

## National Vegetation Classification recording form for the NVC practical and species-rich grassland assessment

Put a tick or 'P' for present in the quadrat if the species is present.

Green = positive calcareous grassland indicators. Orange = negative indicator if >10%

(Wildlife Trust and Magnificent Meadows)

Quadrat number	1	2	3	4	5	6	7	8	9	10
Yarrow ( <i>Achillea millefolium</i> )	P	P					P	P		P
Common Agrimony ( <i>Agrimonia eupatoria</i> )		P				P				
Common Bent Grass ( <i>Agrostis capilaris</i> )							P			P
Pyramidal Orchid ( <i>Anacamptis pyramidalis</i> )									P	
Sweet Vernal-grass ( <i>Anthoxanthum odoratum</i> )							P			
False-oat Grass ( <i>Arrhenatherum elatius</i> )	P	P	P	P	P	P	P		P	P
Tor Grass ( <i>Brachypodium pinnatum/ rupestre</i> )				P		P		P	P	P
Quaking Grass ( <i>Briza media</i> )	P			P	P			P		
Upright Brome Grass ( <i>Bromopsis erecta</i> )				P	P				P	
Clustered Bellflower ( <i>Campanula glomerata</i> )				P						
Harebell ( <i>Campanula rotundifolia</i> )							P			
Sedge ( <i>Carex</i> sp.)		P								
Lesser Knapweed ( <i>Centaurea nigra</i> )	P		P		P	P				P
Greater Knapweed ( <i>Centaurea scabiosa</i> )					P					
Common Centaury ( <i>Centaureum erythraea</i> )									P	
Dwarf Thistle ( <i>Cirsium acaule</i> )	P	P				P				
Woolly Thistle ( <i>Cirsium eriophorum</i> )								P		
Wild Basil ( <i>Clinopodium vulgare</i> )				P					P	
Field Bindweed ( <i>Convolvulus arvensis</i> )					P	P				
Crested Dog's-tail ( <i>Cynosurus cristatus</i> )			P							
Common-spotted Orchid ( <i>Dactylorhiza fuchsia</i> )										P
Cocksfoot Grass ( <i>Dactylis glomerata</i> )	P	P				P		P		
White Bedstraw ( <i>Galium album</i> )	P	P		P		P	P			P
Lady's Bedstraw ( <i>Galium verum</i> )	P	P	P	P	P	P		P	P	P
Rock Rose ( <i>Helianthemum nummularium</i> )	P	P	P	P	P	P	P	P	P	P
Yorkshire Fog Grass ( <i>Holcus lanatus</i> )	P	P	P		P					
St John's Wort ( <i>Hypericum</i> sp.)	P					P	P	P		
Field Scabious ( <i>Knautia arvensis</i> )	P			P		P	P			
Rough Hawkbit ( <i>Leontodon hispidus</i> )	P	P			P					P
Fairy flax ( <i>Linum catharticum</i> )								P	P	
Common Bird's-foot-trefoil ( <i>Lotus corniculatus</i> )	P		P	P	P	P	P	P	P	P
Common Mallow ( <i>Malva sylvestris</i> )							P			
Black Medick ( <i>Medicago lupulina</i> )			P				P			
Restharrow ( <i>Ononis repens</i> )				P	P					
Wild Marjoram ( <i>Origanum vulgare</i> )		P	P	P		P	P			
Ribwort Plantain ( <i>Plantago lanceolata</i> )	P	P	P	P		P	P		P	P

Hoary Plantain ( <i>Plantago media</i> )				P					
Milkwort ( <i>Polygala</i> sp.)			P		P				P
Creeping Cinquefoil ( <i>Potentilla reptans</i> )	P					P			
Cowslip ( <i>Primula veris</i> )			P	P				P	P
Selfheal ( <i>Prunella vulgaris</i> )	P	P							P
Meadow Buttercup ( <i>Ranunculus acris</i> )		P						P	
Yellow Rattle ( <i>Rhinanthus minor</i> )		P							P
Bramble ( <i>Rubus fruticosus</i> agg.)						P			
Common Sorrel ( <i>Rumex acetosa</i> )			P					P	
Salad Burnet ( <i>Sanguisorba minor</i> )	P	P	P	P	P	P		P	P
Dandelion ( <i>Taraxacum</i> agg.)			P			P			P
Wood Sage ( <i>Teucrium scorodonia</i> )						P	P		P
Wild Thyme ( <i>Thymus drucei</i> )					P				P
Red Clover ( <i>Trifolium pratense</i> )	P	P	P	P	P	P		P	P
White Clover ( <i>Trifolium repens</i> )		P		P				P	
Valerian ( <i>Valeriana officinalis</i> )									P
Germander Speedwell ( <i>Veronica chamaedrys</i> )			P			P	P	P	
Common vetch ( <i>Vicia sativa</i> )						P			
Hairy violet ( <i>Viola hirta</i> )					P				

Name changes: *Arrhenatheretum elatioris* => *Arrhenatherum elatius*  
*Bromus erectus* => *Bromopsis erecta*  
*Galium mollugo* => *Galium album*  
*Thymus polytrichus*, *Thymus praecox* => *Thymus drucei*

### Is this grassland classified as species rich?

Yes: across all quadrats richness is greater than 15 species per square metre. There are few negative indicators but Tor Grass (*Brachypodium pinnatum*) is present in half of the quadrats at >10% cover.

### What is the NVC community using the key? Do you agree? And why do you or don't you agree with this assessment?

The best fit route through the key should follow (species present in the sample in bold):

- 1 = Grassland with one or more of ***Bromopsis erecta***, ***Brachypodium pinnatum***, or *Avenula pubescens* constant at more than 10% cover [go to 2]
- 2 = *Sesleria albicans* absent [go to 3]
- 3 = ***Bromopsis erecta*** absent, or if present, then with ***Brachypodium pinnatum*** also present [go to 7]
- 7 = ***Brachypodium pinnatum*** constant without ***Bromopsis erectus*** [go to 8]
- 8 = *Trisetum flavescens* and *Holcus lanatus* absent or, if present, then in small amounts and with some ***Helianthemum nummularium***, ***Sanguisorba minor*** and/or *Hieracium pilosella* [go to 9]
- 9 = *Avenula pratensis* is absent and ***Thymus drucei*** only occasional but ***Leontodon hispidus***, ***Centaurea nigra*** and ***Knautia arvensis*** frequent.

CG4b ***Brachypodium pinnatum*** grassland ***Centaurea nigra*** – ***Leontodon hispidus*** sub-community.

Although *Brachypodium pinnatum* is not constant, many species present are constituents of this community, such as Rock Rose (*Helianthemum nummularium*), Salad Burnet (*Sanguisorba minor*), Fairy Flax (*Linum catharticum*), Rough Hawkbit (*Leontodon hispidus*), Lesser Knapweed (*Centaurea nigra*), and Field

Scabious (*Knautia arvensis*). Additionally, there are some more typically mesotrophic species that are constituents of this community such as Ribwort Plantain (*Plantago lanceolata*), Red Clover (*Trifolium pratense*), and Yorkshire Fog (*Holcus lanatus*). Restharrow (*Ononis repens*) occurs occasionally.

The community also has strong affinity with CG3 Upright Brome (*Bromopsis erecta*) grassland. However, Upright Brome (*Bromopsis erecta*) occurs in only three plots and certainly not at 50%+ cover, so this classification does not key out as readily as CG4b. The herbaceous community is a very good fit for CG3b, including frequently occurring Lesser Knapweed (*Centaurea nigra*), Bird's-foot Trefoil (*Lotus corniculata*), and Salad Burnet (*Sanguisorba minor*), as well as presence of Yellow rattle (*Rhinanthus minor*), White Bedstraw (*Galium album*), and Yarrow (*Achillea millefolium*).

The community exhibits some similarities to MG1 *Arrhenatherum elatius*, *Centaurea nigra* subcommunity with constant presence of False-oat grass (*Arrhenatherum elatius*), and presence of Sweet Vernal Grass (*Anthoxanthum odoratum*), Ribwort Plantain (*Plantago lanceolata*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Yarrow (*Achillea millefolium*), Lady's Bedstraw (*Galium verum*), and Perforate St John's Wort (*Hypericum perforatum*). However, the grassland cannot be described as coarse, species-poor or rank.

### **What is the NVC community using MAVIS?**

The top ten MAVIS (most recent 2016 version) classification percentage matches are:

NVC: CG3 57.98  
NVC: CG3b 57.17  
NVC: MG1d 54.49  
NVC: CG4 53.27  
NVC: MG1 52.61  
NVC: CG3c 52.50  
NVC: CG2 51.32  
NVC: CG2c 50.00  
NVC: CG4b 50.00  
NVC: CG4c 49.90

### **Write a description of the community using the species above with regard to composition of species, frequency of species and overall characteristics.**

The grassland can be described as species-rich with an average of more than 15 plant species per square metre (excluding White Clover (*Trifolium repens*), Tor Grass (*Brachypodium pinnatum*) and pernicious weeds).

The most abundant grasses present in the sample are False-oat grass (*Arrhenatherum elatius*) and Cocksfoot (*Dactylis glomerata*), with the frequently occurring competitive species Tor Grass (*Brachypodium pinnatum*) and occasional Upright Brome (*Bromopsis erecta*) and Quaking Grass (*Briza media*).

Abundant calcareous grassland indicators, being found in 80%+ of the quadrats, are Lady's Bedstraw (*Galium verum*), Rock Rose (*Helianthemum nummularium*), St John's Wort (*Hypericum* sp.), Common Bird's-foot-trefoil (*Lotus corniculatus*) and Salad Burnet (*Sanguisorba minor*). Frequently occurring calcareous indicators include Lesser Knapweed (*Centaurea nigra*), Lady's Bedstraw (*Galium verum*), Quaking grass (*Briza media*), Dwarf thistle (*Cirsium acaule*), Field scabious (*Knautia arvensis*), and Wild Marjoram (*Origanum vulgare*). Occasionally occurring indicators of calcareous grassland include Fairy Flax (*Linum catharticum*), Milkwort (*Polygala* sp.), and the semi-parasitic 'meadow-maker' Yellow Rattle (*Rhinanthus minor*).

More generalist frequently occurring species include White Bedstraw (*Galium album*), Ribwort Plantain (*Plantago lanceolata*), and Red Clover (*Trifolium pratense*).

**After using the key, MAVIS, and writing your community description, what do you conclude about the grassland community species richness and NVC classification?**

The grassland classifies as species-rich with an average of more than 15 beneficial plant species per square metre.

The frequent presence of Tor Grass (*Brachypodium pinnatum*) indicates that the plant community is in transition between CG3b *Bromus erectus* grassland *Centaurea nigra* subcommunity and CG4b *Brachypodium pinnatum* grassland *Centaurea nigra* – *Leontodon hispidus* sub-community. The herbaceous component of the community fits well with CG3b, but Upright Brome (*Bromopsis erecta*) is not as frequent or abundant as required for this classification. Calcareous grassland indicators are abundant at this site. Some mesotrophic indicators show a degree of affinity with MG1 but overall the community cannot be described as species-poor or rank. Overall, the presence of Tor Grass (*Brachypodium pinnatum*) should be monitored and alteration in management may be required to control this competitive grass species.