

SHAW LAITHE FARM, LAND AT LOWER EDGE ROAD AND SHAW LANE,
ELLAND

PROPOSED MIXED RESIDENTIAL AND EDUCATIONAL LAND APPLICATION

LOWER EDGE NVC SURVEY

IN SUPPORT OF DRAFT CALDERDALE LOCAL PLAN ALLOCATION

LP0978

September 2018

On behalf of:

P & J Boyle and Son

Status:

Final

Report Number:

16/1001/PJB/NVC

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1 INTRODUCTION

Barton Howe Associates Ltd have been instructed by Walker Morris LLP, on behalf of the Old Earth Primary School and P & J Boyle and Son, to undertake National Vegetation Classification (NVC) survey of grassland at Lower Edge Road, Elland, Calderdale.

The survey was conducted on grassland within the Lower Edge Road site as shown in Figure 1. For the purposes of this survey the site was divided into four areas. The survey included;

- Full species list for the site;
- Indication of abundance using the DAFOR scale;
- Quadrat survey to allow reference to National Vegetation Classification (NVC) grassland communities and sub-communities; and
- Report to include method, description of plant communities and species list of species encountered during the survey.

For each community a description is offered followed by quadrat data gathered during the survey. A species list for all plants encountered in the grassland during the survey is at Appendix 1.

2 METHOD

National Vegetation Classification (NVC) survey was carried out at Lower Edge Road, Elland by Principal Ecologist Gordon Haycock BSc (Hons) MSc CEcol CEnv MCIEEM, on 12th September 2018.

The method used for survey follows the approach for NVC survey as described by Rodwell *et al* (1992) and Rodwell (2006). The data presented here allows the vegetation communities identified to be classified in accordance with the accounts published in British Plant Communities (Rodwell *et al* 1991 *et seq*).

Grassland areas are shown at Figure 1.

Within each quadrat / sample, all species of vascular plant and bryophytes (mosses and liverworts) were identified and for each species the percentage cover of the quadrat was estimated. In addition, a full species list for each community was made including species not featuring in the quadrats, and an indication of abundance throughout the site recorded using the DAFOR scale. Each species was classified as either Dominant, Abundant, Frequent, Occasional or Rare for the community.

The figure for percentage cover for each species in each quadrat was recorded as a Domin value. Domin values are as follows;

Cover (%)	Domin
91 -100	10
76-90	9
51-75	8
34-50	7
26-33	6
11-25	5
4-10	4
<4 with many individuals	3
<4 with several individuals	2
<4 with few individuals	1

Following field survey and for the purposes of relating the community to community descriptions in the NVC, the frequency of each species in each area was calculated where;

I = 1-20% of quadrats

II = 21-40%

III = 41-60%

IV = 61-80%

V = 81-100%

The NVC community type was determined by comparing the results of the field survey, using both keys and the experience of the field surveyor, with reference to the published accounts and floristic tables in British Plant Communities (Rodwell *et al* 1991 *et seq*).

The community description indicates how the floristic features compare to the standard vegetation community descriptions.

3 SITE DESCRIPTION

Lower Edge Road, Elland is centred on OS grid reference SE120215. The vegetation communities sampled consist of grassland which had been cut for silage or hay some six to eight weeks prior to the survey. Re-growth was good and all perennial species were likely to be detected, however, species flowering early in the year such as *Dactylorhiza* orchids, pignut *Conopodium majus* and annuals may not have been apparent at the time of survey. There is no evidence of grazing and the site is well used by dog walkers

The site is relatively flat and lies in the Calder valley south of the railway line. The site is bounded to the west by housing and a primary school, and by Shaw Lane and what appears to be previously developed land to the west.

In general, plant communities appear to have developed on moisture retentive but generally well-drained clayey soils, and the grassland vegetation was remarkably consistent throughout.

4 COMMUNITY DESCRIPTION

MG6a *Lolium perenne* – *Cynosurus cristatus* grassland Typical sub-community

The grassland community in all four areas has most affinity with MG6 *Lolium perenne* – *Cynosurus cristatus* grassland with a preponderance of mesotrophic grasses and perennial rye-grass frequent throughout. Forbs are represented by common sorrel, ribwort plantain and dandelion with common and creeping buttercup and meadow vetchling frequent throughout. Less abundant are bush and tufted vetch, hairy tare and common mouse-ear. Community constants red fescue, Yorkshire fog, perennial rye-grass and white clover are all present indicating most affinity with MG6 grassland.

For the purposes of survey the site was divided into four areas; as shown at Figure 1. Five quadrats were recorded in each area and the results are presented below. In addition, a full species list of all species encountered in the grassland is attached at Appendix 1.

Table 1.2 - The following data for Area 1 was collected using the standard structured quadrat survey method.

Species	Q1	Q2	Q3	Q4	Q5	Freq	Domin
Grid reference - SE	11892155	11922148	11932152	11942157	11962148		
<i>Festuca rubra</i>	6	7	7	6	5	V	(5-7)
<i>Lolium perenne</i>	4	4	4	7	5	V	(4-7)
<i>Holcus lanatus</i>	4	4	4	4	4	V	(4_)
<i>Dactylis glomerata</i>	6	7	4	3	4	V	(3-7)
<i>Rumex acetosa</i>	4	3	4	3	2	V	(2-4)
<i>Lathyrus pratensis</i>	3	2	2	1	2	V	(1-3)
<i>Ranunculus acris</i>		2	2	2	2	IV	(2_)
<i>Agrostis stolonifera</i>	5	2	4	1		IV	(1-5)
<i>Plantago lanceolata</i>	4	2	2	1		IV	(1-4)
<i>Taraxacum officinale agg</i>	4	1	1	1		IV	(1-4)
<i>Arrhenatherum elatius</i>		4	3		4	III	(3-4)
<i>Vicia cracca</i>			3	3		II	(3_)
<i>Trifolium pratense</i>	2	2				II	(2_)
<i>Ranunculus repens</i>	2			2		II	(2_)
<i>Poa pratensis</i>				3		I	(3_)
<i>Phleum pratense</i>		2				I	(2_)

Table 1.3 - The following data for Area 2 was collected using the standard structured quadrat survey method.

Species	Q1	Q2	Q3	Q4	Q5	Freq	Domin
Grid reference - SE	12012158	12042156	12022154	12042149	12082151		
<i>Festuca rubra</i>	7	4	8	8	7	V	(4-8)
<i>Dactylis glomerata</i>	5	6	4	4	5	V	(4-6)
<i>Holcus lanatus</i>	4	3	3	3	4	V	(3-4)
<i>Arrhenatherum elatius</i>	4	6	2		4	IV	(2-6)
<i>Lolium perenne</i>	3	4	3		2	IV	(2-4)
<i>Plantago lanceolata</i>	4	2	4		3	IV	(2-4)
<i>Lathyrus pratensis</i>	3		2	2	3	IV	(2-3)
<i>Agrostis stolonifera</i>	3	4	3			III	(3-4)
<i>Taraxacum officinale agg</i>	2			4	3	III	(2-4)
<i>Ranunculus repens</i>	3		1		2	III	(1-3)
<i>Rumex acetosa</i>		2	2		1	III	(1-2)
<i>Trifolium pratense</i>			3		2	II	(2-3)
<i>Poa pratensis</i>				2		I	(2_)
<i>Vicia sepium</i>	2					I	(2_)
<i>Anthriscus sylvestris</i>				2		I	(2_)
<i>Trifolium repens</i>					2	I	(2_)
<i>Heracleum sphondylium</i>				1		I	(1_)
<i>Ranunculus acris</i>				1		I	(1_)

Table 1.4 - The following data for Area 3 was collected using the standard structured quadrat survey method.

Species	Q1	Q2	Q3	Q4	Q5	Freq	Domin
Grid reference - SE	12092160	12092163	12142167	12182165	12182162		
<i>Dactylis glomerata</i>	5	4	5	6	7	V	(4-7)
<i>Festuca rubra</i>	4	4	6	5	7	V	(4-7)
<i>Lolium perenne</i>	4	4	6	5	3	V	(3-6)
<i>Taraxacum officinale agg</i>	1	3	2	2	2	V	(1-3)
<i>Holcus lanatus</i>	5	3		3	5	IV	(3-5)

<i>Plantago lanceolata</i>		3	4	4	3	IV	(3-4)
<i>Rumex acetosa</i>	3	2	2		2	IV	(2-3)
<i>Ranunculus acris</i>	2		2	1	2	IV	(1-2)
<i>Ranunculus repens</i>		2	2	3		III	(2-3)
<i>Vicia hirsuta</i>			2	3	2	III	(2-3)
<i>Lathyrus pratensis</i>	3	4				II	(3-4)
<i>Phleum pratense</i>	6	3				II	(3-6)
<i>Arrhenatherum elatius</i>	2	3				II	(2-3)
<i>Trifolium pratense</i>			2		2	II	(2_)
<i>Vicia sepium</i>				2	2	II	(2_)
<i>Anthriscus sylvestris</i>			1	2		II	(1-2)
<i>Agrostis capillaris</i>		4				I	(4_)
<i>Agrostis stolonifera</i>	3					I	(3_)
<i>Heracleum sphondylium</i>					2	I	(2_)
<i>Rumex obtusifolius</i>	1					I	(1_)

Table 1.5 - The following data for Area 4 was collected using the standard structured quadrat survey method.

Species	Q1	Q2	Q3	Q4	Q5	Freq	Domin
Grid reference - SE	12102147	12142137	12102135	12102139	12052142		
<i>Festuca rubra</i>	8	6	5	7	7	V	(5-8)
<i>Holcus lanatus</i>	4	2	5	7	2	V	(2-7)
<i>Dactylis glomerata</i>	5	4	2	2	5	V	(2-5)
<i>Plantago lanceolata</i>	4	5	2	2	2	V	(2-5)
<i>Lolium perenne</i>	3	2	2	4	4	V	(2-4)
<i>Lathyrus pratensis</i>	3	3	2	1	1	V	(1-3)
<i>Ranunculus acris</i>	2	1	3	3	2	V	(1-3)
<i>Agrostis stolonifera</i>	2	2	3			III	(2-3)
<i>Ranunculus repens</i>			2	3	2	III	(2-3)
<i>Phleum pratense</i>		5	6			II	(5-6)
<i>Arrhenatherum elatius</i>		4	3			II	(3-4)

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<i>Rumex acetosa</i>	2				2	II	(2_)
<i>Taraxacum officinale agg</i>			2		1	II	(1-2)
<i>Trifolium pratense</i>	1					I	(1_)

5 GRASSLAND EVALUATION

5.1 Priority Habitat Status

Reference has been made to Natural England 'Technical Information Note 110 – Assessing whether created or restored grassland is a BAP Priority Habitat' and 'Farm Environment Plan' handbook which set out the guidelines used to assess whether a grassland is a Biodiversity Action Plan (BAP) Priority Habitat.

Grassland in this location could qualify as Lowland Meadow Priority Habitat (G06 in Farm Environment Plan lexicon). In order to assess whether a grassland is Priority Habitat Natural England have created a list of indicator species, and from this list two species should be frequent and two species occasional.

The NVC community MG6 grassland is not species-rich, and at Lower Edge Road, Elland is considered to represent semi-improved neutral grassland. One indicator species (meadow vetchling) was found to be frequent at the site, but no other indicator species were considered to be frequent or occasional. The only other indicator species recorded during the survey was autumn hawkbit which was encountered once.

5.2 Constraints

Survey was undertaken in early September and the grassland had been cut 6-8 weeks prior to survey. Consequently, a number of species may not have been apparent at the time of the survey.

5.3 Recommendations

It is recommended that the grassland is surveyed in May or June prior to cutting to confirm the assessment of ecological value of this grassland.

6 BIBLIOGRAPHY

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FIGURE 1
Grassland Area Surveyed















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LEGEND

-  Survey Area
-  Survey Area Compartments 09/18
-  Continuous Bracken
-  Tall Ruderal Vegetation
-  SI Semi Improved Species Poor Grassland
-  Continuous Scrub
-  Scattered scrub
-  Broadleaved scattered trees
-  Dry Ditch
-  Fence
-  Hedgerow
-  H1 Hedgerow Number
-  T2 Target Note: see original 2016 report
-  Wall

GENERAL NOTES

THIS DRAWING IS BASED ON AN OS TILE BASE AND FIGURE 2 OF THE ORIGINAL PHASE 1 HABITAT SURVEY REPORT DATED FEBRUARY 2016

Rev	Description	PM	Review	Date
Client P & J AND BOYLE AND SON				
Project LAND AT LOWER EDGE ROAD ELLAND				
Title PHASE 1 HABITAT MAP ADDITIONAL SURVEY COMPARTMENTS				
Created by	GH/GB	Reviewer	JMH	Date 09/18
Project No. 16/1001/PJB				
Size	A3	Scale	1:2500 @A3	Status FINAL
Figure No. FIGURE 1				



APPENDIX 1
Site Species List

Species	English name	DAFOR
<i>Festuca rubra</i>	Red fescue	A
<i>Arrhenatherum elatius</i>	False oat-grass	LA
<i>Phleum pratense</i>	Timothy	LA
<i>Dactylis glomerata</i>	Cock's-foot	F / LA
<i>Agrostis stolonifera</i>	Creeping bent	F
<i>Holcus lanatus</i>	Yorkshire fog	F
<i>Lathyrus pratensis</i>	Meadow vetchling	F
<i>Lolium perenne</i>	Perennial rye-grass	F
<i>Plantago lanceolata</i>	Ribwort plantain	F
<i>Ranunculus acris</i>	Meadow buttercup	F
<i>Taraxacum officinale agg</i>	Dandelion	F
<i>Ranunculus repens</i>	Creeping buttercup	O / LF
<i>Rumex acetosa</i>	Common sorrel	O / LF
<i>Trifolium pratense</i>	Red clover	O / LF
<i>Vicia cracca</i>	Tufted vetch	O / LF
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Trifolium repens</i>	White clover	O
<i>Vicia sepium</i>	Bush vetch	O
<i>Anthriscus sylvestris</i>	Cowparsley	O
<i>Cerastium fontanum</i>	Common mouse-ear	R
<i>Cirsium arvense</i>	Creeping thistle	R
<i>Cynosurus cristatus</i>	Crested dog's-tail	R
<i>Poa pratensis</i>	Smooth meadow-grass	R
<i>Rumex obtusifolius</i>	Broad-leaved dock	R
<i>Scorzoneroides autumnalis</i>	Autumn hawkbit	R
<i>Vicia hirsuta</i>	Hairy tare	R
<i>Alopecurus pratensis</i>	Meadow fox-tail	R

End of Report