Annex B:

Habitat Survey Report

Wain Estates

Land north of Wilderness Lane, Great Barr, Birmingham

Habitat Survey Report

October 2023

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Rev	Issue Status	Prepared / Date	Approved/Date
-	Draft	HEH / 30.08.23	KG / 01.09.23
-	Draft 1	KG / 17.10.23	KG / 17.10.23
-	Final	HEH / 25.10.23	KG / 25.10.23

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1.0 INTRODUCTION

Introduction

1.1 This report has been prepared by FPCR Environment and Design Ltd. (FPCR) on behalf of Wain Estates. It provides the details of a Habitat Survey and assessment, undertaken as part of an Ecological Impact Assessment (EcIA) to inform a proposed outline planning application for residential development on land at Great Barr, Brimingham (hereafter referred to as 'the site').

1.2 This report should be read in conjunction with the FPCR Ecological Impact Assessment (EcIA) and its associated appendices.

Site Location and Context

1.3 The site is approximately 27ha in size, located on the north-west edge of the town of Great Barr, Birmingham. The site comprises 14 field compartments, predominantly supporting semi-improved neutral grassland, with boundaries comprising mature native hedgerows. Other habitats included dense scrub, tall ruderal vegetation, two ponds and mature trees.

1.4 The A34 borders the site to the north, residential properties with associated gardens along Peak House Road border the site to the east and Wilderness Lane runs adjacent to the to the southeastern boundary. An area of broadleaved woodland and Aston University Recreation Centre and sports facilities border the site to the west and grounds associated with the Q3 Academy Great Barr school lies the site to the south. In the wider landscape the residential area of Great Barr extends to the west with the M6 located to the south and Merrions Wood LNR lies to the north with Great Barr Golf Club situated beyond.

Background

1.5 An extended Phase 1 Habitat survey undertaken by Ecological Solutions in March 2020 with an updated walkover undertaken in August 2021[1]. A further detailed National Vegetation Survey (NVC) of the grassland habitats was undertaken in late May 2020 alongside a detailed hedgerow survey[2]. References are made to these previous surveys where appropriate. A full suite of faunal surveys were also undertaken by Ecology Solutions between May – November 2020 which are referenced within the EcIA report.

1.6 The whole of the site falls within the Peakhouse Farm Site of Importance for Nature Conservation (SINC). As detailed within the Brimingham & Black Country Local Sites Assessment Report[3], the designation was upgraded in August 2019 from a partial SLINC based upon the extensive network of native hedgerows, moderate levels of structural and botanical diversity of the grassland and local faunal populations it supports, including breeding birds and bats. The site also lies within a core ecological area as identified by the Brimingham and Black Country Nature Improvement Area ecological network mapping and was considered to provide connectivity between the Sandwell Valley and existing residential areas to the wider countryside.

[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] Birmingham and the Black Country Wildlife Trust (2018) *Birmingham & Black Country Local Sites Assessment Report. SA007 Peakhouse Farm*

Proposals

1.7 Proposals are for a residential development of up to 150 dwelling located within the northern and eastern field compartments, with associated access, parking, green infrastructure, attenuation features and Countryside Park with ecological enhancements.

2.0 METHODOLOGY

Habitat Survey

2.1 The site was surveyed on the 1st and 2nd of June 2023 and 10th July by an experienced ecologist with a Field Identification Skills Competency (FISC) Level 4. Survey methods followed UKHab methodology[4] and comprised a systematic walk over the Site 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)[5]. 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 Supplement[6].

2.2 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%). Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.

Collection of Grassland Field Data

2.3 The grassland habitat forming most of the site was sampled in detail on 1st and 2nd June 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 is shown on Figure 3. 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.

2.4 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

[4] 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].
[5] *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]
[6] 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
61-80%	IV
41-60%	III
21-40%	II
1-20%	I

2.5 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

2.6 The maximum height of the vegetation in each sample was also recorded, along with the average sward height.

2.7 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

2.8 As there was uniformity in the 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 UKHab classification.

2.9 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.

2.10 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.

2.11 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.

2.12 The data gathered during this survey was analysed using the Modular Analysis of Vegetation Information System (MAVIS)[7] 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 MATCH[8] 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.

2.13 Each NVC community is given a full written description within the published volumes. 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.

Hedgerows

2.14 Hedgerows were surveyed on 10th July using the Hedgerow Evaluation and Grading System (HEGS)[9]. The aim of the assessment is to allow the rapid recording and ecological appraisal of any given site in the UK, and to allow the grading of the individual hedges present, in order to identify those which are likely to be of greatest significance for wildlife. This method of assessment includes noting down: canopy species composition, associated ground flora and climbers, structure of the hedgerow including height, width and gaps, associated features including number and species of mature tree and the presence of banks, ditches and grass verges.

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

[8] 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

[9] Clements, D. and Toft, R. 1992. *Hedgerow Evaluation and Grading System (HEGS), A methodology for the ecological survey, evaluation and grading of hedgerows*.

2.15 Using the HEGS methodology each hedgerow can then be given a grade. These grades are used to assign a nature conservation value to each hedgerow as follows:

- Grade -1, 1, 1+ High to Very High Value
- Grade -2, 2, 2+ Moderately High to High Value
- Grade -3, 3, 3+ Moderate Value
- Grade -4, 4, 4+ Low Value

2.16 Hedgerows graded -2 or above are suggested as being a nature conservation priority.

2.17 The hedgerows were also assessed for their potential ecological value under the Hedgerow Regulations 1997 (Statutory Instrument No:1160)[10] to determine whether they qualified as 'Important Hedgerows' under the Regulations. This was achieved using a methodology in accordance with both the Regulations and DEFRA guidance[11]. An assessment of archaeological importance as defined under the Hedgerow Regulations 1997 was beyond the scope of this assessment.

2.18 Hedgerows were also assessed to determine if they met the habitat descriptions for Hedgerow Habitat of Principal Importance as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act, (i.e. whether they consisted of 80% or more native species) or Priority Habitat of the Birmingham and Black Country BAP.

3.0 RESULTS

Field Results - Habitats/Flora

Overview

3.1 The majority of the site supported field compartments of other neutral grassland, included abandoned pasture fields and a series of compartments used to take an agricultural hay crop. Fields were bound by native mostly outgrown hedgerows with areas of dense bramble and tall forbs within the north-east of the site.

3.2 Habitat descriptions are provided below and the locations of habitats are described are indicated on Figure 2: Baseline Habitat Plan. Full botanical species lists of each grassland compartment are provided at Appendix B and full botanical species lists for all other habitats are provided within Appendix C.

Grassland

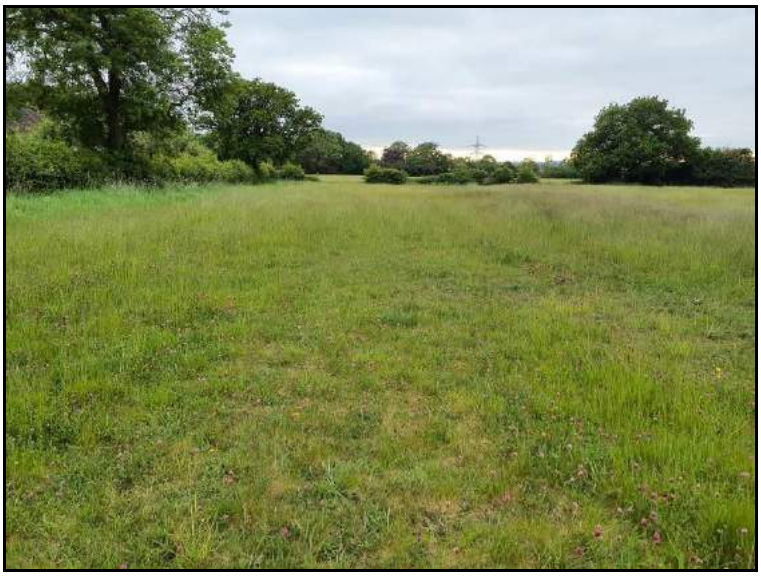
3.3 The full species list for each field, together with the DOMIN and constancy values are shown at Appendix B.

Field F1

3.4 Field F1 comprised a small field along the eastern edge of the site. The majority of the field is largely species-poor (on average 8.8 species per m^2 across the quadrats) with a strip along the south-eastern edge of the field (Photograph 1 & Field F1a, Figure 2) with a much shorter, finer

[10] *The Hedgerow Regulations 1997 – Statutory Instrument 1997 No. 1160*. [Online]. London: HMSO. Available at: http://www.legislation.gov.uk/uksi/1997/1160/contents/made [Accessed 21/08/23].
[11] DEFRA. 1997. *The Hedgerow Regulations 1997. A Guide to the Law and Good Practice.* London: HMSO

sward that had a notable increase in the abundance of forbs and supported 13 species on average.



Photograph 1: Area F1a looking south

3.5 The field is considered to be broadly representative of MG6 *Lolium perenne – Cynosurus cristatus* grassland, with the MAVIS analysis giving it a matching coefficient of 47.26% for the *Anthoxanthum odoratum* sub-community (MG6b). There was a much stronger affiliation to this community within the species-rich strip.

3.6 The sward across the majority of the field was approximately 20-50cm high, with patches of finer sward dominated by red fescue which also supported locally occasional pignut *Conopodium majus* and field woodrush *Luzula campestris*. Additional species recorded within the shorter strip included red clover *Trifolium pratense*, common bird's-foot trefoil *Lotus corniulatus*, creeping cinquefoil *Potentilla reptans* and common knapweed *Centaura nigra* alongside small patches of meadow fescue *Schedonorus pratensis* and cuckoo flower *Cardamine pratensis*.

3.7 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

3.8 This field comprises a large field within the south of the site which was considered to be a good representation of MG6b and had a strong matching coefficient of 61.03%.

3.9 The sward was unmanaged with a heigh of approximately 30-70cm and a regular hay cut is taken as no thatch was evidence. The sward was grass dominated with frequent red fescue *Festuca rubra* agg. and sweet vernal grass *Anthoxanthum oderatum*, occasional crested dog's-tail *Cynosurus cirstatus* and locally occasional patches of meadow foxtail *Alopecurus pratensis*.

3.10 Forbs were relatively low in abundance with meadow buttercup *Ranunculua acris* occasional to frequent within the northern half of the field. Other indicators species included rare occurrence of common sorrel *Rumex acetosa* and red clover with small patches of lesser trefoil *Trifolium dubium* and ribwort plantain *Plantago lanceolata*.

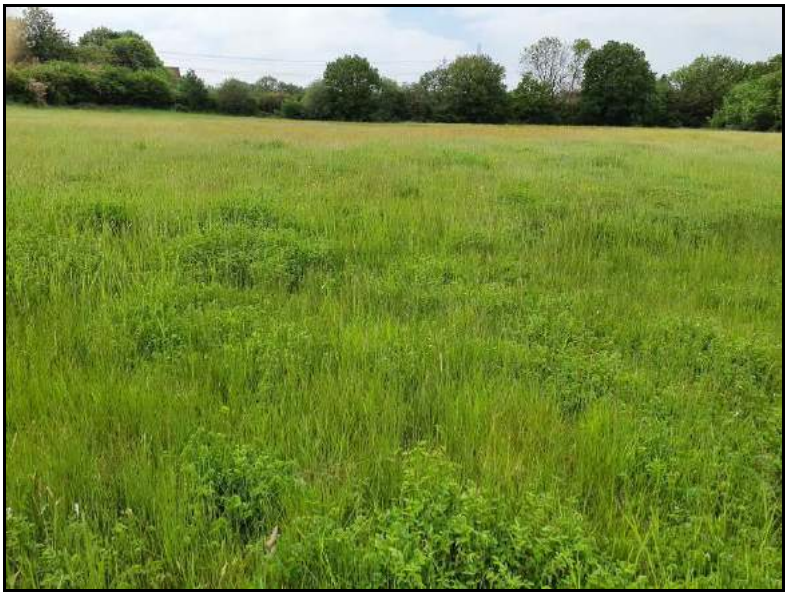
3.11 A small are in the north (see TN1, Figure 2) had a notable increase in the presence of meadow buttercup, along with bush vetch *Vicia sepium* and hairy tare *Ervilia hirsuta*. This seemed to correspond with where a more substantial stand of yellow rattle *Rhinanthus minor* had been previously recorded, though was only rare in occurrence at the time of the survey.

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

Field F3

3.13 This field supported the greatest number of lowland meadow species which included locally frequent patches of great burnet, rare to locally occasional patches of meadow vetchling *Lathyrus pratensis*, rare occurrence of common knapweed, goat's-bead *Tragopogon pratensis* ssp. *minor*, greater bird's-foot trefoil *Lotus pendunculatus* and pignut. The sward was fairly uniform with a height between 30-70cm with a few small patches of shorter grassland where the sward was dominated by finer grasses (Photograph 2).

3.14 The great burnet *Sanguisorba officinalis* was located over an extensive part of the field (see TN2, Figure 2) and the field slopes slightly to the south, with an area of marshy grassland at the southern extent where an increase in the abundance of compact rush *Juncus conglomeratus*, greater bird's-foot trefoil and Yorkshire fog *Holcus lantaus* were recorded. Bare areas were also noted alongside a small channel where water likely pools from the adjacent ditch over winter. Another small area of marshy grassland was noted in the east of the site (TN3) adjacent to an area of scrub which was dominated by great willowherb *Epilobium hirsutum* with frequent common nettle *Urtica dioica* and rare occurrence of meadowsweet *Filipendual ulmaris* and water figwort *Scrophularia auriculata*. To the south of this hard rush was frequent to abundant within the sward. TN4 comprised and enriched area dominated by cock's-foot and broadleaved dock *Rumex obtusifolia*.



Photograph 2: Field F3 looking north

3.15 The great burnet area had a strong matching coefficient (55.51%) for MG4 *Alopecurus pratensis – Sanguisorba officinalis* grassland subcommunity *Holcus lanatus* (MG4c). However, the structure of the sward, with *Alopecurus pratensis* present as a minor component, and other constants species of this community either absent or not present at high enough frequencies

suggests that this is not the best fit. Furthermore, MG4 is a lowland meadow category under UKHabitat classification where typically over 15 species per square metre would be expected and this part of the field had only 9.6 species on average across the quadrats. In addition, only two lowland meadow indicator species were occasional.

3.16 There was also a 53.86% match to MG9 *Holcus lanatus – Deschampsia cespitosa* grassland, albeit and the sward was not in a tussock growth form and *Deschampsia cespitosa* was not a constant. As constants did comprise red fescue and sweet vernal grass, upon reflection it was considered that the sward was still broadly representative of a MG6b community with the areas of marshy grassland were more representative of MG10 *Holcus lanatus – Juncus effusus* rush pasture *Juncus inflexus* subcommunity (MG10b).

3.17 In terms of baseline value for the BNG assessment both areas were classified as other neutral grassland, with the area of great burnet in good condition, surrounding area in moderate condition and the areas of marshy grassland in poor condition, failing core criteria 1 and not affiliating well to any community and with key indicator species present at high enough abundance.

Field F4

3.18 Field F4 was a large field in the south-west corner of the site which had a gentle slope towards the south. The sward was grass dominated and uniform at 30-70cm and it was noted that forbs were present at much lower abundances. Overall, the sward was still representative of MG6b with a matching coefficient of 61.56%. Sweet vernal was the most abundant grass though patches of coarser grasses which included false-oat grass *Arrhenatherum elatius* were noted throughout the field.

3.19 A large patch of yellow rattle was recorded at TN5 with other notable indicator species mostly rare in occurrence, though meadow buttercup was frequent throughout the quadrats.

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

Field F5

3.21 Located towards the centre of the site this field had a south-westerly aspect on a gentle slope. The stable block was no longer present in the north-eastern corner of the field and there was no evidence of the previously recorded areas of marshy grassland within the south with no rushes noted. In 2021 a population of oval sedge *Carex leporina* was recorded in this area, however at the time of the survey this species was not found though a small patch of hairy sedge *Carex hirta* was recorded.

3.22 Coarser grasses and ruderals were present at higher abundances at the peripheries of the field within the shade from the boundary hedgerows and small localised patches of great burnet and pignut were recorded within finer patches of the sward at the base of the slope (TN6). A large patch of common knapweed was also recorded at TN7 within a disturbed area with increased areas of bare ground.

3.23 Overall, the majority of the sward was considered to be representative of an MG6b sub-community and in terms of baseline value for the BNG assessment the field was classified as other neutral grassland which was considered to be in fairly poor condition, only half meeting

essential criteria A with indicator species consistently present but failing to meet the general other neutral grassland definition with a low overall percentage of herb cover.

Field F6

3.24 Field F6 was a small field in the east of the site and had become dominated by large stands of bramble and tall ruderal vegetation. The remnant area of grassland was located along access tracks and supported a species-poor sward which mostly closely resembled a MG1 *Arrhenatherum elatius* grassland community. The sward was dominated by coarse grasses with abundant false-oat grass, locally frequent cock's-foot and rough meadow-grass *Poa trivilis* with other areas along the tracks dominated by red fescue. Forbs were rare in occurrence and included hogweed *Heraculum sphondylium*, dandelion *Taraxacum officinale* agg. and white dead-nettle *Lamium album* alongside other species such as red clover and meadow buttercup as found throughout the other fields.

3.25 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

3.26 This field was located along the northern boundary and was unmanaged at the time of the survey with a sward approximately 30-60cm with areas dominated by coarser grasses up to 1m. The field was previously used as grazing pasture for horses, however there was no longer any rail fencing dividing the field. The sward was variable across the compartment and did not closely affiliate to any recognised community apart from the north-eastern corner which did resemble a remnant MG6b community with a notable increase in the presence of perennial rye-grass *Lolium perenne* and crested dog's-tail and increase in lesser trefoil and common mouse-ear *Cerastium fontanum*. Meadow buttercup was less abundant with sparse distribution and damper areas of the sward supported Yorkshire fog (Photograph 3).

Photograph 3: Field F7 looking west

3.27 False-oat and cock's-foot were more abundant along the southern boundary and central areas of the field (TN8, Figure 2) where nutrient levels were potentially higher and it is considered likely

that the field is transitioning to a MG1 community as often seen with abandoned pasture. A large dense stand of common nettle was recorded in the south-eastern corner of the field to the north of the abandoned stable complex to the south.

3.28 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.

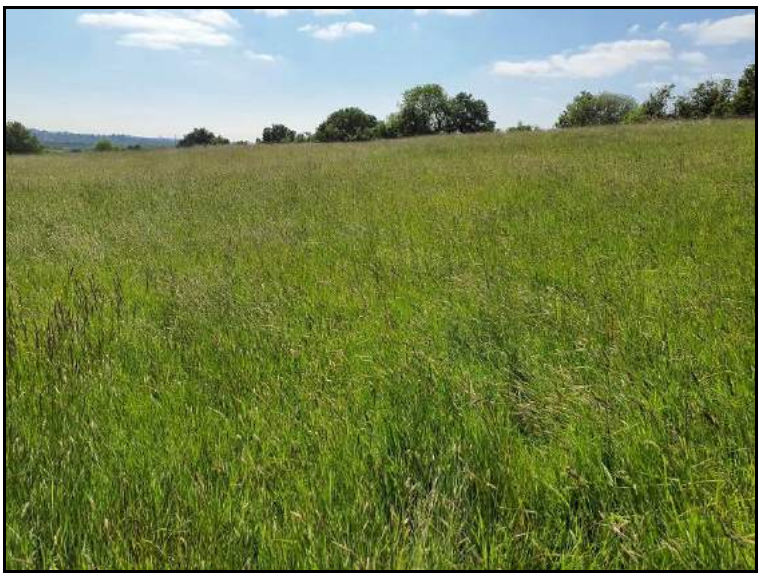
Field F8

3.29 Located to the south of field F7 the field supported species-poor abandoned pasture which was dominated by grasses with very low forb cover. This field also did not affiliate well to any recognised grassland community and was comprised of a mosaic of taller sward to 1m dominated by coarser grasses and shorter areas between 30-60cm which supported finer grasses such as sweet vernal and crested dog's-tail. Encroaching bramble *Rubus fruticosus* agg. and blackthorn *Prunus spinosa* seedlings were recorded along the southern boundary.

3.30 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

3.31 Field F9 comprised a large field compartment along the western boundary that sloped to the east and south-east. The sward was approximately 30-60cm and similar in composition to that of field F5 but relatively species-poor in comparison to field F3 (Photograph 4). It was a grass dominated sward with frequent to abundant sweet vernal, locally frequent red fescue and occasional Yorkshire fog and crested dog's-tail. Perennial rye-grass was more abundant along the remnant vehicle access tracks. Forbs were low in abundance and largely restricted to meadow buttercup, ribwort plantain and bush vetch.



Photograph 4: Field F9 looking south

3.32 The previously recorded population of yellow rattle had notably decreased in size and only small occasional patches or a few individuals recorded across the sward. Potentially it has been previously sown as part of an agricultural improvement scheme rather than being a naturalised occurrence. The grassland had a matching coefficient of 52.79% to MG6b, though indicator species were noted to be a lower abundance than other fields.

3.33 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 as indicator species were not considered to be consistently present.

Field F10

3.34 A small field compartment adjacent to the eastern boundary, the field was no longer horse grazed or divided into compartments. It supported a similar sward to that of field F13 with areas along the western and southern boundaries comprised of a nutrient enriched sward (TN9, Figure 2) dominated by cock's-foot, false oat-grass and meadow foxtail with broadleaved dock which was more resemblant of an MG1 community (Photograph 5).

3.35 The rest of the sward was approximately 30-60cm in height and although there was a notable increase in the amount of perennial rye-grass, it was considered to still be a good representation of MG6b and had a strong matching coefficient of 60.48%. Meadow buttercup and ribwort plantain were constant species with other forbs showing a patchy distribution a low abundances.

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

Photograph 5: Coarser grasses within field F10 looking west

Field F11

3.37 Field F11 is located within the north-eastern corner of the site and appeared to have been abandoned for a long period of time and was dominated by dense areas of mixed and bramble dominated scrub (Photograph 6). The small area of grassland in the north of the site was tussocky, approximately 50-80cm in height with an old thatch present. The sward was dominated by false-oat grass with patches of meadow foxtail and occasional rough meadow-grass with very sparse coverage of forbs with a single patch of meadow buttercup and rare occurrence of golden scale male fern *Dryopteris affinis* near to the scrub and was considered to represent a rank MG1 community.

Photograph 6: Field F11 looking north-west

3.38 Creeping thistle *Cirsium arvense*, cleavers *Galium aparine* and common nettle were present throughout the compartment and formed dense patches at the edges of the scrub.

3.39 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

3.40 Located in the centre of the site the field supports a uniform grass dominated sward which was 20-50cm in height and considered to be most closely represent a MG6b sub-community with a matching coefficient of 59.45%.

3.41 The sward was dominated by sweet vernal and supported a higher abundance of crested dog's-tail than field F5. Forbs were relatively low in abundance with occasional meadow buttercup, locally occasional patches of lesser trefoil and rare occurrence of yellow rattle.

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

Field F13

3.43 Field F13 was unmanaged at the time of the survey and no longer horse grazed or divided into compartments. The sward was similar to that of other fields with a uniform 30-70cm species-poor sward (on average 6.4 species per m^2 across the quadrats).

3.44 A notably taller areas (TN13, Figure 2) was dominated by coarser grasses and a few more ruderal species were noted, though these were still rare in occurrence. Bracken *Pterdium aquilinum* was also beginning to encroach from the northern hedgerows and Yorkshire fog was locally frequent.

3.45 Overall, the majority of the sward was considered to be representative of an MG6b sub-community. 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

3.46 Located to the south of Field F13 this field was also no longer horse grazed or sub-divided into compartment. The previously recorded areas of MG10 were no longer apparent, with only locally occasional patches of compact rush with rare occurrence of cuckoo flower, though Yorkshire fog was abundant within the western half of the field. Oval sedge again was not recorded.

3.47 The sward was approximately 40-70cm with meadow buttercup and common sorrel recorded mostly within the eastern extent of the field. Potentially due to the constant species of Yorkshire fog and sweet vernal and lower abundance of crested dog's-tail and perennial rye-grass the strongest matching coefficient (54.12%) was to MG10a sub-community. However, the sward was considered to largely be still representative of a MG6b sub-community despite the poor match of the floristic tables and lower coefficient of 49.42%.

3.48 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.

Hedgerows and Treelines

Hedgerows

3.49 A network of 33 hedgerows and five tree lines border the grassland field compartments. These were largely unmanaged at the time of the survey, comprising tall outgrown hedgerows of varying species composition. Collectively, these extend to 4,527m. Although they were formed almost entirely by native shrub species, the species diversity of many of the individual hedges was poor. Typical of most Midlands hedges, hawthorn *Crataegus monogyna* represented the main shrub with blackthorn, hazel *Corylus avellana*, ash *Fraxinus excelsior*, field maple *Acer campestre* and elder *Sambucus nigra* also well represented. Other less abundant species included hybrid willow *Salix x reichardtii*, common lime *Tilia x europaea*, bullace *Prunus domestica* subsp. *Insititia* var. and English elm *Ulmus procera*, though much of this was diseased and dying.

3.50 Like most arable hedgerows, ruderal species formed a significant component of the hedge bottom/field margin flora for many of the hedges.

3.51 Some notable ground flora included dog's-mercury *Mercurialis perennis* located along hedgerow H14, though this was rare in occurrence with the majority dominated by ivy *Hedra helix*, great willowherb and cleavers. However, ramsons *Allium ursinum* was previously recorded and bluebell *Hyacinthoides non-scripta* had been previously recorded along hedgerow H15 and it was considered likely that they were still present with the survey undertaken outside the flowering window for these species.

3.52 Male fern *Dryopteris filix-mas* was recorded along hedgerow H8 and bracken was recorded on the eastern aspect of hedgerow H3 and the western aspect of H31. Honeysuckle *Lonicera periclymenum* was recorded as a climbing species along hedgerow H6 and pendulous sedge *Carex pendula* was recorded along the ditch running adjacent to H13.

3.53 Several hedgerows supported shallow ditches, however the majority of these were dry at the time of the survey.

3.54 Hedgerow H36 comprised a mostly ornamental hedgerow as a residential boundary, comprised of snowberry *Symphoricarpos albus*, garden privet *Ligustrum ovalifolium*, cherry laurel *Prunus laurocerasus* and an ornamental meadowsweet *Spirea duglassii.*

3.55 In terms of their baseline condition for the BNG assessment the majority were assessed to be in good condition, as a result of their good structure, undisturbed hedgerow bases and being dominated by native species. Only hedgerow H36 was in poor condition due to the ornamental nature of the hedgerow.

Treelines

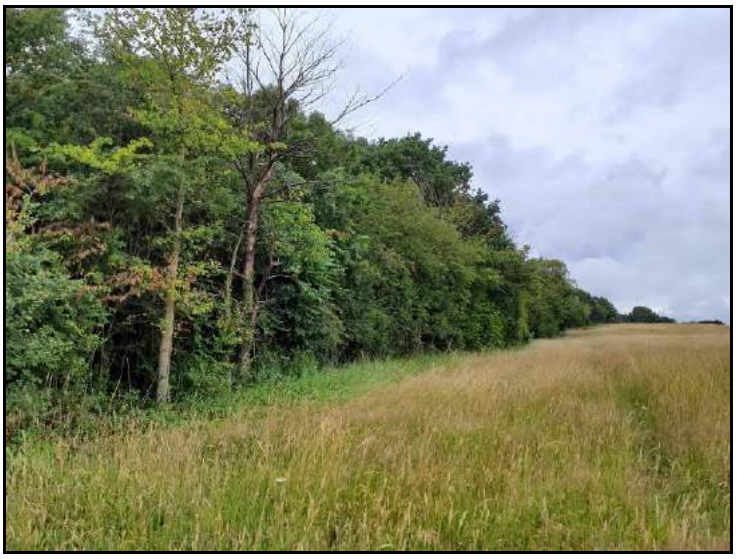
3.56 A treeline (TL1) formed the majority of the southern boundary which previously may have comprised an outgrown hedgerow. The average cross section was over 6m high and comprised mature and semi-mature English oak *Quercus robur* and ash with alder *Alnus glutinosa* and goat willow *Salix caprea* in damper areas with an understorey of hazel, some of which had previously been coppiced. Guelder rose *Viburnum opulus* was also recorded with locally frequent bramble and ivy in the ground flora. A predominantly dry ditch ran along the majority of the length with a small area of soft rush *Juncus effusus* and floating sweet grass *Glyceria fluitans* recorded at the edge end. Ash seedlings were also recorded amongst the ground flora. This treeline was assessed to be in moderate condition.

3.57 Treeline TL2 formed part of the south-western boundary of field F14 and comprised a row of semi-mature and young English oak, goat willow and hawthorn standards adjacent to the pond. This treeline was assessed to be in moderate condition.

3.58 Treeline TL3 runs along the south of the eastern boundary and comprises semi-mature field maple, English oak, sycamore *Acer pseudoplatanus* and wild cherry *Prunus avium* with an understorey of holly *Ilex aquifolium*, hawthorn, blackthorn and cherry laurel. It separates the site from the adjacent gardens. This tree line was considered to be in poor condition.

3.59 A row of mature English oak (TL4) formed the northern boundary of field F14 where the hedgerow element was no longer managed, with only fragmented hawthorn and holly shrubs. Electric fencing used to be present, evident from the attachment pins on the trees which had also been partially ring barked by horses. Ground flora was species-poor and limited to cow parsley *Anthriscus sylvestris*, wood avens *Geum urbanum* and ivy. This treeline was assessed to be in moderate condition.

3.60 Along the western boundary TL5 is located along the edge of an offsite area of semi-natural broadleaved woodland (Photograph 7). Standards included frequent ash and English oak with rare occurrence of sycamore and field maple. Within the understorey blackthorn was locally frequent with occasional hawthorn and rare occurrence of both field and English elm which was dying. This treeline was assessed to be in good condition.



Photograph 7: Treeline TL5 looking north

Mature Trees

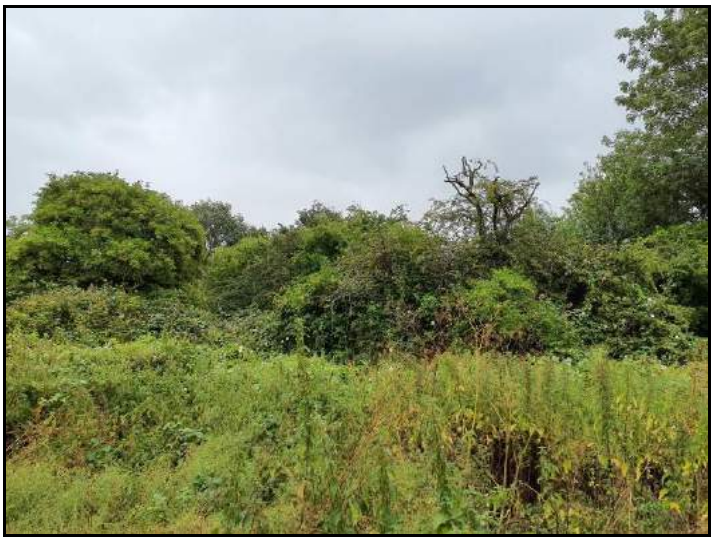
3.61 The presence of mature standards was mostly limited within the site to those associated with the boundary hedgerows and tree lines and have been assessed in detail by an Arboricultural Assessment (AA)[12]. These predominantly comprised English oak and ash with occasional hazel, goat willow and field maple standards. A stag-headed ash was located along hedgerow H32 and some of the mature trees displayed features such as deadwood and rot holes. A single tree along treeline TL2 (reference T6 in the AA) was identified as a veteran tree which comprised a large English oak and supported decay holes, major stem cavities and bark wood within its crown.

Scrub – Dense/Continuous

3.62 Mixed species dense scrub occurs in the north-eastern fields which have been abandoned along side areas of bramble dominated scrub. S1 comprised an area of mixed scrub that had encroached from the boundary hedgerows included a mix of blackthorn, hawthorn, elder and bramble and was considered to be in poor condition.

3.63 In addition, crack willow *Salix x fragilis* was recorded around pond P1 (Photograph 8) along with mature hawthorn and blackthorn and this area (S2) was considered to be in moderate condition. An additional areas of self-set crack willow was recorded in the south-west corner of the site (S3) which was surrounded by an area of bramble, great willowherb and creeping thistle and considered to be in poor condition.

[12] FPCR (2023) Land West of Birmingham Road, Great Barr. *Arboricultural Assessment.*



Photograph 8: Mixed scrub surround pond P1

Tall Forbs

3.64 Dense areas of tall forbs were recorded at the peripheries of fields F6, F11 and F7 in the north-east of the site and were dominated by common nettle with creeping thistle, cow parsley *Anthriscus sylvestris*, great willowherb, bramble, cleavers, rosebay willowherb *Chamaenerion angustifolium* and false oat-grass.

Ponds

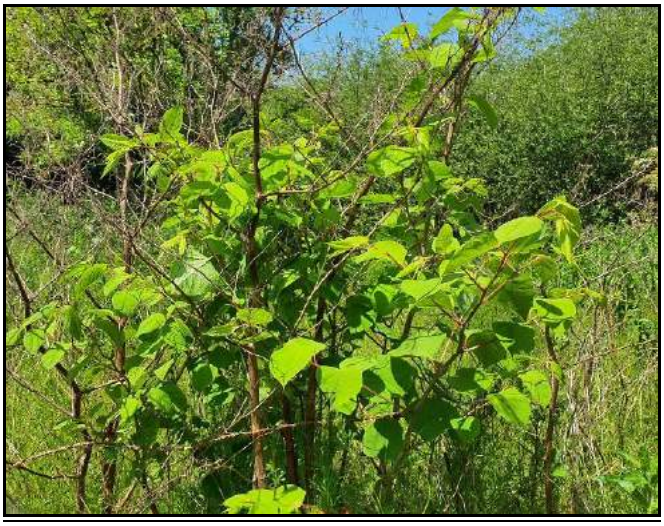
3.65 Two ponds are located within the site. Pond P1 (Photograph 9) comprises a linear pond located along the north eastern edge of field F1 which was well established and supported abundant yellow flag iris *Iris pseudacorus*, locally frequent reed mace *Typha latifolia*, locally occasional bittersweet *Solanumdulcamara* and occasional clustered dock *Rumex conglomeratus*. Other marginal species that were rare in occurrence included hard and soft rush, great willowherb, marsh horsetail *Equisetum* and creeping bent *Agrostis stolonifera*. The eastern extent was dry at the time of the survey, with the western extent supporting a shallow amount of water approximately 20cm deep.

Photograph 9: Pond P1

3.66 Pond P2 was located within field F11 and comprised a defunct, shallow pond within a depression, surrounded by dense mature scrub and ruderal vegetation which heavily shad the pond. It was dry at the time of the survey with no marginal or aquatic flora noted.

Invasive, Non-native Plants

3.67 A single stand of Japanese knotweed *Reynoutria japonica* is present within an area of tall forbs (Photograph 10 & TN11, Figure 2). There were no signs that the stand has been treated or that it has spread in its extent since the previous survey.



Photograph 10: Stand of Japanese knotweed

Evaluation

3.68 Japanese knotweed is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to cause species listed in Schedule 9 to grow in the wild.

4.0 CONCLUSIONS

4.1 From a review of updated field survey work it is considered that the site still meets the selection criteria for SLINC in Birmingham and the Black Country, but only qualifying for the hedgerow network. The grassland across the site was confirmed to comprise neutral grassland which was species-poor and considered to be in decline though absence of active management and in areas was beginning to succeed to scrub. Historically the previous pasture fields in the north and east of the site had been horse grazed for 32 years, with the remainder of the fields used to take a hay / silage crop for the past 30 years and were sprayed and fertilised over this period. The landowner confirmed that two years ago the grassland was directly drilled with grass seed which is reflected in the grass-dominated swards across the site.

4.2 The scheme has been sensitively designed to ensure the SINC is protected from significant harm. Following the mitigation hierarchy, the proposed strategic location of the development within the least damaging area of the site within the north and east within the areas of declining grassland, in combination with the implementation of sympathetic management involving scrub removal and enhancement of the large areas of retained grassland to increase the botanical and structural diversity, the proposals will be in line with Policies ENV1.

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 wit 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

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

0 50 100 m

client
Wain Estates

project
Land North of Wilderness Lane, Great Barr, Birmingham

drawing title
BASELINE HABITAT PLAN

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scale @ A3 1:3,000 | drawn HEH | issue date 1/9/2023

drawing / figure number
Figure 1

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Key

Red Line Boundary

Quadrat Location

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Land north of Wilderness Lane, Great Barr, Birmingham

drawing title
BASELINE HABITAT PLAN

scale @ A3 1:3,000 | drawn HEH | issue date 1/9/2023

drawing / figure number
Figure 2

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	*Festuca rubra*	46 (7)	35 (7)	25 (5)	28 (6)	35 (7)	V	{5-7}	33.8	F-A
Smooth meadow-grass	*Poa pratensis*	2 (1)	10 (4)	5 (4)	15 (5)	20 (5)	V	{1-5}	10.4	LO
Sweet vernal-grass	*Anthoxanthum odoratum*	40 (7)	35 (7)	36 (7)	34 (7)	12 (5)	V	{5-7}	31.4	F
Yorkshire-fog	*Holcus lanatus*	8 (4)	25 (5)	20 (5)	6 (4)	2 (1)	V	{1-5}	12.2	R
Common sorrel	*Rumex acetosa*	3 (2)	2 (1)	3 (2)		1 (1)	IV	{1-2}	1.8	R
False oat-grass	*Arrhenatherum elatius*			5 (4)	2 (2)		II	{2-4}	1.4	R
Field wood-rush	*Luzula campestris*				12 (5)	25 (5)	II	{5}	7.4	LF
Meadow buttercup	*Ranunculus acris*	1 (1)		2 (1)			II	{1}	0.6	R
Cock's-foot	*Dactylis glomerata*			2 (1)			I	{1}	0.4	R
Tall fescue	*Schedonorus arundinaceus*			2 (1)			I	{1}	0.4	R
Tufted hair-grass	*Deschampsia cespitosa*		2 (2)				I	{2}	0.4	R
Cat's-ear	*Hypochaeris radicata*					2 (1)	I	{1}	0.4	R
Cuckooflower	*Cardamine pratensis*		1 (1)				I	{1}	0.2	R
Pignut	*Conopodium majus*				2 (1)		I	{1}	0.4	LO
Ribwort plantain	*Plantago lanceolata*					1 (1)	I	{1}	0.2	R
Perennial rye-grass	*Lolium perenne*									R
White clover	*Trifolium repens*									R
Creeping thistle	*Cirsium arvense*									R
Crested dog's-tail	*Cynosurus cristatus*									R
Meadow foxtail	*Alopecurus pratensis*									R
Rough meadow-grass	*Poa trivialis*									LO
Hard rush	*Juncus inflexus*									R
Common mouse-ear	*Cerastium fontanum*									R
Hairy tare	*Ervilia hirsuta*									R

Field F1a

Species Name	*Latin*	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	*Lolium perenne*	2 (2)	5 (4)	2 (2)	III	{2-4}		
Annual meadow-grass	*Poa annua*	5 (4)	2 (2)	4 (4)	III	{2-4}	2.2	LO
Red fescue	*Festuca rubra*	8 (4)	35 (7)	20 (5)	III	{4-7}	12.6	F-A
Sweet vernal-grass	*Anthoxanthum odoratum*	30 (6)	30 (6)	20 (5)	III	{5-6}	16	F
Yorkshire-fog	*Holcus lanatus*	2 (2)	1 (1)	1 (1)	III	{1-2}	0.8	R
Lesser trefoil	*Trifolium dubium*	4 (4)	2 (1)	4 (4)	III	{1-4}	2	O-F
Meadow buttercup	*Ranunculus acris*	4 (4)	1 (1)	1 (1)	III	{1}	1.2	R
Red clover	*Trifolium pratense*	2 (2)	8 (4)	16 (5)	III	{2-5}	5.2	O-F
Ribwort plantain	*Plantago lanceolata*	5 (4)	6 (4)	3 (2)	III	{2-4}	2.8	O
Rough meadow-grass	*Poa trivilis*	5 (4)	2 (1)		II	{1-4}	1.4	R
Field wood-rush	*Luzula campestris*		2 (2)	2 (2)	II	{2}	0.8	R
Hairy tare	*Ervilia hirsuta*	1 (1)	4 (4)		II	{1-4}	1	R
Cock's-foot	*Dacytlyis glomeratus*			1 (1)	I	{1}	0.2	R
Creeping bent	*Agrostis stolonifera*			2 (2)	I	{2}	0.4	R
Crested dog's-tail	*Cynosurus cristatus*			15 (5)	I	{5}	3	O
Meadow foxtail	*Alopecurus pratensis*			1 (1)	I	{1}	0.2	R
Common bird's-foot-trefoil	*Lotus corniculatus*			2 (2)	I	{2}	0.4	R
Common mouse-ear	*Cerastium fontanum*	5 (4)			I	{4}	1	R
Common vetch	*Vicia sativa*	1 (1)			I	{1}	0.2	R
Creeping cinquefoil	*Potentilla reptans*			2 (2)	I	{2}	0.4	
Dandelion	*Taraxacum officinale agg.*	1 (1)			I	{1}	0.2	R
Meadow fescue	*Schedonorus pratensis*							R
Smooth meadow-grass	*Poa pratensis*							R
Timothy	*Phleum pratense*							
Cuckooflower	*Cardamine pratensis*							R
Yellow rattle	*Rhinanthus minor*							R

Field F2

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Crested dog's-tail	*Cynosurus cristatus*	15 (5)	5 (4)	10 (4)	8 (4)	5 (4)	V	{4-5}	8.6	O
Sweet vernal-grass	*Anthoxanthum odoratum*	30 (6)	35	30 (6)	35 (7)	30 (6)	V	{6-7}	32	F
Red fescue	*Festuca rubra*	35 (7)	35 (7)	28 (6)	30 (6)	20 (5)	V	{5-7}	29.6	F
Meadow buttercup	*Ranunculus acris*	3 (2)	3 (2)	4	2 (2)	2 (2)	V	{2}	2.8	R-F
White clover	*Trifolium repens*	65 (8)	12 (v)	1 (1)	1 (1)	4 (4)	V	{1-8}	16.6	R-LF
Yorkshire-fog	*Holcus lanatus*	2 (2)	8 (4)		3 (4)	20 (5)	IV	{2-5}	6.6	R
Common sorrel	*Rumex acetosa*	1 (1)	1 (1)	1 (1)	1 (1)		IV	{1}	0.8	R
Ribwort plantain	*Plantago lanceolata*	3 (2)		3 (2)	4 (4)	10 (4)	IV	{2-4}	4	LO
Cock's-foot	*Dactylis glomerata*	2 (2)			1 (1)	2 (2)	III	{1-2}	1	R
Smooth meadow-grass	*Poa pratensis*	5 (4)	10 (4)	5 (4)			III	{4}	4	LO
Common vetch	*Vicia sativa*		1 (1)	1 (1)		1 (1)	III	{1}	0.6	R
False oat-grass	*Arrhenatherum elatius*	1 (1)			1 (1)		II	{1}	0.4	R
Hogweed	*Heracleum sphondylium*				1 (1)	1 (1)	II	{1}	0.4	R
Lesser trefoil	*Trifolium dubium*	1 (1)		12 (5)			II	{1-5}	2.6	LF
Smooth tare	*Ervum tetraspermum*				4 (4)	3 (2)	II	{2-4}	1.4	R-LO
Tufted vetch	*Vicia cracca*				1 (1)		I	{1}	0.2	R
Perennial rye-grass	*Lolium perenne*				5 (4)	5 (4)	I	{4}	2	R
Meadow foxtail	*Alopecurus pratensis*		1 (1)				I	{1}	0.2	LO
Common mouse-ear	*Cerastium fontanum*			1 (1)			I	{1}	0.2	R
Dandelion	*Taraxacum officinale agg.*			1 (1)			I	{1}	0.2	R
Meadow vetchling	*Lathyrus pratensis*			1 (1)			I	{1}	0.2	R
Red clover	*Trifolium pratense*			2 (2)			I	{2}	0.4	LO
Yellow rattle	*Rhinanthus minor*	1 (1)					I	{1}	0.2	R
Broad-leaved dock	*Rumex obtusifolius*									R
Creeping thistle	*Cirsium arvense*									R
Meadow fescue	*Schedonorus pratensis*									R
Rough meadow-grass	*Poa trivialis*									R
Soft-brome	*Bromus hordeaceus*									R

Timothy	*Phleum pratense*									R
Bush vetch	*Vicia sepium*									R
Common knapweed	*Centaurea nigra*									R
Goat's-beard	*Tragopogon pratensis ssp minor*									R
Hairy tare	*Ervilia hirsuta*									R
Pignut	*Conopodium majus*									R

Field F3a

Species Name	*Latin*	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
Hard rush	*Juncus inflexus*	40 (7)	50 (7)	5 (4)	V	{4-7}	31.666667	F-A
Yorkshire-fog	*Holcus lanatus*	30 (6)	20 (5)	25 (5)	V	{5-6}	25	O
Rough meadow-grass	*Poa trivialis*		1 (1)	50 (7)	IV	{1-7}	17	LF
Sweet vernal-grass	*Anthoxanthum odoratum*	5 (4)	2 (2)	4 (4)	V	{2-4}	3.6666667	O
Crested dog's-tail	*Cynosurus cristatus*		10 (4)		II	{4}	3.3333333	R
Red fescue	*Festuca rubra*	5 (4)	2 (2)		IV	{2-4}	2.3333333	R
Creeping buttercup	*Ranunculus repens*	3 (2)	3 (2)		IV	{2}	2	R
Creeping cinquefoil	*Potentilla reptans*			6 (4)	II	{4}	2	LO
Greater bird's-foot-trefoil	*Lotus pedunculatus*		5 (4)		II	{4}	1.6666667	LF
Marsh horsetail	*Equisetum palustre*	2 (2)	2 (2)		IV	{2}	1.3333333	R
Meadow buttercup	*Ranunculus acris*	2 (2)	2 (2)		IV	{2}	1.3333333	R
Common nettle	*Urtica dioica*			3 (2)	II	{2}	1	LF
Common vetch	*Vicia sativa*	2 (2)	1 (1)		IV	{1-2}	1	R
Perennial rye-grass	*Lolium perenne*	2 (2)			II	{2}	0.6666667	R
Tufted hair-grass	*Deschampsia cespitosa*			2 (2)	II	{2}	0.6666667	R
Common sorrel	*Rumex acetosa*	1 (1)		1 (1)	IV	{1}	0.6666667	R
Curled dock	*Rumex crispus*	1 (1)			II	{1}	0.3333333	R
Cleavers	*Galium aparine*	1 (1)			II	{1}	0.3333333	LO
Great willowherb	*Epilobium hirsutum*			1 (1)	II	{1}	0.3333333	LF
White clover	*Trifolium repens*							R
False oat-grass	*Arrhenatherum elatius*							R
Meadow foxtail	*Alopecurus pratensis*							LO
Compact rush	*Juncus conglomeratus*							R
Common mouse-ear	*Cerastium fontanum*							R
Clustered dock	*Rumex conglomeratus*							R
Great burnet	*Sanguisorba officinalis*							LO

Field F3b

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Constancy	DOMIN Range	Av % Cover	DAFOR
Red fescue	*Festuca rubra*		40 (7)	30 (6)	30 (6)	10 (4)	2 (2)	5 (4)	2 (2)	V	{2-7}	23.8	LF
Sweet vernal-grass	*Anthoxanthum odoratum*	4 (4)	25 (5)	30 (6)	30 (6)	25 (5)	20 (5)	5 (4)	8 (4)	V	{4-6}	29.4	F
Yorkshire-fog	*Holcus lanatus*	3 (2)	4 (4)	25 (5)	20 (5)	30 (6)	20 (5)	70 (8)	70 (8)	V	{2-8}	48.4	O-A
Common sorrel	*Rumex acetosa*			1 (1)	4 (4)	3 (2)	1 (1)	1 (1)	3 (2)	IV	{1-4}	2.6	R-O
Great burnet	*Sanguisorba officinalis*	45 (7)	40 (7)	8 (4)	5 (4)	4 (4)				IV	{4-7}	20.4	LF
Meadow buttercup	*Ranunculus acris*		1 (1)	2 (2)	2 (2)		3 (2)		3 (2)	IV	{1-2}	2	O
Common mouse-ear	*Cerastium fontanum*	1 (1)	1 (1)					1 (1)		III	{1}	0.4	R
Meadow foxtail	*Alopecurus pratensis*	38 (7)	2 (2)	15 (5)						III	{2-7}	11	LO
Smooth meadow-grass	*Poa pratensis*	2 (2)		2 (2)	5 (4)			2 (2)		III	{2-4}	2.2	O
Cock's-foot	*Dactylis glomerata*	3 (2)						1 (1)	3	II	{1-2}	1.4	R
Compact rush	*Juncus conglomeratus*				1 (2)	1 (2)	15 (5)			II	{1-5}	3.4	R
Creeping bent	*Agrostis stolonifera*			10 (4)		20 (5)	25 (5)			II	{4-5}	11	O
Greater bird's-foot-trefoil	*Lotus pedunculatus*					3 (3)	12 (5)			II	{3-5}	3	R
Rough meadow-grass	*Poa trivialis*							10 (4)	6 (4)	II	{4}	3.2	LO
Common knapweed	*Centaurea nigra*		5 (4)							I	{4}	1	R
Common vetch	*Vicia sativa*				1 (1)					I	{1}	0.2	R
False oat-grass	*Arrhenatherum elatius*							1 (1)		I	{1}	0.2	R
Field horsetail	*Equisetum arvense*							1 (1)		I	{1}	0.2	
Hogweed	*Heracleum sphondylium*							2 (2)		I	{2}	0.4	R
Meadow vetchling	*Lathyrus pratensis*	1 (1)			1 (1)					I	{1}	0.4	R-LO
Perennial rye-grass	*Lolium perenne*						3 (2)			I	{2}	0.6	R
Ribwort plantain	*Plantago lanceolata*		1 (1)						1 (1)	I	{1}	0.4	R
Soft-brome	*Bromus hordeaceus*	1 (1)							2 (2)	I	{1-2}	0.6	R
Tufted hair-grass	*Deschampsia cespitosa*					2 (2)				I	{2}	0.4	R
Tufted vetch	*Vicia cracca*					2 (2)				I	{1}	0.4	R
Smooth tare	*Ervum tetraspermum*			3 (2)						I	{1}	0.6	R-LO
Creeping buttercup	*Ranunculus repens*			1 (1)						I	{1}	0.2	R
Hard rush	*Juncus inflexus*	1 (1)								I	{1}	0.2	R

Bush vetch	*Vicia sepium*												R
Creeping thistle	*Cirsium arvense*												R
Crested dog's-tail	*Cynosurus cristatus*												R
Cut leaved crane's bill	*Geranium desectum*												R
Goat's-beard	*Tragopogon pratensis ssp minor*												R
Hairy tare	*Ervilia hirsuta*												R
Hoary ragwort	*Jacobea erucifolia*												R
Lesser trefoil	*Trifolium dubium*												R
Meadow fescue	*Schedonorus pratensis*												R
Pignut	*Conopodium majus*												R
Red clover	*Trifolium pratense*												R
Square-stalked willowherb	*Epilobium tetragonum*												R

Field F4

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Sweet vernal-grass	*Anthoxanthum odoratum*	46 (7)	50 (7)	15 (5)	30 (6)	40 (7)	V	{5-7}	36.2	F
Yorkshire-fog	*Holcus lanatus*	4 (4)	4 (4)	2 (2)	8 (4)	12 (5)	V	{2-5}	6	O
Meadow buttercup	*Ranunculus acris*	1 (1)	2 (2)	1 (1)	3 (2)	4 (4)	V	{1-4}	2.2	R-O
Crested dog's-tail	*Cynosurus cristatus*	25 (5)	22 (5)	40 (7)	18 (5)		IV	{5-7}	21	O
Red fescue	*Festuca rubra*	10 (4)		5 (4)	5 (4)	30	IV	{4}	10	LF
Rough meadow-grass	*Poa trivialis*	3 (2)	5 (4)		5 (4)	2 (2)	IV	{2-4}	3	LO
Hairy tare	*Ervilia hirsuta*	4 (4)	2 (2)	12 (4)	3 (2)		IV	{2-4}	4.2	LO
Common mouse-ear	*Cerastium fontanum*	1 (1)	1 (1)		1 (1)		III	{1}	0.6	R
Hogweed	*Heracleum sphondylium*			1 (1)	3 (2)	1 (1)	III	{1-2}	1	R
Perennial rye-grass	*Lolium perenne*			2 (2)	5 (4)		II	{2-4}	1.4	R
False oat-grass	*Arrhenatherum elatius*			3 (2)	10 (4)		II	{2-4}	2.6	LO
Common sorrel	*Rumex acetosa*	1 (1)				1 (1)	II	{1}	0.4	R
Common Vetch	*Vicia sativa*	2 (2)		2 (2)			II	{2}	0.8	R
Dandelion	*Taraxacum officinale agg.*		1 (1)		1 (1)		II	{1}	0.4	R
Lesser trefoil	*Trifolium dubium*			2 (2)	1 (1)		II	{1-2}	0.6	R
Ribwort plantain	*Plantago lanceolata*	1 (1)	2 (2)		3 (2)	2 (2)	II	{1-2}	1.6	R
Cock's-foot	*Dactylis glomerata*				1 (1)		I	{1}	0.2	R
Meadow fescue	*Schedonorus pratensis*					3 (2)	I	{2}	0.6	R
Meadow foxtail	*Alopecurus pratensis*					2 (2)	I	{2}	0.4	R
Tall fescue	*Schedonorus arundinaceus*			15 (5)			I	{5}	3	R
Field wood-rush	*Luzula campestris*	1 (1)					I	{1}	0.2	R
Red clover	*Trifolium pratense*			1 (1)			I	{1}	0.2	R
Yellow rattle	*Rhinanthus minor*					2 (2)	I	{2}	0.4	R-LF
Creeping bent	*Agrostis stolonifera*									R
Soft-brome	*Bromus hordeaceus*									R
Goat's-beard	*Tragopogon pratensis ssp minor*									R

Field F5

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Sweet vernal-grass	*Anthoxanthum odoratum*	67 (8)	55 (8)	65 (8)	50 (7)	54 (8)	V	{7-8}	0	A
Yorkshire-fog	*Holcus lanatus*	12 (4)	8 (4)	8 (4)	2 (2)	12 (5)	V	{2-5}	0	O
Common sorrel	*Rumex acetosa*	3 (2)	3 (2)	2 (2)	2 (2)	2 (2)	V	{2}	2.4	R
Crested dog's-tail	*Cynosurus cristatus*		10 (4)	15 (5)	5 (4)	4 (4)	IV	{4-5}	0	O
Meadow Buttercup	*Ranunculus acris*	2 (2)	4 (4)			4 (4)	III	{2-4}	0	R
Perennial rye-grass	*Lolium perenne*		5 (4)		5 (4)		II	{4}	0	R
Red fescue	*Festuca rubra*	2 (2)			10 (4)	10 (4)	II	{2-4}	0	LO
Smooth meadow-grass	*Poa pratensis*	25 (5)		5 (4)	20 (5)		II	{4-5}	0	LO
Pignut	*Conopodium majus*			3 (2)	1 (1)		II	{1-2}		LO
Meadow foxtail	*Alopecurus pratensis*	2 (2)				12 (5)	I	{2-5}	0	LO
Common mouse-ear	*Cerastium fontanum*		2 (2)				I	{2}	0.4	R
Ribwort plantain	*Plantago lanceolata*		10 (4)				I	{4}	0	LO
Yellow rattle	*Rhinanthus minor*				1 (1)		I	{1}		R
Broad-leaved dock	*Rumex obtusifolius*									R
Creeping buttercup	*Ranunculus repens*									R
Cock's-foot	*Dactylis glomerata*									R
False oat-grass	*Arrhenatherum elatius*				2 (2)			{2}		R
Rough meadow-grass	*Poa trivialis*									LO
Soft-brome	*Bromus hordeaceus*									R
Timothy	*Phleum pratense*									R
Bush Vetch	*Vicia sepium*									R
Cat's-ear	*Hypochaeris radicata*									R
Common knapweed	*Centaurea nigra*									R-LF
Field wood-rush	*Luzula campestris*									R
Great burnet	*Sanguisorba officinalis*									R
Hogweed	*Heracleum sphondylium*									R
Hairy sedge	*Carex hirta*									R
Marsh horsetail	*Equisetum palustre*									R

Field F6

Species Name	*Latin*	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
False oat-grass	*Arrhenatherum elatius*	2 (2)	25 (5)	60 (8)	V	{2-8}	0	LA
Rough meadow-grass	*Poa trivialis*	25 (5)	33 (6)	34 (7)	V	{5-8}	0	LF
Yorkshire-fog	*Holcus lanatus*	2 (2)	1 (1)	3 (2)	V	{1-2}	0	R-LO
Cock's-foot	*Dactylis glomerata*		40 (7)	2 (2)	IV	{2-7}	0	LF
Perennial rye-grass	*Lolium perenne*	15 (v)			II	{5}	0	O
Red fescue	*Festuca rubra*	54 (8}			II	{8}	0	LF
Broad-leaved dock	*Rumex obtusifolius*						0	R
Creeping buttercup	*Ranunculus repens*						0	R
Creeping thistle	*Cirsium arvense*						0	R
Annual meadow-grass	*Poa annua*						0	R-LO
Meadow foxtail	*Alopecurus pratensis*						0	LO
Smooth meadow-grass	*Poa pratensis*						0	R
Soft-brome	*Bromus hordeaceus*						14	LO
Tall Fescue	*Schedonorus arundinaceus*						29	R
Bramble	*Rubus fruticosus agg.*						18	R
Dandelion	*Taraxacum officinale agg.*						30.666667	R
Hogweed	*Heracleum sphondylium*						0	R
Lesser trefoil	*Trifolium dubium*						0	R
Meadow buttercup	*Ranunculus acris*						0	R
Mugwort	*Artemisia vulgaris*						2	R
Red clover	*Trifolium pratense*						0	R
Ribwort plantain	*Plantago lanceolata*						0	R
Smooth sow-thistle	*Sonchus oleraceus*						0	R
White dead-nettle	*Lamium album*						0	R

Field F7

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	*Lolium perenne*	8 (4)	15 (5)	2 (2)	12 (5)	16 (5)	V	{2-5}	10.6	O-LF
Yorkshire-fog	*Holcus lanatus*	5 (4)	38 (7)	55 (6)	20 (5)	5 (4)	V	{4-7}	24.6	O
Meadow buttercup	*Ranunculus acris*	2 (2)	4 (4)	1 (1)	2 (2)	2 (2)	V	{1-4}	2.2	R
Sweet vernal-grass	*Anthoxanthum odoratum*	20 (5)	15 (5)		45 (7)	28 (6)	IV	{5-6}	21.6	O-F
Crested dog's-tail	*Cynosurus cristatus*	12 (5)			15 (5)	30 (6)	III	{5-6}	11.4	O
Common vetch	*Vicia sativa*	1 (1)	2 (2)	2 (2)			III	{1-2}	1	R
Creeping bent	*Agrostis stolonifera*	48 (7)	20 (5)				II	{5-7}	13.6	
Rough meadow-grass	*Poa trivialis*			2 (2)		5 (4)	II	{2-4}	1.4	LO
Common mouse-ear	*Cerastium fontanum*				1 (1)	1 (1)	II	{1}	0.4	R
Common Sorrel	*Rumex acetosa*	1 (1)	1 (1)				II	{1}	0.4	R
Dandelion	*Taraxacum officinale agg.*		1 (1)			1 (1)	II	{1}	0.4	R
Marsh horsetail	*Equisetum palustre*	1 (1)	1 (1)				II	{1}	0.4	R
Creeping thistle	*Cirsium arvense*				2 (2)		I	{2}	0.4	
False oat-grass	*Arrhenatherum elatius*			15 (5)			I	{5}	3	LO
Red fescue	*Festuca rubra*					6 (4)	I	{4}	1.2	LO
Soft-brome	*Bromus hordeaceus*			2 (2)			I	{2}	0.4	R
Great willowherb	*Epilobium hirsutum*	1 (1)					I	{1}	0.2	R
Hairy tare	*Ervilia hirsuta*			20 (5)			I	{5}	4	R-LO
Hogweed	*Heracleum sphondylium*		2 (2)				I	{2}	0.4	R
Lesser trefoil	*Trifolium dubium*					3 (4)	I	{4}	0.6	R-LO
Red clover	*Trifolium pratense*					4 (4)	I	{4}	0.8	R
Ribwort plantain	*Plantago lanceolata*				2 (2)		I	{2}	0.4	R
Broad-leaved dock	*Rumex obtusifolius*									R
Cock's-foot	*Dactylis glomerata*									LF
Meadow foxtail	*Alopecurus pratensis*									LO
Smooth meadow-grass	*Poa pratensis*									R
Tall Fescue	*Schedonorus arundinaceus*									R
Bush vetch	*Vicia sepium*									R

Tufted vetch	*Vicia cracca*									R

Field F8

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Smooth meadow-grass	*Poa pratensis*	18 (5)	5 (4)	22 (5)	10 (4)		IV	{4-5}	11	O
Sweet vernal-grass	*Anthoxanthum odoratum*	12 (5)	2 (2)	63 (8)	2 (2)		IV	{2-8}	15.8	LF
Meadow buttercup	*Ranunculus acris*	1 (1)	3 (2)	1 (1)		1 (1)	IV	{1-2}	1.2	R-LO
Crested dog's-tail	*Cynosurus cristatus*	12 (5)	2 (2)		5 (4)		III	{2-5}	3.8	R
Rough meadow-grass	*Poa trivialis*		25 (5)	4 (4)	2 (2)		III	{2-5}	6.2	O
Yorkshire-fog	*Holcus lanatus*	45 (7)			62 (8)	75 (8)	III	{7-8}	36.4	F-LA
Creeping bent	*Agrostis stolonifera*				15 (5)	5 (4)	II	{4-5}	4	O
Perennial rye-grass	*Lolium perenne*			10 (4)			I	{4}	2	R
Cock's-foot	*Dactylis glomerata*					2 (2)	I	{2}	0.4	LO
False oat-grass	*Arrhenatherum elatius*					15 (5)	I	{5}	3	LF
Meadow foxtail	*Alopecurus pratensis*				4 (4)		I	{4}	0.8	LO
Red fescue	*Festuca rubra*					2 (3)	I	{3}	0.4	O
Common vetch	*Vicia sativa*					1 (1)	I	{1}	0.2	R
Hairy tare	*Ervilia hirsuta*				5 (4)		I	{4}	1	R
Hogweed	*Heracleum sphondylium*						I			R
Broad-leaved dock	*Rumex obtusifolius*									R
Creeping thistle	*Cirsium arvense*									R
Cow parsley	*Anthriscus sylvestris*									R
Annual meadow-grass	*Poa annua*									R
Blackthorn seedlings	*Overwrite Me*									R
Bramble	*Rubus fruticosus agg.*									R
Common mouse-ear	*Cerastium fontanum*									R
Ribwort plantain	*Plantago lanceolata*								0	R

Field F9

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Red fescue	*Festuca rubra*	40 (7)	20 (5)	15 (5)	25 (5)	26 (6)	V	{5-7}	25.2	LF
Yorkshire-fog	*Holcus lanatus*	8 (4)	6 (4)	6 (4)	2 (2)	3 (2)	V	{2-4}	5	O
Ribwort plantain	*Plantago lanceolata*	2 (2)	4 (4)	1 (1)	5 (4)	10 (4)	V	{1-4}	4.4	LO
Perennial rye-grass	*Lolium perenne*	2 (2)	5 (4)	5 (4)	8 (4)		IV	{2-4}	4	LO
Crested dog's-tail	*Cynosurus cristatus*	18 (5)	15 (5)	20 (5)		8 (4)	IV	{5}	12.2	O
Sweet vernal-grass	*Anthoxanthum odoratum*	20 (5)	30 (6)	25 (5)		28 (6)	IV	{5-6}	20.6	F-A
Bush vetch	*Vicia sepium*	2 (2)	1 (1)		3 (2)	3 (2)	IV	{1-2}	1.8	R
Meadow buttercup	*Ranunculus acris*	6 (4)	10 (4)	4 (4)		8 (4)	IV	{4}	5.6	R-LO
Smooth tare	*Ervum tetraspermum*	1 (1)	2 (2)			1 (1)	III	{1-2}	0.8	R
Meadow foxtail	*Alopecurus pratensis*			10 (4)		2 (2)	II	{2-4}	2.4	R
Common mouse-ear	*Cerastium fontanum*				1 (1)	1 (1)	II	{1}	0.4	R
Hogweed	*Heracleum sphondylium*	1 (1)			2 (2)		II		0.6	R
Yellow rattle	*Rhinanthus minor*		2 (2)	2 (2)			II	{2}	0.8	R
False oat-grass	*Arrhenatherum elatius*		2 (2)				I	{2}	0.4	R
Rough meadow-grass	*Poa trivialis*				5 (4)		I	{4}	1	R
Common sorrel	*Rumex acetosa*	2 (2)					I	{2}	0.4	R
Hairy tare	*Ervilia hirsuta*			5 (4)			I	{4}	1	R
Tufted vetch	*Vicia cracca*			6 (4)			I	{4}	1.2	R
Creeping buttercup	*Ranunculus repens*									R
Creeping thistle	*Cirsium arvense*									R
Cock's-foot	*Dactylis glomerata*									R
Meadow fescue	*Schedonorus pratensis*									R
Smooth meadow-grass	*Poa pratensis*									R
Cat's-ear	*Hypochaeris radicata*									R
Dandelion	*Taraxacum officinale agg.*									R
Great burnet	*Sanguisorba officinalis*									R

Field F10

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Constancy	DOMIN Range	Av % Cover	DAFOR
Perennial rye-grass	*Lolium perenne*	15 (5)	10 (4)	20 (5)	20 (5)	12 (5)	2 (2)		V	{2-5}	11.28571	O-LF
Rough meadow-grass	*Poa trivialis*	8 (4)	5 (4)	28 (6)	3 (2)	2 (2)	35 (7)	30 (6)	V	{2-7}	15.85714	O
Yorkshire-fog	*Holcus lanatus*	3 (2)	1 (2)	35 (7)	3 (2)	25 (5)		5 (4)	V	{2-7}	10.28571	O-LF
Meadow buttercup	*Ranunculus acris*	1 (1)	2 (2)	3 (2)	3 (2)	4 (2)	2 (2)	1 (1)	V	{1-2}	2.285714	R
Soft-brome	*Bromus hordeaceus*	1 (1)	3 (2)		2 (2)	1 (2)		3 (4)	IV	{1-4}	1.428571	LO
Ribwort plantain	*Plantago lanceolata*	2 (2)	3 (2)	2 (2)	5 (4)	5 (4)			IV	{2-4}	2.428571	O
Broad-leaved dock	*Rumex obtusifolius*			1 (1)	1 (1)		2 (2)		III	{1-2}	0.571429	R
Cock's-foot	*Dactylis glomerata*	2 (2)				1 (1)		50 (7)	III	{1-7}	7.571429	R-LF
Crested dog's-tail	*Cynosurus cristatus*	15 (5)	28 (6)			12 (5)			III	{5-6}	7.857143	LO
Red fescue	*Festuca rubra*	10 (4)	36 (7)		4 (4)	15 (5)			III	{4-5}	9.285714	O
Sweet vernal-grass	*Anthoxanthum odoratum*	30 (6)	5 (4)		48 (7)	20 (5)			III	{4-7}	14.71429	F
Meadow foxtail	*Alopecurus pratensis*				8 (4)		10 (4)		II	[4]	2.571429	R-LO
Common mouse-ear	*Cerastium fontanum*		2 (2)		2 (2)				II	{2}	0.571429	R
Hogweed	*Heracleum sphondylium*		1 (1)				4 (4)		II	{1-4}	0.714286	R
False oat-grass	*Arrhenatherum elatius*							10 (4)	I	[4]	1.428571	LO
Common sorrel	*Rumex acetosa*					1 (1)			I	{1}	0.142857	R
Common vetch	*Vicia sativa*			1 (1)					I	{1}	0.142857	R
Dandelion	*Taraxacum officinale agg.*	1 (1)							I	{1}	0.142857	R
Lesser trefoil	*Trifolium dubium*		1 (1)						I	{1}	0.142857	R
Meadow vetchling	*Lathyrus pratensis*			1 (1)					I	{1}	0.142857	R
Tufted vetch	*Vicia cracca*				2 (2)				I	{2}	0.285714	R
Annual meadow-grass	*Poa annua*											R
Meadow fescue	*Schedonorus pratensis*											R
Bush vetch	*Vicia sepium*											
Cat's-ear	*Hypochaeris radicata*											R

Field F11

Species Name	*Latin*	Q1	Q2	Q3	Constancy	DOMIN Range	Av % Cover	DAFOR
Creeping thistle	*Cirsium arvense*	3 (2)	5 (4)	3 (2)	V	{2-4}	3.6666667	R
Cleavers	*Galium aparine*	1 (1)	2 (2)	2 (2)	V	{1-2}	1.6666667	R
Common nettle	*Urtica dioica*	20 (5)	3 (2)		IV	{2-5}	7.6666667	LF
Rough meadow-grass	*Poa trivialis*	10 (4)	2 (2)		IV	{2}	4	R
False oat-grass	*Arrhenatherum elatius*			70 (8)	II	{8}	23.333333	A
Meadow foxtail	*Alopecurus pratensis*		30 (6)		II	{6}	10	O-LF
Bramble	*Rubus fruticosus agg.*			6 (4)	II	{4}	2	R
Great willowherb	*Epilobium hirsutum*	1 (1)			II	{1}	0.3333333	
Hairy bitter-cress	*Cardamine hirsuta*	1 (1)			II	{1}	0.3333333	R
Perennial rye-grass	*Lolium perenne*							R
Broad-leaved dock	*Rumex obtusifolius*							R
Common ragwort	*Jacobaea vulgaris*							R
Spear thistle	*Cirsium vulgare*							R
Cock's-foot	*Dactylis glomerata*							R
Red fescue	*Festuca rubra*							LO
Soft-brome	*Bromus hordeaceus*							R
Timothy	*Phleum pratense*							R
Dandelion	*Taraxacum officinale agg.*							R
Hogweed	*Heracleum sphondylium*							R
Male-fern	*Dryopteris filix-mas*							R

Field F12

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Crested dog's-tail	*Cynosurus cristatus*	15 (5)	20 (5)	30 (6)	18 (5)	30 (6)	V	{5-6}	22.6	O
Red fescue	*Festuca rubra*	30 (6)	15 (5)	5 (4)	12 (5)	5 (4)	V	{4-6}	13.4	LF
Sweet vernal-grass	*Anthoxanthum odoratum*	35 (7)	20 (5)	26 (5)	20 (5)	43 (7)	V	{5-7}	28.8	F-A
Meadow buttercup	*Ranunculus acris*	2 (2)	2 (2)	2 (2)	2 (2)	3 (2)	V	{2}	2.2	R-O
Yorkshire-fog	*Holcus lanatus*	2 (2)	2 (2)		1 (1)	8 (4)	IV	{1-4}	2.6	LO
Lesser trefoil	*Trifolium dubium*	3 (2)	6 (4)	3 (2)	5 (4)		IV	{2-4}	3.4	LO
False oat-grass	*Arrhenatherum elatius*		8 (4)	26 (6)	20 (5)		III	{4-6}	10.8	LO
Common mouse-ear	*Cerastium fontanum*		1 (1)	1 (1)	1 (1)		III	{1}	0.6	R
Ribwort plantain	*Plantago lanceolata*		3 (2)		4 (4)	2 (2)	III	{2}	1.8	R
Perennial rye-grass	*Lolium perenne*				5 (4)	2 (2)	II	{2-4}	1.4	R
Common ragwort	*Jacobaea vulgaris*		1 (1)				II	{1}	0.2	R
Creeping thistle	*Cirsium arvense*	1 (1)					II	{1}	0.2	
Cock's-foot	*Dactylis glomerata*	1 (2)		2 (2)			II	{2}	0.6	LO
Soft-brome	*Bromus hordeaceus*		1 (1)		2 (2)		II	{1-2}	0.6	LO
Common sorrel	*Rumex acetosa*				1 (1)	3 (2)	II	{1-2}	0.8	R
Hairy tare	*Ervilia hirsuta*	5 (4)			2 (2)		II	{2-4}	1.4	R
Hogweed	*Heracleum sphondylium*	3 (2)			1 (1)		II	{1-2}	0.8	R
Common vetch	*Vicia sativa*			2 (2)			I	{2}	0.4	R
Meadow vetchling	*Lathyrus pratensis*					3 (2)	I	{2}	0.6	R
Red clover	*Trifolium pratense*	2 (2)					I	{2}	0.4	R
Tufted vetch	*Vicia cracca*				1 (1)		I	{1}	0.2	R
Yellow rattle	*Rhinanthus minor*		1 (1)				I	{1}	0.2	R
Meadow foxtail	*Alopecurus pratensis*									R
Cat's-ear	*Hypochaeris radicata*									R
Smooth tare	*Ervum tetraspermum*									R

Field F13

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Yorkshire-fog	*Holcus lanatus*	30 (6)	40 (7)	50 (7)	40 (7)	20 (5)	V	{5-7}	36	LF
Sweet vernal-grass	*Anthoxanthum odoratum*	50 (7)	32 (6)		35 (7)	48 (7)	IV	{6-7}	33	F-A
Common sorrel	*Rumex acetosa*			1 (1)	1 (1)	2 (2)	IV	{1-2}	0.8	R-O
Crested dog's-tail	*Cynosurus cristatus*	4 (4)	20 (5)			5 (4)	III	{4-5}	5.8	O
Rough meadow-grass	*Poa trivialis*			15 (5)	12 (5)	6 (4)	III	{4-5}	6.6	O
Meadow buttercup	*Ranunculus acris*	4 (4)	3 (2)	2 (2)	1 (1)	4 (4)	II	{1-4}	2.8	R
Perennial rye-grass	*Lolium perenne*		2 (2)		5 (4)	10 (4)	II	{2-4}	3.4	R
Ribwort pantain	*Plantago lanceolata*		2 (2)			2 (2)	II	{2}	0.8	R
Red fescue	*Festuca rubra*	2 (2)					I	{2}	0.4	LF
False oat-grass	*Arrhenatherum elatius*			2 (2)			I	{2}	0.4	LO
Soft-brome	*Bromus hordeaceus*					2 (2)	I	{2}	0.4	R
Cat's-ear	*Hypochaeris radicata*		2 (2)				I	{2}	0.4	R
Meadow foxtail	*Alopecurus pratensis*									LF
Cock's-foot	*Dactylis glomerata*									LO
Annual meadow-grass	*Poa annua*									R
Bracken	*Pteridium aquilinum*									R
Broad-leaved dock	*Rumex obtusifolius*									R
Common knapweed	*Centaurea nigra*									R
Common mouse-ear	*Cerastium fontanum*									R
Common nettle	*Urtica dioica*									R

Field F14

Species Name	*Latin*	Q1	Q2	Q3	Q4	Q5	Constancy	DOMIN Range	Av % Cover	DAFOR
Sweet vernal-grass	*Anthoxanthum odoratum*	60 (8)	45 (7)	66 (8)	75 (8)	20 (5)	V	{5-8}	53.2	F-A
Yorkshire-fog	*Holcus lanatus*	30 (6)	20 (5)	8 (4)	2 (2)	8 (4)	V	{2-6}	13.6	LO
Common sorrel	*Rumex acetosa*	3 (2)	2 (2)	3 (2)	2 (2)		IV	{2}	2	R
Crested dog's-tail	*Cynosurus cristatus*		20 (5)	15 (5)		40 (7)	III	{5-7}	15	LF
Rough meadow-grass	*Poa trivialis*		5 (4)	2 (2)		15 (5)	III	{2-5}	4.4	LO
Compact rush	*Juncus conglomeratus*			1 (1)	1 (1)	2 (2)	III	{1-2}	0.8	R
Meadow foxtail	*Alopecurus pratensis*	5 (4)			5 (4)		II	{4}	2	R
Red fescue	*Festuca rubra*		3 (3)			10 (4)	II	{3-4}	2.6	LF
Common mouse-ear	*Cerastium fontanum*	1 (1)	2 (2)				II	{1-2}	0.6	R
Meadow buttercup	*Ranunculus acris*			3 (2)	1 (1)		II	{1-2}	0.8	LO
Perennial rye-grass	*Lolium perenne*				5 (4)		I	{1}	1	R
White clover	*Trifolium repens*					1 (2)	I	{2}	0.2	R
Creeping buttercup	*Ranunculus repens*		1 (1)				I	{1}	0.2	R
Meadow fescue	*Schedonorus pratensis*				6 (4)		I	{4}	1.2	R
Soft-brome	*Bromus hordeaceus*	2 (2)					I	{2}	0.4	R
Marsh horsetail	*Equisetum palustre*			1 (1)			I	{1}	0.2	R
Ribwort plantain	*Plantago lanceolata*					2 (2)	I	{2}	0.4	R
Broad-leaved dock	*Rumex obtusifolius*									R
Cock's-foot	*Dactylis glomerata*								0	R
False oat-grass	*Arrhenatherum elatius*									R
Smooth meadow-grass	*Poa pratensis*									R
Common vetch	*Vicia sativa*									R
Meadow vetchling	*Lathyrus pratensis*									R
Red clover	*Trifolium pratense*									R
Smooth tare	*Ervum tetraspermum*									R

APPENDIX B: BOTANICAL SPECIES LISTS

Common Name	Scientific Name	Abundance (DAFOR)
Hedgerows and Trees		
Alder	*Alnus glutinosa*	R
Ash	*Fraxinus excelsior*	R
Black bryony	*Tamus communis*	R
Blackthorn	*Prunus spinosa*	O-LF
Bracken	*Pteridium aquilinum*	R-LO
Bramble	*Rubus fruticosus* agg.	O-LA
Broadleaved willowherb	*Epilobium montanum*	R
Bullace	*Prunus domestica subsp. insititia var.*	R-LA
Butterfly-bush	*Buddlia davidii*	R
Cherry laurel	*Prunus laurocerasus*	R
Cleavers	*Galium aparine*	R-LF
Cock's-foot	*Dactylis glomerata*	R-O
Common couch	*Elymus repens*	R-O
Common hogweed	*Heraculum sphondilium*	R
Common ivy	*Hedera helix*	LF-LA
Common lime	*Tilia x europaea*	R
Common nettle	*Urtica dioica*	O-LF
Cow parsley	*Anthriscus sylvestris*	R
Crab apple	*Malus sylvestris*	R
Crack willow	*Salix x fragilis*	R
Creeping bent	*Agrostis stolonifera*	O
Creeping thistle	*Cirsium arvense*	R
Dandelion	*Traxacum officinale agg.*	R
Dog's-mecury	*Mercurialis perennis*	R
Dog rose	*Rosa canina*	R
Elder	*Sambucus nigra*	R
English elm	*Ulmus procera*	R-O
English oak	*Quercus robur*	R-LO
False oat-grass	*Arrhenatherum elatius*	O
Field elm	*Ulmus minor*	R
Field maple	*Acer campestre*	R-O
Foxglove	*Digitalis purpurea*	R
Garden privet	*Ligustrum ovalifolium*	R
Garlic mustard	*Alliaria petiolata*	R
Goat willow	*Salix caprea*	R
Great willowherb	*Epilobium hirsutum*	R-LF
Guelder rose	Viburnum opulus	R
Hart's tongue fern	*Asplenium scolopendrim*	R
Hawthorn	*Crataegus monogyna*	F-LD

Common Name	Scientific Name	Abundance (DAFOR)
Hazel	*Corylus avellana*	LO-LA
Hedge bindweed	*Calystegia sepium*	R
Hedge woundwort	*Stachy sylvatica*	R
Herb-robert	*Geranium robertianum*	R
Holly	*Ilex aquifolium*	R-LF
Honeysuckle	*Lonicera periclymenum*	R
Hybrid willow	*Salix x reichardtii*	R
Lords-and-Ladies	*Arum maculatum*	R
Male fern	*Dryopteris filix-mas*	R
Marsh thistle	*Cirsium palustre*	R
Meadow foxtail	*Alopecurus pratensis*	R
Meadowsweet	*Filipendula ulmaria*	R
Pear	*Pyrus communis*	R
Pendulous sedge	*Carex pendula*	R
Red campion	*Silene dioica*	R
Rosebay willowherb	*Chamaenerion angustifolia*	R
Snowberry	*Symphoricarpos albus*	R
Soft-rush	*Juncus effusus*	R
Sycamore	*Acer pseudoplatanus*	R
Wild cherry	*Prunus avium*	R
Wood avens	*Geum urbanum*	R
Wood dock	*Rumex sanguineaus*	R
Yorkshire fog	*Holcus lanatus*	R
Scrub		
Common nettle	*Urtica dioica*	LF
Blackthorn	*Prunus spinosa*	O
Bramble	*Rubus fruticosus agg.*	LA
Crack willow	*Salix x fragilis*	O
Creeping thistle	*Cirsium arvense*	R
Elder	*Sambucus nigra*	R
Great willowherb	*Epilobium hirsutum*	R
Hawthorn	*Crataegus monogyna*	F
Tall Forbs		
Bramble	*Rubus fruticosa*	R
Cleavers	*Galium aparine*	LF
Common couch	*Elytrigia repens*	R
Common nettle	*Urtica dioica*	A
Cow parsley	*Anthriscus sylvestris*	LF
Creeping thistle	*Cirsium arvense*	F
False oat-grass	*Arrhenatherum elatius*	LF
Foxglove	*Digitalis purpurea*	R
Great willowherb	*Epilobium hirsutum*	R
Green alkanet	*Bryonia alba*	R

Common Name	Scientific Name	Abundance (DAFOR)
Hedge bindweed	*Calystegia sepium*	R
Japanese knotweed	*Reynoutria japonica*	R
Rosebay willowherb	*Chamerion angustifolium*	LF
Square stem willowherb	*Epilobium tetragonum*	R
Ponds		
Yellow flag iris	*Iris pseudacorus*	A
Bittersweet	*Solanum dulcamara*	LO
Clustered dock	*Rumex conglomeratus*	O
Creeping bent	*Agrostis stolonifera*	R
Great reed mace	*Typha latifolia*	LF
Great willowherb	*Epilobium hirsutum*	R
Hard rush	*Juncus inflexus*	R
Marsh horsetail	*Equisetum palustre*	R
Soft rush	*Juncus effusus*	R

APPENDIX C: HEDGEROW SURVEY SUMMARY

Ref	Canopy Sp.	Height / Width (m)	Length (m)	Sp. per Av. 30m	Notes	HEGS	Import. HR
H1	*Ap, Cm, Fe, Pi, Qr, Rc, Sn*	1-2 / 1-2	184	3.5	Roadside hedgerow, managed, no gaps, 1≤3 mature standards/100m, 2 end connections, hawthorn dominated.	-2	No
H2	*Ap, Cm, Fe, Ia, Pa, Pi, Sn, S x r*	1-2 / 1-2	120	4	Roadside hedgerow, managed, no gaps, 1 end connection, hawthorn dominated.	3	No
H3	*Cm, Rc, Sn, Pi, Qr*	2-4 /1-2	96	2	Scrappy hedgerow, 10-30% gaps, ≤1 mature standards/100m, 4 end connections, hawthorn dominated, dry ditch	3	No
H4	*Cm, Fe, Qr, Ps, Ac*	2-4 /1-2	62	4	Unmanaged tall hedgerows, 1-10% gaps, 1≤3 mature standards/100m, 1≤3 young standards/100m.	2	No
H5	*Ac, Ca, Cm, Fe, Pi, Ps, Sn*	2-4 / 1-2	164	4	Not well managed, 1-10% gaps, ≤1 mature standards/100m, hawthorn dominated, dry ditch	-2	No
H6	*Ac, Ca, Cm, Ia, Qr, Ra, Sn*	>4 / 1-2	123	3	Unmanaged tall hedgerow, 1≤3 mature standards/100m, 1-10% gaps, 4 end connections, hazel dominated. Embankment on NW aspect	-2	No
H7	*Ca, Cm, Ia, Qr, Fe, Pa, Sn*	>4 / 1-2	129	5	Unmanaged tall hedgerow, 1-10% gaps, 1≤3 mature standards/100m, 3 end connections, hazel dominated, dry ditch	-2	No
H8	*Ca, Cm, Ps, Sn*	>4 / 2-3	51	4	Unmanaged tall hedgerow, 1-10% gaps, 2 end connections, hazel dominated	3	No
H9	*Ac, Ca, Cm, Ps, Sn, Um*	2-4 / 2-3	56	3	Sometimes managed, 1-10% gaps, 3 end connections, dry ditch	2	No
H10	*Ac, Ag, Ca, Cm, Fe, Ps, Qr, Rc, Sn*	>4 / 2-3	165	4	Flailed on western aspect, eastern aspect outgrown, no gaps, 3≤5 mature standards/100m, 1≤3 young standards/100m, dry ditch	-1	No
H11	*Ac, Ca, Fe, Ps, Ms, Rc*	>4 / 2-3	120	4.5	Outgrown hedgerow but hedgerow element flailed, no gaps, >5 mature standards/100m, 1 end connection, wet ditch, hazel and field maple dominant.	2	No
H12	Ac, Ca, Cm, Fe, Ps, Qr, S x f, Sn, Up	>4 / 2-3	147	5	Outgrown hedgerow, no gaps, 3≤5 mature standards/100m, >5 young standards/100m, 2 end connections, dry ditch, elm is dying.	2+	No
H13	*Ac, Ca, Cm, Fe, Ps, Qr, Sn, Um*	>4 / 2-3	149	4	Outgrown hedgerow, no gaps, 3>5 mature standards/100m, 1≤ young standards/100m, 4 end connections, dry ditch, elm is	2+	No

Ref	Canopy Sp.	Height / Width (m)	Length (m)	Sp. per Av. 30m	Notes	HEGS	Import. HR
					dying.		
H14	*Ac, Ca, Cm, Fe, Qr*	>4 / 2-3	81	4	Flail evidence but relatively unmanaged, 1-10% gaps, 1≤3 mature standards/100m, hawthorn dominated, dry ditch	-2	No
H15	*Ca, Cm, Fe, Ia, Pa, Qr, Sn*	>4 / 2-3	178	3	Outgrown hedgerow, 0-10% gaps, 1≤3 mature standards/100m, 1≤3 young standards/100m, 4 end connections, hazel dominated some of which was coppiced. On 2m embankment.	2+	No
H16	*Ca, Cm, Fe, Ia, Pc, Ps, Qr, Sn*	>4 / 2-3	214	4.5	Outgrown hedge, no gaps, 1≤3 mature standards/100m, 4 end connections, dry ditch.	3+	No
H17	*Ac, Ca, Cm,Fe, Ps, Sn, Um*	>4 / 2-3	165	4	Outgrown hedge though lower half more recently flailed, 0-10% gaps, 1≤3 mature standards/100m, 4 end connections hazel dominated.	-2	No
H18	*Ac, Ca, Cm, Pi*	>4 / 2-3	52	3	Outgrown hedgerow, 0-10% gaps, 4 end connections, 1≤3 mature standards/100m, hawthorn dominated.	-2	No
H19	*Cm, Fe, Ia, Sn*	>4 / 2-3	43	3	Outgrown hedgerow, no gaps, hawthorn dominated	2	No
H20	*Cm, Bd, Bp, Ia, Sc, Sn, S x r, Um*	>4 / 2-3	60	4	Outgrown hedgerow, 10-30% gaps, 3≤5 mature standards/100m, 1≤3 young standards/100m, 2 end connections, hawthorn dominated.	-2	No
H21	*Ac, Ca, Cm, Ia, Ps,*	>4 / 2-3	138	4	Field maple and hawthorn dominated, no gaps, 2 end connections, dry ditch	3+	No
H22	*Cm, Sn*	>4 / 1-2	70	3	Scrappy hawthorn dominated hedge, no gaps but quite thin in places.	3+	No
H23	*Ca, Cm, Fe, T x e*	>4 / 2-3	87	2	Unmanaged roadside hedge, no gaps, >5 mature standards/100m, 1 end connection, hawthorn dominated.	2	No
H24	*Ca, Cm, Fe, Ia, Pi, Qr,*	>4 / 2-3	53	3	Unmanaged roadside hedge, no gaps, 3≤5 mature standards/100m, 1 end connection. Bullace dominated	2	No
H25	*Ac, Fe, Ps, Qr, Sn*	>4 / 2-3	71	4	Boundary hedgerow to offsite car park, no gaps, 3≤5 mature standards/100m, 3 end connections, blackthorn dominated.	2+	No
H26	*Ac, Ca, Cm, Fe, Ia, Ps, Qr, Sn*	>4 / 1-2	122	4	Outgrown hedgerow, no gaps, 1≤3 mature standards/100m, 3≤5 young standards/100m, dominated by field maple.	2+	No
H27	*Ac, Ps, Qr*	2-4 / 2-3	97	4	Outgrown hedge, no gaps, 1≤3	2+	No

Ref	Canopy Sp.	Height / Width (m)	Length (m)	Sp. per Av. 30m	Notes	HEGS	Import. HR
					mature standards/100m, 3 end H28connections, dry ditch, blacH29kthorn dominated.		
H28	*Cm, Pi*	1-2 / 1-2	25	2	ScrappyH hedgerow along garden boundary, 10-30% gaps, 1 end connection.	-3	No
H29	*Ac, Ca, Cm, Ia, Ps, Qr, Sn*	2-4 / 2-3	99	4	Dominated by hazel and field maple, 0-10% gaps, 1≤3 young standards/100m, 3 end connections	-2	No
H30	*Ac, Ca, Cm, Ia, Ps, Sn*	2-4 / 2-3	36	6	Species-rich outgrown hedge, 0-10% gaps, 4 end connections.	2	No
H31	*Ac, Ps, Qr*	>4 / 2-3	83	2	Outgrown hedge, no gaps, 3≤5 mature standards/100m, >4 end connections, blackthorn dominated.	2+	No
H32	*Ca, Cm, Fe, Ia, Pa, Ps, Qr, Rc, Sn*	>4 / 2-3	196	4	Outgrown hedge, 0-10% gaps, 1≤3 mature standards/100m, 4 end connections, hawthorn dominated.	2+	No
H33	*Lo, Pl, Ps*	1-2 / 1-2	46	3	Managed garden boundary, mostly comprised of ornamental species.	n/a	No

Key to hedgerow species: *Ac Acer camprestre* – field maple, *Ag Alnus glutinosa* – alder, *Ap Acer pseudoplatanus* - sycamore, *Bd Buddlia davidii* – butterfly-bush, *Bp Betula pendula* – silver birch, *Ca Corylus avellane* – hazel, *Cm Crataegus monogyna* - hawthorn, *Fe Fraxinus excelsior* - ash, *Ia Ilex aquifolium* – holly, *Lo Ligustrum ovalifolium* – garden privet, *Ms Malus sylvestris* – crab apple, *Pa Prunus avium* – wild cherry, *Pi Prunus domestica* subsp. *Institia* var. – bullace, *Pc Pyrus communis* – pear, *Pl Prunuls lauroceracus* – cherry laurel, *Ps Prunus spinose* – blackthorn, *Qr Quercus rober* – English oak, *Ra Rosa arvensis* – Field rose, *Rc Rosa canina* - dog-rose, *S x f Salix fragilis* – crack willow, *S x r Salix reichardtii* – hybrid willow, *Sn Sambus nigra* – elder, *T x e Tilia x europaea* – common lime, *Ulmus minor* – field elm, *Up Ulmus procera* – English elm,

APPENDIX D: BASELINE HABITAT CONDITION ASSESSMENTS

Other Neutral Grassland - Grassland (medium distinctiveness)

Condition Criteria	Grassland Reference							
	F1		F1a		F2		F3a	
	Criteria	Notes	Criteria	Notes	Criteria	Notes	Criteria	Notes
A The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **N.B. this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Fail	Only 47.26% fit to MG6b so does not closely affiliate to NVC community. Indicator species not consistently present	Pass	55.83% fit to MG6b and therefore g3c6 Lolium-Cynosurus neutral grassland.	Pass	61.03% fit to MG6b and therefore g3c6 Lolium-Cynosurus neutral grassland	Fail	Not a great fit to any NVC or UKHab community and indicator species not abundant.
B Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Pass	More natural variability.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.
C Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass		Pass		Pass		Pass	
D Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass	No bracken & scrub <5%.	Pass	No bracken or scrub.	Pass	No bracken or scrub.	Pass	No bracken or scrub.
E Combined cover of species indicative of sub-optimal condition2 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.	Fail	Species indicative of sub-optimal condition averaged at 18.6% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 1.8% across the quadrats and no INNS.	Fail	Species indicative of sub-optimal condition averaged at 18.6% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 3.3% across the quadrat and no INNS.
F There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **N.B. this criterion is essential for achieving Good condition for non-acid grassland types only.**	Fail	Average of 7.8 species when species indicative of sub-optimal condition excluded.	Pass	Average of 14 species.	Fail	Average of 7.8 species when species indicative of sub-optimal condition excluded.	Pass	Average of 10.6 species.
Total Passes	2		6		3		4 excluding A	
Condition	Poor		Good		Moderate		Poor	

Condition Assessment Result	Condition Assessment Score
Passes 5 or 6 of 6 criteria, including essential criteria A and F	Good (3)
Passes 3 or 4 of 6 criteria, including essential criteria A	Moderate (2)
Passes 0, 1 or 2 of 6 criteria; OR Passes 3 or 4 criteria excluding A and F	Poor (1)

Other Neutral Grassland - Grassland (medium distinctiveness)

Condition Criteria	Grassland Reference							
	F3b		F4		F5		F6	
	Criteria	Notes	Criteria	Notes	Criteria	Notes	Criteria	Notes
A The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **N.B. this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Pass	Best fit to g3c6 Lolium-cynosurus grassland with indicators abundant.	Pass	61.56% fit to MG6b and therefore g3c6 Lolium-Cynosurus neutral grassland	Half pass	53.92% fit to MG6b and therefore but doesn't meet the broad criteria for g3c6 with less than 8 species per m^2 and <20% forbs. Half passes the criteira.	Fail	Resembles species-poor MG1 community but indicator species not constant.
B Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Pass	More natural variability.
C Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass		Fail	Bare ground <1%	Pass		Pass	
D Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass	No bracken & scrub <5%.	Pass	No bracken or scrub.	Pass	No bracken or scrub.	Pass	No bracken or scrub.
E Combined cover of species indicative of sub-optimal condition2 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.	Pass	Species indicative of sub-optimal condition averaged at 0.2% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 1.4% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 2% across the quadrats and no INNS.	Fail	No INNS but species indicative of sub-optimal condition >5%.
F There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **N.B. this criterion is essential for achieving Good condition for non-acid grassland types only.**	Pass	Average of 10 species when species indicative of sub-optimal condition excluded.	Pass	Average of 12 species when species indicative of sub-optimal condition excluded.	Fail	Average of 7.2 species when species indicative of sub-optimal condition excluded.	Fail	Average of 4.3 species when species indicative of sub-optimal condition excluded.
Total Passes	5 inc. A & F		4		3.5 exc. F & not fully meeting A		4 ex.A	
Condition	Good		Moderate		Fairly Poor		Poor	

Condition Assessment Result	Condition Assessment Score
Passes 5 or 6 of 6 criteria, including essential criteria A and F	Good (3)
Passes 3 or 4 of 6 criteria, including essential criteria A	Moderate (2)
Passes 0, 1 or 2 of 6 criteria; OR Passes 3 or 4 criteria excluding A and F	Poor (1)

Other Neutral Grassland - Grassland (medium distinctiveness)

Condition Criteria	Grassland Reference							
	F7		F8		F9		F10	
	Criteria	Notes	Criteria	Notes	Criteria	Notes	Criteria	Notes
A The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **N.B. this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Fail	Does not closely affiliate to any community with neutral indicators at low abundances.	Fail	Does not closely affiliate to any community with neutral indicators at low abundances.	Fail	52.79% fit to MG6b and therefore g3c6 Lolium-Cynosurus neutral grassland. But indicators species not consistently present.	Pass	60.48% fit to MG6b and therefore g3c6 Lolium-Cynosurus neutral grassland and indicator species consistently present.
B Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.
C Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass		Pass		Fail	Bare ground <1%	Fail	Bare ground <1%
D Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass	No bracken & scrub <5%.	Pass	No bracken or scrub.	Pass	No bracken or scrub.	Pass	No bracken or scrub.
E Combined cover of species indicative of sub-optimal condition2 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.	Pass	Species indicative of sub-optimal condition averaged at 0.4% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 1.4% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition <5% and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 0.5% across the quadrats and no INNS.
F There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **N.B. this criterion is essential for achieving Good condition for non-acid grassland types only.**	Fail	Average of 9.2 species when species indicative of sub-optimal condition excluded.	Fail	Average of 6 species when species indicative of sub-optimal condition excluded.	Pass	Average of 10.2 species when species indicative of sub-optimal condition excluded.	Fail	Average of 9 species when species indicative of sub-optimal condition excluded.
Total Passes	3 exc. A & F		3 exc. A & F		4 exc. A		3 excluding F	
Condition	Poor		Poor		Poor		Moderate	

Condition Assessment Result	Condition Assessment Score
Passes 5 or 6 of 6 criteria, including essential criteria A and F	Good (3)
Passes 3 or 4 of 6 criteria, including essential criteria A	Moderate (2)
Passes 0, 1 or 2 of 6 criteria; OR Passes 3 or 4 criteria excluding A and F	Poor (1)

Other Neutral Grassland - Grassland (medium distinctiveness)

Condition Criteria	Grassland Reference							
	F11		F12		F13		F14	
	Criteria	Notes	Criteria	Notes	Criteria	Notes	Criteria	Notes
A The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **N.B. this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Fail	Resembles a rank MG1 community but neutral indicators at low abundances.	Pass	59.45% fit to MG6b and therefore g3c6 Lolium-Cynosurus neutral grassland. Indicator species consistently present.	Fail	Potentially MG6b but indicator species not consistently present.	Fail	Potentially MG6b but indicator species not consistently present.
B Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.	Fail	A lack of recent management had resulted in a tall tussocky sward with little variation in height.
C Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail	Bare ground <1%	Fail	Bare ground <1%	Fail	Bare ground <1%	Pass	
D Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass	No bracken or scrub.	Pass	No bracken or scrub.	Pass	No bracken or scrub.	Pass	No bracken or scrub.
E Combined cover of species indicative of sub-optimal condition2 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.	Fail	Species indicative of sub-optimal condition averaged at 11.3% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 0.4% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 0.4% across the quadrats and no INNS.	Pass	Species indicative of sub-optimal condition averaged at 0.4% across the quadrats and no INNS.
F There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **N.B. this criterion is essential for achieving Good condition for non-acid grassland types only.**	Fail	Average of 3.3 species when species indicative of sub-optimal condition excluded.	Pass	Average of 10.4 species when species indicative of sub-optimal condition excluded.	Fail	Average of 6.4 species when species indicative of sub-optimal condition excluded.	Fail	Average of 7.2 species when species indicative of sub-optimal condition excluded.
Total Passes	1		4 exc. A & F		2		3 exc. A & F	
Condition	Poor		Moderate		Poor		Poor	

Condition Assessment Result	Condition Assessment Score
Passes 5 or 6 of 6 criteria, including essential criteria A and F	Good (3)
Passes 3 or 4 of 6 criteria, including essential criteria A	Moderate (2)
Passes 0, 1 or 2 of 6 criteria; OR Passes 3 or 4 criteria excluding A and F	Poor (1)

Scrub

Condition Criteria	Scrub Reference					
	S1		S2		S3	
	Criteria	Notes	Criteria	Notes	Criteria	Notes
A Habitat is representative of UKHab description (where in its natural range). At least 80% is native and there are at least three woody species, with no one species comprising more than 75% of the cover (except hazel, common juniper, sea buckthorn or box, which can be up to 100% cover).	Fail	Dominated by bramble (>75%).	Pass	Mix of hawthorn, blackthorn, bramble and elder.	Fail	Dominated by crack willow (>75%).
B Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Fail	No seedlings or saplings recorded.	Fail	No seedlings or saplings present.	Fail	No young shrubs
C There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Pass	No INNS but species of sub-optimal condition present at >5%	Pass		Pass	No INNS but species of sub-optimal condition present at >5%.
D The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat.	Pass	Unmanaged tall grassland present.	Pass	Unmanaged tall grassland present.	Pass	Unmanaged tall grassland present.
E There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail	Too small for clearings.	Pass	Open area where pond P2 is located.	Fail	Too small for clearings.
Total Passes	2		3		2	
Condition	Poor		Moderate		Poor	

Condition Assessment Result	Condition Assessment Score
Passes 5 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)

Pond (Non-Priority)

Condition Criteria	Scrub Reference			
	P1		P2	
	Criteria	Notes	Criteria	Notes
A The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Pass		Fail	No water present.
B There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10m from the pond edge for its entire perimeter.	Pass	Surrounded by other neutral grassland and a tree line.	Pass	Surrounded by native mixed scrub.
C Less than 10% of the pond is covered with duckweed *Lemna* sp. or filamentous algae.	Pass		Pass	
D The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework.	Pass		Pass	
E Pond water levels should be able to fluctuate naturally throughout the year. No obvious dams, pumps or pipework.	Pass		Fail	No water present.
F There is an absence of listed non-native plant and animal species.	Pass		Pass	
G The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Pass		Pass	
H Emergent, submerged or floating plants (excluding duckweed) cover at least 50% of the pond area which is less than 3m deep. **NB only applicable to non-woodland ponds**	Pass		Fail	
I The pond surface is not more than 50% shaded by adjacent trees and scrub. **NB only applicable to non-woodland ponds**	Fail		Fail	
Total Passes	8		5	
Condition	Moderate		Poor	

Condition Assessment Result	Condition Assessment Score
Woodland Ponds	
Passes 7 criteria	Good (3)
Passes 5 or 6 criteria	Moderate (2)
Passes 4 or fewer criteria	Poor (1)
Non-Woodland Ponds	
Passes 9 criteria	Good (3)
Passes 6 to criteria	Moderate (2)
Passes 5 or fewer criteria	Poor (1)

Hedgerows

Condition Criteria	Hedgerow Reference										
	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11
A1 Height >1.5m average along length.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
A2 Width >1.5m average along length.	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass
B1 Gap between ground and base of canopy <0.5 m for >90% of length.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
B2 Gaps make up <10% of total length and no canopy gaps >5 m.	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
C1 >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow, and is present on one side of the hedge (at least).	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
C2 Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
D1 >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
E1 There is more than one age-class (or morphology) of tree present, and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow.	n/a	n/a	n/a	Fail	n/a	n/a	Fail	n/a	n/a	Fail	Fail
E2 At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	n/a	n/a	n/a	Pass	n/a	n/a	Pass	n/a	n/a	Pass	Pass
Total Failures	1	2 (same functional group)	3	2	1	2	2	1	1	2	2
Condition	Good	Moderate	Moderate	Good	Good	Good	Good	Good	Good	Good	Good

Condition Assessment Result for Hedgerows without Trees	Condition Assessment Score
≤2 total failures; AND no more than 1 failure in any functional group	Good (3)
≤4 total failures; AND does not fail both attributes in more than one functional group	Moderate (2)
>4 total failures; OR fails both attributes in multiple functional groups	Poor (1)
Condition Assessment Result for Hedgerows with trees	**Condition Assessment Score**
≤2 total failures; AND no more than 1 failure in any functional group	Good (3)
≤5 total failures; AND does not fail both attributes in more than one functional group	Moderate (2)

Hedgerows

Condition Criteria	Hedgerow Reference										
	H12	H13	H14	H15	H16	H17	H18	H19	H20	H21	H22
A1 Height >1.5m average along length.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
A2 Width >1.5m average along length.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail
B1 Gap between ground and base of canopy <0.5 m for >90% of length.	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass
B2 Gaps make up <10% of total length and no canopy gaps >5 m.	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass
C1 >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow, and is present on one side of the hedge (at least).	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
C2 Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Fail	Pass	Fail	Fail	Pass	Fail	Fail	Fail	Fail	Fail	Fail
D1 >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass
E1 There is more than one age-class (or morphology) of tree present, and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow.	Pass	Fail	n/a	Fail	Fail	n/a	n/a	n/a	n/a	n/a	n/a
E2 At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Fail	Pass	n/a	Pass	Pass	n/a	n/a	n/a	n/a	n/a	n/a
Total Failures	3	1	1	4	1	1	1	1	3	1	2
Condition	Moderate	Good	Good	Moderate	Good	Good	Good	Good	Moderate	Good	Good

Condition Assessment Result for Hedgerows without Trees	Condition Assessment Score
≤2 total failures; AND no more than 1 failure in any functional group	Good (3)
≤4 total failures; AND does not fail both attributes in more than one functional group	Moderate (2)
>4 total failures; OR fails both attributes in multiple functional groups	Poor (1)
Condition Assessment Result for Hedgerows with trees	**Condition Assessment Score**
≤2 total failures; AND no more than 1 failure in any functional group	Good (3)
≤5 total failures; AND does not fail both attributes in more than one functional group	Moderate (2)

Hedgerows

Condition Criteria	Hedgerow Reference										
	H23	**H24**	**H25**	**H26**	**H27**	**H28**	**H29**	**H30**	**H31**	**H32**	**H33**
A1 Height >1.5m average along length.	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Fail
A2 Width >1.5m average along length.	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Fail
B1 Gap between ground and base of canopy <0.5 m for >90% of length.	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass
B2 Gaps make up <10% of total length and no canopy gaps >5 m.	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass
C1 >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow, and is present on one side of the hedge (at least).	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass
C2 Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Fail
D1 >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail
D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail
E1 There is more than one age-class (or morphology) of tree present, and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow.	Fail	Fail	Fail	n/a	Fail	n/a	n/a	n/a	Fail	n/a	n/a
E2 At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Pass	Pass	Pass	n/a	Pass	n/a	n/a	n/a	Pass	n/a	n/a
Total Failures	4	2	2	2	4	4	1	0	2	1	5
Condition	Moderate	Good	Good	Good	Moderate	Moderate	Good	Good	Good	Good	Poor

Condition Assessment Result for Hedgerows without Trees	**Condition Assessment Score**
≤2 total failures; AND no more than 1 failure in any functional group	Good (3)
≤4 total failures; AND does not fail both attributes in more than one functional group	Moderate (2)
>4 total failures; OR fails both attributes in multiple functional groups	Poor (1)
Condition Assessment Result for Hedgerows with trees	**Condition Assessment Score**
≤2 total failures; AND no more than 1 failure in any functional group	Good (3)
≤5 total failures; AND does not fail both attributes in more than one functional group	Moderate (2)

Line of Trees

Condition Criteria	Treeline Reference									
	TL1		TL2		TL3		TL4		TL5	
	Criteria	Notes	Criteria	Notes	Criteria	Notes	Criteria	Notes	Criteria	Notes
A At least 70% of trees are native species.	Pass		Pass		Fail	Sycamore and cherry laurel comprise >30%	Pass		Pass	Sycamore present but <30% of resource.
B Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	Pass		Pass		Pass		Pass		Pass	
C One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and fallen deadwood.	Pass		Pass	Veteran tree present.	Fail		Pass	Trees with features to support bat roosts present.	Pass	
D There is an undisturbed naturally vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice.	Fail	Surfaced footpath borders the site to the south.	Pass		Fail	Residential boundary.	Pass		Pass	
E At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Pass		Pass		Pass		Fail	Evidence of damage from grazing horses and electric fence previously pinned to trees.	Pass	
Total Passes	4		5		2		4		5	
Condition	Moderate		Good		Poor		Moderate		Good	