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Biodiversity Net Gain Strategy

Client

Hallam Land Management Limited

Project

Land South of Longsight Road

Langho

Date

November 2025

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1.0 INTRODUCTION

- 1.1 The following Biodiversity Net Gain (BNG) Strategy has been prepared by FPCR Environment and Design Ltd on behalf of Hallam Land Management Ltd, to inform the submission of an appeal relating to the refused outline planning application (Ribble Valley Borough Council planning ref: 3/2025/0196) for the redevelopment of a Site at Longsight Road, Langho (central grid reference: SD 702 344) herein referred to as 'the Site'. A full summary of the background to the appeal is set out within the appellant's planning Statement of Case (SoC).
- 1.2 This report accompanies and should be read in conjunction with the Ecological Impact Assessment (EclA) (FPCR, 2025) for the Site which has been undertaken to inform the development proposals and to provide recommendations for mitigation and enhancement.
- 1.3 The report details the results of an UKHab Survey, detailed botanical survey and River Condition Assessment, which was used to establish the pre-development biodiversity value of the Site. The report goes on to provide a Biodiversity Net Gain Calculation, based on the latest illustrative masterplan and landscape masterplan, in order to demonstrate that the delivery of a 10% net gain is feasible for the project.
- 1.4 This report updates and replaces the previously submitted BNG report for the Site, in order to incorporate the results of the detailed botanical surveys. As a result of these detailed botanical surveys, the grassland habitats recorded within the Site have been amended, variously, to change their extent, classification and condition.
- 1.5 The strategy also provides information which comprises an outline Habitat Management and Monitoring Plan (HMMP), in order to demonstrate that the habitats proposed within the site are appropriate and deliverable.

Site Context

- 1.6 The Site is approximately 20ha in extent and supports mostly grassland habitats. Primarily other neutral grassland, with a central area of lowland meadow priority grassland and a modified grassland field to the west. Two streams and a number of waterbodies were recorded on Site. In the north-east corner is an area of Lowland mixed deciduous woodland, with two further areas, lesser in extent occurring along the central stream and also on the western boundary.

Development Proposals

- 1.7 Proposals are for an Outline Application for the construction of up to 300 residential units with associated roads, parking, train station parking area, drainage and areas of public open space.

2.0 LEGISLATIVE AND POLICY CONTEXT

The Environment Act

- 2.1 In England, Biodiversity Net Gain is now required under statutory frameworks introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). Under this framework, every grant of planning permission will be deemed to have been granted subject to a general biodiversity gain condition. This will require an objective for developments to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of all onsite habitats.
- 2.2 This is a pre-commencement condition requiring the provision of a Biodiversity Gain Plan to be submitted and approved before works can be commenced, but after full planning permission, or reserved matters has been granted.
- 2.3 In principle, the grant of planning permission is not within the scope of BNG, however it is important to consider as part of the consenting body's decision-making process how a scheme will be able to demonstrate BNG after permission is granted. Therefore, this Biodiversity Net Gain report presents the results of a Biodiversity Net Gain assessment that has been completed in order to demonstrate how the proposals will be compliant with the requirements of the Environment Act.

Biodiversity Net Gain Hierarchy

- 2.4 The statutory framework allows for the 10% biodiversity gain to be delivered through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits. However, as set out in Articles 37A and 37D of the Town and Country Planning (Development Management Procedure) (England) Order 2015, development must consider the Biodiversity Net Gain hierarchy when designing scheme proposals. This sets out the following hierarchy of actions:
- First, for all medium, high and very high distinctiveness habitats, the avoidance of any adverse effects; then
 - Where these can't be avoided, mitigating any adverse effects on medium, high and very high distinctiveness habitats.
- 2.5 Then, for all onsite habitats (including low distinctiveness), adverse effects should be compensated by in accordance with the following hierarchy:
- Prioritising the enhancement of existing habitats; then
 - Creation of onsite habitats;
 - Allocation of registered offsite unit gains; then
 - Purchase of biodiversity credits.
- 2.6 Proposals must demonstrate how the biodiversity hierarchy has been applied to or provide the reasons for any deviation. This Biodiversity Net Gain hierarchy is distinct from the mitigation hierarchy set out in paragraph 193(a) of the National Planning Policy Framework (2024) which is addressed in the accompanying Ecological Impact Assessment where relevant.

Exemptions

- 2.7 There are a number of circumstances where a Site will be exempt from biodiversity net gain including:
- Development impacting habitat of an area below a 'de minimis' threshold of 25m², or 5m for linear habitats;
 - Householder applications (as defined within article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2015);
 - Self-build and custom-build applications (no more than 9 dwellings, site no larger than 0.5 ha and consists exclusively of self-build/ custom dwellings);
 - Biodiversity gain sites (where habitats are being enhanced for wildlife only); and
 - Previously developed land with a baseline score of zero (exempted via the metric).
- 2.8 The proposals for the Site do not fall under any of the above criteria and this report has therefore been prepared in order to aid the Planning Authority in their decision-making process.

National Planning Policy Framework (2024)

- 2.9 The revised NPPF (2024) seeks to ensure that the planning system contributes to and enhances the natural and local environment, protects and enhances biodiversity and geodiversity by:
- “187. d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*
- 192. b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*

Mandatory Biodiversity Net Gain Minimum Reporting Requirements

- 2.10 The Government's BNG Planning Practice Guidance (PPG)¹ sets out the minimum requirements of any planning application subject to mandatory BNG to present as part of any submission in order to validate the application. For ease of reference, the minimum information required has been set out in Table 1 below.
- 2.11 Additional detail and information appropriate to the application is provided within this report in order to assist Ribble Valley Borough Council in their decision-making process and to provide confidence that the scheme will be able to demonstrate a mandatory BNG through the provision of a Biodiversity Gain Plan following receipt of planning permission, in accordance with the PPG.

Table 1: Checklist of Minimum BNG Reporting Requirements for Planning Application Validation

Minimum Requirements in BNG PPG	Statement of Relevance to Site
<i>Confirmation that the Site is believed to be subject to the mandatory BNG condition.</i>	The Site does not meet any of the exemption criteria and so it is understood that the site will be subject to the mandatory BNG condition.

¹ Gov.uk (2024), Biodiversity Net Gain. Available at: Biodiversity net gain - GOV.UK

<i>The pre-development biodiversity value of the Site, either on the data of application or an earlier proposed date (as appropriate).</i>	The accompanying Statutory Metric completed for the scheme provides the pre-development biodiversity value of the Site. The values are also presented within this report.
<i>Where an earlier date is proposed, provide the reasons for proposing that date.</i>	The 'relevant date' is proposed to be the latest date that a Site survey was completed during which observations were made to check if any significant changes in habitats had occurred. For the Site, this will be 10 th July 2025. This is considered to be an appropriate date as it is within the date that ecological data is considered valid (two years, as recommended by CIEEM).
<i>The completed metric calculation showing the calculations of the pre-development biodiversity value of the on-site habitat on the data of application (or proposed earlier date) including the publication date of the biodiversity metric used.</i>	The Statutory Biodiversity Metric, published in July 2025, was used to calculate the pre-development value of the Site. The completed metric has been provided alongside this BNG report.
<i>A statement whether activities have been carried out prior to the date of application (or proposed date), that result in loss of on-site biodiversity value (degradation).</i>	This statement confirms that FPCR and Hallam Land Management Ltd are not aware of any habitat degradation on-site.
<i>A description of any irreplaceable habitat (as set out in column 1 of the Schedule to the Biodiversity gain Requirements (Irreplaceable Habitat) Regulations 2024) on the Site, that exists on the date of application (or an earlier proposed date)</i>	This statement confirms that two irreplaceable habitats have been identified on-site. The Lowland Mixed Deciduous Woodland W1, is mapped under the Ancient Woodland Inventory (revised completed counties) layer. A veteran Beech Tree (T75) located within the above woodland W1 is also identified as an irreplaceable habitat.
<i>Plan(s), drawn to an identified scale and showing the direction of North, showing on-site habitat existing on the date of application (or earlier proposed date) including any irreplaceable habitat (if applicable).</i>	Figure 1 shows the baseline habitats present on-site on the proposed relevant date (10 th July 2025). This includes the minimum requirement to show an identified scale and north arrow.

3.0 METHODOLOGY

Habitat Survey

- 3.1 A preliminary baseline habitat survey was undertaken on 22nd October 2024 by an Associate Ecologist from FPCR (MCIEEM, Botanical Society of Britain and Ireland's (BSBI) Field Identification Skills Competency (FISC) Level 5). The Site was initially surveyed by Ian Hunter on the 17th December 2019, following the Extended Phase 1 habitat survey methodology²

² JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit, ISBN 0 86139 636 7

- 3.2 Survey methods for the 2024 survey broadly following the UKHab Classification System³ with minor departures from this methodology to allow for compatibility with the DEFRA metric, where applicable.
- 3.3 The survey comprised a systematic walk over of the Site to classify the habitat types and collect a representative species list for each habitat. Habitats were mapped in the field, using the QField app, along with additional notes regarding the current 'condition'⁴ of the habitat, completed in accordance with the Statutory Biodiversity Metric Condition Assessments⁵.
- 3.4 Where feasible, target notes and species lists were compiled for individual areas and assessments of abundance were made using the DAFOR scale. Vascular plant nomenclature follows Stace (2019)⁶.
- 3.5 During the surveys the hedgerow network were surveyed to determine the hedgerow type and condition. To achieve this the length of the hedgerow was walked, and the woody species present recorded. In line with the hedgerow regulations, the number of native woody species within 30m sample sections was recorded, with 1-3 sample sections recorded depending on the length of the hedgerow. A record of the veteran, mature and young tree standards was taken for each hedgerow and a record of the length of each horizontal gap within the hedgerow. In addition to the above, any hedgerow trees of medium size or above (>30cm DBH) within all hedgerows which were to be lost to proposals were mapped as individual trees.
- 3.6 Detailed Botanical Surveys of the Grasslands were undertaken on the 10th July 2025 by Ian Hunter, to inform habitat classification and collect robust condition assessment information. This involved the remapping of the grassland communities present within the Site, where necessary and recording the plant species present within a series of 1m x 1m quadrats, which were used to inform the habitat classification selected and the corresponding condition assessment undertaken. Quadrats were placed within what were visually considered to be stands of homogenous vegetation where the vegetation was considered to potentially be representative of a distinct community type. The number of quadrats collected within each community sampled varied between 4-10 based on the size of the community, perceived species richness, distinctiveness or variability within the sward.
- 3.7 The location of each quadrat was recorded and a photograph taken of the sampled area. Within each quadrat, all vascular plant species were recorded and given a percentage cover. This information was then used to construct 'floristic tables' which include the frequency and abundance for each species recorded within the sample quadrats as well as information to inform classification and condition, such as species per m². The percentage cover of bare ground was also recorded within each quadrat.
- 3.8 Where species are referred to in the text, the common name for the species is used, with the associated scientific name provided within the botanical species lists for the Site in Appendix A, with Appendix A1 providing the results of the detailed botanical surveys of the grasslands, including data processing to assist with the assessment of condition. Appendix A2a & A2b

³ UKHab Ltd (2024). UK Habitat Classification Version 2.01(at <https://UKHab.org>)

⁴ Condition' is one of the measures of the quality of a habitat used within the DEFRA biodiversity metric. It takes into account key physical characteristics and typical species of a particular habitat type.

⁵ Defra (2023). "The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology" November 2023" Access [online] (Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>)

⁶ Stace, C (2019) *New Flora of the British Isles*. 4th edn. C&M Floristics

provide the results of the hedgerow surveys. Finally, Appendix A3 provides the species lists for the other habitats recorded across the site.

Habitat Condition Assessments

- 3.9 Defra has developed a metric based on evaluating each individual habitat's value within the Statutory Biodiversity Metric. All habitats/habitat compartments on site have been assessed using the technical guidance document provided by Defra for use with their biodiversity metric. The guidance provides a list of criteria for a range of broad habitat types which are used to determine whether habitat fall into a 'poor', 'fairly poor', 'moderate', 'fairly good' or 'good' condition score.

Grassland Classification and Condition Assessments

Grassland Classification

Lowland Meadow Grassland Classification

- 3.10 UKhab 2.0 includes a habitat definition for Lowland Meadow which specifies that assigning this classification to a community requires it to meet all three of the following criteria:
- a) Close correspondence with the following NVC communities is a prerequisite for this habitat type: MG4, MG5, MG8 (MG1c-e, MG2, MG7c) (As defined by *British Plant Communities Volume 3*⁷).
 - b) Meets at least two of these three criteria:
 1. >15 species m² (including grasses and excluding bryophytes);
 2. >30% cover of broadleaved herbs and sedges (excluding White Clover, Creeping Buttercup and injurious weeds); and
 3. <10% cover of rye grasses and White Clover *Trifolium repens*.
 - c) AND EITHER ≥4 of the listed indicators at least 'present' on the DAFOR scale.
OR ≥3 of the listed indicators at least 'occasional' on the DAFOR scale (but not limited to field corners or edges).

Other Neutral Grassland Classification

- 3.11 UKhab 2.0 includes a broad habitat definition for the level 4 habitat 'Other Neutral Grassland', which specifies that a community should pass at least three of the four criteria listed below to be defined as 'Other Neutral Grassland':
1. >20% cover of broadleaved herbs and sedges;
 2. >8 species per m² (including forbs, grasses, sedges and rushes, and excluding bryophytes);
 3. ≥1 grass species that is not generally sown for intensive agricultural production (ie. Ryegrasses *Lolium spp.*, Timothy *Phleum pratense*, Cock's-foot *Dactylis glomerata*, Meadow fescue *Festuca pratensis*) is at least abundant; and
 4. Cover of Rye-grasses *Lolium spp.* and White Clover *Trifolium repens*, where present, is <30%.

⁷ Rodwell, J.S. (1992). *British Plant Communities: Volume 3 Grasslands and Montane Communities*. Cambridge University Press

3.12 It is our professional judgement that the above broad habitat definition of 'Other Neutral Grassland', excludes a significant number of species poor identifiable neutral grassland communities. It is our experience that species poor, 'typical' examples of the level 5 habitats g3c5 *Arrhenatherum*, g3c7 *Deschampsia*, g3c8 *Holcus-Juncus* and in some cases g3c6 *Lolium-Cynosurus neutral* grassland would fail the UKHab broad habitat definition of other neutral grassland. In these cases, we classify the habitat as other neutral grassland, based on the community composition of the habitat recorded, with reference to the corresponding NVC Grassland community⁸ as referenced in the UKHab guidance. Where these decisions on classification have been made onsite, we have provided explanatory notes with section 5 and within the relevant condition assessment tables for the community.

Medium, High and Very High Distinctiveness Grassland Condition Assessment

3.13 A key criterion in the assessment of condition, as specified within the Statutory Metric condition assessment for Medium, High and Very High Distinctiveness grasslands is Criterion A, which states:

"The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).

Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only."

3.14 In order to quantify the assessment of this criterion, to be a 'good example' it is our consideration that as a pre-requisite for passing this criterion is that the community not only passes, but it should meet all criteria of the broad habitat definition within UKHab.

3.15 In addition, to quantify the assessment on whether a 'consistently high proportion' of relevant indicator species are present within communities an assessment is made using the quadrat data. To pass this criterion, as a rule of thumb, the quadrat data should show at least two indicators as frequent and at least three more at occasional, with scope for surveyor's professional judgement.

3.16 In order to provide a quantitative assessment of the frequency of indicator species within a community the following categories are applied to the quadrat data collected:

- Rare - present in 0-20% of quadrats;
- Occasional – Present in 21-50% of quadrats; and
- Frequent - Present in >50% of quadrats

3.17 The 'Indicator species relevant to the specific habitat type' are defined in the first instance by the habitat definitions in UKHab 2.0. The definitions of all high and very high distinctiveness grassland habitats, including lowland meadow include a detailed list of appropriate indicator species to make this assessment robustly.

3.18 However, an equivalent list of indicator species are not provided for the equivalent medium distinctiveness other neutral grassland sub-communities. As such, in these cases this was informed by the habitat descriptions in UKHab 2.0, the semi-improved grassland indicators

⁸ Rodwell, J.S. (1992). British Plant Communities: Volume 3 Grasslands and Montane Communities. Cambridge University Press

listed in the Farm Environment Plan (FEP) Manual from Natural England⁹ and surveyor experience.

River Condition Assessment

- 3.19 The River Condition Assessment (RCA) field survey was completed by two experienced ecologists both with over 4 years' experience in ecological consultancy and accredited in conducting River Condition Assessment survey using MoRPh methodology.
- 3.20 Two field surveys were conducted. The first was undertaken on 29th October 2024, working downstream during medium flow with weather conditions as 60% cloud cover, gusts of up to 16mph, and a max temperature between 13°C and 14°C. The second was undertaken on 21st November 2024, working downstream in low flow with weather conditions as 20% cloud cover, gusts of up to 17mph, and a max temperature between 3°C and 6°C.
- 3.21 Two watercourses were identified on Site, both tributaries of Bushburn Brook (R1 & R2 accordingly), with watercourse R2 passing through the centre of the Site flowing south to north and tributary B passing along the eastern Site boundary and then on the western edge of Green Nook Wood. Both tributaries pass under Longsight Road (A59) via culverts before joining a watercourse to the north. R2 measured less than 5m wide with a survey length of approximately 360m within the redline boundary. This resulted in 2 sub-reaches being surveyed (sub-reach 1 and 2) for the watercourse, comprised of 5 x 10m modules (MoRPh5), undertaken from the right bank. R1 also measured less than 5m wide with a survey length of approximately 337m within the redline boundary. This resulted in 2 sub-reaches being surveyed (sub-reach 1 and 2) for the watercourse, comprised of 5 x 10m modules (MoRPh5), undertaken from a mix of both banks.
- 3.22 R1 was identified as 'other river and stream' type F (straight/sinuuous), a non-priority river type. R2 was identified as 'other river and stream' type C (straight/sinuuous), a non-priority river type.

Biodiversity Net Gain Calculation

- 3.23 The Statutory Biodiversity Metric, published in February 2024, has been used for this scheme. The Statutory Metric is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the area-based habitats and linear features such as hedgerows and lines of trees separately, and is based on pre-determined values, along with published written guidance set by a Natural England-led team of experts.
- 3.24 The aim of biodiversity offsetting is to compensate for significant adverse impacts on biodiversity identified after appropriate avoidance, minimisation and on-site rehabilitation measures have been taken, according to the mitigation hierarchy as required by the NPPF.
- 3.25 To facilitate this, the Site has been mapped and digitised using the Statutory Biodiversity Metric QGIS Template, with the existing habitats identified and areas automatically generated. In accordance with the Statutory Biodiversity Metric User Guide, habitats have been defined under UKHab.

⁹ Natural England (2010) Farm Environment Plan (FEP) Manual: Technical guidance on the completion of the FEP and identification, condition assessment and recording of HLS FEP features

- 3.26 On Site post-development habitats were based on the submitted Illustrative Masterplan (333101612_MR_MP_VW0101F) and the Landscape Masterplan (P24-2318_07B). The post development habitat types and condition were assigned in line with the recommend enhancement measures in these areas. Proposed habitats were mapped and digitised into the latest Biodiversity Metric QGIS Template to generate areas for each of the habitats proposed for enhancement.
- 3.27 These pre- and post-development habitat areas were then inputted into the Statutory Biodiversity Metric Calculation tool. The metric then provides a habitat distinctiveness score for each of the baseline and proposed habitats which are pre-assigned scores based on the habitat type.
- 3.28 The strategic significance of the habitats was also assessed for both the pre- and post-development habitats based on the location of the site, its proximity to existing areas of biodiversity interest and its setting within wider habitat corridors.
- 3.29 The metric then assigns a range of pre-assigned factors to each of the proposed habitats. These have been advised by subject knowledge experts and are universal multipliers generated by the metric itself for the following variables relevant to habitat creation, enhancement or restoration proposals:
- Difficulty of creating or restoring/enhancing a habitat: this pre-assigned score is based on how difficult a particular habitat type is to create or restore/enhance;
 - Temporal risk: this is the 'time to target condition' for any particular habitat and determines how long a particular habitat type is likely to take to reach the condition score that the desired condition score assigned to it; and
 - Spatial risk: this score is based on the distance between the site of habitat loss and any habitats creation or enhancement proposals at any offsite offsetting solutions.
- 3.30 Full details of the calculation methodology are provided in Statutory Biodiversity Metric – User Guide¹⁰.

Habitat Trading Rules

- 3.31 Within the metric a set of trading rules are applied, the aim of these rules is to ensure that any loss of habitat is replaced on a 'like for like' or 'like for better' distinctiveness basis.
- 3.32 The trading summary draws data from across the metric and presents the data in a standard way to determine whether or not the trading principles set out in Rule 3 of the user guide have been adhered to. This trading summary avoids the need to track the changes in habitat type and condition on an individual parcel by parcel basis, which is not practical, particularly on larger sites. Table 2, below summarises the trading rule requirements for each distinctiveness band.

¹⁰ <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

Table 2: Habitat Trading Rules and associated habitat compensation requirements

Baseline Habitat Distinctiveness	Distinctiveness of Replacement Habitat Required by Trading Rules
Very High	Losses of these habitats are not able to be assessed within the metric. A bespoke assessment and compensation package must be agreed.
High	These habitats must be replaced on a like-for-like basis with the same habitat type as impacted by the scheme.
Medium	These habitat types must be replaced with units from the same broad habitat type, or any habitat from a higher distinctiveness band.
Low	These habitat types can be replaced with any other low distinctiveness habitat type, or any habitat from a high distinctiveness band.
Very Low	No replacement is required for these land uses.

Limitations

- 3.33 It was not possible to collect detailed quadrat information for Other Neutral Grassland Field G9 and Modified Grassland field M1 as the fields has just been cut for Silage. However, due to the low species diversity and richness observed during the two previous surveys in 2024 and 2019, it is considered that a robust classification and condition assessment has been made based on the available data.
- 3.34 No further limitations specific to this report influenced this assessment.

4.0 RESULTS

Strategic Significance

- 4.1 There are three levels of strategic significance:
- Highly strategically significant ('formally identified in local strategy') - pre and post development habitats are subject to a 15% multiplier;
 - Medium strategic significance (Location Ecologically Desirable but not in Local strategy) - pre and post development habitats are subject to a 10% multiplier; and
 - Low strategic significance (Area not in local strategy) – No multiplier.
- 4.2 The Local Nature Recovery Strategy (LNRS) for the area, which is the relevant strategic policy which would define strategic significance, has been published in draft. The draft LNRS Habitat Map¹¹ includes the central and eastern section of the Site under 'Areas that could become important, which are regarded as opportunity areas for potential measures that could be undertaken. Much of the Site is mapped under the woodland broad habitat opportunity layer, which states as priorities:
- Retention and appropriate maintenance of aged, ancient and veteran trees to maximise their lifespan and biodiversity value; and

¹¹ <https://experience.arcgis.com/experience/92a5cd8951b84c65b9cd842f5ffc2333/>

- Restore natural processes and enhance the biodiversity value of existing wooded habitats, prioritising ancient and long established woodlands, temperate rainforest, plantations on Ancient Woodland Sites (PAWS) and wet woodland.

4.3 The Site is also mapped under the Urban broad habitat opportunity layer which states: *Wooded habitat creation and enhancement in urban open spaces such as orchards, street trees, micro-woods, urban woodland and hedgerows.*

4.4 Informed by the above the calculations have been undertaken on the assumption that the following habitat interventions would be of high strategic significance:

- Enhancement of existing woodland habitats; and
- The planting of urban trees.


4.5 All other habitat creation and enhancement measures are of low strategic significance.



Baseline Habitats



4.6 Each habitat within the Site has been described in Table 3 below using the corresponding UKHab classification, with habitats ordered by their distinctiveness. A summary of the assessed condition of the habitat (where applicable) is provided within the table, with the full condition assessment tables provided in Appendix B.



4.7 Appendix A includes the botanical species lists of the habitats recorded. Figure 1 shows the baseline habitats recorded during the survey, together with the parcel reference codes and Figure 4 shows the Baseline Condition & Distinctiveness Plan.



Table 3: Baseline habitat Descriptions

Ref	Habitat type	Condition	Description	Photo
Very High Distinctiveness				
G11	Lowland Meadow	Poor	<p>Community G11 was moderately species rich neutral grassland community recorded at the southern extent of the Site to the West of Watercourse R2. The community featured a diverse mixture of species, including a number of neutral grassland and lowland meadow indicators. However the majority of these were present at lower frequencies, which resulted in the average number of species per m² recorded during the detailed botanical surveys being lower than typical examples of the community.</p> <p>The tall, closed sward was characterised by common bent, red fescue, sweet vernal-grass and hairy sedge with crested dog's-tail and heath-grass noted at lower frequencies. Tormentil, ribwort plantain and meadow buttercup were frequent throughout with eyebright, greater bird's-foot-trefoil, great burnet and betony locally frequent. Himalayan balsam was occasionally noted in association with the margins of the watercourse.</p> <p><u>Classification</u> The community is representative of NVC community MG5c the <i>Danthonia decumbens</i> sub-community. The <i>Danthonia</i> sub-community is the acid influenced sub-community of MG5, with its classification here based on the frequency and abundance of preferential species such as tormentil, eyebright, heath-grass, betony, devil's-bit scabious, field wood-rush and sneezewort, which occur together with a range of neutral grassland indicators, such as ribwort plantain meadow buttercup, common sorrel and common bird's-foot-trefoil.</p> <p><u>Lowland Meadow Criteria</u> 1. >15 species m² (including grasses and excluding bryophytes) – <u>FAIL (12.67 m²)</u> 2. >30% cover of broadleaved herbs and sedges – <u>PASS – 36.17%</u> 3. <10% cover of rye grasses and White Clover – <u>PASS – 3.3%</u> AND EITHER ≥4 of these indicators at least 'present' on the DAFOR scale. – <u>PASS 12 present</u> OR ≥3 of these indicators at least 'occasional' on the DAFOR scale – <u>PASS – Five Occasional in quadrats</u></p> <p>On the basis of the habitat meeting the pre-requisite habitat classification of MG5 and passing the lowland meadow criteria outlined in UKHab the classification of g3a Lowland Meadow was made.</p> <p><u>Condition</u> Overall, the community was assessed as being in Poor condition, principally due to failing essential criterion A. Although it is a good fit for NVC community MG5c, assessment has shown it is not a good example of the type, lacking the overall species richness and cover of indicator species seen in the best examples. Here, no Lowland meadow indicators were recorded as frequent within the quadrats with 5 at occasional. The community is managed by extensive low density grazing and is considered to be undermanaged, in common with the wider eastern and central fields, which is evident through the tall closed grassy swards and the lack of bare ground. These limit herbaceous diversity and cover to the detriment to the conservation value of the community.</p> <p>The community also failed on the local presence of the invasive species Himalayan balsam on the margins of the habitat next to R2.</p>	
High Distinctiveness				




Ref	Habitat type	Condition	Description	Photo
W1	Lowland mixed deciduous woodland	Poor	<p>Woodland W1, known locally as Green Nook Wood, was recorded to the north-east of the Site. Pedunculate Oak was abundant amongst the canopy sycamore and beech (including a veteran) occasional associates. These canopy trees formed a high single storey canopy, lacking any significant understorey with only hazel recorded at occasional or above. The ground flora would be broadly characterised as NVC community W11 <i>Quercus petraea</i> - <i>Betula pubescens</i> - <i>Oxalis acetosella</i> woodland) with an abundance of common bent, frequent cock's foot and a limited number of herbaceous species such as wood speedwell, wood avens and broad buckler-fern recorded occasionally. However, the woodland was open to grazing stock, with evidence of grazing pressure negatively impacting the woodland.</p> <p>Further north alder was more prominent within the canopy and tufted hair-grass and creeping buttercup become locally frequent along with marsh thistle and Reed canary-grass at lower frequencies, indicative of damper conditions. The banks of watercourse R1, which runs along the woodlands western edge, had a degree of protection for grazing animals and featured a more diverse assemblage of plants, including yellow pimpernel, common figwort, remote sedge and lady-fern. The stream side vegetation and the alder dominated areas were characteristic of NVC community W7 <i>Alnus glutinosa</i> - <i>Fraxinus excelsior</i> - <i>Lysimachia nemorum</i> woodland. The woodland pond P1 was recorded in this area. The invasive species Himalayan balsam was recorded locally along the eastern and northern extent of the woodland.</p> <p>Due to the age and native status of the canopy trees, together with the typical associated woodland ground flora, this woodland was classified as lowland mixed deciduous woodland, a priority habitat type. The woodland is also mapped on the updated Ancient Woodland Inventory (revised completed counties) layer, with the classification of ancient woodland supported by the field survey which show the ground flora comprises recognisable NVC communities, with a number of ancient woodland indicators, albeit at low frequencies. As a result this habitats is considered to be an irreplaceable habitat as defined by the NPPF and the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024.</p> <p>The woodland was assessed as being in poor condition, scoring poorly on herbivore damage, structure and regeneration.</p>	
W2	Lowland mixed deciduous woodland	Poor	<p>Woodland W2 was an additional area of lowland mixed deciduous woodland, recorded in a mosaic with species rich neutral grassland, and scattered Trees along the steep-sided valley of Watercourse R2 which runs through the centre of the site. Pedunculate oak was abundant within the canopy with ash and alder at lower frequencies. Hawthorn and holly were occasional amongst the scattered scrub understorey. On the slope tops the ground flora displayed an acidic influence, characterised by common bent, with the herbaceous species such as foxglove and tormentil scattered throughout. In the sheltered valley sides, a cooler, damper influence was noted, evidenced by an increased incidence of the ferns broad buckler-fern, male-fern and hart's-tongue.</p> <p>The community was assessed as being in poor condition scoring badly on structure, herbivore damage, invasive species and regeneration.</p>	



Ref	Habitat type	Condition	Description	Photo
W3	Lowland mixed deciduous woodland	Moderate	<p>Woodland W3 was recorded along the steep banks of a ditch to the western extent of the Site. Pedunculate oak, sycamore and ash were co-dominant within the canopy. A healthy understorey was noted with frequent hazel and oak saplings recorded. The ground flora featured a reasonable diversity of species characteristic of old woodlands, with wood melick, dog's mercury, broad buckler-fern and Hairy-brome all recorded. Himalayan balsam was locally frequent at the slope bottom.</p> <p>The woodland was assessed as being in moderate condition due to the improved structure and regeneration, but the community still scored poorly in relation to invasive species and the amount of deadwood.</p>	
Medium Distinctiveness				
G1	Other neutral grassland	Moderate	<p>Other Neutral Grassland Community G1 was recorded within the eastern section of the eastern field compartment and comprised a moderately species rich example of g3c6 <i>Lolium -Cynosurus</i> grassland. The sward comprised an intimate mixture of common bent, Yorkshire-fog, red fescue, perennial rye-grass, sweet vernal-grass and hairy sedge, with the general character of the sward being tall. The undesirable species creeping thistle formed locally frequent patches with creeping buttercup and common ragwort scattered throughout.</p> <p>The bulk of the herbaceous cover was made up by the neutral indicators: common sorrel, ribwort plantain and meadow buttercup. However, a number of lowland meadow indicator species including meadow vetchling, great burnet, tormentil, eyebright and greater bird's-foot trefoil were scattered across the community at lower frequencies.</p> <p><u>Classification</u> The community is a moderately species rich example of NVC Community MG6b, the <i>Anthoxanthum</i> sub-community. Although some Lowland Meadow species were present, only meadow vetchling (frequent) and greater bird's-foot-trefoil (occasional) were above occasional within the quadrats.</p> <p>Lowland Meadow Criteria 1. >15 species m² (including grasses and excluding bryophytes) – FAIL (10.71 m²) 2. >30% cover of broadleaved herbs and sedges – FAIL – 27.43% 3. <10% cover of rye grasses and White Clover – PASS – 4.57% AND EITHER ≥4 of these indicators at least 'present' on the DAFOR scale. – PASS 6 present OR ≥3 of these indicators at least 'occasional' on the DAFOR scale – FAIL 2 ≥ Occasional in quadrats</p> <p>On the basis of the above a classification of Other Neutral Grassland - g3c6 <i>Lolium -Cynosurus</i> grassland was made.</p> <p><u>Condition</u></p>	




Ref	Habitat type	Condition	Description	Photo
			Overall, the community was assessed as being in Moderate condition, passing essential criterion A, due to neutral grassland and Lowland meadow indicators being well represented throughout. However, the community failed on sward height variation, lack of bare ground and overall cover of undesirable species.	
G1a	Other neutral grassland	Moderate	<p>Community G1a, was similar to the community G1, described above, but overall was less diverse and lacked the diversity and coverage of indicator species. Th undesirable specie creeping thistle was also locally frequent.</p> <p><u>Classification</u> The community is a moderately species rich example of NVC Community MG6b, the <i>Anthoxanthum</i> sub-community (g3c6 <i>Lolium -Cynosurus</i> grassland in UKHab). Only 3 lowland meadow indicators were noted within the community none of which were in the quadrats.</p> <p>Lowland Meadow Criteria: 1. >15 species m² (including grasses and excluding bryophytes) – FAIL (9.4 m²) 2. >30% cover of broadleaved herbs and sedges – FAIL – 24% 3. <10% cover of rye grasses and White Clover – PASS – 7% AND EITHER ≥4 of these indicators at least 'present' on the DAFOR scale. – Fail 3 present OR ≥3 of these indicators at least 'occasional' on the DAFOR scale – FAIL 0 ≥ Occasional in quadrats</p> <p>On the basis of the above a classification of Other Neutral Grassland - g3c6 <i>Lolium -Cynosurus</i> grassland was made.</p> <p><u>Condition</u> Overall, the community was assessed as being in Moderate condition, passing essential criterion A, as the Neutral grassland indicators meadow buttercup, ribwort plantain and common sorrel were all frequent within the quadrats. The community failed on the lack of bare ground, overall cover of undesirable species and species richness.</p>	
G1b	Other neutral grassland	Moderate	<p>Community G1b was a short-grazed species rich grassland community recorded on the southern, western and south-eastern boundaries of the eastern field, as well as locally along ridges within the field. As with G1, the sward comprised an intimate mixture of common bent, Yorkshire-fog, red fescue, perennial rye-grass, sweet vernal-grass, but in a short, closed sward with the increased incidence of field wood-rush and crested dog's-tail.</p> <p>The most notable component of the herbaceous diversity was eyebright which was frequent throughout, along with ribwort plantain, meadow buttercup and common sorrel. Lowland Meadow indicator species such as tormentil, glaucous sedge, sneezewort and betony were present, but with the exception of eyebright these were all at local distributions or lower frequencies generally.</p> <p>This community now contains the small bank of grassland adjacent to watercourse R1, which was previously recorded as a medium distinctiveness acid grassland community. This previous classification was made due to the presence of tormentil and betony. However, detailed surveys do not show a strong difference between this bank of grassland and the wider G1b community.</p> <p><u>Classification</u></p>	




Ref	Habitat type	Condition	Description	Photo
			<p>The community is considered a species rich example of NVC Community MG6b, the <i>Anthoxanthum</i> sub-community. Although eyebright was constant, other MG5c indicators were highly local (1 patch of betony for example) or were rare generally, with the constant species being the typical MG6 indicators meadow buttercup, common sorrel, white clover and ribwort plantain.</p> <p>Lowland Meadow Criteria 1. >15 species m² (including grasses and excluding bryophytes) – FAIL (12 m²) 2. >30% cover of broadleaved herbs and sedges – PASS – 34.3% 3. <10% cover of rye grasses and White Clover – FAIL – 11.8% AND EITHER ≥4 of these indicators at least 'present' on the DAFOR scale. – PASS 10 present OR ≥3 of these indicators at least 'occasional' on the DAFOR scale – FAIL 2 ≥ Occasional in quadrats</p> <p>On the basis of the above a classification of Other Neutral Grassland - g3c6 <i>Lolium -Cynosurus</i> grassland was made.</p> <p><u>Condition</u> Overall, the community was assessed as being in Moderate condition, passing essential criterion A, due to neutral grassland and Lowland meadow indicators being well represented throughout. However, the community failed on sward height variation, lack of bare ground and overall cover of undesirable species.</p>	
G2	Other neutral grassland	Good	<p>Community G2, recorded centrally within the Northern section of the eastern field and comprised a taller wet grassland community, with a sward characterised by an increased cover of rushes, including compact rush (frequent), soft-rush (occasional), hard rush (occasional) and sharp-flowered rush (locally frequent). These rushes were growing together with Yorkshire-fog, common bent, sweet vernal grass and hairy sedge.</p> <p>Greater bird's-foot-trefoil, common sorrel, common sedge, creeping buttercup and ribwort plantain were the indicators with the highest coverage, recorded with oval sedge, meadow buttercup, great burnet, tormentil and meadow sweet at low frequencies.</p> <p><u>Classification</u> The community is considered a good example of NVC community Mg10 (equivalent of g3c8 <i>Holcus Juncus</i> Grassland in UKHAB), moving towards M23b rush pasture, the soft rush sub-community (f2b rush pasture in UKHab). However, the community recorded is not species rich enough to classify as the priority habitat type of rush pasture and overall lacks either the presence or frequency of typical M23 indicators, such as common marsh bedstraw, marsh thistle, wild angelica. Of the typical M23 indicators, only common sedge and greater bird's-foot-trefoil were recorded at occasional or above in the quadrats.</p> <p>On the basis of the above a classification of Other Neutral Grassland - g3c8 <i>Holcus-Juncus</i> grassland was made. The community is not a close match to NVC communities MG4 MG5 or MG8 and so does not meet the qualifying criteria for lowland meadows.</p> <p><u>Condition.</u> The community was assessed as being in Good condition, passing all criteria. Essential criterion A was passed due to neutral grassland and Lowland meadow indicators being well represented throughout.</p>	




Ref	Habitat type	Condition	Description	Photo
G3	Other neutral grassland	Moderate	<p>Community ONG3 was recorded to the north of the Site along the A59, to the west of watercourse R2. The sward was characterised by an intimate mixture of grasses, including perennial rye-grass at an average cover of ~10%. Herbaceous cover featured frequent ribwort plantain, great bird's-foot-trefoil, locally frequent silverweed, with occasional red bartsia, common sorrel and tormentil.</p> <p><u>Classification</u> The community was considered to be a moderately species rich example of g3c6 <i>Lolium -Cynosurus</i> grassland and does not meet the qualifying criteria for lowland meadow.</p> <p><u>Condition</u> The community was assessed as being in moderate condition, passing essential criterion A due to two indicators being frequent and three occasional within the quadrats. The grassland failed on the diversity of sward height and the lack of bare ground.</p>	
G4	Other neutral grassland	Poor	<p>Recorded to the south of G3, this community featured a similar sward composition, characterised by a mixture of grasses within which common bent and perennial rye-grass were the most abundant. The bulk of the herbaceous cover was formed by creeping buttercup, but ribwort plantain, common mouse-ear, red bartsia, common sorrel and eyebright were all scattered through the sward at low covers.</p> <p><u>Classification</u> The community is a typical example of g3c6 <i>Lolium -Cynosurus</i> grassland and does not meet the qualifying criteria for lowland meadow.</p> <p><u>Condition</u> The community was assessed as being in poor condition, failing essential criterion A as it does not pass all four other neutral grassland broad habitat definition criteria. Additionally, the detailed botanical survey only recorded 1 indicator as frequent and two as occasional within the quadrats. The grassland failed all other criteria with the exception of the scrub/bracken cover.</p>	
G5	Other neutral grassland	Poor	<p>Recorded to the west of G3, along the A59, this community featured an intimate mixture of grasses, with common bent, Yorkshire-fog and perennial rye-grass the most abundant. Meadow buttercup and ribwort plantain were frequent common mouse-ear, red bartsia, common sorrel, eyebright and meadow vetchling noted at low frequencies.</p> <p><u>Classification</u> The community is a typical example of g3c6 <i>Lolium -Cynosurus</i> grassland and does not meet the qualifying criteria for lowland meadow.</p> <p><u>Condition</u> The community was assessed as being in poor condition, failing essential criterion A as it does not pass all four other neutral grassland broad habitat definition criteria. Additionally, only 1 indicator was recorded at occasional or above within the quadrats. As with G4, the grassland failed all other criteria with the exception of the scrub/bracken cover.</p>	




Ref	Habitat type	Condition	Description	Photo
G6	Other neutral grassland	Poor	<p>A small unmanaged g3c5 <i>Arrhenatherum</i> grassland community recorded to the north-west of the Site. The tall sward was characterised by the broad-leaved grasses, cock's-foot, false oat-grass, Yorkshire fog and creeping bent. Herbaceous diversity was low, limited to occasional common sorrel and meadow buttercup. Ruderal species were common including locally frequent creeping thistle, great willowherb and occasional common hogweed. Bramble was encroaching locally at the margins and the invasive species Himalayan balsam was locally frequent on the margins of the ditch which runs through the habitat to the west.</p> <p>The community was assessed as being in poor condition, failing on the lack of neutral indicators and high coverage of undesirable species.</p>	
G7	Other neutral grassland	Poor	<p>The central field in the site, contained a community of g3c6 <i>Lolium -Cynosurus</i> grassland on a shallow north facing slope. Common bent, perennial rye-grass, red fescue, Yorkshire-fog and sweet vernal-grass characterised the sward. Meadow buttercup, ribwort plantain and common sorrel were constants, with creeping buttercup, eyebright and red clover occasional associates.</p> <p><u>Classification</u> The community is a typical example of g3c6 <i>Lolium -Cynosurus</i> grassland, with high frequency of neutral grassland indicators. It does not meet the qualifying criteria for lowland meadow, but features four lowland meadow indicators, only one of which is above rare.</p> <p><u>Condition</u> The community was assessed as being in Poor condition, passing essential criterion A, but failing all other criteria with the exception of the scrub/bracken cover. Criterion A was passed due to three indicators being frequent and two occasional within the quadrats.</p>	
G8	Other neutral grassland	Good	<p>Community ONG8 was a moderately species rich neutral grassland community recorded to along the western edge of watercourse R2, to the north of the Site. Generally, the sward was dominated by fine leaved grasses, particularly common bent and red fescue.</p> <p>Within the community a small bank of acid influenced grassland was noted (sampled by quadrat Q1), which featured sheep's fescue, heath-grass and tormentil, as well as more mesotrophic herbs such as common bird's-foot-trefoil and cat's-ear. Additionally, there was a small area with high cover of sharp-flowered-rush (sampled by quadrat Q2), which also featured common sedge, common knapweed and great burnet.</p> <p>Elsewhere, eyebright, ribwort plantain, meadow buttercup, common bird's-foot-trefoil are common with a range of other indicators noted at low frequencies.</p> <p><u>Classification</u> Although containing localised areas with acidic and damp influences, overall, the community is considered a good example of NVC Community MG6b. The most constant herbs were the ONG indicators ribwort plantain and meadow buttercup, along with eyebright and common bird's-foot-trefoil. Beyond those four, a range of lowland meadow and MG5c indicators were recorded but only rarely.</p>	

Ref	Habitat type	Condition	Description	Photo
			<p>Lowland Meadow Criteria</p> <p>1. >15 species m² (including grasses and excluding bryophytes) – <u>FAIL (12.25m²)</u></p> <p>2. >30% cover of broadleaved herbs and sedges – <u>FAIL – 27.5%</u></p> <p>. <10% cover of rye grasses and White Clover – <u>PASS – 5%</u></p> <p>AND EITHER ≥4 of these indicators at least 'present' on the DAFOR scale. – <u>PASS 12 present</u></p> <p>OR ≥3 of these indicators at least 'occasional' on the DAFOR scale – <u>PASS 9 ≥ Occasional in quadrats</u></p> <p>On the basis of the above a classification of Other Neutral Grassland - g3c6 <i>Lolium -Cynosurus</i> grassland was made.</p> <p><u>Condition</u></p> <p>As a result of the frequency and cover of neutral grassland and lowland meadow indicators, the community was assessed as passing criterion A. Overall the community was assessed as being in good condition, failing only on the local presence of the invasive species Himalayan balsam along the boundary with watercourse R2.</p>	
G9	Other neutral grassland	Poor	<p>Parcel G9, recorded to the west of the Site featured a short sward of abundant perennial rye-grass, with frequent Yorkshire-fog and creeping bent and occasional red fescue. Dandelion was the most frequent forb noted, with common sorrel, creeping buttercup and meadow buttercup being occasional and ribwort plantain and common mouse-ear rare.</p> <p>The community was considered to be borderline between g4 modified grassland and g3c other neutral grassland, with a classification of g3c made on the basis of the overall species richness and the frequency of a number of neutral grassland indicators.</p> <p>It was not possible to collect detailed quadrat information for this field as the field has just been cut. However, due to the low species richness observed during the previous surveys, it is considered that a robust classification and condition assessment has been made.</p>	
P1-P6	Ponds (non-priority habitat)	Moderate	<p>Six ponds were recorded around the Site.</p> <p>P1 – Recorded on the northern boundary within woodland W1 and mapped as a constituent part of the woodland habitats. A heavily vegetated pond with abundant creeping buttercup and locally frequent Himalayan balsam.</p> <p>P2 – A seasonally wet pond dominated by soft-rush present within community ONG4</p> <p>P3 – A heavily vegetated pond in a hollow within ONG3, featuring frequent floating sweet-grass and creeping buttercup.</p> <p>P4 – A shallow hollow on the southern boundary, featuring shallow water heavily vegetated with floating sweet-grass and creeping buttercup.</p> <p>P5 – A seasonally wet pond within a hollow to the southern extent of ONG7. Creeping buttercup, broad-leaved dock and creeping bent were all locally frequent</p> <p>P6 – A shallow heavily vegetated pond on the eastern margin of grassland field ONG9. Featuring dominant creeping bent.</p> <p>All ponds within the site were assessed as being in moderate condition, scoring well on water quality and the lack of artificial drains.</p>	

Ref	Habitat type	Condition	Description	Photo
SC1	Hawthorn scrub	Poor	<p>Sc1, recorded on the Sites eastern boundary was an open even aged scrub community featuring frequent hawthorn, along with holly and hazel. The ground flora was dominated by ruderal species, particularly common nettle and creeping thistle, with the invasive species Himalayan balsam locally frequent.</p> <p>The scrub was assessed as being in poor condition, failing all criteria.</p>	
SC2	Blackthorn scrub	Poor	<p>An area of continuous scrub was recorded on the western boundary of the Site between hedgerows H4 and H5. Blackthorn was abundant with hawthorn and a alder standard.</p> <p>The community was assessed as being in poor condition, failing on the even aged nature of the habitat, the dominance of a single species and lack of glades.</p>	
	Individual Trees – Veteran	Good	<p>A single veteran tree was noted within the Site, present within W1, the lowland mixed deciduous woodland. This tree meets the definition of an irreplaceable habitat within the NPPF and the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. Although this tree is a constituent part of woodland W1, it has been mapped separately in Figure 1 and included as a separate line in the Statutory Metric.</p> <p>The tree is an old beech pollard with a DBH of 165cm. The tree was assessed as being in good condition, failing only criterion A, as it is not a native tree species to this part of the UK.</p>	

Ref	Habitat type	Condition	Description	Photo
	Individual trees	Good	<p>Mature freestanding trees, particularly of pedunculate oak, were a prominent feature of the Site. A total of 37 freestanding trees in good condition were recorded within the Site, of the following size categories:</p> <ul style="list-style-type: none"> • Four Very large • 29 Large • Four medium <p>The majority of the trees were pedunculate oak, with the exception of T1, T42, T43 and T44, which were alders; T63 which was a sycamore and T69 which was an ash.</p>	
	Individual trees	Moderate	Two additional medium sized trees, T10 and T71 were recorded in moderate condition.	
Low Distinctiveness				
M1	Modified grassland	Poor	<p>A small field to the west of the Site, contained species poor modified grassland. Perennial rye-grass was dominant within the sward, growing with occasional Yorkshire fog. Creeping buttercup and dandelion were the most frequently recorded forbs, with meadow buttercup, common sorrel and cuckooflower noted at low frequencies.</p> <p>The community was assessed as containing less than 6 species per m² and as a result was recorded in poor condition.</p> <p>It was not possible to collect detailed quadrat information for this field as the field has just been cut. However, due to the low species richness observed during the previous surveys, it is considered that a robust classification and condition assessment has been made.</p>	
	Tall forbs	Poor	An area of tall forbs were recorded to the south of ONG5. Common nettle was locally abundant, growing with frequent creeping thistle and Broad-leaved dock.	

Ref	Habitat type	Condition	Description	Photo
Linear Habitats				
H3, H5	Species-rich native hedgerow	Moderate - Good	Two species rich hedgerows were recorded on the western boundary of the Site. H3 was characterised by hawthorn with occasional hazel and elder and featured a single pedunculate oak standard. The hedgerow was assessed as being on moderate condition. H5 featured frequent hawthorn, holly and hazel, with a single mature oak standard and was assessed as being in good condition.	
H1, H2, H4	Native hedgerow	Moderate	Three species poor hedgerows were recorded within the Site. H1 was recorded on the Site's northern boundary and was dominated by hawthorn, with occasional elder. Himalayan balsam was present to the east. H2 was a boundary hedgerow to an adjacent property at the western extent, again dominated by hawthorn. H4 which connected woodland W3 to scrub Sc2, featured blackthorn and hawthorn, along with a mature ash tree. All three hedgerows were assessed as being in moderate condition.	
LoT 1	Ecologically valuable line of trees	Moderate	A mature row of trees was recorded on the southern extent of the western boundary. The tree line featured two prominent large pedunculate oak trees, together with a further 3 medium sized oaks and a medium ash tree. A number of outgrown hazel stools and large holly bushes were also present. The tree line was assessed as being in moderate condition, failing only on the lack of an undisturbed vegetated strip on the offsite roadside.	
Watercourses				

Ref	Habitat type	Condition	Description	Photo
R1	Other Rivers and streams	Fairly Poor and Poor	<p>Watercourse R1 was recorded on the Sites eastern boundary, with the stream issuing to the south of the Site near tree T1. The stream then flows south, along the western edge of Woodland W1, before exiting the site via a culvert under Longsight Road.</p> <p>The watercourse featured a reasonable variety of emergent vegetation with brooklime, water-cress, floating sweet-grass, creeping buttercup and reed canary-grass. The invasive Species Himalayan balsam was locally frequent.</p> <p>The watercourse comprised two sub-reaches, with sub-reach A assessed upstream where the stream banks are open and sub-reach B downstream, where R1 runs adjacent woodland W1. Sub-reach A was assessed as being in 'Fairly poor' and sub-reach B 'Moderate' condition. It was also considered to be over deep (river shape index of 2.480 and 2.5). Therefore, the condition of has been downgraded from 'Fairly poor' to 'Poor' for sub-reach A and moderate to 'Fairly poor' for sub-reach B condition. See Appendix C for results.</p>	
R2	Other Rivers and streams	Fairly Poor	<p>Watercourse R2 ran from south to north through the centre of the Site, issuing from a culvert under the railway and running through the steep sided channel featuring woodland W2. Himalayan balsam was frequent along the watercourse, particularly to the north.</p> <p>The watercourse comprised two sub-reaches, with sub-reach A recorded to the south of the Site where banks were open and sub-reach B being further downstream within woodland W2. with both of the reaches assessed as being in 'Moderate' condition, however, it was also considered to be over deep (river shape index of 0.556 and 1.160). Therefore, the condition of R1 has been downgraded from moderate to 'Fairly poor' condition. See Appendix C for results.</p>	
D1	Ditch	Poor	<p>Watercourse D1, was a shallow ditch running along the western boundary edge within at the centre of woodland D1. Th ditch featured very shallow water with Himalayan balsam locally frequent at its northern extent.</p> <p>The ditch was assessed as being in poor condition.</p>	

Baseline Habitat Value

- 4.8 The baseline value of the Site has been calculated at 145.52 area habitat units, 6.41 watercourse units and 3.94 hedgerow units. Therefore, a total of 160.07 habitat units, 7.05 watercourse units and 4.33 hedgerow units will be required to deliver a 10% net gain within the Site. Note: a 10% gain will need to be provided for the habitat and linear units separately, i.e., a gain in hedgerow units cannot be used to offset a deficit in habitat units.

5.0 PROPOSED HABITATS - OUTLINE HMMP

- 5.1 The habitats proposed are shown in Figure 2 with the proposed habitat distinctiveness and condition shown on Figure 5. Proposals are for an Outline Application, with detailed design and landscaping reserved for subsequent approvals. As such, the proposed habitat classification and condition have been determined from the Illustrative Masterplan (333101612_MR_MP_VW0101F) and the Landscape Masterplan (P24-2318_07B).

Habitat Retention – BNG Hierarchy

- 5.2 Figure 3 shows the habitat retention plan. The vast majority of the site comprises medium distinctiveness grassland habitats. The central river corridor and the eastern section of the Site comprise habitats of higher biodiversity value, including very high distinctiveness lowland meadow grassland, high distinctiveness woodland and medium distinctiveness other neutral grassland in moderate and good condition. The western section of the site comprising of grasslands of low species diversity (modified grassland and other neutral grassland in poor condition).
- 5.3 The iterative design process, which led to the sites Illustrative Masterplan has sought to retain higher distinctiveness habitats within the site and to strengthen existing ecological corridors. This has been achieved through the following intrinsic ecological avoidance measures

Irreplaceable Habitats

- Proposals will retain and appropriately buffer the lowland mixed deciduous woodland W1 and the veteran tree recorded within it. The woodland will be buffered by a minimum distance of 15m from built development. It will also be enhanced as part of proposals, the details of which are provided in table 4 below.

Very High Distinctiveness Habitats

- This biodiversity net gain assessment has assumed the loss of the entirety of the 0.8796ha of lowland meadow recorded within the Site. Of this total, 0.7726ha will be translocated to the western section of the Site, replacing the existing modified grassland field M1. The 0.7726ha to be translocated accounts for the 0.72ha under the footprint of built development and an additional 0.0526ha which is outside the built development, but greater than 10m from the watercourse.
- Within the Statutory Metric, the translocated lowland meadow grassland has been treated as lost in its original location and created lowland meadow in the proposed receptor site. A 5-year 'created in advance' multiplier has been added to the created habitat, to take into

account the benefits of translocating an existing habitat compared to creating it from a modified grassland baseline. This reduces the time to target condition and difficulty multipliers within the metric but still accounts for a proportionate degree of risk in delivery.

- The remaining 0.107ha of lowland meadow, which is present within 10m of the watercourse will not be translocated and will be in effect retained but treated as lost and recreated as other neutral grassland in good condition within the statutory biodiversity metric, to account for the risk of degradation. This area has had a 10-year 'created in advance' multiplier applied, which is the time to target condition for other neutral grassland in good condition, to take into account the fact that this habitat has not been created.

High Distinctiveness Habitats

- Impacts to high distinctiveness habitats have been avoided, with the retention and buffering of the Lowland mixed deciduous woodland present within the Site. Furthermore, woodlands W2 will be enhanced as part of proposals, which supports wider LNRS aims.
- Similarly, both streams, which are high distinctiveness watercourse habitats, will be retained as part of proposals, with the exception of two sections of the central watercourse R2, which will require culverting under the proposed internal roads. Watercourse R1, present on the sites eastern boundary will be enhanced as part of proposals.

Medium Distinctiveness Habitat

- Proposals have sought to focus development on the western section of the site, which contains predominantly neutral and modified grassland in poor condition. Significant areas of the moderately species rich grassland (Other Neutral Grassland in Good and moderate condition) recorded centrally and to the east of the site will be retained, with measures outlined to enhance them where possible.
- The vast majority of mature free-standing trees have been retained and buffered as part of proposals, the exceptions are:
 - A large oak tree and a medium alder, which require removal to facilitate the internal access road to the south of the site;
 - Three large oak trees and a medium sycamore, which require removal to facilitate the creation of a SuDS basin to the north of the Site;
 - One large and a medium oak tree which require removal to facilitate residential development to the east; and
 - A single medium sized ash tree on the northern Site boundary.
- All hedgerows and tree lines will be retained, with the exception of 160m of species poor native hedgerow (H1), which will be removed to facilitate access and the visibility splay.

Habitat Creation and Enhancement

- 5.4 Tables 4 and 5, below outline the proposed habitats within the site, which have been determined, determined from the Illustrative Masterplan (333101612_MR_MP_VW0101F) and the Landscape Masterplan (P24-2318_07B). Outline habitat creation and ongoing management prescriptions have been included for each habitat to demonstrate how measures will meet the specified habitat creation and condition criteria required. This has been provided to highlight

how the onsite measures secured by subsequent approvals could contribute to satisfactorily discharging the Biodiversity Net Gain condition.

Table 4: Proposed area-based habitats

Habitat	Outline Habitat Creation and management prescriptions	Target Condition
<p>Lowland Meadow</p>	<p>The existing lowland meadow community (G11) is proposed to be translocated, with the proposed receptor Site being field M1 to the west of the Site. A outline method statement for the proposed grassland translocation has been provided separately, with a summary of the methods provided below.</p> <p><u>Abiotic requirements:</u> It is considered that the removal of the topsoil layer to the subsoil within the receptor site will remove the risk of any potential constraints related to soil fertility in the receptor topsoil. The topography of the donor and receptor are broadly similar with more localised areas of varied topography within the donor site.</p> <p><u>Timings:</u> The optimal time to undertake grassland translocation is Autumn when soils are warm, toward the end of the plant growing season but before winter months.</p> <p><u>Methods:</u> All work to be done by specialist contractors and equipment. The existing sward and top-soil within the receptor site will be stripped immediately prior to the translocation. The turves will be taken to a consistent depth, as determined by a pre-commencement soil survey, using a specialist flat bottomed and untoothed bucket. Turf sizes should be as large as possible without making handling and transport difficult to the potential degradation of the turf. It is recommended that a turf size of no less than 3m². Turves will be cut sequentially and placed, where extents allow, in the same configuration within the receptor site. Turves should be immediately transported to the receptor site laid in the pit as evenly as possible and firmed gently with the machine bucket to ensure they are in full contact with the surface beneath.</p> <p><u>Initial Management:</u> In the first year any bare ground may be colonised by annuals and the movement of the turves may release nutrients resulting in higher growth rates. As such, two and potentially three cuts may be required, with arisings removed.</p> <p><u>On-going management</u> will involve a cut after flowering in July (with late June-August acceptable), removing arisings, preferably after they have dried, but immediately with the use of a cut and collect mower is also acceptable. Once every four years cut the grassland in September to allow late flowering species to set seed. In the absence of aftermath grazing a second cut and collect will be undertaken in late autumn or early spring.</p> <p>In order to target good condition, 20% of the grassland should be left unmown each year on-rotation and the cut height varied across the field from 50mm-90mm to introduce structural diversity into the sward.</p>	<p>Good</p>

Habitat	Outline Habitat Creation and management prescriptions	Target Condition
	<p>In addition, recreational impacts and overall cover of bare ground will be monitored and corrective measures undertaken if above or below the specified thresholds. For example, if a dense closed sward is extensive the field should be lightly chain harrowed in autumn to open up bare ground for recruitment.</p> <p>Inclusion of information boards so residents are informed about the biodiversity value of such habitats; why at certain periods the grass is longer and to help create a sense of place.</p> <p>All condition criteria are targeted, with allowance for failure in Criterion E, to account for the risk of greater than 5% recreational damage.</p>	
<p>Other Neutral Grassland</p>	<p>The retained areas of other neutral grassland within G1 and G1b to the east, G8 and G1b along the central river corridor and G5 to the north west will be enhanced, where possible, as part of proposals.</p> <p>All these grasslands were recorded in moderate in the baseline and it is considered the introduction of favourable management will result in the increase in condition by increasing species diversity, controlling undesirable species and introducing variable sward heights.</p> <p>In the case of grassland G8, which was recorded in good condition in the baseline, the habitat will be retained in that condition.</p> <p>Localised impacts resulting from increased recreational pressure have been accounted for within the design, with an assumed condition of moderate targeted alongside the major pedestrian routes.</p> <p>The enhanced grasslands will be protected during construction through the use of heras fencing. The grasslands will be cut hard in late summer early autumn then raked or harrowed expose ~50% bare ground. The grasslands will then be seeded with the retained green hay from the above cut. As an alternative a bespoke locally appropriate 100% wildflower seed mix will be sown.</p> <p>Ongoing management will involve 1-2 cuts per year, with the grassland left unmown during the summer and any arisings removed. 20% of each field will be left unmown during each cut, on rotation to ensure a mix of sward heights. In addition, the overall cover of bare ground will be monitored and corrective measures undertaken, as outlined above if above the specified thresholds.</p>	<p>Moderate - Good</p>
<p>Other Neutral grassland</p>	<p>Other neutral Grassland in poor condition is targeted within the western section of the built development around the boundary area of Public Open Space. Here the grasslands will be created and enhanced in the same way as above, but using an appropriate wildflower rich seed mix. The grasslands will be managed via 1-2 cuts per year, with arising removed. Poor condition is targeted to allow failure to meet essential criterion A.</p>	<p>Poor</p>
<p>SUDS basins – Other Neutral Grassland</p>	<p>The SUDS basins to the north of the site have been assumed to be seeded with a wildflower rich wet grassland mix and managed to support other neutral grassland in moderate condition.</p>	<p>Moderate</p>

Habitat	Outline Habitat Creation and management prescriptions	Target Condition
	<p>The grassland within the basins will be cut 1-2 times per year with arisings removed.</p>	
<p>Lowland Mixed Deciduous Woodland</p>	<p>Woodlands W1 and W2 will be brought into favourable management to retain their existing value. An increase in condition can be achieved specifically by:</p> <ul style="list-style-type: none"> • Undertaking a programme of removal of non-native invasive species, particularly Himalayan balsam. The woodland will be monitored to ensure continued absence and corrective measures undertaken if re-recorded. • The removal of grazing animals from the woodlands to reduce negative impact and encourage regeneration. • Selective felling on non-native trees, where appropriate and coppicing of suitable understorey shrubs to encourage natural regeneration of gaps and diversify the structure of the woodland. • Deadwood from coppicing and thinning should be left in-situ, both as standing and lying deadwood. • Underplanting of native shrub and tree species to increase structural diversity. 	<p>Moderate</p>
<p>Modified Grassland</p>	<p>The formal grassland areas within the built development have been targeted as modified grassland in moderate condition. This is equivalent to a 'flowering lawn' a grassland which responds well to regular mowing, but with increased species diversity.</p> <p>These areas will be seeded using a flowering lawn mix, such as Emorsgate EL1 - flowering lawn mix. The grassland can be mown as usual during the growing season, with mowing relaxed for two months during May-June to allow flowering.</p>	<p>Moderate</p>
<p>Individual trees</p>	<p>The illustrative masterplan currently accounts for the planting of 478 new trees. The proposed tree are all native species which allows moderate condition to be targeted.</p>	<p>Moderate</p>
<p>Other Broadleaved Woodland</p>	<p>Additional woodland planting is proposed for the boundaries of the Site. This woodland creation has been classified as other broadleaved woodland in moderate condition.</p> <p>This will be achieved by planting of a diverse mix of native species, appropriate to the local area. Planting patterns will be set out in lazy-S rows to avoid consistent linear lines throughout the woodland planting, with planting densities mixed throughout.</p> <p>Moderate condition achieved primarily through the initial planting of a diverse mix of native trees and shrubs and selective felling and coppicing to develop a diverse structure.</p>	<p>Moderate</p>

Habitat	Outline Habitat Creation and management prescriptions	Target Condition
	Retain deadwood in situ following thinning works or Introduce deadwood from felling / coppicing activities locally. Ringbark selected trees to allow for standing deadwood habitat.	
Mixed Scrub	<p>Localised areas of mixed scrub are proposed within the site typically bordering the created woodlands.</p> <p>This will be achieved by planted with at least 5 native woody species to achieve a target of at least 3 species in each block with no more than 75% of cover dominated by any one species.</p> <p>Selective felling and coppicing of species through the management period will establish a varied age range, encourage regeneration and create dynamic open spaces / scalloped edges.</p> <p>A well-developed edge between the scrub and neighbouring habitats will be provided by allowing grass and herbs to grow taller along the border of the two habitats. Regular monitoring and removal of any invasive non-native or undesirable species should be undertaken.</p>	Moderate

Table 5: Proposed linear-based habitats

Habitat	Outline Habitat Creation and management prescriptions	Target Condition
Creation		
Species rich native hedgerow	<p>The creation of new native species rich hedgerows have been included to replace the lost native hedgerow along the site entrance to the north, as well as along the boundaries of the Site. The planting mix should include a diverse mixture of native woody species, planted in staggered double rows.</p> <p>Management should allow for hedgerow growth of at least 1.5m in height and width. At least 1m of ground cover either side of the hedgerow should remain undisturbed, and hedgerow cutting should be done on rotation to allow for a continual supply of flowering and fruiting bushes.</p>	Moderate
Enhancement		

Habitat	Outline Habitat Creation and management prescriptions	Target Condition
Other river and stream – Watercourse R1	<p>Calculations have accounted for the enhancement of Watercourse R1, recorded to the east of the site.</p> <p>Enhancement of R1, will be to reduce the bank height on the left hand bank, to reduce the effects of over-deepening and to enhance specific low scoring features. For the two sub-reaches the following areas have be targeted for enhancement:</p> <ul style="list-style-type: none"> • Removal of invasive species on bank top and bank face; • Removal of grazing which is impacting bank profile due to poaching; • Restore natural bank profile in impacted areas; and • Removal of large trash from the channel bed. <p>Please see appendix D for specified RCA potential enhancement areas.</p>	Moderate – Fairly Good.

Significant Onsite Biodiversity Gains

5.5 It is considered that all of the creation and enhancement measures outlined in tables 4 and 5 above, would constitute 'significant onsite gains'. The Biodiversity Net Gain Condition, attached to any planning permission for the proposed development would secure the creation and ongoing management and monitoring of these habitats for a minimum of 30 years, via the approval of a detailed Habitat Management and Monitoring Plan (HMMP).

Outline Monitoring Requirements

5.6 The Site will be monitored at varying degrees from establishment and through its long-term management. Initially the Site will be monitored in years 1, 2, 3 & 5 by suitably experienced ecologists to review how the establishment of the proposed habitat enhancement is progressing. The key observations during this period will be to determine whether habitats are successfully improving and whether replacement planting or reseeding may be required.

5.7 Following that, during years 10-30, monitoring of the Site will be undertaken every 5 years beginning at year 10. The key elements of this monitoring will be to review whether the long-term management practices have achieved and maintained target habitat type and condition. During this period, adaptive management measures will be reviewed to determine whether there are any opportunities to alter management to encourage additional habitat enhancements.

6.0 BIODIVERSITY NET GAIN CALCULATION

6.1 The Statutory metric for the project is attached, with the headline summary results given below.

On-site baseline	Area habitat units	145.52		
	Hedgerow units	3.94		
	Watercourse units	6.41		
On-site post-intervention (including habitat retention, creation & enhancement)	Area habitat units	111.16		
	Hedgerow units	4.90		
	Watercourse units	7.26		
On-site net change (units & percentage)	Area habitat units	-34.35		-23.61%
	Hedgerow units	0.96		24.37%
	Watercourse units	0.85		13.30%

6.2 On-site post intervention consists of 111.16 habitat units, 4.90 hedgerow units and 7.26 watercourse units. As such, the development will result in a 23.61% loss in habitat units, but a 24.37% hedgerow gain and 13.3% watercourse gain.

6.3 To achieve a net gain of 10%, subsequent approvals will require an additional 48.91 habitat units. This can be achieved by securing offsite habitat gains.

Habitat Trading

6.4 Proposals result in the loss of very high distinctiveness Lowland Meadow habitat, compensation for which requires like for like replacement. Trading rules for Very High Distinctiveness habitats are satisfied within the Site boundary as Proposals have facilitated the translocation and enhancement of the existing Lowland Meadow Grassland.

6.5 The habitats to be lost to proposals comprise predominantly of medium distinctiveness other neutral grassland, along with smaller losses to individual trees and non-priority ponds. Medium distinctiveness habitats will require compensation through creation and enhancement of habitats of the same broad habitat type. The above calculations result in a cumulative loss within the medium distinctiveness grassland and lake broad habitat types. The proposed onsite enhancement of the higher distinctiveness lowland mixed deciduous woodland and the lowland meadow grassland have contributed to reducing this deficit, but an additional 51.73 units of medium distinctiveness grassland will be required to satisfy trading rules.

Offsite Compensation

6.6 In order to achieve a net gain of 10% for the scheme, the applicant has reserved the purchase of both lowland meadow and other neutral grassland units from a local habitat bank located in close proximity to the Site. The units have been reserved from Moreton Park Habitat Bank, which is located just 4km from the application Site and is on the Biodiversity Gain Site Register (BGS-300625002) and therefore is legal secured.

6.7 Although the trading rules for lowland meadow are satisfied by the onsite proposed translocation and enhancement of this habitat, the applicant had sought to over-compensate by reserving an additional 10.02 lowland meadow units from the Moreton Park Habitat Bank. The purchase of these lowland meadow units ensures that when taken as a whole, the overall development proposals will a net increase of at least 113% in lowland meadow locally (expressed in biodiversity units).

6.8 In addition to the above a further 42.02 other neutral grassland units have been reserved from the Moreton Park Habitat Bank. This is above the minimum required units to deliver a 10% gain, overall, for the Site and will result in a net increase of 5.2% in other neutral grassland units locally. Overall, the purchase of these units will deliver result in the scheme providing a 12.15% gain in biodiversity value, with all trading rules satisfied.

Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Area habitat units</i>	12.15%
	<i>Hedgerow units</i>	24.37%
	<i>Watercourse units</i>	13.30%

7.0 CONCLUSION

- 7.1 Proposals are for an Outline Application and this Biodiversity Net Gain report establishes the Sites preliminary pre-development biodiversity value as determined through a detailed UKHab survey and condition assessments. The report goes on to provide a Biodiversity Net Gain Calculation in order to demonstrate that the delivery of a 10% net gain is feasible for the project.
- 7.2 The above survey has determined that the Site has a baseline biodiversity value of 145.52 area habitat units, 6.41 watercourse units and 3.94 hedgerow units
- 7.3 A Biodiversity Net Gain calculation was then completed for the Site, with the onsite post-development habitats based on the Illustrative Masterplan (333101612_MR_MP_VW0101F), the Landscape Masterplan (P24-2318_07B) and guided by ecological professional judgement.
- 7.4 The report goes on to outline a realistic and deliverable series of habitat creation and enhancement measures for the Site to be undertaken to contribute to delivering a 10% gain in Biodiversity Value. At present, based on the above, on-site post intervention consists of 111.16 habitat units, 4.90 hedgerow units and 7.26 watercourse units. As such, the development will result in a 23.61% loss in habitat units, but a 24.37% hedgerow gain and 13.3% watercourse gain.
- 7.5 To achieve a net gain of 10%, subsequent approval(s) will require an additional 51.73 units of medium distinctiveness grassland to satisfy trading rules.
- 7.6 In order to achieve a net gain of 10% for the scheme, the applicant has reserved the purchase of 10.02 lowland meadow units and 42.02 other neutral grassland units from a local habitat bank located in close proximity to the Site. The provision of additional lowland meadow units and an increased offer of other neutral grassland units has sought to over compensate for the losses to the grassland habitats on site and will result in an increase of 113% and 5.2% in biodiversity units of the respective habitat types locally.
- 7.7 Overall, the purchase of these units will result in the scheme providing a 12.15% gain in biodiversity value, with all trading rules satisfied.
- 7.8 Given the above, it is concluded that proposals can deliver a biodiversity net gain for the scheme, which would be secured by the Biodiversity Net Gain Condition, attached to any planning permission for the proposed development.

APPENDIX A: SPECIES LISTS

The results of the detailed botanical surveys of the grasslands are below. They are also provided separately, for ease of Reference, in Excel Format in the following workbooks: Appendix A1: Detailed Botanical Survey Results

Lowland Meadow G11

Common Name	Scientific Name	Q5	Q6	Q7	Q8	Q9	Q10	DAFOR	Count	Q Frequency
	Bare Ground	0	0	0	3	0	0			
White Clover	<i>Trifolium repens</i>							r	0	0.00
Creeping Buttercup	<i>Ranunculus repens</i>	20					5	r lo	2	33.33
Pedunculate oak	<i>Quercus robur</i>								0	0.00
Perennial Rye-grass	<i>Lolium perenne</i>	5	2	5	5		3	o	5	83.33
Common bent	<i>Agrostis capillaris</i>	10	20	20	25	20	20	f a	6	100.00
Red fescue	<i>Festuca rubra</i>	20	45	35	35	30	25	f	6	100.00
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	5	5	10	5	5	5	f	6	100.00
Yorkshire-fog	<i>Holcus lanatus</i>	5	2	2	2		2	o	5	83.33
Field wood-rush	<i>Luzula campestris</i>	1		2			2	o	3	50.00
Crested dog's-tail	<i>Cynosurus cristatus</i>	2				5		lo	3	50.00
Heath-grass	<i>Danthonia decumbens</i>		2					r	1	16.67
Compact rush	<i>Juncus conglomeratus</i>							r	0	0.00
Smooth meadow-grass	<i>Poa pratensis</i>							r	0	0.00
Cock's-foot	<i>Dactylis glomerata</i>							r	0	0.00
Creeping bent	<i>Agrostis stolonifera</i>							r	0	0.00
Tufted hair-grass	<i>Deschampsia caespitosa</i>							r	0	0.00
Ribwort plantain	<i>Plantago lanceolata</i>	5	5	2	3	5	5	f	6	100.00
Meadow buttercup	<i>Ranunculus acris</i>	5	2	10	2	5	5	f	6	100.00
Hairy sedge	<i>Carex hirta</i>	3	2		2		3	f	4	66.67
Tormentil	<i>Potentilla erecta</i>		15		5	5		f	3	50.00
Sneezewort	<i>Achillea ptarmica</i>	5		3		5		o	3	50.00
Eyebright	<i>Euphrasia agg.</i>		2				2	o lf	2	33.33
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>					15	10	o f	2	33.33
Field horsetail	<i>Equisetum arvense</i>			1	1			r	2	33.33

Common sorrel	<i>Rumex acetosa</i>		2		1			o	2	33.33
common sedge	<i>Carex nigra</i>	20				5		o	2	33.33
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>			15				o	1	16.67
Great burnet	<i>Sanguisorba officinalis</i>						5	o lf	1	16.67
Glaucous sedge	<i>Carex flacca</i>						5	r	1	16.67
Dandelion	<i>Taraxacum officinale agg.</i>						1	r	1	16.67
Common mouse-ear	<i>Cerastium fontanum</i>						1	r	1	16.67
Meadow vetchling	<i>Lathyrus pratensis</i>					2		lo	1	16.67
Red clover	<i>Trifolium pratense</i>			2				r	1	16.67
betony	<i>Betonica officinalis</i>				15			lf	1	16.67
Devil's-bit scabious	<i>Succisa pratensis</i>					10		r	1	16.67
Common knapweed	<i>Centaurea nigra</i>							r	0	0.00
Oval sedge	<i>Carex leporina</i>							r	0	0.00
Red bartsia	<i>Odontites vernus</i>							r	0	0.00
Himalayan balsam	<i>Impatiens glandulifera</i>							lo near stream	0	0.00
Blue = Other neutral Grassland Indicator		Q5	Q6	Q7	Q8	Q9	Q10	Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	13	12	12	13	12	16	13.00		
	Grassland LOW number of Forbs	6	6	6	7	8	10	7.17		
	GRASSLAND MED+Species/m2 exc. Undesirables	12	12	12	13	12	15	12.67		
	% cover rye-grass & white clover	5	2	5	5	0	3	3.33		
	% cover Undesirables	20	0	0	0	0	5	4.17		
	% cover grasses	48	76	74	77	57	60	65.33		
	% cover wildflowers exc. Undesirables	38	28	33	29	52	37	36.17		

	Bare Ground							0.5		
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Other Neutral Grassland G1

Common Name	Scientific Name	Q6 long	Q7 long	Q8 long	Q9 long	Q10 long	q12long	q13 long	dafor	Count	Q Frequency
	Bare Ground	0	0	0	0	0	0	0			
Creeping Buttercup	<i>Ranunculus repens</i>		15	2			2		f o	3	37.5
Creeping Thistle	<i>Cirsium arvense</i>	1			2				lf	2	25
Common Ragwort	<i>Jacobaea vulgaris</i>						1	0	lo	2	25
Curled Dock	<i>Rumex crispus</i>	1							r	1	12.5
White Clover	<i>Trifolium repens</i>								r	0	0
Broad-leaved Dock	<i>Rumex obtusifolius</i>								r	0	0
Common bent	<i>Agrostis capillaris</i>	55	30	55	45	55	55	55	a	7	87.5
Red fescue	<i>Festuca rubra</i>	2	5		20	10	5	3	f	6	75
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	10	5	3	5		10	5	f	6	75
Perennial Rye-grass	<i>Lolium perenne</i>	2		5	5	10	5	5	o	6	75
Yorkshire-fog	<i>Holcus lanatus</i>	10	2	2	3	2	3		o	6	75
Smooth meadow-grass	<i>Poa pratensis</i>	2	10			2	2		o	4	50
Field wood-rush	<i>Luzula campestris</i>				1				o	1	12.5
Meadow foxtail	<i>Alopecurus pratensis</i>			2					r	1	12.5
Reed canary-grass	<i>Phalaris arundinacea</i>			10					r	1	12.5
Cock's-foot	<i>Dactylis glomerata</i>								r	0	0
Crested dog's-tail	<i>Cynosurus cristatus</i>								r	0	0
Creeping bent	<i>Agrostis stolonifera</i>								r	0	0
Sharp-flowered rush	<i>Juncus acutiflorus</i>								r	0	0
Common sorrel	<i>Rumex acetosa</i>	2	5	15	1	15	3	2	f	7	87.5
Hairy sedge	<i>Carex hirta</i>	10	30	2	2	2		30	f a	6	75
Meadow vetchling	<i>Lathyrus pratensis</i>	2	1		1		10	5	o	5	62.5
Ribwort plantain	<i>Plantago lanceolata</i>		1		10		5	2	f	4	50
Field horsetail	<i>Equisetum arvense</i>	1			1	1		2	lo	4	50
Meadow buttercup	<i>Ranunculus acris</i>	1		2	1				f	3	37.5
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>			5	5	2			o	3	37.5
Great burnet	<i>Sanguisorba officinalis</i>					10			o	1	12.5

Red clover	<i>Trifolium pratense</i>				2				o	1	12.5
Common mouse-ear	<i>Cerastium fontanum</i>						1		r	1	12.5
Eyebright	<i>Euphrasia agg.</i>		1						r	1	12.5
Common Chickweed	<i>Stellaria media</i>	1							r	1	12.5
Tormentil	<i>Potentilla erecta</i>								r	0	0
Oval sedge	<i>Carex leporina</i>								r	0	0
Bramble	<i>Rubus fruticosus agg.</i>								r	0	0
Selfheal	<i>Prunella vulgaris</i>								r	0	0
Glaucous sedge	<i>Carex flacca</i>								r	0	0
Dandelion	<i>Taraxacum officinale agg.</i>								r	0	0
Creeping cinquefoil	<i>Potentilla reptans</i>								r	0	0
Blue = Other neutral Grassland Indicator		Q6 long	Q7 long	Q8 long	Q9 long	Q10 long	q12long	q13 long	Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	14	11	11	15	10	12	10	11.86		
	Grassland LOW number of Forbs	8	6	5	9	5	6	6	6.43		
	GRASSLAND MED+Species/m2 exc. Undesirables	12	10	10	14	10	10	9	10.71		
	% cover rye-grass & white clover	2	0	5	5	10	5	5	4.57		
	% cover Undesirables	2	15	2	2	0	3	0	3.43		
	% cover grasses	81	52	77	79	79	80	68	73.71		
	% cover wildflowers exc. Undesirables	17	38	24	23	30	19	41	27.43		
	Bare Ground								0.00		

Other Neutral Grassland G1a

Common Name	Scientific Name	Q1	Q2	Q3	Q4	Q5	DAFOR	Count	Q Frequency
	Bare Ground	0	1	0	0	0			
White Clover	<i>Trifolium repens</i>					1	r	1	20
Creeping Buttercup	<i>Ranunculus repens</i>		1	15	55		f	3	60
Creeping Thistle	<i>Cirsium arvense</i>					3	lf	1	20
Broad-leaved Dock	<i>Rumex obtusifolius</i>						o	0	0
Common Ragwort	<i>Jacobaea vulgaris</i>						o	0	0
Perennial Rye-grass	<i>Lolium perenne</i>	15	5	5	3	5	o	5	100
Common bent	<i>Agrostis capillaris</i>	40		25	25	45	f	4	80
Red fescue	<i>Festuca rubra</i>	25		25	5	10	f	4	80
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	5		15	3	20	f	4	80
Yorkshire-fog	<i>Holcus lanatus</i>	2	15			2	o	3	60
Rough meadow-grass	<i>Poa trivialis</i>		2		3	2	r	3	60
Smooth meadow-grass	<i>Poa pratensis</i>	2		2				2	40
Crested dog's-tail	<i>Cynosurus cristatus</i>			2			r o	1	20
Creeping bent	<i>Agrostis stolonifera</i>		35				lf	1	20
False oat-grass	<i>Arrhenatherum elatius</i>	2					r	1	20
Field wood-rush	<i>Luzula campestris</i>	1					r	1	20
Cock's-foot	<i>Dactylis glomerata</i>						r	0	0
Meadow foxtail	<i>Alopecurus pratensis</i>						r	0	0
Timothy	<i>Phleum pratense</i>						r	0	0
Reed canary-grass	<i>Phalaris arundinacea</i>						r	0	0
Soft-rush	<i>Juncus effusus</i>						r	0	0
Creeping soft-grass	<i>Holcus mollis</i>						lf	0	0
Hairy sedge	<i>Carex hirta</i>	3	40	5	2	2	o f	5	100
Ribwort plantain	<i>Plantago lanceolata</i>	10		3	10	5	o f	4	80
Common sorrel	<i>Rumex acetosa</i>		10		3	2	o	3	60
Meadow buttercup	<i>Ranunculus acris</i>	5		5		5	o	3	60
Common mouse-ear	<i>Cerastium fontanum</i>	2					r	1	20
Red clover	<i>Trifolium pratense</i>					2	r	1	20
Oval sedge	<i>Carex leporina</i>				5		r lo	1	20
Red bartsia	<i>Odontites vernus</i>						lo	0	0

Great burnet	<i>Sanguisorba officinalis</i>						r	0	0
Tormentil	<i>Potentilla erecta</i>						r	0	0
Smooth hawk's-beard	<i>Crepis capillaris</i>						r	0	0
Common hogweed	<i>Heracleum sphondylium</i>						r	0	0
Eyebright	<i>Euphrasia agg.</i>						r paths	0	0
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Q5	Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	12	7	10	10	13	10.4		
	Grassland LOW number of Forbs	4	3	4	5	7	5		
	GRASSLAND MED+Species/m2 exc. Undesirables	12	6	9	9	11	9.4		
	% cover rye-grass & white clover	15	5	5	3	6	7		
	% cover Undesirables	0	1	15	55	4	15		
	% cover grasses	92	57	74	39	84	69		
	% cover wildflowers exc. Undesirables	20	50	13	20	16	24		
	Bare Ground						0.2		

Other Neutral Grassland G1b

Common Name	Scientific Name	Q1short	Q2 short	Q3 short	Q4 short	Q5 short	q11 short	q14	q15	Q1 acid	Q2 Acid	DAFOR	Count	Q Frequency
	Bare Ground	0	1	0	0	0	0	0	0	3	1			
White Clover	<i>Trifolium repens</i>	20	5	20	5	10	5	10	5			f	8	80
Creeping Buttercup	<i>Ranunculus repens</i>	1	10		10	1			5			f	5	50
Creeping Thistle	<i>Cirsium arvense</i>			1								r	1	10
Pedunculate oak	<i>Quercus robur</i>						1					r	1	10
Bramble	<i>Rubus fruticosus agg.</i>									1		r	1	10
Broad-leaved Dock	<i>Rumex obtusifolius</i>											r	0	0

Hoary ragwort	<i>Jacobaea aquatica</i>											r	0	0
Perennial Rye-grass	<i>Lolium perenne</i>	10	2	2	5	5	5	5	3	1		o lf	9	90
Common bent	<i>Agrostis capillaris</i>	25	35	20	25	40	35	30	25	55	35	f	10	100
Red fescue	<i>Festuca rubra</i>	2	10	5	5	5	5	10	5	10	5	o f	10	100
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	20	15	15	10	10	20	5	10	10	15	r	10	100
Yorkshire-fog	<i>Holcus lanatus</i>	5	2	5		2	2	20	15	3	2	f	9	90
Field wood-rush	<i>Luzula campestris</i>	2	1		1	1	1		2	3	5	o	8	80
Crested dog's-tail	<i>Cynosurus cristatus</i>			5	2	2						o	3	30
Smooth meadow-grass	<i>Poa pratensis</i>		1	2	2							r	3	30
Creeping bent	<i>Agrostis stolonifera</i>											lf	0	0
Cock's-foot	<i>Dactylis glomerata</i>											o	0	0
Meadow foxtail	<i>Alopecurus pratensis</i>											o	0	0
Timothy	<i>Phleum pratense</i>											r	0	0
Sharp-flowered rush	<i>Juncus acutiflorus</i>											r	0	0
Eyebright	<i>Euphrasia agg.</i>	20	15	15	20	30	1	15	15		1	f	9	90
Ribwort plantain	<i>Plantago lanceolata</i>	3	5	10	2	2		2	3		5	f	8	80
Meadow buttercup	<i>Ranunculus acris</i>	10	2	1	2	1		10	10			f	7	70
Hairy sedge	<i>Carex hirta</i>				1	1	5	2		2	1	o	6	60
Common sorrel	<i>Rumex acetosa</i>		2	2				1	5			f	4	40
Red clover	<i>Trifolium pratense</i>	1	1	1			2					o	4	40
Common mouse-ear	<i>Cerastium fontanum</i>		1	1				1	1			r	4	40
Tormentil	<i>Potentilla erecta</i>						5			25	15	lf	3	30
Glaucous sedge	<i>Carex flacca</i>				15						5	o	2	20
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>					2	5					o lf	2	20
Sneezewort	<i>Achillea ptarmica</i>				3			1				r	2	20
Dandelion	<i>Taraxacum officinale agg.</i>		1	1									2	20
betony	<i>Betonica officinalis</i>										15	lf 1 patch	1	10
Great burnet	<i>Sanguisorba officinalis</i>						15					lo	1	10
Meadow vetchling	<i>Lathyrus pratensis</i>			1								r	1	10
Field horsetail	<i>Equisetum arvense</i>										2	r	1	10
Bluebell	<i>Endymion non-scriptus</i>									1		r	1	10
Red bartsia	<i>Odontites vernus</i>											lo	0	0
Smooth hawk's-beard	<i>Crepis capillaris</i>											r	0	0

Common knapweed	<i>Centaurea nigra</i>												r	0	0
Oval sedge	<i>Carex leporina</i>												r	0	0
Selfheal	<i>Prunella vulgaris</i>												r	0	0
Meadowsweet	<i>Filipendula ulmaria</i>												r	0	0
Creeping cinquefoil	<i>Potentilla reptans</i>												r	0	0
Yellow Club mushroom	<i>Clavulinopsis Sp. [indet]</i>												r		
Himalayan balsam	<i>Impatiens glandulifera</i>												lo		
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Q5	q11 short	Q14	q15	Q1 acid	Q2 Acid	Average per m2			
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	12	16	17	15	14	14	13	13	10	12	13.60			
	Grassland LOW number of Forbs	6	9	10	8	7	8	8	7	4	7	7.40			
	GRASSLAND MED+Species/m2 exc. Undesirables	10	14	15	13	12	12	12	11	9	12	12.00			
	% cover rye-grass & white clover	30	7	22	10	15	10	15	8	1	0	11.80			
	% cover Undesirables	21	15	21	15	11	6	10	10	1	0	11.00			
	% cover grasses	64	66	54	50	65	68	70	60	82	62	64.10			
	% cover wildflowers exc. Undesirables	34	27	32	43	36	33	32	34	28	44	34.30			
	Bare Ground											0.5			

Other Neutral Grassland G2

Common Name	Scientific Name	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	DAFOR	Count	Q Frequency
	Bare Ground	0	2	0	3	2	0	0	0	0	0			
White Clover	<i>Trifolium repens</i>											r	0	0
Creeping Buttercup	<i>Ranunculus repens</i>	2	2		2	2	15					r o	5	50
Broad-leaved Dock	<i>Rumex obtusifolius</i>											r	0	0
Common Ragwort	<i>Jacobaea vulgaris</i>											r	0	0

Creeping Thistle	<i>Cirsium arvense</i>											r	0	0
Perennial Rye-grass	<i>Lolium perenne</i>	5		3	5	5		3	3	2		r o	7	70
Common bent	<i>Agrostis capillaris</i>	35	10	25	30	30	15	35	25	40	20	f	10	100
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	10	15	5	2	10	3			5	2	f	8	80
Yorkshire-fog	<i>Holcus lanatus</i>	3	5				2	2	2	5	2	o	7	70
Red fescue	<i>Festuca rubra</i>		3				5	10	3	2	3	o	6	60
Compact rush	<i>Juncus conglomeratus</i>	5			40			5	10		30	f	5	50
Smooth meadow-grass	<i>Poa pratensis</i>	2	1	5						2	2	r	5	50
Meadow foxtail	<i>Alopecurus pratensis</i>		2				2		2	3		r lo	4	40
Hard rush	<i>Juncus inflexus</i>					15	2			5		o	3	30
Soft-rush	<i>Juncus effusus</i>					10	30			15		o	3	30
Sharp-flowered rush	<i>Juncus acutiflorus</i>		40									lf	1	10
Timothy	<i>Phleum pratense</i>						2					r	1	10
Crested dog's-tail	<i>Cynosurus cristatus</i>			5								r	1	10
Tufted hair-grass	<i>Deschampsia caespitosa</i>									5		r lo	1	10
Cock's-foot	<i>Dactylis glomerata</i>											r	0	0
Creeping bent	<i>Agrostis stolonifera</i>											r	0	0
Reed canary-grass	<i>Phalaris arundinacea</i>											r	0	0
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>	15	15		20	20	10	10	3	15	20	a	9	90
Hairy sedge	<i>Carex hirta</i>	5	5	20		10	10	3	5		20	f a	8	80
Common sorrel	<i>Rumex acetosa</i>	2	1				1	5	3	2	1	f	7	70
common sedge	<i>Carex nigra</i>	30		45			10	15	30	5	3	f	7	70
Oval sedge	<i>Carex leporina</i>		3		5		3				2	o	4	40
Field horsetail	<i>Equisetum arvense</i>	1	1			3		1				o	4	40
Ribwort plantain	<i>Plantago lanceolata</i>	1						2	2			f	3	30
Meadow buttercup	<i>Ranunculus acris</i>	1			2			1				o	3	30
Common mouse-ear	<i>Cerastium fontanum</i>	1	1			1						r	3	30
Red bartsia	<i>Odontites vernus</i>							1		2		o	2	20
Meadow vetchling	<i>Lathyrus pratensis</i>						2					o	1	10
Great burnet	<i>Sanguisorba officinalis</i>								10			o	1	10
Eyebright	<i>Euphrasia agg.</i>							1				r	1	10
Cuckooflower	<i>Cardamine pratensis</i>					1						r	1	10
Tormentil	<i>Potentilla erecta</i>							5				r o	1	10

Red clover	<i>Trifolium pratense</i>												r	0	0
Common knapweed	<i>Centaurea nigra</i>												r	0	0
Cat's-ear	<i>Hypochaeris radicata</i>												r	0	0
Meadowsweet	<i>Filipendula ulmaria</i>												r	0	0
Common spotted-orchid	<i>Dactylorhiza fuchsii</i>												r	0	0
Smooth hawk's-beard	<i>Crepis capillaris</i>												r	0	0
Sneezewort	<i>Achillea ptarmica</i>												r lo	0	0
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Average per m2	Q1	Q2	
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	15	14	7	8	11	15	15	12	14	11	12.20			
	Grassland LOW number of Forbs	9	7	2	4	6	7	10	6	4	5	6.00			
	GRASSLAND MED+Species/m2 exc. Undesirables	14	13	7	7	10	14	15	12	14	11	11.70			
	% cover rye-grass & white clover	5	0	3	5	5	0	3	3	2	0	2.60			
	% cover Undesirables	2	2	0	2	2	15	0	0	0	0	2.30			
	% cover grasses	60	76	43	77	70	61	55	45	84	59	63.00			
	% cover wildflowers exc. Undesirables	56	26	65	27	35	36	44	53	24	46	41.20			
	Bare Ground											0.7			

Other Neutral Grassland G3

Common Name	Scientific Name	Q1	Q2	Q3	Q4	Q5	DAFOR	Count	Q Frequency
	Bare Ground	0	2	0	0	1			
White Clover	<i>Trifolium repens</i>						r	0	0
Creeping Buttercup	<i>Ranunculus repens</i>	15		2			o	2	40
Perennial Rye-grass	<i>Lolium perenne</i>	3	15	15	15	10	o	5	100
Yorkshire-fog	<i>Holcus lanatus</i>	2	15	10	20	2	o	5	100

Common bent	<i>Agrostis capillaris</i>	40	25	35	30	35	f	5	100
Red fescue	<i>Festuca rubra</i>	15	15	15	5	20	f	5	100
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	15	5	10	10	10	f	5	100
Smooth meadow-grass	<i>Poa pratensis</i>	2	2	2	5	2	o	5	100
Meadow foxtail	<i>Alopecurus pratensis</i>			2			r	1	20
Compact rush	<i>Juncus conglomeratus</i>			2			r	1	20
Ribwort plantain	<i>Plantago lanceolata</i>	15	5	5		5	f	4	80
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>	2	2	3	10		f o	4	80
Field horsetail	<i>Equisetum arvense</i>	1	1	1		1	o	4	80
Hairy sedge	<i>Carex hirta</i>	2				2	r	2	40
Common sorrel	<i>Rumex acetosa</i>		5		10		o	2	40
Tormentil	<i>Potentilla erecta</i>		10			15	o	2	40
Common sedge	<i>Carex nigra</i>		3	3			r o	2	40
Meadow buttercup	<i>Ranunculus acris</i>					2	o	1	20
Oval sedge	<i>Carex leporina</i>		2				r	1	20
Glaucous sedge	<i>Carex flacca</i>					1	r	1	20
Red bartsia	<i>Odontites vernus</i>						o	0	0
Silverweed	<i>Potentilla anserina</i>						lf	0	0
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Q5	Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	11	13	13	8	12	11.40		
	Grassland LOW number of Forbs	5	7	5	2	6	5.00		
	GRASSLAND MED+Species/m2 exc. Undesirables	10	13	12	8	12	11.00		
	% cover rye-grass & white clover	3	15	15	15	10	11.60		
	% cover Undesirables	15	0	2	0	0	3.40		
	% cover grasses	77	77	91	85	79	81.80		

	% cover wildflowers exc. Undesirables	20	28	12	20	26	21.20		
	Bare Ground						0.6		

Other Neutral Grassland G4

Common Name	Scientific Name	Q1	Q2	Q3	Q4	DAFOR	Count	Q Frequency
	Bare Ground	0	0	0	0			
White Clover	<i>Trifolium repens</i>	10	5.0				2	50
Creeping Buttercup	<i>Ranunculus repens</i>	10	10.0	15.0	20.0		4	100
Creeping Thistle	<i>Cirsium arvense</i>			1.0			1	25
Perennial Rye-grass	<i>Lolium perenne</i>	15	20.0	15.0	10.0		4	100
Yorkshire-fog	<i>Holcus lanatus</i>	10	10.0	25.0	5.0		4	100
Common bent	<i>Agrostis capillaris</i>	35	25.0	15.0	45.0		4	100
Red fescue	<i>Festuca rubra</i>		20.0	25.0	5.0		3	75
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>		5.0	2.0	5.0		3	75
Smooth meadow-grass	<i>Poa pratensis</i>		1.0	1.0	2.0		3	75
Crested dog's-tail	<i>Cynosurus cristatus</i>	5					1	25
Ribwort plantain	<i>Plantago lanceolata</i>	1	1.0	3.0	5.0		4	100
Common mouse-ear	<i>Cerastium fontanum</i>	1	1.0		1.0		3	75
Red bartsia	<i>Odontites vernus</i>	3	2.0				2	50
Hairy sedge	<i>Carex hirta</i>	2			5.0		2	50
Common sorrel	<i>Rumex acetosa</i>		2.0		2.0		2	50
Eyebright	<i>Euphrasia agg.</i>	5	1.0				2	50
Meadow buttercup	<i>Ranunculus acris</i>	5					1	25
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	12	13	9	11	11.25		
	Grassland LOW number of Forbs	8	7	3	5	5.75		

	GRASSLAND MED+Species/m2 exc. Undesirables	10	11	7	10	9.50		
	% cover rye-grass & white clover	25	25	15	10	18.75		
	% cover Undesirables	20	15.0	16	20	17.75		
	% cover grasses	65	81	83	72	75.25		
	% cover wildflowers exc. Undesirables	17	7	3	13	10.00		
	Bare Ground					0		

Other Neutral Grassland G5

Common Name	Scientific Name	Q1	Q2	Q3	Q4	Q5	DAFOR	Count	Q Frequency
	Bare Ground	2	0	0	1	0			
White Clover	<i>Trifolium repens</i>		10.0	30.0	15.0	30		4	80
Creeping Buttercup	<i>Ranunculus repens</i>			10.0	15.0	15		3	60
Creeping Thistle	<i>Cirsium arvense</i>		2.0		1.0			2	40
Curled Dock	<i>Rumex crispus</i>						lo	0	0
Perennial Rye-grass	<i>Lolium perenne</i>	2	10.0	20.0	10.0	10		5	100
Yorkshire-fog	<i>Holcus lanatus</i>	10	15.0	25.0	15.0	25		5	100
Common bent	<i>Agrostis capillaris</i>	55	30.0	10.0	10.0	15		5	100
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	5	5.0	5.0	10.0	5		5	100
Red fescue	<i>Festuca rubra</i>	20	10.0		15.0			3	60
Meadow foxtail	<i>Alopecurus pratensis</i>		2.0					1	20
Timothy	<i>Phleum pratense</i>		5.0					1	20
Meadow buttercup	<i>Ranunculus acris</i>		5.0	5.0	5.0	5		4	80
Field horsetail	<i>Equisetum arvense</i>	2	1.0		1.0			3	60
Common mouse-ear	<i>Cerastium fontanum</i>			1.0	1.0			2	40
Red bartsia	<i>Odontites vernus</i>				3.0	2		2	40
Hairy sedge	<i>Carex hirta</i>	5	3.0					2	40
Common sorrel	<i>Rumex acetosa</i>					1		1	20

Meadow vetchling	<i>Lathyrus pratensis</i>						2		1	20
Red clover	<i>Trifolium pratense</i>		2.0						1	20
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>		2.0						1	20
Eyebright	<i>Euphrasia agg.</i>		2.0						1	20
Dandelion	<i>Taraxacum officinale agg.</i>		2.0						1	20
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Q5		Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	7	16	8	12	10		10.60		
	Grassland LOW number of Forbs	2	9	4	7	6		5.60		
	GRASSLAND MED+Species/m2 exc. Undesirables	7	14	6	9	8		8.80		
	% cover rye-grass & white clover	2	20	50	25	40		27.40		
	% cover Undesirables	0	12.0	40	31	45		25.60		
	% cover grasses	92	77	60	60	55		68.80		
	% cover wildflowers exc. Undesirables	7	17	6	10	10		10.00		
	Bare Ground							0.6		

Other Neutral Grassland G7

Common Name	Scientific Name	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	DAFOR	Count	Q Frequency
	Bare Ground	0	0	0	0	1	0	0	0	0	0			
White Clover	<i>Trifolium repens</i>							5		10			2	20
Creeping Buttercup	<i>Ranunculus repens</i>			5		30	20	2	25	25		f	6	60
Creeping Thistle	<i>Cirsium arvense</i>	2										r	1	10
Broad-leaved Dock	<i>Rumex obtusifolius</i>											r	0	0
Perennial Rye-grass	<i>Lolium perenne</i>	5	10	5	10	5	15	10		25	10	o	9	90
Common bent	<i>Agrostis capillaris</i>	45	25	50	20	10	15	35	30	15	35	f	10	100

Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	15	5	5	5	15	2	10	10			f	8	80
Red fescue	<i>Festuca rubra</i>		40		35	10	20	15	10		10	f	7	70
Yorkshire-fog	<i>Holcus lanatus</i>	15		15	10		5	2		5	5	o	7	70
Smooth meadow-grass	<i>Poa pratensis</i>	2		2			1			5	2	r	5	50
Field wood-rush	<i>Luzula campestris</i>	2	2								3	r	3	30
Crested dog's-tail	<i>Cynosurus cristatus</i>									5		r	1	10
Meadow foxtail	<i>Alopecurus pratensis</i>						5					r	1	10
Cock's-foot	<i>Dactylis glomerata</i>											r	0	0
Timothy	<i>Phleum pratense</i>											r	0	0
Creeping bent	<i>Agrostis stolonifera</i>											r	0	0
Meadow buttercup	<i>Ranunculus acris</i>	10	5	10	5	10		10	5	5	5	f	9	90
Ribwort plantain	<i>Plantago lanceolata</i>	2	15	5	20		5	2	15	2	2	o	9	90
Common sorrel	<i>Rumex acetosa</i>	2	2	2		2	5		2	1	2	o	8	80
Eyebright	<i>Euphrasia agg.</i>	1		1				15		5	10	lf	5	50
Hairy sedge	<i>Carex hirta</i>			5		10	10		5	2		of	5	50
Red clover	<i>Trifolium pratense</i>							3		2	15	o	3	30
Common mouse-ear	<i>Cerastium fontanum</i>									1		r	1	10
Dandelion	<i>Taraxacum officinale agg.</i>				1							r	1	10
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>					10						r lo	1	10
Red bartsia	<i>Odontites vernus</i>											r	0	0
Meadow vetchling	<i>Lathyrus pratensis</i>											r	0	0
Great burnet	<i>Sanguisorba officinalis</i>											r lo	0	0
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	q5	q6	q7	q8	q9	q10	Average per m2		
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	11	8	11	8	9	11	11	9	13	11	10.20		
	Grassland LOW number of Forbs	5	3	6	3	5	4	6	5	9	5	5.10		
	GRASSLAND MED+Species/m2 exc. Undesirables	10	8	10	8	8	10	9	8	11	11	9.30		
	% cover rye-grass & white clover	5	10	5	10	5	15	15	0	35	10	11.00		

	% cover Undesirables	2	0	5	0	30	20	7	25	35	0	12.40		
	% cover grasses	84	82	77	80	40	63	72	55	50	65	66.80		
	% cover wildflowers exc. Undesirables	15	22	23	26	32	20	30	27	18	34	24.70		
	Bare Ground											0.1		

Other Neutral Grassland G8

Common Name	Scientific Name	Q1 bank acid	Q2 rushy	Q3	Q4	Count	Q Frequency
	Bare Ground	4	0	0	0		
White Clover	<i>Trifolium repens</i>				5	1	25
Creeping Buttercup	<i>Ranunculus repens</i>				5	1	25
Pedunculate oak	<i>Quercus robur</i>					1	25
Perennial Rye-grass	<i>Lolium perenne</i>				5	10	50
Common bent	<i>Agrostis capillaris</i>	35	30	25	40	4	100
Red fescue	<i>Festuca rubra</i>		20	30	15	3	75
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>				5	5	50
Yorkshire-fog	<i>Holcus lanatus</i>		2	5		2	50
Field wood-rush	<i>Luzula campestris</i>	3				1	25
Sheep's-fescue	<i>Festuca ovina</i>	25		1		2	50
Sharp-flowered rush	<i>Juncus acutiflorus</i>		20			1	25
Compact rush	<i>Juncus conglomeratus</i>		2			1	25
Smooth meadow-grass	<i>Poa pratensis</i>		2			1	25
Heath-grass	<i>Danthonia decumbens</i>	15				1	25
Mat-grass	<i>Nardus stricta</i>	2				1	25
Cock's-foot	<i>Dactylis glomerata</i>					0	0
Crested dog's-tail	<i>Cynosurus cristatus</i>					0	0
Timothy	<i>Phleum pratense</i>					0	0
Creeping bent	<i>Agrostis stolonifera</i>					0	0
Tufted hair-grass	<i>Deschampsia caespitosa</i>					0	0
Hairy sedge	<i>Carex hirta</i>		3	2	2	3	75

Eyebright	<i>Euphrasia agg.</i>	2	1	2	3	75
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>	2		3	20	75
Ribwort plantain	<i>Plantago lanceolata</i>			1	2	50
Meadow buttercup	<i>Ranunculus acris</i>			2	5	50
Tormentil	<i>Potentilla erecta</i>	5	5			50
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>		3	2		50
Field horsetail	<i>Equisetum arvense</i>		1	1		50
Sneezewort	<i>Achillea ptarmica</i>			2		25
Common sorrel	<i>Rumex acetosa</i>		2			25
common sedge	<i>Carex nigra</i>		5			25
Great burnet	<i>Sanguisorba officinalis</i>		5			25
Glaucous sedge	<i>Carex flacca</i>			5		25
Dandelion	<i>Taraxacum officinale agg.</i>		1			25
Common knapweed	<i>Centaurea nigra</i>		5			25
Oval sedge	<i>Carex leporina</i>			1		25
Cat's-ear	<i>Hypochaeris radicata</i>	20				25
Devil's-bit scabious	<i>Succisa pratensis</i>					0
Bank Haircap Moss	<i>Polytrichastrum formosum</i>	[2]				0
Red bartsia	<i>Odontites vernus</i>					0
Himalayan balsam	<i>Impatiens glandulifera</i>					0
Blue = Other neutral Grassland Indicator		Q1	Q2	Q3	Q4	Average per m2
Red = Lowland Meadow Indicator	GRASSLAND LOW Species/m2	9	16	18	9	13.00
	Grassland LOW number of Forbs	4	10	12	5	7.75
	GRASSLAND MED+Species/m2 exc. Undesirables	9	16	16	8	12.25
	% cover rye-grass & white clover	0	0	10	10	5.00
	% cover Undesirables	0	0	10	1	2.75

	% cover grasses	80	76	71	70	74.25
	% cover wildflowers exc. Undesirables	29	31	21	29	27.50
	Bare Ground					1

Appendix A2: Other Botanical Survey Results

Woodland W1

Common Name	Scientific Name	Upper canopy	understorey	young tree	sapling	Seedling	Ground Flora
Woody Species							
Pedunculate oak	<i>Quercus robur</i>	A					
Sycamore	<i>Acer pseudoplatanus</i>	O					
Beech	<i>Fagus sylvatica</i>	O				R	
Alder	<i>Alnus glutinosa</i>	O		R	LF		
ash	<i>Fraxinus excelsior</i>	R					
Goat willow	<i>Salix caprea</i>	R					
Scots pine	<i>Pinus sylvestris</i>	R					
Hazel	<i>Corylus avellana</i>		O				
Holly	<i>Ilex aquifolium</i>		R				
Hawthorn	<i>Crataegus monogyna</i>		R				
Elder	<i>Sambucus nigra</i>		R				
Ground Flora							
Common bent	<i>Agrostis capillaris</i>						F
Himalayan balsam	<i>Impatiens glandulifera</i>						LA
Creeping buttercup	<i>Ranunculus repens</i>						LF

Common Name	Scientific Name	Upper canopy	understorey	young tree	sapling	Seedling	Ground Flora
Wood avens	<i>Geum urbanum</i>						LO
Tufted hair-grass	<i>Deschampsia caespitosa</i>						LO
Bramble	<i>Rubus fruticosus agg.</i>						O
Broad buckler-fern	<i>Dryopteris dilatata</i>						O
Cock's-foot	<i>Dactylis glomerata</i>						O
Wood speedwell	<i>Veronica montana</i>						O
False brome	<i>Brachypodium sylvaticum</i>						R
Lady-fern	<i>Athyrium filix-femina</i>						R
Remote sedge	<i>Carex remota</i>						R
Foxglove	<i>Digitalis purpurea</i>						R
Yellow pimpernel	<i>Lysimachia nemorum</i>						R
Red campion	<i>Silene dioica</i>						R
Herb-robert	<i>Geranium robertianum</i>						R
Common nettle	<i>Urtica dioica</i>						R
Hedge woundwort	<i>Stachys sylvatica</i>						R
Meadowsweet	<i>Filipendula ulmaria</i>						R
Pendulous sedge	<i>Carex pendula</i>						R
Common figwort	<i>Scrophularia nodosa</i>						R
Marsh thistle	<i>Cirsium palustre</i>						R
Soft-rush	<i>Juncus effusus</i>						R
Reed canary-grass	<i>Phalaris arundinacea</i>						R

Woodland W2

Common Name	Scientific Name	Upper canopy	understorey	young tree	sapling	Ground Flora
Woody Species						
Pedunculate oak	<i>Quercus robur</i>	A			R	
ash	<i>Fraxinus excelsior</i>	O				
Alder	<i>Alnus glutinosa</i>	R		R		
Holly	<i>Ilex aquifolium</i>		O			
Hawthorn	<i>Crataegus monogyna</i>		O			
Hazel	<i>Corylus avellana</i>		R			
Ground Flora						
Common bent	<i>Agrostis capillaris</i>					A
Himalayan balsam	<i>Impatiens glandulifera</i>					F
Ribwort plantain	<i>Plantago lanceolata</i>					O
Male-fern	<i>Dryopteris filix-mas</i>					O
Broad buckler-fern	<i>Dryopteris dilatata</i>					O
Tormentil	<i>Potentilla erecta</i>					LO
Common ragwort	<i>Jacobaea vulgaris</i>					R
Bramble	<i>Rubus fruticosus agg.</i>					R
Common ivy	<i>Hedera helix</i>					R
Lady-fern	<i>Athyrium filix-femina</i>					R
Wood avens	<i>Geum urbanum</i>					R
Hart's-tongue	<i>Asplenium scolopendrium</i>					R
Herb-robert	<i>Geranium robertianum</i>					R

Common Name	Scientific Name	Upper canopy	understorey	young tree	sapling	Ground Flora
Remote sedge	<i>Carex remota</i>					R
Great willowherb	<i>Epilobium hirsutum</i>					R
Pendulous sedge	<i>Carex pendula</i>					R
Foxglove	<i>Digitalis purpurea</i>					R

Woodland W3

Common Name	Scientific Name	Upper canopy	understorey	young tree	sapling	Seeding	Ground Flora
Woody Species							
Pedunculate oak	<i>Quercus robur</i>	A			F	F	
Sycamore	<i>Acer pseudoplatanus</i>	F					
ash	<i>Fraxinus excelsior</i>	O			R		
Hazel	<i>Corylus avellana</i>		F			R	
Hawthorn	<i>Crataegus monogyna</i>		R		R		
Holly	<i>Ilex aquifolium</i>				R		
Dog rose	<i>Rosa canina</i>						
Blackthorn	<i>Prunus spinosa</i>				R		
Ground Flora							
Himalayan balsam	<i>Impatiens glandulifera</i>						F
Creeping bent	<i>Agrostis stolonifera</i>						LF
Bramble	<i>Rubus fruticosus agg.</i>						O
Male-fern	<i>Dryopteris filix-mas</i>						O
Common ivy	<i>Hedera helix</i>						O

Common Name	Scientific Name	Upper canopy	understorey	young tree	sapling	Seeding	Ground Flora
Wood avens	<i>Geum urbanum</i>						O
Dog's mercury	<i>Mercurialis perennis</i>						O
Field horsetail	<i>Equisetum arvense</i>						R
Broad buckler-fern	<i>Dryopteris dilatata</i>						R
Herb-robert	<i>Geranium robertianum</i>						R
Wood melick	<i>Melica uniflora</i>						R
Hart's-tongue	<i>Asplenium scolopendrium</i>						R
Hairy-brome	<i>Bromopsis ramosa</i>						R

Scrub Sc1

Common Name	Scientific Name	Upper canopy	sapling	Ground flora
Hawthorn	<i>Crataegus monogyna</i>	F		
Holly	<i>Ilex aquifolium</i>		O	
hazel	<i>Corylus avellana</i>	R		
Ground Flora				
Common nettle	<i>Urtica dioica</i>			F
Creeping buttercup	<i>Ranunculus repens</i>			F
Himalayan balsam	<i>Impatiens glandulifera</i>			LF
Common ivy	<i>Hedera helix</i>			O
Creeping thistle	<i>Cirsium arvense</i>			O
Bramble	<i>Rubus fruticosus agg.</i>			R

Scrub Sc2

Common Name	Scientific Name	Upper canopy	understorey
Blackthorn	<i>Prunus spinosa</i>		A
Hawthorn	<i>Crataegus monogyna</i>		R
Alder	<i>Alnus glutinosa</i>	R	

Other Neutral Grassland – Poor Condition

Common Name	Scientific Name	ONG6	ONG9
White Clover	<i>Trifolium repens</i>		
Broad-leaved Dock	<i>Rumex obtusifolius</i>	R	R
Common Nettle	<i>Urtica dioica</i>	R	
Common Ragwort	<i>Jacobaea vulgaris</i>	R	
Creeping Buttercup	<i>Ranunculus repens</i>	F	O
Creeping Thistle	<i>Cirsium arvense</i>	LF	
Curled Dock	<i>Rumex crispus</i>		R
Perennial Rye-grass	<i>Lolium perenne</i>		A
Yorkshire-fog	<i>Holcus lanatus</i>	F	F
Common bent	<i>Agrostis capillaris</i>		
Creeping bent	<i>Agrostis stolonifera</i>	F	F
Meadow foxtail	<i>Alopecurus pratensis</i>		
Cock's-foot	<i>Dactylis glomerata</i>	F	R
Red fescue	<i>Festuca rubra</i>		O

Common Name	Scientific Name	ONG6	ONG9
Soft-rush	<i>Juncus effusus</i>	R	
Timothy	<i>Phleum pratense</i>		
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>		
Reed canary-grass	<i>Phalaris arundinacea</i>	R	
Crested dog's-tail	<i>Cynosurus cristatus</i>		
Compact rush	<i>Juncus conglomeratus</i>		
False oat-grass	<i>Arrhenatherum elatius</i>	F	
Field wood-rush	<i>Luzula campestris</i>		
Soft Brome	<i>Bromus hordeaceus</i>		R
Ribwort plantain	<i>Plantago lanceolata</i>	R	R
Common sorrel	<i>Rumex acetosa</i>	O	O
Red bartsia	<i>Odontites vernus</i>		
Meadow buttercup	<i>Ranunculus acris</i>	O	O
Common mouse-ear	<i>Cerastium fontanum</i>		R
Red clover	<i>Trifolium pratense</i>		
Tormentil	<i>Potentilla erecta</i>		
Great burnet	<i>Sanguisorba officinalis</i>		
Smooth hawk's-beard	<i>Crepis capillaris</i>		
Silverweed	<i>Potentilla anserina</i>		
Hairy sedge	<i>Carex hirta</i>		
Greater bird's-foot-trefoil	<i>Lotus pedunculatus</i>		
Himalayan balsam	<i>Impatiens glandulifera</i>	LF	

Common Name	Scientific Name	ONG6	ONG9
Great willowherb	<i>Epilobium hirsutum</i>	LF	
Bramble	<i>Rubus fruticosus</i> agg.	LF	
Common hogweed	<i>Heracleum sphondylium</i>	O	
Redshank	<i>Persicaria maculosa</i>	R	
Cat's-ear	<i>Hypochaeris radicata</i>		
Selfheal	<i>Prunella vulgaris</i>		
Dandelion	<i>Taraxacum officinale</i> agg.		F
Great willowherb	<i>Epilobium hirsutum</i>		
Cuckooflower	<i>Cardamine pratensis</i>		R

Modified Grassland

Common Name	Scientific Name	M1
Undesirables		
White Clover	<i>Trifolium repens</i>	R
Broad-leaved Dock	<i>Rumex obtusifolius</i>	R
Creeping Buttercup	<i>Ranunculus repens</i>	F
Grasses and Rushes		
Perennial Rye-grass	<i>Lolium perenne</i>	D
Yorkshire-fog	<i>Holcus lanatus</i>	O
Wildflowers and sedges		
Dandelion	<i>Taraxacum officinale</i> agg.	F
Common sorrel	<i>Rumex acetosa</i>	R

Common Name	Scientific Name	M1
Meadow buttercup	<i>Ranunculus acris</i>	O
Cuckooflower	<i>Cardamine pratensis</i>	R
Hairy sedge	<i>Carex hirta</i>	R

Watercourses

Common Name	Scientific Name	R1	R2
Creeping buttercup	<i>Ranunculus repens</i>	A	O
Creeping bent	<i>Agrostis stolonifera</i>	F	
Himalayan balsam	<i>Impatiens glandulifera</i>	LF	F
Great willowherb	<i>Epilobium hirsutum</i>	LF	
Hairy sedge	<i>Carex hirta</i>	O	O
Brooklime	<i>Veronica beccabunga</i>	O	
Common nettle	<i>Urtica dioica</i>	R	LF
Hard rush	<i>Juncus inflexus</i>	R	O
Meadowsweet	<i>Filipendula ulmaria</i>	R	R
Hawthorn	<i>Crataegus monogyna</i>	R	R
Alder	<i>Alnus glutinosa</i>	R	R
Broad-leaved dock	<i>Rumex obtusifolius</i>	R	
Floating sweet-grass	<i>Glyceria fluitans</i>	R	
Bramble	<i>Rubus fruticosus agg.</i>	R	
Water-cress	<i>Nasturtium officinale</i>	R	
Reed canary-grass	<i>Phalaris arundinacea</i>	R	

Common Name	Scientific Name	R1	R2
Soft-rush	<i>Juncus effusus</i>		F
Common hogweed	<i>Heracleum sphondylium</i>		O
Silverweed	<i>Potentilla anserina</i>		O
ash	<i>Fraxinus excelsior</i>		R
Jointed rush	<i>Juncus articulatus</i>		R

Ponds

Common Name	Scientific Name	P1	P2	P3	P4	P5	P6
Creeping buttercup	<i>Ranunculus repens</i>	A		F		LF	F
Himalayan balsam	<i>Impatiens glandulifera</i>	O LF					
Remote sedge	<i>Carex remota</i>	O					
Soft-rush	<i>Juncus effusus</i>	R	A	LF		R	O
Creeping bent	<i>Agrostis stolonifera</i>	O			D	LF	
A water-starwort	<i>Callitriche sp.</i>	O					
Creeping thistle	<i>Cirsium arvense</i>		O				
Brooklime	<i>Veronica beccabunga</i>		O	O			
Great willowherb	<i>Epilobium hirsutum</i>		O	O			
Broad-leaved dock	<i>Rumex obtusifolius</i>		R			F	
Common nettle	<i>Urtica dioica</i>		O		LF		
Hairy sedge	<i>Carex hirta</i>		R				
Floating sweet-grass	<i>Glyceria fluitans</i>			F			F
Cock's-foot	<i>Dactylis glomerata</i>				R		

Common Name	Scientific Name	P1	P2	P3	P4	P5	P6
Redshank	<i>Persicaria maculosa</i>					R	
Sharp-flowered rush	<i>Juncus acutiflorus</i>					R	

Hedgerow H1

length (m)	320		Height(m)	1.3			Width(m)	2.5			Ditch	no			Bank	no		
Type here	Common Name	Scientific Name	Dafor	30m - 1	30m - 2	30m - 3	Veteran standard	Mature standard	Young standard	Gaps (m)	Type here	Common Name	Scientific Name					
Hawthorn	Hawthorn	<i>Crataegus monogyna</i>	d	x	x	x						Bramble	<i>Rubus fruticosus agg.</i>					
Sycamore	Sycamore	<i>Acer pseudoplatanus</i>	r								Himalayan balsam	alayan bals	<i>Impatiens glandulifera</i>					
Elder	Elder	<i>Sambucus nigra</i>	o	x	x	x						-	-					
ash	ash	<i>Fraxinus excelsior</i>	r					1				-	-					
Dog rose	Dog rose	<i>Rosa canina</i>	r									-	-					

Hedgerow H2

length (m)	105		Height(m)	2			Width(m)	1			Ditch	no			Bank			
Type here	Common Name	Scientific Name	Dafor	30m - 1	30m - 2	30m - 3	Veteran standard	Mature standard	Young standard	Gaps (m)	Type here	Common Name	Scientific Name					
Hawthorn	Hawthorn	<i>Crataegus monogyna</i>	a	x	x							-	-					
Blackthorn	Blackthorn	<i>Prunus spinosa</i>	f	x	x							-	-					
Holly	Holly	<i>Ilex aquifolium</i>	r	x								-	-					
Osier	Osier	<i>Salix viminalis</i>	r						1			-	-					

Hedgerow H3

length (m)	52		Height(m)	2.5			Width(m)	2			Ditch				Bank			
Type here	Common Name	Scientific Name	Dafor	30m - 1	30m - 2	30m - 3	Veteran standard	Mature standard	Young standard	Gaps (m)	Type here	Common Name	Scientific Name					
Hazel	Hazel	<i>Corylus avellana</i>	o									Bramble	<i>Rubus fruticosus</i>					
Hawthorn	Hawthorn	<i>Crataegus monogyna</i>	a	x								-	-					
Sycamore	Sycamore	<i>Acer pseudoplatanus</i>	r									-	-					
Elder	Elder	<i>Sambucus nigra</i>	o	x								-	-					
Dog rose	Dog rose	<i>Rosa canina</i>	r									-	-					
Pedunculate oak	Pedunculate oak	<i>Quercus robur</i>	r	x				1				-	-					
Holly	Holly	<i>Ilex aquifolium</i>	r	x								-	-					

Hedgerow H4

length (m)		86		Height(m)		Width(m)			Ditch			Bank			Gaps (m)		
Type here	Common Name	Scientific Name	Dafor	30m - 1	30m - 2	30m - 3	Veteran standard	Mature standard	Young standard				Type here	Common Name	Scientific Name		
Blackthorn	Blackthorn	<i>Prunus spinosa</i>	f										12	Bramble	Bramble	<i>sp. fruticosus</i>	
Hazel	Hazel	<i>Corylus avellana</i>	o	x										Raspberry	Raspberry	<i>Rubus idaeus</i>	
Hawthorn	Hawthorn	<i>Crataegus monogyna</i>	a	x										-	-	-	
Pedunculate oak	Pedunculate oak	<i>Quercus robur</i>	r											-	-	-	
ash	ash	<i>Fraxinus excelsior</i>	r					x						-	-	-	

Hedgerow H5

length (m)		83		Height(m)		Width(m)			Ditch			Bank			Gaps (m)		
Type here	Common Name	Scientific Name	Dafor	30m - 1	30m - 2	30m - 3	Veteran standard	Mature standard	Young standard				Type here	Common Name	Scientific Name		
Hawthorn	Hawthorn	<i>Crataegus monogyna</i>	f	x										Honeysuckle	Honeysuckle	<i>L. periclymenum</i>	
Pedunculate oak	Pedunculate oak	<i>Quercus robur</i>	r	x					1					-	-	-	
Holly	Holly	<i>Ilex aquifolium</i>	f	x										-	-	-	
ash	ash	<i>Fraxinus excelsior</i>	r											-	-	-	
Hazel	Hazel	<i>Corylus avellana</i>	lf	x										-	-	-	
Sycamore	Sycamore	<i>Acer pseudoplatanus</i>	r											-	-	-	
Dog rose	Dog rose	<i>Rosa canina</i>	r	x										-	-	-	

APPENDIX B: BASELINE HABITAT CONDITION ASSESSMENTS

Grassland – Lowland Meadow

Condition Criteria	G11
<p>The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).1</p> <p>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</p>	<p>Fail - Lowland Meadow, good fit for NVC MG5c - But not a good example as it lacks the overall species richness of the best examples. Additionally, no Lowland meadow indicators were recorded as frequent within the quadrats, 5 were occasional.</p>
<p>Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.</p>	<p>Fail - All tall, particularly inside fence line.</p>

Condition Criteria	G11
Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ¹ .	Fail - 0.5% in the quadrats. Representative of wider parcel
Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Pass
Combined cover of species indicative of sub-optimal condition ² 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 ³ (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.	Fail - Himalayan balsam present at edge of habitat near watercourse. Average of 4% undesirables in quadrats
There are 10 or more vascular plant species per m ² 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 12.63
Total Passes	2
Condition	Poor

Grassland – Medium distinctiveness. Good to moderate condition

Condition Criteria	G1	G1a	G1b	G2	G3	G8
The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific	Pass - Moderately species rich g3c6. Fails Lowland Meadow Criteria due to species	Pass - Ribwort plantain, common sorrel, meadow buttercup frequent in quadrats and red clover rare. Plus some Lowland	Pass - <u>Species rich g3c6 borderline Lowland meadow</u> Just Fails Lowland Meadow Criteria	Pass - Good quality g3c8 <i>Holcus Juncus</i> Grassland, moving towards f2b rush pasture (of the NVC	Pass - g3c6 - moderately species rich. 2 indicators frequent (1	Pass - Species rich g3c6 borderline Lowland meadow 8 LM indicators present. 4 ONG

Condition Criteria	G1	G1a	G1b	G2	G3	G8
<p>habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).1</p> <p>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</p>	<p>richness and herb cover under thresholds. Lowland Meadow indicators 1 F, 1 O, 2 R. Other neutral indicators 1 F, 2 O, 1 R</p>	<p>Meadow indicators present but at low abundances and not in quadrats</p>	<p>due to species richness under threshold and rye grass and white clover cover just over. LM indicators 1 F, 1 O, 6 R. ONG indicators 2 F, 2 O.</p>	<p>community M23b type) but not species rich enough for priority habitat and lacks indicator species for f2b. Passes Lowland Meadow UKHab criteria, but not a good fit for NVC communities MG4 5 or 8 etc. LM indicators 2 F, 4 R. ONG indicators 1 F, 2 O, 1 R.</p>	<p>ONG 1 LM) 3 occasional (2 LM 1 ONG) 2 rare (1 LM 1ONG)</p>	<p>indicators present, but just Fails Lowland Meadow Criteria due to species richness and herb cover under threshold. LM indicators 2 F, 7 O. ONG indicators 4 O,</p>
<p>Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.</p>	<p>Fail - Some short areas but predominantly longer sward</p>	<p>Pass - Around 20% short grazed</p>	<p>Fail - All Short grazed</p>	<p>Pass - Tall tussocky areas and localised short grazed.</p>	<p>Fail - All above 7cm</p>	<p>Pass</p>
<p>Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens1.</p>	<p>Fail - less than 1% in quadrats</p>	<p>Fail - less than 1% on average</p>	<p>Pass - 0.5% in quadrats but localised patches outside quadrats</p>	<p>Pass - 0.7% in quadrats and localised patches elsewhere.</p>		<p>Pass – 1% in quadrats and localised patches on ridge</p>
<p>Cover of bracken Pteridium aquilinum is less than 20% and cover of scrub (including bramble Rubus fruticosus agg.) is less than 5%.</p>	<p>Pass</p>	<p>Pass</p>	<p>Pass</p>	<p>Pass</p>	<p>Pass</p>	<p>Pass</p>

Condition Criteria	G1	G1a	G1b	G2	G3	G8
<p>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.</p> <p>If any invasive non-native plant species³ (as listed on Schedule 9 of WCA⁴) are present, this criterion is automatically failed.</p>	Fail - 3% cover in quadrats, but creeping thistle LF (not sampled) and common ragwort occasional	Fail – 15% in quadrats + creeping thistle and creeping buttercup with high cover	Fail -11% in quadrats due to white clover and creeping butercup cover. Himlayan balsam present towards stream	Pass - 2.3% in quadrats	Fail - Less than 1%	Fail – Himalayan balsam occasional along margin with R2
<p>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).</p> <p>N.B. this criterion is essential for achieving Good condition for non-acid grassland types only.</p>	Pass - 11 species per m ² on average	Fail – 9.4 on average in quadrats	Pass - Average of 12 in quadrats	Pass – Average of 11.7 in quadrats	Pass – Average of 11 in quadrats	Pass – Average of 12.25 in quadrats
Total Passes	3	3	4	6	4	5
Condition	Moderate	Moderate	Moderate	Good	Moderate	Good

Grassland – Med and high distinctiveness. Poor condition

Condition Criteria	G4	G5	G6	G7	G9
<p>The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).1</p> <p>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</p>	<p>Fail - g3c6. Fail as community doesn't pass all the ONG broad habitat definition criteria, falling on overall herb cover. Not enough indicators with ribwort plantain frequent, common sorrel and eyebright occasional and meadow buttercup rare.</p>	<p>Fail - species poor g3c6. Doesn't pass all ONG broad habitat definition criteria. Meadow buttercup frequent, 5 rare (3 Lowland meadow indicators 2 ONG indicators).</p>	<p>Fail -g3c8, but only occasional common sorrel and meadow buttercup noted</p>	<p>Pass - Moderately species rich g3c6. 3 ONG indicators frequent and one occasional in quadrats. One Lowland meadow indicator occasional and one rare in quadrats</p>	<p>Fail – Borderline g4 and only indicators are common sorrel and meadow buttercup, both rare.</p>
<p>Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.</p>	<p>Fail – All over 7cm</p>	<p>Fail - All over 7cm</p>	<p>Fail – All grassland tall and tussocky</p>	<p>Fail - all greater than 7cm</p>	<p>Fail – All short</p>
<p>Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens1.</p>	<p>Fail – None in quadrats, closed sward across surveyed area</p>	<p>Fail - 0.6% in quadrats</p>	<p>Pass</p>	<p>Fail - 0.1% in quadrats - representative of wider field.</p>	<p>Pass</p>
<p>Cover of bracken Pteridium aquilinum is less than 20% and cover of scrub (including bramble Rubus fruticosus agg.) is less than 5%.</p>	<p>Pass</p>	<p>Pass</p>	<p>Fail – bramble encroaching over 5%</p>	<p>Pass</p>	<p>Pass</p>

Condition Criteria	G4	G5	G6	G7	G9
<p>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.</p> <p>If any invasive non-native plant species³ (as listed on Schedule 9 of WCA⁴) are present, this criterion is automatically failed.</p>	Fail- 17% in quadrats	Fail - 26% undesirables in Quadrats	Fail – Himalayan balsam present and creeping thistle frequent	Fail - 12.4% in quadrats	Pass – only creeping buttercup occasional
<p>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).</p> <p>N.B. this criterion is essential for achieving Good condition for non-acid grassland types only.</p>	Fail – Average of 9.5 within quadrats	Fail - Average of 8.8 within quadrats	Fail – No quadrats taken but clearly less than 10	Fail - Average of 9.3 within quadrats	Fail – No Quadrats taken but clearly less than 10
Total Passes	1	1	2	2	3
Condition	Poor	Poor	Poor	Poor	Poor

Ponds

Condition Criteria	P1	P2	P3	P4	P5	P6
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	Pass	Pass	Pass	Pass	Pass
There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	Fail	Pass	Pass	Pass	Pass	Fail
Less than 10% of the water surface is covered with duckweed Lemna spp. or filamentous algae.	Pass	Pass	Pass	Pass	Pass	Pass
The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework.	Pass	Pass	Pass	Pass	Pass	Pass
Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	Pass	Pass	Pass	Pass	Pass	Pass
There is an absence of listed non-native plant and animal species ³ .	Fail	Pass	Pass	Pass	Pass	Pass
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	Pass	Pass	Pass	Pass
Non-woodland Ponds Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3 m deep.	N/A	Fail	Fail	Fail	Fail	Fail
Non-woodland Ponds The pond surface is no more than 50% shaded by adjacent trees and scrub.	N/A	Pass	Pass	Pass	Pass	Pass
Total Passes	5	8	8	8	8	7
Condition	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

Hedgerows

Hedge	Hedgerow Type	A1 Height >1.5m	A2 width >1.5m	B1 Gap Hedge base	B2 - Gap hedge canopy	C1 - undisturbed ground	C2 - Nutrient Enriched Veg	D1 Invasives	D-2 Current damage	E-1 Tree Class	E-2 Tree health	Condition
H1	Native Hedgerow	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Pass	N/a	N/a	Moderate
H2	Native Hedgerow	Pass	Fail	Fail	Pass	Fail	Pass	Pass	Pass	N/a	N/a	Moderate
H3	Species Rich Native Hedgerow	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	N/a	N/a	Moderate
H4	Native Hedgerow	Fail	Fail	Pass	Fail	Pass	Pass	Pass	Pass	N/a	N/a	Moderate
H5	Species Rich Native Hedgerow	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	N/a	N/a	Good

Grassland – Low distinctiveness.

Condition Criteria	M1
There are 6-8 vascular plant species per m ² present, including at least 2 forbs . Note - this criterion is essential for achieving Moderate or Good condition.	Fail
Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Fail
Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass
Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Pass
Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Pass
Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Pass
There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA4).	Pass
Total Passes	5
Condition	Poor

Scrub

Condition Criteria	SC1	SC2
The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Fail	Fail
Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	Fail all mature	Fail
There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA4) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	Fail him bal	Pass
The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Fail	Pass
There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail	Fail
Total Passes	0	2
Condition	Poor	Poor

Woodland

Condition Criteria	W1	W2	W3
Age Distribution of Trees 3 - three age classes 2 - two age classes 1 - one age class	1 all old	1	2
Herbivore Damage 3 - no significant browsing 2 - significant browsing pressure <40% 1 - significant browsing pressure >40%	1	2	3
Invasive Plant Species 3 - No invasive species 2 - invasive species <10% cover AND NO rhododendron or Cherry Laurel Present 1 - invasive species >10% cover or/and Rhododendron or cherry laurel present.	1	1	1
Number of Native Species 3 - 5+ native trees and/or shrubs 2 - 3-4 native trees and/or shrubs 1 - 2- native trees and/or shrubs	2	2	2
Cover of Native Species 3 - >80% of canopy & understorey native 2 - 50-80% of canopy & understorey native 1 - <50% of canopy & understorey native	3	3	3
Open Space 3 - 10-20% temporary open space If woodland area <10ha 0-20% temporary open space = Good 2 - 21-40% temporary open space 1 - <10% or >40% temporary open space	3	3	3
Woodland Regeneration 3 - 3 age classes 2 - 1-2 age classes 1 - No classes or coppice regrowth	1	1	2
Tree Health 3 - <10% mortality, no pests/disease, no dieback 2 - 11-25% mortality, low risk pest or disease present 1 - >25% mortality, high risk pest or disease present	2	2	2
Vegetation & Ground Flora 3 - Recognisable NVC community including ancient flora specialists 2 - Recognisable NVC community at ground level 1 - No recognisable NVC community	2	2	3
Woodland Vertical Structure 3 - Three or more storeys or a complex woodland 2 - Two storeys 1 - One or no defined storeys	1	2	2
Veteran Trees 3 - 2+ veteran trees per ha 2 - 1 veteran tree per ha 1 - no veterans	2	1	1

Condition Criteria	W1	W2	W3
Amount of Deadwood 3 - 50%+ of plots have deadwood 2 - 25-50% of plots have deadwood 1 - <25% of plots have deadwood	2	2	1
Disturbance and enrichment 3 - No nutrient enrichment or damaged ground 2 - <1ha of nutrient enrichment and /or less than 20% of woodland has damaged ground 1 - >1ha of nutrient enrichment and/or >20% of woodland has damaged ground	3	3	3
Total Score	24	25	28
Condition	Poor	Poor	Moderate

Tall Forbs

Condition Criteria	Tall forbs
A. Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	Fail
B. The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	Fail
C. Invasive non-native plant species (listed on Schedule 9 of WCA1) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ .	Pass
Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Pass
Total Passes	1
Condition	Poor

Line of trees

Condition Criteria	Lot 1
At least 70% of trees are native species.	Pass
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
One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	Pass
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

Condition Criteria	Lot 1
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
Total Passes	4
Condition	Moderate

APPENDIX C: RIVER CONDITION ASSESSMENT RESULTS

Watercourse R1

Condition Assessment Criteria		Sub Reach A RCA Index Values	Sub Reach B RCA Index Values
RCA Index ID	RCA Index Name Green = Positive and Red = Negative scoring indices	Baseline Score	Baseline Score
Bank Top			
B1	Bank top vegetation structure	2	3
B2	Bank top tree feature richness	0	0
B3	Bank top water-related features	0	0
B4	<i>Bank top NNIPS cover</i>	-2	-2
B5	<i>Bank top managed ground cover</i>	-2	-2
Bank face			
C1	Bank face riparian vegetation structure	2	4
C2	Bank face tree feature richness	0	1
C3	Bank face natural bank profile extent	2	2
C4	Bank face natural bank profile richness	2	3
C5	Bank face natural bank material	1	1
C6	Bank face bare sediment extent	4	3
C7	<i>Bank face artificial bank profile extent</i>	-3	-2
C8	<i>Bank face reinforcement extent</i>	0	0
C9	<i>Bank face reinforcement material</i>	0	0
C10	<i>Bank face NNIPS* cover</i>	0	-3
Channel Margin			
D1	Channel margin aquatic vegetation	0	3
D2	Channel margin aquatic morphotype	0	1
D3	Channel margin physical feature extent	1	1
D4	Channel margin physical feature	1	2
D5	<i>Channel Margin artificial features</i>	0	0
Channel Bed			
E1	Channel aquatic Morphotype richness	0	1
E2	Channel bed tree features richness	0	2
E3	Channel bed hydraulic features richness	2	2
E4	Channel bed nature features richness	1	3
E5	Channel bed natural features richness	1	1

Condition Assessment Criteria		Sub Reach A RCA Index Values	Sub Reach B RCA Index Values
E6	Channel bed material richness	2	3
E7	Channel bed siltation	0	0
E8	Channel bed reinforcement extent	0	0
E9	Channel bed reinforcement severity	0	0
E10	Channel bed artificial features severity	-3	0
E11	Channel bed NNIPS extent	0	0
E12	Channel bed filamentous algae extent	0	0
Is the Watercourse Over Deep?		Yes	Yes
Final Condition Score (including over deepness assessment)		Poor	Fairly Poor

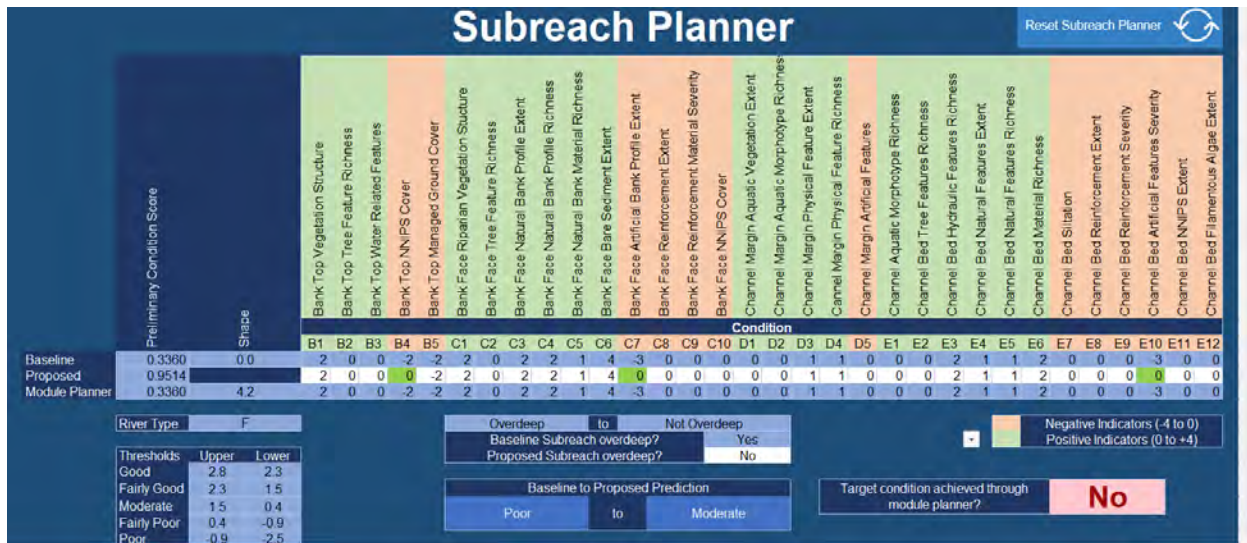
Watercourse R2

Condition Assessment Criteria		Sub Reach B RCA Index Values	Sub Reach A RCA Index Values
RCA Index ID	RCA Index Name Green = Positive and Red = Negative scoring indices	Baseline Score	Baseline Score
Bank Top			
B1	Bank top vegetation structure	2	2
B2	Bank top tree feature richness	2	0
B3	Bank top water-related features	0	0
B4	Bank top NNIPS cover	-3	-2
B5	Bank top managed ground cover	0	0
Bank face			
C1	Bank face riparian vegetation structure	2	3
C2	Bank face tree feature richness	1	0
C3	Bank face natural bank profile extent	3	2
C4	Bank face natural bank profile richness	2	3
C5	Bank face natural bank material	1	1
C6	Bank face bare sediment extent	1	2
C7	Bank face artificial bank profile extent	0	0
C8	Bank face reinforcement extent	0	0
C9	Bank face reinforcement material	0	0
C10	Bank face NNIPS* cover	-3	-3
Channel Margin			
D1	Channel margin aquatic vegetation	1	1

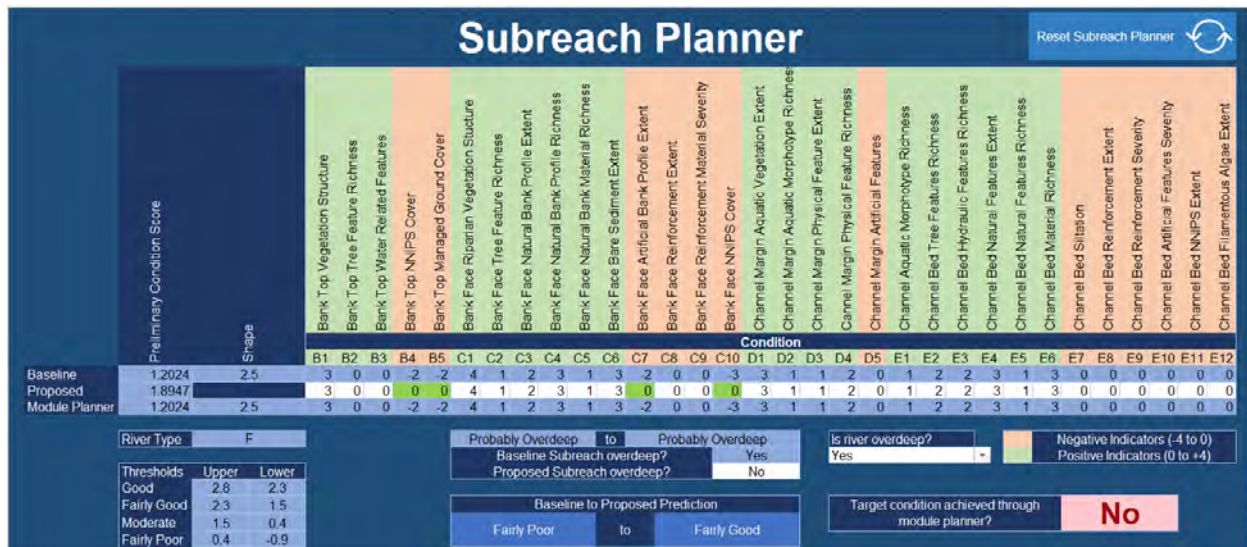
Condition Assessment Criteria		Sub Reach B RCA Index Values	Sub Reach A RCA Index Values
D2	Channel margin aquatic morphotype	0	0
D3	Channel margin physical feature extent	0	1
D4	Channel margin physical feature	0	1
D5	<i>Channel Margin artificial features</i>	0	0
Channel Bed			
E1	Channel aquatic Morphotype richness	0	0
E2	Channel bed tree features richness	2	0
E3	Channel bed hydraulic features richness	2	2
E4	Channel bed nature features richness	3	2
E5	Channel bed natural features richness	3	2
E6	Channel bed material richness	3	3
E7	<i>Channel bed siltation</i>	0	0
E8	<i>Channel bed reinforcement extent</i>	0	0
E9	<i>Channel bed reinforcement severity</i>	0	0
E10	<i>Channel bed artificial features severity</i>	0	0
E11	<i>Channel bed NNIPS extent</i>	-3	-1
E12	<i>Channel bed filamentous algae extent</i>	0	0
Is the Watercourse Over Deep?		Yes	Yes
Final Condition Score (including over deepness assessment)		Fairly Poor	Fairly Poor

APPENDIX D: WATERCOURSE ENHANCEMENT MODULE PLANNER.

River R1 – Sub-reach A



River R1 – Sub-reach B

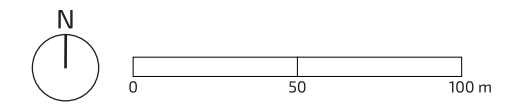
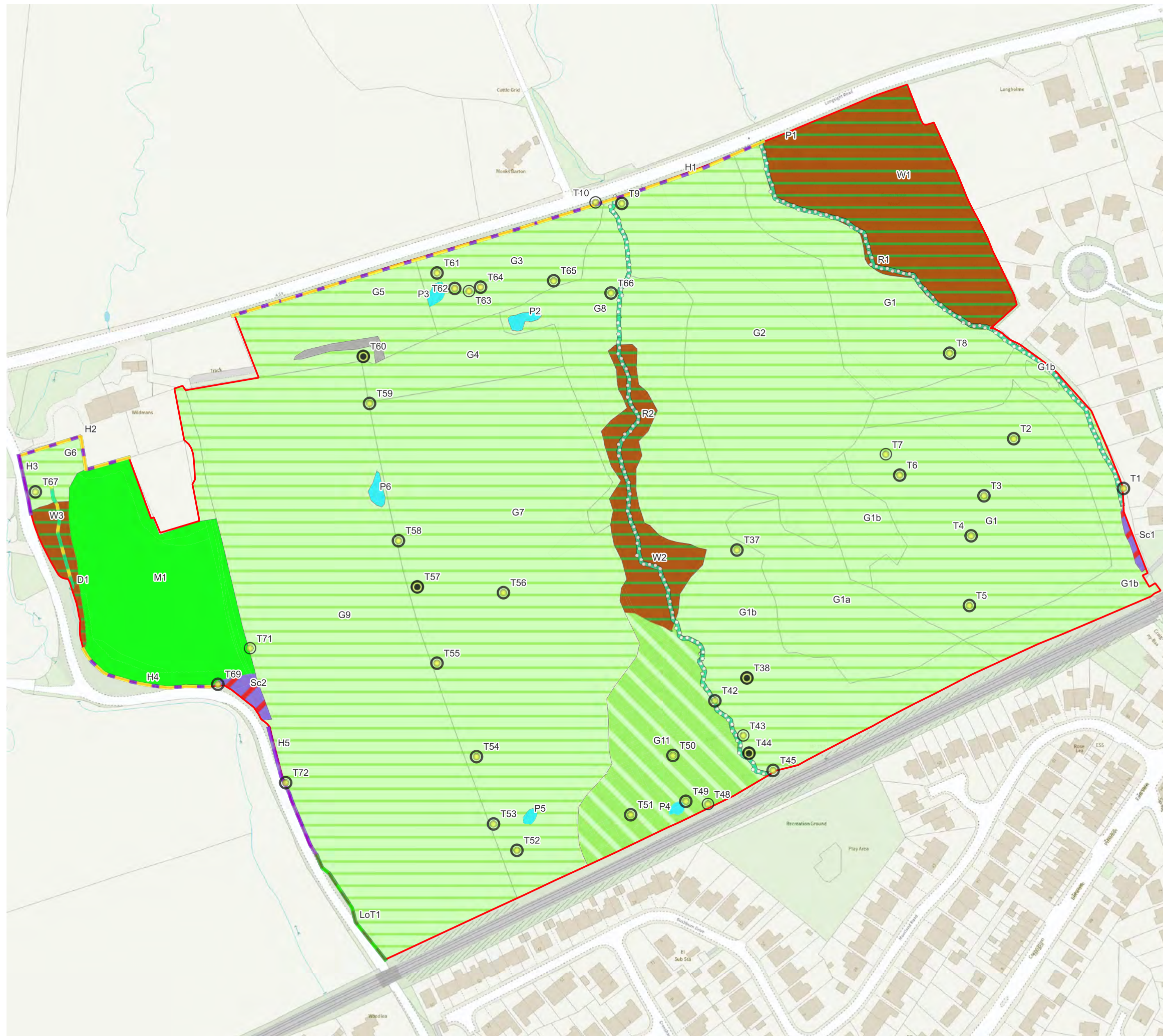


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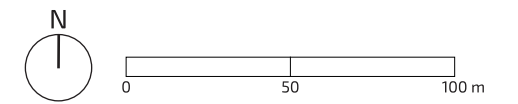
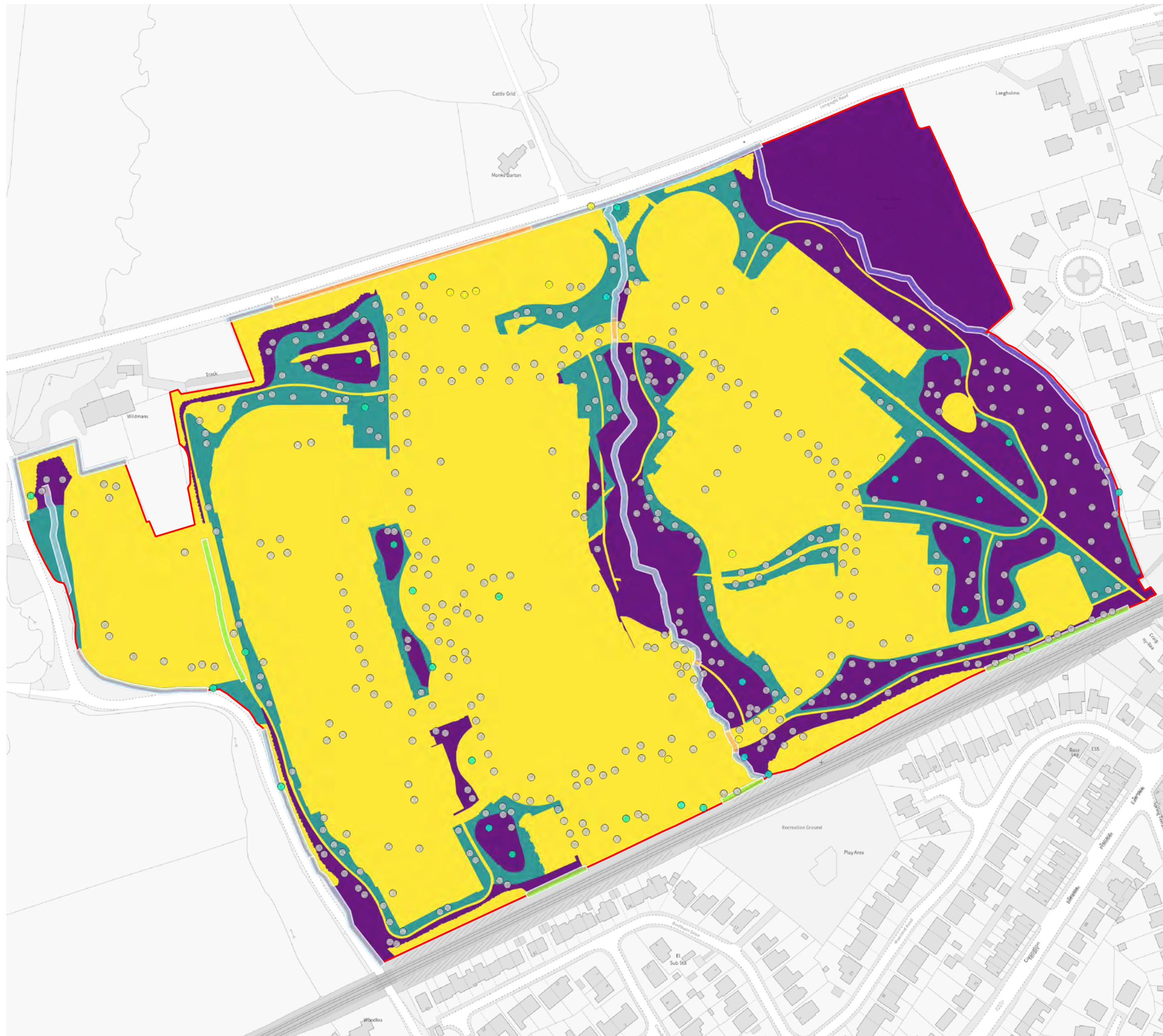
- Redline Boundary
- Baseline Habitats**
- Blackthorn scrub
- Hawthorn scrub
- Lowland meadows
- Lowland mixed deciduous woodland
- Modified grassland
- Ponds (non-priority habitat)
- Tall forbs
- Other neutral grassland
- Baseline Hedgerow**
- Ecologically valuable line of trees
- Native hedgerow
- Species-rich native hedgerow
- Baseline Watercourse**
- Ditches
- Other rivers and streams
- Baseline Individual Trees**
- Existing very large rural tree
- Existing large rural tree
- Existing medium rural tree

date 18/11/25 drwn/chkd
DV / ET

client **Hallam Land Management Ltd**
 project **Land South of Longsight Road
Langho**

title **BASELINE HABITAT PLAN** scale
1:2,300 @ A3

number **FIGURE 1** rev
-



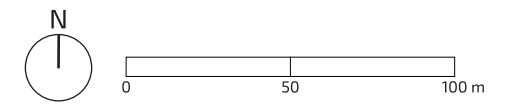
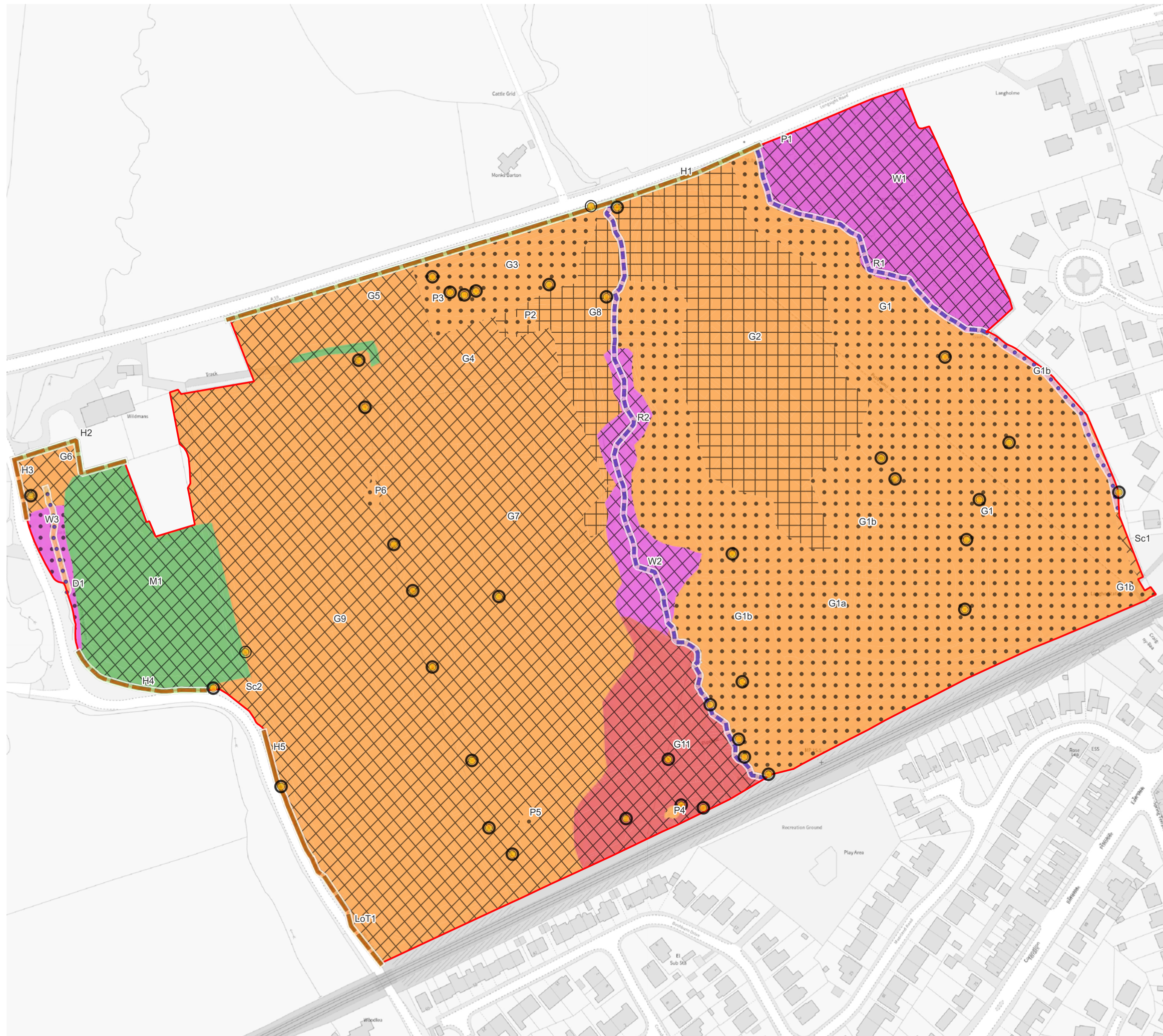
- Redline Boundary
- Habitats**
- Enhanced
- Retained
- Lost
- Hedgerows**
- Created
- Retained
- Lost
- Watercourses**
- Enhanced
- Retained
- Lost
- Individual Trees**
- Created
- Retained
- Proposed Lost

date 18/11/25 drwn/chkd
DV / ET

client **Hallam Land Management Ltd**
 project **Land South of Longsight Road
Langho**

title **HABITAT RETENTION PLAN** scale
1:2,300 @ A3

number **FIGURE 3** rev
-



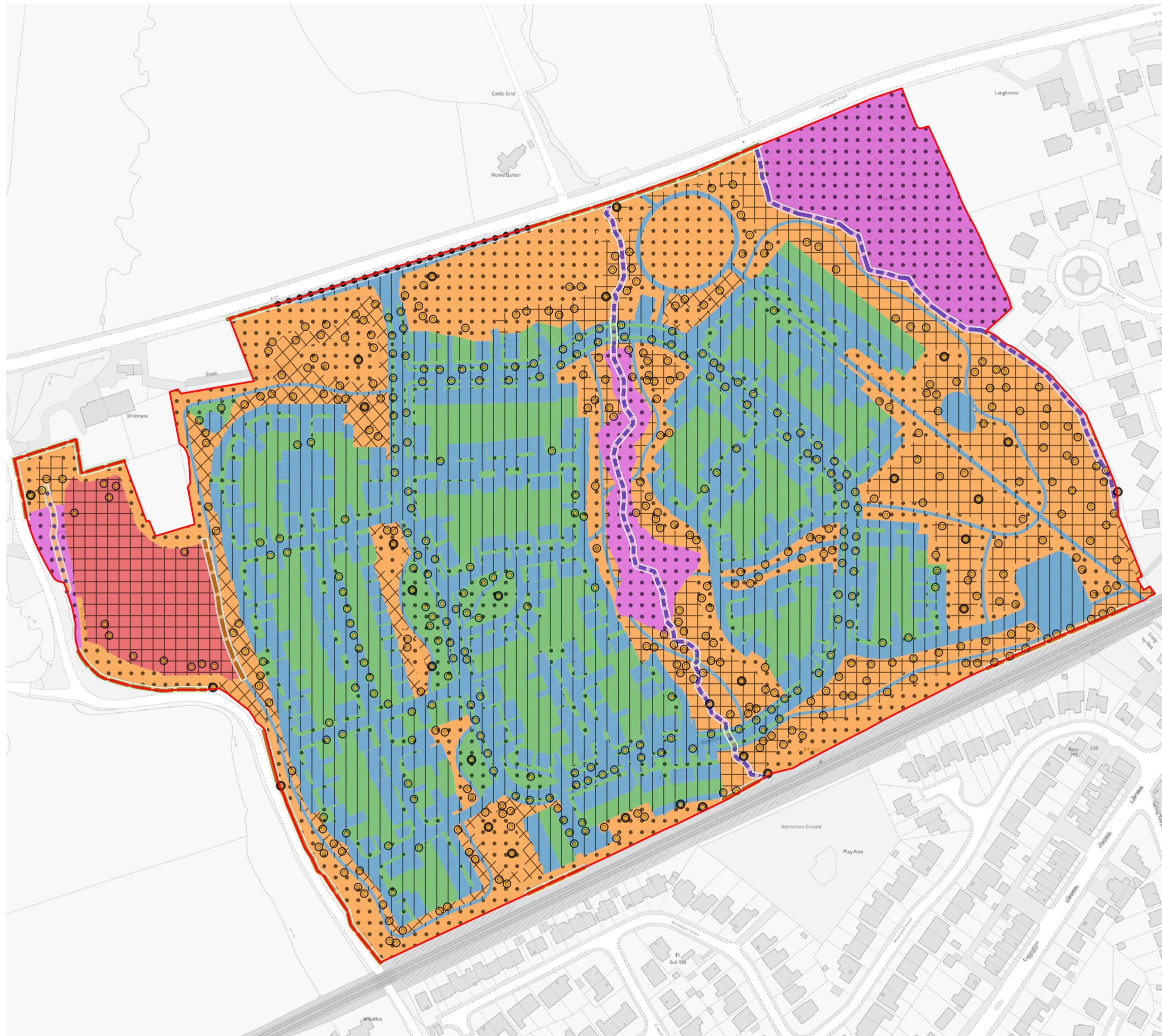
- Redline Boundary
- Baseline Habitat Condition**
- Good
- Moderate
- Poor
- Baseline Habitat Distinctiveness**
- V.High
- High
- Medium
- Low
- Baseline Hedgerow Condition**
- Good
- Moderate
- Baseline Hedgerow Distinctiveness**
- Medium
- Low
- Baseline Watercourse Condition**
- Fairly Poor
- Poor
- Baseline Watercourse Distinctiveness**
- High
- Medium
- Baseline Individual Tree Condition**
- Moderate
- Good
- Baseline Individual Tree Distinctiveness**
- Medium

date 18/11/25 drwn/chkd DV / ET

client **Hallam Land Management Ltd**
 project **Land South of Longsight Road Langho**

title **BASELINE HABITAT CONDITION AND DISTINCTIVENESS PLAN** scale 1:2,300 @ A3

number **FIGURE 4** rev -



date 18/11/25 drwn/chkd DV / ET

client Hallam Land Management Ltd

project Land South of Longsight Road Langho

title PROPOSED HABITAT CONDITION AND DISTINCTIVENESS PLAN scale 1:2,300 @ A3

number FIGURE 5 rev -