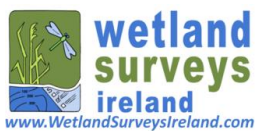


EWIC Biodiversity Initiative

Annual Report October 2020



Wetland Surveys Ireland Ltd.

Bell Height

Kenmare

Co Kerry

T: + 353 868510292

E: info@WetlandSurveysIreland.com

www.WetlandSurveysIreland.com

Document Control Sheet

Client	Eirgrid
Project Title	EWIC Biodiversity Initiative
Document Title	Biodiversity Initiative 2020 Report
Project Number	WS0670
Document No.	EWIC Biodiversity Initiative Report 2020

Revision	Status	Author	Review	Approved	Date
001	DRAFT	MCG			06/10/2020
002	FINAL DRAFT		PC	PC	22/10/2020
Wetland Surveys Ireland					

CONTENTS

	Page
1 INTRODUCTION AND PROJECT BACKGROUND	1
1.1 PROJECT AIMS	1
2 MATERIALS AND METHODS	1
2.1 PROJECT SITE AND CURRENT MANAGEMENT	1
2.2 SURVEY DESIGN	3
2.3 BASELINE VEGETATION SURVEY	4
2.3.1 Relevé surveys	5
2.3.2 Establishment of permanent quadrats.....	7
3 SURVEY RESULTS.....	8
3.1 GRASSLAND COMMUNITY TYPE	8
3.1.1 GL2C – <i>Holcus lanatus</i> – <i>Lolium perenne</i> grassland	8
3.1.2 GL2B - <i>Juncus effusus</i> - <i>Holcus lanatus</i> grassland.....	8
3.2 VEGETATION COMPOSITION.....	9
3.3 VEGETATION STRUCTURE	10
4 DISCUSSION AND RECOMMENDATIONS	11
4.1 PROPOSED MOWING REGIMES	11
4.2 ADDITIONAL RECOMMENDATIONS.....	12

APPENDIX I: Relevé data

LIST OF FIGURES

FIGURE 1: HABITATS PRESENT AT EWIC SITE. TEXT OF TARGET NOTES IS PRESENTED IN TABLE 1.	2
FIGURE 2: LOCATION OF RELEVÉS ALONG SURVEY TRANSECTS IN EWIC MEADOW.	5
FIGURE 3: SCREENSHOTS OF THE SURVEY123 FORM USED TO COLLECT RELEVÉ DATA IN THE FIELD ON A MOBILE DEVICE.....	7
FIGURE 4: PERCENTAGE COVER OF GRAMINEA AND FORBS IN THE SURVEY AREA. NOTE TOTAL VEGETATION COVER CAN EXCEED 100% IN A SINGLE RELEVÉ DUE TO OVERLAPPING LAYERS OF VEGETATION.	10
FIGURE 5: MEDIAN HEIGHT OF FORBS AND GRAMINEA IN THE SURVEY AREA.	10
FIGURE 6: PROPOSED MOWING REGIMES IN EWIC MEADOW.	11

LIST OF TABLES

TABLE 1: TEXT OF TARGET NOTES COLLECTED DURING BASELINE SURVEYS AT EWIC SITE.	3
TABLE 2: DATA FIELDS USED FOR RECORDING RELEVÉS	6
TABLE 3: DETAILS OF PROPOSED MOWING REGIMES IN EWIC MEADOW.....	12

1 INTRODUCTION AND PROJECT BACKGROUND

The East West Interconnector (EWIC) site is located near Batterstown, Co. Meath, adjacent to the ESB Woodland 400kV power station. The EWIC links the electricity grids of Ireland and Great Britain via submarine cables running between convertor stations in Ireland and Wales. The EWIC site is under the ownership of EirGrid and the site is managed by ABB. ABB carry out all soft and hard landscaping of the site.

Sustainability, and therefore biodiversity, are integral to the EirGrid Group's Strategy 2020-2025. As part of EirGrid's Corporate and Social Responsibility Strategy the company is committed to delivering biodiversity initiatives. The EWIC site has been identified as a suitable location for a pilot biodiversity enhancement project. Specifically, a meadow area in the western part of the EWIC site has been identified as a suitable location to determine the effect of different mowing regimes on biodiversity.

Wetland Surveys Ireland Ltd. were commissioned by EirGrid to work on this biodiversity enhancement project which runs over three years. In the first year of the project a baseline of the current diversity of the project area will be determined and over the subsequent two years different mowing methods will be trialed to determine the best long term mowing regime for the site.

1.1 Project Aims

The aim of the project is to trial different mowing regimes in the meadow area of the site to determine which regime should be adopted for the long term management of this area with the objective of increasing biodiversity. Data collected during a baseline survey carried out in the first year of the project will be used to assess the effectiveness of the mowing regimes. As there is limited information available regarding specific mowing regimes and biodiversity it is also hoped that this project will provide evidence to support the adoption of specific mowing methods at other locations.

2 MATERIALS AND METHODS

2.1 Project site and current management

A preliminary site walkover survey was undertaken on the 6th of August 2020 by Patrick Crushell (WSI) accompanied by Liam Bergin (ABB). During this walkover, the current management regime of grassland areas within the site were discussed to provide WSI with an understanding of the methods used to date. As seen in Figure 1, the EWIC site is comprised of three main habitat types: buildings and artificial surfaces, improved amenity grassland, and dry meadow and grassy verge vegetation.



Figure 1: Habitats present at EWIC site. Text of target notes is presented in Table 1.

Those areas mapped as improved amenity grassland are currently intensively mown throughout the summer season, being cut at approximately weekly intervals. The management of these areas includes a mix of mulching and removal of fine cuttings. The collected cuttings are disposed of in the north-eastern part of the site (see N4 in map and associated table below). Cuttings are removed from the mown areas in proximity to the car-parking areas, whereas mulching is the typical approach in mown areas removed from the car park.

There are a series of embankments within the site. These embankments are subject to two different management approaches depending on their proximity to the built-up parts of the site. Those sides facing the built areas of the site are mown regularly throughout the summer season, while the western side of the main embankment is not subject to any active management.

The meadow area to the west of the site supports dry meadow and grassy verges (GS2) that was reseeded following EWIC site construction. The sward is relatively species poor and this is largely likely to reflect the original seed mix used to reinstate the area post-construction. This area (1.9ha in extent) is currently mown once a year using a tractor mounted silage harvester, typically in mid to late summer. The off-cuts are bailed and removed off-site.

There are no open drains or watercourses within or directly adjacent to the EWIC site. An underground piped storm-water drain traverses the site in a northerly direction and discharges to a tributary of the Tolka River to the north-east of the adjacent Woodland substation site (see Figure 1). This natural watercourse was viewed from the public road approaching the EWIC.

Table 1: Text of target notes collected during baseline surveys at EWIC site.

Note number	Note text
N1	Intensively mown areas, sward of <i>Lolium perenne</i> with <i>Ranunculus repens</i> and <i>Trifolium repens</i> .
N2	Semi-mature alder and ash amongst mown grassland. Sprayed at base of trees.
N3	Small spot within lawn (20m x 4m) where the surface has been damaged by a machine. Area has remained uncut during 2020, species present include <i>Phleum pratense</i> , <i>Holcus lanatus</i> , <i>Ranunculus repens</i> , <i>Rumex</i> sp., and <i>Poa pratensis</i> .
N4	Grass cuttings disposed of here.
N5	Buzzard heard.
N6	1-2m strip at base of perimeter fence mown frequently, weed killer sprayed at base of fence.
N7	Fauna recorded: Green-veined white butterfly, bumble bees, hare, swallows.
N8	Similar to west embankment, main meadow: <i>Holcus lanatus</i> , <i>Ranunculus repens</i> , <i>Trifolium repens</i> , <i>Juncus effusus</i> , <i>Agrostis stolonifera</i> , <i>Phleum pratensis</i> , <i>Trifolium pratensis</i> , <i>Ranunculus acris</i> , <i>Festuca rubra</i> , <i>Carex nigra</i> , <i>Rumex</i> sp., and <i>Juncus inflexus</i> .

2.2 SURVEY DESIGN

Given the current mowing regime in the project area it was determined that two different mowing treatments should be trailed during the project. Power analysis was used to determine the number of relevés needed to detect any effects of different mowing regimes at the required confidence level ($P = 0.05$). The higher the sample size (number of relevés in this case) the higher the likelihood of detecting effects if they exist, however large sample sizes require significant time and resources and are not always practical. To carry out power analysis you need to estimate the effect of the treatments. As this is an unknown, we used a number of different potential values when carrying out the power analysis and then used the average

sample size. The online power analysis calculator developed by Rollin Brant at the University of British Columbia was used for power analysis calculations (<https://www.stat.ubc.ca/~rollin/stats/ssize/n2.html>).

The input values used in the calculator were as follows:

- Mean of population 1 = 10
- Mean of population 2 = 15
- Common standard deviation = 3
- Type I error (alpha) = 0.05
- Power value = 0.8

These values were based on an average of 10 flora species per relevé at the start of the study, with a potential increase to 15 flora species with changes in mowing regime. This calculation gave a sample size of 12 (6 per treatment). However, to maintain flexibility with study design and selection of mowing regimes, we decided to select a sample size of 20 relevés (10 per treatment). This number of replicates will be large enough to detect significant effects if present, allows for flexibility with the initial project design, and is achievable with the resources available.

2.3 Baseline vegetation survey

A baseline vegetation survey of the meadow area was undertaken by Patrick Crushell and Mary Catherine Gallagher on the 12th of August 2020. Two 'W' shaped survey transects were followed running east to west through the meadow area. Vegetation relevés (2m x 2m) were recorded at regular intervals along each transect. A total of 20 relevés (10 per transect) were recorded (Figure 2). The south western corner of the relevé was always orientated to the transect line.



Figure 2: Location of relevés along survey transects in EWIC meadow.

2.3.1 Relevé surveys

Relevé data was recorded using an ESRI Survey 123 relevé form developed by WSI operating on a mobile device. The fields recorded for each relevé are presented in Table 2 and an example of the form is shown in Figure 3. Cover of individual flora species was recorded using the DOMIN scale:

- +: 1 individual, no measureable cover
- 1: <4% cover, with few individuals
- 2: <4% cover, with several individuals
- 3: <4% cover, with many individuals
- 4: 4-10% cover
- 5: 11-25% cover
- 6: 26-33% cover
- 7: 34-50% cover
- 8: 51-75% cover
- 9: 76-90% cover
- 10: 91-100% cover

Table 2: Data fields used for recording relevés

Field Name	Data description
Project Name	Name of the project
Project Code	WSI project code
Site Name	Name of the survey site
Date	Date of survey
Relevé Code	Unique ID code for relevé (assigned by WSI)
Relevé Area	Area of the relevé is square meters
Recorder	Name of person recording the data
accuracy	The accuracy level of the GPS location (in m)
survey_x_coord	The x coordinate of the location
survey_coord	The y coordinate of the location
Habitat Type	Habitat type (as per Fossitt 2000)
Soil Type	Soil type
Soil Stability	Stability or firmness of soil
Aspect	Direction in which the relevé is facing
Slope	The slope of the relevé (degrees)
Maximum height trees (m)	Height of tallest tree within the relevé (m)
Maximum height shrubs (cm)	Height of tallest shrub within the relevé (cm)
Maximum height bryophytes (cm)	Height of tallest bryophyte within the relevé (cm)
Maximum height graminea (cm)	Height of tallest graminid within the relevé (cm)
Maximum height forbs (cm)	Height of tallest forb within the relevé (cm)
Median height graminea (cm)	The median height of graminea within the relevé (cm)
Median height forbs (cm)	The median height of forbs within the relevé (cm)
Total vegetation cover (%)	Percentage cover of vegetation within the relevé
Cover of graminea (%)	Percentage cover of graminea within the relevé
Forbs (%)	Percentage cover of forbs within the relevé
Mosses and liverworts (%)	Percentage cover of mosses and liverworts within the relevé
Trees (%)	Percentage cover of trees within the relevé
Shrubs (%)	Percentage cover of shrubs within the relevé
Litter (%)	Percentage cover of plant litter within the relevé
Bare soil (%)	Percentage cover of bare soil within the relevé
Bare rock (%)	Percentage cover of bare rock within the relevé
Open water (%)	Percentage of open water within the relevé
Species Name (Latin)	Latin name of individual flora species recorded within the relevé - selected from drop down menu pre-populated with most common species names
Species name (English)	English species name of flora species. Auto populated once Latin name as been selected
Species Cover	Cover of flora species in question within the relevé (measured using the DOMIN scale)

Field Name	Data description
Other species	Any additional species recorded within the relevé that were not present on the species list (cover also recorded in this field)
Other species in proximity	Any additional flora species present in proximity to the relevé
Fauna observations	Any faunal observations in within or in proximity to the relevé
Relevé comment	Any additional comments regarding the relevé

Figure 3. Screenshots of the Survey123 form used to collect relevé data in the field on a mobile device.

The relevé data collected in August 2020 provides the baseline against which any changes will be monitored. Additionally, by comparing the relevé data collected in each treatment area in the coming years, it will be possible to determine which regime should be adapted to improve the biodiversity of the grassland in the long term.

2.3.2 Establishment of permanent quadrats

The location of the four corners of each relevé was recorded using sub-metre GNSS units (typical accuracy of +/- 22cm) using the ArcGIS Online Platform. The south western corner of each relevé was marked using a large metal peg (flush with the ground to facilitate mowing) and the other three corners were marked using six inch nails (flush with the ground). The quadrats will be relocated for subsequent surveys using a combination of the location data and a metal detector.

3 SURVEY RESULTS

Overall the meadow was found to be species poor. The area was found to be relatively homogenous, with similar species composition, vegetation cover, and vegetation height recorded in the relevés. No flora species of conservation significance were recorded during the survey. Relevé data recorded during the baseline vegetation survey is presented in Appendix I.

The physical characteristics of the relevés were all very similar, with all 20 relevés occurring on firm, mineral soil, with a very gentle slope (>5 degrees). Trees, shrubs, bryophytes, bare soil, bare rock, or open water were not recorded in any of the relevés. Vegetation cover was 100% in all relevés, with the exception of one (EWIC20), which had 85% vegetation cover and 15% cover of plant litter.

3.1 GRASSLAND COMMUNITY TYPE

The data collected during the current survey was checked for correspondence with previously described vegetation communities defined by the Irish Vegetation Classification (IVC). The web based application ERICA was used for assigning the vegetation data¹.

The majority of relevés were assigned to the *Holcus lanatus*-*Lolium perenne* grassland community (GL2C), with just four relevés (EWIC02, EWIC04, EWIC17, and EWIC18) assigned to the *Juncus effusus*-*Holcus lanatus* grassland community. All relevés were fully assigned to their specific community group, with the exception of EWIC12, which was 'transitional' and had almost equal affinities with both GL2C and GL2B.

3.1.1 GL2C – *Holcus lanatus* – *Lolium perenne* grassland

This grassland community is species poor, with just a few constant species. It is regarded as a variable community of wet pastures and meadows that is found commonly across Ireland. *Holcus lanatus*, *Agrostis stolonifera*, and *Lolium perenne* are generally dominant, with *Ranunculus repens* and *Trifolium repens* also present. This grassland community corresponds to the following Fossitt² habitat classifications: Improved agricultural grassland (GA1) (45.2%), wet grassland (GS4) (24.0%), and dry meadow and grassy verge vegetation (GS2) (20.3%).

3.1.2 GL2B - *Juncus effusus*-*Holcus lanatus* grassland

This grassland community is common across Ireland and is typically found on lowland farmland with poor drainage or flat ground with gentle slopes. The dominant species in this community

¹<https://www.biodiversityireland.ie/projects/national-vegetation-database/irish-vegetation-classification/erica/>

² Fossitt, J.A. (2000) A Guide to Habitats in Ireland. The Heritage Council.

type are *H. lanatus*, *A. stolonifera*, and *Anthoxanthum odoratum*, which typically form a tall, rank sward. The dominant herbs in this community type are *R. repens*, *Ranunculus acris*, *T. repens*, and *Rumex acetosa*. This grassland community corresponds to the following Fossit habitat classifications: wet grassland (GS4) (91.3%) and improved agricultural grassland (GA1) (7.5%).

3.2 VEGETATION COMPOSITION

A total of 27 flora species were recorded from the relevés. The number of flora species recorded per relevé ranged from 6-14, with an average of 10 flora species per relevé. Yorkshire Fog (*H. lanatus*) was the most abundant species and was recorded in all 20 relevés. White Clover (*T. repens*), Red Clover (*T. pretense*), Creeping Buttercup (*R. repens*), Meadow Buttercup (*R. acris*), and Red Fescue (*Festuca rubra*) were recorded in the majority of relevés. Rushes (*Juncus effusus* and *Juncus inflexus*) and sedges (*Carex nigra*, *Carex canescens*, and *Carex* sp.) were recorded in 9 of the relevés, which is reflective of their patchy distribution throughout the meadow. Additional species that were present at low abundances were Broad-leaved Dock (*Rumex obtusifolius*), Timothy Grass (*Phleum pretense*), Dandelion (*Taraxacum* agg.), Perennial Rye Grass (*L. perenne*), Common Mouse-ear (*Cerastium fontanum*), Creeping Thistle (*Cirsium arvense*), Ribwort Plantain (*Plantago lanceolata*), Cat's-ear (*Hypochaeris radicata*), and Bent Grass (*Agrostis* sp.).

Graminea were the dominant flora type within the relevés accounting for an average of 94.8% (\pm 5.3%) of vegetation cover, while forbs accounted for just 26.2% (\pm 12.4%) of vegetation cover (Figure 4).

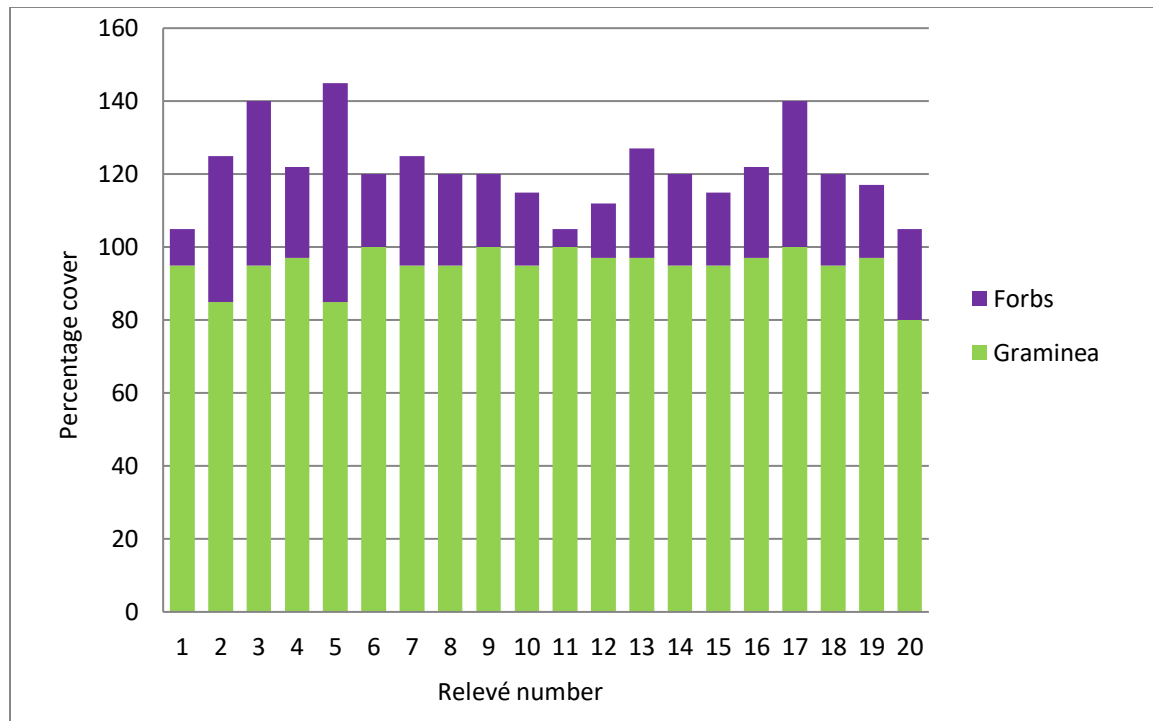


Figure 4: Percentage cover of graminea and forbs in the survey area. Note total vegetation cover can exceed 100% in a single relevé due to overlapping layers of vegetation.

3.3 VEGETATION STRUCTURE

The vegetation structure was relatively homogenous in the project area. Typically graminea were slightly taller than the forbs. Maximum graminid height ranged from 74-100cm, while maximum forb height ranged from 39-100cm. Median graminid height ranged from 33-45cm, with median forb height ranging from 14-30cm (Figure 5).

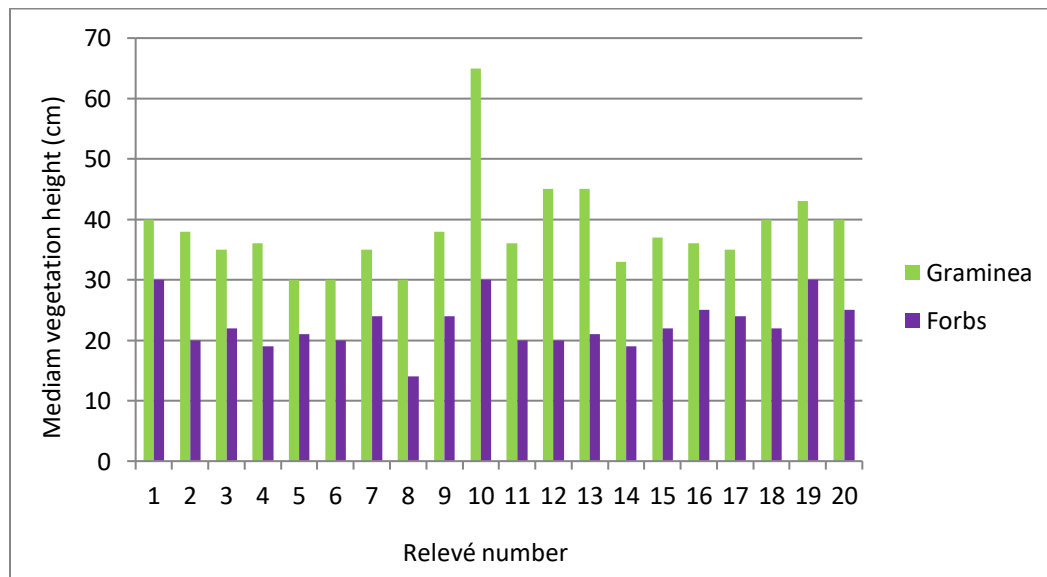


Figure 5: Median height of forbs and graminea in the survey area.

4 DISCUSSION AND RECOMMENDATIONS

At present the meadow area is of low to moderate biodiversity value, it is dominated by competitive grass species with a low diversity of flowering plant species. Given that the current management regime of the meadow is already a single cut per year with removal of cuttings, it is not clear how much of an impact changes in mowing regime alone will have on the biodiversity of the meadow area. An additional measure, such as supplementary planting, may be required to help increase the diversity of this area and is discussed in more detail in Section 4.2. Additional biodiversity measures that could be applied to the wider EWIC site and would complement the meadow area are also discussed.

4.1 PROPOSED MOWING REGIMES

Two mowing regimes are recommended for the project site (Figure 6, Table 3). Mowing regime 1 comprises two cuts per year, while mowing regime 2 comprises a single cut per year. Mowing regime 2 is similar to the current management of the meadow area, however the timing of the mowing will be restricted to September, while previously it could occur at any time in the summer or autumn. The cuttings will be removed after each mowing.



Figure 6: Proposed mowing regimes in EWIC meadow.

Table 3: Details of proposed mowing regimes in EWIC meadow.

	Area	Proposed mowing method
Mowing regime 1	0.8ha	Single mowing in September with hay removal after cutting.
Mowing regime 2	0.8ha	Mow once in spring (any time before the end of April) and once in Autumn (September) removing the hay after each mowing.

4.2 ADDITIONAL RECOMMENDATIONS

Given the low level of diversity currently present in the meadow and the abundance of competitive grass species, it may be necessary to consider planting Yellow Rattle (*Rhinanthus minor*) plugs or seeds within the meadow to decrease the competitiveness of the dominant grasses and promote the growth of wildflowers. Supplementary planting with other wildflowers, such as Knapweed (*Centuarea nigra*), and selective removal of ‘weeds’ should also be considered.

In addition to altering the mowing regime in the meadow area, there is potential for additional biodiversity enhancement measures to be carried out within the site. In particular areas in proximity to the EWIC building that are currently under intensive management regimes have significant potential for biodiversity enhancement. Reducing the mowing regime of this area would help to improve the value of this area for pollinators, however this option may not be feasible given the proximity to the EWIC building and car parking areas. An alternative option would be planting a clover lawn in place of the grassland. Consultation between EirGrid and Maria Long (grassland expert, NPWS) supported the idea of a clover lawn, due to the high value for pollinators and high tolerance of mowing. This option will need to be further discussed between EirGrid and EWIC to determine the suitability of a clover lawn in proximity to the EWIC building.

Additional recommendations to improve the overall biodiversity value of the site include the reduction (or ideally cessation) of herbicide use within the site. A bird box and associated nest camera are being installed by EWIC and it is hoped that this will result in increased habitat for bird species.

It has also been proposed to plant the north eastern boundary with a hedge comprised of native species that are of high value to pollinators and bird species. This needs to be further discussed with EWIC to ensure that it would not inhibit site access.

Any trees, plants, or seeds that are introduced to the site should be of Irish provenance and sourced as locally as possible.

Creation of habitat for invertebrates, though the creation of earth banks or sand banks should also be considered for the site. This could be carried out through introducing some clean sand

and creating a south facing sand bank, or by exposing areas of earth on any south facing earth banks already present on site.

Appendix I

Relevé Data

Releve Code	EWIC01	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.20	
X coordinate	-6.569101267500001	
Y coordinate	53.472210157833324	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	95	
Maximum height forbs (cm)	39	
Median height graminea (cm)	40	
Median height forbs (cm)	30	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	10	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Poa pratensis</i>	Smooth Meadow-grass	3 (<4%, many indivs)
<i>Trifolium repens</i>	White Clover	3 (<4%, many indivs)
<i>Trifolium pratense</i>	Red Clover	3 (<4%, many indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Taraxacum</i> agg.	Dandelion	+ (Indiv, <4%)
Other species in proximity	<i>Rumex acetosa</i>	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC02	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.20	
X coordinate	-6.569043113833334	
Y coordinate	53.47208373	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	85	
Maximum height forbs (cm)	55	
Median height graminea (cm)	38	
Median height forbs (cm)	20	
Total vegetation cover (%)	100	
Cover of graminea (%)	85	
Forbs (%)	40	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Trifolium repens</i>	White Clover	6 (26-33%)
<i>Juncus effusus</i>	Soft-rush	5 (11-25%)
<i>Trifolium pratense</i>	Red Clover	5 (11-25%)
<i>Ranunculus repens</i>	Creeping Buttercup	5 (11-25%)
<i>Juncus inflexus</i>	Hard Rush	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Cerastium fontanum</i>	Common Mouse-ear	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	2 (<4%, several indivs)
<i>Carex flacca</i>	Glaucous Sedge	+ (Indiv, <4%)
Other species in proximity	<i>Phleum pratense, Carex nigra, Rumex crispus</i>	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC03	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.00	
X coordinate	-6.569043113833334	
Y coordinate	53.47208373	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	93	
Maximum height forbs (cm)	47	
Median height graminea (cm)	35	
Median height forbs (cm)	22	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	45	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
Species recorded		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Trifolium repens</i>	White Clover	5 (11-25%)
<i>Ranunculus repens</i>	Creeping Buttercup	5 (11-25%)
<i>Juncus effusus</i>	Soft-rush	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Carex nigra</i>	Common Sedge	4 (4-10%)
<i>Lolium perenne</i>	Perennial Rye-grass	2 (<4%, several indivs)
<i>Epilobium ciliatum</i>	Fringed Willowherb	1 (<4%, few indivs)
<i>Rumex crispus</i>	Curly Dock	1 (<4%, few indivs)
Other species in proximity	<i>Phleum pratense</i>	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC04	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.17	
X coordinate	-6.5691529971666665	
Y coordinate	53.47194186833334	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	79	
Maximum height forbs (cm)	45	
Median height graminea (cm)	36	
Median height forbs (cm)	19	
Total vegetation cover (%)	100	
Cover of graminea (%)	97	
Forbs (%)	25	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Ranunculus repens</i>	Creeping Buttercup	5 (11-25%)
<i>Juncus effusus</i>	Soft-rush	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	3 (<4%, many indivs)
<i>Poa pratensis</i>	Smooth Meadow-grass	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	3 (<4%, many indivs)
<i>Cynosurus cristatus</i>	Crested Dog's-tail	2 (<4%, several indivs)
<i>Phleum pratense</i>	Timothy	1 (<4%, few indivs)
<i>Cerastium fontanum</i>	Common Mouse-ear	+ (Indiv, <4%)
Other species in proximity	None	
Fauna observations	Green-veined White	
Releve comment	None	

Releve Code	EWIC05	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.17	
X coordinate	-6.569375263166667	
Y coordinate	53.47193523733334	
Habitat Type	GS1 Dry calcareous and neutral grassland	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	100	
Maximum height forbs (cm)	42	
Median height graminea (cm)	30	
Median height forbs (cm)	21	
Total vegetation cover (%)	100	
Cover of graminea (%)	85	
Forbs (%)	60	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Ranunculus repens</i>	Creeping Buttercup	6 (26-33%)
<i>Trifolium repens</i>	White Clover	5 (11-25%)
<i>Phleum pratense</i>	Timothy	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Carex canescens</i>		1 (<4%, few indivs)
Other species in proximity	<i>Rumex crispus</i> (litter in releve)	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC06	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.19	
X coordinate	-6.569609072833333	
Y coordinate	53.47190898033333	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	91	
Maximum height forbs (cm)	34	
Median height graminea (cm)	30	
Median height forbs (cm)	20	
Total vegetation cover (%)	100	
Cover of graminea (%)	100	
Forbs (%)	20	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Carex nigra</i>	Common Sedge	5 (11-25%)
<i>Trifolium repens</i>	White Clover	5 (11-25%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Juncus effusus</i>	Soft-rush	3 (<4%, many indivs)
<i>Juncus inflexus</i>	Hard Rush	3 (<4%, many indivs)
<i>Festuca rubra</i>	Red Fescue	3 (<4%, many indivs)
<i>Ranunculus acris</i>	Meadow Buttercup	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
Other species in proximity	None	
Fauna observations	None	
Releve comment	Northeast marker located just to NE of corner due to stone.	

Releve Code	EWIC07	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.23	
X coordinate	-6.5695885433333325	
Y coordinate	53.471731652	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	74	
Maximum height forbs (cm)	54	
Median height graminea (cm)	35	
Median height forbs (cm)	24	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	30	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Festuca rubra</i>	Red Fescue	5 (11-25%)
<i>Ranunculus repens</i>	Creeping Buttercup	5 (11-25%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Poa pratensis</i>	Smooth Meadow-grass	2 (<4%, several indivs)
<i>Cerastium fontanum</i>	Common Mouse-ear	2 (<4%, several indivs)
<i>Ranunculus acris</i>	Meadow Buttercup	2 (<4%, several indivs)
<i>Rumex crispus</i>	Curly Dock	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Trifolium pratense</i>	Red Clover	+ (Indiv, <4%)
Other species in proximity	<i>Juncus effusus</i> and <i>Juncus inflexus</i> in surroundings	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC08	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.16	
X coordinate	-6.569553222833334	
Y coordinate	53.471554197833335	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	67	
Maximum height forbs (cm)	47	
Median height graminea (cm)	30	
Median height forbs (cm)	14	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	25	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Trifolium repens</i>	White Clover	3 (<4%, many indivs)
<i>Ranunculus acris</i>	Meadow Buttercup	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	2 (<4%, several indivs)
<i>Cerastium fontanum</i>	Common Mouse-ear	2 (<4%, several indivs)
<i>Rumex crispus</i>	Curly Dock	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Agrostis</i> sp.	Bent grass	1 (<4%, few indivs)
<i>Cirsium arvense</i>	Creeping Thistle	+ (Indiv, <4%)
<i>Carex</i> sp.		+ (Indiv, <4%)
Other species in proximity	None	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC09	
Releve Area (m2)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.16	
X coordinate	-6.569839101999999	
Y coordinate	53.471535875166666	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	80	
Maximum height forbs (cm)	54	
Median height graminea (cm)	38	
Median height forbs (cm)	24	
Total vegetation cover (%)	100	
Cover of graminea (%)	100	
Forbs (%)	20	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
Species recorded		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Agrostis stolonifera</i>	Creeping Bent	5 (11-25%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	3 (<4%, many indivs)
<i>Ranunculus repens</i>	Creeping Buttercup	3 (<4%, many indivs)
<i>Ranunculus acris</i>	Meadow Buttercup	3 (<4%, many indivs)
<i>Rumex crispus</i>	Curly Dock	2 (<4%, several indivs)
<i>Cirsium arvense</i>	Creeping Thistle	1 (<4%, few indivs)
<i>Phleum pratense</i>	Timothy	+ (Indiv, <4%)
<i>Hypochaeris radicata</i>	Cat's-ear	+ (Indiv, <4%)
Other species in proximity	<i>Lotus pedunculatus</i> , <i>Molinia caerulea</i> (?), <i>Dactylis glomerata</i>	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC10	
Releve Area (m2)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.16	
X coordinate	-6.57019779233332	
Y coordinate	53.47157369599999	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	95	
Maximum height forbs (cm)	100	
Median height graminea (cm)	65	
Median height forbs (cm)	30	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	20	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Rumex obtusifolius</i>	Broad-leaved Dock	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	3 (<4%, many indivs)
<i>Phleum pratense</i>	Timothy	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	2 (<4%, several indivs)
<i>Agrostis sp.</i>	Bent grass	1 (<4%, few indivs)
<i>Plantago lanceolata</i>	Ribwort Plantain	+ (Indiv, <4%)
<i>Cerastium fontanum</i>	Common Mouse-ear	+ (Indiv, <4%)
Other species in proximity	<i>Cynosuras cristatus</i>	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC11	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.16	
X coordinate	-6.570724595500001	
Y coordinate	53.471811517666666	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	West	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	90	
Maximum height forbs (cm)	100	
Median height graminea (cm)	36	
Median height forbs (cm)	20	
Total vegetation cover (%)	100	
Cover of graminea (%)	100	
Forbs (%)	5	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Taraxacum</i> agg.	Dandelion	4 (4-10%)
<i>Dactylis glomerata</i>	Cock's-foot	4 (4-10%)
<i>Rumex obtusifolius</i>	Broad-leaved Dock	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	3 (<4%, many indivs)
<i>Phleum pratense</i>	Timothy	+ (Indiv, <4%)
Other species in proximity	None	
Fauna observations	None	
Releve comment	Does this part of the site get mowed? under OH line. Lower part of site.	

Releve Code	EWIC12	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.21	
X coordinate	-6.570463112333335	
Y coordinate	53.47180344183333	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	84	
Maximum height forbs (cm)	45	
Median height graminea (cm)	45	
Median height forbs (cm)	20	
Total vegetation cover (%)	100	
Cover of graminea (%)	97	
Forbs (%)	15	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Cynosurus cristatus</i>	Crested Dog's-tail	5 (11-25%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Carex nigra</i>	Common Sedge	3 (<4%, many indivs)
<i>Juncus effusus</i>	Soft-rush	3 (<4%, many indivs)
<i>Festuca rubra</i>	Red Fescue	3 (<4%, many indivs)
<i>Ranunculus repens</i>	Creeping Buttercup	2 (<4%, several indivs)
<i>Ranunculus acris</i>	Meadow Buttercup	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Cerastium fontanum</i>	Common Mouse-ear	1 (<4%, few indivs)
Other species in proximity	None	
Fauna observations	Green-veined White	
Releve comment	None	

Releve Code	EWIC13	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.19	
X coordinate	-6.570237419	
Y coordinate	53.47186402016667	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	87	
Maximum height forbs (cm)	55	
Median height graminea (cm)	45	
Median height forbs (cm)	21	
Total vegetation cover (%)	100	
Cover of graminea (%)	97	
Forbs (%)	30	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	7 (34-50%)
<i>Agrostis stolonifera</i>	Creeping Bent	7 (34-50%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	3 (<4%, many indivs)
<i>Festuca rubra</i>	Red Fescue	3 (<4%, many indivs)
<i>Phleum pratense</i>	Timothy	2 (<4%, several indivs)
<i>Cynosurus cristatus</i>	Crested Dog's-tail	2 (<4%, several indivs)
<i>Agrostis</i> sp.	Bent grass	2 (<4%, several indivs)
Other species in proximity	None	
Fauna observations	Green-veined White	
Releve comment	None	

Releve Code	EWIC14	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.17	
X coordinate	-6.570223084166668	
Y coordinate	53.47201125899999	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	85	
Maximum height forbs (cm)	65	
Median height graminea (cm)	33	
Median height forbs (cm)	19	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	25	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	9 (76-90%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	3 (<4%, many indivs)
<i>Trifolium repens</i>	White Clover	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Phleum pratense</i>	Timothy	+ (Indiv, <4%)
<i>Trifolium pratense</i>	Red Clover	+ (Indiv, <4%)
Other species in proximity	<i>Carex nigra</i>	
Fauna observations	Buzzard calling regularly	
Releve comment	None	

Releve Code	EWIC15	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.18	
X coordinate	-6.570183923166667	
Y coordinate	53.47217644049999	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	75	
Maximum height forbs (cm)	34	
Median height graminea (cm)	37	
Median height forbs (cm)	22	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	20	
Mosses and liverworts (%)	1	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Lolium perenne</i>	Perennial Rye-grass	3 (<4%, many indivs)
<i>Calliergonella cuspidata</i>	Pointed Spear Moss	3 (<4%, many indivs)
<i>Trifolium repens</i>	White Clover	2 (<4%, several indivs)
<i>Trifolium pratense</i>	Red Clover	1 (<4%, few indivs)
<i>Phleum pratense</i>	Timothy	1 (<4%, few indivs)
Other species in proximity	None	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC16	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.18	
X coordinate	-6.569918822833333	
Y coordinate	53.47220774916667	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	84	
Maximum height forbs (cm)	75	
Median height graminea (cm)	36	
Median height forbs (cm)	25	
Total vegetation cover (%)	100	
Cover of graminea (%)	97	
Forbs (%)	25	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Phleum pratense</i>	Timothy	4 (4-10%)
<i>Trifolium pratense</i>	Red Clover	4 (4-10%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Trifolium repens</i>	White Clover	3 (<4%, many indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Cerastium fontanum</i>	Common Mouse-ear	+ (Indiv, <4%)
Other species in proximity	None	
Fauna observations	Green-veined White	
Releve comment	None	

Releve Code	EWIC17	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.20	
X coordinate	-6.5697056521666655	
Y coordinate	53.47219702966666	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	79	
Maximum height forbs (cm)	49	
Median height graminea (cm)	35	
Median height forbs (cm)	24	
Total vegetation cover (%)	100	
Cover of graminea (%)	100	
Forbs (%)	40	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	7 (34-50%)
<i>Carex nigra</i>	Common Sedge	6 (26-33%)
<i>Agrostis stolonifera</i>	Creeping Bent	4 (4-10%)
<i>Festuca rubra</i>	Red Fescue	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Juncus effusus</i>	Soft-rush	3 (<4%, many indivs)
<i>Trifolium pratense</i>	Red Clover	3 (<4%, many indivs)
<i>Juncus inflexus</i>	Hard Rush	1 (<4%, few indivs)
<i>Phleum pratense</i>	Timothy	+ (Indiv, <4%)
Other species in proximity	<i>Juncus inflexus</i>	
Fauna observations	None	
Releve comment		

Releve Code	EWIC18	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.21	
X coordinate	-6.569527984166666	
Y coordinate	53.472220486333335	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	99	
Maximum height forbs (cm)	47	
Median height graminea (cm)	40	
Median height forbs (cm)	22	
Total vegetation cover (%)	100	
Cover of graminea (%)	95	
Forbs (%)	25	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Ranunculus repens</i>	Creeping Buttercup	5 (11-25%)
<i>Carex nigra</i>	Common Sedge	4 (4-10%)
<i>Juncus effusus</i>	Soft-rush	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	3 (<4%, many indivs)
<i>Juncus inflexus</i>	Hard Rush	3 (<4%, many indivs)
<i>Phleum pratense</i>	Timothy	2 (<4%, several indivs)
<i>Agrostis</i> sp.	Bent grass	2 (<4%, several indivs)
<i>Juncus</i> sp.	Rush species	2 (<4%, several indivs)
<i>Trifolium pratense</i>	Red Clover	1 (<4%, few indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	+ (Indiv, <4%)
Other species in proximity	<i>Lotus peduncularis</i>	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC19	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.21	
X coordinate	-6.569562715166668	
Y coordinate	53.47235200633333	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	55	
Maximum height forbs (cm)	84	
Median height graminea (cm)	43	
Median height forbs (cm)	30	
Total vegetation cover (%)	100	
Cover of graminea (%)	97	
Forbs (%)	20	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	<4%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Trifolium repens</i>	White Clover	6 (26-33%)
<i>Festuca rubra</i>	Red Fescue	5 (11-25%)
<i>Cerastium fontanum</i>	Common Mouse-ear	4 (4-10%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Ranunculus repens</i>	Creeping Buttercup	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	3 (<4%, many indivs)
<i>Rumex obtusifolius</i>	Broad-leaved Dock	+ (Indiv, <4%)
Other species in proximity	None	
Fauna observations	None	
Releve comment	None	

Releve Code	EWIC20	
Releve Area (m²)	4	
Recorder	Patrick Crushell	
accuracy (m)	0.20	
X coordinate	-6.5696085391666665	
Y coordinate	53.4724857365	
Habitat Type	GS2 Dry meadows and grassy verges	
Soil Type	Mineral	
Soil Stability	Firm	
Aspect	North	
Slope	<5	
Maximum height trees (m)	NA	
Maximum height shrubs (cm)	NA	
Maximum height bryophytes (cm)	NA	
Maximum height graminea (cm)	82	
Maximum height forbs (cm)	40	
Median height graminea (cm)	40	
Median height forbs (cm)	25	
Total vegetation cover (%)	85	
Cover of graminea (%)	80	
Forbs (%)	25	
Mosses and liverworts (%)	NA	
Trees (%)	NA	
Shrubs (%)	NA	
Litter (%)	15%	
Bare soil (%)	0	
Bare rock (%)	0	
Open water (%)	0	
<u>Species recorded</u>		
<i>Holcus lanatus</i>	Yorkshire-fog	8 (51-75%)
<i>Festuca rubra</i>	Red Fescue	5 (11-25%)
<i>Ranunculus acris</i>	Meadow Buttercup	4 (4-10%)
<i>Trifolium repens</i>	White Clover	4 (4-10%)
<i>Dactylis glomerata</i>	Cock's-foot	4 (4-10%)
<i>Agrostis</i> sp.	Bent grass	3 (<4%, many indivs)
<i>Agrostis stolonifera</i>	Creeping Bent	3 (<4%, many indivs)
<i>Cerastium fontanum</i>	Common Mouse-ear	2 (<4%, several indivs)
<i>Ranunculus repens</i>	Creeping Buttercup	2 (<4%, several indivs)
<i>Lolium perenne</i>	Perennial Rye-grass	1 (<4%, few indivs)
<i>Cirsium arvense</i>	Creeping Thistle	1 (<4%, few indivs)
<i>Phleum pratense</i>	Timothy	1 (<4%, few indivs)
Other species in proximity	None	
Fauna observations	None	
Releve comment	None	