



Wain Estates

Land north of Wilderness Lane, Great Barr, Birmingham

Update Grassland Survey Technical Note

May 2024

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Rev	Issue Status	Prepared / Date	Approved/Date
-	Final	HEH / 30.05.24	KG / 31.05.24

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1.0 INTRODUCTION

Introduction

- 1.1 This summary note has been prepared by FPCR Environment and Design Ltd. (FPCR) on behalf of Wain Estates. It provides the details of an update detailed grassland survey undertaken at Land North of Wilderness Lane, Great Barr where a proposal for a residential development is currently under consideration at planning appeal (Appeal Reference: APP/G4620/W/24/3341688).

Background

- 1.2 An extended Phase 1 Habitat survey undertaken by Ecological Solutions in March 2020 with an updated walkover undertaken in August 2021¹. A further detailed National Vegetation Survey (NVC) of the grassland habitats was undertaken in late May 2020 alongside a detailed hedgerow survey².
- 1.3 FPCR carried out a habitat survey based on the UKHabitat classification system and undertook quadrat surveys of the grassland on 1st and 2nd June 2023 and 10th July 2023³⁴ by a Principal Ecologist from FPCR Ecologist (FISC Level 4). The detailed grassland survey was updated by the same ecologist 14th and 15th May 2024.

¹ Ecological Solutions (2022) *Land at Birmingham Road, Great Barr, Sandwell. Ecological Assessment.*

² Phil Quinn (2020) *Land at Great Barr, Sandwell. NVC and hedgerow survey.*

³ FPCR (2023) Land North of Wilderness Lane, Great Barr. *Annex I Habitat Survey Report*

⁴ FPCR (2023) Land North of Wilderness Lane, Great Barr. *Ecological Impact Assessment.*

2.0 METHODOLOGY

Grassland Survey

- 2.1 The grassland within the site was surveyed on the 9th, 14th and 15th May by an experienced ecologist with a Field Identification Skills Competency (FISC) Level 4 who previously surveyed the site in 2023.
- 2.2 An update systematic walk over of the site was undertaken on 9th May which broadly followed the UKhabitat Classification system⁵ to classify the broad habitat types and identify any Habitats of Principal Importance (HPI) for the conservation of biodiversity as listed within Section 41 (S41) of the NERC Act (2006)⁶. To inform the Biodiversity Net Gain (BNG) assessment habitat condition assessments were undertaken using the relevant Condition Assessment Criteria within the DEFRA Biodiversity Metric 4.0 – Technical Supplement⁷.
- 2.3 The abundance of species was quantified using the DAFOR scale, ranging from Dominant (>75%) to Abundant (75-51%), through Frequent (50-26%) and Occasional (25-11%) to Rare (10-1%).

Collection of Grassland Field Data

- 2.4 The grassland habitat forming most of the site was sampled in detail on 14th and 15th May via a series of 1m x 1m quadrats across each field compartment, avoiding any of the atypical parts of the sward. The locations of each quadrat were approximately the same as the previous year and are shown on Figure 1. The number of quadrats was proportional to the area sizes, with five quadrats recorded in each area where the vegetation was considered to potentially be representative of a distinct community type. These areas could then subsequently be analysed as individual stands or be combined to be considered as a single stand if analysis subsequently showed them to be similar in their species composition.
- 2.5 Species within each quadrat were recorded along with the percentage cover, along with other species noted within the sward but not recorded within the quadrats themselves. To allow for National Vegetation Classification (NVC) all species recorded within the sample quadrats were then assigned a constancy score of 'I' to 'V' depending on the number of quadrats they occurred in; as shown in Table 1.

Table 1: Assignment of Constancy Score

% Occurrence in total number of quadrat samples	Constancy Score
81-100%	V
61-80%	IV

⁵ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. 2020. *The UK Habitat Classification User Manual 1.1* <http://www.ukhab.org> [Accessed 16/08/2023].

⁶ *The Natural Environment and Rural Communities Act 2006*. [Online]. London: HMSO Available at: <http://www.legislation.gov.uk/ukpga/2006/16/contents> [Accessed 16/08/2023]

⁷ Natural England (2023) *The Biodiversity Metric 4.0* (JP039) [Online]. Available from: <https://publications.naturalengland.org.uk/publication/6049804846366720> [Accessed 16/08/23]

% Occurrence in total number of quadrat samples	Constancy Score
41-60%	III
21-40%	II
1-20%	I

- 2.6 The percentage cover was also converted to the DOMIN scale as shown in in Table 2. This information was then used to construct 'floristic tables' which include the frequency and abundance range for each species recorded within the sample quadrats.

Table 2: DOMIN Scale of Cover / Abundance

DOMIN SCALE	% COVER
10	91-100%
9	76-90%
8	51-75%
7	34-50%
6	26-33%
5	11-25%
4	4-10%
3	Several (10+) individuals
2	Many (4-10) individuals
1	Few (1-4) individuals

- 2.7 The maximum height of the vegetation in each sample was also recorded, along with the average sward height.
- 2.8 To assist with habitat condition assessments for the BNG assessment, each species was also assigned an abundance value on the basis of how many of the quadrats it occurred in, as follows.
- Occurs in 0-20% of quadrats = rare
 - Occurs in 21-50% of quadrats = occasional
 - Occurs in >51% of quadrates = frequent

Analysis of Grassland Field Data

- 2.9 As the resultant data showed a relatively uniform species composition across the samples, in some areas the grassland was representative of a NVC community and further NVC analysis was undertaken in addition to a UKHabitat classification.
- 2.10 Analysis of NVC survey data involves four elements:
- Use of a vegetation key;
 - Computer analysis;

- Comparison of floristic tables and community descriptions; and
 - Surveyor experience.
- 2.11 British Plant Communities Vol. 3 provides a key (largely a dichotomous key) which enables the user to arrive at a conclusion by answering a series of questions based on the floristic composition of the sampled stand.
- 2.12 The quantitative species data for the NVC communities and their sub-communities are summarised in a standardised format in the form of floristic tables. Each floristic table includes the frequency and abundance range for each species within the main community and any sub-communities. Floristic tables produced from the survey were compared with the published NVC tables to look for any similarity between the two data sets which would then indicate the presence of a particular NVC community within the sampled areas.
- 2.13 The data gathered during this survey was analysed using the Modular Analysis of Vegetation Information System (MAVIS)⁸ software package. For groups of plots entered into MAVIS as constancy tables, or for groups created within the program, matching coefficients are computed between the published NVC synoptic floristic tables and the survey field data. The top 10 matching coefficients are displayed. Matching follows the same application of the Czekanowski coefficient as MATCH⁹ with the same down-weighting to 0.1 of species not present in the input data but present at constancy I (1-20%) in the NVC tables. Though the “matching coefficient”, measured on a scale from 0 to 100, bears no absolute meaning it is generally considered that coefficients below about 50 indicate poor matches, and those below 40 indicate very poor matches.
- 2.14 Each NVC community is given a full written description within the published volumes¹⁰. These descriptions give context to the key and floristic tables and are of great value and importance as part of the analysis processes. Once a decision has been made on the basis of the result of the keying exercise, comparison of floristic tables and computer analysis, it is imperative that the description for the NVC community which it is assumed to be present is then read to ensure that this reflects the sampled stand.

⁸ CEH. (2014). Modular Analysis of Vegetation Information System (MAVIS). [online]. Webpage. Available from: <http://www.ceh.ac.uk/products/software/cehsoftware-mavis.htm>

⁹ Malloch, A.J.C (1996). Match Version 2.0: A computer program to aid assignment of vegetation data to the communities and sub-communities of the National Vegetation Classification. Lancaster University: Unit of Vegetation Science

¹⁰ Rodwell (ed.) (1992). *British Plant Communities Volume 3 Grasslands and Montane Communities*. Cambridge: The Press Syndicate of the University of Cambridge.

3.0 RESULTS

Overview

- 3.1 The site was still supported field compartment of neutral grassland, which included abandoned pasture fields (F6, F7, F8, F10 & F11) and a series of compartments used to take an agricultural hay crop. A late hay cut appeared to have been taken and the sward across all compartments was notably shorter. Several fields (F2, F7, F8, F9, F10 & F13) had been cut and bailed on site and most field compartments had notable tyre track marks, particularly at field entrances where the ground generally supported large areas of bare ground. Differences in grassland quality were noted however there had been no extensive changes in the type of management, levels of scrub encroachment or

Grassland

- 3.2 Habitat descriptions are provided below, and a full species list for each field, together with the DOMIN and constancy values are shown at Appendix A. The number of indicator species include those highlighted in Appendix A as either neutral grassland or lowland meadow indicator species.

Field F1

- 3.3 Field F1 has a similarly composition to before and with a species-poor (on average 7.2 species per m² across the quadrats) grass dominated sward. Field woodrush *Luzula campestris* was notably less abundant though the number of indicator species was consistent with the previous years data.
- 3.4 The strip along the south-eastern edge of the field was less notably different to that of the rest of the field and although still supported larger amounts of red clover *Trifolium pratense*, other forbs were less abundant and there were less than 10 species per m².
- 3.5 In terms of baseline value for the BNG assessment the field was classified as other neutral grassland, with the majority of the field in poor condition as indicator species were not considered to be consistently present. The narrower strip was considered to be in moderate condition.

Field F2

- 3.6 The grassland within this field had been cut and bailed on site and at the time of the survey had a shorter sward than last year at approximately 10-20cm. The field still supported a grassland dominated sward with abundant sweet vernal *Anthoxanthum odoratum*, locally frequent red fescue *Festuca rubra* agg. and locally occasional patches of meadow foxtail *Alopecurus pratensis*.
- 3.7 Forb coverage had declined with a much lower abundance of meadow buttercup *Ranunculus acris* and a small decline in species per metre square. No yellow rattle was recorded and notably larger areas of bare ground were recorded at the field access and in the south-western corner of the field caused by vehicle damage. In addition, a small area dominated by floating sweet-grass *Glyceria fluitans* was recorded adjacent to the wet ditch (TN1).
- 3.8 In terms of baseline value for the BNG assessment the field still classifies as other neutral grassland in moderate condition.

Field F3

- 3.9 An area of rush dominated sward (TN2, Figure 1) is still present adjacent to the scrub in the north-east which was still dominated by great willowherb *Epilobium hirsutum* with frequent common nettle *Urtica dioica* and rare occurrence of meadowsweet *Filipendula ulmaris* and water figwort *Scrophularia auriculata*. Hard rush was still abundant surrounding this area with frequent creeping bent and rare occurrence of soft rush and was considered to most closely resemble a MG10 *Holcus lanatus* – *Juncus effusus* rush pasture.
- 3.10 The central part of the field (TN3) was also supported large areas of rush, including three distinct stands of jointed rush *Juncus articulatus* that had not been previously recorded. Abundances of finer grasses such as red fescue were also lower in this area. The number of indicator species recorded was the same however their relative abundances were lower, including that of great burnet *Sanguisorba officinalis* which was most notable towards the north of the field (TN4). Larger areas of bare ground were also noted in the south where water had stood over the winter and the sward at the time of the survey was much shorter.
- 3.11 Overall, the analysis still had a fairly strong matching coefficient (59.44%) for MG4 *Alopecurus pratensis* – *Sanguisorba officinalis* grassland subcommunity *Holcus lanatus* (MG4c). However, in line with the results of the survey last year, the structure of the sward, with *Alopecurus pratensis* present as a minor component, low species-richness and other constants species of this community either absent or not present at high enough frequencies suggests that this is not the best fit. Due to the increased presence of rushes and creeping bent it is however considered that this part of the field (quadrats Q1-Q5) more closely resembled a marshy grassland that was more representative of MG10 *Holcus lanatus* – *Juncus effusus* rush pasture *Agrostis stolonifera* subcommunity (MG10a).
- 3.12 The remaining parts of the field in the north and east were still considered to be broadly representative of a MG6b community due to the constant presence of sweet vernal grass.
- 3.13 In terms of baseline value for the BNG assessment communities were classified as other neutral grassland, in moderate condition.

Field F4

- 3.14 Field F4 had declined in overall species-richness with fewer species per square metre (9.4 species) and still comprised a uniform grass dominated sward. The patch of yellow rattle *Rhinanthus minor* had reduced in spread and the abundances of indicator species including meadow buttercup had declined.
- 3.15 The analysis had a poorer fit to MG6b and it is likely that this is due to the low forb abundances and as such in terms of the BNG assessment this field was considered to have declined to fairly-poor condition.

Field F5

- 3.16 The sward was notably shorter and small remnant patches of rushes were recorded towards the centre of the compartment, however these areas were still not considered to represent marshy grassland. Small stands of common knapweed were recorded in the south where the sward was much patchier and patches of field woodrush were still present in finer, more open areas of the sward towards the north. No oval sedge *Carex leporine* was recorded and the number and

abundances of indicator species had decreased slightly. Yellow rattle was also rarely recorded and mostly confined to areas TN5.

- 3.17 Overall, the community composition remained the same and in terms of the baseline value for the BNG assessment is still considered to be in fairly poor condition.

Field F6

- 3.18 This field appears not to have been subject to recent management and was still dominated by large stands of bramble and tall ruderal vegetation. Finer and shorter areas of grassland were recorded along the former access track with coarse grasses dominating the areas between the dense stands of rosebay willowherb *Chamaenerion angustifolium*, nettle and scrub. A small stand of Japanese knotweed was still present in the north-west corner (TN6).
- 3.19 Overall, in terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to be in poor condition.

Field F7

- 3.20 The sward had been cut and bailed on site and supported a similar community to the year before with a mix of grasses and low abundance of herbs that did not affiliate particularly well to any community. Dense tussocks of coarser grasses were recorded throughout and particularly along the southern and eastern boundaries, indicative of the transition to a MG1 community. This field is still considered to be more diverse than field F8 but has declined slightly in species-richness with a higher frequency of ruderal species recorded.
- 3.21 In terms of baseline value for the BNG assessment the field was still classified as other neutral grassland which was considered to be in poor condition.

Field F8

- 3.22 The sward has also been cut and bailed on site and was shorter at approximately 10-20cm in height, with larger tussocks of coarser grasses up to 40cm. The grassland was a similar composition to last year and comprised a species-poor abandoned pasture which did not affiliate well to any recognisable community.
- 3.23 Ruderal species such as creeping thistle and creeping buttercup were more frequently recorded as well as creeping bent *Agrostis stolonifera* and meadow foxtail and the sward remained species-poor and grass dominated.
- 3.24 In terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to be in poor condition.

Field F9

- 3.25 The sward had been cut and bailed on site and comprised a grass dominated sward with very few herbs. Although the matching coefficient was lower (49.77%), the field was still considered to be representative of a species-poor MG6b community that is likely transitioning to a MG1 community with large tussocks of tall fescue *Festuca arundinacea* which were most abundant at TN6 and false oat-grass, particularly towards the south. No yellow rattle was noted and overall species diversity had declined slightly.
- 3.26 In terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to still be in poor condition as indicator species were not considered to be consistently present.

Field F10

- 3.27 This field compartment has been cut and bailed on site and at the time of the survey and had a shorter sward approximately 20-30cm. The sward was grass dominated and due to the abundances of perennial rye-grass *Lolium perenne*, rough meadow-grass *Poa trivialis* and meadow foxtail and low abundances of forbs, the analysis found a closer match to a MG7 *Lolium perenne-Alopecurus pratensis* community. Species diversity had declined slightly to 7.9 species per square metre and the number and abundances of indicator species has also declined. In line with the historic management of this field compartment it is considered that it supports a modified species-poor sward.
- 3.28 In terms of baseline value for the BNG assessment the field was classified as modified grassland which was considered to be in moderate condition.

Field F11

- 3.29 Field F11 was considered to have the same composition as last year with a slightly shorter sward at the time of the update survey. The pond in this field did hold water at the time of the survey and localised patches of Yorkshire fog *Holcus lanatus* were recorded in the vicinity.
- 3.30 Slightly less scrub was recorded which was considered likely to be due to the management and early survey period, however dense patches of nettles and were still present throughout the sward and species-richness has declined (3.7 species per m²).
- 3.31 In terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to be in poor condition.

Field F12

- 3.32 This field supported the same grassland community albeit with a smaller number of indicator species and at the time of the survey a shorter sward.
- 3.33 In terms of baseline value for the BNG assessment the field was still classified as other neutral grassland which was considered to be in moderate condition.

Field F13

- 3.34 Field F13 was unmanaged at the time of the survey, having been cut and bailed on site. The sward had a similar composition to last year with a grass dominated sward, though indicator species had declined in number with only meadow buttercup and common sorrel *Rumex acetosa* recorded. Small areas were dominated by meadow foxtail but overall the sward was still considered to be representative of an MG6b sub-community.
- 3.35 In terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to be in poor condition, passing only two of the condition criteria.

Field F14

- 3.36 This field was similar in composition to the previous year with a shorter sward at the time of the survey and overall decline in species-richness and presence of indicator species. Small sparse patches of rush were present in line with the results of last year and no oval sedge was recorded. Despite a high frequency of Yorkshire fog and creeping bent, the sward still considered to best representative of a MG6b sub-community due to the high abundance of sweet vernal in combination with perennial rye-grass.

- 3.37 In terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to be in poor condition.

APPENDIX A: GRASSLAND QUADRAT RESULTS & CONSISTENCY TABLES**Field F1**

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Red fescue	<i>Festuca rubra</i>	15 (5)	45 (7)	35 (7)	25 (5)	36 (7)	V	{5-7}	24	LF
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	45 (7)	40 (7)	42 (7)	44 (7)	40 (7)	V	{7}	34.2	A
Yorkshire-fog	<i>Holcus lanatus</i>	25 (5)	10 (4)	15 (5)	20 (5)	12 (5)	V	{4-5}	14	LO
Common sorrel	<i>Rumex acetosa</i>	4 (4)	1 (1)	2 (2)	4 (4)		IV	{1-4}	2.02	LO
Meadow foxtail	<i>Alopecurus pratensis</i>		2 (2)	2 (2)		2 (2)	III	{2}	0.8	LO
Annual meadow-grass	<i>Poa annua</i>	2 (1)			2 (1)		II	{1}	0.8	R
Field wood-rush	<i>Luzula campestris</i>				3 (4)	8 (4)	II	{4}	0.6	R-LO
Hairy sedge	<i>Carex hirta</i>					1 (1)	II	{1}		R
Meadow buttercup	<i>Ranunculus acris</i>		1 (2)	1 (2)			II	{2}	0.4	R
Perennial rye-grass	<i>Lolium perenne</i>		2 (2)		2 (2)		II	{2}	0.8	R
Smooth meadow-grass	<i>Poa pratensis</i>	5 (4)				2 (1)	II	{1}	1	R
Crested dog's-tail	<i>Cynosurus cristatus</i>	5 (4)					I	{1}	1	R
Neat feather-moss	<i>Pseudoscleropodium purum</i>				1 (1)		I	{1}	0.2	R
Tall fescue	<i>Schedonorus arundinaceus</i>			2 (1)			I	{1}	0.4	R
Cat's-ear	<i>Hypochaeris radicata</i>									R
Cock's-foot	<i>Dactylis glomerata</i>									R
Creeping bent	<i>Agrostis stolonifera</i>									LF
Cuckooflower	<i>Cardamine pratense</i>									R
Curled dock	<i>Rumex crispus</i>									R
Dandelion	<i>Taraxacum officinale</i> agg.									R
False oat-grass	<i>Arrhenatherum elatius</i>									R
Tufted hair-grass	<i>Deschampsia cespitosa</i>									R

Field F1a

Species Name	Latin	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	10 (4)	5 (4)	10 (4)	V	{4}	8.3333333	R-O
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	30 (6)	56 (8)	46 (7)	V	{6-8}	44	A
Yorkshire-fog	<i>Holcus lanatus</i>	20 (5)	12 (5)	5 (4)	V	{4-5}	12.3333333	R
Red clover	<i>Trifolium pratense</i>	2 (2)	3 (3)	3 (3)	V	{2-3}	2.6666667	F
Creeping bent	<i>Agrostis stolonifera</i>	10 (4)		25 (5)	IV	{4-5}	11.6666667	F
Meadow foxtail	<i>Alopecurus pratensis</i>	25 (5)	3 (2)		IV	{2-5}	9.3333333	R
Red fescue	<i>Festuca rubra</i>	2 (3)	4 (4)		IV	{3-4}	2	LF
Meadow buttercup	<i>Ranunculus acris</i>		1 (1)	1 (1)	IV	{1}	0.3666667	R
Ribwort plantain	<i>Plantago lanceolata</i>	1 (1)	3 (2)		IV	{1-2}	1.3333333	O
Greater plantain	<i>Plantago major</i>		1 (1)		II	{1}	0.3333333	R
Annual meadow-grass	<i>Poa annua</i>		3 (2)		II	{2}	1	R
Cock's-foot	<i>Dactylis glomerata</i>			1 (1)	II	{1}	0.3333333	R
Crested dog's-tail	<i>Cynosurus cristatus</i>		5 (4)		II	{4}	1.6666667	R
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>			5 (4)	II	{1}	1.6666667	R
Common sorrel	<i>Rumex acetosa</i>		2 (2)		II	{1}	0.6666667	R
Creeping cinquefoil	<i>Potentilla reptans</i>			1 (1)	II	{1}	0.3333333	
Dandelion	<i>Taraxacum officinale</i> agg.			2 (1)	II	{1}	0.6666667	R
Meadow fescue	<i>Festuca pratensis</i>							R
Smooth meadow-grass	<i>Poa pratensis</i>							O
Tall fescue	<i>Schedonorus arundinaceus</i>							LO
Common mouse-ear	<i>Cerastium fontanum</i>							R
Field wood-rush	<i>Luzula campestris</i>							R
Hairy tare	<i>Ervilla hirsuta</i>							R

Field F2

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	10 (4)	4 (4)	20 (5)	8 (4)	16 (5)	V	{4-5}	11.6	R
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	40 (7)	40 (7)	50 (7)	35 (7)	55 (8)	V	{7-8}	44	A
Yorkshire-fog	<i>Holcus lanatus</i>	15 (5)	20 (4)	8 (4)	20 (5)	4 (4)	V	{4-5}	13.4	R
Meadow buttercup	<i>Ranunculus acris</i>	2 (1)	1 (1)	1 (1)	2 (1)	1 (1)	V	{1}	1.22	O
Crested dog's-tail	<i>Cynosurus cristatus</i>	20 (5)	3 (2)		2 (2)	4 (4)	IV	{2-5}	5.8	R
Red fescue	<i>Festuca rubra</i>	10 (5)	30 (6)	12 (5)	25 (5)	5 (4)	IV	{4-6}	16.4	LF
Common sorrel	<i>Rumex acetosa</i>	1 (1)	1 (1)	1 (1)	0.1 (1)		IV		0.62	R
Cock's-foot	<i>Dactylis glomerata</i>			1 (1)	1 (1)	2 (2)	III	{1-2}	0.8	R
Meadow foxtail	<i>Alopecurus pratensis</i>	3 (2)		1 (2)		10 (4)	III	{2-4}	2.8	O-F
Common hogweed	<i>Heracleum sphondylium</i>			3 (1)		2 (1)	III	{1}	1	R
Tufted vetch	<i>Vicia cracca</i>		1 (1)	1 (1)	2 (2)		III	{1-2}	0.62	R
Creeping thistle	<i>Cirsium arvense</i>			1 (1)			I	{1}	0.2	R
Annual meadow-grass	<i>Poa annua</i>				1 (1)		I	{1}	0.2	R
Neat feather-moss	<i>Pseudoscleropodium purum</i>				2 (1)		I	{1}	0.4	R
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>			1 (1)			I	{1}	0.2	R
Common vetch	<i>Vicia sativa</i>					1 (1)	I	{1}	0.02	R
Red clover	<i>Trifolium pratense</i>					1 (1)	I	{1}	0.2	R
Creeping buttercup	<i>Ranunculus repens</i>									R
Creeping bent	<i>Agrostis stolonifera</i>									LF
Floating sweet-grass	<i>Glyceria fluitans</i>									R
Italian rye-grass	<i>Lolium muliflorum</i>									R
Meadow fescue	<i>Festuca pratensis</i>									R
Soft-brome	<i>Bromus hordeaceus</i>									R
Common mouse-ear	<i>Cerastium fontanum</i>									R
Dandelion	<i>Taraxacum officinale agg.</i>									R
Hard rush	<i>Juncus inflexus</i>									R

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Marsh horsetail	<i>Equisetum palustre</i>									R
Meadow vetchling	<i>Lathyrus pratensis</i>									R
Ribwort plantain	<i>Plantago lanceolata</i>									R

Field F3a

Species Name	Latin	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
Yorkshire-fog	<i>Holcus lanatus</i>	20 (5)	2 (3)	25 (5)	III	{3-5}	15.666667	R
Hard rush	<i>Erythraea hirsuta</i>	45 (7)	25 (5)	20 (5)	III	{5-7}	30	A
Creeping bent	<i>Agrostis stolonifera</i>	2 (2)		5 (4)	II	{2-4}	2.3333333	O
Meadow foxtail	<i>Alopecurus pratensis</i>	8 (4)		15 (5)	II	{4-5}	7.6666667	F
Neat feather-moss	<i>Pseudoscleropodium purum</i>	5 (4)	1 (1)		II	{1}	2	O
Common sorrel	<i>Rumex acetosa</i>	2 (1)		1 (1)	II	{1}	1	R
Marsh horsetail	<i>Equisetum palustre</i>	1 (1)	1 (1)		II		0.0666667	R
Meadow buttercup	<i>Ranunculus acris</i>	5 (4)	2 (2)		II		2.3333333	R
Soft rush	<i>Juncus effusus</i>	1 (1)	1 (1)		II	{1}	0.6666667	O
Meadow vetchling	<i>Lathyrus pratensis</i>			1 (1)	I	{1}	0.0333333	R
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>		2 (2)		I	{1}	0.6666667	R
Creeping cinquefoil	<i>Potentilla reptans</i>			20 (5)	I	{1}	6.6666667	LO
Great burnet	<i>Sanguisorba officinalis</i>			8 (4)	I	{1}	2.6666667	R
Great willowherb	<i>Epilobium hirsutum</i>			1 (1)	I	{1}	0.3333333	LF
Greater bird's-foot-trefoil	<i>Lotus pendunculatus</i>		65 (8)		I	{1}	21.666667	LF
Annual meadow-grass	<i>Poa annua</i>							LO
Dandelion	<i>Taraxacum officinale agg.</i>							R
Hairy bitter-cress	<i>Cardamine hirsuta</i>							R
Meadowsweet	<i>Filipendula ulmaria</i>							LO
Ribwort plantain	<i>Plantago lanceolata</i>							R
Square-stalked willowherb	<i>Epilobium tetragonum</i>							R
Water figwort	<i>Scrophularia umbrosa</i>							R
Yellow Rattle	<i>Rhinanthus minor</i>							R

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Field F3b

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Constancy	DOMIN Range	Av % Cover	DAFOR
Creeping bent	<i>Agrostis stolonifera</i>	53 (8)	12 (4)	46 (7)	25 (5)	22 (5)	26 (6)		12 (5)	V	{4-7}	24.5	LF
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	4 (4)	30 (6)	35 (6)	10 (4)	45 (7)		12 (5)	10 (4)	V	{4-7}	18.25	LA
Yorkshire-fog	<i>Holcus lanatus</i>	3 (2)	3 (2)	2 (2)	2 (2)	10 (4)	1 (2)	80 (9)	6 (4)	V	{2-9}	13.375	R
Common sorrel	<i>Rumex acetosa</i>		1 (1)	1(1)	1 (1)	1 (1)	1 (1)	1 (1)		V	{1}	0.1875	R-O
Perennial rye-grass	<i>Lolium perenne</i>	25 (5)	5 (4)	2 (2)		20 (5)		2 (2)	15 (4)	IV	{2-5}	8.625	R-O
Red fescue	<i>Festuca rubra</i>	5 (4)	16 (5)			2 (2)		5 (4)		III	{2-4}	3.5	R-LO
Great burnet	<i>Sanguisorba officinalis</i>	1(1)	20 (5)	10 (4)	30	1(1)				III	{1}	7.75	LO
Soft rush	<i>Juncus effusus</i>		1(1)	1(1)	1(1)	1(1)				III	{1}	0.5	R
Meadow foxtail	<i>Alopecurus pratensis</i>	3 (2)	3 (2)						36 (6)	II	{2-6}	5.25	O
Neat feather-moss	<i>Pseudoscleropodium purum</i>				5 (4)		1 (2)	2 (2)		II	{2-4}	1	R
Tufted hair-grass	<i>Deschampsia cespitosa</i>				3 (2)	2 (1)	5 (4)			II	{1-5}	1.25	R
Ribwort plantain	<i>Plantago lanceolata</i>	1(1)			0.1 (1)				2 (2)	II	{1}	0.3875	O
Common mouse-ear	<i>Cerastium fontanum</i>	0.1 (1)								I		0.0125	R
Creeping buttercup	<i>Ranunculus repens</i>			1 (1)			2 (1)			I	{1}	0.375	R
Rough meadow-grass	<i>Poa trivialis</i>			3 (2)						I	{2}	0.375	R
Soft-brome	<i>Bromus hordeaceus</i>								15 (4)	I	{4}	1.875	R
Bush vetch	<i>Vicia sepium</i>								2 (2)	I	{2}	0.25	R
Compact rush	<i>Juncus conglomeratus</i>				1(1)		5 (4)			I	{1-4}	0.75	O
Glaucous sedge	<i>Carex flacca</i>		1 (1)							I	{1}	0.0125	R
Greater bird's-foot-trefoil	<i>Lotus pendunculatus</i>					1(1)	15 (5)			I	{1-5}	2	R
Hard rush	<i>Juncus inflexus</i>	4 (4)								I	{4}	0.5	LA
Marsh horsetail	<i>Equisetum palustre</i>								1(1)	I	{1}	0.125	R
Meadow buttercup	<i>Ranunculus acris</i>			2 (2)	2 (2)					I	{2}	0.5	LO
Meadow vetchling	<i>Lathyrus pratensis</i>	1 (1)								I	{1}	0.0125	R-LO
Broad-leaved dock	<i>Rumex obtusifolius</i>												R
Creeping thistle	<i>Cirsium arvense</i>												R

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Cock's-foot	<i>Dactylis glomerata</i>												R
Floating sweet-grass	<i>Glyceria fluitans</i>												R
Meadow barley	<i>Hordeium secalinum</i>												R
Smooth meadow-grass	<i>Poa pratense</i>												R
Tall fescue	<i>Schedonorus arundinaceus</i>												R
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>												R-LF
Common vetch	<i>Vicia sativa</i>												R
Dandelion	<i>Vicia sativa</i>												R
Field wood-rush	<i>Luzula campestris</i>												R
Hairy bitter-cress	<i>Cardamine hirsuta</i>												R
Hoary ragwort	<i>Jacobae erucifolia</i>												R
Jointed rush	<i>Juncus articulatus</i>												R
Pignut	<i>Conopodium majus</i>												R
Yellow Rattle	<i>Rhinanthus minor</i>												R

Field F4

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	10 (4)	2 (2)	1 (1)	3 (2)	6 (4)	V	{1-4}	4.4	R
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	55 (7)	78 (9)	55 (8)	58 (8)	60 (8)	V	{7-8}	61.2	F
Meadow foxtail	<i>Alopecurus pratensis</i>	15 (5)	2 (2)		8 (4)	15 (5)	IV	{2-5}	8	F
Red fescue	<i>Festuca rubra</i>	5 (4)	2 (2)	8 (4)	10 (4)		IV	{2-4}	5	R
Yorkshire-fog	<i>Holcus lanatus</i>	5 (4)	2 (2)	6 (4)		12 (5)	IV	{2-5}	5	LO-LF
Crested dog's-tail	<i>Cynosurus cristatus</i>	5 (4)	10 (4)	18 (5)			III	{4-5}	6.6	O
False oat-grass	<i>Arrhenatherum elatius</i>	2 (1)			13 (5)		III	{1-5}	3	R
Soft-brome	<i>Bromus hordeaceus</i>			3 (2)	3 (2)		III	{2}	1.2	R
Tall fescue	<i>Schedonorus arundinaceus</i>			5 (4)		2 (1)	III	{1-4}	1.4	R
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>		0.1 (1)	0.1 (1)	0.1 (1)		III	{1}	0.06	R
Common hogweed	<i>Heracleum sphondylium</i>				3 (1)	1 (1)	III	{1}	0.8	R-O
Meadow buttercup	<i>Ranunculus acris</i>			2 (2)	2 (2)	2 (2)	III	{2}	1.2	R-LO
Neat feather-moss	<i>Pseudoscleropodium purum</i>	2 (2)		2 (2)		1 (1)	I	{1-2}	1	R
Smooth meadow-grass	<i>Poa pratensis</i>		5 (4)			2 (2)	I	{2-4}	1.4	R
Common sorrel	<i>Rumex acetosa</i>			.	1 (1)		I	{1}	0.02	R
Common vetch	<i>Vicia sativa</i>				1 (1)		I	{1}	0.02	
Field wood-rush	<i>Luzula campestris</i>	1 (1)					I	{1}	0.2	R
Creeping bent	<i>Agrostis stolonifera</i>									LF
Meadow fescue	<i>Festuca pratensis</i>									R
Common knapweed	<i>Centaurea nigra</i>									R
Common mouse-ear	<i>Cerastium fontanum</i>									R
Compact rush	<i>Juncus conglomeratus</i>									R
Cuckooflower	<i>Cardamine pratense</i>									R
Lesser trefoil	<i>Trifolium dubium</i>									R
Red clover	<i>Trifolium pratense</i>									R

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Ribwort plantain	<i>Plantago lanceolata</i>									R-LO
Smooth tare	<i>Ervum tetraspermum</i>									R
Tufted vetch	<i>Vicia cracca</i>									R
Yellow Rattle	<i>Rhinanthus minor</i>									LO

Field F5

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	64 (8)	58 (8)	70 (8)	70 (8)	74 (8)	V	{8}	67.2	A
Yorkshire-fog	<i>Holcus lanatus</i>	8 (4)	2 (2)	10 (4)	8 (4)	2 (2)	V	{2-4}	6	LO
Meadow foxtail	<i>Alopecurus pratensis</i>	4 (4)	5 (4)		3 (3)	10 (4)	IV	{3-4}	4.4	O-LF
Common sorrel	<i>Rumex acetosa</i>	3 (2)	20 (5)	1 (1)	1 (1)		IV	{1-5}	4.82	R
Meadow buttercup	<i>Ranunculus acris</i>	3 (2)	1 (1)			1 (1)	III	{1}	1	R-O
Red fescue	<i>Festuca rubra</i>	2 (2)		10 (4)		12 (5)	III	{2-5}	4.8	LO
Timothy	<i>Phleum pratense</i>	10 (4)	10 (4)	2 (1)			III	{1-4}	4.4	R
Perennial rye-grass	<i>Lolium perenne</i>		5 (4)	5 (4)			II	{4}	2	LO
Pignut	<i>Conopodium majus</i>			1 (1)	1 (1)		II	{1}	0.04	R
Cock's-foot	<i>Dactylis glomerata</i>			1 (1)			I	{1}	0.2	R
Crested dog's-tail	<i>Cynosurus cristatus</i>				5 (4)		I	{4}	1	R
False oat-grass	<i>Arrhenatherum elatius</i>				2 (1)		I	{1}	0.4	R
Smooth meadow-grass	<i>Poa pratensis</i>				12 (5)		I	{5}	2.4	R
Common mouse-ear	<i>Cerastium fontanum</i>		1 (1)				I	{1}	0.02	R
Hairy sedge	<i>Carex hirta</i>		1 (1)				I	{1}	0.02	R
Rough meadow-grass	<i>Poa trivialis</i>	5 (4)					I	{4}	1	R
Yellow Rattle	<i>Rhinanthus minor</i>		1 (1)				I	{1}	0.02	R
Creeping bent	<i>Agrostis stolonifera</i>									O
Smaller cat's-tail	<i>Phleum bertolonii</i>									R
Soft-brome	<i>Bromus hordeaceus</i>									O
Common hogweed	<i>Heracleum sphondylium</i>									R
Common knapweed	<i>Centaurea nigra</i>									R-LF
Dandelion	<i>Taraxacum officinale</i> agg.									R
Field wood-rush	<i>Luzula campestris</i>									R-LO
Great Burnet	<i>Sanguisorba officinalis</i>									R
Marsh horsetail	<i>Equisetum palustre</i>									R
Neat feather-moss	<i>Pseudoscleropodium purum</i>									R

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Ribwort plantain	<i>Plantago lanceolata</i>									R-LO
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Field F6

Species Name	Latin	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
Yorkshire-fog	<i>Holcus lanatus</i>	10 (4)	2 (1)	1 (1)	III	{1-4}	4.3333333	R
Perennial rye-grass	<i>Lolium perenne</i>	5 (4)		6 (4)	II	{4}	3.6666667	
Annual meadow-grass	<i>Poa annua</i>	3 (2)		2 (2)	II	{2}	1.6666667	R
False oat-grass	<i>Arrhenatherum elatius</i>	15 (5)		68 (8)	II	{5-8}	27.666667	F
Rough meadow-grass	<i>Poa trivialis</i>	68 (8)		18 (5)	II	{5-8}	28.666667	O
Tall fescue	<i>Schedonorus arundinaceus</i>		1 (1)	2 (2)	II	{1-2}	1	R
Broad-leaved dock	<i>Rumex obtusifolius</i>		1 (1)		I	{1}	0.3333333	R
Creeping thistle	<i>Cirsium arvense</i>			1 (1)	I	{1}	0.3333333	R
Cock's-foot	<i>Dactylis glomerata</i>		1 (1)		I	{1}	0.3333333	O
Meadow foxtail	<i>Alopecurus pratensis</i>		96 (10)		I		32	LA
Rosebay willowherb	<i>Chamaenerion angustifolium</i>			2 (1)	I	{1}	0.6666667	R
Common nettle	<i>Urtica dioica</i>						0	R
Red fescue	<i>Festuca rubra</i>						0	LF
Soft-brome	<i>Bromus hordeaceus</i>						0	LO
Bramble	<i>Rubus fruticosus</i> agg.						0	R
Cleavers	<i>Galium aparine</i>						0	R
Cow parsley	<i>Anthriscus sylvestris</i>						0	R
Dandelion	<i>Taraxacum officinale</i> agg.						0	R-LO
Meadow buttercup	<i>Ranunculus acris</i>						0	R
Red clover	<i>Trifolium pratense</i>						0	R
Ribwort plantain	<i>Plantago lanceolata</i>						0	R

Field F7

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	4 (4)	15 (5)	20 (5)	12 (5)	20 (5)	V	{4-5}	14.2	R
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	38 (7)	43 (7)	5 (4)	55 (8)	64 (8)	V	{4-8}	41	A
Yorkshire-fog	<i>Holcus lanatus</i>	15 (5)	10 (4)	50 (7)	25 (5)	4 (4)	V	{4-5}	20.8	R
Meadow buttercup	<i>Ranunculus acris</i>	3 (3)	2 (2)	1 (1)	3 (3)	1 (1)	V	{3}	2	R-O
Red fescue	<i>Festuca rubra</i>	3 (3)	2 (2)		1 (1)	3 (3)	IV	{1-3}	1.8	R
Common vetch	<i>Vicia sativa</i>		1 (1)	1 (1)		1 (1)	III	{1}	0.42	R
Meadow foxtail	<i>Alopecurus pratensis</i>			20 (5)		1 (2)	II	{2-5}	4.2	LF
Smooth meadow-grass	<i>Poa pratensis</i>		10 (4)		3 (2)		II	{2-4}	2.6	O
Ribwort plantain	<i>Plantago lanceolata</i>				1 (1)	1 (1)	II	{1}	0.4	R
Curled dock	<i>Rumex crispus</i>			1 (1)			I	{1}	0.2	R
Cock's-foot	<i>Dactylis glomerata</i>					2 (1)	I	{1}	0.4	LO
Common couch	<i>Elytrigia repens</i>			2 (1)			I	{1}	0.4	R
Creeping bent	<i>Agrostis stolonifera</i>	30 (6)					I	{6}	6	LF
Rough meadow-grass	<i>Poa trivialis</i>		15 (5)				I	{5}	3	LO
Soft-brome	<i>Bromus hordeaceus</i>					1 (1)	I	{1}	0.2	R
Timothy	<i>Phleum pratense</i>	1 (1)					I	{1}	0.2	R
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>					1 (1)	I	{1}	0.02	R
Common hogweed	<i>Heracleum sphondylium</i>	1 (1)					I	{1}	0.2	O
Common sorrel	<i>Rumex acetosa</i>	2 (2)					I	{2}	0.4	R
Marsh horsetail	<i>Equisetum palustre</i>	3 (3)					I	{3}	0.6	R
Red clover	<i>Trifolium pratense</i>					3 (3)	I	{3}	0.6	R
Smooth tare	<i>Ervum tetraspermum</i>			1 (1)			I	{1}	0.02	R
White clover	<i>Trifolium repens</i>									R
Crested dog's-tail	<i>Cynosurus cristatus</i>									LO
Tall fescue	<i>Schedonorus arundinaceus</i>									R
Cleavers	<i>Galium aparine</i>									R
Common knapweed	<i>Centaurea nigra</i>									R

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Common mouse-ear	<i>Cerastium fontanum</i>									R
Cow parsley	<i>Anthriscus sylvestris</i>									R
Meadow vetchling	<i>Lathyrus pratensis</i>									R

Field F8

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	8 (4)	15 (5)	5 (4)	8 (4)	6 (4)	V	{4-5}	8.4	R
Yorkshire-fog	<i>Holcus lanatus</i>	20 (5)	12 (4)	65 (8)	5 (4)	50 (7)	V	{4-7}	30.4	O
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	57 (8)	65 (8)	30 (6)	65 (8)		IV	{8}	43.4	A
Meadow buttercup	<i>Ranunculus acris</i>	2 (2)	3 (3)	1 (1)			III	{1-3}	1.2	R-LO
Meadow foxtail	<i>Alopecurus pratensis</i>				8 (4)	20 (5)	II	{4}	5.6	LA
Rough meadow-grass	<i>Poa trivialis</i>			4 (4)	10 (4)		II	{4}	2.8	R
Curled dock	<i>Rumex crispus</i>				1 (1)		I	{1}	0.2	R
Cock's-foot	<i>Dactylis glomerata</i>			1 (2)			I	{2}	0.2	R
Common bent	<i>Agrostis capillaris</i>	10 (4)					I	{4}	2	R
Crested dog's-tail	<i>Cynosurus cristatus</i>			4 (4)			I	{4}	0.8	O
False oat-grass	<i>Arrhenatherum elatius</i>					25 (5)	I	{5}	5	R
Meadow barley	<i>Hordeum secalinum</i>				2 (1)		I	{1}	0.4	R
Rough-stalked feather-moss	<i>Brachythecium rutabulum</i>	1 (2)					I	{2}	0.2	R
Smooth meadow-grass	<i>Poa pratensis</i>		5 (4)				I	{4}	1	R
Timothy	<i>Phleum pratense</i>	1 (1)					I	{1}	0.2	R
Cleavers	<i>Galium aparine</i>					1 (1)	I	{1}	0.02	R
Smooth tare	<i>Ervum tetraspermum</i>				1 (1)		I	{1}	0.2	R
Broad-leaved dock	<i>Rumex obtusifolius</i>									R
Creeping buttercup	<i>Ranunculus repens</i>									R
Creeping thistle	<i>Cirsium arvense</i>									R-LO
Bramble	<i>Rubus fruticosus agg.</i>									R
Common hogweed	<i>Heracleum sphondylium</i>									R

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Common mouse-ear	<i>Cerastium fontanum</i>									R
Common sorrel	<i>Rumex acetosa</i>									R
Common vetch	<i>Vicia sativa</i>									R
Great willowherb	<i>Epilobium hirsutum</i>									R
Marsh horsetail	<i>Equisetum palustre</i>									R
Soft rush	<i>Juncus effusus</i>									R

Field F9

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	2 (2)	10 (4)	8 (4)	5 (4)	5 (4)	V	{2-4}	6	LO
Red fescue	<i>Festuca rubra</i>	5 (5)	28 (6)	2 (2)	30 (6)	30 (6)	V	{2-6}	19	LO
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	48 (7)	40 (7)	42 (7)	40 (7)	38 (7)	V	{7}	41.6	F
Yorkshire-fog	<i>Holcus lanatus</i>	22 (5)	20 (5)	8 (4)	15 (5)	5 (4)	V	{4-5}	14	R
Crested dog's-tail	<i>Cynosurus cristatus</i>	12 (5)	2 (2)			12 (4)	III	{2-5}	5.2	O
Meadow foxtail	<i>Alopecurus pratensis</i>			40 (7)		6 (4)	III	{4-7}	9.2	F
Rough-stalked feather-moss	<i>Brachythecium rutabulum</i>	2 (2)	1 (2)				III	{2}	0.6	R
Tall fescue	<i>Schedonorus arundinaceus</i>	1 (1)			2 (1)		III	{1}	0.6	R-LO
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>		0.1 (1)		0.1 (1)		III	{1}	0.04	R
Common hogweed	<i>Heracleum sphondylium</i>				3 (1)	1 (1)	III	{1}	0.8	O
Common vetch	<i>Vicia sativa</i>		1 (1)	1 (1)	1 (1)		III	{1}	0.24	R
Meadow buttercup	<i>Ranunculus acris</i>	3	1 (1)	1 (1)		1 (1)	III	{1}	0.84	R
Common sorrel	<i>Rumex acetosa</i>	1 (1)			1 (1)		II	{1}	0.4	R
Cock's-foot	<i>Dactylis glomerata</i>	1 (1)					I	{1}	0.2	R
Rough meadow-grass	<i>Poa trivialis</i>	2 (2)					I	{2}	0.4	R
Smooth meadow-grass	<i>Poa pratensis</i>				2 (2)		I	{2}	0.4	R
Bush vetch	<i>Vicia sepium</i>				1 (1)		I	{1}	0.02	R
Smooth tare	<i>Ervum tetraspermum</i>		1 (1)				I	{1}	0.02	R
Square-stalked willowherb	<i>Epilobium tetragonum</i>			1 (1)			I	{1}	0.02	R
Creeping thistle	<i>Cirsium arvense</i>									R
Creeping bent	<i>Agrostis capillaris</i>									R
False oat-grass	<i>Arrhenatherum elatius</i>									LO
Soft-brome	<i>Bromus hordeaceus</i>									O
Common knapweed	<i>Centaurea nigra</i>									R
Common mouse-ear	<i>Cerastium fontanum</i>									R
Meadow vetchling	<i>Lathyrus pratensis</i>									R

Field F10

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	15 (5)	25 (5)	10 (4)	15 (5)	6 (4)	16 (5)	10 (4)	V	{4-5}	13.857143	O
Cock's-foot	<i>Dactylis glomerata</i>	2 (2)	2 (2)	1 (1)	3 (2)	3 (2)	2 (2)	5 (4)	V	{2-4}	2.5714286	R-LO
Red fescue	<i>Festuca rubra</i>	10 (4)	20 (5)	3 (3)	1 (2)	2 (2)			IV	{2-5}	5.1428571	R
Rough meadow-grass	<i>Poa trivialis</i>	44 (7)	1 (2)	78 (9)		32 (6)	12 (4)	50 (7)	IV	{2-7}	31	LF
Yorkshire-fog	<i>Holcus lanatus</i>	8 (4)	8 (4)	1 (1)	2 (2)	2 (2)		10	IV	{1-4}	4.4285714	O
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	15 (5)	42 (7)		60 (8)	45 (7)			III	{5-7}	23.142857	A
Broad-leaved dock	<i>Rumex obtusifolius</i>			3 (1)			2 (1)	2 (1)	II	{1}	1	R
Meadow foxtail	<i>Alopecurus pratensis</i>	2 (2)			15 (4)		58 (7)		II	{2-7}	10.714286	LF
Common hogweed	<i>Heracleum sphondylium</i>			1 (1)	2 (1)	4 (4)	8 (4)		II	{1-4}	2.1428571	R-LF
Common sorrel	<i>Rumex acetosa</i>	1 (1)			1 (1)	1 (1)			II	{1}	0.3	R
Common vetch	<i>Vicia sativa</i>				1 (1)				II	{1}	0.0142857	R
Common couch	<i>Elytrigia repens</i>						1 (1)		I	{1}	0.1428571	R
Crested dog's-tail	<i>Cynosurus cristatus</i>					5 (4)			I	{4}	0.7142857	O
False oat-grass	<i>Arrhenatherum elatius</i>							20 (5)	I	{5}	2.8571429	LO
Soft-brome	<i>Bromus hordeaceus</i>	1 (1)							I	{1}	0.1428571	R
Dandelion	<i>Taraxacum officinale</i> agg.		2 (1)			1 (1)			I	{1}	0.4285714	R
Meadow buttercup	<i>Ranunculus acris</i>	2 (2)		2 (2)					I	{2}	0.5714286	R-LO
Smooth tare	<i>Ervum tetraspermum</i>				1 (1)				I	{1}	0.0142857	R
White clover	<i>Trifolium repens</i>											R
Common nettle	<i>Urtica dioica</i>											R
Creeping thistle	<i>Cirsium arvense</i>											R
Creeping bent	<i>Agrostis stolonifera</i>											O
Rough-stalked feather-moss	<i>Brachythecium rutabulum</i>											R
Smooth meadow-grass	<i>Poa pratensis</i>											R
Tall fescue	<i>Schedonorus arundinaceus</i>											R
Timothy	<i>Phleum pratense</i>											R

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Tufted hair-grass	<i>Deschampsia cespitosa</i>											R
Bramble	<i>Rubus fruticosus</i> agg.											R
Cow parsley	<i>Anthriscus sylvestris</i>											R
Ribwort plantain	<i>Plantago lanceolata</i>											R
Soft rush	<i>Juncus effusus</i>											O
Square-stalked willowherb	<i>Epilobium tetragonum</i>											R

Field F11

Species Name	Latin	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
False oat-grass	<i>Arrhenatherum elatius</i>	74 (8)	98 (10)	96 (10)	III	{8-10}	89.333333	F
Creeping thistle	<i>Cirsium arvense</i>	5 (4)	1 (1)		II	{1-4}	2	O
Yorkshire-fog	<i>Holcus lanatus</i>	1 (1)		3 (2)	II	{1-2}	1.333333	LF
Common nettle	<i>Urtica dioica</i>	2 (1)			I	{1}	0.666667	LA
Cock's-foot	<i>Dactylis glomerata</i>			1 (1)	I	{1}	0.333333	O
Red fescue	<i>Festuca rubra</i>	15 (5)			I	{5}	5	LO
Bramble	<i>Rubus fruticosus agg.</i>			2 (1)	I	{1}	0.666667	R
Cleavers	<i>Galium aparine</i>		0.1 (1)		I	{1}	0.033333	R
Common vetch	<i>Vicia sativa</i>	1 (1)			I	{1}	0.333333	R
A willowherb	<i>Epilobium sp.</i>	0.1 (1)			I	{1}		R
Perennial rye-grass	<i>Lolium perenne</i>							R
White clover	<i>Trifolium repens</i>							R
Broad-leaved dock	<i>Rumex obtusifolius</i>							O
Common ragwort	<i>Jacobaea vulgaris</i>							R
Creeping buttercup	<i>Ranunculus repens</i>							R
Curled dock	<i>Rumex crispus</i>							R
Greater plantain	<i>Plantago major</i>							R
Spear thistle	<i>Cirsium vulgare</i>							R
Meadow foxtail	<i>Alopecurus pratensis</i>							LF
Broad-leaved willowherb	<i>Epilobium montanum</i>							R
Common sorrel	<i>Rumex acetosa</i>							R
Male-fern	<i>Jacobae erucifolia</i>							R

Field F12

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	2 (2)	2 (2)	5 (4)	6 (4)	12 (5)	V	{2-5}	5.4	LO
Crested dog's-tail	<i>Cynosurus cristatus</i>	32 (6)	35 (7)	30 (6)	12 (5)	18 (5)	V	{5-7}	25.4	LF
Red fescue	<i>Festuca rubra</i>	2 (2)	3 (3)	5 (4)	4 (4)	18 (5)	V	{2-5}	6.4	R-O
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	40 (7)	45 (7)	40 (7)	64 (8)	42 (7)	V	{7-8}	46.2	A
Yorkshire-fog	<i>Holcus lanatus</i>	16 (5)	8 (4)	8 (4)	10 (5)	4 (4)	V	{4-5}	9.2	R
Soft-brome	<i>Bromus hordeaceus</i>	1 (1)	2 (2)	2 (2)			III	{1-2}	1	R
Common sorrel	<i>Rumex acetosa</i>		0.1 (1)		0.1 (1)	0.1 (1)	III	{1}	0.06	R
Common vetch	<i>Vicia sativa</i>	0.1 (1)	0.1 (1)		0.1 (1)		III	{1}	0.06	R
Meadow buttercup	<i>Ranunculus acris</i>		1 (1)	1 (1)		1 (1)	III	{1}	0.6	R
Meadow foxtail	<i>Alopecurus pratensis</i>				2 (2)	3 (2)	II	{2}	1	R
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>	0.1 (1)				0.1 (1)	II	{1}	0.04	R
Common hogweed	<i>Heracleum sphondylium</i>	2 (1)	0.1 (1)				II	{1}	0.42	LO
Meadow vetchling	<i>Lathyrus pratensis</i>	4 (4)			2 (1)		II	{4}	1.2	R
Creeping thistle	<i>Cirsium arvense</i>	0.1 (1)					I	{1}	0.02	R
Cock's-foot	<i>Dactylis glomerata</i>			5 (4)			I	{4}	1	R
Meadow fescue	<i>Festuca pratensis</i>			1 (1)			I	{1}	0.2	R
Rough-stalked feather-moss	<i>Brachythecium rutabulum</i>			3 (2)			I	{2}	0.6	R
Smooth meadow-grass	<i>Poa pratensis</i>		3 (2)				I	{2}	0.6	R
Tall fescue	<i>Schedonorus arundinaceus</i>	1 (1)					I	{1}	0.2	R
Hairy tare	<i>Ervilla hirsuta</i>	0.1 (1)					I	{1}	0.02	R
Red clover	<i>Trifolium pratense</i>	0.1 (1)					I	{1}	0.02	R

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Tufted vetch	<i>Vicia cracca</i>				0.1 (1)		I	{1}	0.02	R
Cow parsley	<i>Anthriscus sylvestris</i>									R
Marsh horsetail	<i>Equisetum palustre</i>									R

Field F13

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	5 (4)	35 (7)	10 (4)	8 (4)	15 (5)	V	{4-7}	14.6	LO
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	56 (8)	50 (7)	15 (5)	60 (8)	50 (7)	V	{5-8}	46.2	A
Yorkshire-fog	<i>Holcus lanatus</i>	15 (5)	4 (4)	60 (8)	2 (2)	6 (4)	V	{2-8}	17.4	O
Red fescue	<i>Festuca rubra</i>	2 (2)	2 (2)	2 (2)		10 (4)	IV	{2-4}	3.2	R
Common bent	<i>Agrostis capillaris</i>	10 (4)	5 (4)		3 (3)		III	{3-4}	3.6	R-O
Creeping bent	<i>Agrostis stolonifera</i>					15 (5)	III	{5}	3	LO
Crested dog's-tail	<i>Cynosurus cristatus</i>	10 (4)					III	{4}	2	O
False oat-grass	<i>Arrhenatherum elatius</i>				20 (5)		III	{5}	4	O
Smooth meadow-grass	<i>Poa pratensis</i>				5 (4)	2 (1)	III	{1-4}	1.4	O
Meadow buttercup	<i>Ranunculus acris</i>		4 (4)	1 (1)		1 (1)	III	{1}	1.2	O
Rough meadow-grass	<i>Poa trivialis</i>			10 (4)			I	{4}	2	R
Common hogweed	<i>Heracleum sphondylium</i>			1 (1)			I	{1}	0.2	R
Common sorrel	<i>Rumex acetosa</i>			1 (1)			I	{1}	0.2	R
Dandelion	<i>Taraxacum officinale</i> agg.		1 (1)				I	{1}	0.2	R
Broad-leaved dock	<i>Rumex obtusifolius</i>									R
Creeping thistle	<i>Cirsium arvense</i>									LO
Cock's-foot	<i>Dactylis glomerata</i>									LF
Meadow foxtail	<i>Alopecurus pratensis</i>									LA
Common mouse-ear	<i>Cerastium fontanum</i>									R
Soft-rush	<i>Juncus effusus</i>									R

Field F14

Species Name	Latin	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	<i>Lolium perenne</i>	4 (4)	2 (2)	4 (4)	2 (2)	68 (8)	V	{2-8}	16	LF
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	60 (8)	30 (6)	35 (6)	25 (5)	15 (5)	V	{5-8}	33	A
Creeping bent	<i>Agrostis stolonifera</i>	20 (5)	42 (7)	42 (7)	62 (8)		IV	{5-8}	33.2	O-LF
Yorkshire-fog	<i>Holcus lanatus</i>	2 (2)	5 (4)		2 (2)	3 (3)	IV	{2-4}	2.4	F
Common sorrel	<i>Rumex acetosa</i>	1 (1)	1 (1)	5 (4)			III	{1-4}	1.4	R - LF
Compact rush	<i>Juncus conglomeratus</i>			3 (2)	5 (4)		III	{2-4}	1.6	LO-LF
Red fescue	<i>Festuca rubra</i>	8 (4)			2 (2)		II	{2-4}	2	R
Meadow buttercup	<i>Ranunculus acris</i>			2 (2)	0.1 (1)		II	{1-2}	0.42	O
Creeping buttercup	<i>Ranunculus repens</i>			4 (4)			I	{4}	0.8	R
Meadow foxtail	<i>Alopecurus pratensis</i>					2 (2)	I	{2}	0.4	LO
Rough meadow-grass	<i>Poa trivialis</i>					5 (4)	I	{4}	1	R
Smooth meadow-grass	<i>Poa pratensis</i>		3 (2)				I	{2}	0.6	
Timothy	<i>Phleum pratense</i>	5 (4)					I	{4}	1	R
Tufted hair-grass	<i>Deschampsia cespitosa</i>		5 (4)				I	{4}	1	R
Clustered dock	<i>Rumex conglomeratus</i>					4 (4)	I	{4}	0.8	R
Broad-leaved dock	<i>Rumex obtusifolius</i>									R
Barren brome	<i>Anisantha sterilis</i>									LA
Cock's-foot	<i>Dactylis glomerata</i>									R
Common mouse-ear	<i>Cerastium fontanum</i>									R
Dandelion	<i>Taraxacum officinale</i> agg.									R
Ribwort plantain	<i>Plantago lanceolata</i>									R



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Key

- Red Line Boundary
- Target Note Areas
- Target Note Point

Baseline Habitats

- Bracken
- Bramble scrub
- Developed land; sealed surface
- Mixed scrub
- Other neutral grassland
- Ponds (non-priority habitat)
- Tall forbs

Baseline Hedgerows

- Non-native and ornamental hedgerow - H33
- Line of trees - TL2, TL3, TL4, TL5
- Line of trees - associated with bank or ditch - TL1
- Native hedgerow - H1, H2, H6, H8, H14, H17, H19, H20, H21, H22, H26, H28, H29, H30, H32
- Native hedgerow - associated with bank or ditch - H3, H5, H9
- Native hedgerow with trees - H4, H15, H23, H24, H25, H27, H31
- Native hedgerow with trees - associated with bank or ditch - H10, H11, H13, H16
- Species-rich native hedgerow - H18
- Species-rich native hedgerow with trees - associated with bank or ditch - H7, H12

Baseline Trees

- Existing Large Rural Tree
- Existing Medium Rural Tree
- Existing Small Rural Tree



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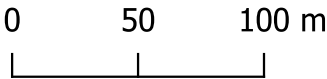
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Key

Red Line Boundary

● **Quadrat Location**





client
Wain Estates

project
**Land north of Wilderness Lane,
Great Barr, Birmingham**

drawing title
GRASSLAND QUADRAT LOCATION PLAN

scale @ A3
1:3,000

drawn
HEH

issue date
31/5/2024

Figure 2

rev
A