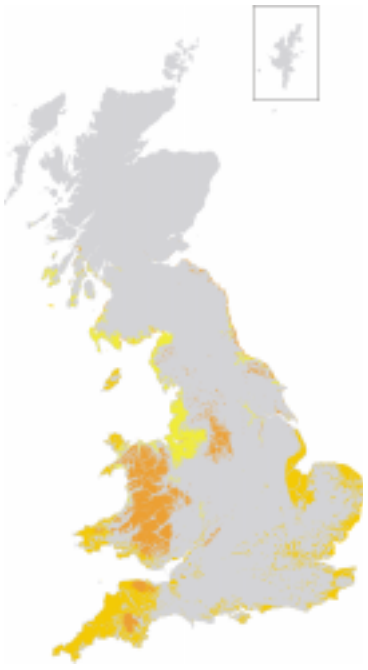



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.09 SE 0.07

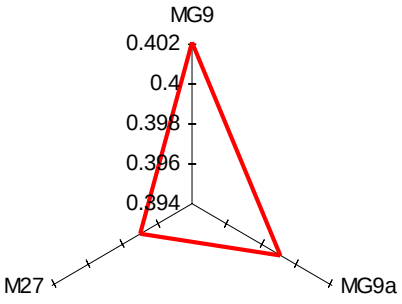
**Boundary**
Length 10.62 SE 4.40

## Floristic characteristics

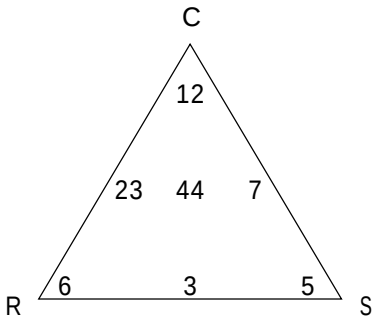
**Species number:** 236 (High) **No. of species groups:** 6 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Holcus lanatus* | 88 | *Holcus lanatus* | 16.6 | *Galium palustre* |
| *Ranunculus repens* | 80 | *Juncus effusus* | 9.3 | *Stellaria alsine* |
| *Juncus effusus* | 79 | *Agrostis stolonifera* | 8.7 | *Juncus effusus* |
| *Agrostis stolonifera* | 73 | *Deschampsia cespitosa* | 6.0 | *Cirsium palustre* |
| *Rumex acetosa* | 65 | *Ranunculus repens* | 5.1 | *Lotus uliginosus* |

### Similarity with National Vegetation Classification (NVC) types



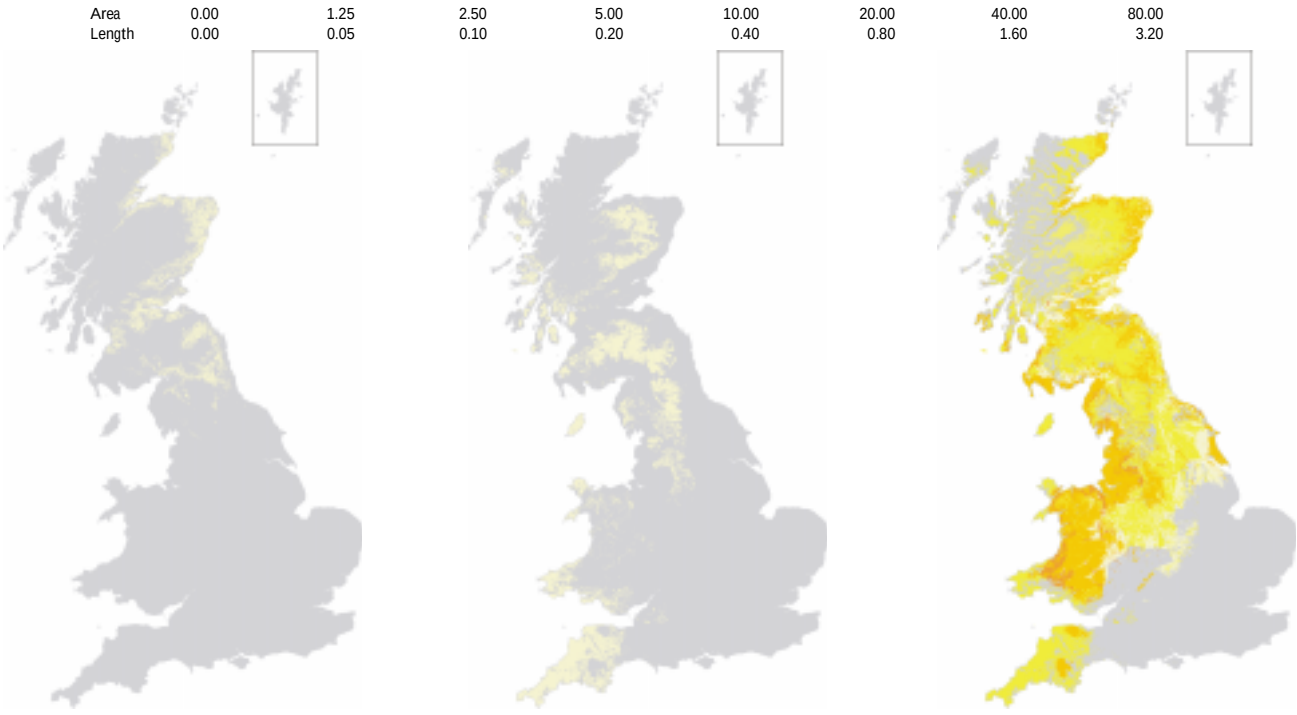

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.6 Low | Mean 6.4 Medium | Mean 5.4 Medium | Mean 4.9 Medium | Mean 3.4 Medium |

## Distribution




**Hedge**
Length 0.25 SE 0.25

**Roadside**
Length 0.56 SE 0.34

**Streamside**
Length 21.79 SE 3.31

**Vegetation class 49**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

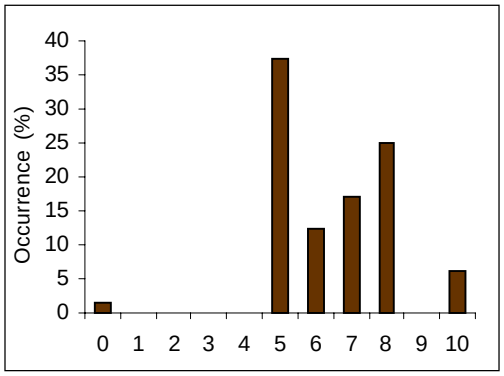
# Neutral/acidic woodland patches

## Description

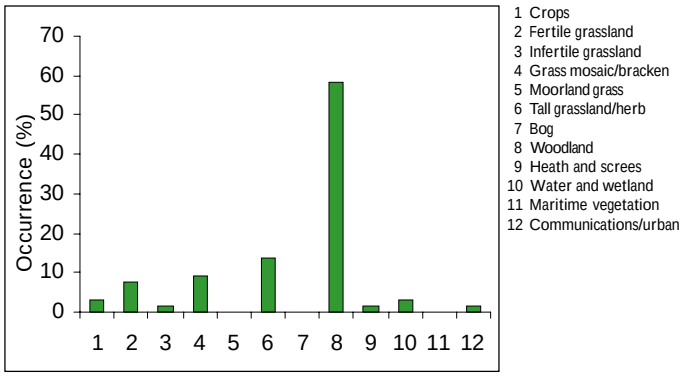
This class usually occurs in small fragments of rather open woodland on mildly acidic soils, but may also be by other linear features. It is often found with sycamore (*Acer pseudoplatanus*) as the canopy species, although other species are often involved. It has a high ground cover vegetation of bracken (*Pteridium aquilinum*), rosebay willowherb *(Chamaenerion angustifolium.)* or bramble (*Rubus fruiticosus*). The class is not common; it has a low diversity, with plants such as creeping soft-grass (*Holcus mollis*), common bent (*Agrostis capillaris*) and broad buckler-fern (*Droypteris dilatata*). This class is present throughout much of the lowlands of the Midlands, northern England and Scotland.

## Associated features

### Soils

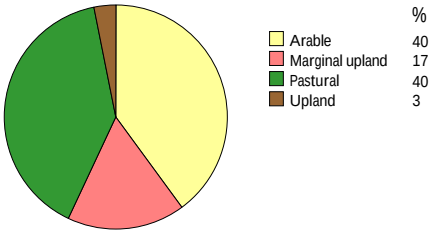



### Land cover

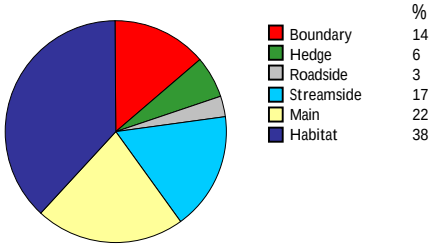



## Distribution

**Total number of plots** 65




### Landscape association

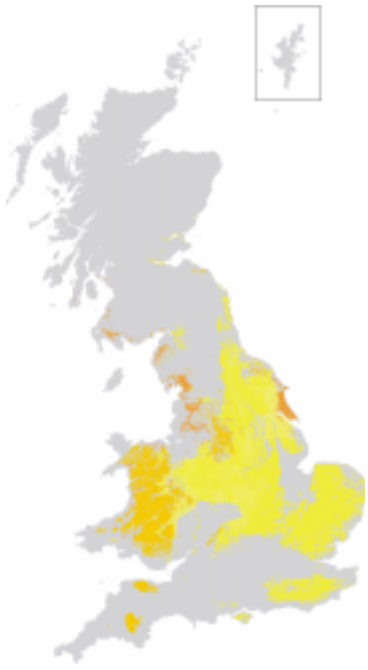



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.67 SE 0.26

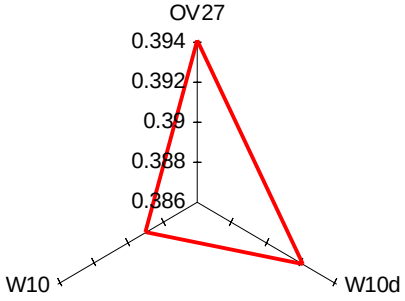
**Boundary**
Length 10.32 SE 3.74

## Floristic characteristics

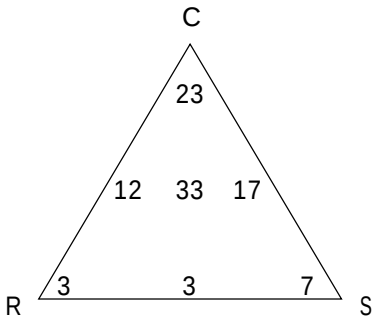
**Species number:** 132 (Low) **No. of species groups:** 10 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Holcus mollis* | 49 | *Holcus mollis* | 14.3 | *Chamaenerion angustifolium* |
| *Holcus lanatus* | 49 | *Pteridium aquilinum* | 12.4 | *Holcus mollis* |
| *Chamaenerion angustifolium* | 47 | *Holcus lanatus* | 7.5 | *Urtica dioica* |
| *Pteridium aquilinum* | 36 | *Chamaenerion angustifolium* | 7.3 | *Rumex acetosella* |
| *Urtica dioica* | 36 | *Agrostis capillaris* | 6.9 | *Acer pseudoplatanus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.3 Low | Mean 6.0 Medium | Mean 5.1 Medium | Mean 4.8 Medium | Mean 3.3 Medium |

## Distribution


**Hedge**
Length 0.25 SE 0.16

**Roadside**
Length 0.13 SE 0.13

**Streamside**
Length 1.90 SE 0.82

**Vegetation class 50**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

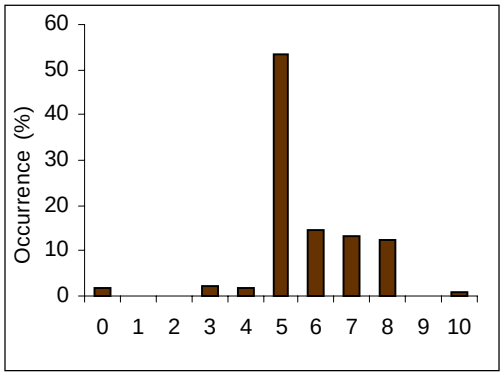
# Neutral/acidic woodland

## Description

This class has many woodland species and occurs in a range of landscape elements containing trees, including hedges, on mildly acidic soils. A range of tree species are present, with hazel (*Corylus avellana*) often being a canopy species, and a typical ground cover of common bent (*Agrostis capillaris*), bracken (*Pteridium aquilinum*) and creeping soft-grass (*Holcus mollis*). The class is relatively common, has quite a high diversity and has characteristic plants such as foxglove (*Digitalis purpurea*), common dog-violet (*Viola riviniana*) and wood-sorrel (*Oxalis acetosella*). This class is mainly present in western Britain, although it is found occasionally elsewhere in the lowlands and valleys in the uplands.

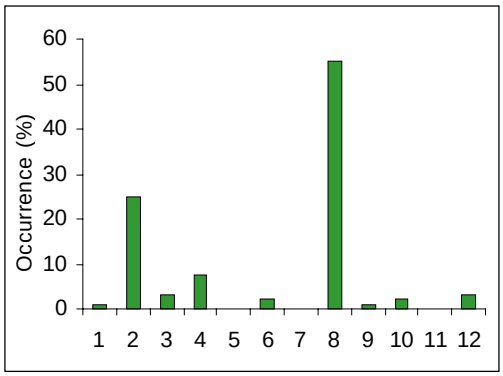
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

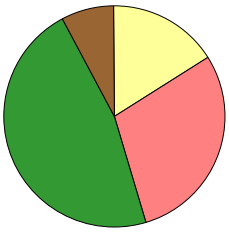
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

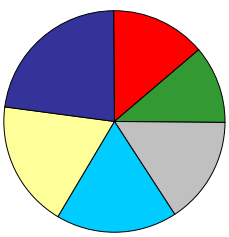
## Distribution

**Total number of plots** 130



| | % |
|---|---|
| Arable | 16 |
| Marginal upland | 29 |
| Pastural | 47 |
| Upland | 8 |

### Landscape association

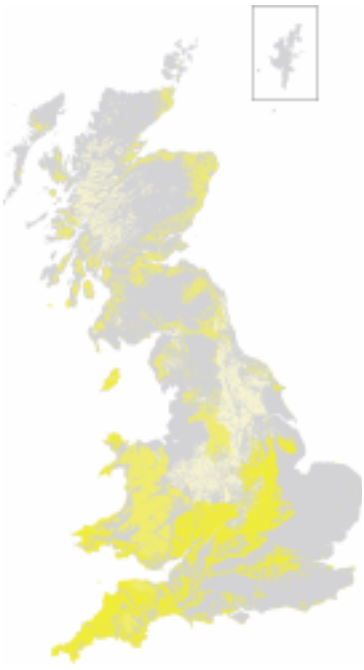


| | % |
|---|---|
| Boundary | 14 |
| Hedge | 12 |
| Roadside | 15 |
| Streamside | 18 |
| Main | 18 |
| Habitat | 23 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km

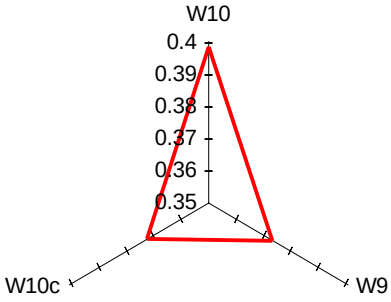
**Main**
Area 1.59 SE 0.45

**Boundary**
Length 22.40 SE 5.81

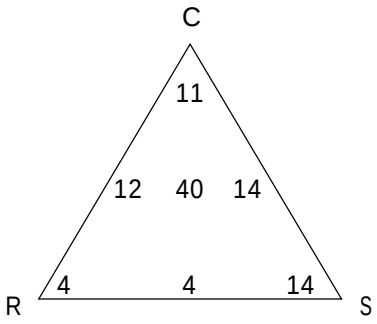
## Floristic characteristics

| **Species number:** | 238 (High) | **No. of species groups:** | 11 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Holcus lanatus* | 68 | *Pteridium aquilinum* | 12.2 | *Dactylis glomerata* | |
| *Agrostis capillaris* | 60 | *Agrostis capillaris* | 9.0 | *Crataegus monogyna* | |
| *Holcus mollis* | 56 | *Corylus avellana* | 6.7 | *Corylus avellana* | |
| *Digitalis purpurea* | 53 | *Holcus mollis* | 6.0 | *Teucrium scorodonia* | |
| *Pteridium aquilinum* | 50 | *Holcus lanatus* | 4.9 | *Digitalis purpurea* | |

### Similarity with National Vegetation Classification (NVC) types



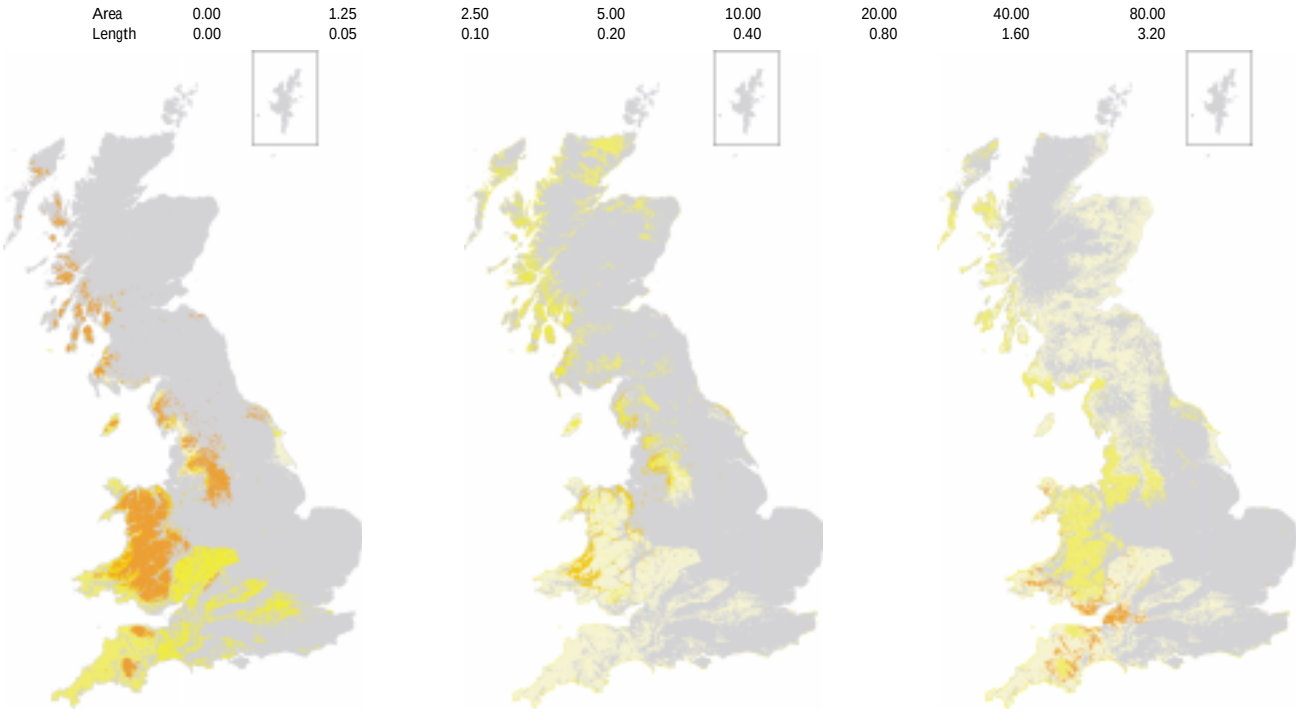

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.0 Low | Mean 5.7 Medium | Mean 5.3 Medium | Mean 4.9 Medium | Mean 3.2 Medium |

## Distribution




**Hedge**
Length 13.73 SE 5.10

**Roadside**
Length 3.34 SE 1.12

**Streamside**
Length 4.95 SE 1.76

**Vegetation class 51**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

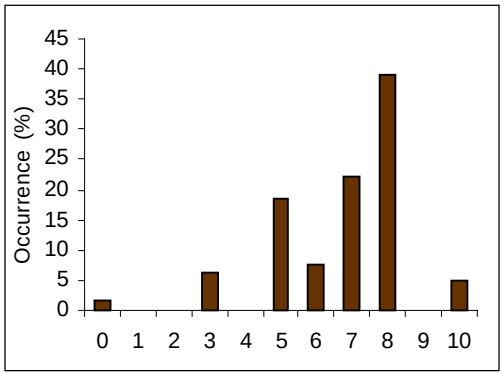
# Wet rushy grassland

## Description

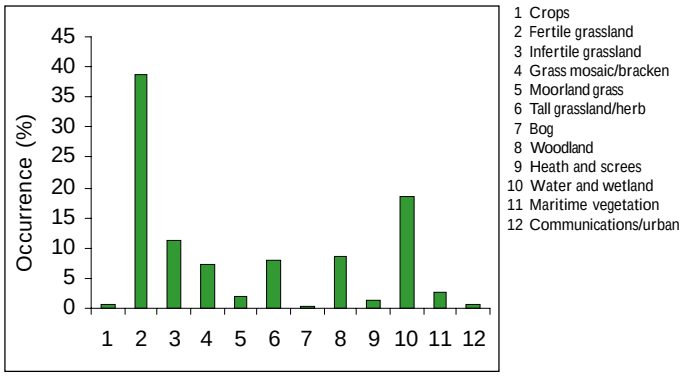
This class usually occurs by streams, but is also widely found in fields, open vegetation and small, damp patches. It is very common where grassland is affected by water seepage, but not to the extent of forming a true marsh. There is therefore usually a high cover of grasses such as Yorkshire-fog (*Holcus lanatus*) and common bent (*Agrostis capillaris*), with soft-rush (*Juncus effusus*) often present as well as creeping buttercup (*Ranunculus repens*) and white clover (*Trifolium repens*). The class is diverse, depending upon local drainage conditions, and its characteristic species are meadow buttercup (*Ranunculus acris*), jointed rush (*Juncus articulatus*) and ribwort plantain (*Plantago lanceolata*). This class occurs throughout Britain, except for a small area in the Midlands.

## Associated features

### Soils

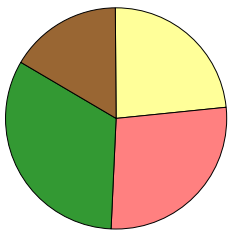



### Land cover



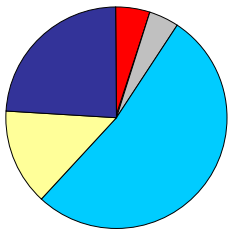

## Distribution

**Total number of plots** 295



| | % |
|---|---|
| Arable | 24 |
| Marginal upland | 27 |
| Pastural | 33 |
| Upland | 17 |

### Landscape association

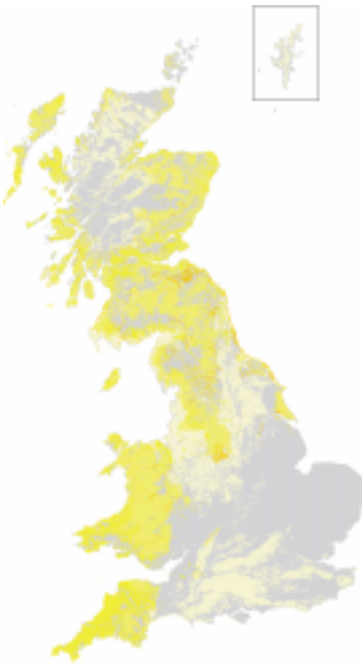


| | % |
|---|---|
| Boundary | 5 |
| Hedge | 0 |
| Roadside | 4 |
| Streamside | 52 |
| Main | 14 |
| Habitat | 24 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km

**Main**
Area 2.05 SE 0.44

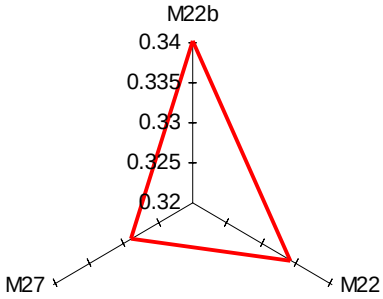
**Boundary**
Length 16.45 SE 5.27

## Floristic characteristics

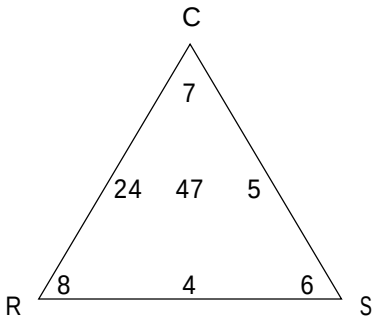
**Species number:** 338 (High) **No. of species groups:** 9 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Holcus lanatus* | 92 | *Holcus lanatus* | 11.8 | *Cirsium palustre* |
| *Ranunculus repens* | 78 | *Juncus effusus* | 10.4 | *Ranunculus flammula* |
| *Trifolium repens* | 77 | *Agrostis stolonifera* | 8.0 | *Galium palustre* |
| *Rumex acetosa* | 72 | *Agrostis capillaris* | 5.9 | *Cardamine pratensis* |
| *Juncus effusus* | 72 | *Festuca rubra* | 5.4 | *Juncus effusus* |

### Similarity with National Vegetation Classification (NVC) types



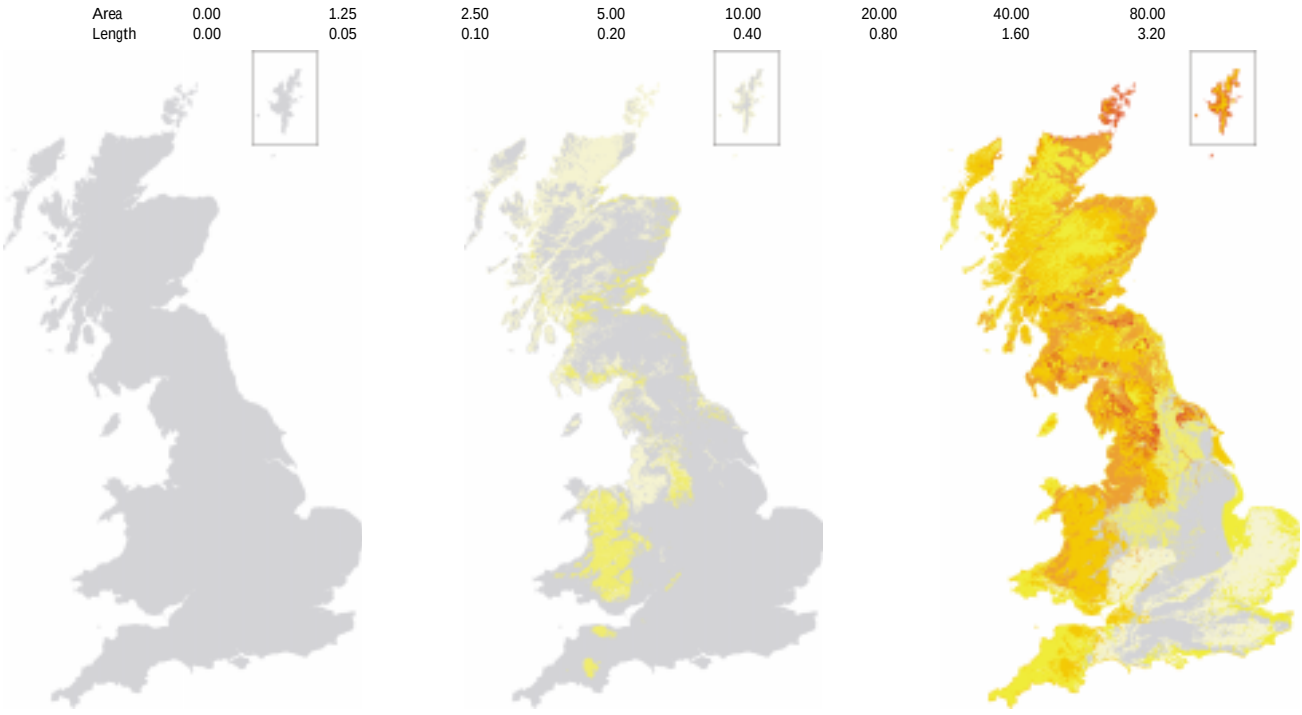

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 6.3 Medium | Mean 5.3 Medium | Mean 4.5 Medium | Mean 3.3 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 1.63 SE 0.67

**Streamside**
Length 48.72 SE 8.05

**Vegetation class 52**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

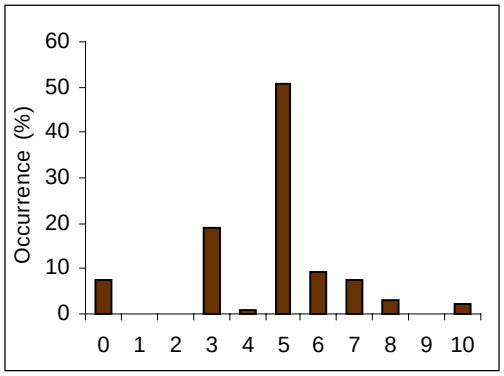
# Neutral grassland

## Description

This class occurs mainly in fields but also in small patches and occasionally on roadsides. It is quite common, with common bent (*Agrostis capillaris*) as the main cover species and crested dog's-tail (*Cynosurus cristatus*), Yorkshire-fog (*Holcus lanatus*) and red fescue (*Festuca rubra*) also important. The class is quite diverse: characteristic species are yarrow (*Achillea millefolium*), cat's-ear (*Hypochoeris radicata*) and selfheal (*Prunella vulgaris*). This class occurs throughout Britain, except in the high mountains of northern Scotland and arable landscape of East Anglia.

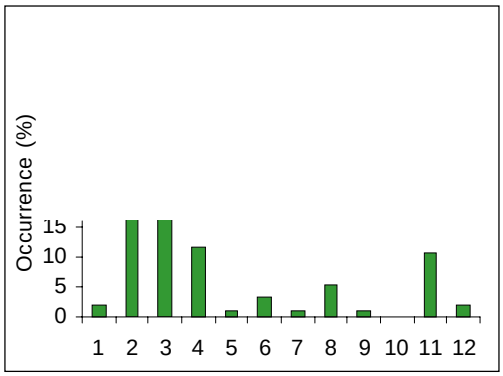
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

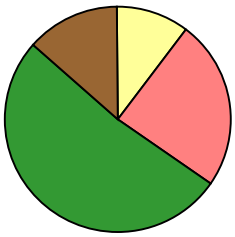
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

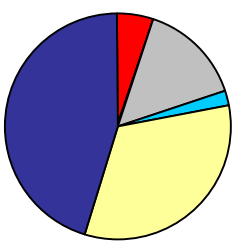
## Distribution

**Total number of plots** 95



| | % |
|---|---|
| Arable | 11 |
| Marginal upland | 24 |
| Pastural | 52 |
| Upland | 14 |

### Landscape association



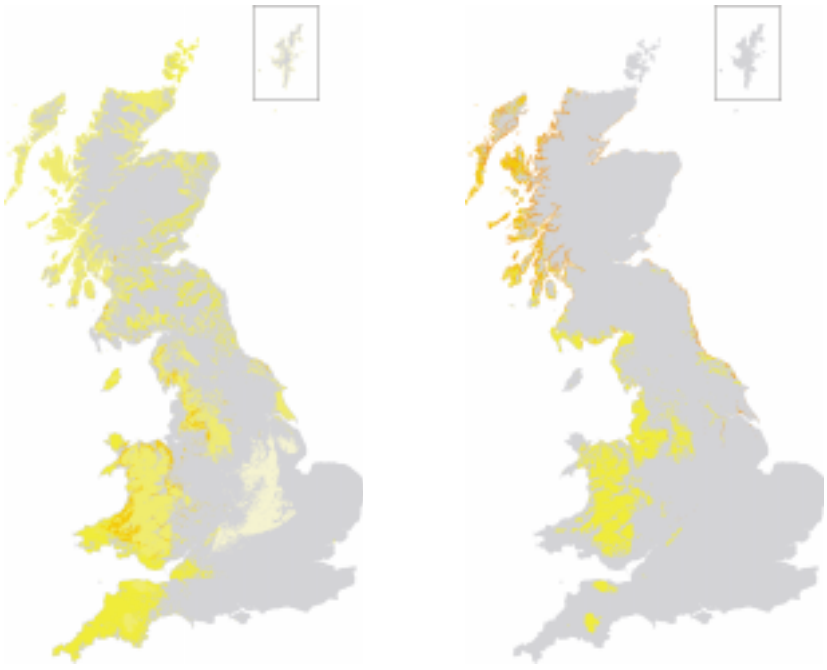
| | % |
|---|---|
| Boundary | 5 |
| Hedge | 0 |
| Roadside | 15 |
| Streamside | 2 |
| Main | 33 |
| Habitat | 45 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



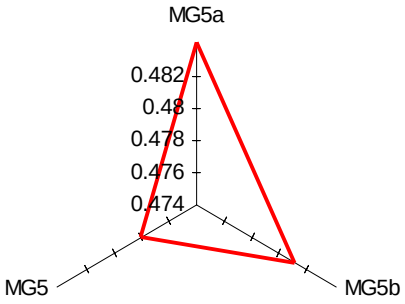
**Main**
Area 1.48 SE 0.36

**Boundary**
Length 5.34 SE 2.75

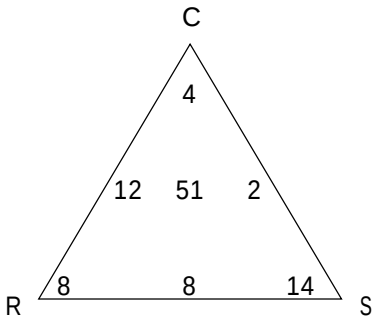
## Floristic characteristics

| **Species number:** | 222 (High) | **No. of species groups:** | 9 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Plantago lanceolata* | 86 | *Agrostis capillaris* | 19.2 | *Lotus corniculatus* | |
| *Trifolium repens* | 81 | *Festuca rubra* | 12.5 | *Galium verum* | |
| *Agrostis capillaris* | 81 | *Cynosurus cristatus* | 7.3 | *Prunella vulgaris* | |
| *Lotus corniculatus* | 76 | *Festuca ovina* | 6.3 | *Campanula rotundifolia* | |
| *Achillea millefolium* | 75 | *Lolium perenne* | 6.3 | *Achillea millefolium* | |

### Similarity with National Vegetation Classification (NVC) types



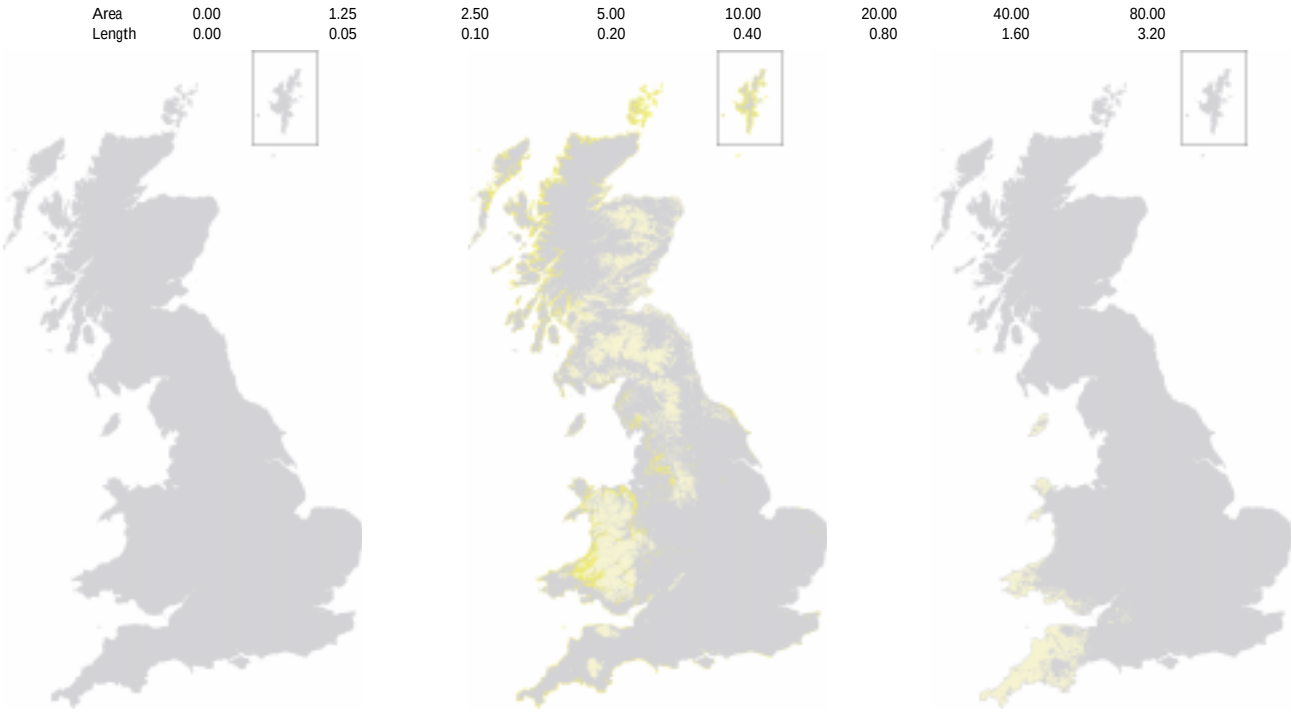

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 5.3 Low | Mean 5.4 Medium | Mean 4.2 Medium | Mean 3.3 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 1.29 SE 0.48

**Streamside**
Length 0.41 SE 0.41

**Vegetation class 53**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

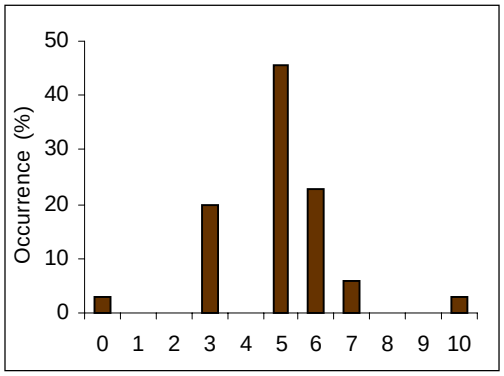
# Species-rich neutral/acid grassland/ scrub

## Description

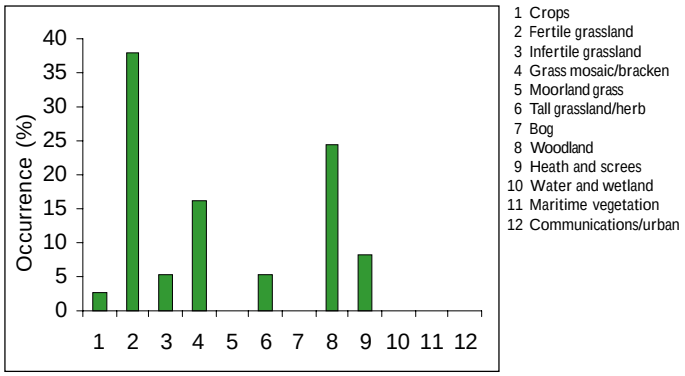
This class is mainly present in fields but can occur in all linear features or small patches of complex vegetation. It is found in a mosaic of soil conditions, eg acid rocky outcrops in rye-grass pasture, and may contain species such as gorse (*Ulex europaeus*). It is an uncommon class with common bent (*Agrostis capillaris*) as the main cover species, but also with bracken (*Pteridium aquilinum*) or even rye-grass (*Lolium perenne*), depending upon local conditions. The class is diverse ecologically, with species from a range of situations such as sheep's sorrel (*Rumex acetosella*), foxglove (*Digitalis purpurea*) and sheep's-fescue (*Festuca ovina*). This class is distributed widely but is especially common in the marginal uplands of Wales.

## Associated features

### Soils

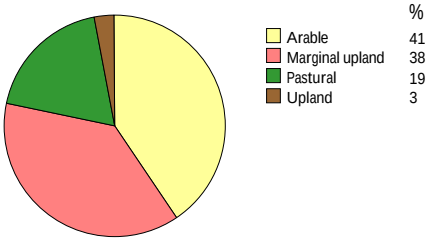



### Land cover

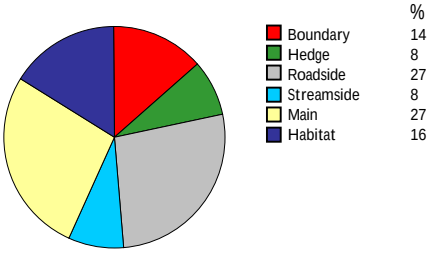



## Distribution

**Total number of plots** 37




### Landscape association

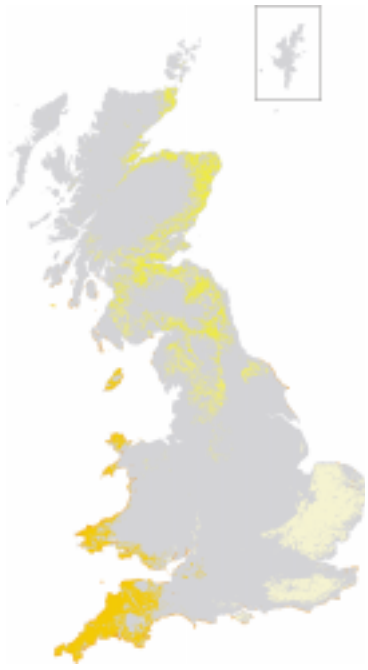



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.24 SE 0.14

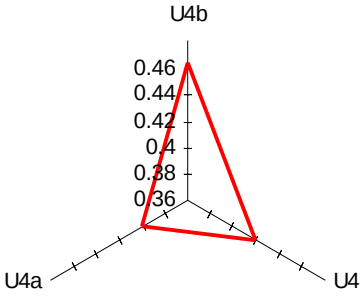
**Boundary**
Length 4.94 SE 2.90

## Floristic characteristics

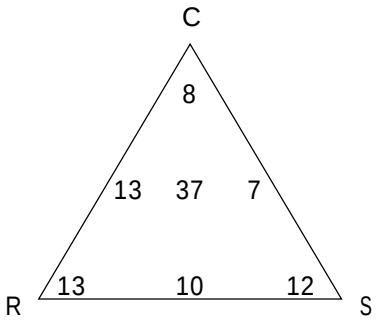
**Species number:** 139 (Low) **No. of species groups:** 8 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Agrostis capillaris* | 79 | *Agrostis capillaris* | 18.4 | *Rumex acetosella* |
| *Rumex acetosella* | 68 | *Pteridium aquilinum* | 8.4 | *Chamaenerion angustifolium* |
| *Holcus lanatus* | 57 | *Lolium perenne* | 8.3 | *Digitalis purpurea* |
| *Cerastium fontanum* | 57 | *Festuca rubra* | 6.4 | *Pteridium aquilinum* |
| *Poa annua* | 54 | *Agrostis stolonifera* | 6.3 | *Ulex europaeus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 5.4 Low | Mean 5.0 Medium | Mean 4.3 Medium | Mean 3.3 Medium |

## Distribution


**Hedge**
Length 0.49 SE 0.49

**Roadside**
Length 0.75 SE 0.31

**Streamside**
Length 0.53 SE 0.38

## Vegetation class 54

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

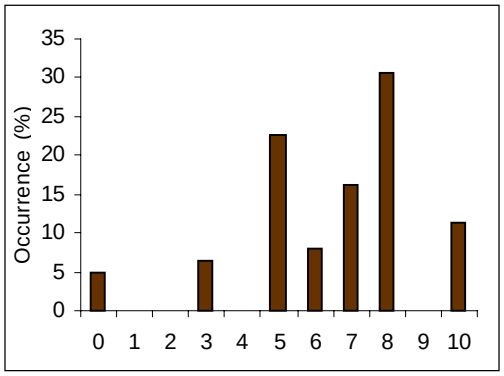
# Marsh/fen

## Description

This class occurs mainly on small patches of wetland but may also be beside streams or rivers, usually on groundwater gleys, but also on a range of other soil types. It is not a common type; soft-rush (*Juncus effusus*) forms the main cover, together with tufted hair-grass (*Deschampsia cespitosa*). The class is quite diverse and has characteristic species such as marsh bedstraw (*Galium palustre*), meadowsweet (*Filipendula ulmaria*) and marsh-marigold (*Caltha palustris*). This class occurs in western Britain, but also in lowlands in the north, with outliers in East Anglia and southern Britain.

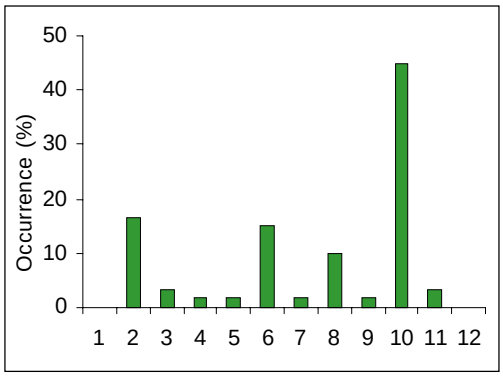
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

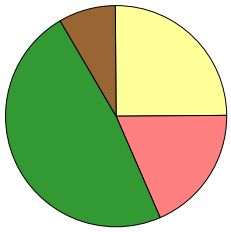
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

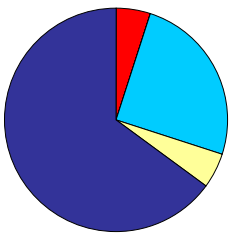
## Distribution

**Total number of plots** 60



| | % |
|---|---|
| Arable | 25 |
| Marginal upland | 18 |
| Pastural | 48 |
| Upland | 8 |

### Landscape association



| | % |
|---|---|
| Boundary | 5 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 25 |
| Main | 5 |
| Habitat | 65 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km

**Main**
Area 0.12 SE 0.08

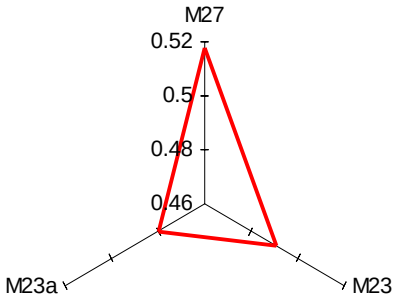
**Boundary**
Length 3.55 SE 2.17

## Floristic characteristics

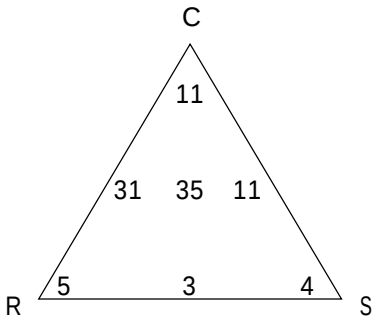
**Species number:** 142 (Medium) **No. of species groups:** 8 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Juncus effusus* | 70 | *Juncus effusus* | 14.1 | *Galium palustre* |
| *Ranunculus repens* | 67 | *Deschampsia cespitosa* | 7.5 | *Epilobium palustre* |
| *Galium palustre* | 65 | *Agrostis stolonifera* | 5.5 | *Ranunculus flammula* |
| *Agrostis stolonifera* | 57 | *Filipendula ulmaria* | 5.4 | *Stellaria alsine* |
| *Holcus lanatus* | 57 | *Holcus lanatus* | 4.0 | *Juncus effusus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 7.4 High | Mean 5.3 Medium | Mean 4.5 Medium | Mean 3.4 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 4.77 SE 1.78

**Vegetation class 55**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

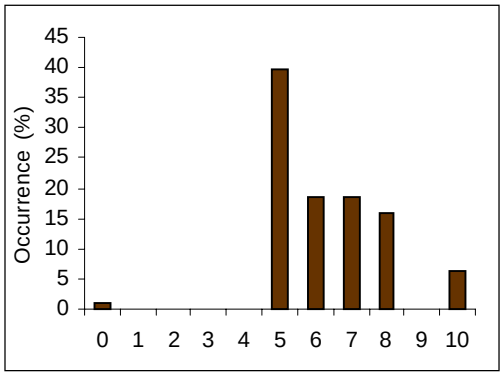
# Wet neutral/ acid rush grassland

## Description

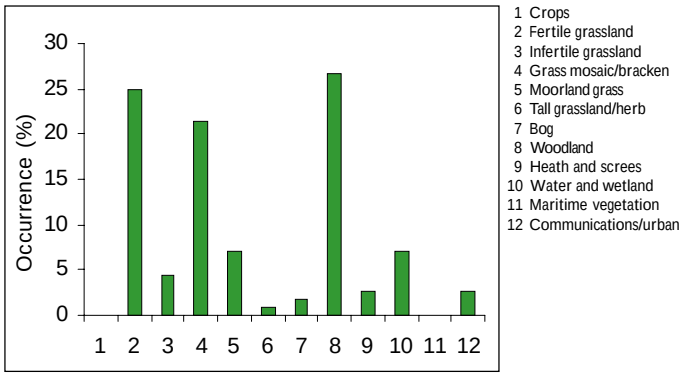
This class occurs throughout the landscape, but rarely by hedges, on a range of soil types. The class is quite common; it has mixtures of common bent (*Agrostis capillaris*), soft-rush (*Juncus effusus*), Yorkshire-fog (*Holcus lanatus*) and sweet vernal-grass (*Anthoxanthum odoratum*) as cover species, and a high cover of mosses. It is quite diverse because of the variable soil conditions. Species such as heath bedstraw (*Galium saxatile*), tufted hair-grass (*Deschampsia cespitosa*) and sheep's-fescue (*Festuca ovina*) are characteristic. This class is widespread in north and west Britain, but especially in Wales.

## Associated features

### Soils

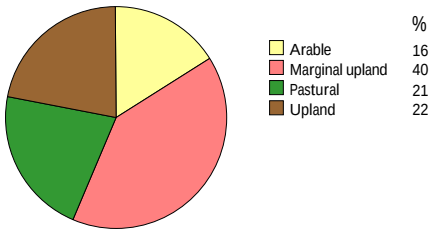



### Land cover

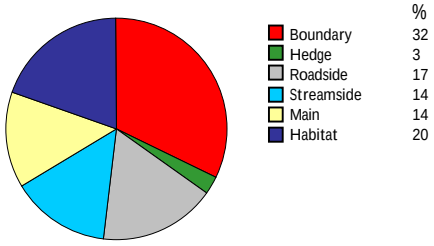



## Distribution

**Total number of plots** 112



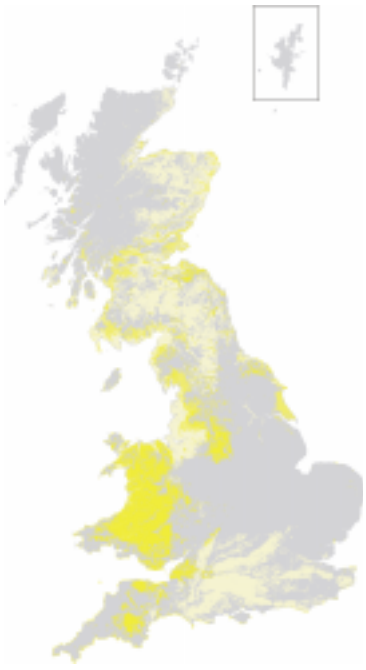

### Landscape association




### Plot types

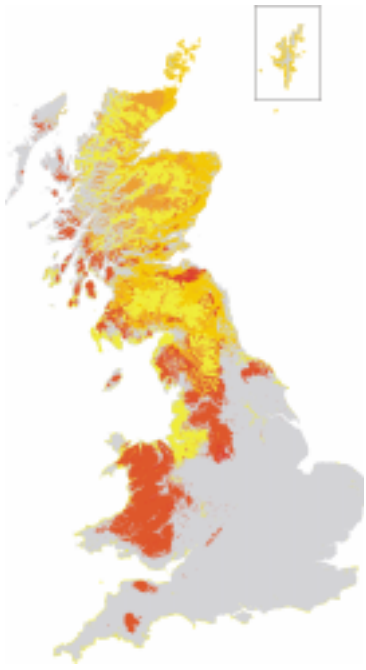
Mapscale approx: 1:11,000,000

0 kilometres 500



**Main**
Area 1.14 SE 0.30

Key units
Area 000's km$^{-2}$
Length 000's km



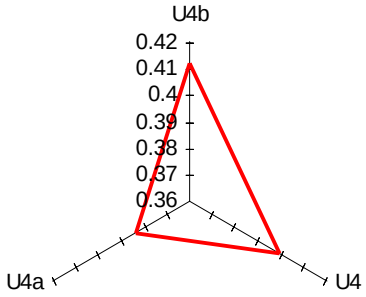
**Boundary**
Length 45.48 SE 9.29

## Floristic characteristics

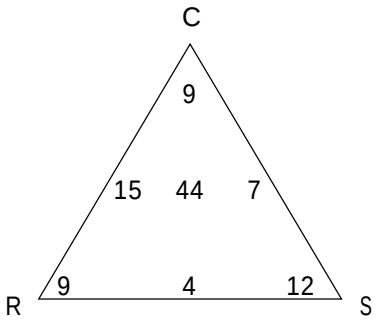
**Species number:** 204 (High) **No. of species groups:** 9 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Agrostis capillaris* | 89 | *Agrostis capillaris* | 20.4 | *Galium saxatile* |
| *Holcus lanatus* | 71 | *Holcus lanatus* | 8.5 | *Deschampsia cespitosa* |
| *Rhytidiadelphus squarrosus* | 68 | *Juncus effusus* | 7.6 | *Festuca ovina* |
| *Cerastium fontanum* | 63 | *Pteridium aquilinum* | 5.2 | *Pteridium aquilinum* |
| *Juncus effusus* | 58 | *Poa annua* | 4.3 | *Digitalis purpurea* |

### Similarity with National Vegetation Classification (NVC) types



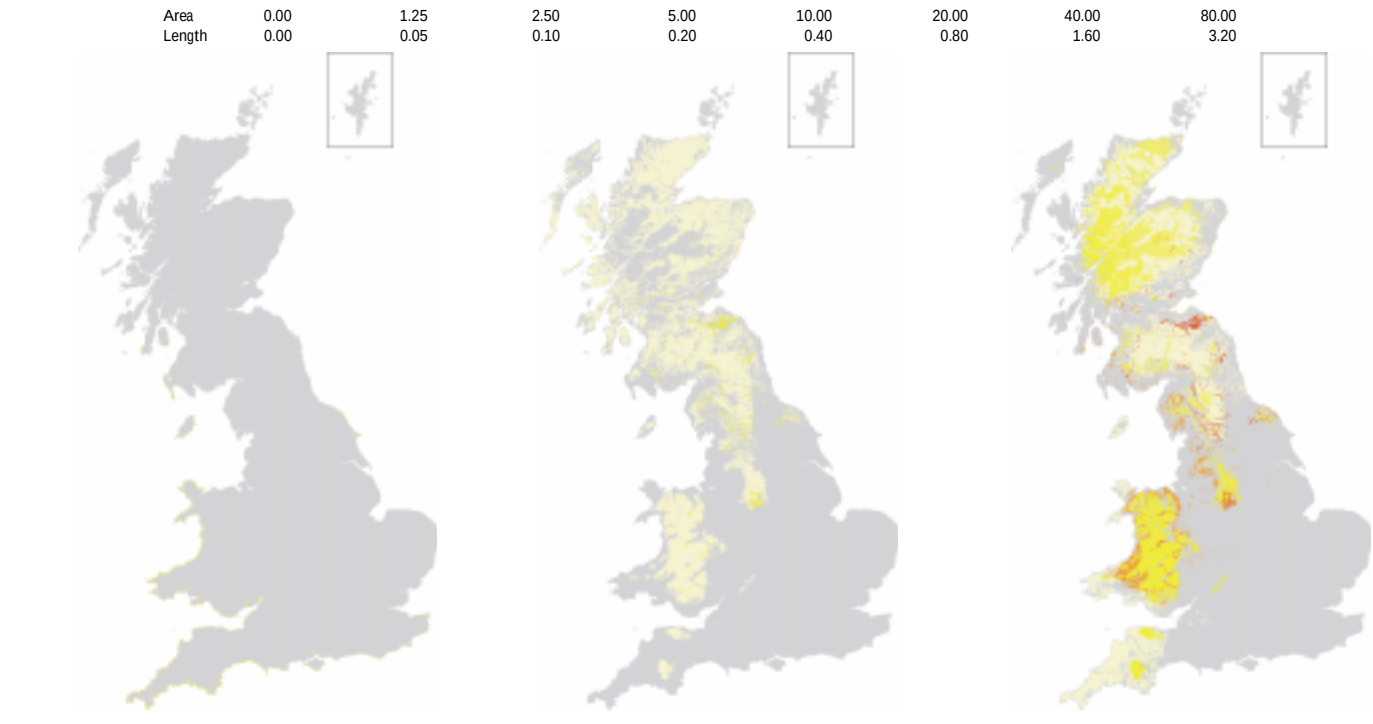

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 5.7 Medium | Mean 5.1 Medium | Mean 4.3 Medium | Mean 3.3 Medium |

## Distribution




**Hedge**
Length 0.08 SE 0.08

**Roadside**
Length 1.66 SE 0.59

**Streamside**
Length 7.48 SE 2.23

**Vegetation class 56**

**AGGREGATE CLASS IV**
**INFERTILE GRASSLAND**

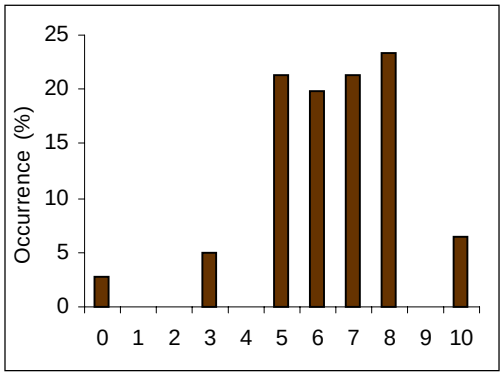
# Species-rich neutral/acid grassland

## Description

Although this class occurs mainly in fields, it is often present by roads but rarely by other linear features, on a variety of soil types. It is quite common; common bent (*Agrostis capillaris*) is the main cover species, but commonly Yorkshire-fog (*Holcus lanatus*), red fescue (*Festuca rubra*) and sweet vernal-grass (*Anthoxanthum odoratum*) are also present. The class is quite diverse and has a range of species typical of neutral pasture, such as ribwort plantain (*Plantago lanceolata*) and selfheal (*Prunella vulgaris*), as well as species having more acidic affinities, eg heath bedstraw (*Galium saxatile*) and tormentil (*Potentilla erecta*). Variability is due to management and also to soil type. This class is absent from south and east England, but occurs widely elsewhere.

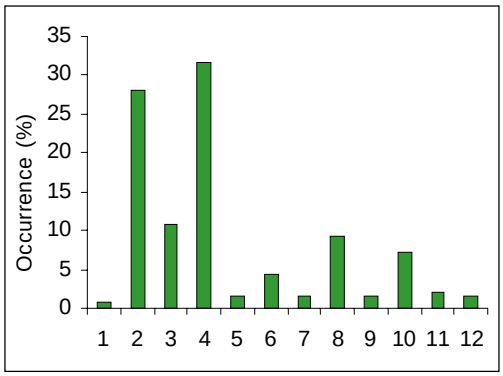
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

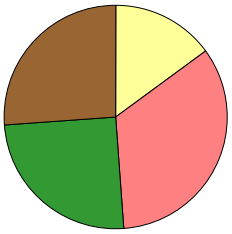
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

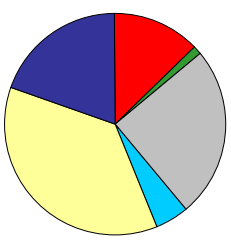
## Distribution

**Total number of plots** 141



| | % |
|---|---|
| Arable | 15 |
| Marginal upland | 34 |
| Pastural | 25 |
| Upland | 26 |

### Landscape association



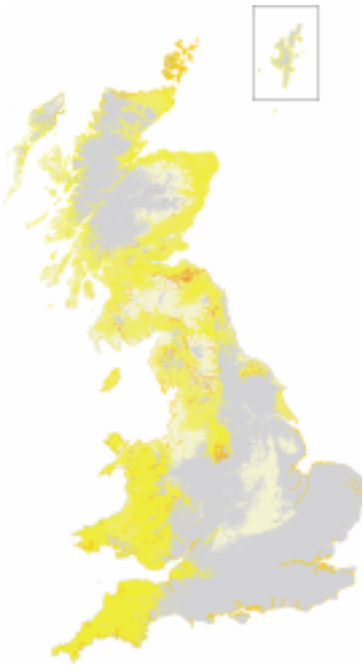
| | % |
|---|---|
| Boundary | 13 |
| Hedge | 1 |
| Roadside | 25 |
| Streamside | 5 |
| Main | 36 |
| Habitat | 20 |

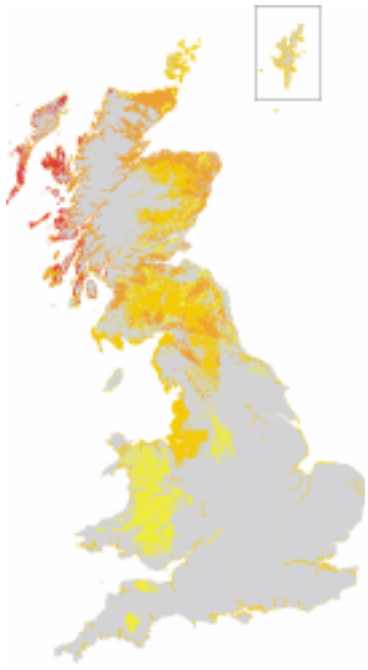
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km





**Main**
Area 2.42 SE 0.60

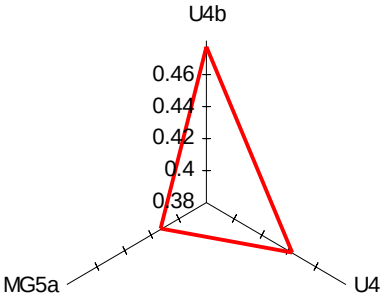
**Boundary**
Length 22.07 SE 7.01

## Floristic characteristics

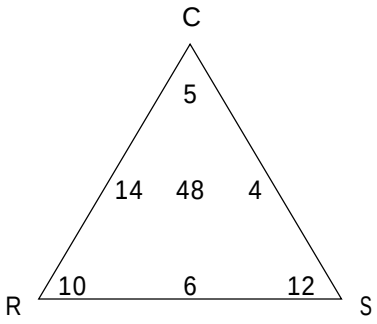
**Species number:** 224 (High) **No. of species groups:** 10 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Trifolium repens* | 89 | *Agrostis capillaris* | 24.7 | *Potentilla erecta* |
| *Agrostis capillaris* | 88 | *Holcus lanatus* | 8.8 | *Galium saxatile* |
| *Holcus lanatus* | 88 | *Trifolium repens* | 8.4 | *Plantago lanciolata* |
| *Anthoxanthum odoratum* | 86 | *Festuca rubra* | 7.7 | *Anthoxanthum odoratum* |
| *Cerastium fontanum* | 84 | *Lolium perenne* | 7.1 | *Festuca ovina* |

### Similarity with National Vegetation Classification (NVC) types



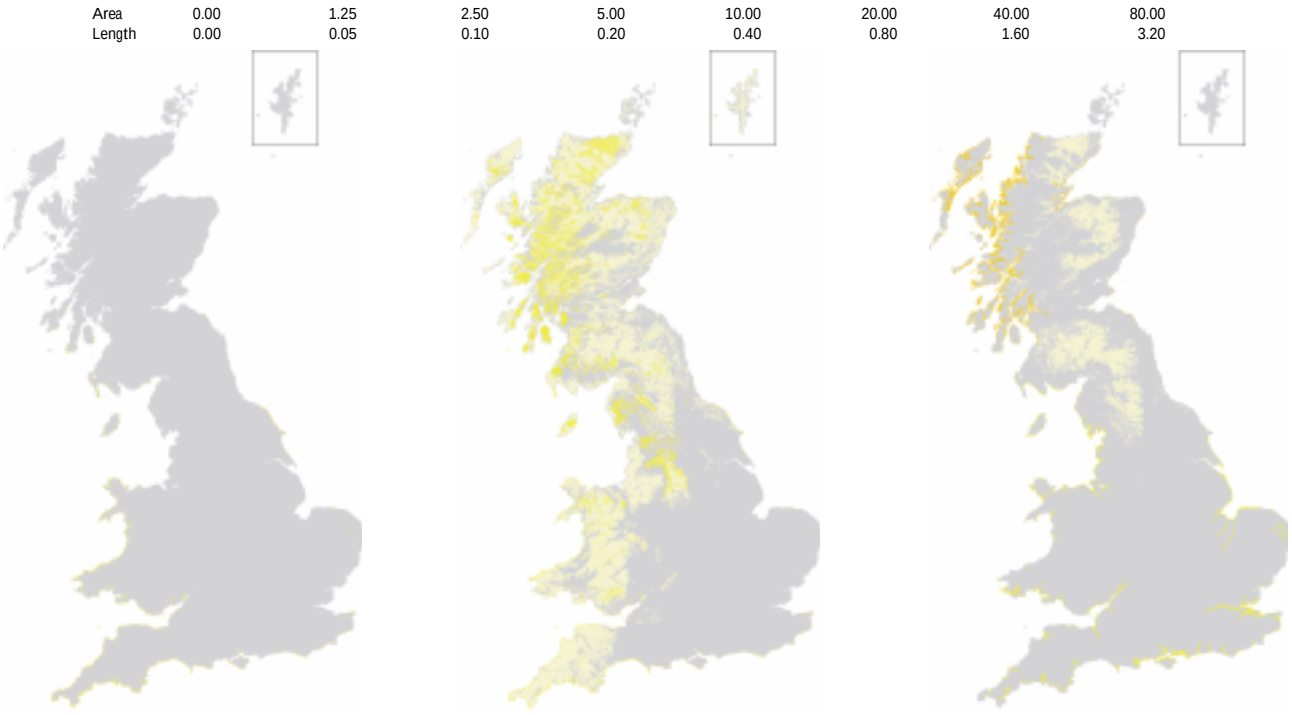

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.7 Medium | Mean 5.8 Medium | Mean 5.0 Medium | Mean 4.4 Medium | Mean 3.3 Medium |

## Distribution




**Hedge**
Length 0.08 SE 0.08

**Roadside**
Length 3.86 SE 1.20

**Streamside**
Length 1.41 SE 0.83

**Vegetation class 57**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

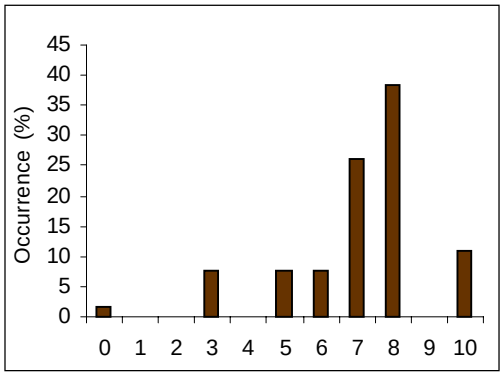
# Enriched acid grassland/ moorland grass flushes

## Description

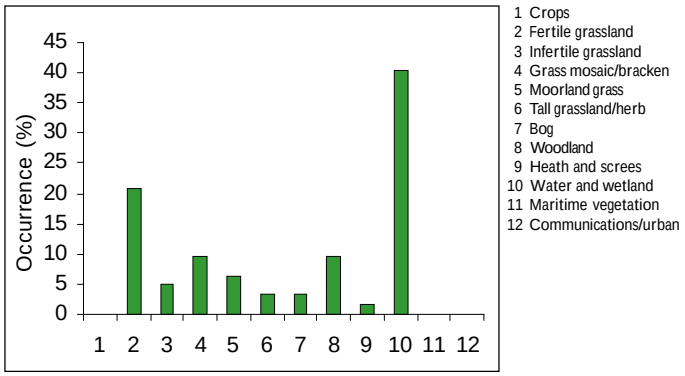
This class usually occurs in small flushes but may be found in open vegetation and by streamsides on water-affected soils. It is not common and purple moor-grass (*Molinia caerulea*) and soft-rush (*Juncus effusus*) are the main cover species, as well as Yorkshire-fog (*Holcus lanatus*), reflecting the variability in ground conditions. It is therefore a diverse type, with species such as meadow buttercup (*Ranunculus acris*), cuckoo flower (*Cardamine pratensis*) and marsh violet (*Viola palustris*). This class occurs in western and northern Britain, but not the high mountains of Scotland, in relatively even frequency.

## Associated features

### Soils

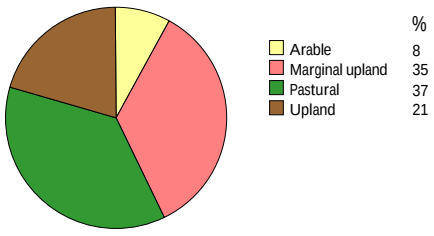



### Land cover

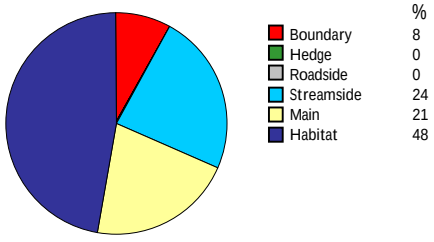



## Distribution

**Total number of plots** 63




### Landscape association

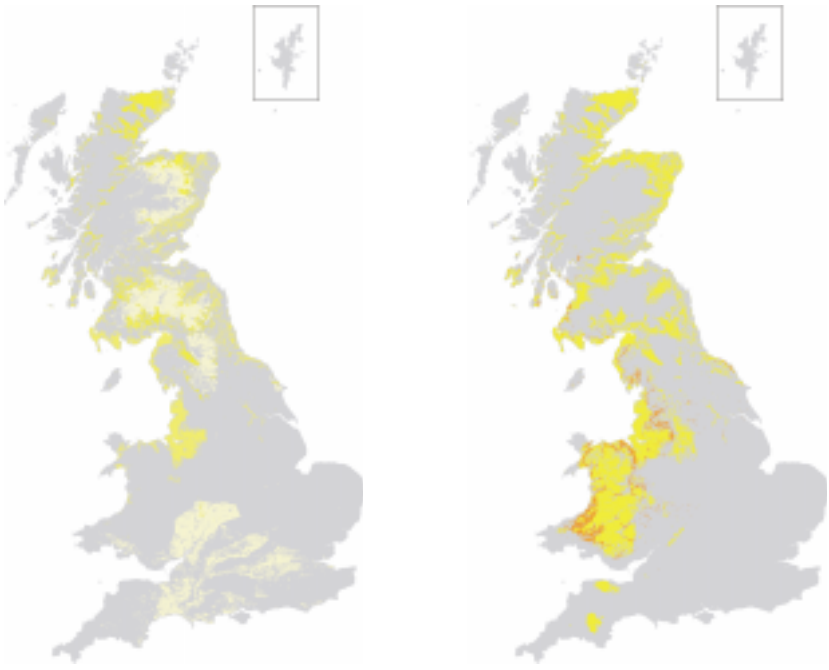



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.61 SE 0.27

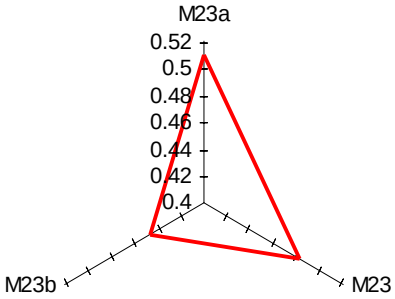
**Boundary**
Length 5.91 SE 2.80

## Floristic characteristics

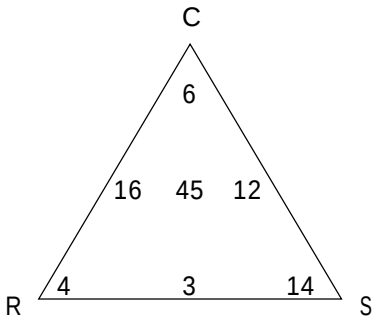
**Species number:** 168 (Medium) **No. of species groups:** 10 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Holcus lanatus* | 87 | *Molinia caerulea* | 15.3 | *Galium palustre* |
| *Potentilla erecta* | 74 | *Juncus effusus* | 11.8 | *Epilobium palustre* |
| *Molinia caerulea* | 70 | *Holcus lanatus* | 8.7 | *Filipendula ulmaria* |
| *Juncus effusus* | 69 | *Deschampsia cespitosa* | 5.9 | *Achillea ptarmica* |
| *Galium palustre* | 69 | *Agrostis stolonifera* | 4.7 | *Lotus uliginosus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 7.0 High | Mean 4.6 Medium | Mean 3.7 Medium | Mean 3.2 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 3.61 SE 1.27

**Vegetation class 58**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

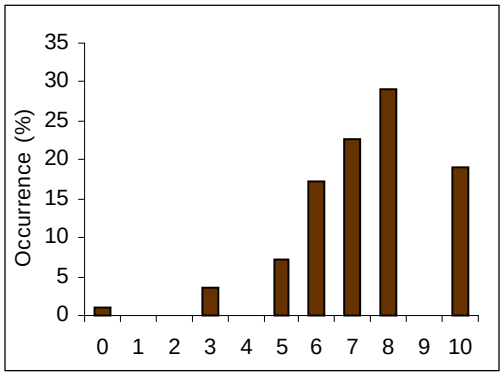
# Species-rich moorland grass stream-sides/flushes

## Description

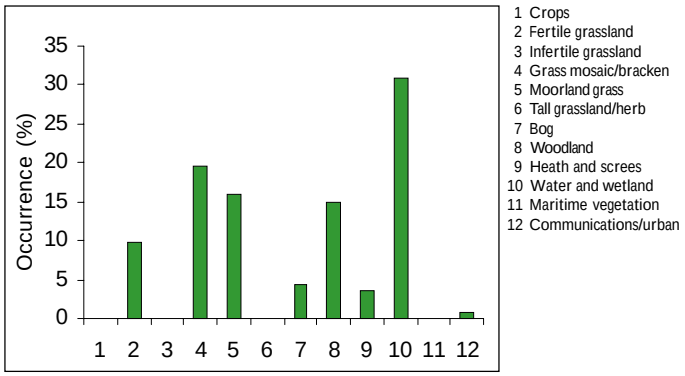
This class occurs mainly by streamsides but also in small patches of wetland or, rarely, by linear features, usually on seasonally flushed soils. It is quite a common class with soft-rush (*Juncus effusus*) and jointed rush (*Juncus articulatus*) as the main cover species, but also Yorkshire-fog (*Holcus lanatus*) and sweet vernal-grass (*Anthoxanthum odoratum*). The class is diverse, reflecting complex soil conditions, and characteristic species are marsh thistle (*Cirsium palustre*), marsh-bedstraw (*Galium palustre*) and bog stitchwort (*Stellaria alsine*). This class occurs throughout western and northern Britain but especially in the mountains of northern England, southern Scotland and the Grampians.

## Associated features

### Soils

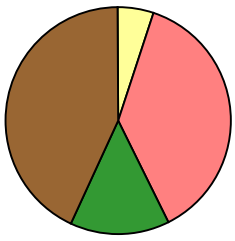



### Land cover



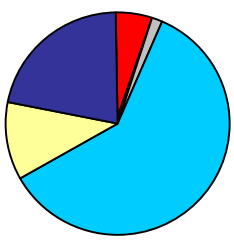

## Distribution

**Total number of plots** 113



| | % |
|---|---|
| Arable | 5 |
| Marginal upland | 37 |
| Pastural | 14 |
| Upland | 43 |

### Landscape association

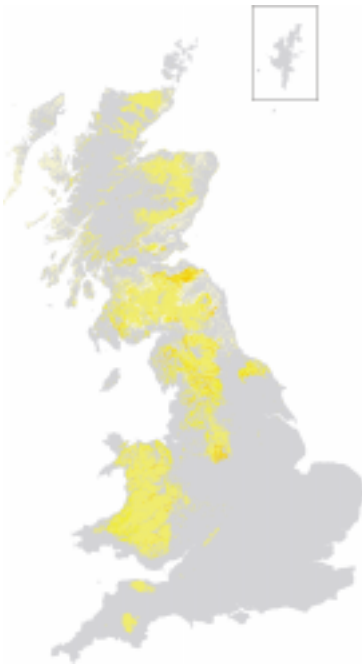


| | % |
|---|---|
| Boundary | 5 |
| Hedge | 0 |
| Roadside | 2 |
| Streamside | 59 |
| Main | 12 |
| Habitat | 22 |

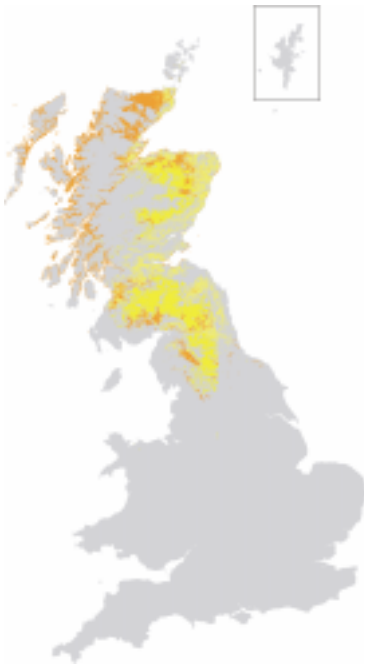
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km



**Main**
Area 0.97 SE 0.30

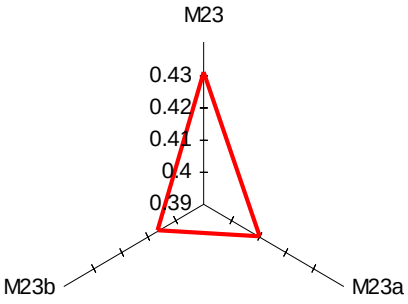
**Boundary**
Length 6.09 SE 2.78

## Floristic characteristics

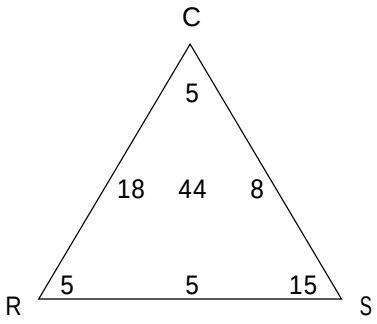
**Species number:** 204 (High) **No. of species groups:** 9 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Holcus lanatus* | 88 | *Juncus effusus* | 18.1 | *Galium palustre* |
| *Juncus effusus* | 88 | *Agrostis capillaris* | 7.1 | *Stellaria alsine* |
| *Rumex acetosa* | 74 | *Holcus lanatus* | 6.6 | *Cirsium palustre* |
| *Anthoxanthum odoratum* | 69 | *Anthoxanthum odoratum* | 4.3 | *Epilobium palustre* |
| *Cirsium palustre* | 68 | *Holcus mollis* | 3.7 | *Holcus mollis* |

### Similarity with National Vegetation Classification (NVC) types



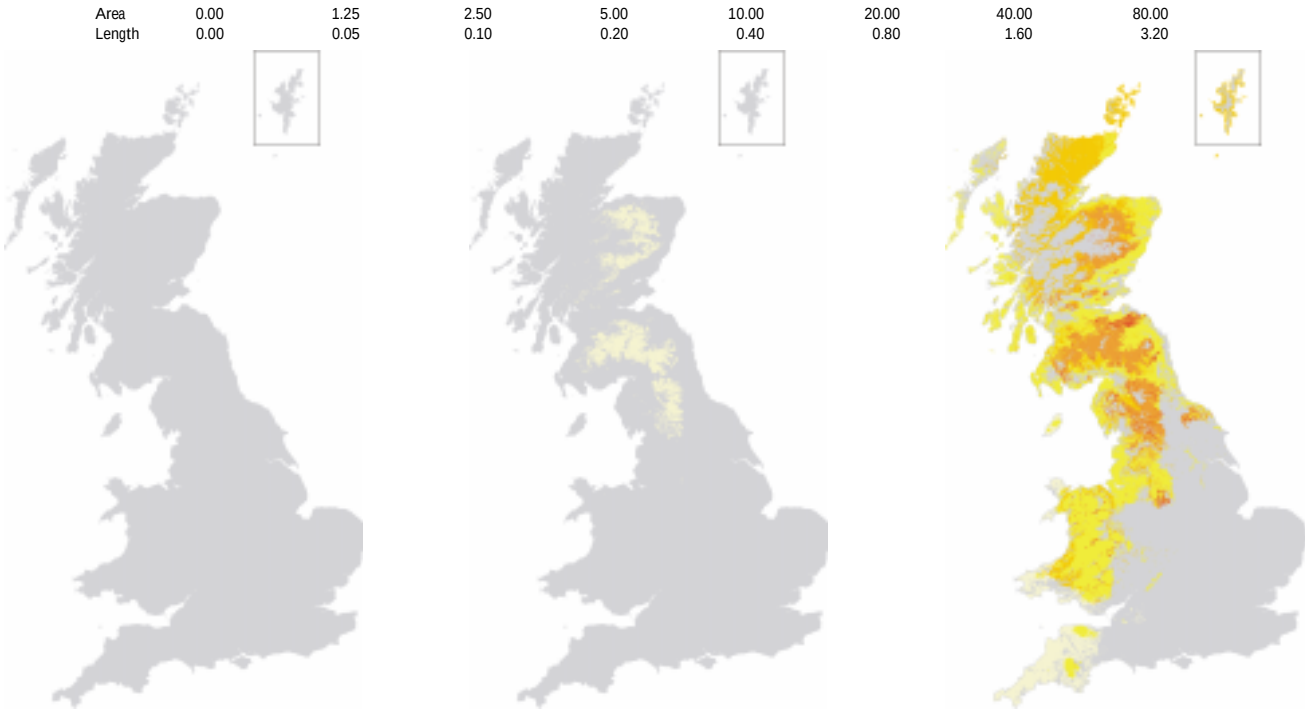

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 6.8 High | Mean 4.6 Medium | Mean 3.7 Medium | Mean 3.2 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.13 SE 0.13

**Streamside**
Length 24.10 SE 5.02

**Vegetation class 59**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

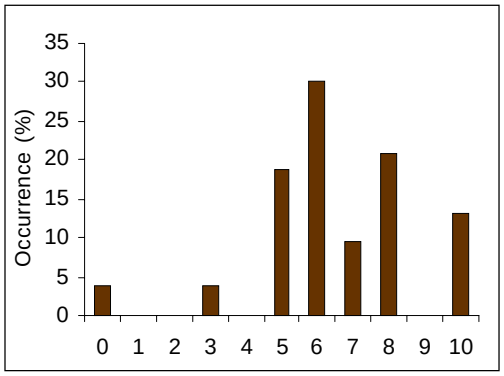
# Wooded streamsides

## Description

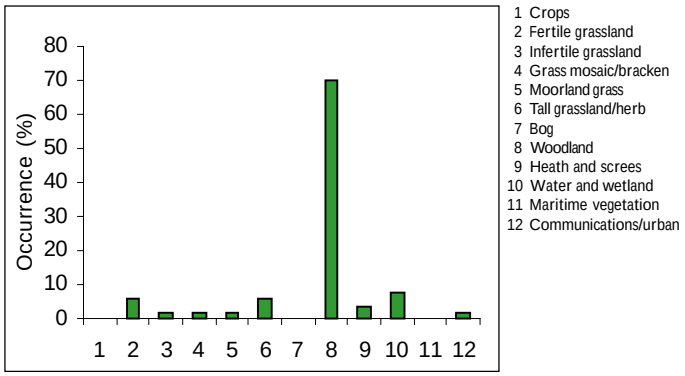
Although this class occurs mainly in the uplands by streamsides in woodlands, it may also be found in open vegetation or on soils with poor drainage. Soft-rush (*Juncus effusus*), tufted hair-grass (*Deschampsia cespitosa*) and Yorkshire-fog (*Holcus lanatus*) are the main cover species, with birch (*Betula* spp.) or other trees forming the canopy. The class is locally common, and is quite diverse, with species such as foxglove (*Digitalis purpurea*), marsh thistle (*Cirsium palustre*) and wood-sorrel (*Oxalis acetosella*) characteristic. This class occurs throughout upland Britain, but is also present in the lowlands of the north.

## Associated features

### Soils

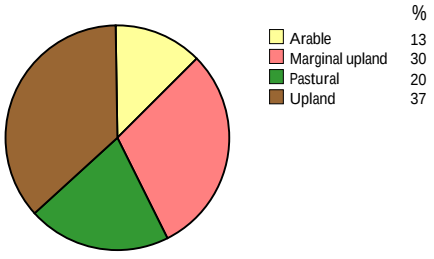



### Land cover

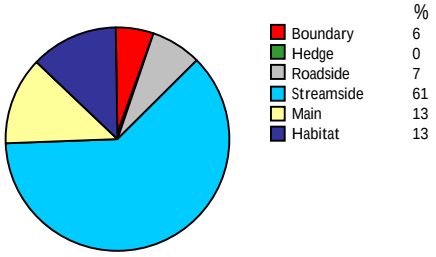



## Distribution

**Total number of plots** 54




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.50 SE 0.24

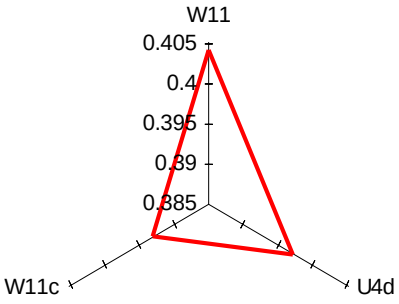
**Boundary**
Length 1.24 SE 0.85

## Floristic characteristics

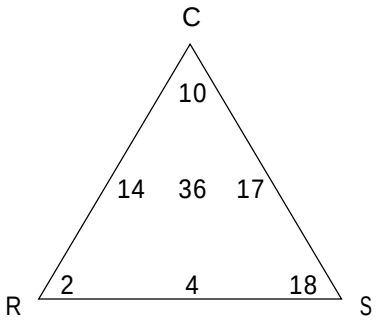
**Species number:** 144 (Medium) **No. of species groups:** 11 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Juncus effusus* | 72 | *Juncus effusus* | 8.3 | *Viola palustris* |
| *Holcus lanatus* | 66 | *Deschampsia cespitosa* | 7.4 | *Juncus effusus* |
| *Galium saxatile* | 64 | *Molinia caerulea* | 6.0 | *Stellaria alsine* |
| *Digitalis purpurea* | 64 | *Agrostis capillaris* | 5.4 | *Cirsium palustre* |
| *Oxalis acetosella* | 57 | *Holcus mollis* | 5.3 | *Digitalis purpurea* |

### Similarity with National Vegetation Classification (NVC) types



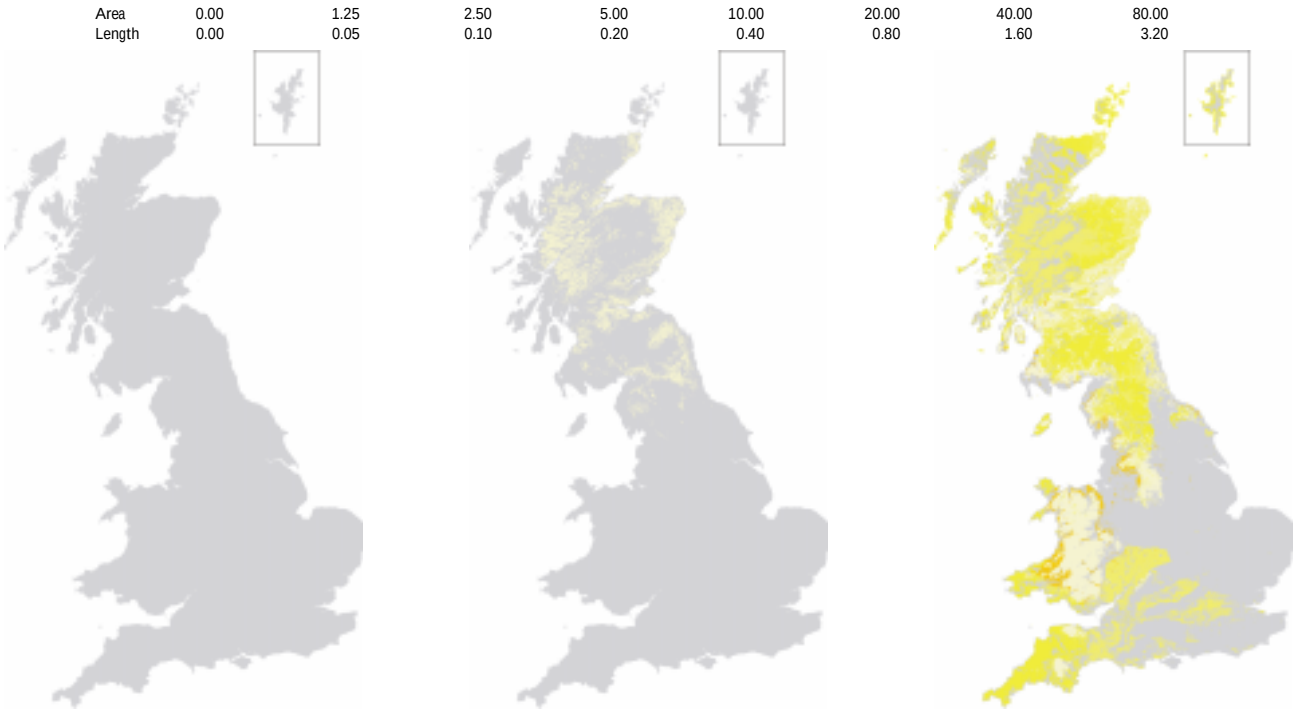

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.3 Low | Mean 6.5 Medium | Mean 4.4 Medium | Mean 3.9 Medium | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.30 SE 0.22

**Streamside**
Length 9.97 SE 2.60

**Vegetation class 60**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

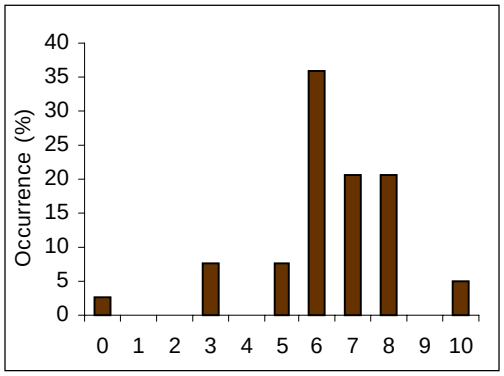
# Acid grassland/ streamsides/ flushes

## Description

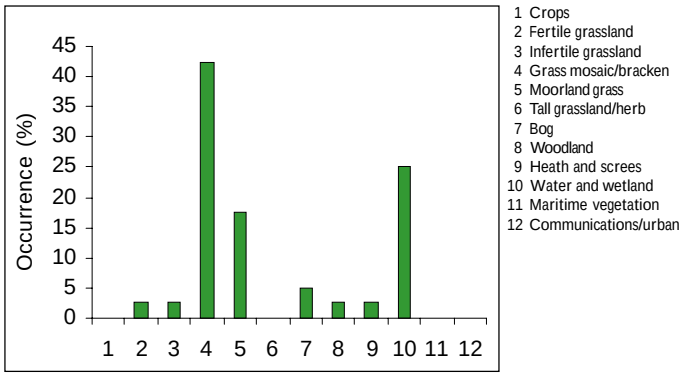
This class occurs mainly beside streams or in flushes but occasionally by linear features, on a range of soils, usually those affected by water. The main cover species are soft rush (*Juncus effusus*) sweet vernal-grass (*Anthoxanthum odoratum*), mat-grass (*Nardus stricta*) and Yorkshire-fog (*Holcus lanatus*). The class is not very common and is quite diverse, with species such as selfheal (*Prunella vulgaris*), marsh pimpernel (*Anagallis tenella*) and lesser spearwort (*Ranunculus flammula*) reflecting its inherent variability. This class is largely confined to marginal and upland landscapes, especially in Wales and the Pennines, but is also occasionally present in lowland situations.

## Associated features

### Soils

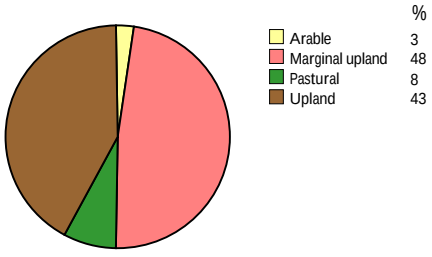



### Land cover

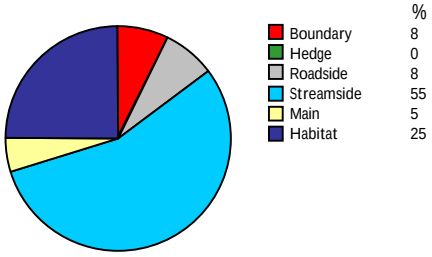



## Distribution

**Total number of plots** 40




### Landscape association

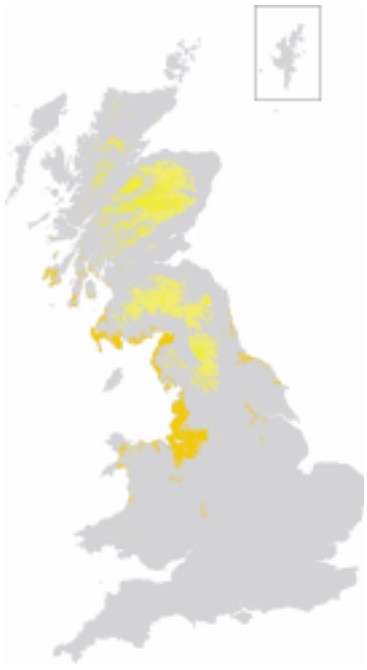



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.14 SE 0.11

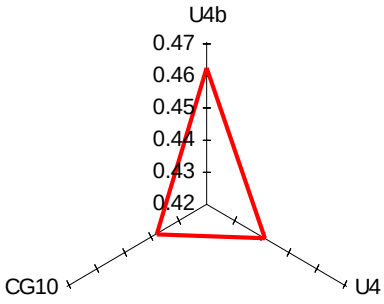
**Boundary**
Length 3.65 SE 2.30

## Floristic characteristics

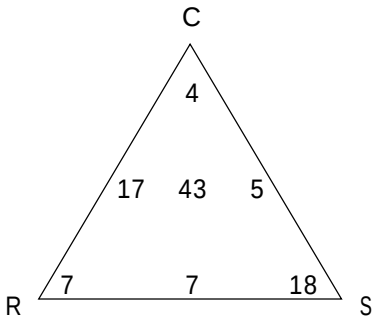
**Species number:** 141 (Medium) **No. of species groups:** 9 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Anthoxanthum odoratum* | 87 | *Juncus effusus* | 8.2 | *Bellis perennis* |
| *Trifolium repens* | 87 | *Anthoxanthum odoratum* | 6.3 | *Prunella vulgaris* |
| *Nardus stricta* | 84 | *Agrostis capillaris* | 6.1 | *Anagallis tenella* |
| *Prunella vulgaris* | 82 | *Nardus stricta* | 5.9 | *Cynosurus cristatus* |
| *Juncus effusus* | 76 | *Festuca ovina* | 5.0 | *Carex demissa* |

### Similarity with National Vegetation Classification (NVC) types



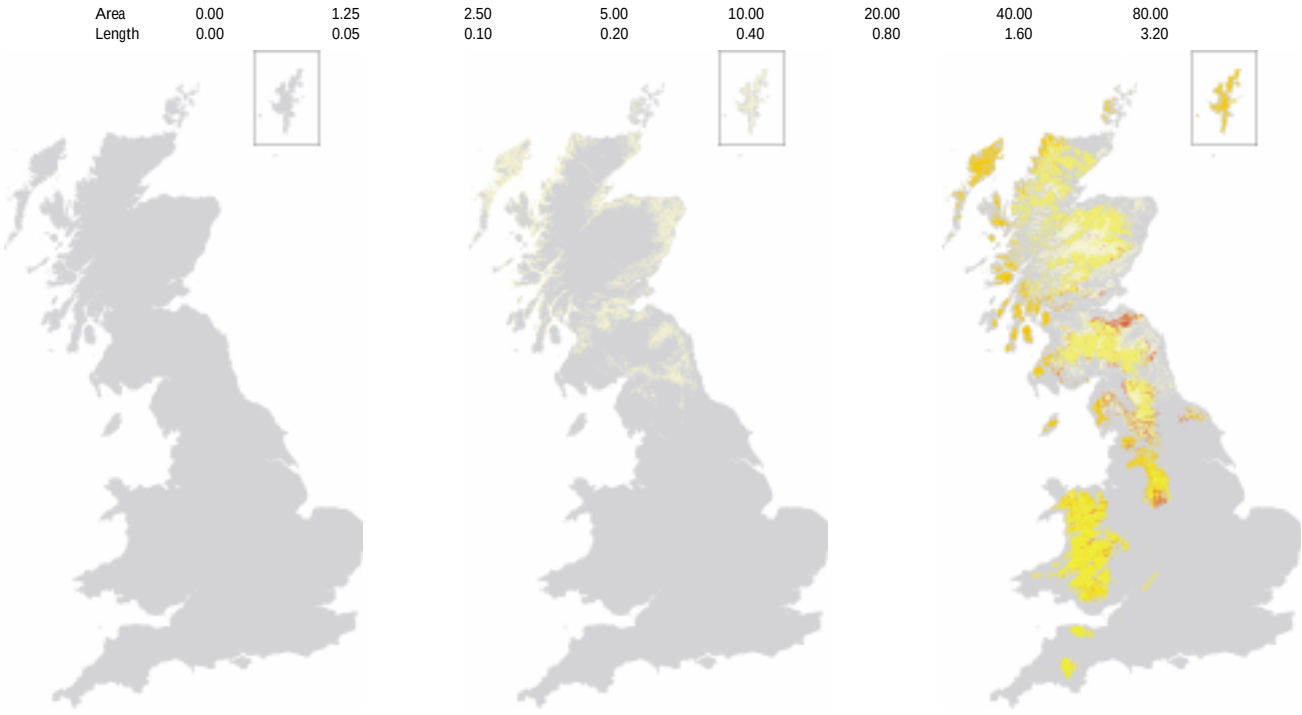

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 High | Mean 5.8 Medium | Mean 4.6 Medium | Mean 3.7 Medium | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.21 SE 0.13

**Streamside**
Length 9.52 SE 3.70

**Vegetation class 61**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

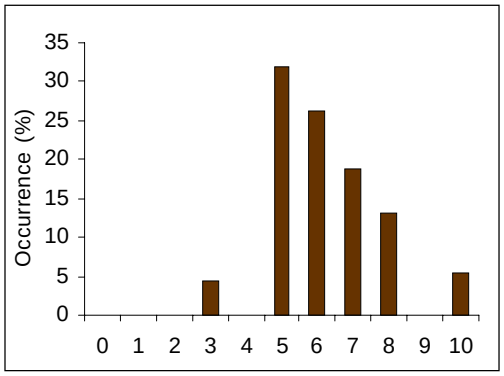
# Species-rich acid grassland

## Description

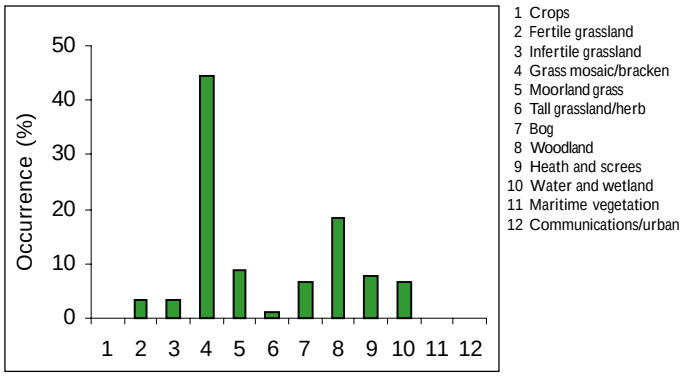
This class occurs most often by roads but also in open vegetation, mainly on acidic but moderately fertile soils. The ground cover is variable but usually consists of common bent (*Agrostis capillaris*), sheep's-fescue (*Festuca ovina*) and sweet vernal-grass (*Anthoxanthum odoratum*). The class is diverse, with a mixture of species from acidic habitats such as heath bedstraw (*Galium saxatile*) and heath wood-rush (*Luzula multiflora*), and those more typical of neutral conditions such as ribwort plantain (*Plantago lanceolata*) and germander speedwell (*Veronica chamaedrys*). This class occurs mainly in the uplands, especially in northern England and Scotland.

## Associated features

### Soils

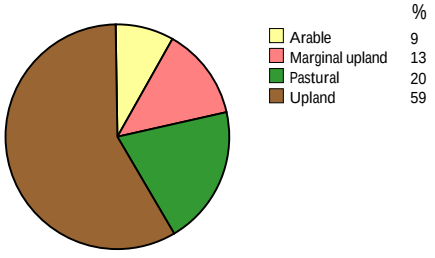



### Land cover

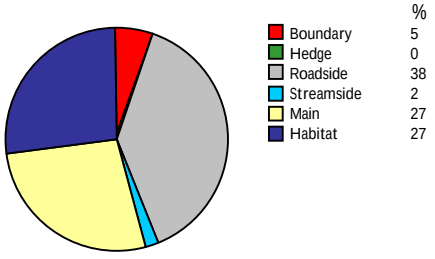



## Distribution

**Total number of plots** 92



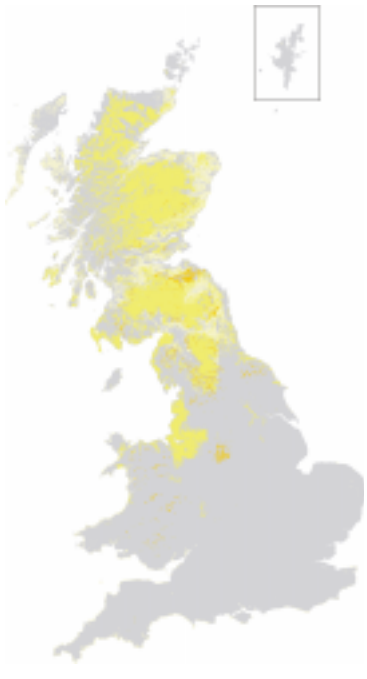

### Landscape association



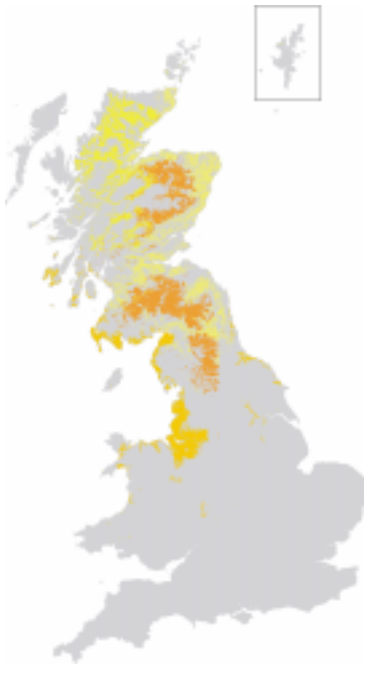

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 0.86 SE 0.27

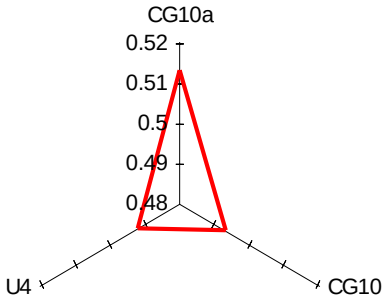
**Boundary**
Length 9.34 SE 5.58

## Floristic characteristics

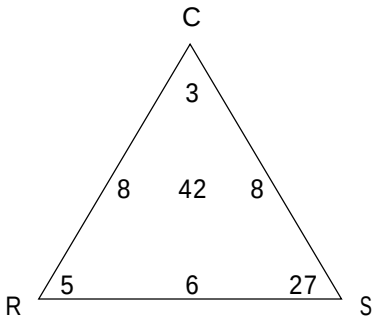
**Species number:** 206 (High) **No. of species groups:** 5 (Low) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Potentilla erecta* | 91 | *Agrostis capillaris* | 16.1 | *Veronica chamaedrys* |
| *Anthoxanthum odoratum* | 90 | *Festuca ovina* | 12.4 | *Achillea millefolium* |
| *Rhytidiadelphus squarrosus* | 87 | *Anthoxanthum odoratum* | 10.9 | *Veronica officinalis* |
| *Agrostis capillaris* | 82 | *Pteridium aquilinum* | 9.0 | *Plantago lanceolata* |
| *Holcus lanatus* | 75 | *Festuca rubra* | 7.4 | *Senecio jacobaea* |

### Similarity with National Vegetation Classification (NVC) types



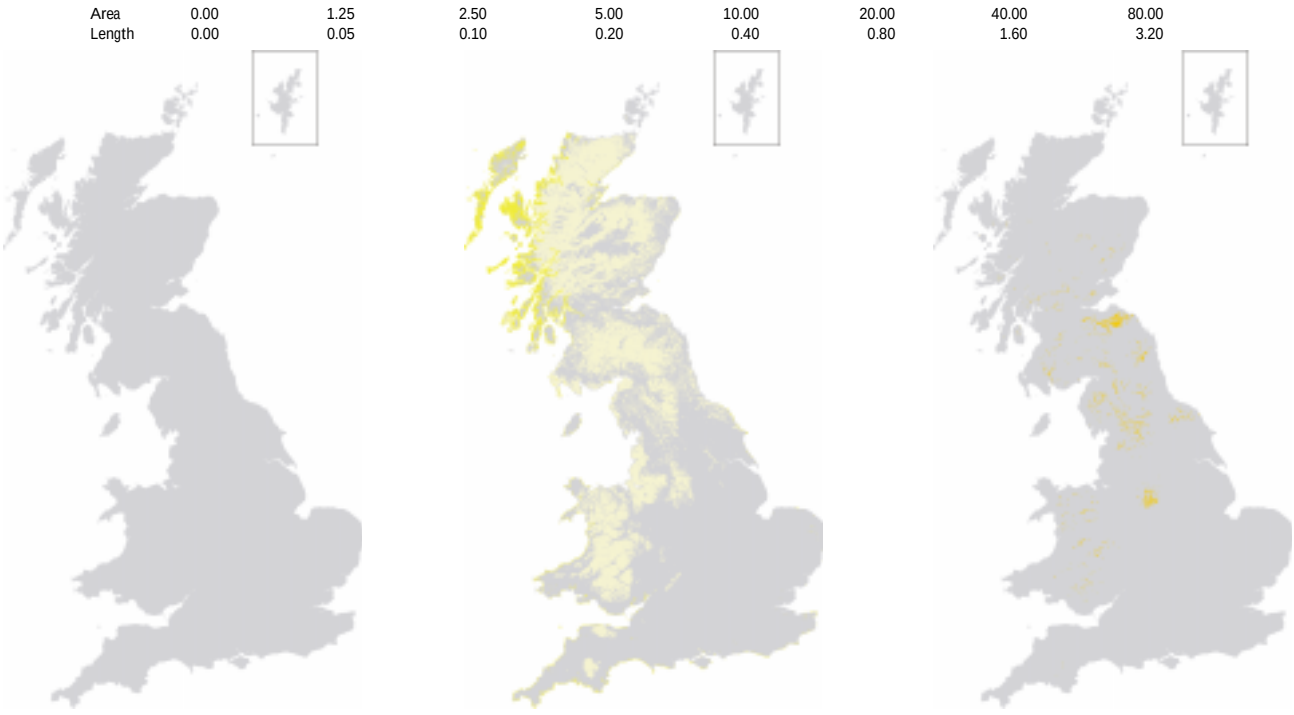

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.1 High | Mean 6.6 Medium | Mean 4.6 Medium | Mean 3.6 Medium | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 2.11 SE 0.70

**Streamside**
Length 0.75 SE 0.75

**Vegetation class 62**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

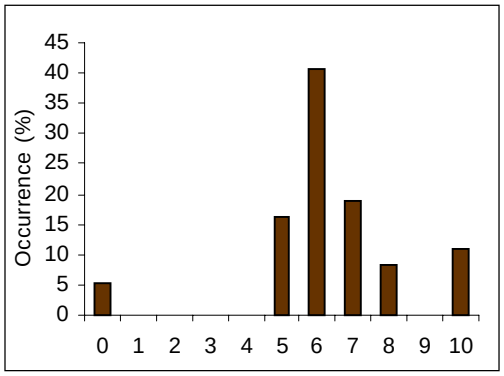
# Woodland on podzolic soils

## Description

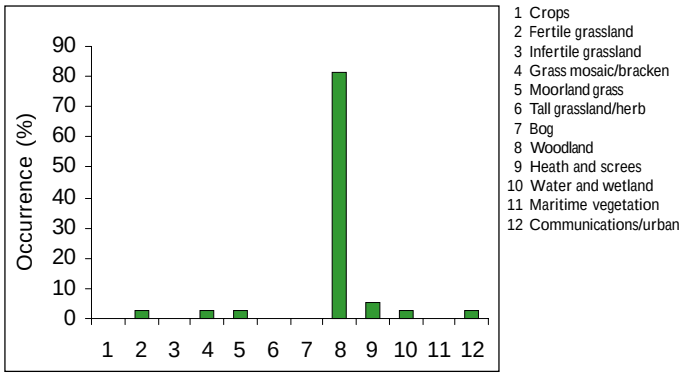
This class occurs mainly in woodlands but may also be found by shaded streamsides or boundaries, invariably on podzolic soils. Scots pine (*Pinus sylvestris*) is the main tree species but oak (*Quercus* spp.) or birch (*Betula* spp.) may also be present. There is usually a high ground cover of bracken (*Pteridium aquilinum*) and sometimes purple moor-grass (*Molinia caerulea*) in wet situations. The class is uncommon, of low diversity, with plants such as heather (*Calluna vulgaris*), common bent (*Agrostis capillaris*) and heath bedstraw (*Galium saxatile*) characteristic. The class occurs throughout Britain on appropriate soils.

## Associated features

### Soils

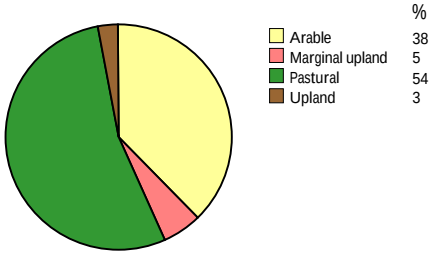



### Land cover

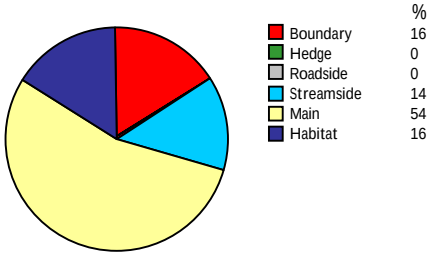



## Distribution

**Total number of plots** 37




### Landscape association

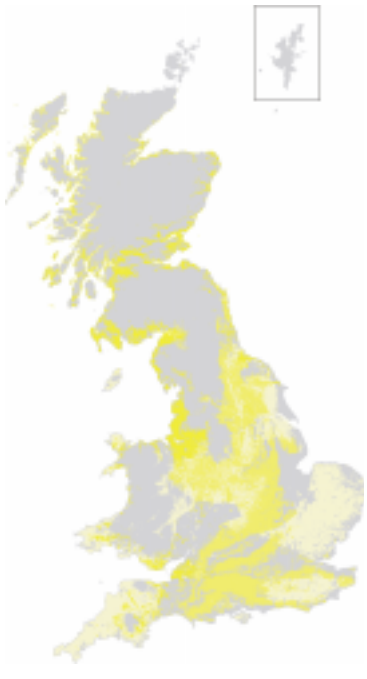



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



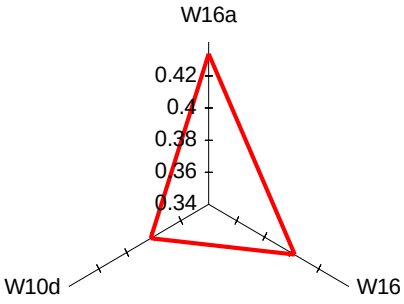
**Main**
Area 1.32 SE 0.39

**Boundary**
Length 3.11 SE 1.57

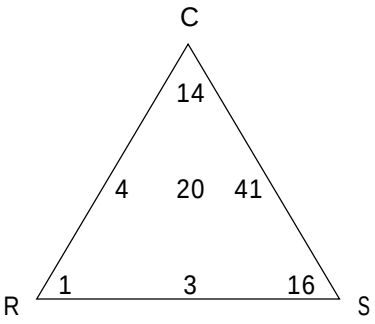
## Floristic characteristics

| **Species number:** | 82 (Low) | **No. of species groups:** | 11 (High) | **Most frequent group:** | 27 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Molinia caerulea* | 56 | *Pteridium aquilinum* | 17.7 | *Molinia caerulea* | |
| *Pteridium aquilinum* | 56 | *Pinus sylvestris* | 14.4 | *Deschampsia flexuosa* | |
| *Deschampsia flexuosa* | 50 | *Deschampsia flexuosa* | 11.3 | *Pteridium aquilinum* | |
| *Pinus sylvestris* | 34 | *Molinia caerulea* | 9.3 | *Sorbus aucuparia* | |
| *Holcus lanatus* | 22 | *Calluna vulgaris* | 3.0 | *Calluna vulgaris* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.9 Medium | Mean 6.1 Medium | Mean 3.8 Medium | Mean 3.6 Medium | Mean 3.2 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 1.04 SE 0.57

**Vegetation class 63**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

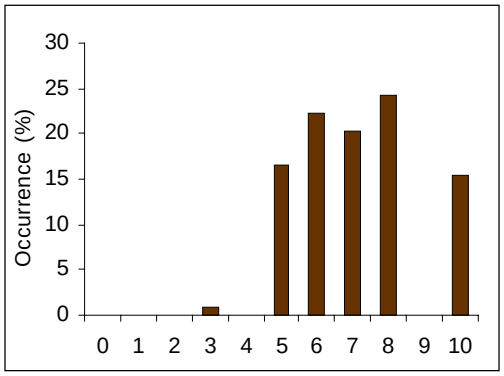
# Herb-rich streamsides/ acid grassland

## Description

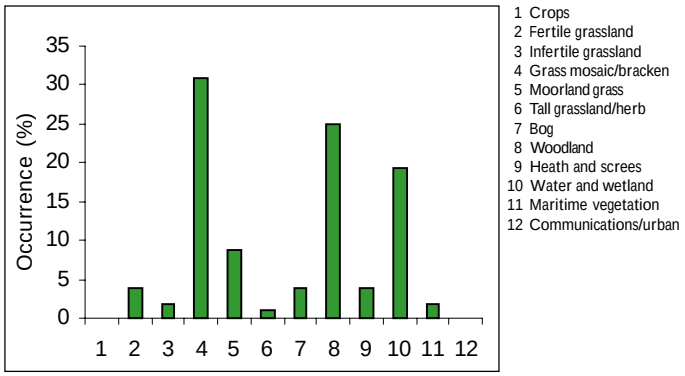
Although this class is mainly found on streamsides, it is also present in open upland vegetation and occasionally on roadsides, on a range of upland soils. Common bent (*Agrostis capillaris*) is the main cover species, with soft-rush (*Juncus effusus*), sweet vernal-grass (*Anthoxanthum odoratum*) and Yorkshire-fog (*Holcus lanatus*) also locally abundant. The class is quite widespread and its high diversity is reflected in the contrasting ecological amplitudes of typical species such as meadow buttercup (*Ranunculus acris*), sheep's-fescue (*Festuca ovina*) and wood-sorrel (*Oxalis acetosella*). It is present in marginal and upland landscapes throughout Britain and occasionally in the lowlands.

## Associated features

### Soils

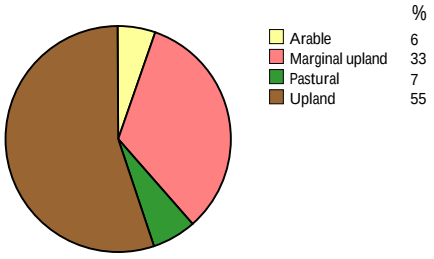



### Land cover

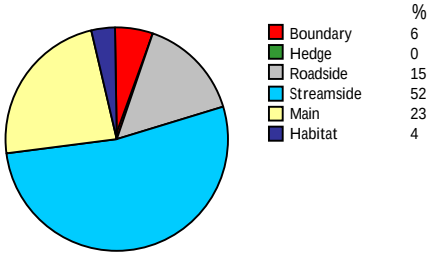



## Distribution

**Total number of plots** 107



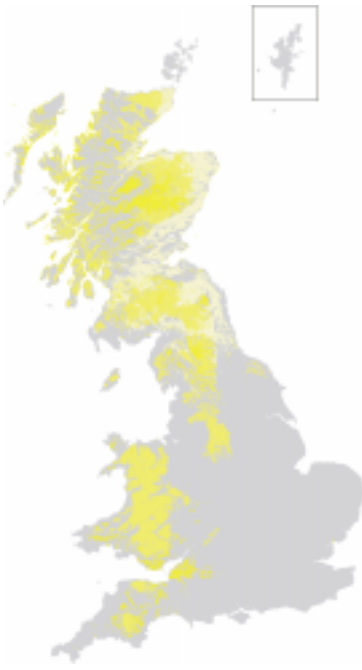

### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



**Main**
Area 1.13 SE 0.30

Key units
Area 000's km$^{-2}$
Length 000's km

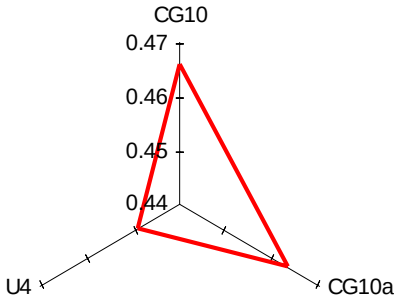
**Boundary**
Length 6.73 SE 3.45

## Floristic characteristics

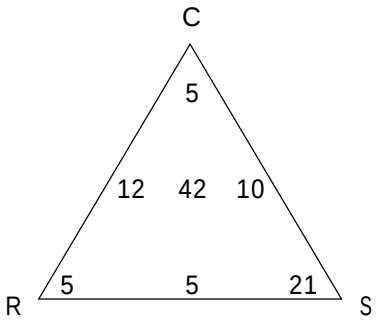
**Species number:** 221 (High) **No. of species groups:** 7 (Medium) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Potentilla erecta* | 89 | *Agrostis capillaris* | 14.9 | *Cirsium palustre* |
| *Holcus lanatus* | 88 | *Juncus effusus* | 9.1 | *Prunella vulgaris* |
| *Anthoxanthum odoratum* | 87 | *Anthoxanthum odoratum* | 8.4 | *Cynosurus cristatus* |
| *Agrostis capillaris* | 85 | *Festuca ovina* | 7.8 | *Trifolium repens* |
| *Rhytidiadelphus squarrosus* | 83 | *Holcus lanatus* | 7.7 | *Plantago lanceolata* |

### Similarity with National Vegetation Classification (NVC) types



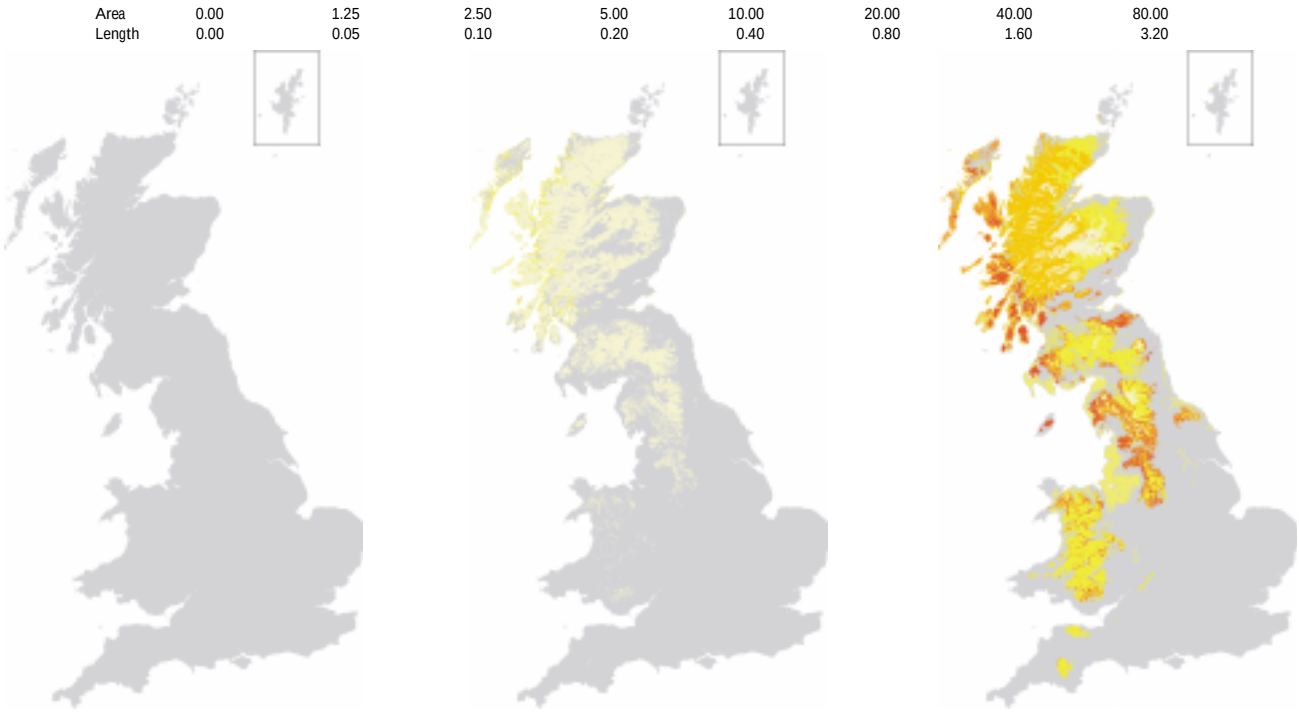

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 6.3 Medium | Mean 4.5 Medium | Mean 3.6 Medium | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 1.31 SE 0.49

**Streamside**
Length 23.89 SE 7.34

**Vegetation class 64**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

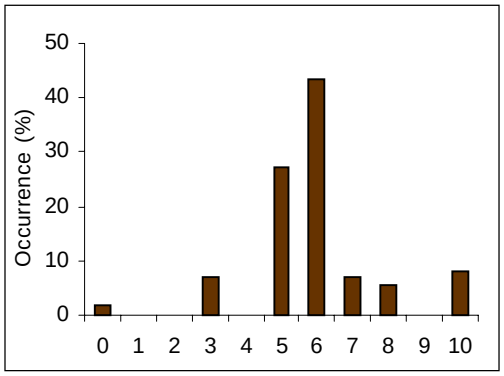
# Bracken/acid grassland

## Description

This class is usually in open vegetation but also often in woodlands and may also be on roadsides and streamsides, usually on podzolic or brown soils. Although bracken (*Pteridium aquilinum*) is the most extensive cover species, this depends on management, and common bent (*Agrostis capillaris*) and sheep's-fescue (*Festuca ovina*) are often equally important. The class is common and of average diversity; typical species are tormentil (*Potentilla erecta*), heath bedstraw (*Galium saxatile*) and wavy hair-grass (*Deschampsia flexuosa*), reflecting its acidic affinities. Some species, such as common dog-violet (*Viola riviniana*), reflect its woodland affinities. This class occurs throughout western and northern Britain.

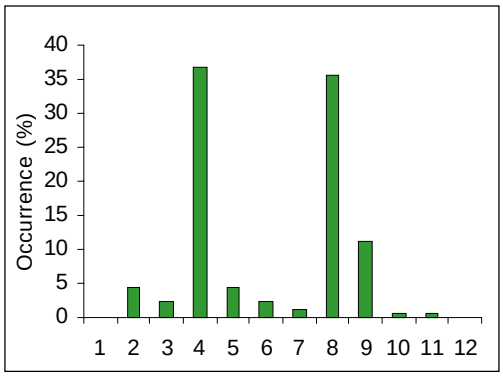
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

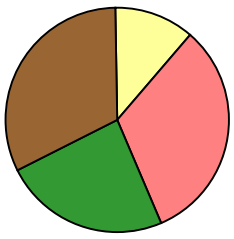
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

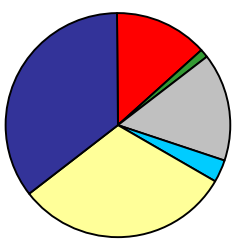
## Distribution

**Total number of plots** 162



| | % |
|---|---|
| Arable | 12 |
| Marginal upland | 31 |
| Pastural | 24 |
| Upland | 33 |

### Landscape association

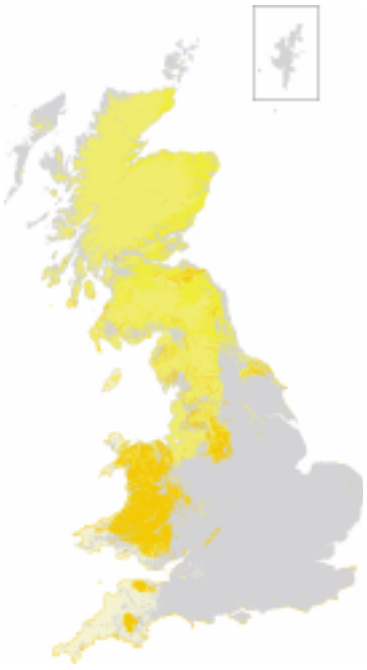


| | % |
|---|---|
| Boundary | 14 |
| Hedge | 1 |
| Roadside | 15 |
| Streamside | 3 |
| Main | 31 |
| Habitat | 36 |

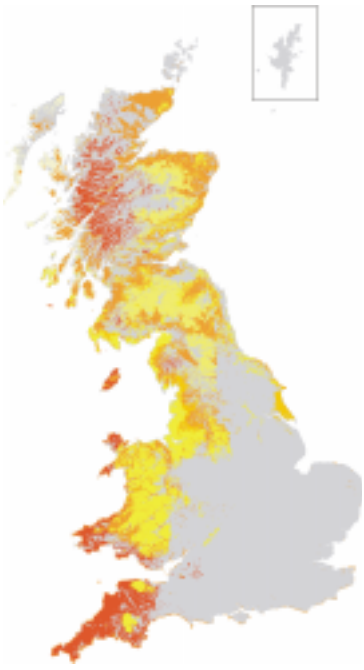
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 2.69 SE 0.52

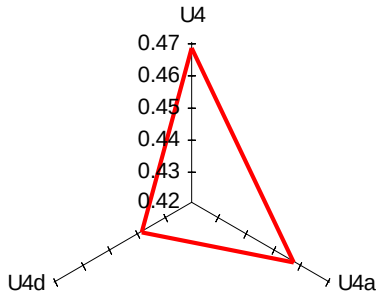
**Boundary**
Length 31.64 SE 9.10

## Floristic characteristics

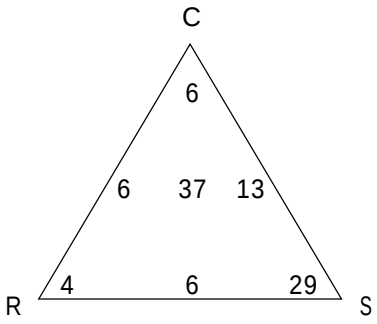
**Species number:** 198 (Medium) **No. of species groups:** 11 (High) **Most frequent group:** 29

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Agrostis capillaris* | 85 | *Pteridium aquilinum* | 21.8 | *Galium saxatile* |
| *Galium saxatile* | 82 | *Agrostis capillaris* | 17.7 | *Potentilla erecta* |
| *Potentilla erecta* | 69 | *Deschampsia flexuosa* | 6.9 | *Festuca ovina* |
| *Anthoxanthum odoratum* | 66 | *Festuca ovina* | 6.7 | *Anthoxanthum odoratum* |
| *Rhytidiadelphus squarrosus* | 62 | *Galium saxatile* | 6.2 | *Rhytidiadelphus squarrosus* |

### Similarity with National Vegetation Classification (NVC) types



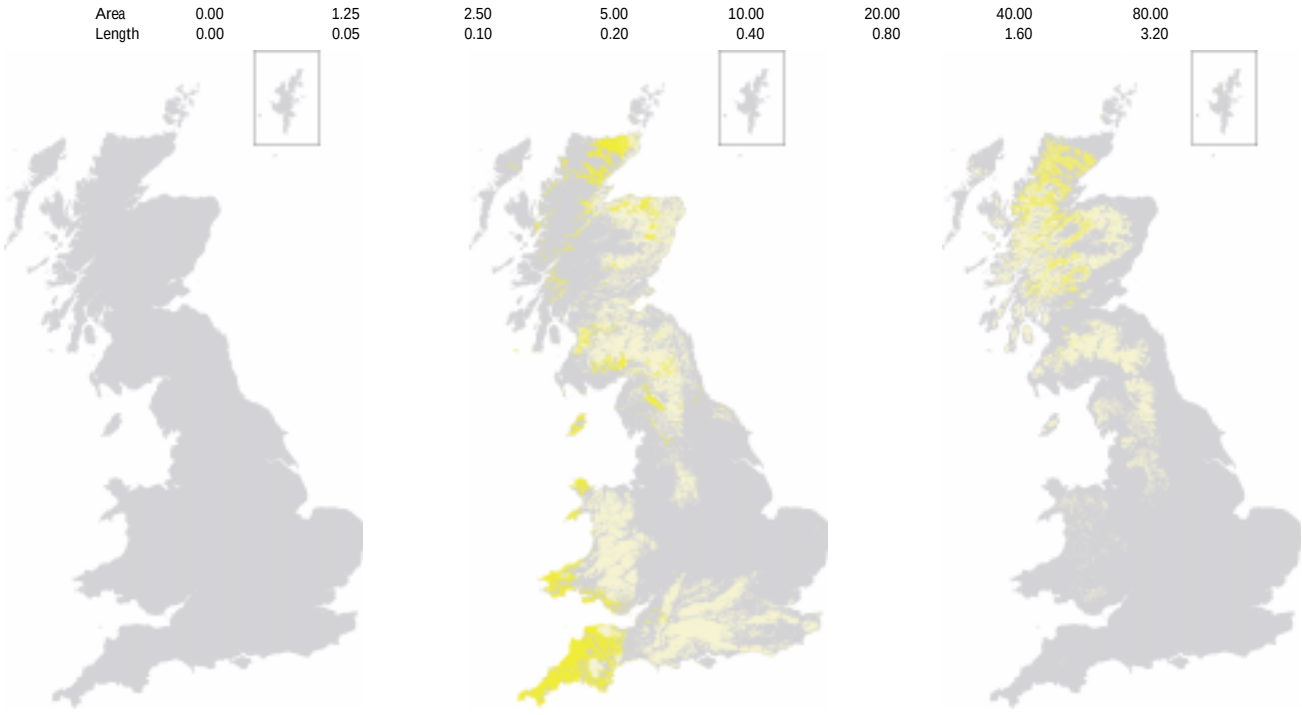

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.7 Low | Mean 5.9 Medium | Mean 4.0 Low | Mean 3.4 Medium | Mean 3.1 Medium |

## Distribution




**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length 2.70 SE 0.95

**Streamside**
Length 1.36 SE 0.67

**Vegetation class 65**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

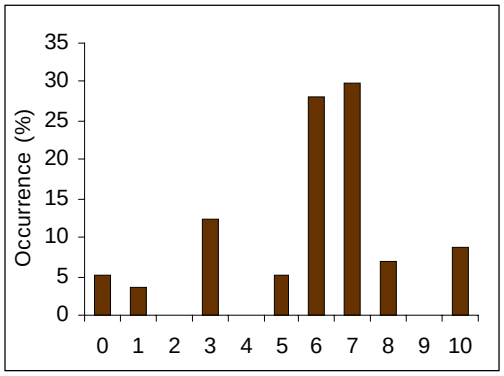
# Herb-rich acid grassland/ heath

## Description

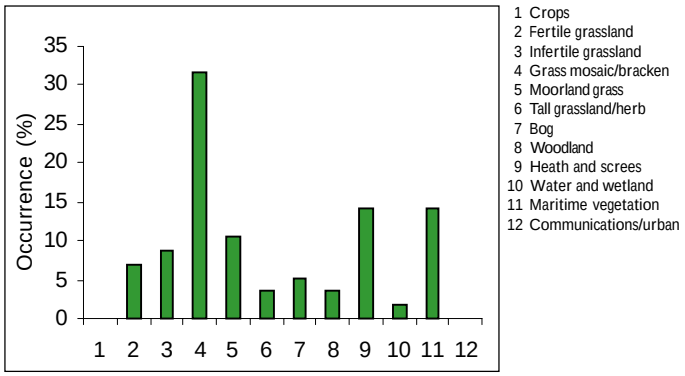
Although this class occurs mainly in open vegetation in the uplands, it is also present in linear features and on poor brown soils and podzols elsewhere. Although the main cover species is heather (*Calluna vulgaris*), common bent (*Agrostis capillaris*) and sweet vernal-grass (*Anthoxanthum odoratum*) may also occur. The class contains species from a range of ecological conditions, reflecting complex edaphic variation, eg eyebright (*Euphrasia* spp.), common dog-violet (*Viola riviniana*) and devil's-bit scabious (*Succisa pratensis*). It is most common in north-west Scotland, but is also found in the lowlands.

## Associated features

### Soils

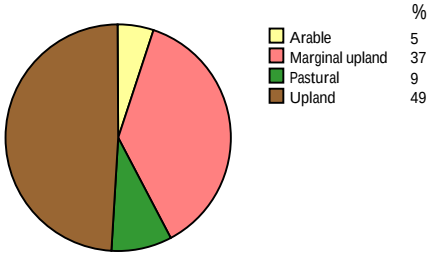



### Land cover

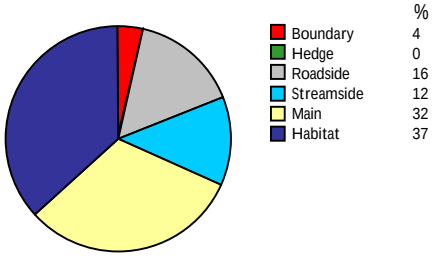



## Distribution

**Total number of plots** 57




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.33 SE 0.16

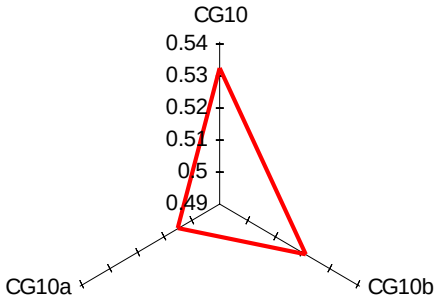
**Boundary**
Length 2.71 SE 2.09

## Floristic characteristics

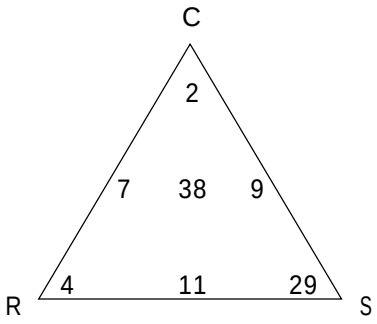
**Species number:** 181 (Medium) **No. of species groups:** 11 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Plantago lanceolata* | 83 | *Calluna vulgaris* | 11.7 | *Plantago maritima* |
| *Potentilla erecta* | 74 | *Agrostis capillaris* | 8.2 | *Lotus corniculatus* |
| *Anthoxanthum odoratum* | 72 | *Festuca ovina* | 7.7 | *Carex flacca* |
| *Agrostis capillaris* | 68 | *Festuca rubra* | 7.2 | *Bellis perennis* |
| *Holcus lanatus* | 66 | *Anthoxanthum odoratum* | 5.6 | *Plantago lanceolata* |

### Similarity with National Vegetation Classification (NVC) types



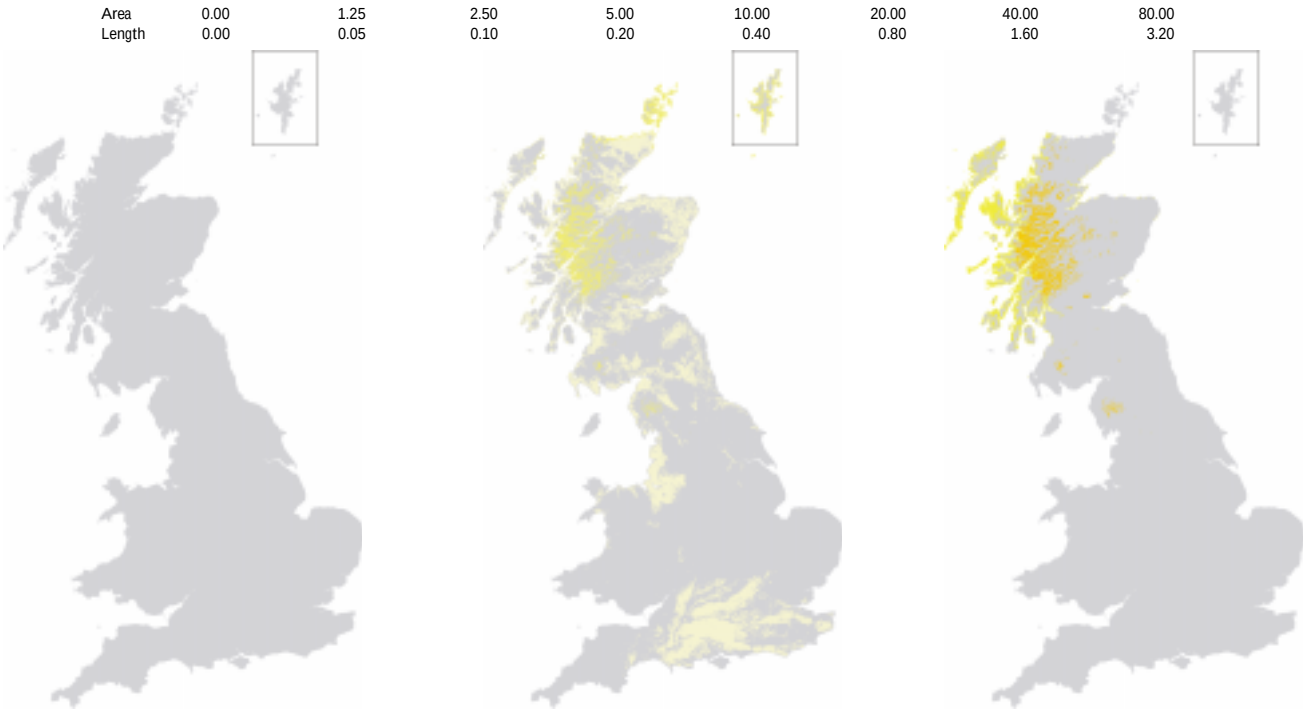

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 5.9 Medium | Mean 4.6 Medium | Mean 3.3 Low | Mean 3.0 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 1.01 SE 0.47

**Streamside**
Length 3.53 SE 2.83

**Vegetation class 66**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

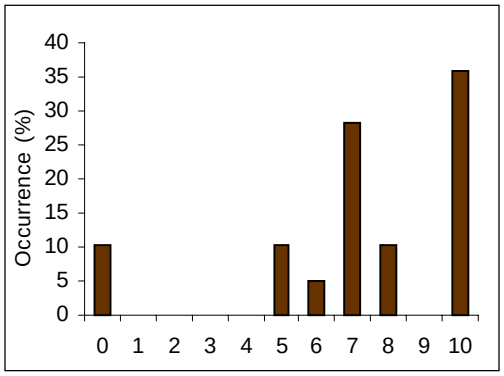
# Moorland grass streamsides/ flushes

## Description

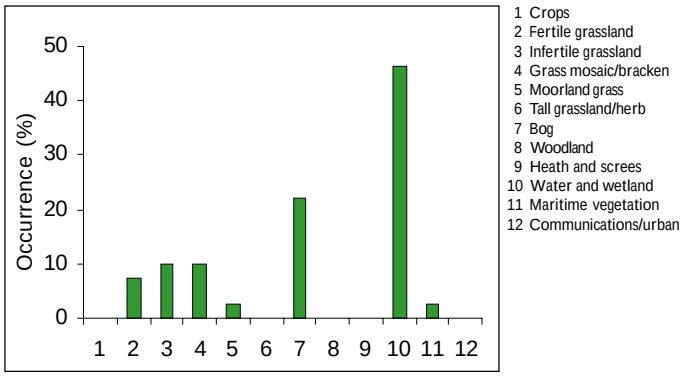
This class is usually present on streamsides or in flushes within a matrix of acid moorland vegetation. The class has a mixture of cover species, such as Yorkshire-fog (*Holcus lanatus*), jointed rush (*Juncus articulatus*) and common sedge (*Carex nigra*), all of which may predominate locally. The class has a restricted occurrence and is diverse, reflecting complex soil conditions, typical species being common mouse-ear (*Cerastium fontanum*), marsh violet (*Viola palustris*) and bulbous rush (*Juncus bulbosus*). This class is restricted to upland Britain and is most widespread in the far north of Scotland.

## Associated features

### Soils

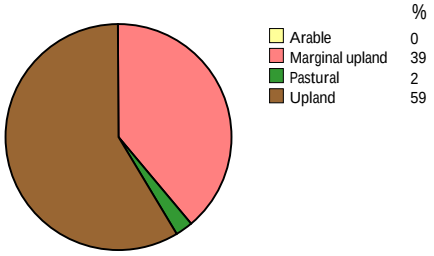



### Land cover

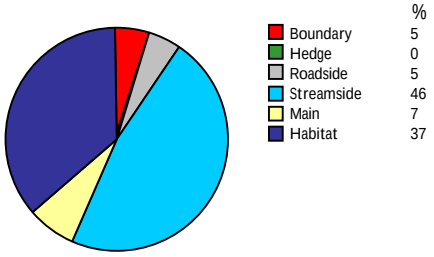



## Distribution

**Total number of plots** 41




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

**Main**
Area 0.11 SE 0.11

Key units
Area 000's km$^{-2}$
Length 000's km

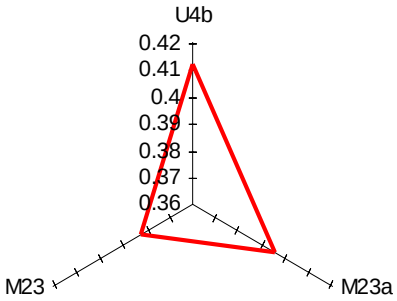
**Boundary**
Length 2.41 SE 1.73

## Floristic characteristics

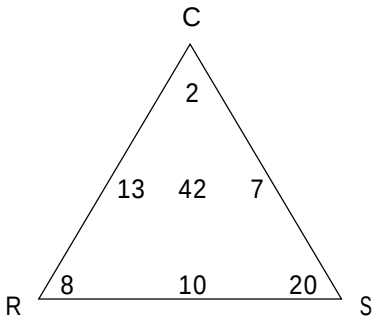
**Species number:** 150 (Medium) **No. of species groups:** 11 (High) **Most frequent group:** 22

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Ranunculus flammula* | 90 | *Holcus lanatus* | 7.1 | *Ranunculus flammula* |
| *Carex nigra* | 88 | *Carex nigra* | 6.7 | *Caltha palustris* |
| *Anthoxanthum odoratum* | 80 | *Anthoxanthum odoratum* | 5.1 | *Epilobium palustre* |
| *Holcus lanatus* | 78 | *Carex echinata* | 3.8 | *Cardamine pratensis* |
| *Juncus bulbosus* | 78 | *Nardus stricta* | 3.7 | *Juncus bulbosus* |

### Similarity with National Vegetation Classification (NVC) types



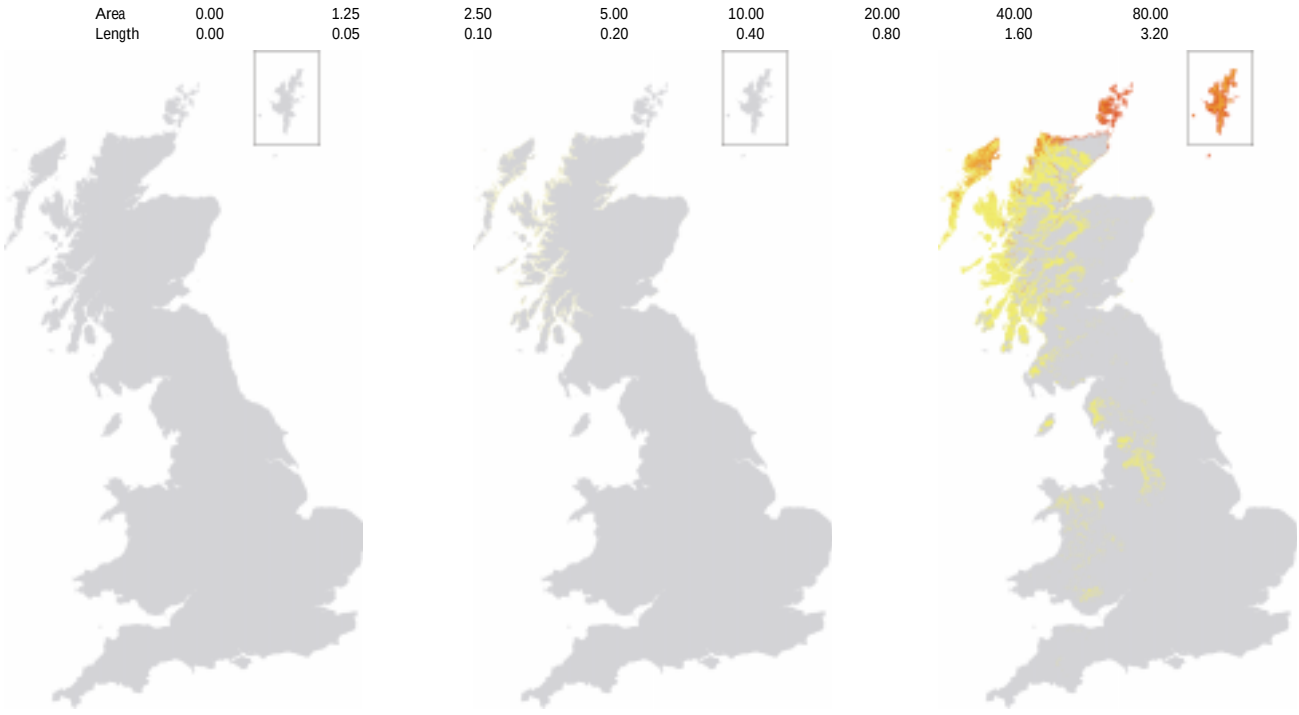

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 6.9 High | Mean 4.5 Medium | Mean 3.4 Low | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.03 SE 0.03

**Streamside**
Length 4.79 SE 1.50

**Vegetation class 67**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

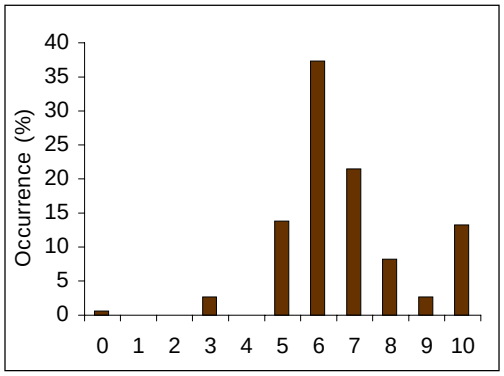
# Moorland grass

## Description

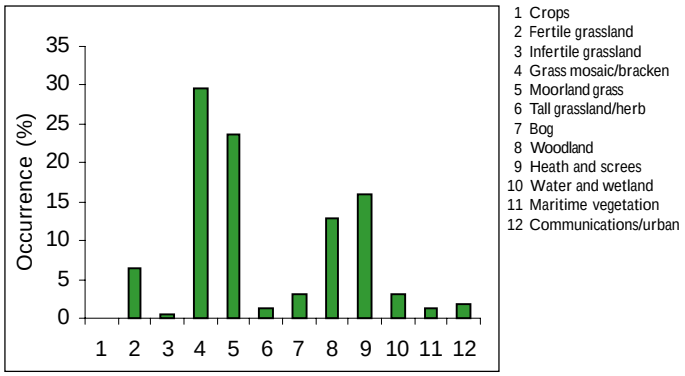
Although usually in open vegetation, the class is also present besides roads or streams on podzolic or gleyed soils. Common bent (*Agrostis capillaris*) is the main cover species but mat-grass (*Nardus stricta*) and sheep's-fescue (*Festuca ovina*) often have a high cover. The class is common and of low diversity, with species such as soft-rush (*Juncus effusus*), sheep's sorrel (*Rumex acetosella*) and tormentil (*Potentilla erecta*) typical. Although this class occurs throughout upland Britain, it is especially widespread in the Pennines, southern uplands of Scotland and the Grampians, and occasionally in the lowlands.

## Associated features

### Soils

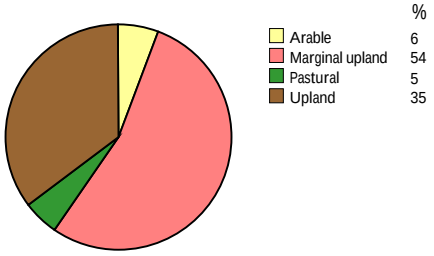



### Land cover

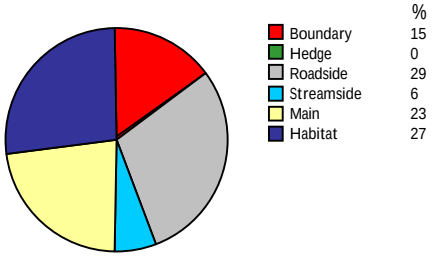



## Distribution

**Total number of plots** 158



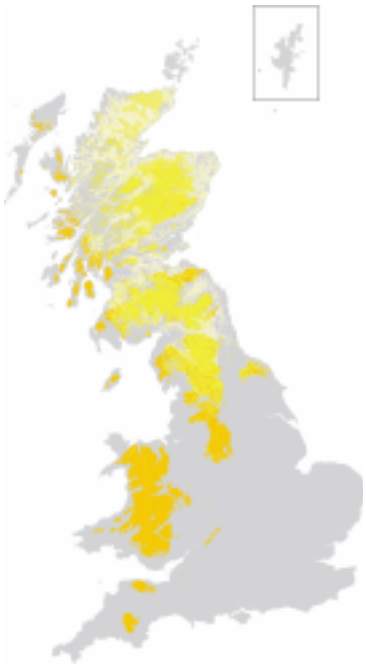

### Landscape association



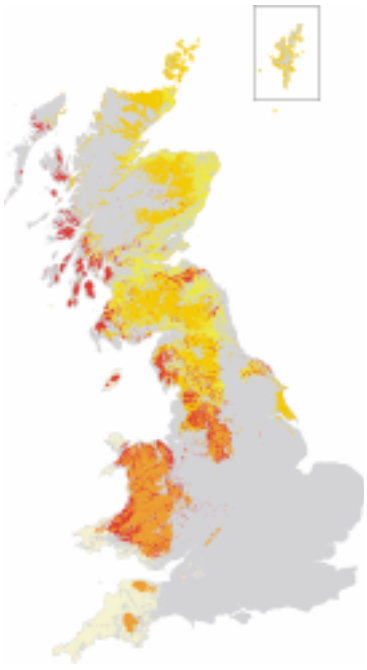

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 1.96 SE 0.53

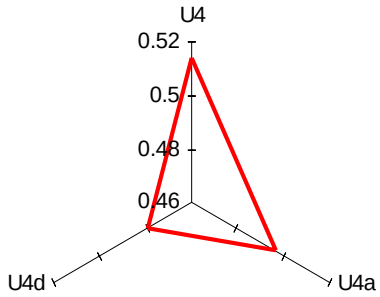
**Boundary**
Length 40.85 SE 12.09

## Floristic characteristics

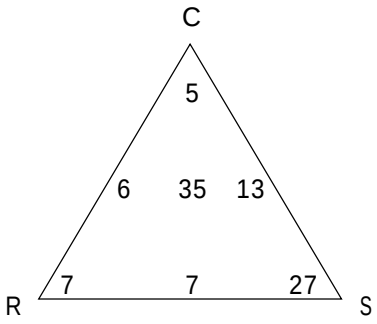
**Species number:** 153 (Medium) **No. of species groups:** 7 (Medium) **Most frequent group:** 29

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Agrostis capillaris* | 93 | *Agrostis capillaris* | 18.4 | *Poa annua* |
| *Galium saxatile* | 74 | *Nardus stricta* | 11.8 | *Rumex acetosella* |
| *Festuca ovina* | 65 | *Festuca ovina* | 10.6 | *Aira praecox* |
| *Nardus stricta* | 59 | *Juncus effusus* | 6.9 | *Agrostis capillaris* |
| *Anthoxanthum odoratum* | 54 | *Deschampsia flexuosa* | 6.0 | *Festuca ovina* |

### Similarity with National Vegetation Classification (NVC) types



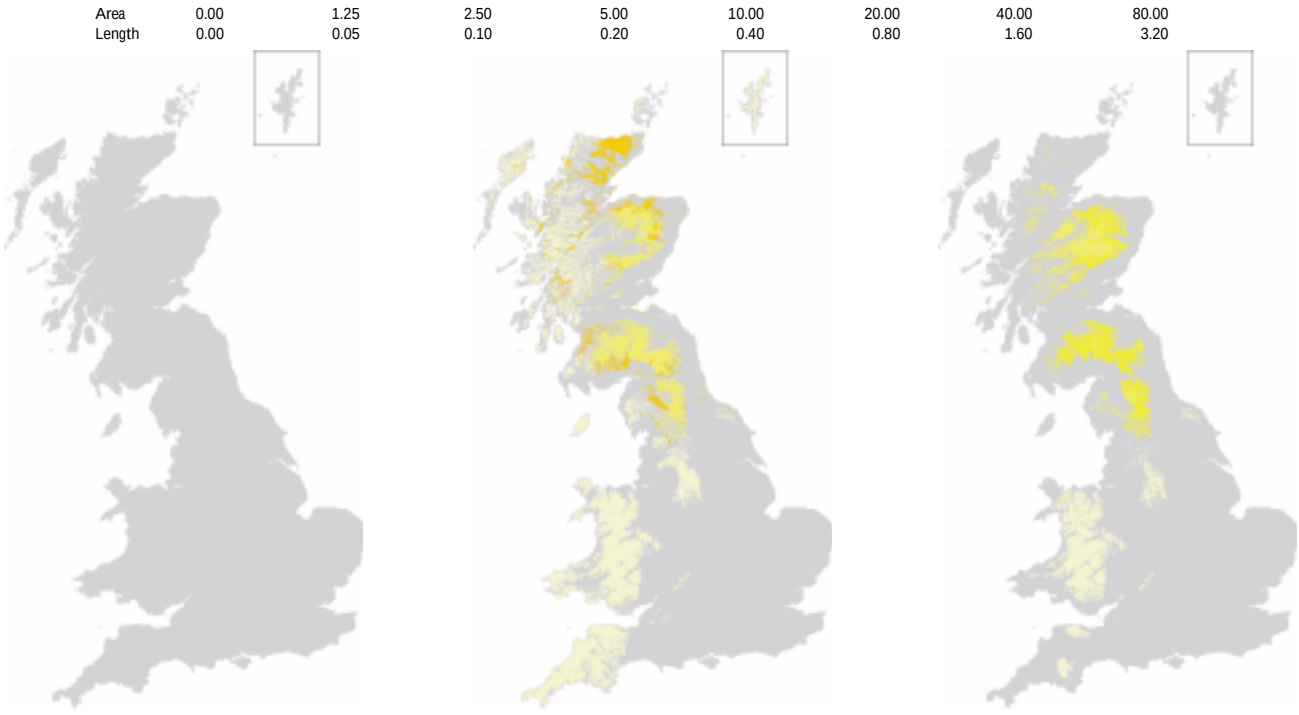

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 6.1 Medium | Mean 4.0 Low | Mean 3.3 Low | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 3.59 SE 1.84

**Streamside**
Length 2.34 SE 1.03

**Vegetation class 68**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

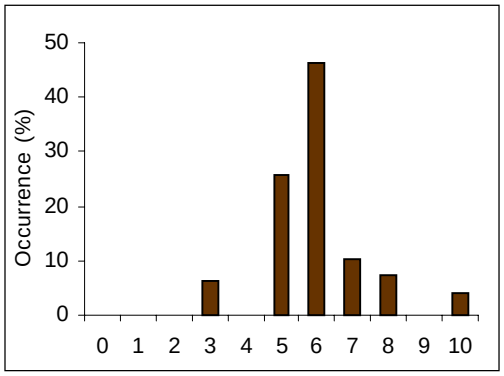
# Oak/birch woodland

## Description

This class is usually present in woodland, but may have developed in more fragmented belts of trees by streamsides, on podzolic soils. Oak (*Quercus* spp.) and birch (*Betula* spp.) usually form the canopy, with rowan (*Sorbus aucuparia*) and holly (*Ilex aquifolium*) sometimes present. Although bracken (*Pteridium aquilinum*) most commonly forms the ground cover and may have a similar effect to tree canopies, wavy hair-grass (*Deschampsia flexuosa*) and common bent (*Agrostis capillaris*) are also often present as cover species. The class is quite common and of average diversity, typical species being wood-sorrel (*Oxalis acetosella*), bilberry (*Vaccinium myrtillus*) and hard fern (*Blechnum spicant*). This class is restricted to the north and west of Britain.

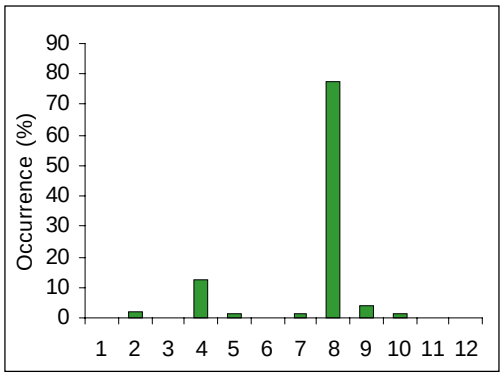
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

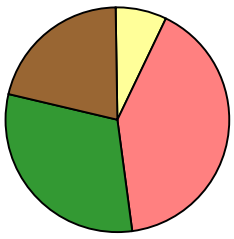
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

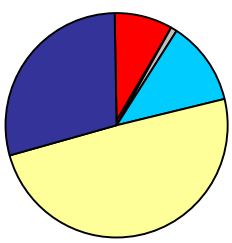
## Distribution

**Total number of plots** 94



| | % |
|---|---|
| Arable | 7 |
| Marginal upland | 40 |
| Pastural | 31 |
| Upland | 21 |

### Landscape association



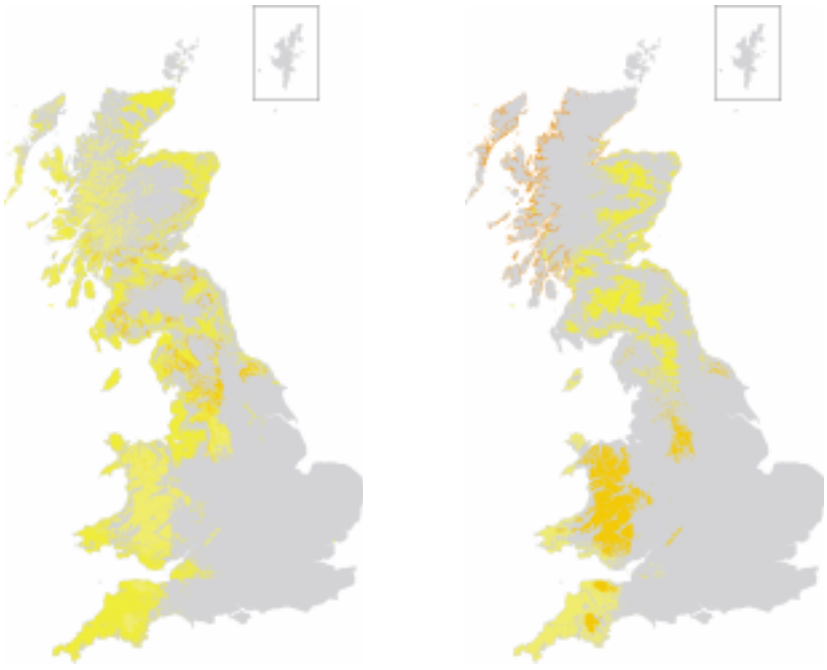
| | % |
|---|---|
| Boundary | 9 |
| Hedge | 0 |
| Roadside | 1 |
| Streamside | 12 |
| Main | 49 |
| Habitat | 30 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



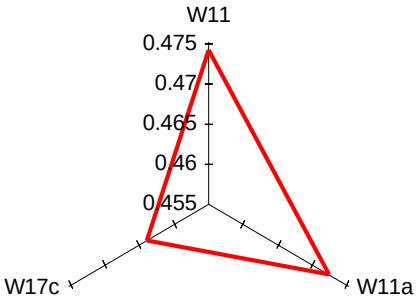
**Main**
Area 2.09 SE 0.57

**Boundary**
Length 9.22 SE 3.78

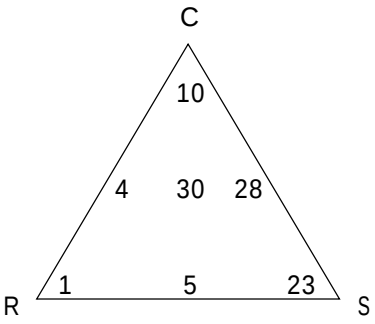
## Floristic characteristics

| **Species number:** | 139 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 27 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Deschampsia flexuosa* | 60 | *Pteridium aquilinum* | 22.1 | *Vaccinium myrtillus* | |
| *Mnium hornum* | 49 | *Larix* spp. | 9.2 | *Oxalis acetosella* | |
| *Pteridium aquilinum* | 47 | *Deschampsia flexuosa* | 8.6 | *Deschampsia flexuosa* | |
| *Oxalis acetosella* | 47 | *Picea sitchensis* | 6.5 | *Blechnum spicant* | |
| *Vaccinium myrtillus* | 42 | *Agrostis capillaris* | 5.2 | *Sorbus aucuparia* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.9 Low | Mean 6.0 Medium | Mean 3.9 Low | Mean 3.7 Medium | Mean 3.1 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.01 SE 0.01

**Streamside**
Length 4.28 SE 1.74

**Vegetation class 69**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

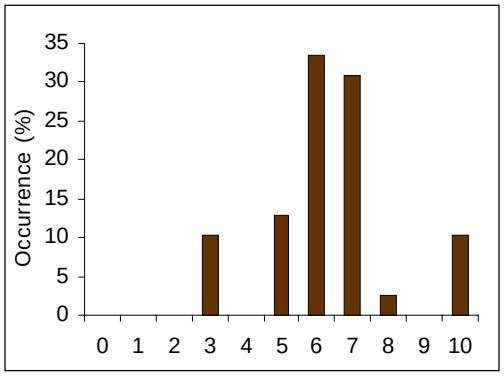
# Open woodland/ heath

## Description

This class is usually found in open woodland where birch (*Betula* spp.) forms the canopy, but the high humidities in the north-west means that such vegetation can often be found in the open. The main cover species is bracken (*Pteridium aquilinum*), but purple moor-grass (*Molinia caerulea*) and heather (*Calluna vulgaris*) are also common. The class is very diverse, typical species being primrose (*Primula vulgaris*), devil's-bit scabious (*Succisa pratensis*) and wood sage (*Teucrium scorodonia*), reflecting the complexity of ecological conditions. Although this type occurs most commonly in the far north-west of Scotland, it has outliers in the lowlands on the west, on appropriate soils.

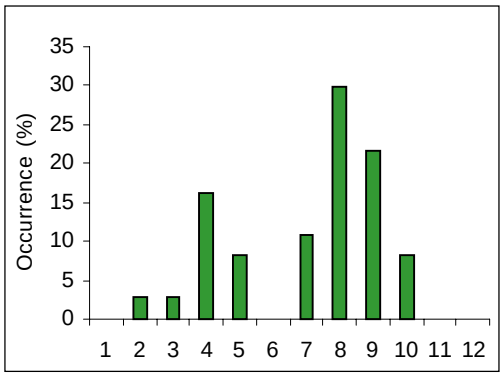
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

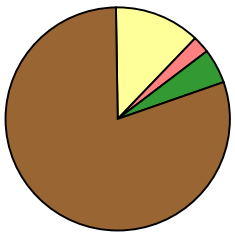
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

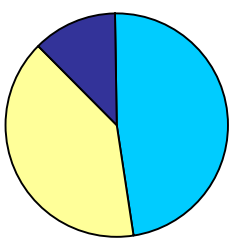
## Distribution

**Total number of plots** 40



| | % |
|---|---|
| Arable | 13 |
| Marginal upland | 3 |
| Pastural | 5 |
| Upland | 80 |

### Landscape association



| | % |
|---|---|
| Boundary | 0 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 48 |
| Main | 40 |
| Habitat | 13 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.19 SE 0.11

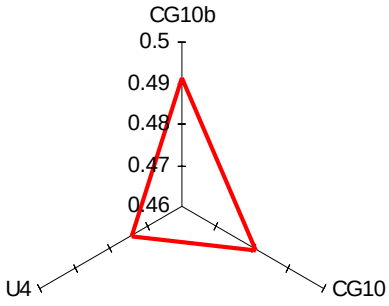
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

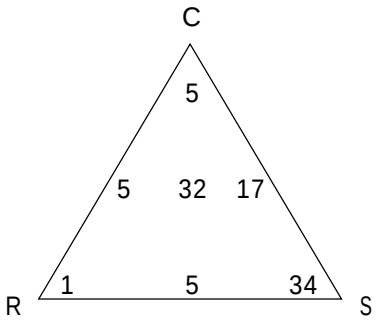
**Species number:** 186 (Medium) **No. of species groups:** 13 (High) **Most frequent group:** 29

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Hypericum pulchrum* | 86 | *Pteridium aquilinum* | 30.2 | *Hypericum pulchrum* |
| *Potentilla erecta* | 86 | *Molinia caerulea* | 21.6 | *Succisa pratensis* |
| *Blechnum spicant* | 82 | *Calluna vulgaris* | 16.8 | *Prunella vulgaris* |
| *Calluna vulgaris* | 77 | *Festuca ovina* | 6.9 | *Primula vulgaris* |
| *Thuidium tamariscinum* | 73 | *Anthoxanthum odoratum* | 6.3 | *Calluna vulgaris* |

### Similarity with National Vegetation Classification (NVC) types



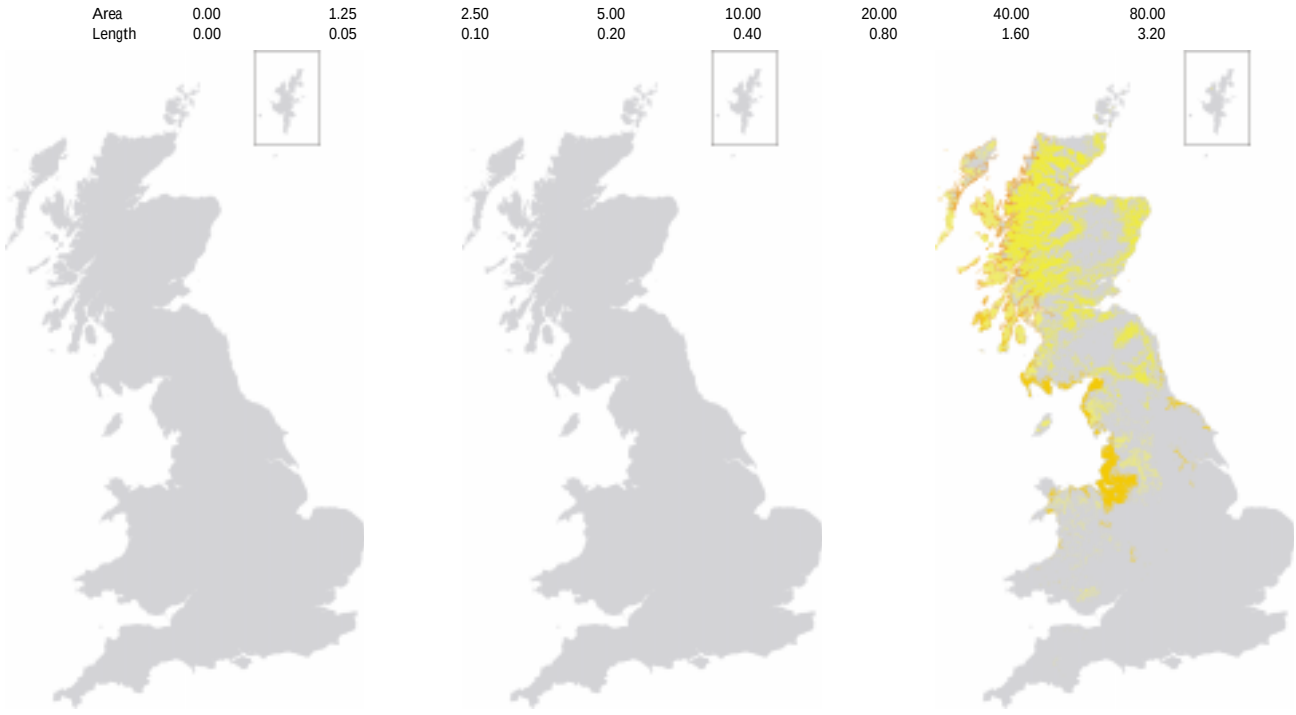

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.6 Low | Mean 6.2 Medium | Mean 4.3 Medium | Mean 3.4 Low | Mean 3.0 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 6.52 SE 2.19

**Vegetation class 70**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

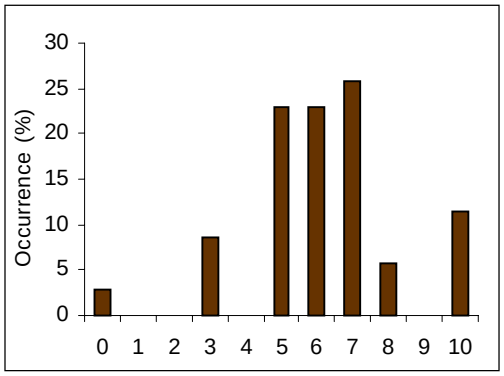
# Wooded acid streamsides

## Description

This class is mainly found by streamsides in woodland but may be in open vegetation on variable soils. The sheltered conditions lead to high humidities, with Scots pine (*Pinus sylvestris*) and birch (*Betula* spp.) as canopy species, as well as many species associated with woodland. The ground vegetation is typically of common bent grass (*Agrostis capillaris*) and bracken (*Pteridium aquilinum*). The class is rather uncommon and is of quite high diversity. Species such as hard fern (*Blechnum spicant*), heath bedstraw (*Galium saxatile*) and yellow pimpernel (*Lysimachia nemorum*) are present, reflecting variable soil conditions. This class occurs mainly in the uplands of northern England and Scotland, with outliers in Wales and the West Country.

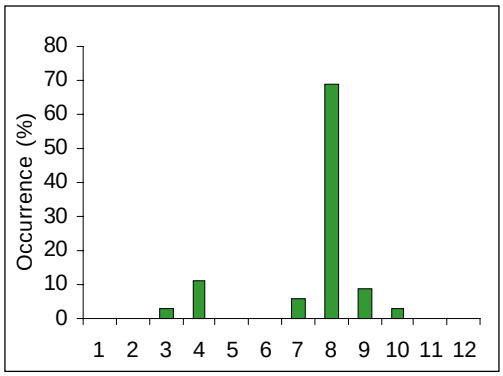
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

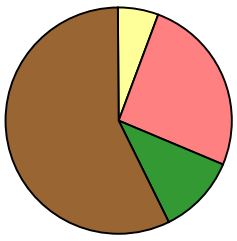
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

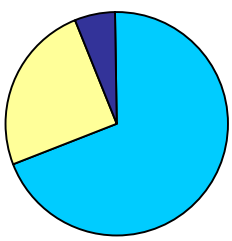
## Distribution

**Total number of plots** 35



| | % |
|---|---|
| Arable | 6 |
| Marginal upland | 26 |
| Pastural | 11 |
| Upland | 57 |

### Landscape association



| | % |
|---|---|
| Boundary | 0 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 69 |
| Main | 26 |
| Habitat | 6 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.75 SE 0.30

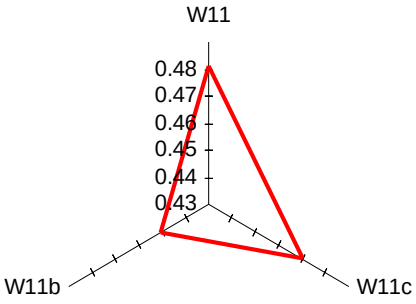
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

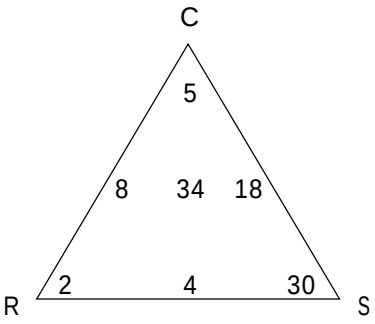
**Species number:** 150 (Medium) **No. of species groups:** 10 (High) **Most frequent group:** 29

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Thuidium tamariscinum* | 93 | *Agrostis capillaris* | 5.3 | *Viola palustris* |
| *Oxalis acetosella* | 79 | *Molinia caerulea* | 4.7 | *Blechnum spicant* |
| *Blechnum spicant* | 79 | *Pinus sylvestris* | 4.6 | *Lysimachia nemorum* |
| *Potentilla erecta* | 75 | *Pteridium aquilinum* | 4.6 | *Succisa pratensis* |
| *Molinia caerulea* | 61 | *Thuidium tamariscinum* | 4.2 | *Hypericum pulchrum* |

### Similarity with National Vegetation Classification (NVC) types



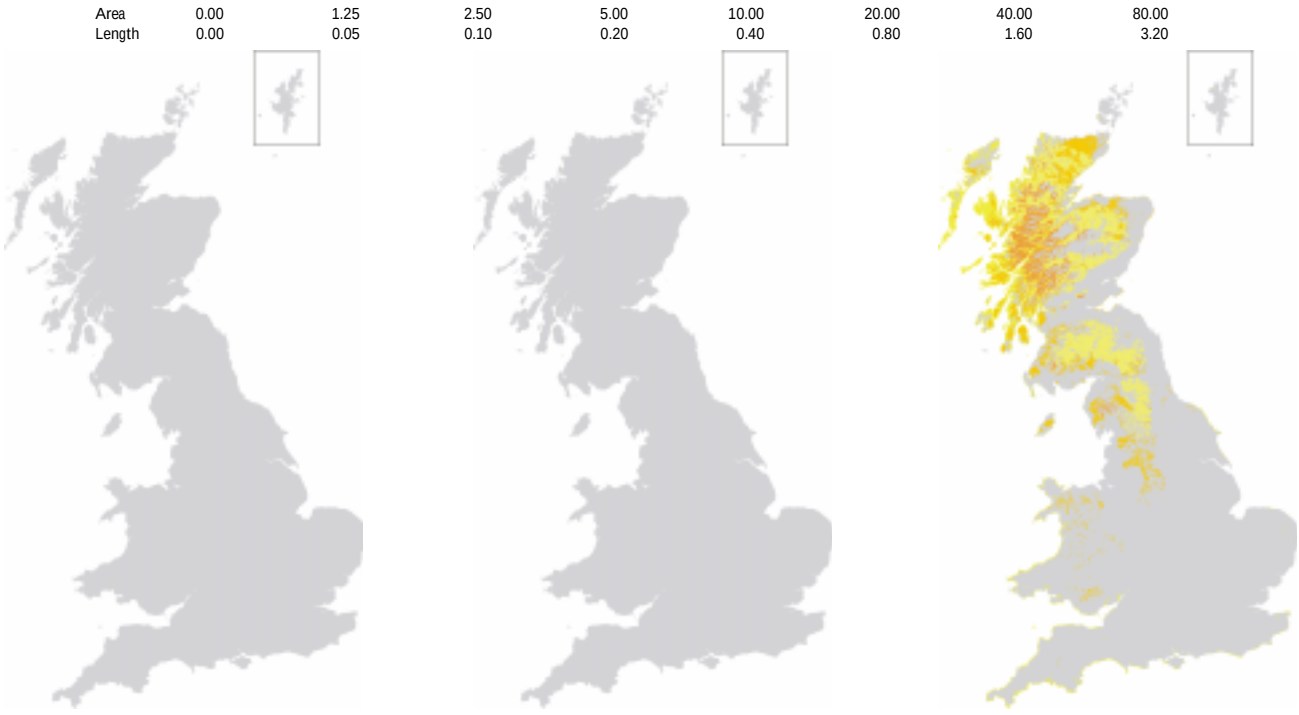

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.2 Low | Mean 6.4 Medium | Mean 4.0 Low | Mean 3.5 Medium | Mean 3.0 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 9.00 SE 3.96

**Vegetation class 71**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

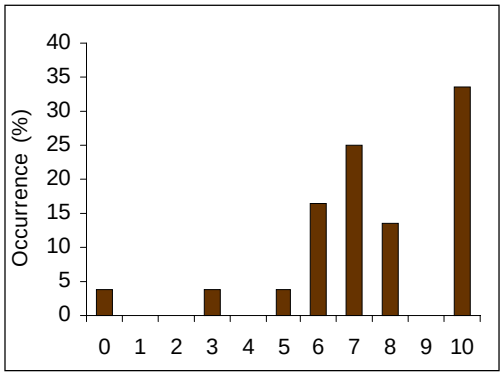
# Herb-rich moorland grass/heath

## Description

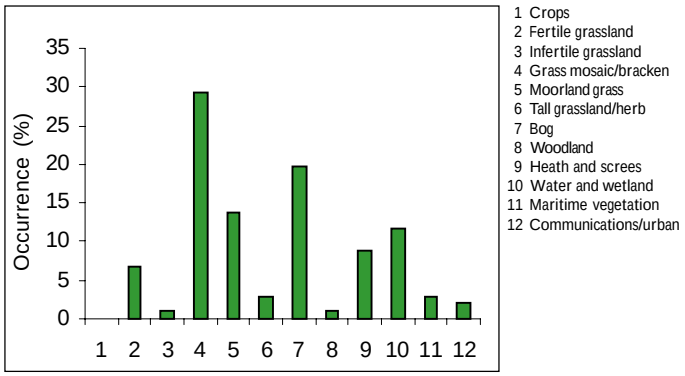
This class occurs mainly on streamsides with some enrichment, or on roadsides in open vegetation, and is present on variable soils but especially peats. There is a range of cover species: common bent (*Agrostis capillaris*), mat-grass (*Nardus stricta*) and heather (*Calluna vulgaris*), depending on soil conditions. The class is quite diverse as reflected by typical species such as ribwort plantain (*Plantago lanceolata*), eyebright (*Euphrasia* spp.) and white clover (*Trifolum repens*). This class is virtually confined to upland Britain and is most frequent in the north west of Scotland, the outer isles and Shetland, but also occasionally occurs in the northern lowlands.

## Associated features

### Soils

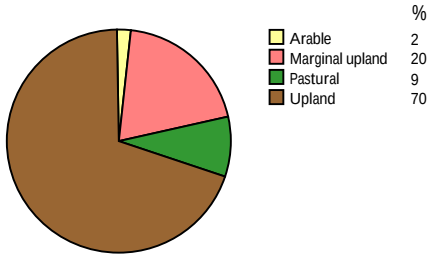



### Land cover

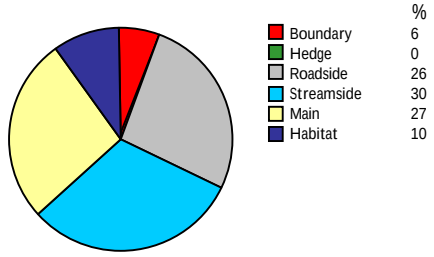



## Distribution

**Total number of plots** 102




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

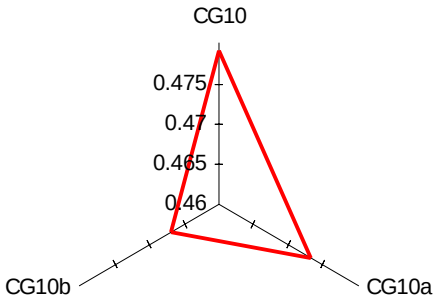
**Main**
Area 1.25 SE 0.43

**Boundary**
Length 7.72 SE 3.12

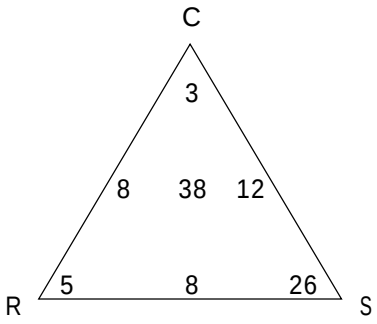
## Floristic characteristics

| **Species number:** | 213 (High) | **No. of species groups:** | 12 (High) | **Most frequent group:** | 22 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Nardus stricta* | 92 | *Agrostis capillaris* | 10.0 | *Trifolium repens* | |
| *Potentilla erecta* | 92 | *Nardus stricta* | 9.4 | *Carex panicea* | |
| *Anthoxanthum odoratum* | 92 | *Calluna vulgaris* | 6.2 | *Plantago lanceolata* | |
| *Agrostis capillaris* | 87 | *Anthoxanthum odoratum* | 5.6 | *Festuca vivipara* | |
| *Trifolium repens* | 83 | *Holcus lanatus* | 5.2 | *Prunella vulgaris* | |

### Similarity with National Vegetation Classification (NVC) types



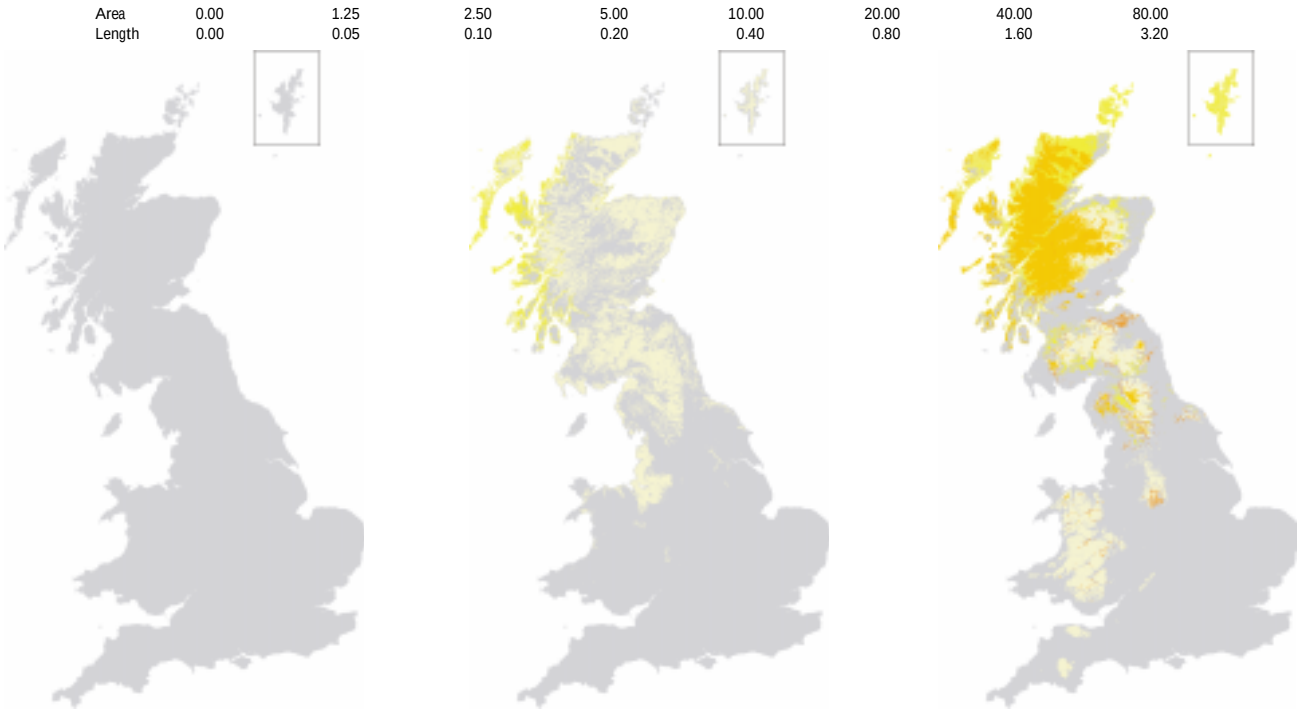

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 6.5 Medium | Mean 4.2 Medium | Mean 3.2 Low | Mean 3.0 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 1.75 SE 0.66

**Streamside**
Length 12.21 SE 3.02

**Vegetation class 72**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

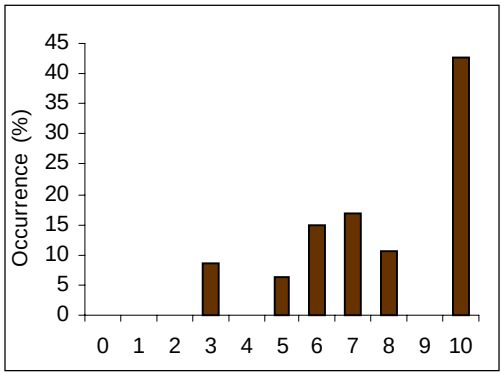
# Acid streamsides/ flushes

## Description

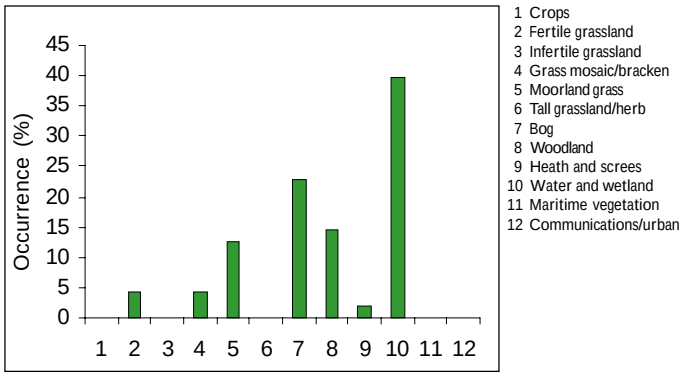
This class is not very common, occuring by streamsides or in flushes, usually on peaty soils. The main cover is of soft-rush (*Juncus effusus*) and purple moor-grass (*Molinia caerulea*), often with an understorey of sphagnum (*Sphagnum* spp.). The class is not diverse and typical species are marsh pennywort (*Hydrocotyle vulgaris*), spearwort (*Ranunculus flammula*) and marsh bedstraw (*Galium palustre*). Although this class is mainly found in the uplands of Britain, it is also found in similar environmental conditions in the lowlands, especially in the west.

## Associated features

### Soils

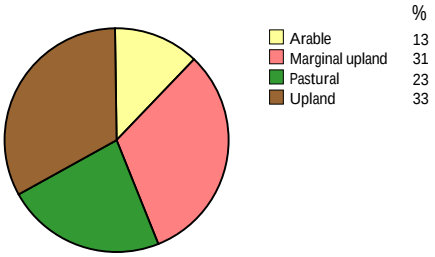



### Land cover

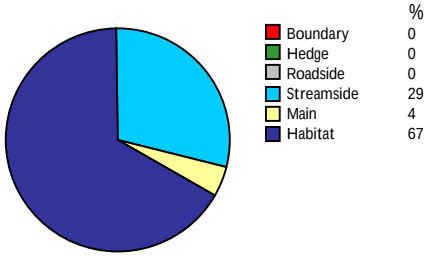



## Distribution

**Total number of plots** 48




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.14 SE 0.10

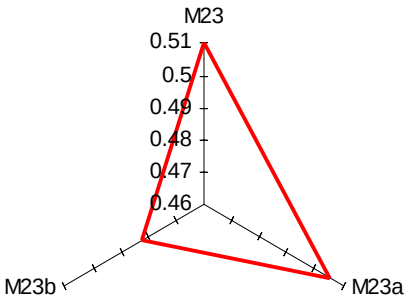
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

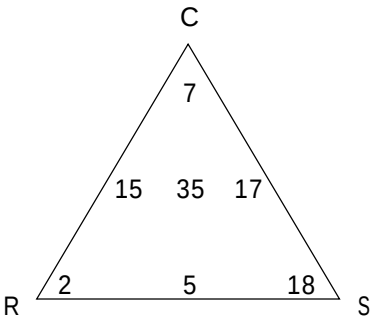
**Species number:** 119 (Low) **No. of species groups:** 7 (Medium) **Most frequent group:** 31

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Juncus effusus* | 71 | *Juncus effusus* | 16.5 | *Galium palustre* |
| *Potentilla erecta* | 56 | *Molinia caerulea* | 15.6 | *Lotus uliginosus* |
| *Molinia caerulea* | 46 | *Potentilla palustris* | 2.7 | *Angelica sylvestris* |
| *Galium palustre* | 44 | *Agrostis stolonifera* | 2.6 | *Caltha palustris* |
| *Viola palustris* | 40 | *Holcus lanatus* | 2.1 | *Hydrocotyle vulgaris* |

### Similarity with National Vegetation Classification (NVC) types



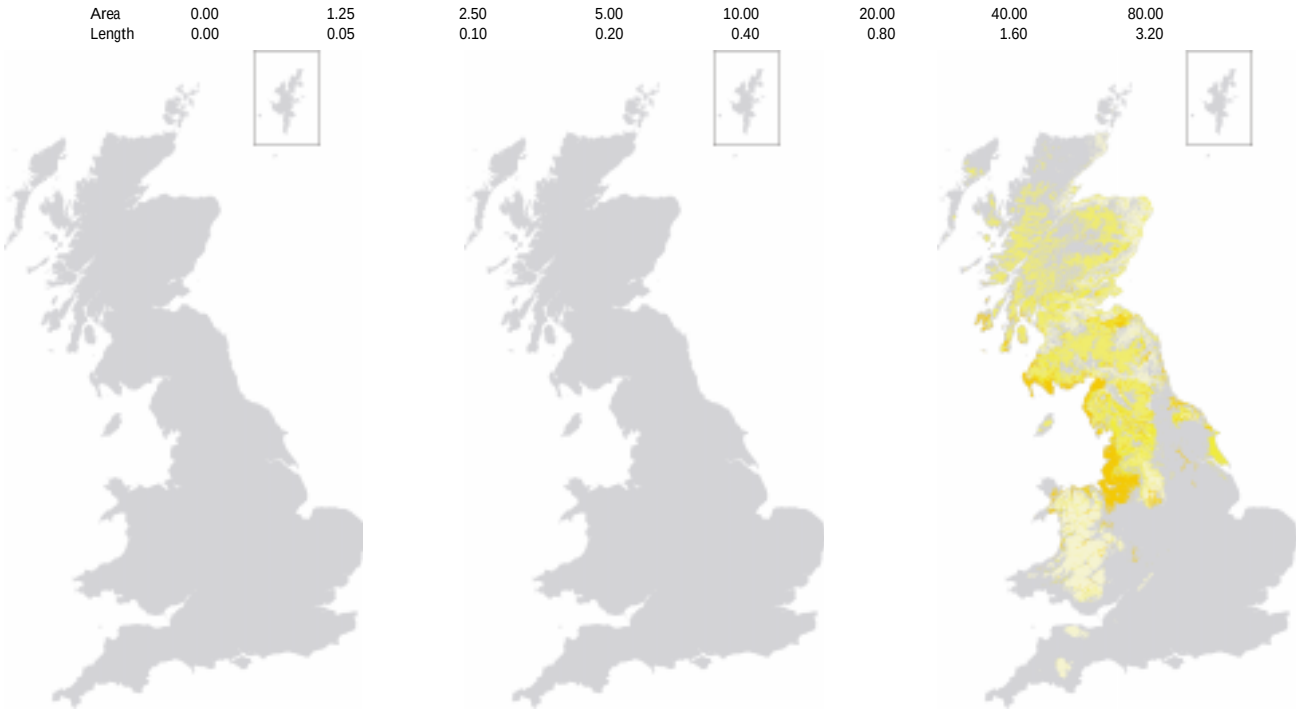

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.1 High | Mean 7.5 High | Mean 4.1 Medium | Mean 3.3 Low | Mean 3.1 Medium |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 5.75 SE 1.87

**Vegetation class 73**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

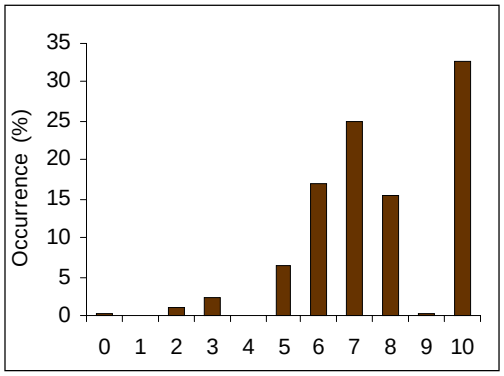
# Rushy moor-land grass/ streamsides on peat soils

## Description

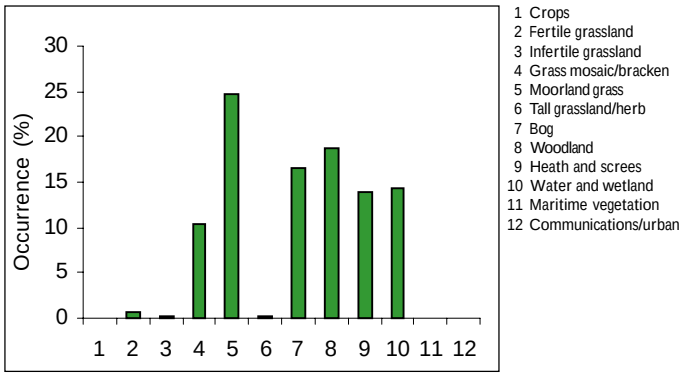
This class occurs most often by streamsides but may be in flushes or open vegetation , most commonly on peats or peaty gley soils. There is a high cover of soft-rush (*Juncus effusus*) and mat-grass (*Nardus stricta*) and various mosses, together with common bent (*Agrostis capillaris*) and purple moor-grass (Molinia caerulea). The class has characteristic species such as tormentil (*Potentilla erecta*), squarrose rush (*Juncus squarrosus*), and even heather (*Calluna vulgaris*). It is one of the most widespread classes in upland Britain, especially in northern England and Scotland, but also in Wales, Dartmoor and Exmoor.

## Associated features

### Soils

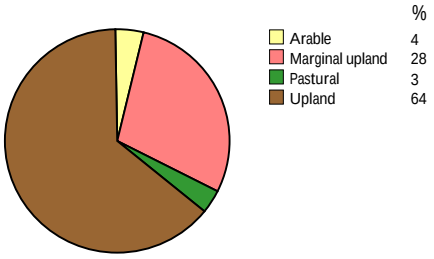



### Land cover

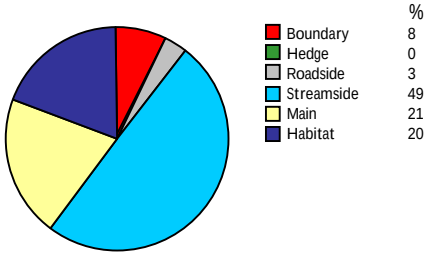



## Distribution

**Total number of plots** 317



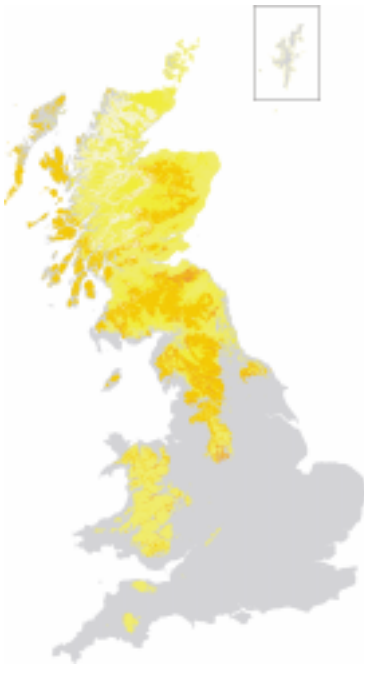

### Landscape association



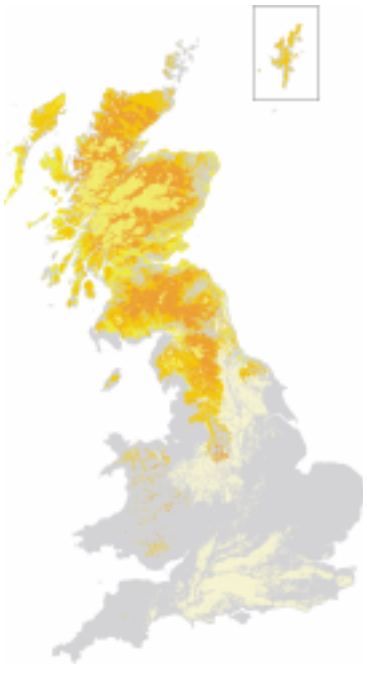

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 3.83 SE 0.64

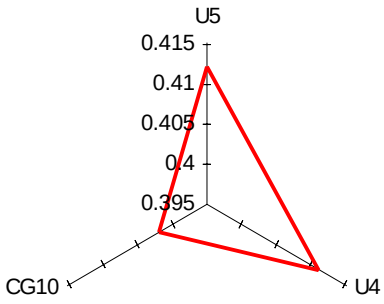
**Boundary**
Length 23.27 SE 5.56

## Floristic characteristics

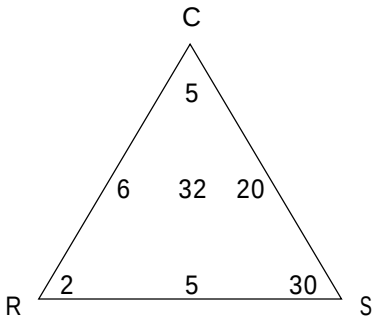
**Species number:** 217 (High) **No. of species groups:** 8 (Medium) **Most frequent group:** 29

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Galium saxatile* | 77 | *Juncus effusus* | 12.0 | *Juncus effusus* |
| *Juncus effusus* | 77 | *Nardus stricta* | 11.8 | *Deschampsia flexuosa* |
| *Potentilla erecta* | 74 | *Molinia caerulea* | 9.2 | *Galium saxatile* |
| *Anthoxanthum odoratum* | 69 | *Agrostis capillaris* | 6.2 | *Juncus squarrosus* |
| *Nardus stricta* | 60 | *Calluna vulgaris* | 5.0 | *Eriophorum vaginatum* |

### Similarity with National Vegetation Classification (NVC) types



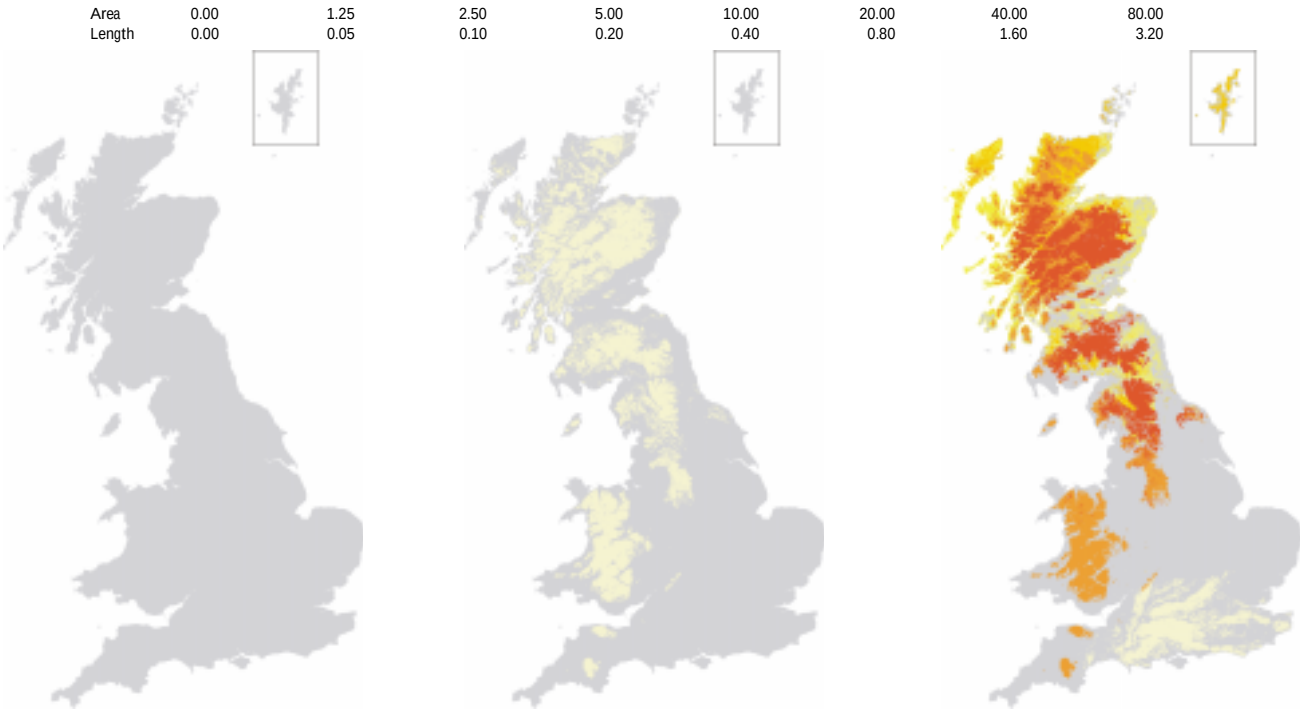

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 6.8 High | Mean 3.6 Low | Mean 2.9 Low | Mean 3.0 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.61 SE 0.28

**Streamside**
Length 47.49 SE 7.13

**Vegetation class 74**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

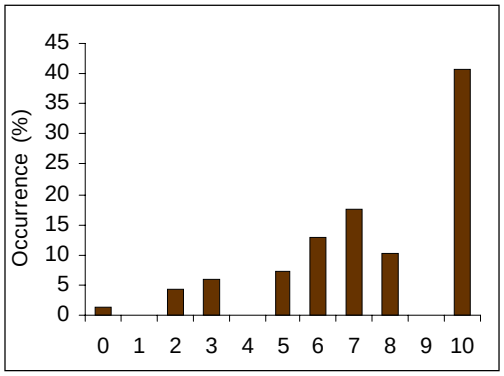
# Inundated streamsides/ flushes

## Description

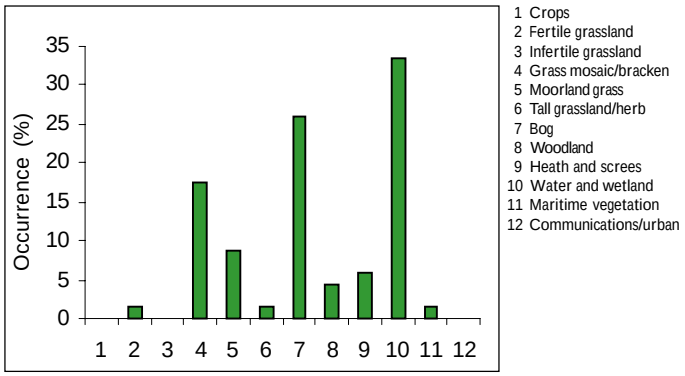
This class occurs on wet streamsides or in small flushes, invariably on peaty soils. The main cover species is purple moor-grass (*Molinia caerulea*) but jointed rush (*Juncus articulatus*) and star sedge (*Carex echinata*) may be locally important. The class is quite common and is diverse as reflected in characteristic species such as spearwort (*Ranunculus flammula*), bulbous rush (*Juncus bulbosus*) and cross-leaved heath (*Erica tetralix*). Although this class is concentrated in the uplands, it also occurs in the lowlands of the north and west.

## Associated features

### Soils

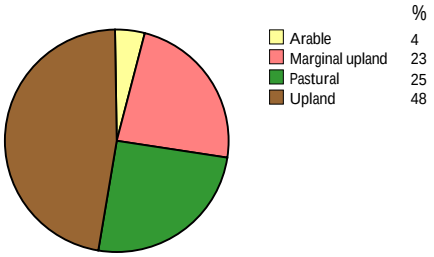



### Land cover

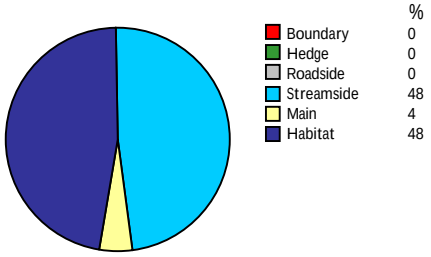



## Distribution

**Total number of plots** 69




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.02 SE 0.02

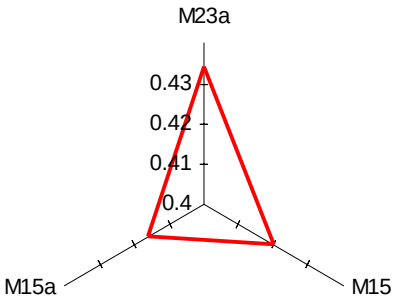
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

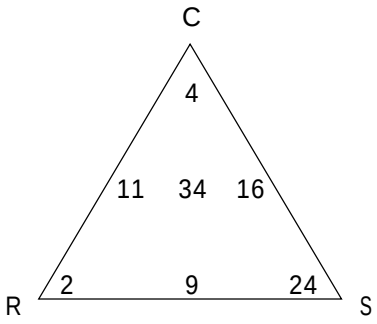
**Species number:** 157 (Medium) **No. of species groups:** 10 (High) **Most frequent group:** 31

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Ranunculus flammula* | 79 | *Molinia caerulea* | 15.3 | *Ranunculus flammula* |
| *Anthoxanthum odoratum* | 73 | *Carex nigra* | 4.2 | *Hydrocotyle vulgaris* |
| *Juncus bulbosus* | 73 | *Juncus effusus* | 3.9 | *Juncus bulbosus* |
| *Carex panicea* | 73 | *Carex panicea* | 3.8 | *Myrica gale* |
| *Carex echinata* | 71 | *Juncus bulbosus* | 3.1 | *Eriophorum angustifolium* |

### Similarity with National Vegetation Classification (NVC) types



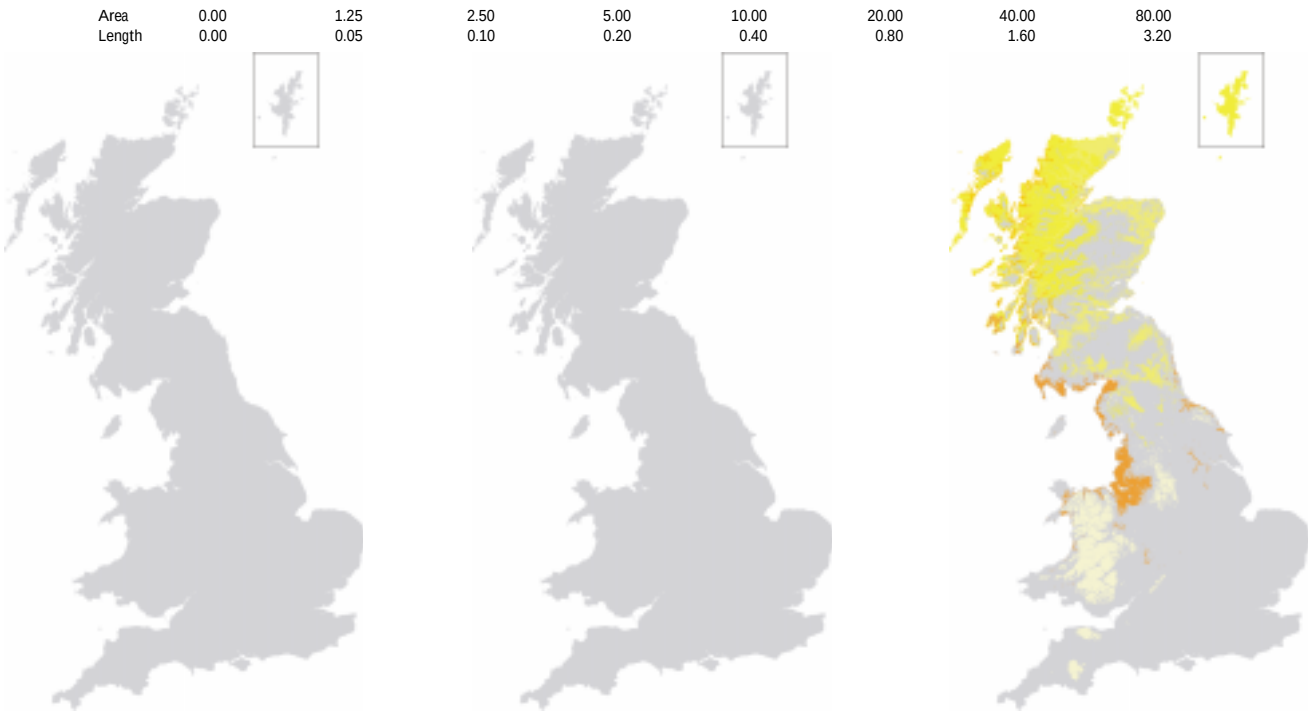

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.3 | High | Mean 7.4 | High | Mean 4.0 | Low | Mean 2.9 | Low | Mean 2.9 | Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 10.57 SE 2.76

**Vegetation class 75**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

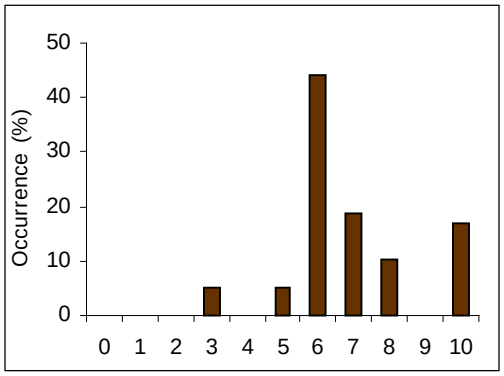
# Coniferous plantations

## Description

This class is found almost entirely in planted coniferous forests, but may also be found on linear features such as roadsides on podzolic soils. The tree cover is usually Sitka spruce (*Picea sitchensis*), with variable ground cover of purple moor-grass (*Molinia caerulea*), wavy hair-grass (*Deschampsia flexuosa*) or heather (*Calluna vulgaris*). As the canopy closes, so the ground vegetation disappears until it moves into class 77. The class is quite common and is not diverse, with some shade-tolerant mosses and species such as bilberry (*Vaccinium myrtillus*) and heath bedstraw (*Galium saxatile*) as remnants of the former vegetation. It occurs throughout upland Britain but may occasionally be present in lowlands in the north.

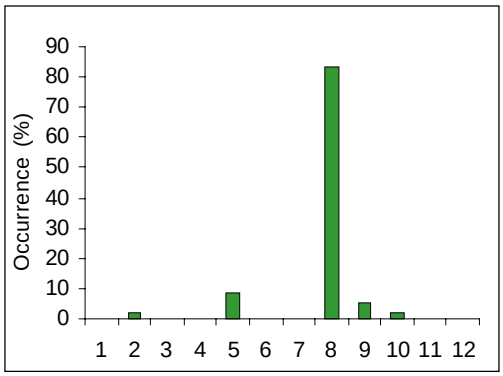
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

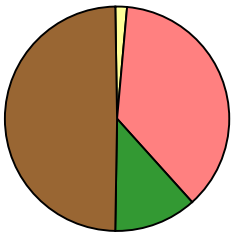
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

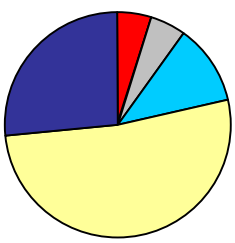
## Distribution

**Total number of plots** 60



| | % |
|---|---|
| Arable | 2 |
| Marginal upland | 37 |
| Pastural | 12 |
| Upland | 50 |

### Landscape association



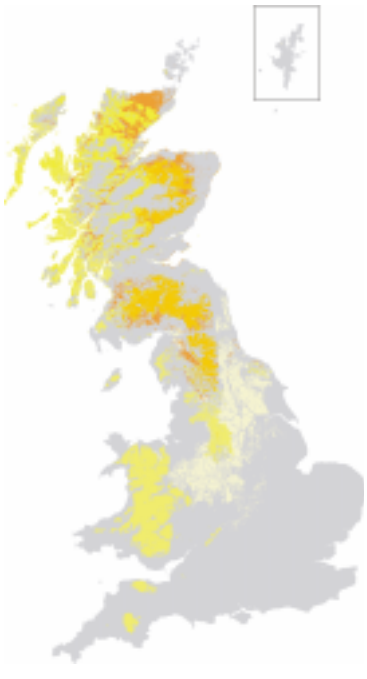
| | % |
|---|---|
| Boundary | 5 |
| Hedge | 0 |
| Roadside | 5 |
| Streamside | 12 |
| Main | 52 |
| Habitat | 27 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



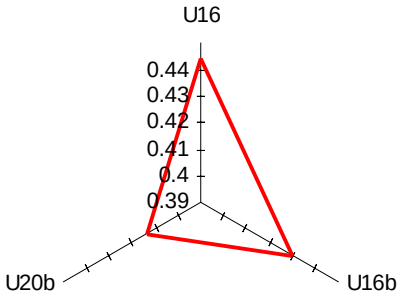
**Main**
Area 2.44 SE 0.64

**Boundary**
Length 2.18 SE 1.84

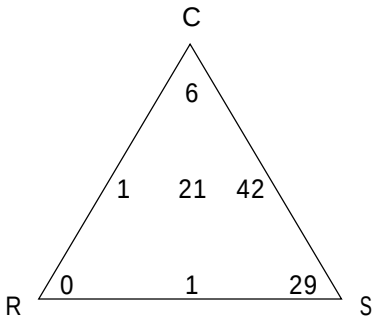
## Floristic characteristics

| **Species number:** | 76 (Low) | **No. of species groups:** | 3 (Low) | **Most frequent group:** | 33 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Deschampsia flexuosa* | 65 | *Picea sitchensis* | 39.6 | *Picea sitchensis* | |
| *Picea sitchensis* | 49 | *Molinia caerulea* | 7.3 | *Galium saxatile* | |
| *Plagiothecium undulatum* | 49 | *Larix spp.* | 6.2 | *Vaccinium myrtillus* | |
| *Vaccinium myrtillus* | 42 | *Pinus sylvestris* | 5.5 | *Deschampsia flexuosa* | |
| *Pleurozium schreberi* | 33 | *Calluna vulgaris* | 3.9 | *Molinia caerulea* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.7 Low | Mean 6.5 Medium | Mean 3.2 Low | Mean 3.1 Low | Mean 3.1 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.50 SE 0.42

**Streamside**
Length 1.62 SE 0.83

**Vegetation class 76**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

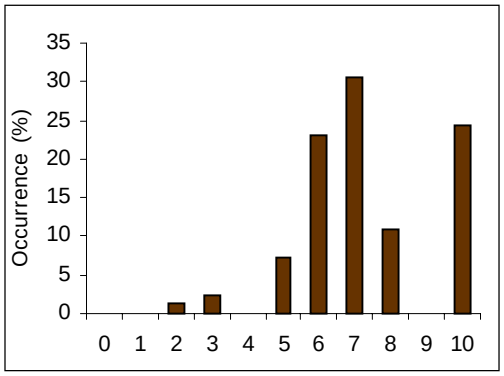
# Diverse acid streamsides/ flushes

## Description

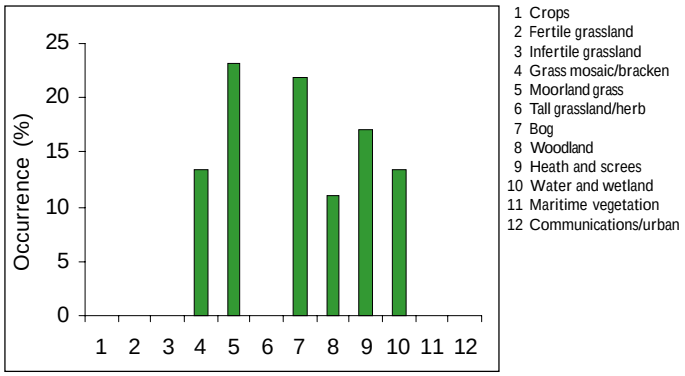
This class is found mainly on streamsides, but it may also occur in open vegetation on a range of upland soils, usually with a surface peat layer. Purple moor-grass (*Molinia caerulea*) and heather (*Calluna vulgaris*) are the main cover species but mat-grass (*Nardus stricta*) is also widespread. The class is diverse, due to local enrichment and contains a range of species of different ecological amplitudes, such as hard fern (*Blechnum spicant*), selfheal (*Prunella vulgaris*) and devil's-bit scabious (*Succisa pratensis*). This class is found in the uplands of Britain especially in the far north-west of Scotland, even to sea level, and elsewhere in appropriate conditions in the lowlands.

## Associated features

### Soils

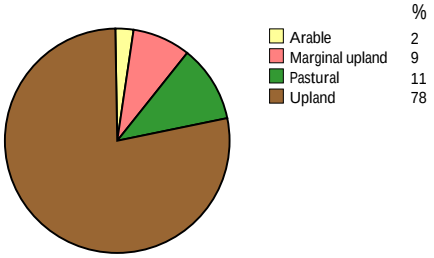



### Land cover

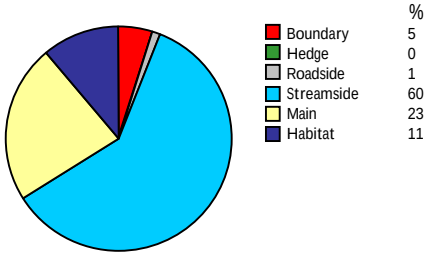



## Distribution

**Total number of plots** 82



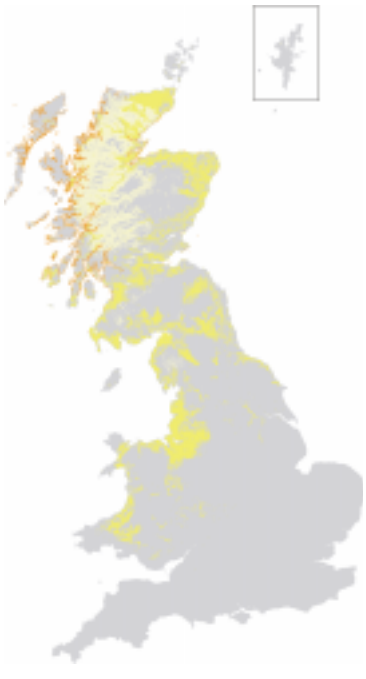

### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



**Main**
Area 0.79 SE 0.26

Key units
Area 000's km$^{-2}$
Length 000's km

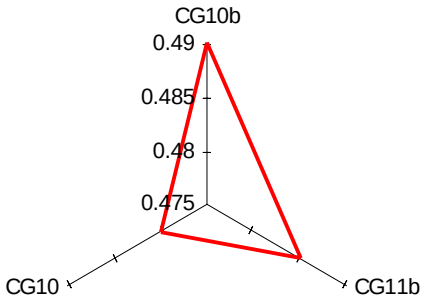
**Boundary**
Length 5.39 SE 3.56

## Floristic characteristics

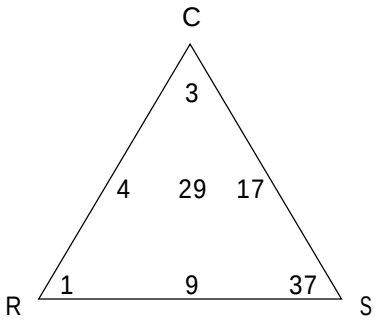
**Species number:** 197 (Medium) **No. of species groups:** 12 (High) **Most frequent group:** 33

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Potentilla erecta* | 91 | *Molinia caerulea* | 15.7 | *Hypericum pulchrum* |
| *Anthoxanthum odoratum* | 87 | *Calluna vulgaris* | 14.9 | *Erica tetralix* |
| *Calluna vulgaris* | 85 | *Nardus stricta* | 6.6 | *Blechnum spicant* |
| *Molinia caerulea* | 81 | *Pteridium aquilinum* | 4.2 | *Succisa pratensis* |
| *Succisa pratensis* | 79 | *Agrostis capillaris* | 3.9 | *Primula vulgaris* |

### Similarity with National Vegetation Classification (NVC) types



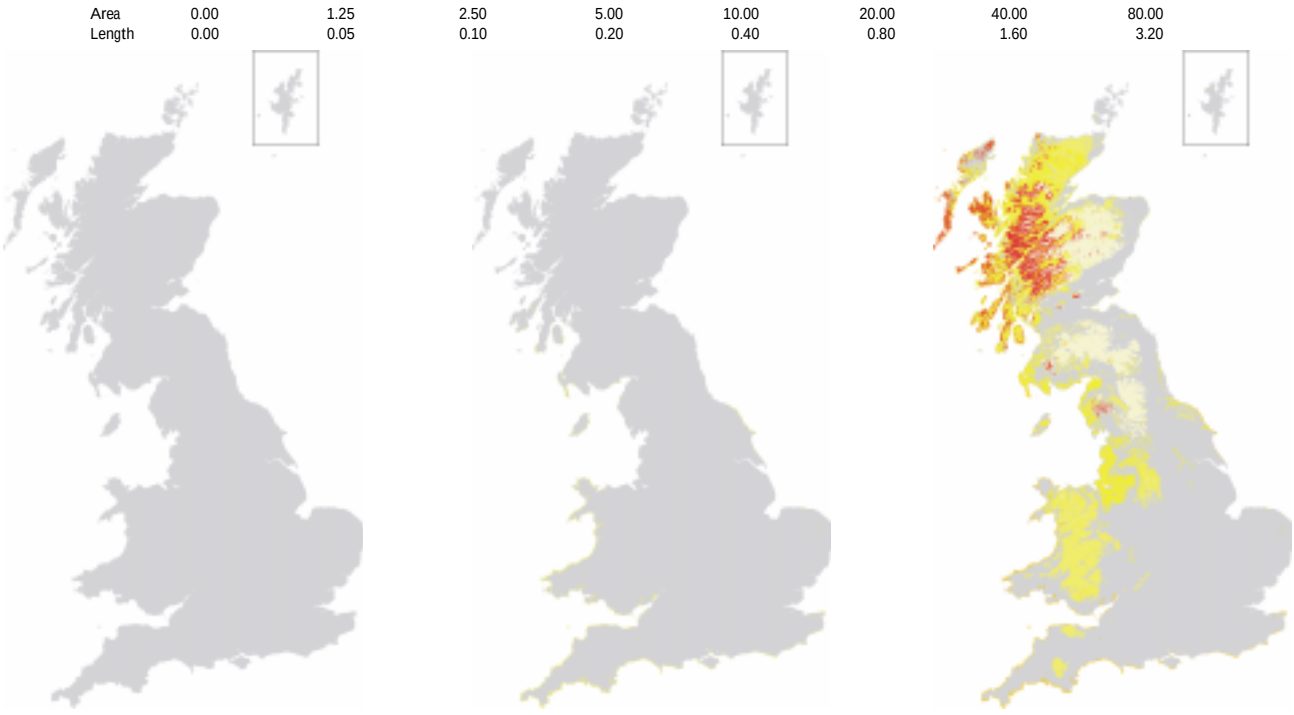

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 Medium | Mean 6.6 High | Mean 3.9 Low | Mean 2.8 Low | Mean 2.9 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.05 SE 0.05

**Streamside**
Length 21.12 SE 6.76

**Vegetation class 77**

**AGGREGATE CLASS VI**
**UPLAND WOODED**

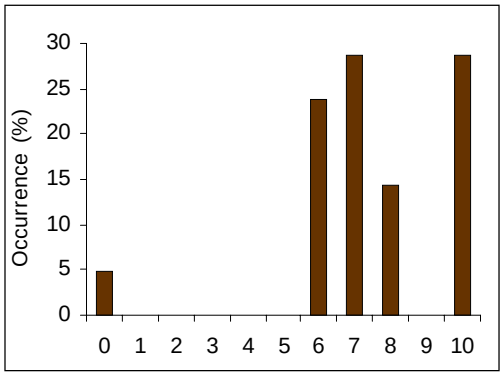
# Mature coniferous plantations

## Description

This class may also occur on a range of acid soils and lowlands in the west. Sitka spruce (*Picea sitchensis*) invariably forms the canopy and the negligible ground cover consists of a few mosses. This class is found mainly in northern England and Scotland.

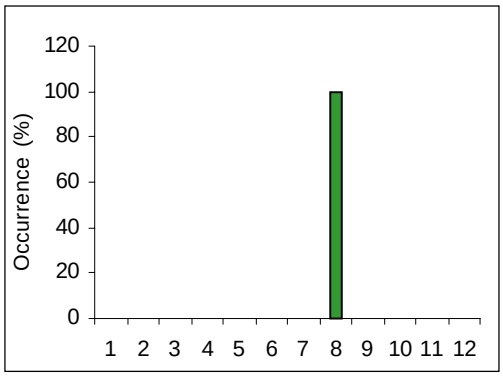
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

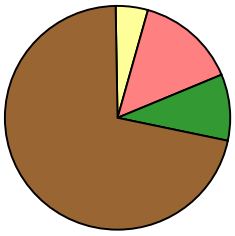
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

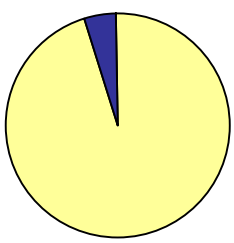
## Distribution

**Total number of plots** 21



| | % |
|---|---|
| Arable | 5 |
| Marginal upland | 14 |
| Pastural | 10 |
| Upland | 71 |

### Landscape association

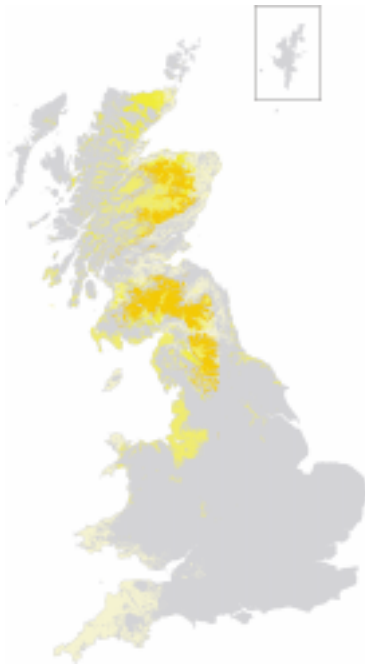


| | % |
|---|---|
| Boundary | 0 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 0 |
| Main | 95 |
| Habitat | 5 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km

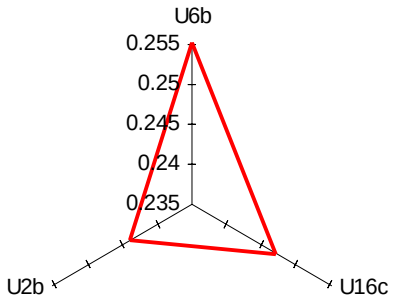
**Main**
Area 1.64 SE 0.44

**Boundary**
Length *absent* SE *n/a*

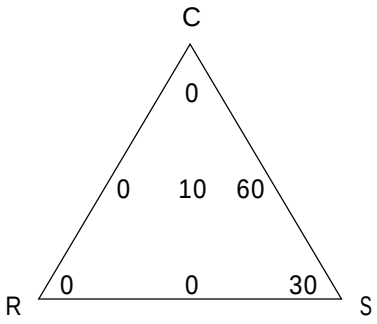
## Floristic characteristics

| **Species number:** | 17 (Low) | **No. of species groups:** | 0 (Low) | **Most frequent group:** | 33 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Picea sitchensis* | 94 | *Picea sitchensis* | 98.2 | *Picea sitchensis* | |
| *Plagiothecium undulatum* | 44 | *Rhytidiadelphus squarrosus* | 2.8 | *Plagiothecium undulatum* | |
| *Hylocomium splendens* | 17 | *Plagiothecium undulatum* | 2.7 | *Hylocomium splendens* | |
| *Thuidium tamariscinum* | 11 | *Dicranum scoparium* | 0.6 | | |
| *Mnium hornum* | 11 | | | | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 5.1 Low | Mean 6.8 High | Mean 3.0 Low | Mean 3.0 Low | Mean 3.1 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length *absent* SE *n/a*

**Vegetation class 78**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

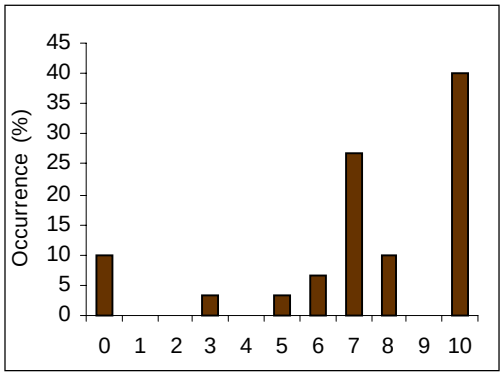
# Species-rich moorland grass/heath

## Description

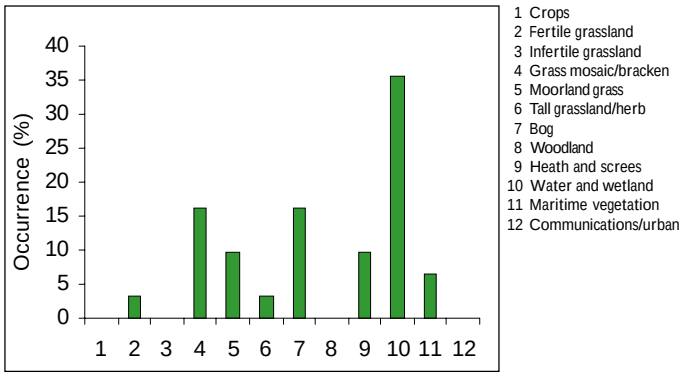
This class is mainly present on streamsides, but also occurs widely in open vegetation on peats or peaty gley soils. Mat-grass (*Nardus stricta*) is the main cover species but sweet vernal grass (*Anthoxanthum odoratum*) and heather (*Calluna vulgaris*) are also present. The class is diverse and characteristic of high humidities in upland situations, typical species being viviparous fescue (*Festuca vivipara*), lousewort (*Pedicularis sylvatica*) and devil's-bit scabious (*Succisa pratensis*). This class is confined to the uplands of northern England and Scotland; it reaches its highest frequency in the Western Isles, Orkney and Shetland.

## Associated features

### Soils

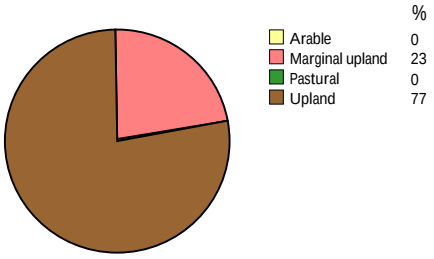



### Land cover

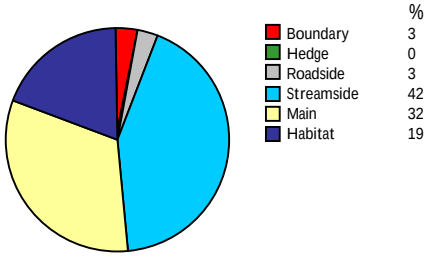



## Distribution

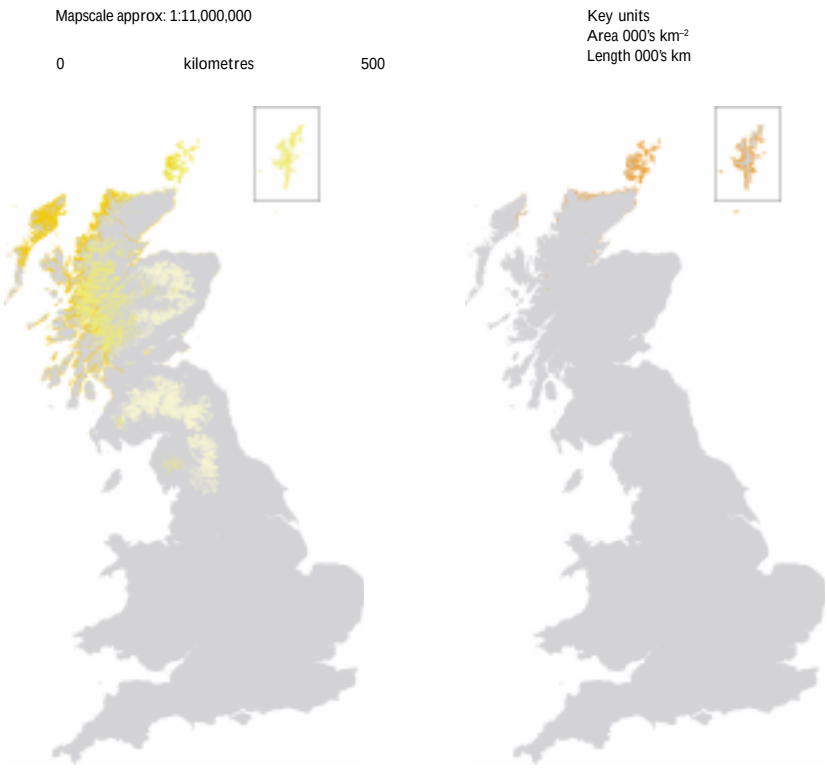
**Total number of plots** 31




### Landscape association




### Plot types




**Main**
Area 0.52 SE 0.18

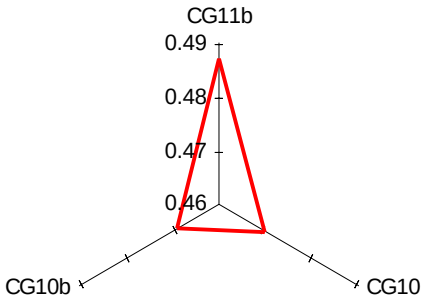
**Boundary**
Length 0.65 SE 0.65

## Floristic characteristics

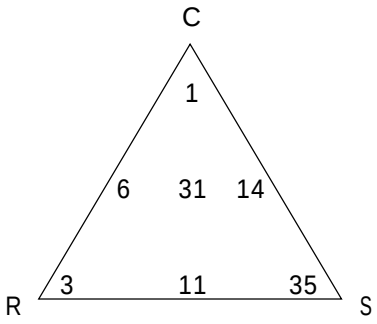
**Species number:** 155 (Medium) **No. of species groups:** 12 (High) **Most frequent group:** 33

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Carex panicea* | 97 | *Nardus stricta* | 17.0 | *Pinguicula vulgaris* |
| *Potentilla erecta* | 93 | *Calluna vulgaris* | 6.6 | *Plantago maritima* |
| *Nardus stricta* | 93 | *Anthoxanthum odoratum* | 5.1 | *Pedicularis sylvatica* |
| *Anthoxanthum odoratum* | 90 | *Festuca vivipara* | 4.7 | *Festuca vivipara* |
| *Succisa pratensis* | 90 | *Carex panicea* | 4.6 | *Succisa pratensis* |

### Similarity with National Vegetation Classification (NVC) types



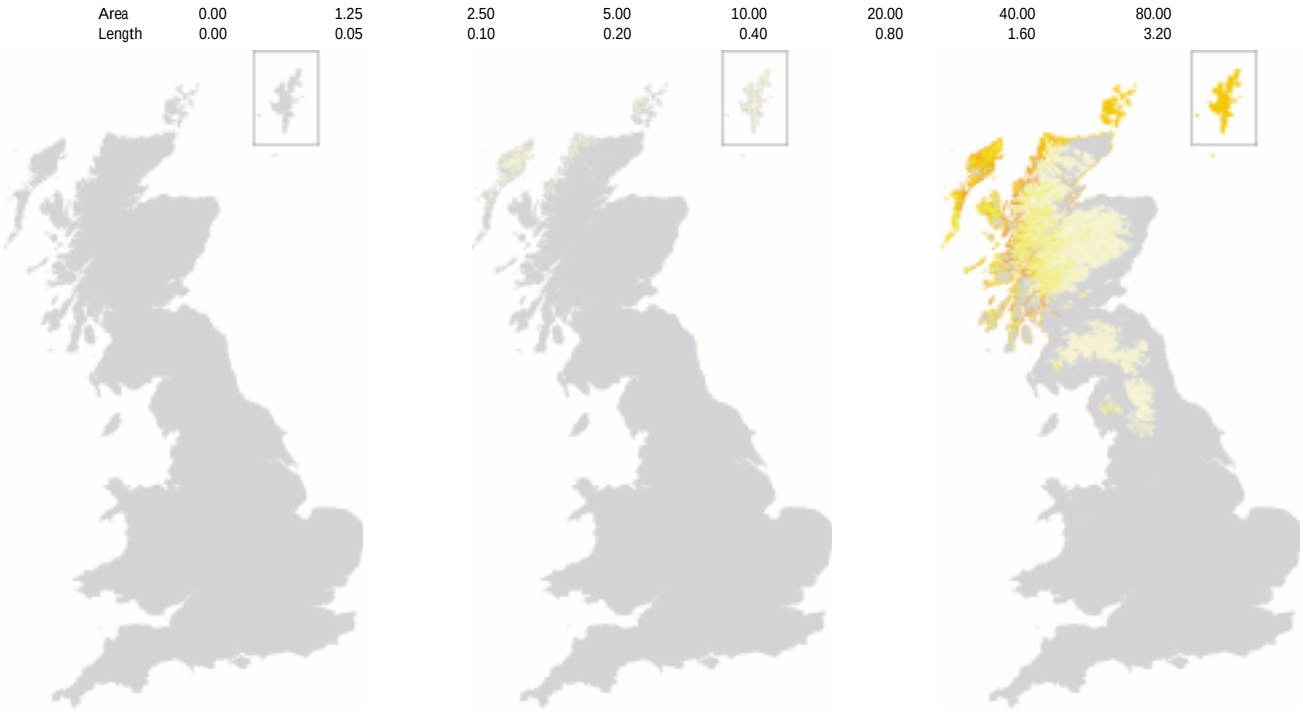

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.3 High | Mean 6.8 High | Mean 3.9 Low | Mean 2.7 Low | Mean 2.8 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.09 SE 0.09

**Streamside**
Length 4.64 SE 1.72

**Vegetation class 79**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

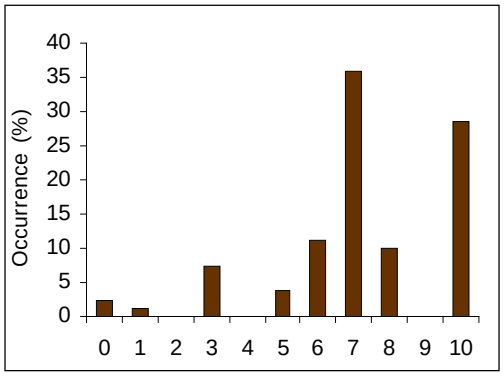
# Mountain streamsides/ flushes

## Description

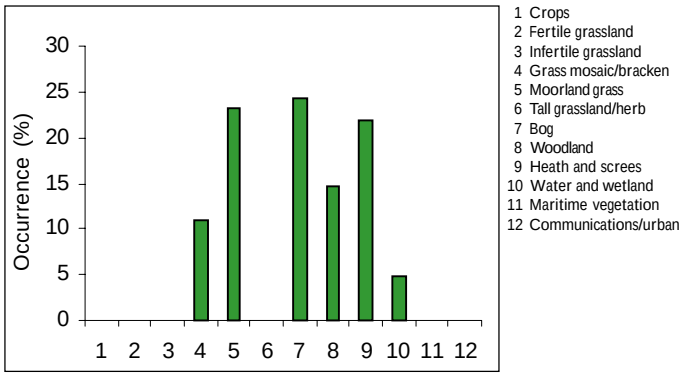
This class is usually present by streams, but also occurs in open vegetation on peats or peaty gley soils. Heather (*Calluna vulgaris*) is the main cover species, but mat-grass (*Nardus stricta*) may also form a high cover as well as sweet vernal-grass (*Anthoxanthum odoratum*). The vegetation is quite diverse, mainly in plants associated with acidic soils such as bilberry (*Vaccinium myrtillus*), hard fern (*Blechnum spicant*) and great wood-rush (*Luzula sylvatica*). This class is confined to upland Britain, principally in the mountains of north-west Scotland.

## Associated features

### Soils

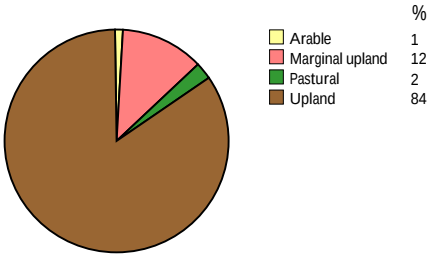



### Land cover

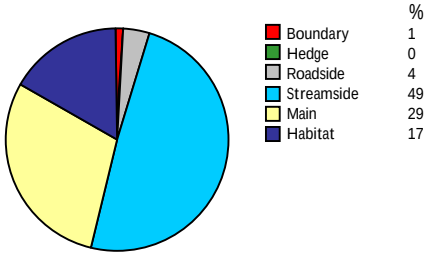



## Distribution

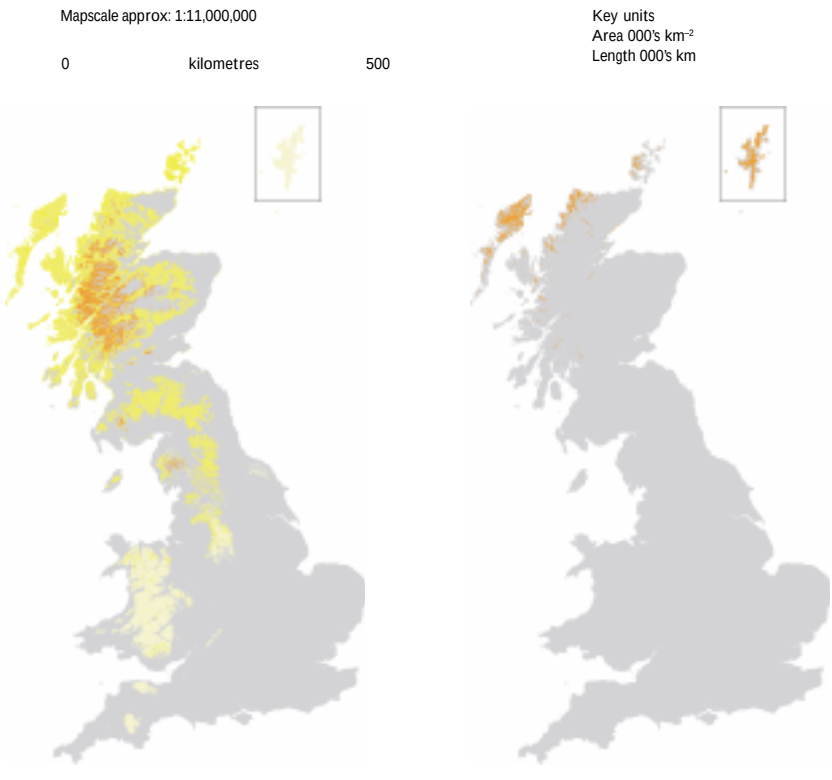
**Total number of plots** 82




### Landscape association




### Plot types




**Main**
Area 1.64 SE 0.45

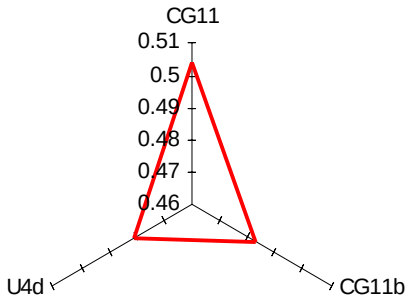
**Boundary**
Length 1.89 SE 1.69

## Floristic characteristics

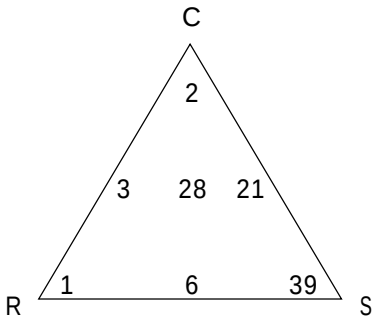
**Species number:** 177 (Medium) **No. of species groups:** 9 (High) **Most frequent group:** 33

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Potentilla erecta* | 92 | *Calluna vulgaris* | 10.8 | *Luzula sylvatica* |
| *Anthoxanthum odoratum* | 81 | *Nardus stricta* | 10.2 | *Blechnum spicant* |
| *Galium saxatile* | 81 | *Molinia caerulea* | 9.6 | *Luzula sylvatica* |
| *Nardus stricta* | 73 | *Agrostis capillaris* | 4.6 | *Festuca vivipara* |
| *Hylocomium splendens* | 67 | *Anthoxanthum odoratum* | 4.2 | *Racomitrium lanuginosum* |

### Similarity with National Vegetation Classification (NVC) types



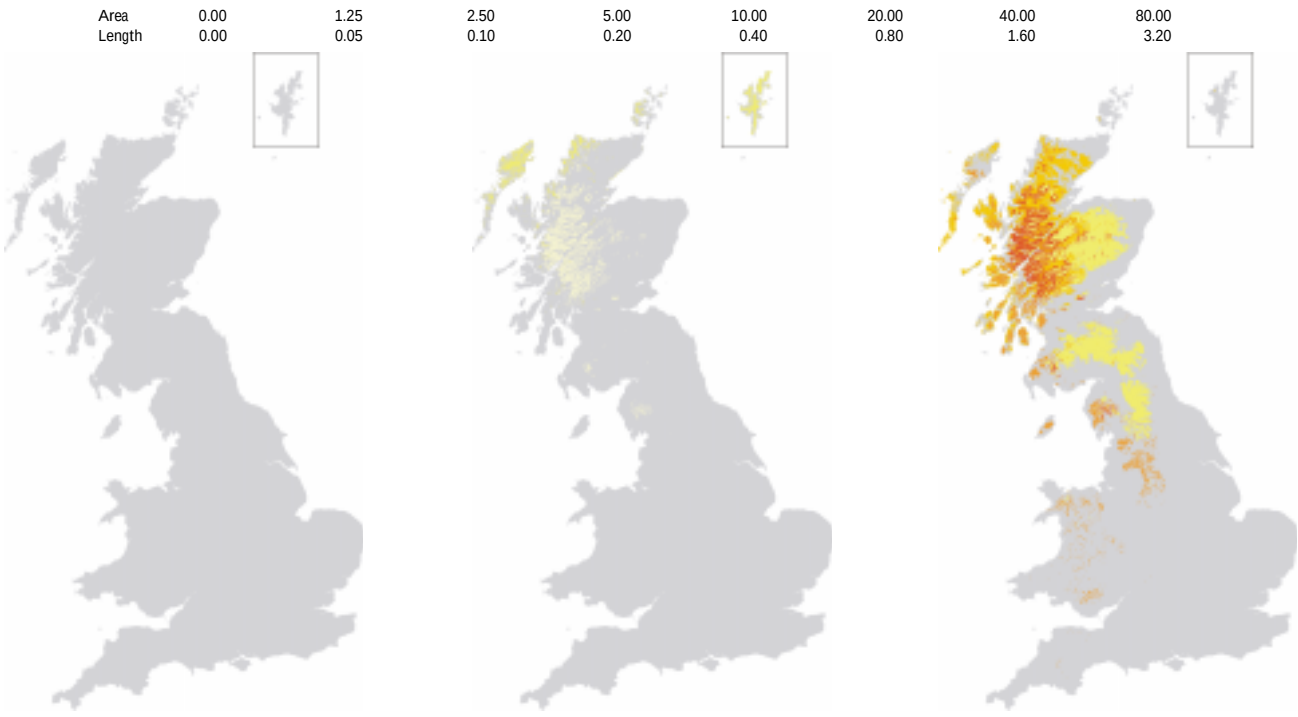

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 6.6 High | Mean 3.5 Low | Mean 2.8 Low | Mean 2.9 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.28 SE 0.21

**Streamside**
Length 14.95 SE 3.38

**Vegetation class 80**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

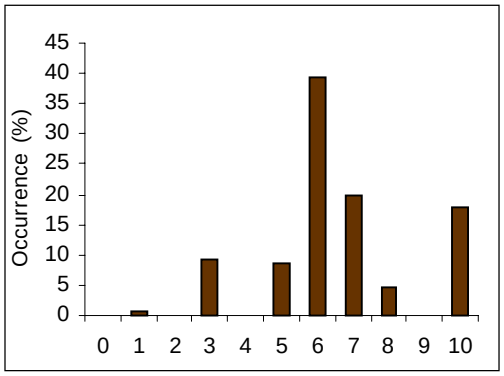
# Moorland grass/heath on podzolic soils

## Description

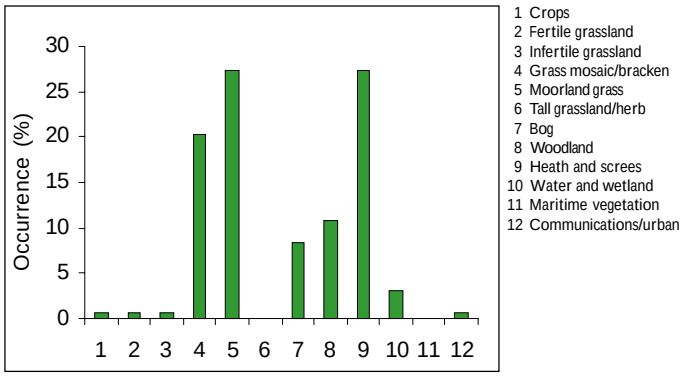
This class is most common in open vegetation on podzolic soils. Mat-grass (*Nardus stricta*) is the major cover species with sheep's-fescue (*Festuca ovina*) often present. The type is relatively uniform, with widespread species such as heath bedstraw (*Galium saxatile*), bilberry (*Vaccinium myrtillus*) and wavy hair-grass (*Deschampsia flexuosa*) being typical. The class occurs throughout upland Britain, but occasionally in the lowlands on appropriate poor soils.

## Associated features

### Soils

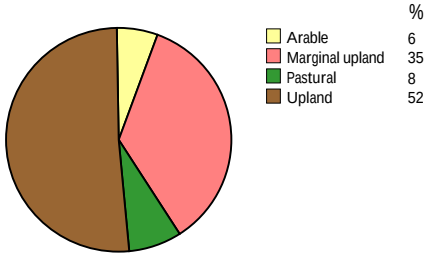



### Land cover

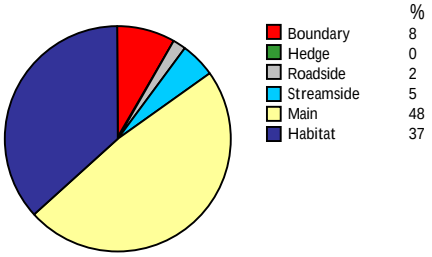



## Distribution

**Total number of plots** 157



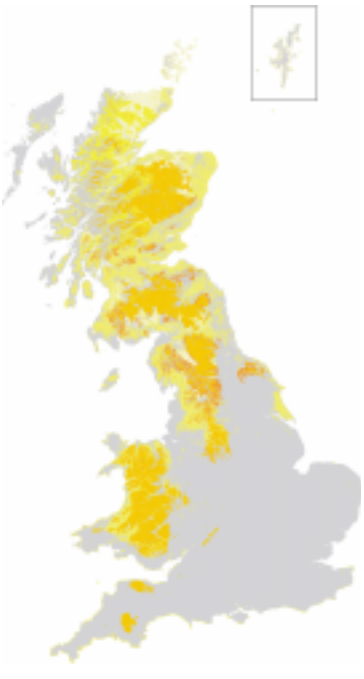

### Landscape association



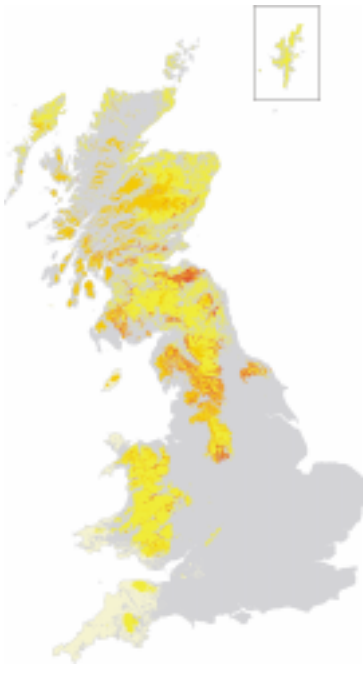

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 4.18 SE 0.76

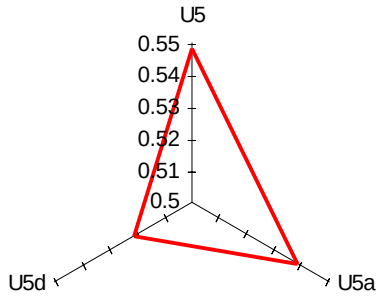
**Boundary**
Length 14.39 SE 4.94

## Floristic characteristics

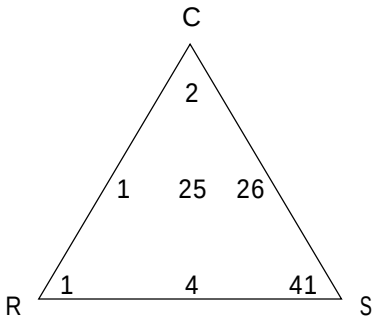
**Species number:** 140 (Medium) **No. of species groups:** 6 (Medium) **Most frequent group:** 29

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Galium saxatile* | 86 | *Calluna vulgaris* | 18.5 | *Vaccinium myrtillus* |
| *Festuca ovina* | 73 | *Nardus stricta* | 15.2 | *Nardus stricta* |
| *Vaccinium myrtillus* | 73 | *Festuca ovina* | 11.1 | *Agrostis capillaris* |
| *Agrostis capillaris* | 71 | *Agrostis capillaris* | 8.5 | *Deschampsia flexuosa* |
| *Rhytidiadelphus squarrosus* | 65 | *Vaccinium myrtillus* | 6.6 | *Festuca ovina* |

### Similarity with National Vegetation Classification (NVC) types



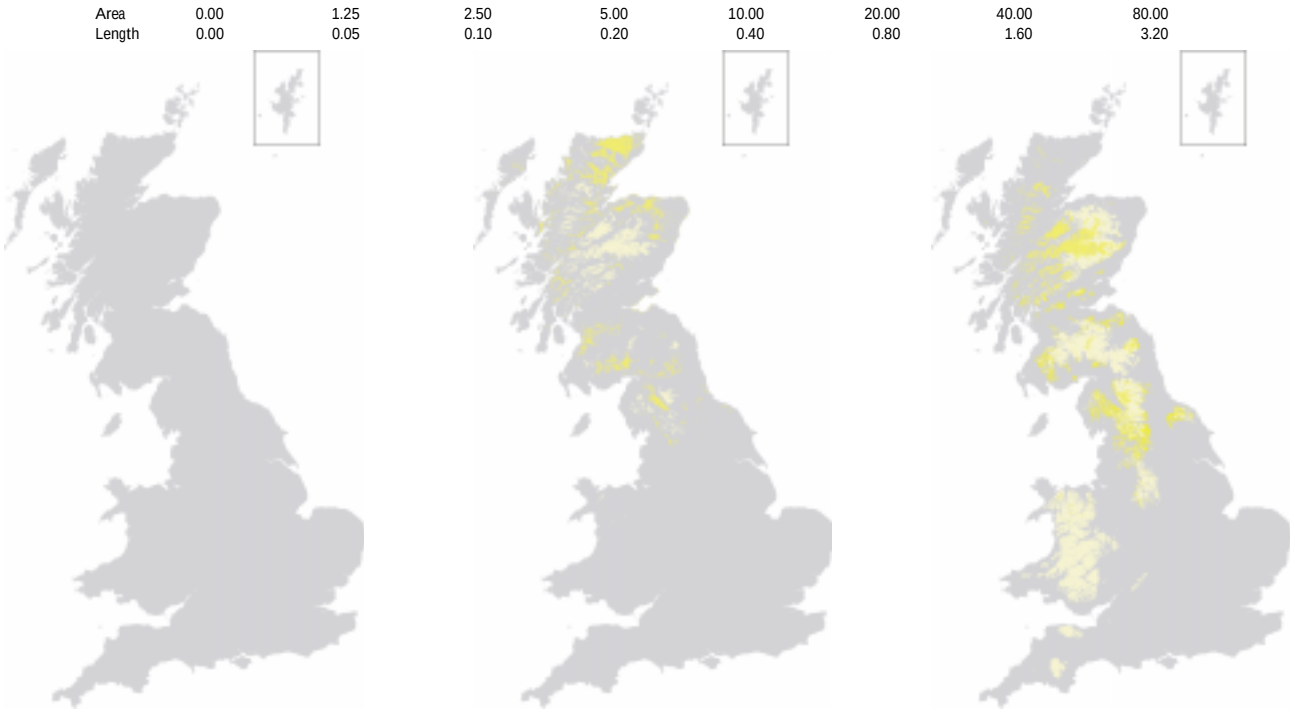

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 6.4 Medium | Mean 3.1 Low | Mean 2.5 Low | Mean 3.0 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.50 SE 0.43

**Streamside**
Length 1.89 SE 0.85

**Vegetation class 81**

**AGGREGATE CLASS VII**
**MOORLAND GRASS/MOSAIC**

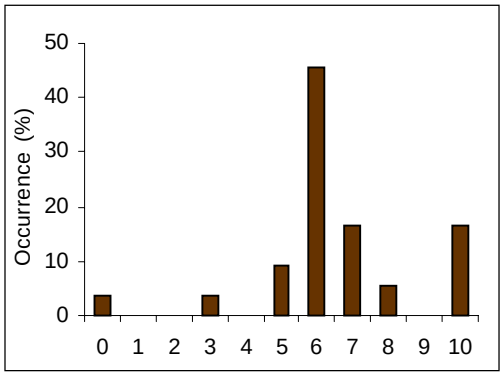
# Montane heath/acid grassland

## Description

This class occurs mainly in open vegetation or in small patches, and occasionally by linear features, usually on podzolic soils. It is not particularly common and heather (*Calluna vulgaris*) is the main cover species, although mat-grass (*Nardus stricta*) and sheep=s-fescue (*Festuca ovina*) are often present. The class is of average diversity with species from strongly acidic soils predominating, eg tormentil (*Potentilla erecta*), cowberry (*Vaccinium vitis-idaea*) and bell heather (*Erica cinerea*), as well as various lichens. The class occurs throughout upland Britain, especially in the Grampians, Orkney and Shetland, but occasionally in the lowlands.

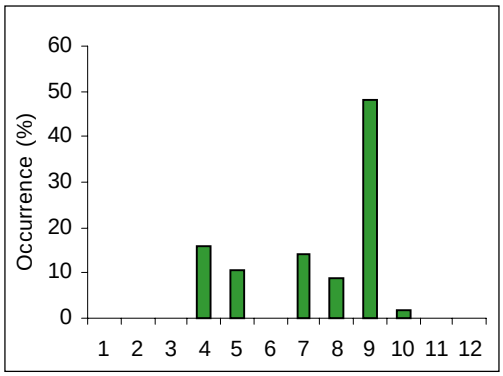
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

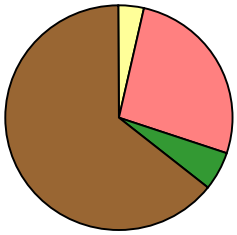
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

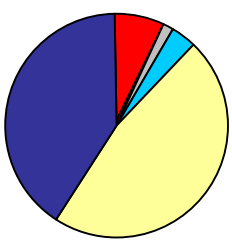
## Distribution

**Total number of plots** 56



| | % |
|---|---|
| Arable | 4 |
| Marginal upland | 27 |
| Pastural | 5 |
| Upland | 64 |

### Landscape association



| | % |
|---|---|
| Boundary | 7 |
| Hedge | 0 |
| Roadside | 2 |
| Streamside | 4 |
| Main | 46 |
| Habitat | 41 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 1.05 SE 0.30

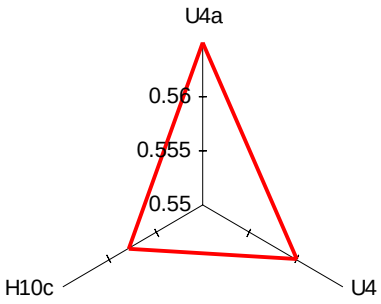
**Boundary**
Length 2.39 SE 1.41

## Floristic characteristics

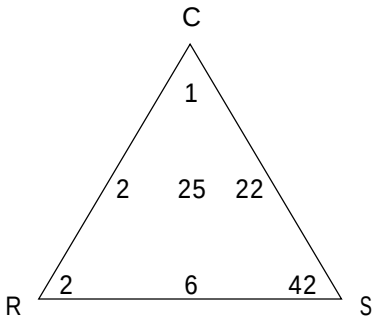
**Species number:** 133 (Low) **No. of species groups:** 7 (Medium) **Most frequent group:** 33

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 91 | *Calluna vulgaris* | 32.7 | *Vaccinium vitis-idaea* |
| *Potentilla erecta* | 91 | *Nardus stricta* | 7.9 | *Erica cinerea* |
| *Agrostis capillaris* | 82 | *Festuca ovina* | 7.5 | *Potentilla erecta* |
| *Vaccinium myrtillus* | 80 | *Agrostis capillaris* | 7.5 | *Empetrum nigrum* |
| *Anthoxanthum odoratum* | 77 | *Vaccinium myrtillus* | 5.8 | *Vaccinium myrtillus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.8 Medium | Mean 6.3 Medium | Mean 3.4 Low | Mean 2.6 Low | Mean 2.9 Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.08 SE 0.08

**Streamside**
Length 0.36 SE 0.36

**Vegetation class 82**

**AGGREGATE CLASS VII**
**HEATH/BOG**

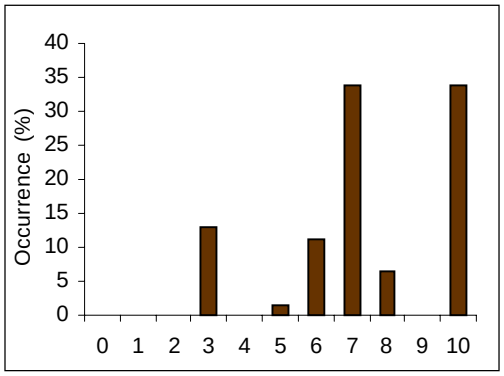
# Wet heath/ bog

## Description

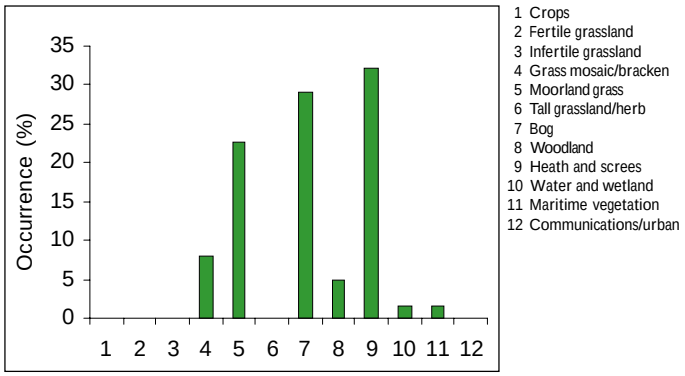
Although this class mainly occurs in open vegetation, it is also present on streamsides. It is not particularly common and usually has a cover of heather (*Calluna vulgaris*) and purple moor-grass (*Molinia caerulea*). The class is quite diverse, with species such as cross-leaved heath (*Erica tetralix*), bog asphodel (*Narthecium ossifragum*) and slender St John's-wort (*Hypericum pulchrum*). This class is mainly confined to the far north-west of Scotland, but it has outliers in other upland areas and rarely in the lowlands.

## Associated features

### Soils

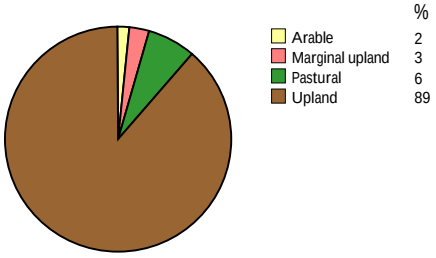



### Land cover

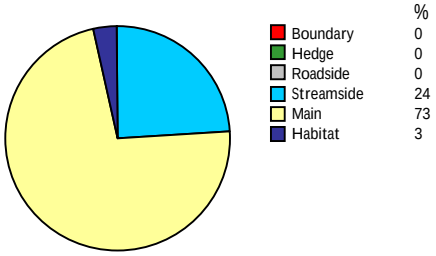



## Distribution

**Total number of plots** 62




### Landscape association

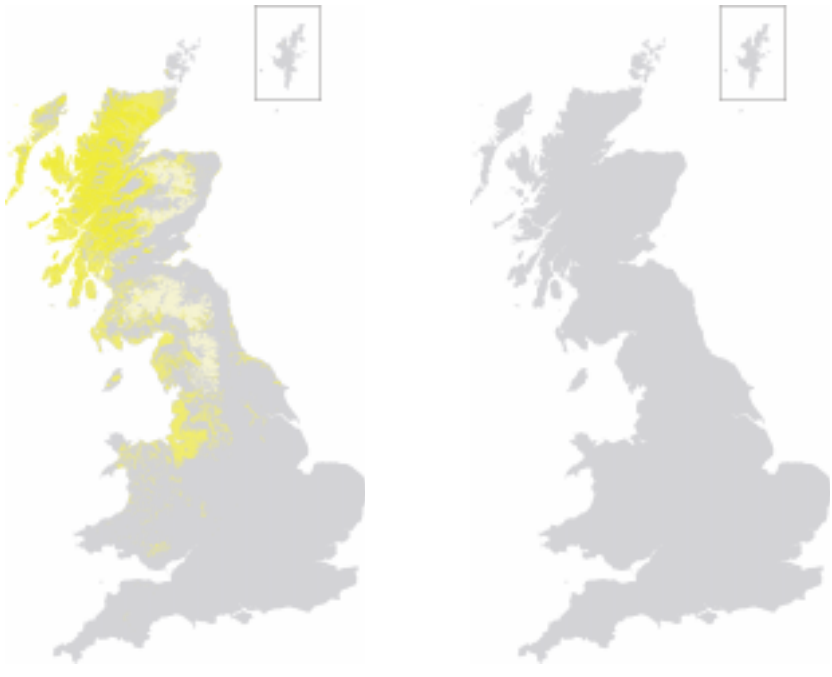



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 1.20 SE 0.36

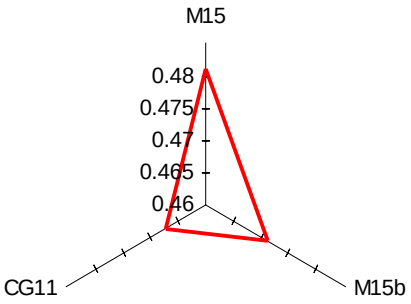
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

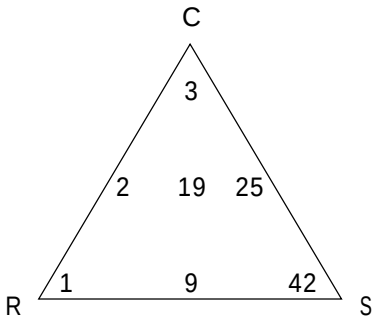
**Species number:** 152 (Medium) **No. of species groups:** 10 (High) **Most frequent group:** 33

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 100 | *Calluna vulgaris* | 57.6 | *Hypericum pulchrum* |
| *Potentilla erecta* | 100 | *Molinia caerulea* | 49.0 | *Pteridium aquilinum* |
| *Trichophorum caespitosum* | 92 | *Trichophorum caespitosum* | 15.7 | *Narthecium ossifragum* |
| *Molinia caerulea* | 88 | *Nardus stricta* | 11.9 | *Blechnum spicant* |
| *Erica tetralix* | 85 | *Erica tetralix* | 8.8 | *Succisa pratensis* |

### Similarity with National Vegetation Classification (NVC) types



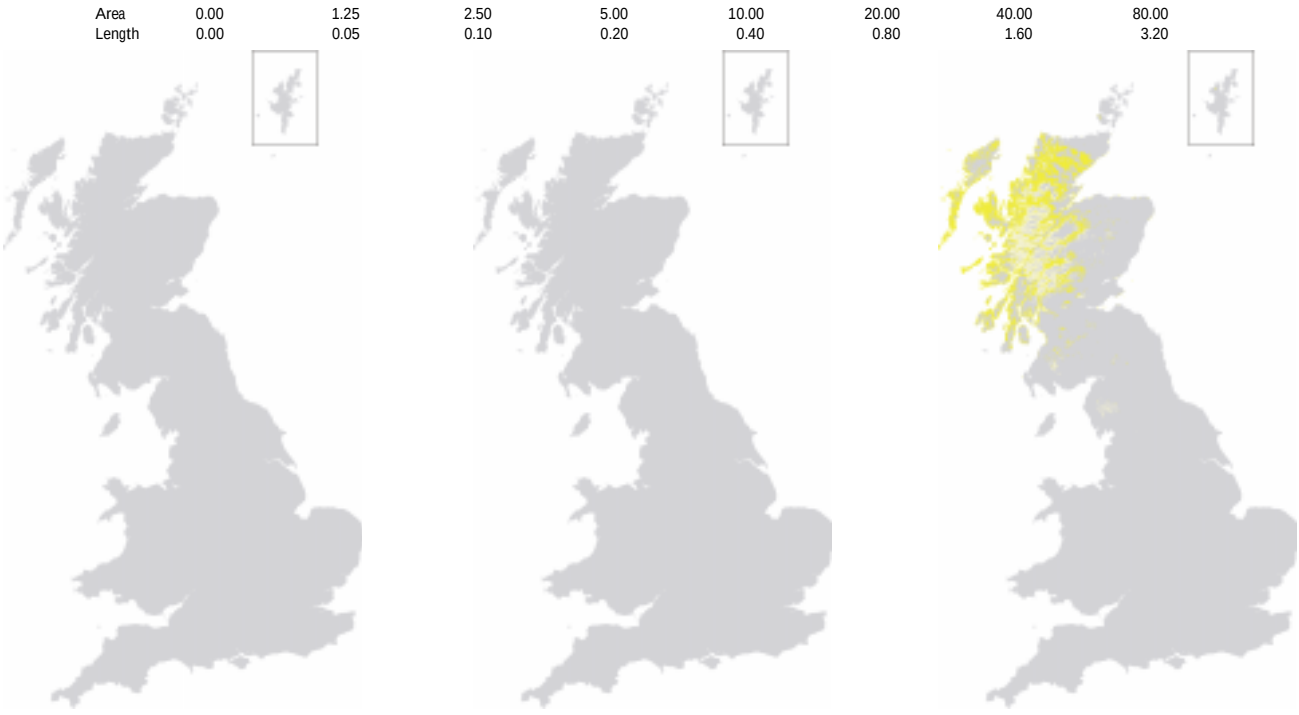

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.0 High | Mean 6.9 High | Mean 3.2 Low | Mean 2.4 Low | Mean 2.8 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 2.68 SE 1.19

**Vegetation class 83**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

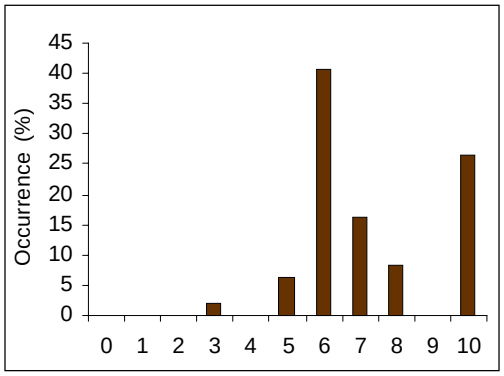
# Young coniferous plantations

## Description

This class occurs mainly within the boundaries of young conifer plantations on brown podzolic soils. It is quite common; heather (*Calluna vulgaris*) and purple moor-grass (*Molinia caerulea*) are the main cover species, together with some mosses. The class is not diverse and species such as wavy hair-grass (*Deschampsia flexuosa*), bilberry (*Vaccinium myrtillus*) and tormentil (*Potentilla erecta*) are characteristic. It often contains Sitka spruce (*Picea sitchensis*) or lodgepole pine (*Pinus contorta*) and may therefore move into classes 75 and eventually 77. This class occurs throughout the uplands of Britain, with outliers in the Scottish lowlands and the West Country.

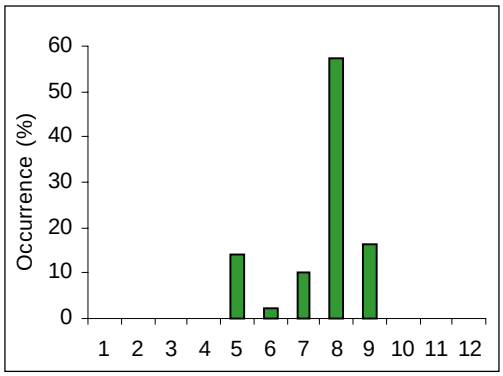
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

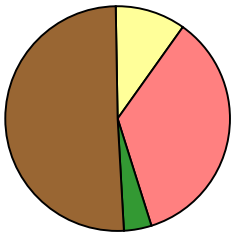
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

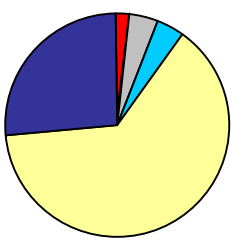
## Distribution

**Total number of plots** 49



| | % |
|---|---|
| Arable | 10 |
| Marginal upland | 35 |
| Pastural | 4 |
| Upland | 51 |

### Landscape association

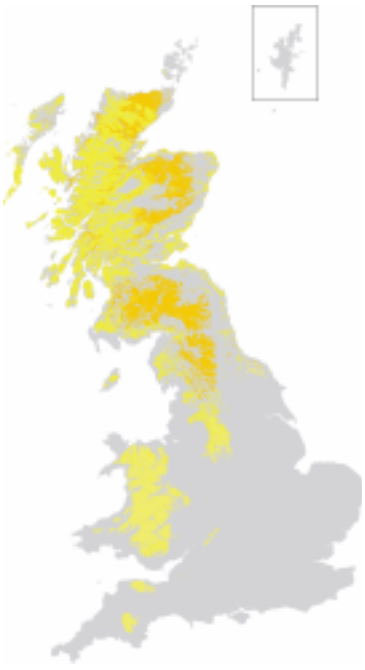


| | % |
|---|---|
| Boundary | 2 |
| Hedge | 0 |
| Roadside | 4 |
| Streamside | 4 |
| Main | 63 |
| Habitat | 27 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km

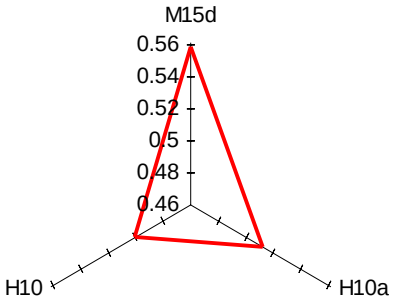
**Main**
Area 2.36 SE 0.53

**Boundary**
Length 0.72 SE 0.72

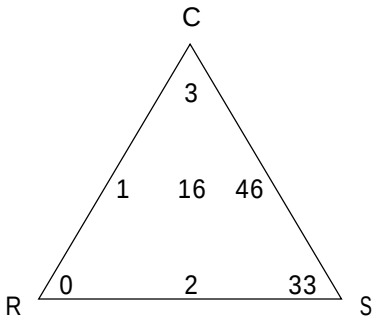
## Floristic characteristics

| **Species number:** | 91 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 35 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Calluna vulgaris* | 91 | *Calluna vulgaris* | 32.3 | *Molinia caerulea* | |
| *Deschampsia flexuosa* | 74 | *Molinia caerulea* | 15.3 | *Deschampsia flexuosa* | |
| *Vaccinium myrtillus* | 74 | *Picea sitchensis* | 11.8 | *Blechnum spicant* | |
| *Plagiothecium undulatum* | 74 | *Pleurozium schreberi* | 6.4 | | |
| *Pleurozium schreberi* | 72 | *Vaccinium myrtillus* | 4.2 | | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 6.6 | Low | Mean 6.9 | High | Mean 2.6 | Low | Mean 2.3 | Low | Mean 3.0 | Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.00 SE 0.00

**Streamside**
Length 0.99 SE 0.81

**Vegetation class 84**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

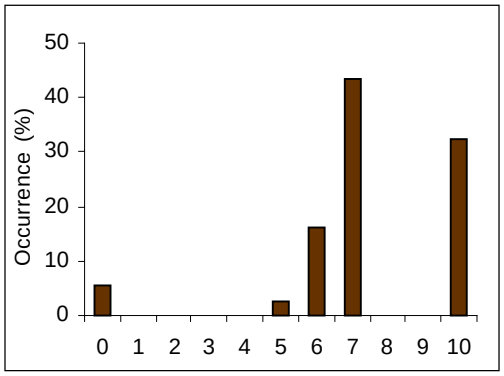
# Rush heath/ moorland grass

## Description

This class is often found on streamsides but is also common in open vegetation usually on gleyed soils. The class is not uncommon; heather (*Calluna vulgaris*) being the main cover species followed by heath rush (*Juncus squarrosus*). The class is not diverse and is species-poor, with soft-rush (*Juncus effusus*), sheep's-fescue (*Festuca ovina*) and bilberry (*Vaccinium myrtillus*). The centre of distribution of this class is the Pennines, and, although it also occurs elsewhere in the uplands and occasionally in the lowlands, it is virtually absent from the north of Scotland.

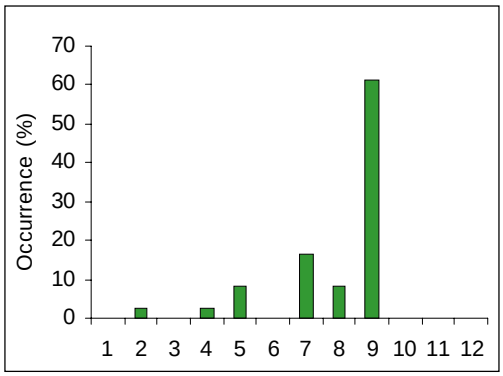
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

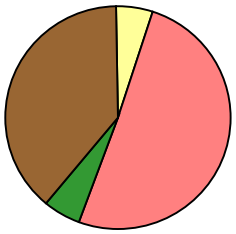
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

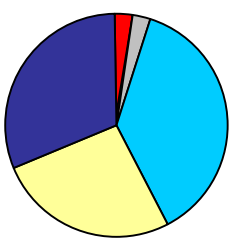
## Distribution

**Total number of plots** 38



| | % |
|---|---|
| Arable | 5 |
| Marginal upland | 50 |
| Pastural | 5 |
| Upland | 39 |

### Landscape association

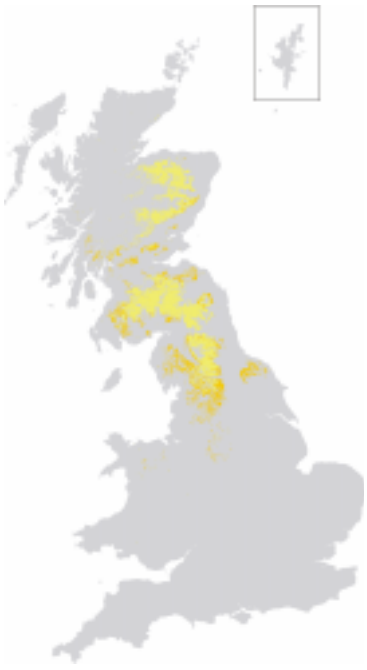


| | % |
|---|---|
| Boundary | 3 |
| Hedge | 0 |
| Roadside | 3 |
| Streamside | 37 |
| Main | 26 |
| Habitat | 32 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km

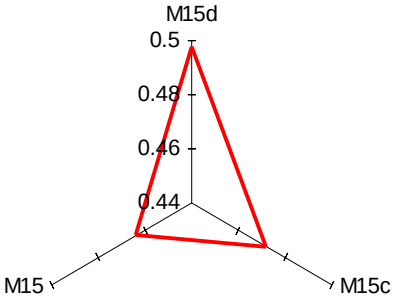
**Main**
Area 0.51 SE 0.37

**Boundary**
Length 0.00 SE 0.00

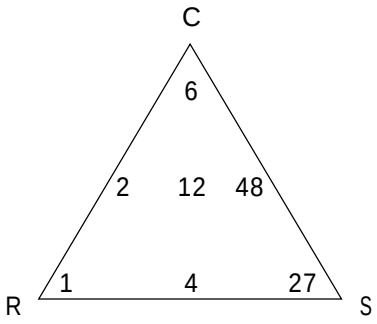
## Floristic characteristics

| **Species number:** | 56 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 35 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Calluna vulgaris* | 87 | *Calluna vulgaris* | 43.5 | *Juncus effusus* | |
| *Juncus squarrosus* | 70 | *Juncus squarrosus* | 8.9 | *Agrostis stolonifera* | |
| *Juncus effusus* | 47 | *Nardus stricta* | 5.0 | *Juncus squarrosus* | |
| *Vaccinium myrtillus* | 43 | *Vaccinium myrtillus* | 4.6 | *Festuca ovina* | |
| *Erica tetralix* | 40 | *Eriophorum angustifolium* | 4.4 | *Agrostis capillaris* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.2 | High | Mean 7.0 | High | Mean 2.7 | Low | Mean 2.2 | Low | Mean 2.9 | Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.03 SE 0.03

**Streamside**
Length 5.49 SE 2.49

**Vegetation class 85**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

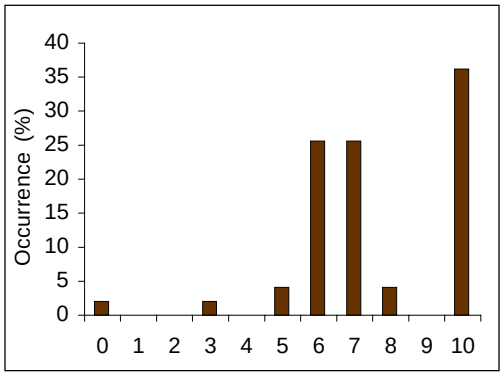
# Streamsides/ flushes on peat soils

## Description

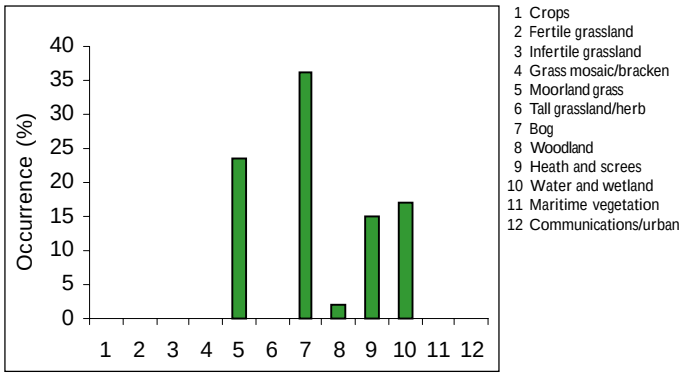
This class is present mainly by the many small streams of the extreme west, or in flushes, usually on peat soils. It is not particularly common, and purple moor-grass (*Molinia caerulea*) usually forms the main cover; otherwise heather (*Calluna vulgaris*) and mat-grass (*Nardus stricta*) are significant cover species. It is quite a diverse class with many species from wet soils, such as lesser spearwort (*Ranunculus flammula*), bog asphodel (*Narthecium ossifragum*) and several sedges (*Carex* spp.). The class occurs mainly in north-west Scotland with a high concentration in coastal areas, but there are outliers in the lowlands of north-west England.

## Associated features

### Soils

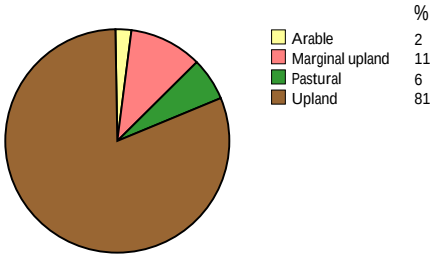



### Land cover

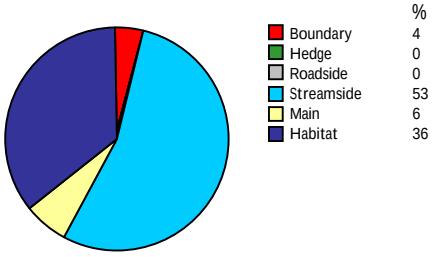



## Distribution

**Total number of plots** 47




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

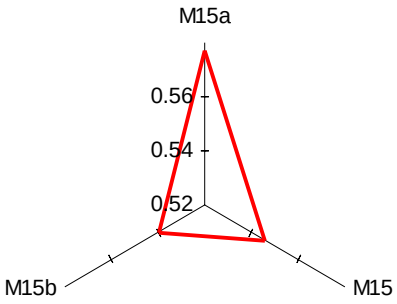
**Main**
Area 0.01 SE 0.01

**Boundary**
Length 1.47 SE 1.47

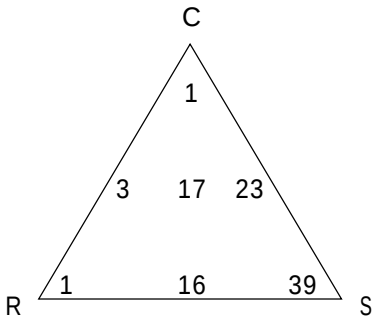
## Floristic characteristics

| **Species number:** | 127 (Low) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 37 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Carex panicea* | 91 | *Molinia caerulea* | 23.7 | *Ranunculus flammula* | |
| *Molinia caerulea* | 88 | *Nardus stricta* | 6.5 | *Selaginella selaginoides* | |
| *Potentilla erecta* | 86 | *Calluna vulgaris* | 5.3 | *Carex demissa* | |
| *Narthecium ossifragum* | 86 | *Carex demissa* | 4.6 | *Pinguicula vulgaris* | |
| *Carex demissa* | 84 | *Carex panicea* | 4.2 | *Succisa pratensis* | |

### Similarity with National Vegetation Classification (NVC) types



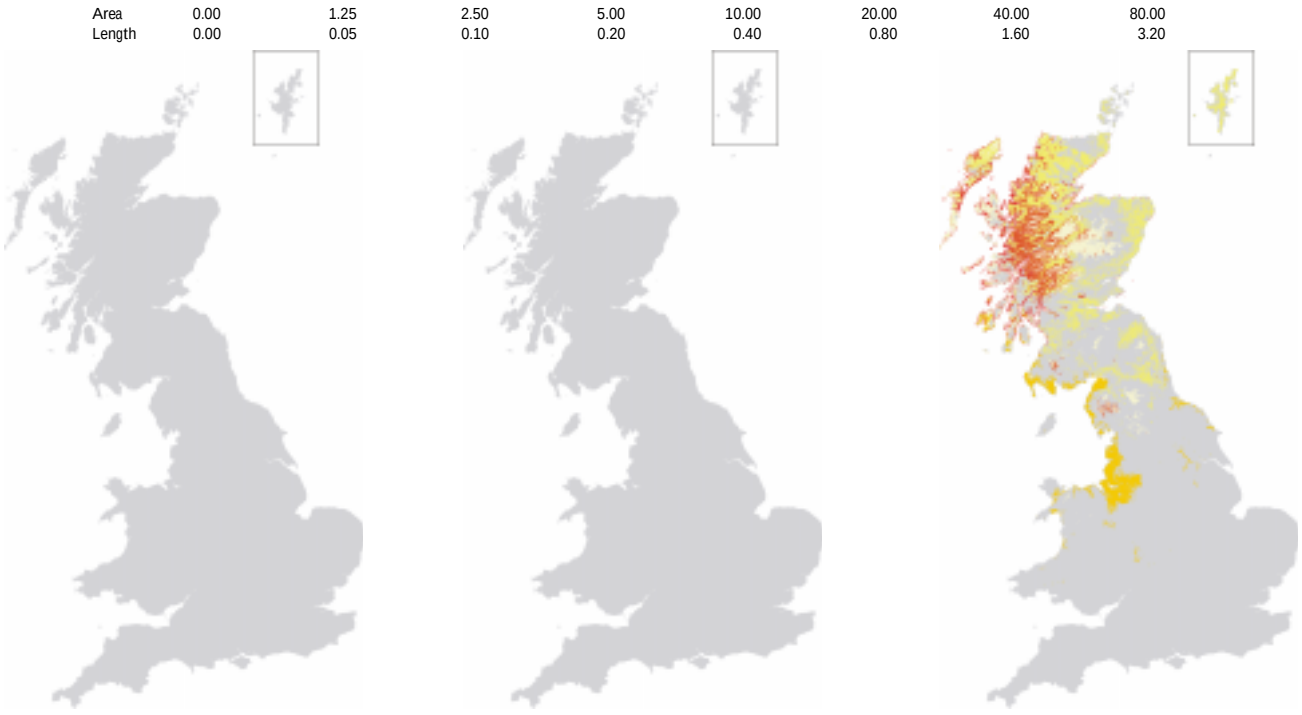

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.5 | High | Mean 7.5 | High | Mean 3.6 | Low | Mean 2.3 | Low | Mean 2.6 | Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 15.32 SE 5.67

**Vegetation class 86**

**AGGREGATE CLASS VIII HEATH/BOG**

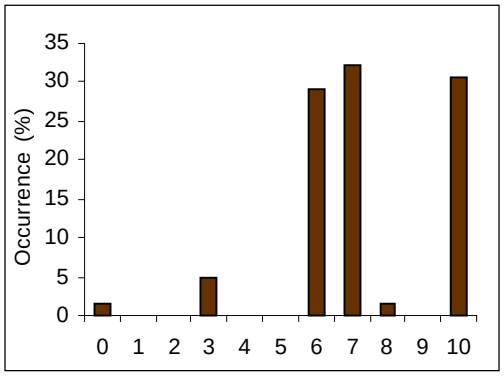
# Wet moor-land grass/ streamsides on peaty gley soils

## Description

This class is widely found in open vegetation in the north-west, on a range of upland soils. The class is quite common and tends to form extensive areas where it occurs with heather (*Calluna vulgaris*) and purple moor-grass (*Molinia caerulea*) as the main cover species, but with mat-grass (*Nardus stricta*) also often present. It is rather diverse, characteristic species being deergrass (*Trichophorum cespitosum*), hard fern (*Blechnum spicant*) and flea sedge (*Carex pulicaris*). This class usually occurs in the uplands, especially in the far north-west of Scotland, but also in the high mountains of the Lake District, the Pennines and north Wales.

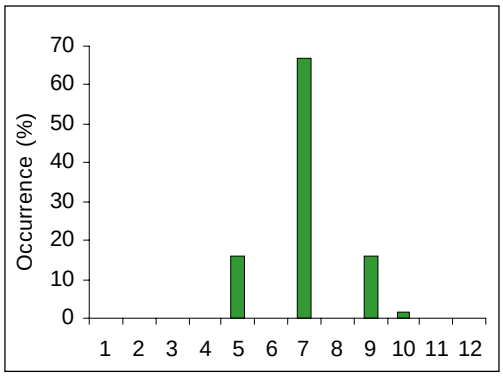
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

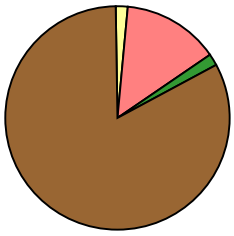
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

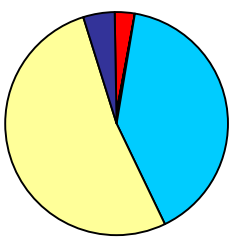
## Distribution

**Total number of plots** 63



| | % |
|---|---|
| Arable | 2 |
| Marginal upland | 14 |
| Pastural | 2 |
| Upland | 83 |

### Landscape association

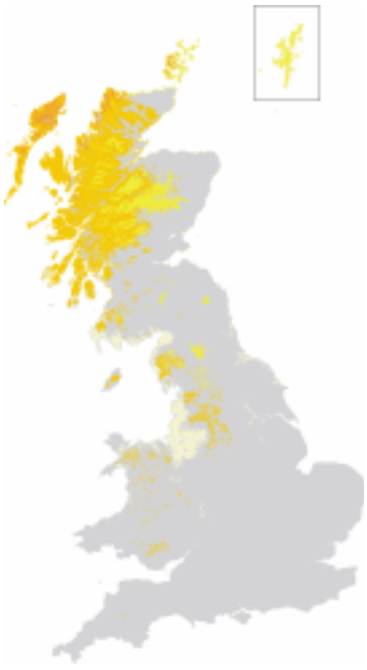


| | % |
|---|---|
| Boundary | 3 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 40 |
| Main | 52 |
| Habitat | 5 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km

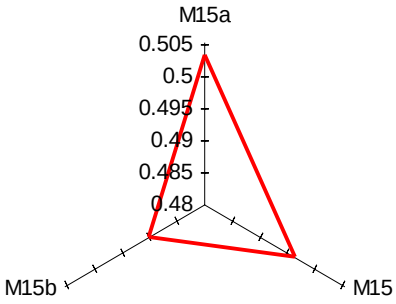
**Main**
Area 2.44 SE 0.57

**Boundary**
Length 1.98 SE 1.48

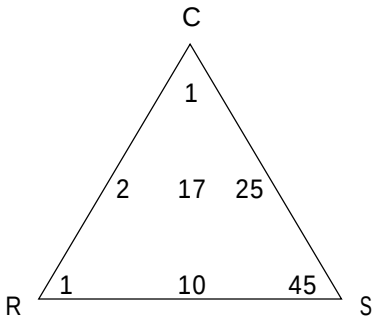
## Floristic characteristics

| **Species number:** | 139 (Low) | **No. of species groups:** | 10 (High) | **Most frequent group:** | 33 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Potentilla erecta* | 100 | *Calluna vulgaris* | 15.0 | *Festuca vivipara* | |
| *Calluna vulgaris* | 95 | *Molinia caerulea* | 13.8 | *Agrostis capillaris* | |
| *Nardus stricta* | 94 | *Nardus stricta* | 9.0 | *Selaginella selaginoides* | |
| *Molinia caerulea* | 92 | *Trichophorum caespitosum* | 7.3 | *Carex demissa* | |
| *Trichophorum caespitosum* | 89 | *Eriophorum angustifolium* | 3.1 | *Blechnum spicant* | |

### Similarity with National Vegetation Classification (NVC) types



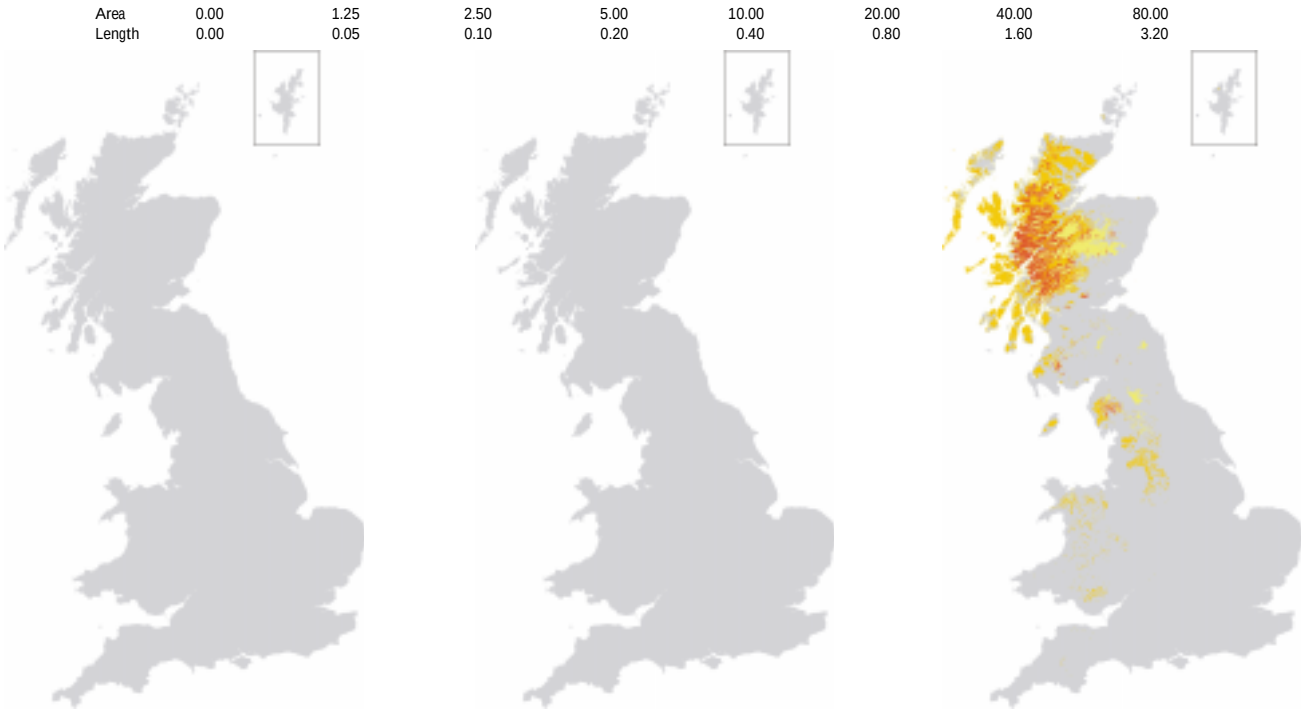

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.3 | High | Mean 7.1 | High | Mean 3.2 | Low | Mean 2.3 | Low | Mean 2.7 | Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 12.55 SE 4.40

**Vegetation class 87**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

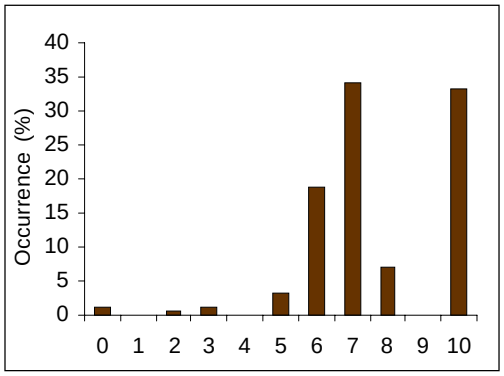
# Moorland grass/bog on peaty gley/ peat soils

## Description

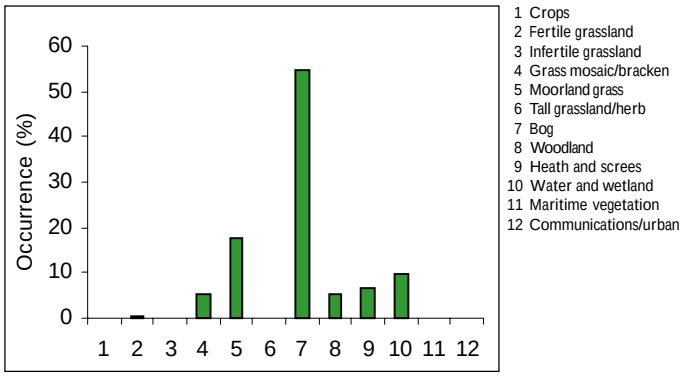
This class usually occurs in open vegetation, but may also be present by streamsides and in flushes on mainly peaty gley and peat soils. It is one of the most widespread classes of open moorland, with purple moor-grass (*Molinia caerulea*) and heather (*Calluna vulgaris*) as the main cover species. The class is relatively uniform, typical species being star sedge (*Carex echinata*), marsh violet (*Viola palustris*) and bulbous rush (*Juncus bulbosus*). This class occurs throughout western Britain but is most widespread in northern Scotland and the Isles with a lower frequency in northern England and the Welsh uplands, and some outliers in the lowlands.

## Associated features

### Soils

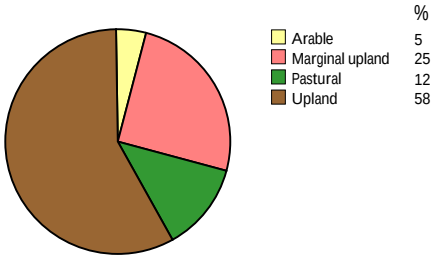



### Land cover

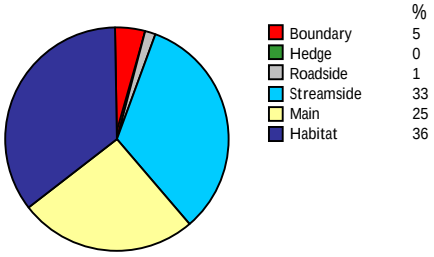



## Distribution

**Total number of plots** 153




### Landscape association

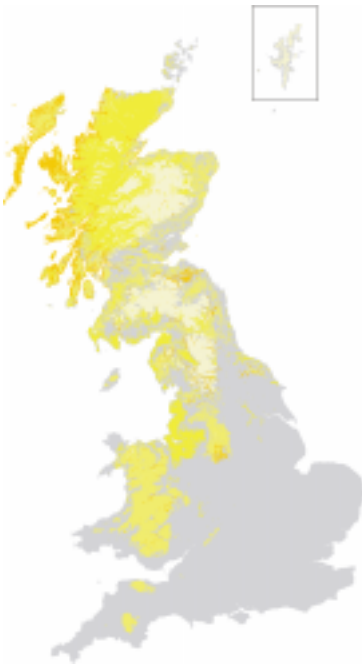



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 2.17 SE 0.45

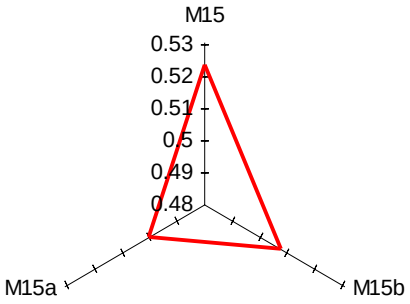
**Boundary**
Length 6.11 SE 2.34

## Floristic characteristics

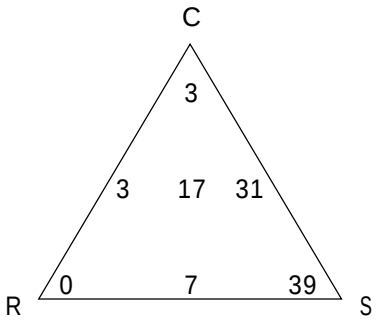
**Species number:** 155 (Medium) **No. of species groups:** 8 (Medium) **Most frequent group:** 37

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Potentilla erecta* | 93 | *Molinia caerulea* | 24.6 | *Carex echinata* |
| *Molinia caerulea* | 83 | *Calluna vulgaris* | 11.7 | *Juncus effusus* |
| *Eriophorum angustifolium* | 70 | *Nardus stricta* | 5.6 | *Viola palustris* |
| *Erica tetralix* | 70 | *Eriophorum angustifolium* | 5.2 | *Juncus bulbosus* |
| *Carex echinata* | 69 | *Trichophorum caespitosum* | 4.5 | *Succisa pratensis* |

### Similarity with National Vegetation Classification (NVC) types



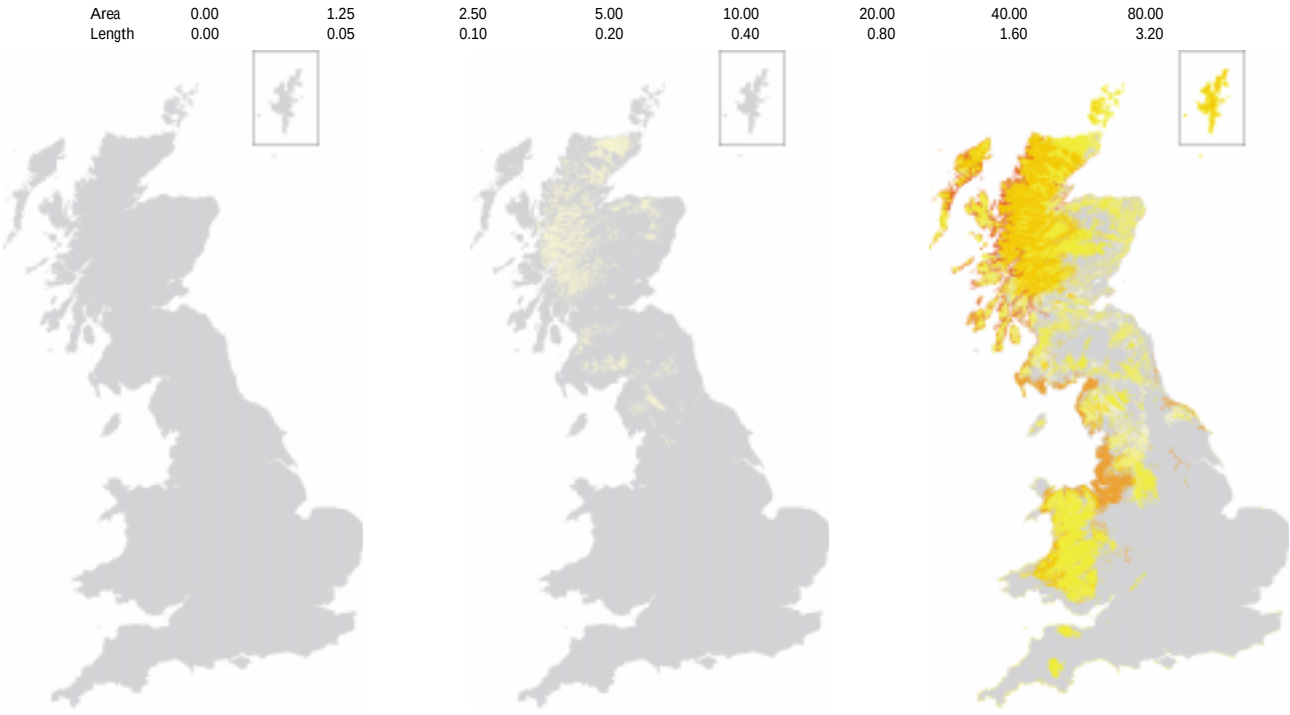

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.4 | High | Mean 7.5 | High | Mean 3.1 | Low | Mean 2.2 | Low | Mean 2.7 | Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.15 SE 0.11

**Streamside**
Length 16.53 SE 3.54

**Vegetation class 88**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

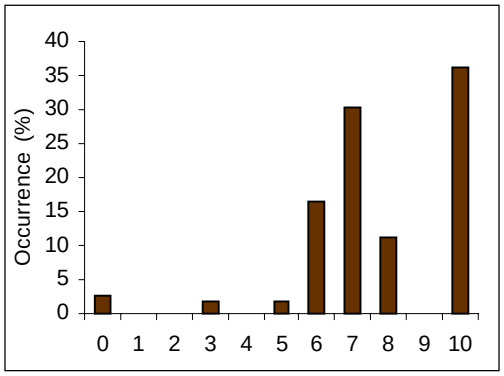
# Moorland grass/heath/ bog

## Description

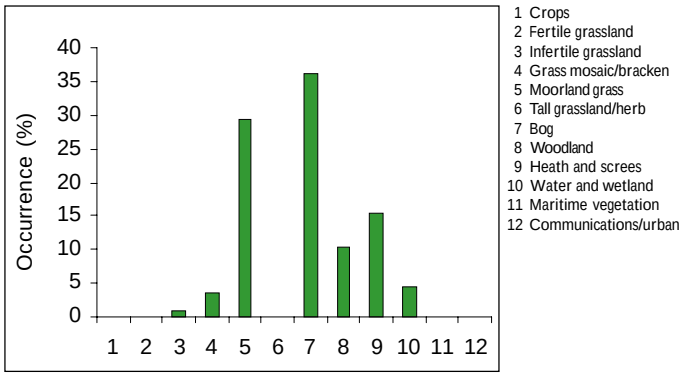
This class occurs almost entirely in open vegetation, but also by streams, and is usually on peats or peaty gley soils. Heather (*Calluna vulgaris*) is the main cover species, with wavy hair-grass (*Deschampsia flexuosa*) and bilberry (*Vaccinium myrtillus*). The class is widespread, and relatively uniform, covering extensive areas; characteristic species are tormentil (*Potentilla erecta*), hare's-tail cottongrass (*Eriophorum vaginatum*) and heath bedstraw (*Galium saxatile*). This class is restricted to upland Britain, especially the Pennines, the Lake District, the southern uplands and the Grampians.

## Associated features

### Soils

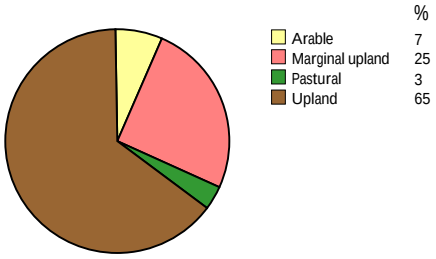



### Land cover

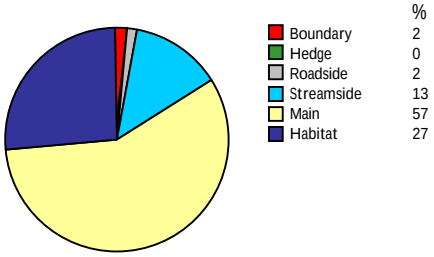



## Distribution

**Total number of plots** 116



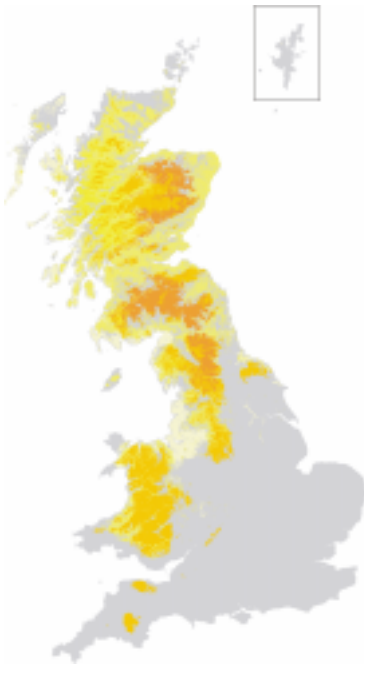

### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



**Main**
Area 4.00 SE 0.86

Key units
Area 000's km$^{-2}$
Length 000's km

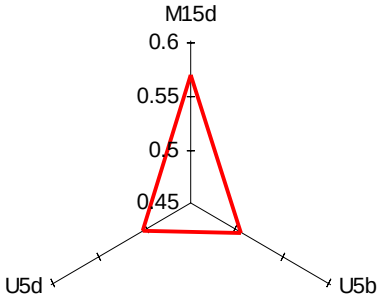
**Boundary**
Length 1.44 SE 1.44

## Floristic characteristics

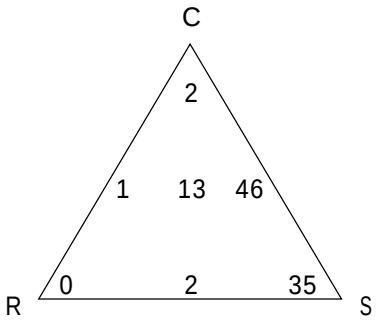
**Species number:** 104 (Low) **No. of species groups:** 6 (Medium) **Most frequent group:** 35

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Deschampsia flexuosa* | 76 | *Calluna vulgaris* | 20.7 | *Galium saxatile* |
| *Juncus squarrosus* | 75 | *Molinia caerulea* | 14.6 | *Deschampsia flexuosa* |
| *Calluna vulgaris* | 74 | *Nardus stricta* | 8.8 | *Vaccinium myrtillus* |
| *Vaccinium myrtillus* | 71 | *Eriophorum vaginatum* | 8.6 | *Juncus effusus* |
| *Eriophorum angustifolium* | 65 | *Deschampsia flexuosa* | 8.3 | *Juncus squarrosus* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.1 High | Mean 7.1 High | Mean 2.6 Low | Mean 2.2 Low | Mean 3.0 Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.01 SE 0.01

**Streamside**
Length 3.06 SE 1.12

**Vegetation class 89**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

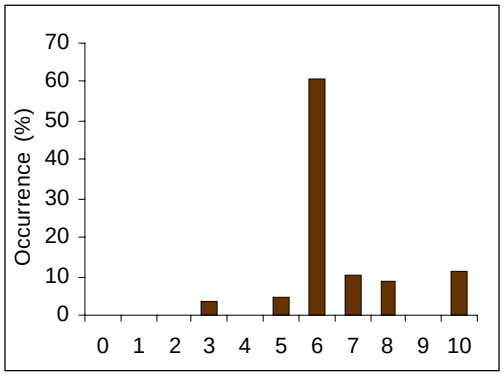
# Dry heath on podzolic soils

## Description

This class is almost entirely restricted to open vegetation and may occur in small patches, but is occasionally on roadsides or by streams. It is common in a variety of situations and is dominated by heather (*Calluna vulgaris*), with some bilberry (*Vaccinium myrtillus*) as well as various mosses. It is not diverse and has a limited range of species, typically bell heather (*Erica cinerea*), cowberry (*Vaccinium vitis-idaea*) and wavy hair-grass (*Deschampsia flexuosa*). The class is distributed evenly throughout upland Britain, with outliers in the lowlands.

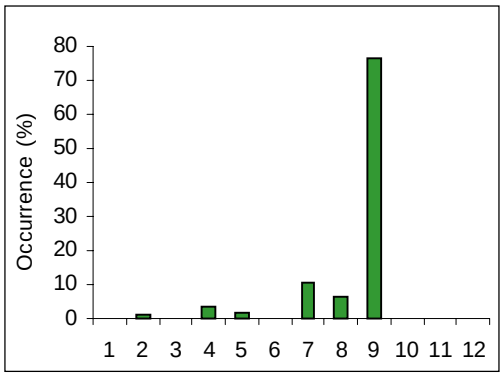
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

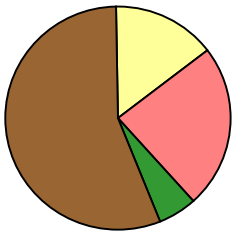
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

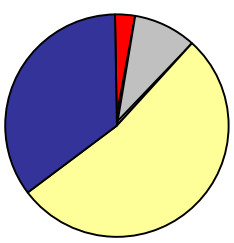
## Distribution

**Total number of plots** 107



| | % |
|---|---|
| Arable | 15 |
| Marginal upland | 23 |
| Pastural | 6 |
| Upland | 56 |

### Landscape association

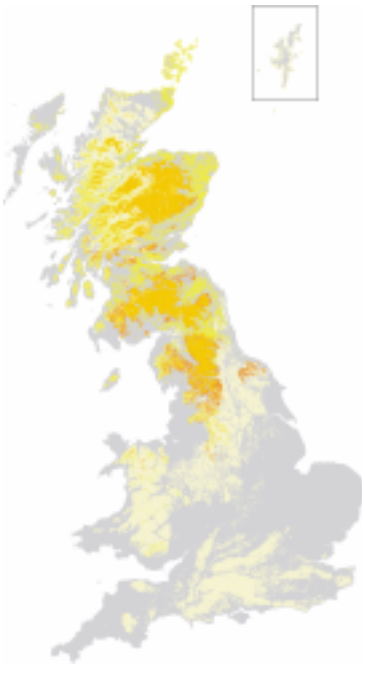


| | % |
|---|---|
| Boundary | 3 |
| Hedge | 0 |
| Roadside | 9 |
| Streamside | 0 |
| Main | 52 |
| Habitat | 36 |

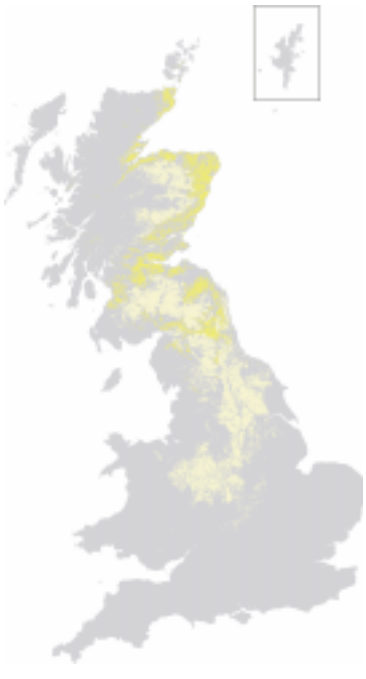
### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km



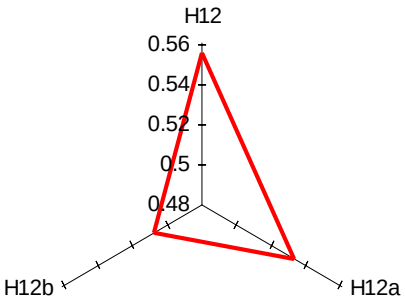
**Main**
Area 3.05 SE 0.83

**Boundary**
Length 1.97 SE 1.17

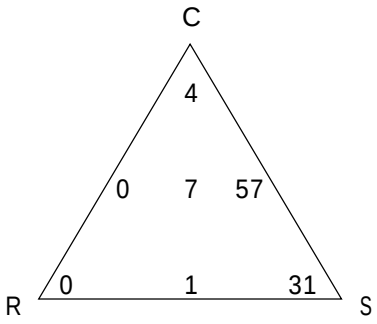
## Floristic characteristics

| **Species number:** | 98 (Low) | **No. of species groups:** | 3 (Low) | **Most frequent group:** | 35 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Calluna vulgaris* | 100 | *Calluna vulgaris* | 67.2 | *Pteridium aquilinum* | |
| *Vaccinium myrtillus* | 67 | *Vaccinium myrtillus* | 9.5 | *Vaccinium vitis-idaea* | |
| *Deschampsia flexuosa* | 59 | *Pleurozium schreberi* | 6.2 | *Vaccinium myrtillus* | |
| *Dicranum scoparium* | 51 | *Erica cinerea* | 4.1 | *Dicranum scoparium* | |
| *Cladonia impexa* | 49 | *Empetrum nigrum* | 3.6 | *Cladonia arbuscula* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 6.7 | Low | Mean 6.5 | Medium | Mean 2.2 | Low | Mean 2.0 | Low | Mean 3.1 | Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.08 SE 0.08

**Streamside**
Length 0.00 SE 0.00

**Vegetation class 90**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

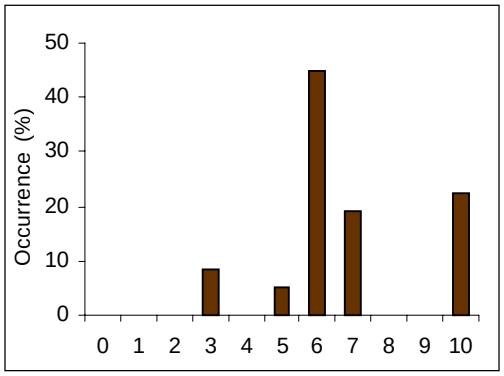
# Wet heath/ moorland grass on variable soils

## Description

This class is almost entirely restricted to open vegetation but also in small patches, on brown soils with impeded drainage. It is not common and has heather (*Calluna vulgaris*) as the main cover species, but also purple moor-grass (*Molinia caerulea*) and cross-leaved heath (*Erica tetralix*). It is not diverse and has a range of typical species such as bell heather (*Erica cinerea*), sheep's-fescue (*Festuca ovina*), with western gorse (*Ulex gallii*) and bristle bent (*Agrostis curtisii*) in the south-west. The class occurs patchily in western and northern Britain, usually at lower altitudes in the uplands, but also in lowland situations and on appropriate geological strata in the south-west.

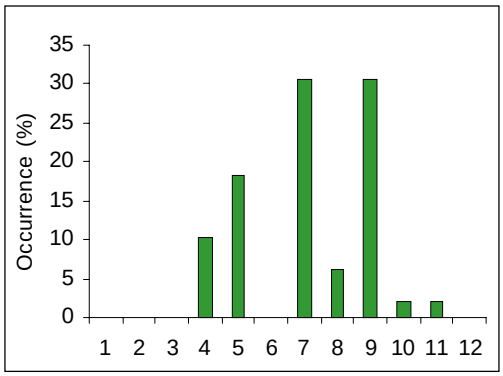
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

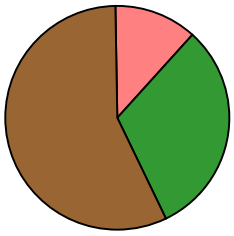
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

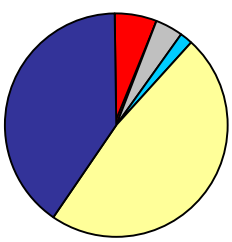
## Distribution

**Total number of plots** 49



| | % |
|---|---|
| Arable | 0 |
| Marginal upland | 12 |
| Pastural | 31 |
| Upland | 57 |

### Landscape association



| | % |
|---|---|
| Boundary | 6 |
| Hedge | 0 |
| Roadside | 4 |
| Streamside | 2 |
| Main | 47 |
| Habitat | 41 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 0.77 SE 0.27

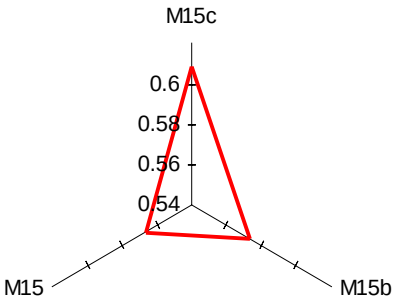
**Boundary**
Length 2.69 SE 2.14

## Floristic characteristics

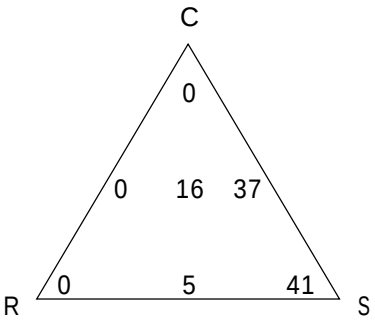
**Species number:** 79 (Low) **No. of species groups:** 6 (Medium) **Most frequent group:** 33

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Molinia caerulea* | 92 | *Calluna vulgaris* | 30.0 | *Erica cinerea* |
| *Calluna vulgaris* | 92 | *Molinia caerulea* | 20.5 | *Danthonia decumbens* |
| *Potentilla erecta* | 89 | *Nardus stricta* | 6.5 | *Molinia caerulea* |
| *Erica tetralix* | 68 | *Erica tetralix* | 5.8 | *Agrostis capillaris* |
| *Erica cinerea* | 68 | *Trichophorum caespitosum* | 5.3 | *Potentilla erecta* |

### Similarity with National Vegetation Classification (NVC) types



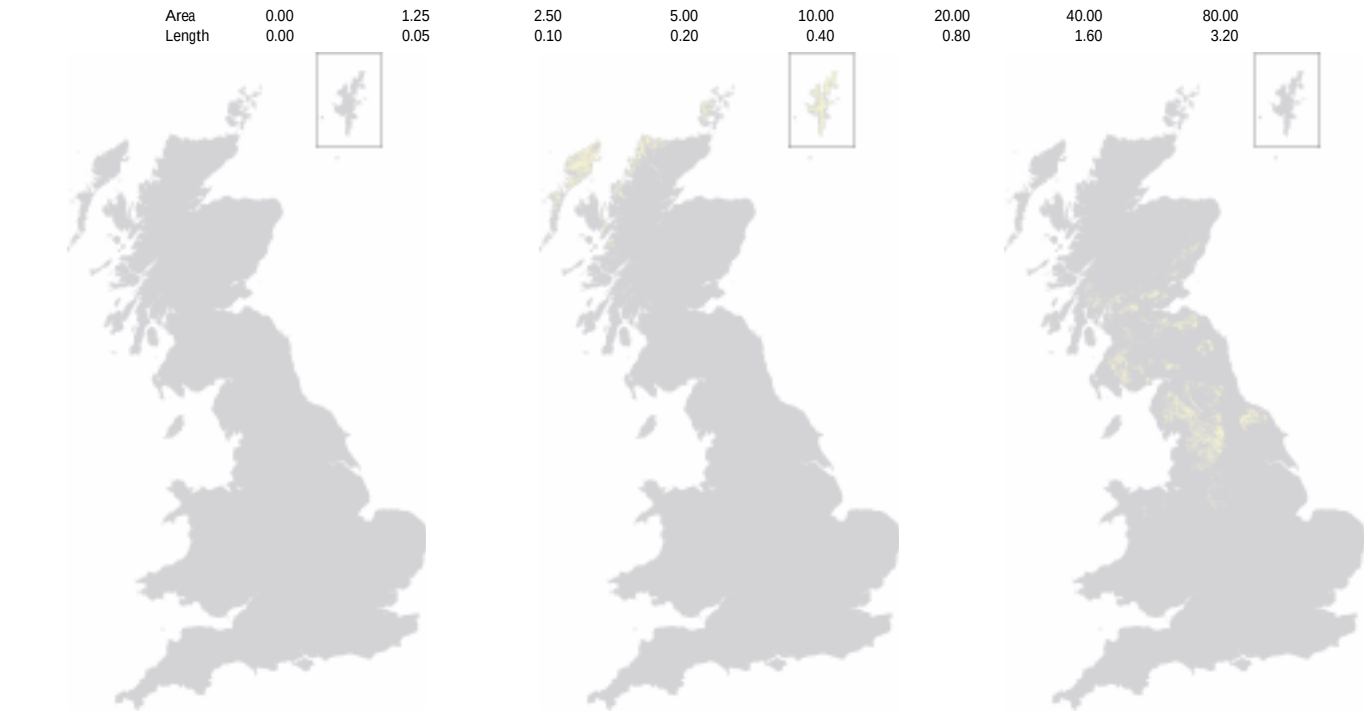

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.3 High | Mean 6.9 High | Mean 2.7 Low | Mean 2.0 Low | Mean 2.7 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.09 SE 0.09

**Streamside**
Length 0.14 SE 0.14

**Vegetation class 91**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

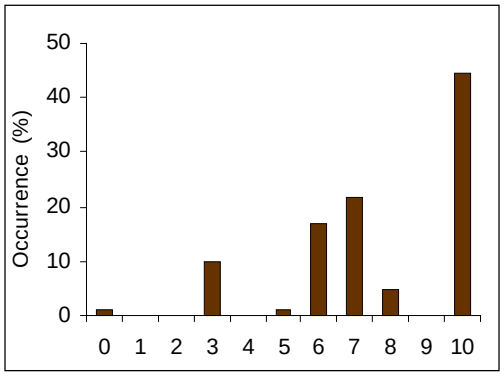
# Heath/ moorland grass

## Description

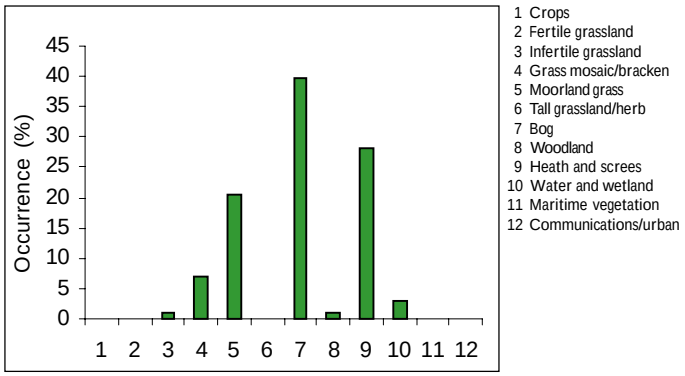
This class occurs mainly in open vegetation, but occasionally beside streams, mainly on peat or peaty gley soils. It is widespread in the uplands and usually has a high cover of heather (*Calluna vulgaris*) and mat-grass (*Nardus stricta*). Its characteristic species are cowberry (*Vaccinium vitis-idaea*), tormentil (*Potentilla erecta*) and hare's-tail cottongrass (*Eriophorum vaginatum*). This is a dominant class of the high mountains of the north and west of Scotland and is also present in upland situations elsewhere, as well as in lowlands in the north.

## Associated features

### Soils

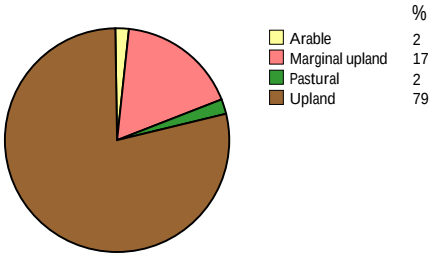



### Land cover

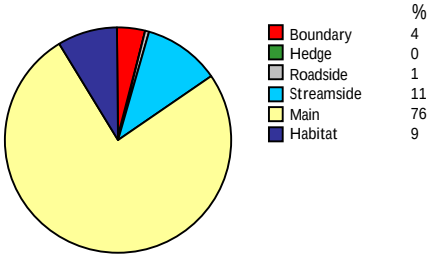



## Distribution

**Total number of plots** 103




### Landscape association

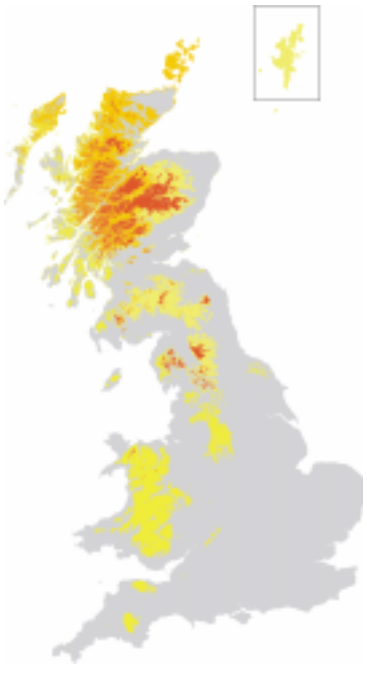



### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 4.51 SE 0.75

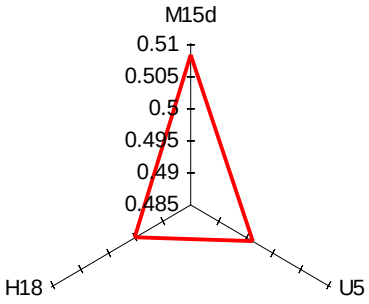
**Boundary**
Length 2.98 SE 1.88

## Floristic characteristics

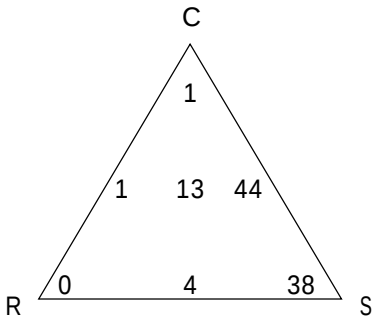
**Species number:** 124 (Low) **No. of species groups:** 6 (Medium) **Most frequent group:** 35

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 94 | *Calluna vulgaris* | 46.0 | *Plagiothecium undulatum* |
| *Juncus squarrosus* | 88 | *Nardus stricta* | 9.2 | *Rhytidiadelphus loreus* |
| *Vaccinium myrtillus* | 81 | *Trichophorum caespitosum* | 7.3 | *Vaccinium vitis-idaea* |
| *Pleurozium schreberi* | 78 | *Eriophorum vaginatum* | 6.9 | *Empetrum nigrum* |
| *Potentilla erecta* | 74 | *Juncus squarrosus* | 5.8 | *Hylocomium splendens* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 7.0 High | Mean 2.6 Low | Mean 2.1 Low | Mean 2.9 Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.08 SE 0.08

**Streamside**
Length 2.72 SE 1.02

**Vegetation class 92**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

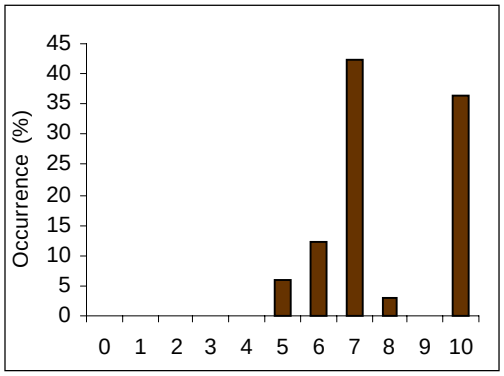
# Northern moorland grass/bog

## Description

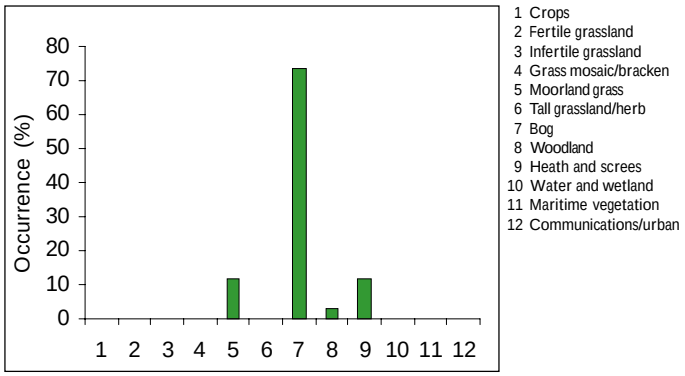
This class is confined to open vegetation, often in large continuous areas, usually on peaty gley and peat soils. The class is extensive where it occurs; heather (*Calluna vulgaris*) is the main species, with a high cover of purple moor-grass (*Molinia caerulea*) and deergrass (*Trichophorum cespitosum*), reflecting the water-saturated soil. It is quite diverse with many species typical of bogs such as *Sphagnum*, bog asphodel (*Narthecium ossifragum*) and lousewort (*Pedicularis sylvatica*). The class is virtually restricted to upland situations in north-west Scotland, with outliers in the uplands of northern England.

## Associated features

### Soils

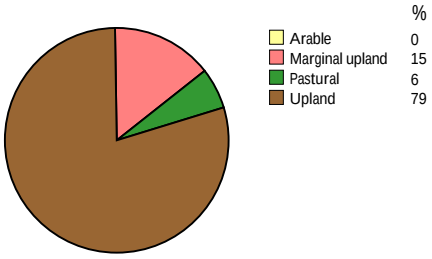



### Land cover

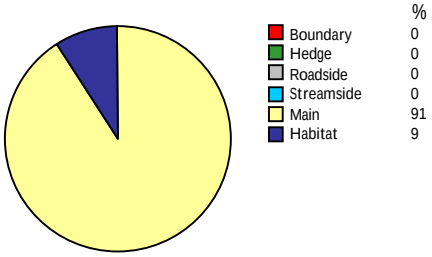



## Distribution

**Total number of plots** 34




### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 2.09 SE 0.45

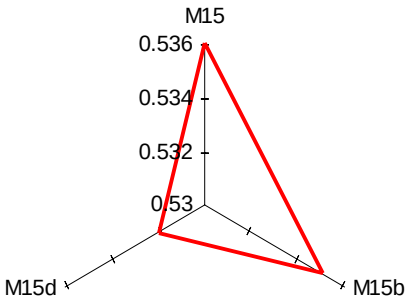
**Boundary**
Length 0.00 SE 0.00

## Floristic characteristics

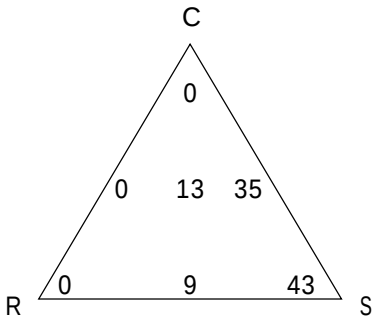
**Species number:** 91 (Low) **No. of species groups:** 8 (Medium) **Most frequent group:** 37

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 100 | *Calluna vulgaris* | 29.5 | *Pedicularis sylvatica* |
| *Potentilla erecta* | 100 | *Molinia caerulea* | 19.5 | *Cladonia uncialis* |
| *Molinia caerulea* | 93 | *Trichophorum caespitosum* | 11.9 | *Rhytidiadelphus loreus* |
| *Cladonia impexa* | 90 | *Nardus stricta* | 5.4 | *Agrostis capillaris* |
| *Trichophorum caespitosum* | 90 | *Racomitrium lanuginosum* | 4.9 | *Racomitrium lanuginosum* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.3 High | Mean 7.2 High | Mean 2.8 Low | Mean 2.1 Low | Mean 2.7 Low |

## Distribution


**Hedge**
Length 0.00 SE 0.00

**Roadside**
Length 0.00 SE 0.00

**Streamside**
Length 0.00 SE 0.00

**Vegetation class 93**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

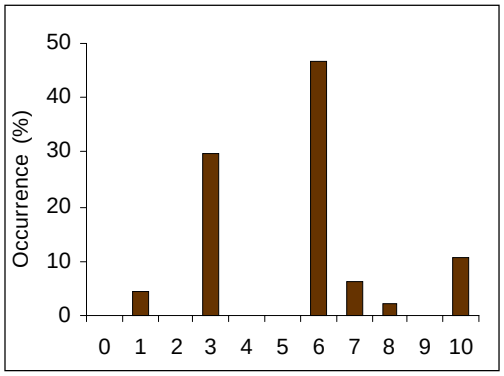
# Montane heath on podzolic soils

## Description

This class is restricted to open vegetation but may be present in small patches and is usually found on podzolic or shallow soils. It is not common and occurs in exposed situations with much bare ground; heather (*Calluna vulgaris*) is the main cover species, but with mat-grass (*Nardus stricta*), wavy hair-grass (*Deschampsia flexuosa*), crowberry (*Empetrum nigrum*) and bilberry (*Vaccinium myrtillus*) often present. It is relatively uniform, and characteristic species are heath bedstraw (*Galium saxatile*), fir clubmoss (*Huperzia selago*) and alpine lady's-mantle (*Alchemilla alpina*). The class is confined to upland situations, with the highest frequency in the northern Highlands, and locally in the Lake District, north Pennines and Wales.

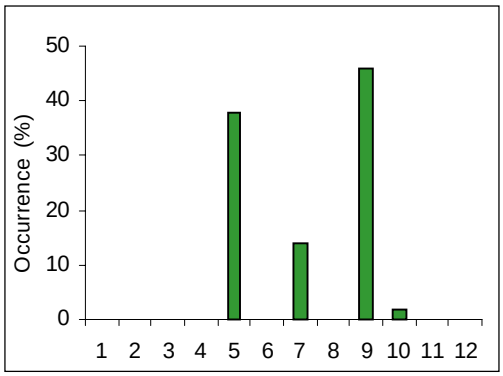
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

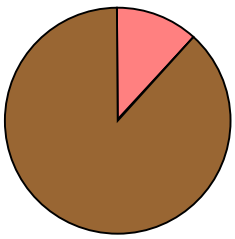
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

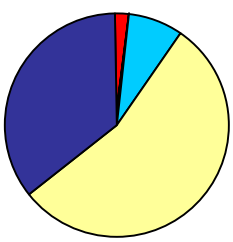
## Distribution

**Total number of plots** 50



| | % |
|---|---|
| Arable | 0 |
| Marginal upland | 12 |
| Pastural | 0 |
| Upland | 88 |

### Landscape association



| | % |
|---|---|
| Boundary | 2 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 8 |
| Main | 54 |
| Habitat | 36 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km

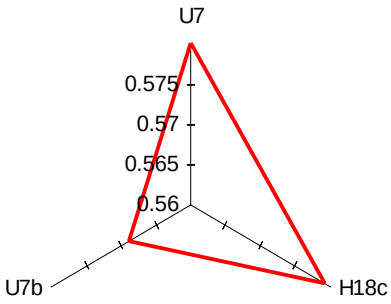
**Main**
Area 1.60 SE 0.53

**Boundary**
Length 0.64 SE 0.64

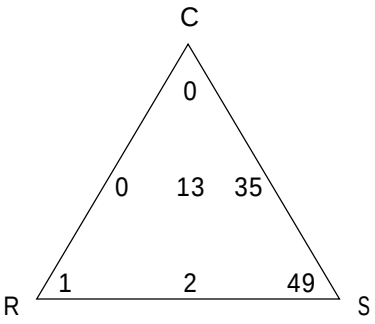
## Floristic characteristics

| **Species number:** | 81 (Low) | **No. of species groups:** | 5 (Low) | **Most frequent group:** | 35 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Vaccinium myrtillus* | 86 | *Calluna vulgaris* | 16.4 | *Huperzia selago* | |
| *Racomitrium lanuginosum* | 81 | *Nardus stricta* | 14.5 | *Cladonia arbuscula* | |
| *Deschampsia flexuosa* | 81 | *Racomitrium lanuginosum* | 10.4 | *Galium saxatile* | |
| *Nardus stricta* | 74 | *Vaccinium myrtillus* | 7.7 | *Racomitrium lanuginosum* | |
| *Cladonia uncialis* | 69 | *Empetrum nigrum* | 7.7 | *Vaccinium myrtillus* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 6.9 Medium | Mean 6.4 Medium | Mean 2.6 Low | Mean 2.3 Low | Mean 3.0 Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 0.40 SE 0.30

**Vegetation class 94**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

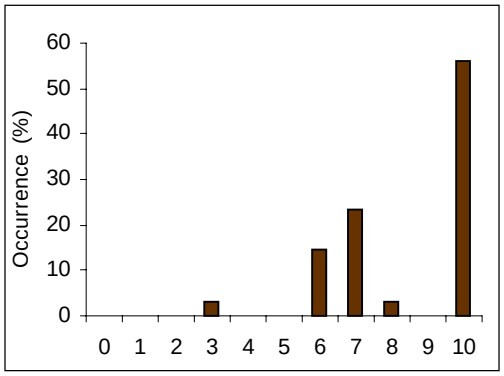
# Sphagnum bog

## Description

This class is virtually limited to large areas of open vegetation, nearly always on peat soils. It is quite common and, although heather (*Calluna vulgaris*) is the major cover species, purple moor-grass (*Molinia caerulea*), *Sphagnum* and deergrass (*Trichophorum cespitosum*) are also abundant. The class is relatively uniform and characteristic plants are tormentil (*Potentilla erecta*), various *Sphagnum* species and round-leaved sundew (*Drosera rotundifolia*) as well as various other mosses. This class is rare in upland situations in the south, extends into the lowlands of eastern Scotland and northern England, but has the centre of its distribution in the north-west of Scotland.

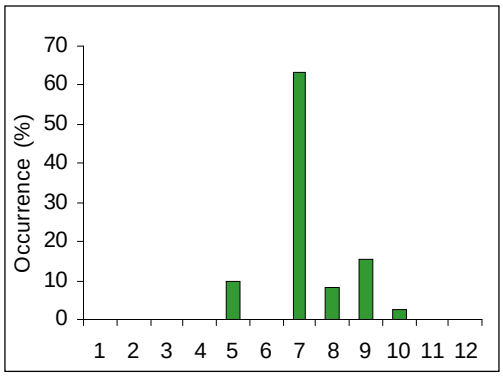
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

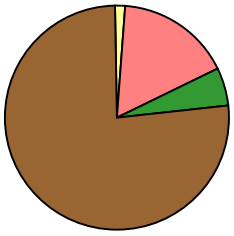
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

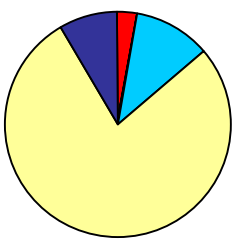
## Distribution

**Total number of plots** 72



| | % |
|---|---|
| Arable | 1 |
| Marginal upland | 17 |
| Pastural | 6 |
| Upland | 76 |

### Landscape association

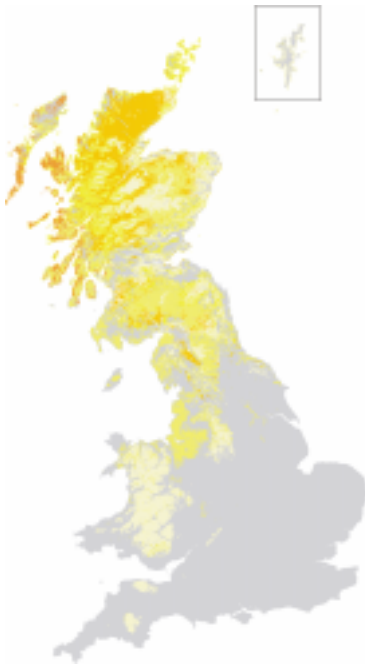


| | % |
|---|---|
| Boundary | 3 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 11 |
| Main | 78 |
| Habitat | 8 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's km$^{-2}$
Length 000's km

**Main**
Area 2.82 SE 0.62

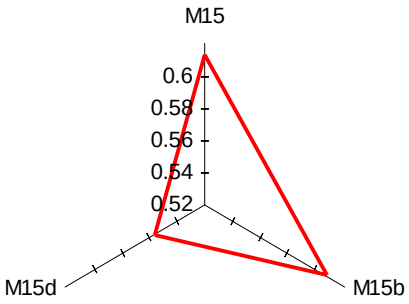
**Boundary**
Length 0.66 SE 0.66

## Floristic characteristics

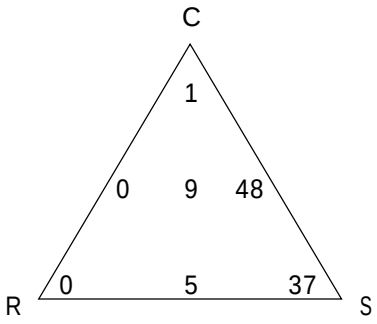
**Species number:** 97 (Low) **No. of species groups:** 6 (Medium) **Most frequent group:** 37

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 100 | *Calluna vulgaris* | 40.0 | *Plagiothecium undulatum* |
| *Erica tetralix* | 96 | *Molinia caerulea* | 21.4 | *Rhytidiadelphus loreus* |
| *Eriophorum angustifolium* | 91 | *Trichophorum caespitosum* | 17.1 | *Cladonia impexa* |
| *Molinia caerulea* | 91 | *Eriophorum vaginatum* | 11.1 | *Aulacomnium palustre* |
| *Narthecium ossifragum* | 87 | *Eriophorum angustifolium* | 7.3 | *Pleurozium schreberi* |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.5 High | Mean 7.5 High | Mean 2.5 Low | Mean 2.0 Low | Mean 2.7 Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 1.89 SE 0.84

**Vegetation class 95**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

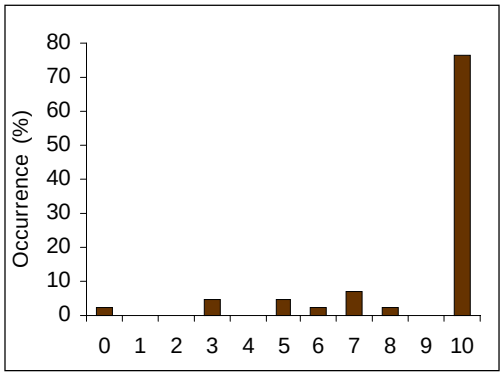
# Crowberry blanket bog

## Description

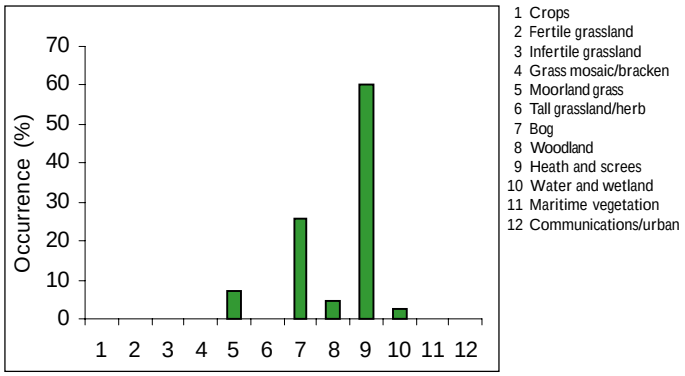
This class is mainly present in open vegetation but may occur in small patches or by streamsides, almost entirely on peat soils. The class is of restricted occurrence and although heather (*Calluna vulgaris*) is the major species, both common cottongrass and hare's-tail cottongrass (*Eriophorum angustifolium* and *E. vaginatum*) form significant cover, as well as crowberry (*Empetrum nigrum*). The class is very poor in species, with cloudberry (*Rubus chamaemorus*), bilberry (*Vaccinium myrtillus*) and wavy hair-grass (*Deschampsia flexuosa*) being characteristic. The class, although with upland affinities, is mainly present in the marginal uplands of southern Scotland, northern England and, to a lesser extent, Wales.

## Associated features

### Soils

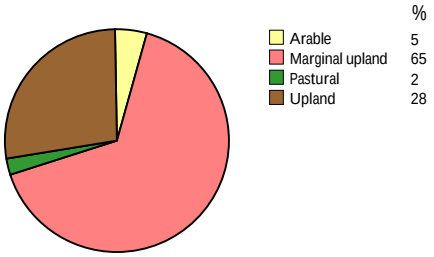



### Land cover

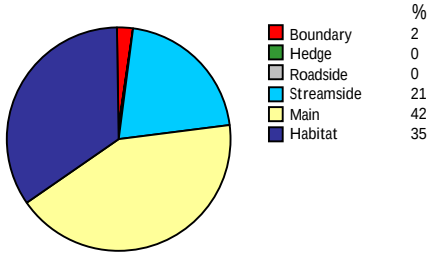



## Distribution

**Total number of plots** 43



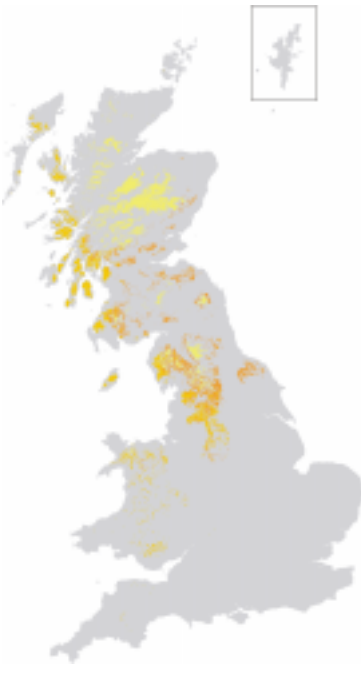

### Landscape association




### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



**Main**
Area 1.58 SE 0.94

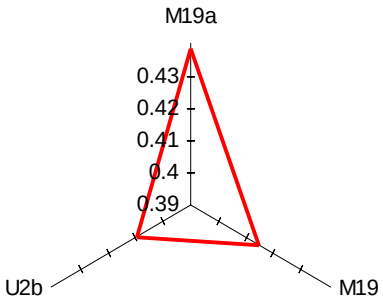
Key units
Area 000's km$^{-2}$
Length 000's km

**Boundary**
Length 0.83 SE 0.83

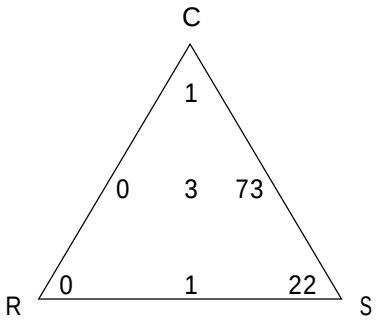
## Floristic characteristics

| **Species number:** | 46 (Low) | **No. of species groups:** | 3 (Low) | **Most frequent group:** | 37 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Eriophorum vaginatum* | 83 | *Calluna vulgaris* | 39.1 | *Rubus chamaemorus* | |
| *Eriophorum angustifolium* | 81 | *Eriophorum vaginatum* | 14.9 | *Eriophorum vaginatum* | |
| *Calluna vulgaris* | 69 | *Empetrum nigrum* | 8.5 | *Empetrum nigrum* | |
| *Vaccinium myrtillus* | 58 | *Vaccinium myrtillus* | 7.5 | *Vaccinium myrtillus* | |
| *Deschampsia flexuosa* | 56 | *Deschampsia flexuosa* | 7.1 | *Deschampsia flexuosa* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 7.3 High | Mean 2.1 Low | Mean 1.9 Low | Mean 3.2 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 4.95 SE 3.07

**Vegetation class 96**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

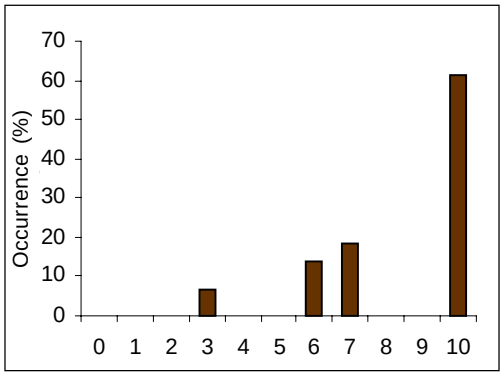
# Wet deer grass bog

## Description

This class occurs mainly in large continuous areas of vegetation but may be in small patches and by streams on peat soils. The class is of restricted occurrence; purple moor-grass (*Molinia caerulea*) is the major cover species, but heather (*Calluna vulgaris*) and deergrass (*Trichophorum cespitosum*) are equally important. The class is quite diverse, with plants such as cross-leaved heath (*Erica tetralix*), bulbous rush (*Juncus bulbosus*) and common butterwort (*Pinguicula vulgaris*) being characteristic. The class is virtually confined to the uplands, especially in the far north-west of Scotland, although there are outliers in the lowlands and occasionally in the uplands further south.

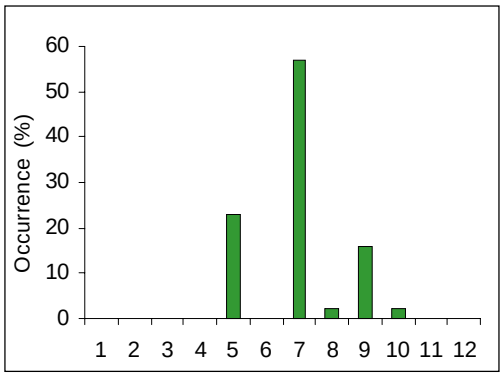
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

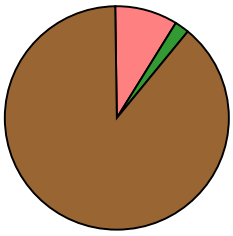
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

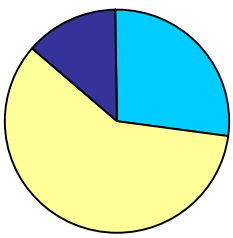
## Distribution

**Total number of plots** 44



| | % |
|---|---|
| Arable | 0 |
| Marginal upland | 9 |
| Pastural | 2 |
| Upland | 89 |

### Landscape association



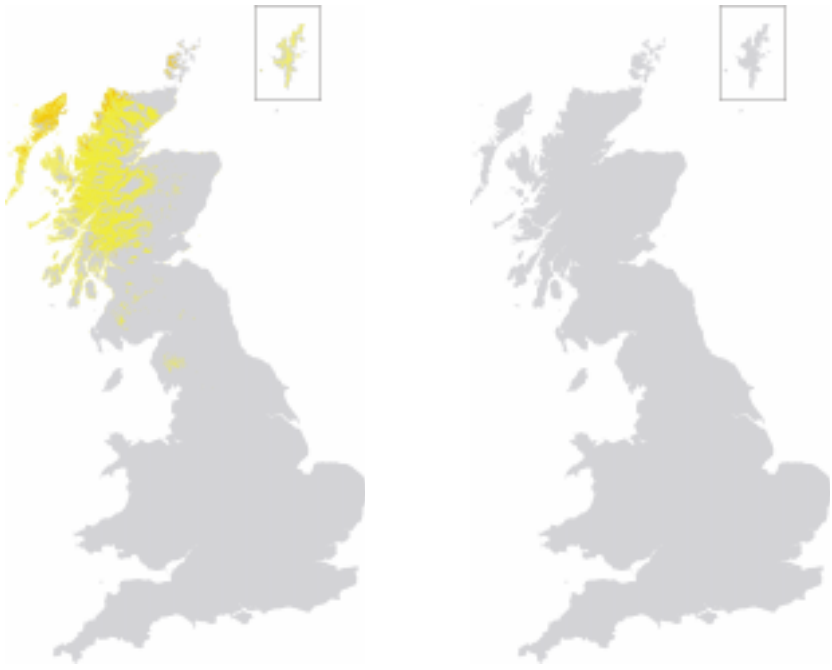
| | % |
|---|---|
| Boundary | 0 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 27 |
| Main | 59 |
| Habitat | 14 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's km$^{-2}$
Length 000's km



**Main**
Area 1.01 SE 0.33

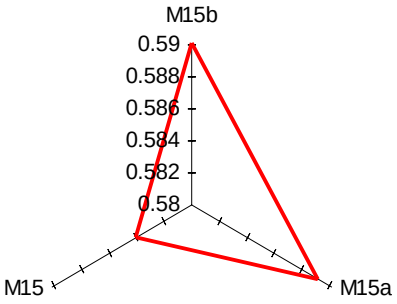
**Boundary**
Length 0.00 SE 0.00

## Floristic characteristics

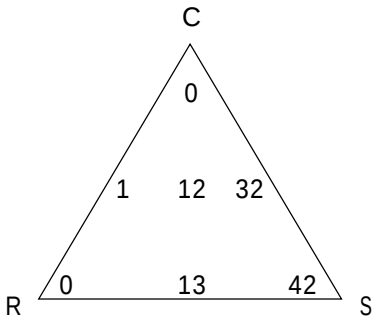
**Species number:** 79 (Low) **No. of species groups:** 8 (Medium) **Most frequent group:** 37

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 96 | *Molinia caerulea* | 28.9 | *Juncus bulbosus* |
| *Juncus bulbosus* | 93 | *Calluna vulgaris* | 23.3 | *Carex demissa* |
| *Trichophorum caespitosum* | 93 | *Trichophorum caespitosum* | 23.2 | *Racomitrium lanuginosum* |
| *Potentilla erecta* | 93 | *Eriophorum angustifolium* | 12.0 | *Carex echinata* |
| *Eriophorum angustifolium* | 85 | *Racomitrium lanuginosum* | 10.0 | *Carex panicea* |

### Similarity with National Vegetation Classification (NVC) types



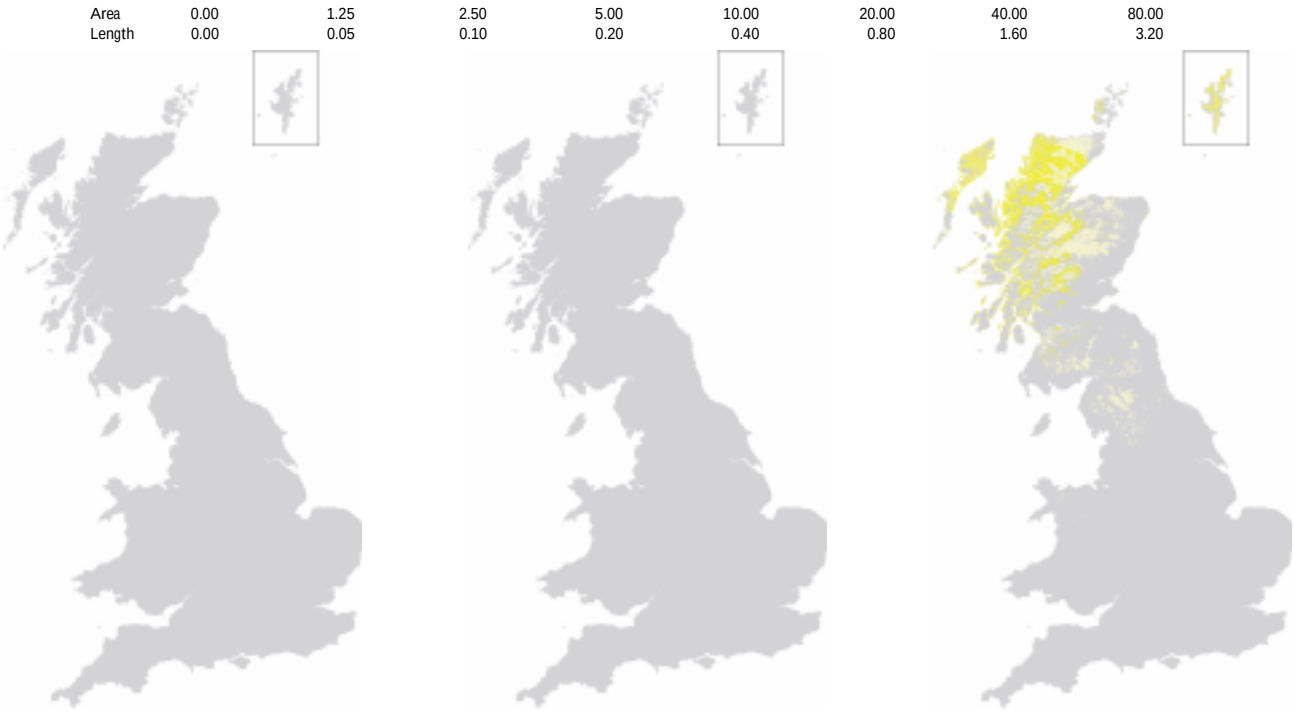

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.6 High | Mean 7.6 High | Mean 2.9 Low | Mean 2.0 Low | Mean 2.5 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 1.74 SE 0.67

**Vegetation class 97**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

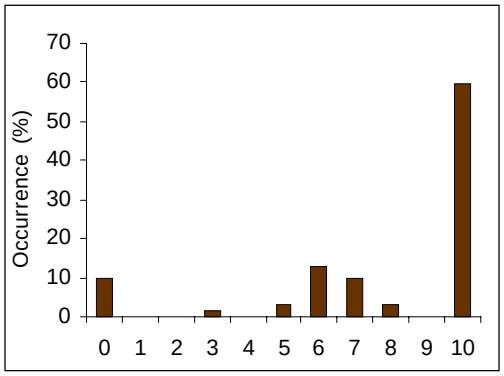
# Northern blanket bog

## Description

This class mainly occurs over large areas, but may also be in small patches and rarely by streamsides, invariably on peat soils. The class occurs extensively in northern mountains and has heather (*Calluna vulgaris*) forming the majority of cover; hare's-tail cottongrass (*Eriophorum vaginatum*) is the other major species. The class is not diverse and the characteristic species are bilberry (*Vaccinium myrtillus*), crowberry (*Empetrum nigrum*) and cloudberry (*Rubus chamaemorus*). This class is confined to northern England and Scotland, extending into the lowlands, but its main coverage is in the northern Pennines, the southern uplands of Scotland and the central Highlands.

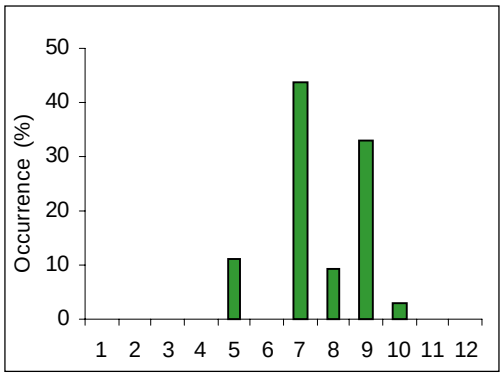
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

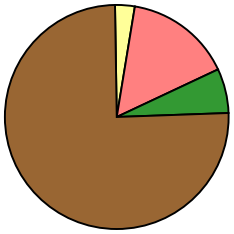
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

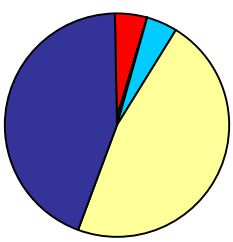
## Distribution

**Total number of plots** 65



| | % |
|---|---|
| Arable | 3 |
| Marginal upland | 15 |
| Pastural | 6 |
| Upland | 75 |

### Landscape association



| | % |
|---|---|
| Boundary | 5 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 5 |
| Main | 46 |
| Habitat | 45 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km

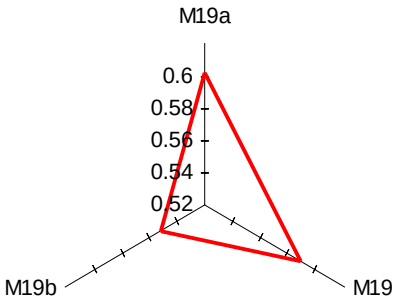
**Main**
Area 1.69 SE 0.56

**Boundary**
Length 2.04 SE 1.14

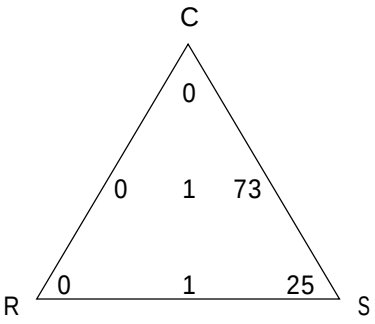
## Floristic characteristics

| **Species number:** | 57 (Low) | **No. of species groups:** | 3 (Low) | **Most frequent group:** | 37 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Calluna vulgaris* | 98 | *Calluna vulgaris* | 44.1 | *Rubus chamaemorus* | |
| *Eriophorum vaginatum* | 91 | *Eriophorum vaginatum* | 17.7 | *Eriophorum vaginatum* | |
| *Vaccinium myrtillus* | 65 | *Deschampsia flexuosa* | 6.2 | *Pleurozium schreberi* | |
| *Pleurozium schreberi* | 64 | *Pleurozium schreberi* | 6.0 | *Empetrum nigrum* | |
| *Deschampsia flexuosa* | 60 | *Vaccinium myrtillus* | 5.8 | *Vaccinium myrtillus* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.2 High | Mean 7.3 High | Mean 1.9 Low | Mean 1.7 Low | Mean 3.1 Medium |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 0.92 SE 0.56

**Vegetation class 98**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

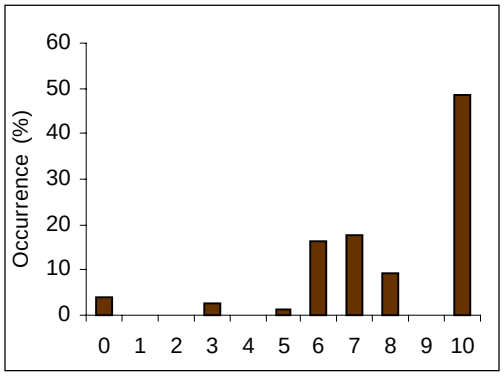
# Cotton grass bog

## Description

This class mainly occurs in small patches and flushes but may also be common by streamsides. It is not wide spread and occurs in a variety of situations with poor drainage and peaty soils and, although purple moor-grass (*Molinia caerulea*) is the major cover species, heather (*Calluna vulgaris*) and common cottongrass (*Eriophorum angustifolium*) are often present. It is not diverse and plants such as cross-leaved heath (*Erica tetralix*), bog asphodel (*Narthecium ossifragum*) and bog-myrtle (*Myrica gale*) are characteristic. This class is widespread throughout north and western Britain but in low frequencies, with outliers in the lowlands of southern England.

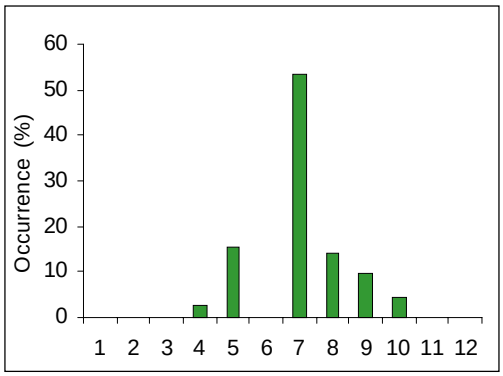
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

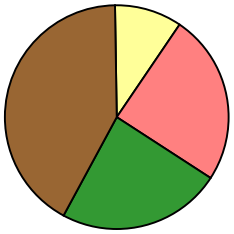
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

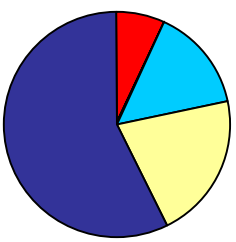
## Distribution

**Total number of plots** 73



| | % |
|---|---|
| Arable | 10 |
| Marginal upland | 25 |
| Pastural | 23 |
| Upland | 42 |

### Landscape association



| | % |
|---|---|
| Boundary | 7 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 15 |
| Main | 21 |
| Habitat | 58 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km

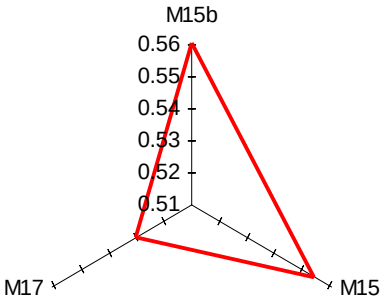
**Main**
Area 0.39 SE 0.17

**Boundary**
Length 3.31 SE 1.93

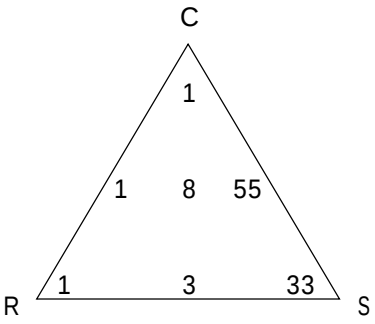
## Floristic characteristics

| **Species number:** | 80 (Low) | **No. of species groups:** | 4 (Low) | **Most frequent group:** | 37 |
|---|---|---|---|---|---|
| ***Most frequent species*** | ***%*** | ***Species with highest cover*** | ***%*** | ***Characteristic species*** | |
| *Eriophorum angustifolium* | 78 | *Molinia caerulea* | 22.2 | *Myrica gale* | |
| *Molinia caerulea* | 73 | *Calluna vulgaris* | 11.9 | *Eriophorum angustifolium* | |
| *Erica tetralix* | 70 | *Eriophorum angustifolium* | 8.5 | *Narthecium ossifragum* | |
| *Calluna vulgaris* | 65 | *Myrica gale* | 7.5 | *Erica tetralix* | |
| *Narthecium ossifragum* | 62 | *Trichophorum caespitosum* | 7.4 | *Molinia caerulea* | |

### Similarity with National Vegetation Classification (NVC) types




### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | | *Moisture* | | *pH* | | *Fertility* | | *Continentality* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean 7.6 | High | Mean 7.8 | High | Mean 2.5 | Low | Mean 1.9 | Low | Mean 2.7 | Low |

## Distribution


**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 2.40 SE 1.01

**Vegetation class 99**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

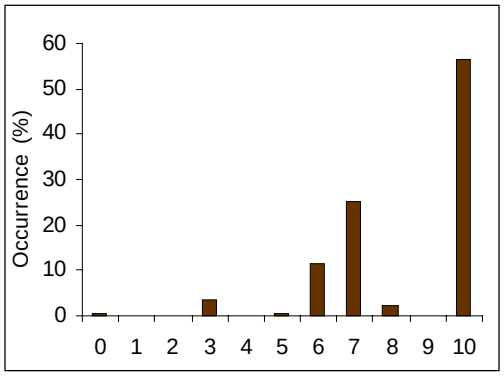
# Saturated bog

## Description

This class mainly occurs over very large areas but can be in small patches or, rarely, by streams, invariably on peat soils. This is a widespread type and, when it occurs, heather (*Calluna vulgaris*) is the major cover species with deergrass (*Trichophorum cespitosum*) and purple moor-grass (*Molinia caerulea*) usually intermixed. It is quite diverse and has plants such as bog asphodel (*Narthecium ossifragum*), lousewort (*Pedicularis sylvatica*) and great sundew (*Drosera anglica*) as characteristic species. The class covers a high proportion of land in north-west Scotland, but is also present in the uplands elsewhere and occasionally in the lowlands further south.

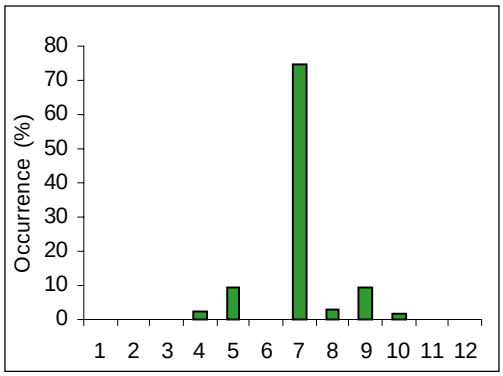
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

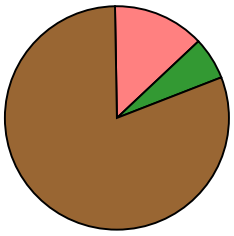
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

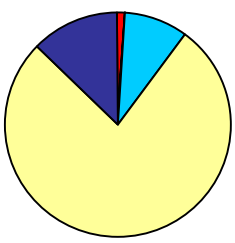
## Distribution

**Total number of plots** 186



| | % |
|---|---|
| Arable | 0 |
| Marginal upland | 13 |
| Pastural | 6 |
| Upland | 81 |

### Landscape association

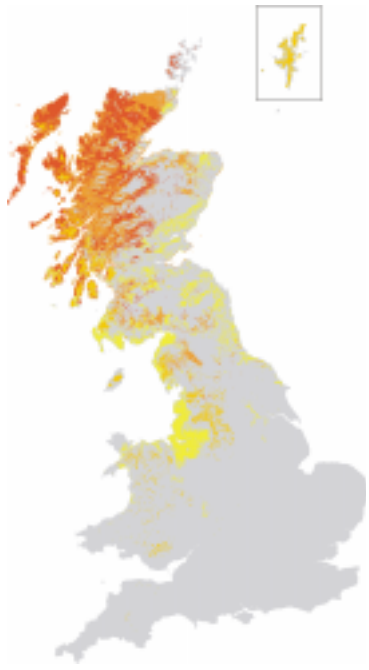


| | % |
|---|---|
| Boundary | 1 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 9 |
| Main | 77 |
| Habitat | 13 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500



Key units
Area 000's $km^{-2}$
Length 000's km

**Main**
Area 6.53 SE 1.06

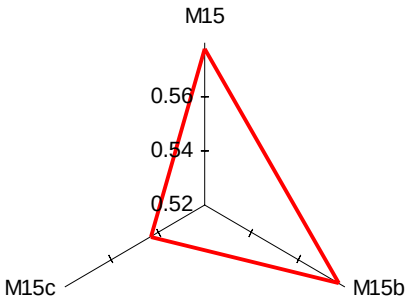
**Boundary**
Length 1.27 SE 0.85

## Floristic characteristics

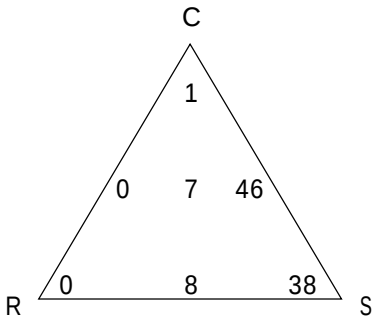
**Species number:** 108 (Low) **No. of species groups:** 5 (Low) **Most frequent group:** 37

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Calluna vulgaris* | 99 | *Calluna vulgaris* | 32.6 | *Racomitrium lanuginosum* |
| *Erica tetralix* | 95 | *Molinia caerulea* | 24.5 | *Cladonia uncialis* |
| *Trichophorum caespitosum* | 93 | *Trichophorum caespitosum* | 23.5 | *Drosera anglica* |
| *Potentilla erecta* | 90 | *Racomitrium lanuginosum* | 12.3 | *Cladonia impexa* |
| *Molinia caerulea* | 85 | *Eriophorum angustifolium* | 9.4 | *Drosera rotundifolia* |

### Similarity with National Vegetation Classification (NVC) types



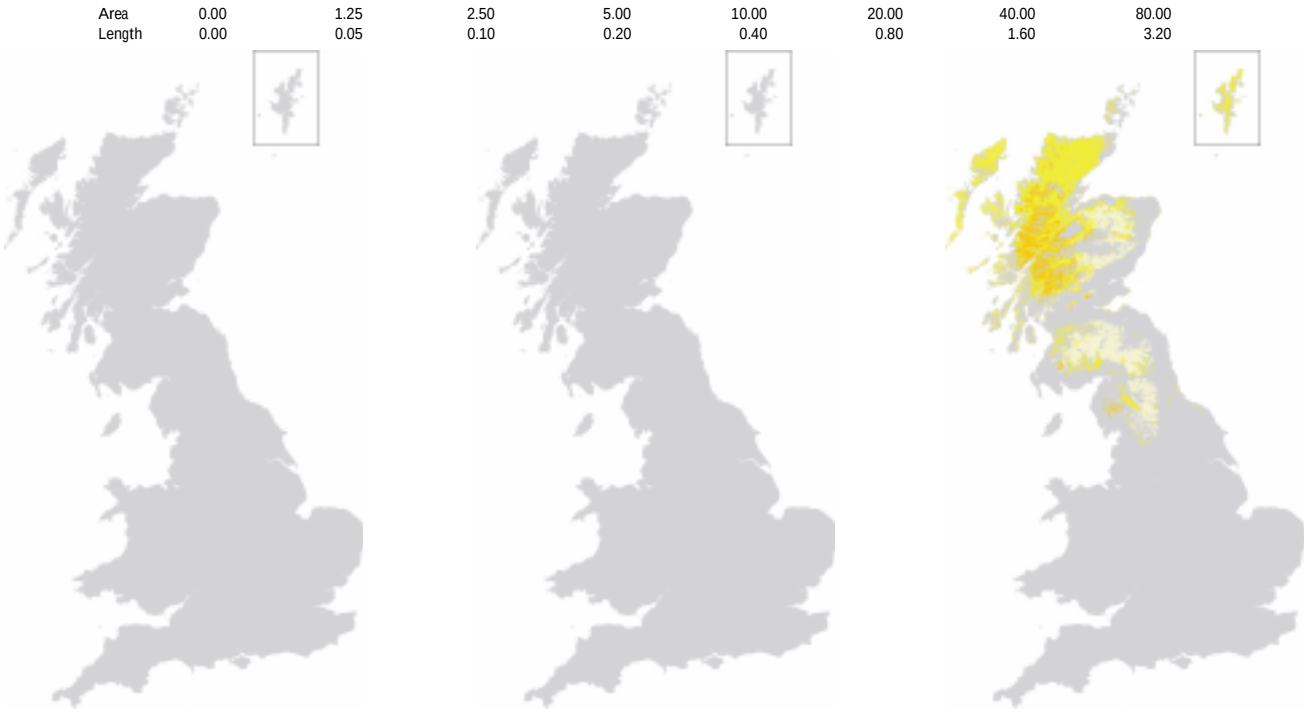

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.6 High | Mean 7.6 High | Mean 2.5 Low | Mean 1.8 Low | Mean 2.7 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length *absent* SE *n/a*

**Streamside**
Length 5.72 SE 2.23

**Vegetation class 100**

**AGGREGATE CLASS VIII**
**HEATH/BOG**

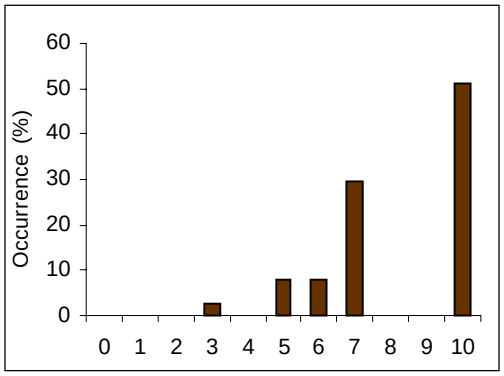
# Inundated bog/wetland

## Description

This class usually occurs in small patches, but can be in open vegetation or by streamsides. It is of restricted occurrence, with purple moor-grass (*Molinia caerulea*) and a range of other species such as deergrass (*Trichophorum cespitosum*) forming the cover. It is variable in species content according to local conditions, plants such as bog-myrtle (*Myrica gale*), common sundew (*Drosera rotundifolia*) and bogbean (*Menyanthes trifoliata*) being characteristic. The class is most common in the Outer Isles, Orkney and Shetland, but is also present elsewhere in the uplands of Britain and in some western lowlands.

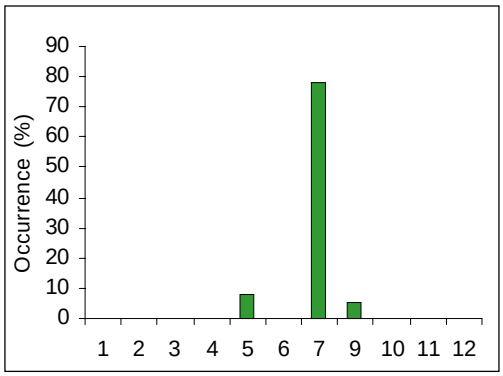
## Associated features

### Soils




0 Disturbed
1 Terrestrial raw
2 Raw gley
3 Lithomorphic
4 Pelosols
5 Brown
6 Podzolic
7 Surface water gley
8 Groundwater gley
9 Man-made
10 Peat

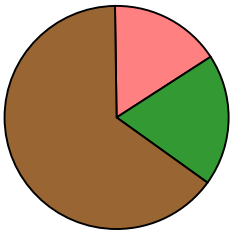
### Land cover




1 Crops
2 Fertile grassland
3 Infertile grassland
4 Grass mosaic/bracken
5 Moorland grass
6 Tall grassland/herb
7 Bog
8 Woodland
9 Heath and screes
10 Water and wetland
11 Maritime vegetation
12 Communications/urban

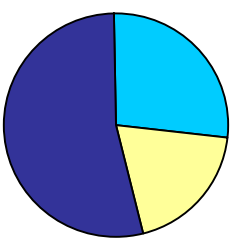
## Distribution

**Total number of plots** 37



| | % |
|---|---|
| Arable | 0 |
| Marginal upland | 16 |
| Pastural | 19 |
| Upland | 65 |

### Landscape association



| | % |
|---|---|
| Boundary | 0 |
| Hedge | 0 |
| Roadside | 0 |
| Streamside | 27 |
| Main | 19 |
| Habitat | 54 |

### Plot types

Mapscale approx: 1:11,000,000

0 kilometres 500

Key units
Area 000's $km^{-2}$
Length 000's km

**Main**
Area *absent* SE *n/a*

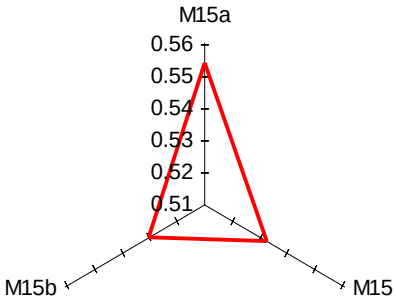
**Boundary**
Length *absent* SE *n/a*

## Floristic characteristics

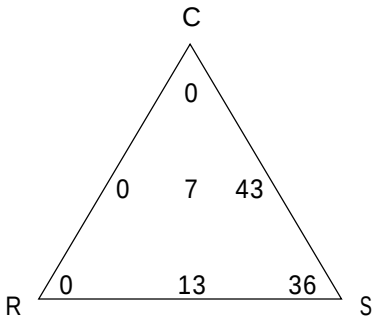
**Species number:** 65 (Low) **No. of species groups:** 6 (Medium) **Most frequent group:** 37

| *Most frequent species* | % | *Species with highest cover* | % | *Characteristic species* |
|---|---|---|---|---|
| *Molinia caerulea* | 86 | *Molinia caerulea* | 13.8 | *Drosera anglica* |
| *Eriophorum angustifolium* | 80 | *Trichophorum caespitosum* | 10.8 | *Drosera rotundifolia* |
| *Narthecium ossifragum* | 80 | *Myrica gale* | 6.2 | *Myrica gale* |
| *Drosera rotundifolia* | 77 | *Calluna vulgaris* | 5.9 | *Juncus bulbosus* |
| *Erica tetralix* | 77 | *Eriophorum angustifolium* | 5.3 | *Narthecium ossifragum* |

### Similarity with National Vegetation Classification (NVC) types



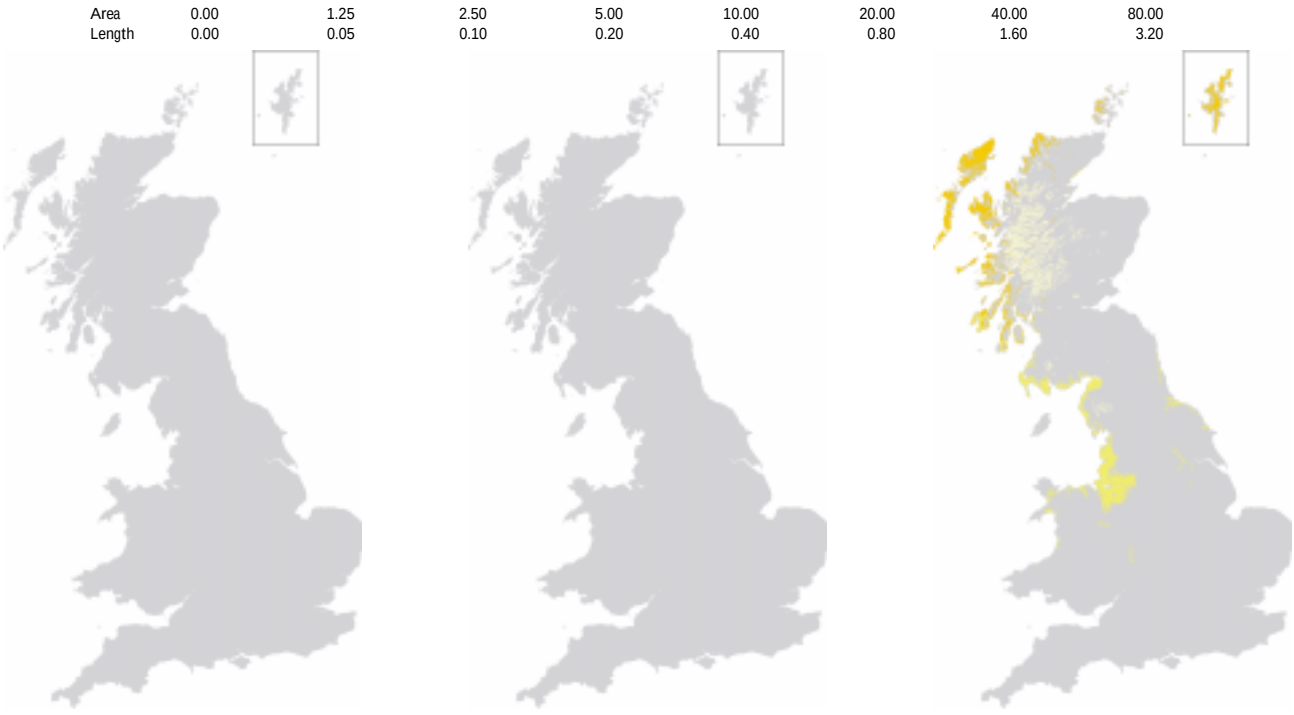

### Competitor–Stress–Ruderal (CSR) characterisation (%)




### Ellenberg scores

| *Light* | *Moisture* | *pH* | *Fertility* | *Continentality* |
|---|---|---|---|---|
| Mean 7.8 High | Mean 8.5 High | Mean 3.0 Low | Mean 1.9 Low | Mean 2.5 Low |

## Distribution




**Hedge**
Length *absent* SE *n/a*

**Roadside**
Length 0.00 SE 0.00

**Streamside**
Length 2.04 SE 0.89

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