ECOLOGICAL EXPERTISE, EVOLVED

Blackthorn Farm, Culverstone Green

Habitats, Flora and Vegetation Survey Report

Prepared on behalf of

Esquire Developments Ltd

Final Report

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Contents

FIGURES

APPENDICES

Executive Summary

Ecological Planning & Research Ltd (EPR) conducted a habitat, vegetation and flora survey in relation to the Proposed Development on land at Blackthorn Farm, Culverstone Green.

The on-site hedgerows and tree lines comprise common and widespread species. They are largely intact (lacking gaps) and well connected to on and off-site woodland habitats. Therefore, they are of ecological importance at the **Local Level**.

Three on-site Field Maples do not qualify as veteran trees under the National Planning Policy Framework (2024), but do support veteran features such as deadwood, rot holes and cavities, and as such they meet the alternative definition of a veteran tree as set out in the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. These features have the potential to provide habitat for specialist invertebrates, lichens and fungi, and are therefore considered to be of ecological importance at the **Local Level**.

Two on-site grassland types are also of ecological importance at the **Local Level**. These are:

- MG5 Cynosurus cristatus-Centaurea nigra grasslands: an increasingly uncommon grassland community resulting from agricultural intensification. Those at the Site support a diversity of common and widespread plant species, but are significantly degraded due to intensive grazing, fertilisation and re-seeding causing a transition towards MG6 type grasslands. They are also a poor example of the Section 41 habitat Lowland Meadows; and
- MG6 Lolium perenne-Cynosurus cristatus grasslands: a widespread and common grassland in Kent. Those found at the Site are relatively species-rich and contribute to the diversity of habitats and species in the landscape.

Finally, the on-site woodland shaw is also of ecological importance at the **Local Level** because it comprises of Lowland Mixed Deciduous Woodland, with several ancient woodland indicator species.

All other on-site habitats, flora and vegetation communities are of ecological importance at the **Within Zone of Influence Level** only.

Details associated with impact avoidance and mitigation will be detailed in the associated Ecological Impact Assessment (EcIA) in due course.

1. INTRODUCTION

1.1 Ecological Planning & Research (EPR) Ltd was commissioned by Esquire Developments Ltd to conduct a survey of the habitats, flora and vegetation on land at Blackthorn Farm, Culverstone Green (hereafter referred to as 'the Site').

1.2 **Figure 1** shows the location of the Site.

Relevant Legislation and Planning Policy

1.3 **Appendix 1** provides further detail:

- The Environment Act 2021;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006; and
- The Gravesham Local Plan Core Strategy 2014.

Likely Biophysical Changes

1.4 Biophysical change means an "… *alteration in biological and/or physical conditions of the environment (e.g. changes in the atmospheric concentration of carbon dioxide, altered soil pH or change in the frequency of a plant species in an area)*" (CIEEM, 2018).

1.5 The predicted biophysical changes that could be generated from the Proposed Development and be of relevance to habitats, flora and vegetation are detailed in **Table 1.1**, along with their likely Zone of Influence (discussed further below).

Table 1.1: Activities and Biophysical Changes associated with the Proposed Development that may give rise to ecological impacts to Habitats Flora and Vegetation and the associated Zone(s) of Influence.

Activity	Potential Impact	Zone of Influence
The Site Clearance and Construction Phase		
Vegetation clearance and ground works	Loss and fragmentation of habitat. Damage of vulnerable habitat	Site and immediate surrounds
Drainage	Change of groundwater and surface flows and/or water quality, that may in turn affect habitats	Within the site boundary and habitats that are hydrologically connected
Assembly and storage areas for machines, materials, and construction compounds	Damage of vulnerable habitat	Site and immediate surrounds
Construction of new roads and buildings	Habitat fragmentation	Site and immediate surrounds
Creation of new habitats through implementation of a soft landscaping scheme	Beneficial impact from the restoration and creation of new habitat	Site and immediate surrounds
Operational Phase		
Access and travel on / off the Site, including increased number of people visiting areas on and around it for recreational purposes	Loss and fragmentation of habitats by trampling	The Site and immediate surrounds generally extending up to 400m from the Site boundary. However, it will extend beyond this for effects associated with recreational activities (for example up to 5-6km)
Occupation of new houses: urban effects	Loss and fragmentation of habitats by trampling Degradation and pollution of habitats through urban effects (such as fly tipping and introduction of non-native species)	The Site and immediate surrounds generally extending up to 400m from the Site boundary. However, it could extend beyond this as per above
Implementation of Biodiversity Gain and Ecological Management Plan	Enhancement of existing habitats and the creation of new habitats	Site and immediate surrounds

Zone of Influence and Survey Area

1.6 The Zone of Influence (ZoI) of a proposed development is defined by the Ecological Impact Assessment Guidelines (EcIA) (CIEEM, 2018) as "…*the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities.*"

1.7 In the case of habitats, flora and vegetation, this is largely confined to the land within the Site itself. Survey effort therefore focused on areas within the Site boundary only. This may be extended in future to include off-site areas within the ZoI, should assessment work indicate impacts on sensitive off-site habitats, flora or vegetation are likely (for example, associated with off-site highways works).

1.8 Most of the activities and resultant biophysical changes listed in **Table 1.1** are unlikely to have an effect beyond the site boundary and the immediate surrounding area. However, recreational effects arising from new residents, can extend further. For example, deposition of nitrogen and other pollutants associated with car travel may occur several kilometres from a Site (for example up to 5 to 6km).

1.9 The ZoI will also extend to those locations where off-site impacts might occur. Further details will be provided in the EcIA report in due course.

Survey Objectives

1.10 The objectives of the survey and report are to:

- Produce a detailed map of habitats within the Site;
- Identify and map habitat types afforded significant weight in planning policy;
- Report the results of the survey; and
- Assess the ecological importance of the flora species/assemblages and vegetation communities within the Site.

2. METHODS

Desk Survey

2.1 A biological records data search was commissioned from Kent and Medway Biological Record Centre (KMBRC) on 5th March 2025. It included biological records within a 2km radius of the Site, including vascular and non-vascular plant species, lichens and fungi, and any locally designated sites for nature conservation.

2.2 A desktop study was also undertaken that reviewed published information and internet resources, including data held on priority habitats, ancient woodland, veteran trees, geology, topography and landscape history for the ZoI. Sources consulted included:

- The Multi-Agency Geographic Information for the Countryside (MAGIC);
- The British Geological Survey;
- The Soil Survey of England and Wales;
- The Environment Agency;
- Open-source LiDAR imagery published by DEFRA;
- Tithe maps and apportionments for Meopham Parish (ca. 1840s);
- OS 1 inch to the mile Old Series OS map, Sheet VI, published 1863;
- OS 1 inch to the mile OS map, Sheet 271, published 1893;
- The 6 inch to the Mile Ordnance Survey Maps, Kent XXX.NW, published 1898;
- The 25 inch to the Mile Ordnance Survey Map, Kent XXX.2. published 1896;
- Land Utilisation Survey of Britain c.1937;
- 2nd Land Utilisation Survey of Britain c.1960; and
- Aerial imagery from the 1940s onwards.

2.3 A combination of the OS MasterMap Topography Layer and open-source aerial imagery was used to divide the Site into parcels and create a draft habitat map in ArcGIS software, which was then ground-truthed and updated following the field survey.

2.4 Each habitat parcel and linear feature (such as hedgerows) has been assigned a unique ID code. These are referred to throughout this report and are shown on **Figures 2, 3 and 4**.

Field Survey

Overview

2.5 The survey was completed on 16th May, 30th May, 20th June, and 8th July 2025 by Senior Ecologist Sean Manley BSc (Hons), and he was assisted by Specialist Principal Ecologist Jodie Southgate BA (Hons) MSc MCIEEM on 20th June.

2.6 Sean and Jodie are experienced habitat and botanical surveyors and map to the highest level of the UK Habitat Classification (UKHab) (2023), as well as to the NVC (National Vegetation

Classification). Jodie also holds a Level 4 Field Identification Skills Certificate (FISC) from the Botanical Society of Britain and Ireland (BSBI).

2.7 Each of the parcels and linear features within the Site were subject to a slow walkover to record the habitats, vascular plant species and vegetation communities present, along with notes on habitat condition and any evidence of management.

2.8 Further details on specific recording methods for habitats, flora and vegetation respectively are described below.

Habitats

2.9 Following the field survey and drawing on the flora/vegetation data collected as described below, each habitat parcel was characterised and mapped to the most detailed level possible under UKHab, including all applicable secondary codes. A Minimum Mapping Unit (MMU) of 25m^2 was used.

Flora

2.10 A list of the vascular plant species present was recorded from each parcel, along with an estimation of relative frequency using the 'DAFOR' scale, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. The prefix 'L' was used to denote 'Locally'. Nomenclature follows Stace, 4th edition 2019. Any readily identifiable non-vascular plants (bryophytes) and lichens were also recorded where present.

2.11 Particular attention was paid to searching for species of conservation interest, habitat quality indicator species, and invasive non-native species.

2.12 Species of conservation interest are defined here as species in one or more of the following categories:

- Species with a conservation status listed by the Joint Nature Conservation Committee (JNCC) in their "Conservation Designations for UK Taxa" list (JNCC, 2023); and
- 'County Notable Species' as published by the Kent Nature Partnership (KNP, 2020).

2.13 The following habitat quality indicator lists were used:

- National Vegetation Classification – MG5 and MG6 Constancy Tables;
- UK Habitats Classification – g3a Lowland Meadows Indicator Species List;
- Indicators of Ancient Woodland – Francis Rose (1999); and
- Local Wildlife Sites in Kent Criteria for Selection and Delineation V1.9 (2024) – Appendix 1 Ancient Woodland Indicator List and Appendix 4 Indicators of Unimproved Neutral Grassland in Kent.

2.14 The presence/absence and abundance/distribution of species of conservation interest and habitat quality indicators were used to assist with the classification of habitat types and vegetation communities (see below), and in the assessment of flora and vegetation against the evaluation criteria described under 'Evaluation Methodology' below.

2.15 Invasive non-native species are defined as those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Vegetation

2.16 Vegetation was mapped in the field by drawing polygons of homogenous vegetation onto draft field maps. Where necessary, habitat parcels were split to distinguish between different vegetation communities or sub-communities. Divisions between vegetation types were drawn by the surveyor based on field observation, aerial imagery, and/or LiDAR imagery.

2.17 A mixture of 1x1m and 2x2m quadrats were recorded in the grassland parcels, to aid identification of vegetation communities and/or to collect data for future condition assessment under the Statutory Biodiversity Metric (DEFRA, 2025). The "Domin scale" was used for the 2x2m quadrats in accordance with the National Vegetation Classification (NVC) methodology (Rodwell, 2006). Quadrat locations are shown on **Figure 2**.

2.18 Where possible, the vegetation within the Site was classified according to the NVC community descriptions (Rodwell, 1991-2000) using a combination of the quadrat data and overall species lists and notes for each parcel. The identification of NVC communities informs the evaluation of the vegetation supported by the ZoI of the Proposed Development against the criteria described under 'Evaluation Methodology' below.

Ecological Evaluation

2.19 The importance value used in this report is based on the recommended geographical context. For the purposes of this assessment, the following geographical contexts are used; ZoI, Local, County, Regional, National, United Kingdom, European or International level. Typically, only those features of "Local" importance or above are taken forward for full impact assessment, with some exceptions (referred to where relevant below).

2.20 The methods used for evaluating the habitats, flora and vegetation at the Site are set out below.

Habitat Classification

2.21 The evaluation of habitats is typically contained within the evaluation of their component flora and vegetation, as habitat type does not convey an intrinsic level of importance on the CIEEM geographic scale.

2.22 Some habitat parcels and features, however, may qualify as "important ecological features" in their own right, i.e. for reasons unrelated to their component flora and vegetation or geographic level of importance. This includes habitats afforded additional weight in planning policy, such as those associated with areas of Provisional Ancient Woodland, Annex 1 and Section 41 'Priority' habitats, ancient/veteran trees, and habitats which are of intrinsic importance as wildlife corridors or historic features of long ecological continuity. Such habitats should also be subject to a full impact assessment as part of the EcIA and are therefore highlighted throughout **Section 4**.

Flora

2.23 An interpretation of the potential importance of the flora supported by the ZoI of the Proposals is based on descriptions given in the following:

National

- Guidelines for the Selection of Biological Sites of Special Scientific Interest (SSSIs): Chapter 11: Vascular Plants (Taylor *et al*., 2021).

County

- Criteria for the Selection of Local Wildlife Sites (LWSs) in Kent V1.9 (Kent Wildlife Trust, 2024).

Vegetation

2.24 An interpretation of the potential importance of the vegetation communities identified within the ZoI of the Proposed Development is based on descriptions given in the following:

National

- Interpretation Manual of EU Habitats: Annex 1 Habitats (EC, 2007);
- Guidelines for the Selection of Biological Sites of Special Scientific Interest (SSSIs): Chapter 2a Woodlands, Wood Pasture and Parkland, and Veteran Trees (Latham et al., 2018); and
- Guidelines for the Selection of Biological Sites of Special Scientific Interest (SSSIs): Chapter 3 Grasslands (Jefferson et al., 2019).

County

- Criteria for the Selection of Local Wildlife Sites (LWSs) in Kent V1.9 (Kent Wildlife Trust, 2024).

2.25 The purpose of this assessment is not to identify sites that could be considered for selection/notification as SACs, SSSIs or LWSs. Rather, the criteria set out in the resources listed above are used as a tool to inform an objective evaluation of the flora and vegetation at the Site, according to CIEEM's geographic frame of reference (2018).

Considerations

2.26 A rapid botanical survey was completed on 16th May 2025. This followed a period of heavy drought and was completed after a period of grazing. As such, certain flora may have been missed. After being bitten by one horse, initially no further effort was made to access fields containing horses due to health and safety concerns.

2.27 This meant Fields G9a and G9b were not accessed for survey until late July, and after a period of hot dry weather. Consequently, whilst numerous plant species had burned off and dried out, it did not represent a material constraint to identifying the habitat types present. Instead, it may have only restricted the diversity of plants recorded within these fields.

3. DESK STUDY RESULTS

Designated Sites

3.1 There are no statutory or non-statutory designated sites within the ZoI for habitats, vegetation and flora.

Ancient Semi-Natural and Ancient Replanted Woodland

3.2 There are 18 ancient semi-natural and ancient replanted woodlands listed on Natural England's Provisional Ancient Woodland Inventory within 1km of the Site, including one ancient, replanted woodland that is directly adjacent to the Site to the east, and this is called Round Wood (or Willow Wood on MAGIC Map and the 6-inch OS Map from 1888 to 1915).

3.3 During the field survey another section of possible ancient woodland was recorded off-Site and running alongside the eastern edge and adjacent to the grass field, labelled as G8 on **Figure 3.**

3.4 The on-site woodland shaw (W1) is shown on the 1830s to 1880s OS 6-inch Maps, as well as the 1888 to 1915 Maps.

Relevant Species Records

3.5 Priority plant records returned by KMBRC included:

- White Helleborine *Cephalanthera damasonium* – 'Culverstone Green north-east';
- Broad-leaved Helleborine *Epipactis helleborine* – 'Culverstone Green north-east';
- Bird's-nest Orchid *Neottia nidus-avis* – 'Culverstone Green north-east';
- Greater Butterfly-orchid *Platanthera chlorantha* – 'Culverstone Green north-east;' and
- Basil Thyme *Clinopodium acinos* – 'Culverstone Green north-east.'

3.6 Surveyors were therefore particularly alert to the potential presence of these species while conducting the field survey.

Ecological Context

Geology and Soils

3.7 The British Geological Survey's Open Geoscience Viewer indicates the whole of the Site is underlain by Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation – Chalk.

3.8 One superficial deposit overlays the bedrock on most of the Site, which is Clay-with-flints Formation - Clay, silt, sand and gravel. The eastern field (polygon G8 on **Figure 3**) has no superficial deposit according to online data sources.

3.9 The Cranfield Soil and Agrifood Institute Soilscapes describes the soils within the Site as Soilscape 8: Slightly acid loamy and clayey soils with impeded drainage. This is associated with

a wide range of pasture and woodland types and usually supports mesotrophic (neutral pH) vegetation communities.

Hydrology

3.10 The Governments 'Flood Map for Planning' website indicates that the Site is within Flood Zone 1 and has low probability of flooding. There are no watercourses on-site.

Topography and other Context

3.11 The Site is mostly flat but includes a gently sloping grassland on the eastern field (labelled as G8 on **Figure 3**). The woodland shaw within the middle of the Site is also on a step. This woodland block includes two chalk pit areas, one of which is identified on the OS 25-inch Map, Kent XXX.2. published 1896.

Ecological History

3.12 The Site comprises grass fields bisected by a woodland shaw. The field layout and woodland shaw have been present on tithe maps dating back to the early 1840s.

3.13 The tithe map and apportionments for Meopham Parish list most of the Site as being in arable use in the early 1840s. The only field listed as pasture at this time was field G8 (see **Figure 3**). This remained as such until at least the early 1960s, as confirmed in the 2nd Land Utilisation Survey, which shows G8 as pasture along with field G5 to the south, and the remainder of the Site to the west of the woodland shaw as arable. This is corroborated by an online aerial image dated 1962.

3.14 The arable use seems to have stopped by the next available image from 1990, and the north-west and largest field (G9) has been used for grazing since then. The eastern field (polygon G8) appears to have been used for hay cropping around 1990.

3.15 The woodland shaw within the Site (W1) is shown on the OS 6-inch Map Kent XXX.NW, published 1898. On the OS 25-inch Map, Kent XXX.2. published 1896 a chalk pit is shown within this narrow strip of woodland.

4. FIELD SURVEY RESULTS

Habitat Classification

4.1 Full species lists and quadrat data collected during the surveys are tabulated in **Appendix 2.** This data was used in combination with the desk study to produce a detailed habitat map of the Site using the UK Habitat Classification (**Figure 3a and 3b**). The following semi-natural habitat types were identified:

- g3a Lowland meadow;
- g3c Other neutral grassland;
- h3a Blackthorn scrub;
- h3d Bramble scrub;
- h3h Mixed scrub;
- w1f Lowland mixed deciduous woodland;
- h2a Native hedgerow;
- h2a5 Species-rich native hedgerow;
- Line of trees (secondary code 33); and
- Individual trees (secondary code 200).

4.2 A description of the main habitat types is set out below (see **Figure 3a and 3b**).

g3a Lowland Meadow

4.3 The Site supports 2.77ha of g3a Lowland Meadow grasslands. The Lowland Meadow habitat is distributed across G5b, G6, G7b, G8c, G9a and G9b forming a mosaic of moderately species rich grasslands associated with the heavily grazed, less fertile and improved core of the fields. All the grasslands are subject to annual intensive grazing, which has left extensive areas of bare ground.

4.4 These grasslands are examples of low-input overgrazed pastures supporting a few UKHab Lowland Meadow indicator species (See **Table 4.1, and Appendix 2**). The grasslands are species rich, ranging between 16 and 24 species per m^2. All parcels supported at least three g3a indicators. Typical species found across all g3a grasslands included Common Bent *Agrostis capillaris*, Red Fescue *Festuca rubra*, Yorkshire Fog *Holcus lanatus*, Perennial Rye-grass *Lolium perenne*, Red Clover *Trifolium pratense*, Ox-eye Daisy *Leucanthemum vulgare*, Bird's-foot Trefoil *Lotus corniculatus*, Autumn Hawkbit *Scorzoneroides autumnalis*, Ribwort Plantain *Plantago lanceolata* Cat's-ear *Hypochaeris radicata* and Meadow Buttercup *Ranunculus acris*.

4.5 Although they meet the criteria for classification as g3a Lowland Meadows under the UKHab system, the grasslands within the Site do not represent good examples of the S41 Lowland Meadow priority habitat type as listed under the NERC Act 2006 (as amended) and described within the former UK Biodiversity Action Plan, for the following reasons:

- As set out in **Section 3**, records of land-use within the Site indicate a rotational use of horticulture, arable and grassland as recently as 1960 indicating that grasslands G6, G7 and G9, in particular are recently established;
- The grasslands do not support any scarce and declining plant species (see 'Flora' below), likely due to a combination of land use history plus intensive grazing, attempts to fertilise and localised reseeding. They are composed of a community of common and widespread plants, that in-combination meet the Lowland Meadow criteria as outlined in the UK Habitat Classification;
- The indicator species present are themselves common and widespread examples (e.g. Ox-eye Daisy, Bird's-foot Trefoil and Autumn Hawkbit); and
- Priority Lowland Meadow habitat is typically represented by the NVC communities MG4, MG5 or MG8. As set out below under 'Vegetation', analysis of the detailed quadrat surveys indicates that the grasslands are formed of a transitional community between MG5 and the more widespread MG6 grassland types.

g3c Other Neutral Grassland

4.6 The Site supports 1.93ha of g3c Other Neutral grasslands. This habitat is distributed across G1, G2, G3, G4, G5a, G7c, G8a, G8b and G9 forming a mosaic of species poor to moderately species rich, fertile grasslands associated with the fragmented margins of the Site, horse latrines and shaded tree driplines at the margins of the fields. All the grasslands are subject to annual intensive grazing, which has left extensive bare ground and areas of high fertility. They represent characteristic examples of Other Neutral Grassland as described in the UK Habitat Classification.

4.7 Species diversity ranges from five species per m^2 in the rankest areas to 14 species per m^2 in the least fertile situations (see **Appendix 2**). Typical species found across all g3c grasslands included Cocksfoot *Dactylis glomerata*, Yorkshire Fog, Perennial Rye-grass, Field Bindweed *Convolvulus arvensis,* Meadow Buttercup, Stinging Nettle *Urtica dioica*, Selfheal *Prunella vulgaris* and Cut Leaved Cranesbill *Geranium dissectum.*

w1f Lowland mixed deciduous woodland

4.8 Extending north to south through the centre of the Site is a broad-leaved, deciduous woodland shaw approximately 0.20ha in size, which supports ancient woodland indicator vascular plants (polygon W1 on **Figure 3**).

4.9 The canopy and shrub layers comprise frequent Ash *Fraxinus excelsior* and Hazel *Corylus avellana* coppice stools with very occasional Field Maple *Acer campestre* coppices. Several mature English Oak *Quercus robur* standards are present along the edge of the woodland. Wild Cherry *Prunus avium* is also present. Areas of the woodland have been significantly disturbed

4.10 Wood Anemone *Anemone nemorosa* is widespread and found frequently within the woodland shaw alongside a dominant presence of Bluebell *Hyacinthoidesnon-scripta*, patchy Dogs Mercury *Mercurialis perennis* and Yellow Archangel *Lamium galeobdolon*. Other species present at the base of old Field Maple and Cherry trees were Toothwort *Lathraea squamaria* and Moschatel *Adoxa moschatellina*. **Appendix 2** provides further detail.

4.11 The woodland is a small but good example of Lowland Mixed Deciduous Woodland S41 priority habitat. The species present indicate that it may also be an unmapped area of ancient woodland.

h3 Scrub

4.12 The Site margins support 0.18ha of scrub habitat. This is formed of a mixture of h3a Blackthorn Scrub, h3d Bramble Scrub and h3h Mixed Scrub. The scrub margins are species poor, supporting a dominant coverage of Blackthorn *Prunus spinosa* and Bramble *Rubus fruticosus*, with scattered areas of mixed scrub including young Ash and Elder *Sambucus nigra*.

h2a Native hedgerow

4.13 H2 (**Figure 3b**) is a mature native hedgerow that extends westwards from the woodland shaw, including parts that have 'grown out' and includes species such as Hawthorn *Crataegus monogyna*, Blackthorn and Field Maple.

4.14 H3 runs along the outside of the western Site boundary and alongside the A227. It is a more recently planted hedgerow and includes a diverse mix of shrubs along its whole length. The hedgerow is dominated by Hawthorn, Blackthorn and Hazel with occasional Oak, Holly *Ilex aquifolium*, Field Maple and Dog Wood *Cornus sanguinea*. Both H2 and H3 meet the definition of the Hedgerow Section 41 priority habitat.

h2a5 Species-rich native hedgerow

4.15 Three species rich native hedgerows (with trees) are present within the Site boundary, all of which also meet the definition of the Hedgerow Section 41 priority habitat. The longest feature is H1, alongside two older boundaries H4 and H5. These hedgerows are moderately diverse supporting a mixture of Hawthorn, Elder, Field Maple, Hazel, Oak and Ash.

Line of trees (secondary code 33)

4.16 One short line of trees is present within the Site. This is formed of a row of recently planted Hornbeam *Carpinus betulus*.

Individual trees (secondary code 200)

4.17 Trees FM1, FM2 and FM3 (**Figure 3a**) are remnant features of a historic laid hedge or field boundary. They contain cavities, loose bark and rot holes, and have exposed heart wood due to damage. The trees do not meet the definition of a veteran tree under the National Planning Policy Framework (NPPF) but do meet the alternative definition under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024.

4.18 There are several other scattered trees throughout the site including HB1 a mature in-field Oak tree and HB2 a large Hornbeam coppice stool. A few semi-mature and immature trees are also present and include young Ash, Hawthorn and Sycamore *Acer pseudoplatanus*.

Flora

4.19 A total of 78 botanical species were recorded during the surveys of the grasslands and a further 39 species within the small woodland shaw (**Appendix 2**).

Species of Conservation Interest

4.20 One species of conservation interest was identified within the on-site wooded shaw: Bluebell *Hyacinthoides non-scripta* is listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) and found frequently within the on-site woodland.

4.21 One species of conservation interest was identified at the margin of G8a and S6 grassland field parcels (**See Figure 3**), Crosswort *Cruciata laevipes.* This species is classified as **Near Threatened** in England by the England Red List (Stroh *et al.* 2014) and is present on the Kent Rare Plant Species list.

Habitat Quality Indicator Species

4.22 Six indicator and typical species of unimproved neutral grasslands were identified within the Site as defined by the Kent Local Wildlife Site (LWS) Criteria v1.9 (KWT, 2024). All the species were most frequently recorded within the core of the grassland fields away from the fertile margins. **Table 4.1** provides further information.

4.23 **Table 4.1** also summarises the total number of habitat quality indicator species for lowland meadow grassland that were recorded within each grassland parcel as per the UK Hab g3a Lowland Meadows criteria, derived from the species tables in **Appendix 2**. This data was used in the habitat classification described above and in the evaluation of the grassland habitats in **Section 5**.

4.24 **Appendix 2; Table A2.1** lists the species recorded within the woodland shaw. A total of 11 ancient woodland indicator species as outlined in the Kent Local Wildlife Site criteria for Ancient Woodland Indicator Species in Kent were recorded and a total of 16 Ancient Woodland Indicators as outlined in Rose (1999). This data has been used in the evaluation of the woodland habitats in **Section 5**.

Invasive Non-Native Species

4.25 A very small amount of Variegated Yellow Archangel *Lamiastrum galeobdolon subsp. argentatum* was found within the on-site woodland shaw. Within the on-site fields an area of Himalayan Balsam *Impatiens glandulifera* was present along the southern edge of G8a, G8b and G8d and northeastern edge of G5a. Both species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Vegetation

4.26 The plant species detailed in **Table 4.1 and Appendix 2** have been used to determine NVC community types where possible.

4.27 As mentioned above under ‘Habitat Classification’, the grasslands are transitional communities, arising from a combination of intensive grazing, historic disturbance through agricultural practices and attempts to ‘improve’ productivity through seeding and fertilising. Consequently, the swards are extremely short grazed with patchy areas of high fertility and reduced species richness interspersed with areas of higher diversity. The boundary lines between the different communities shown on **Figure 4** are therefore intended to be indicative, rather than precise.

4.28 As shown on **Figure 4**, the central areas of fields G5, G6, G7, G8 and G9 have similarities to the MG5: *Cynosurus cristatus - Centaurea nigra* mesotrophic grassland community. These areas support a herb-rich short sward with several of the constant species of MG5 such as Crested Dog's Tail *Cynosurus cristatus*, Red Fescue, Yorkshire Fog, Bird's Foot Trefoil, Autumn Hawkbit, Ribwort Plantain, Red Clover and White Clover *Trifolium repens* (see **Table 4.1** and **Appendix 2**).

4.29 The marginal areas are subject to greater modification and fertility, plus areas G5a, G7a and G8b are a closer fit to the MG6*: Lolium perenne – Cynosurus cristatus* community, with community constants such as Perennial Rye-grass, White Clover, Common Mouse Ear, Yorkshire Fog and Red Fescue frequent throughout the sward with a notable lack of frequent MG5 constants such as Autumn Hawkbit and Bird's-foot Trefoil.

4.30 Other areas of grassland such as G1, G2, G3 and G4 are not referable to a described NVC community.

4.31 The woodland shaw is an example of the NVC community W8 *Fraxinus excelsior-Acer campestre-Mercurialis perennis* woodland. The scrub communities are broadly referable to W22 *Prunus spinosa-Rubus fruticosus* scrub and W24 *Rubus fruticosus-Holcus lanatus* underscrub.

Summary

4.32 **Table 4.1** below sets out a summary of the habitat classifications and indicator species associated with the grassland fields. **Table 4.2** provides a brief description of each habitat parcel or feature and summarises the results of the surveys in respect of their respective habitat classification, flora and vegetation.

Table 4.1: Grassland Summary - Vegetation and Habitat Classifications and Indicator Species

Field Name			G1	G2	G3	G4	G5	G6	G7a/b	G8a	G8b/c	G9a/b
Flora												
Species of Conservation Interest present?	See list in **Section 2**		No	No	No	No	No	No	No	Yes	No	No
Habitat Quality:	Total UKHab g3a Lowland Meadow indicator species		1	1	1	1	4	4	3	0	4	3
	Total Kent LWS Grassland Indicator Species		1	1	0	2	3	3	3	0	4	2
Vegetation												
NVC Community			n/a	n/a	n/a	n/a	MG5/ MG6	MG5/ MG6	MG5/ MG6	MG6	MG5/ MG6	MG5/ MG6
Habitats												
UK Habitat Classification: Assessment against g3a criteria	At least two out of three of:	>15 species m^2 (including grasses)	No	No	No	No	Yes	Yes	Yes	No	Yes	Yes
		>30% cover of broad-leaved herbs and sedges excl. *T.repens, R. repens*, and injurious weeds	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		<10% cover of *Lolium* and *T.repens*	No	No	No	No	No	No	No	No	No	No
	AND											
	Either	≥ 4 indicators at least 'present'	No	No	No	No	Yes	Yes	No	No	Yes	No
	Or	≥ 3 indicators at least 'occasional'	No	No	No	No	No	No	Yes	No	Yes	Yes
g3a Indicator Species												
Agrimonia eupatoria	Agrimony					R		R			O	
Centaurea nigra	Black Knapweed						R					
Lathyrus pratensis	Meadow vetchling										R	
Leucanthemum vulgare	Ox-eye Daisy		R	R			R	VLO	O		LF	O

Field Name		G1	G2	G3	G4	G5	G6	G7a/b	G8a	G8b/c	G9a/b
Lotus corniculatus	Bird's-foot Trefoil			R		O-LF	A	A		F-LA	A
Scorzoneroides autumnalis	Autumn Hawkbit					O	O	F			F
g3a criteria met?		**Fail**	**Fail**	**Fail**	**Fail**	**Pass**	**Pass**	**Pass**	**Fail**	**Pass**	**Pass**
UK Habitat Classification		g3c	g3c	g3c	g3c	g3a	g3a	g3a	g3c	g3a	g3a
Kent LWS Grassland Indicator Species											
Agrimonia eupatoria	Agrimony				R		R			O	
Centaurea nigra	Black Knapweed					R					
Hordeum secalinum	Meadow Barley				O			O		O	
Lathyrus pratensis	Meadow vetchling									R	
Leucanthemum vulgare	Ox-eye Daisy	R	R			R	VLO	O		LF	O
Scorzoneroides autumnalis	Autumn Hawkbit					O	O	F			F
Criterion GN2 met (4 species of which 2 are Frequent and 2 Occasional)?		**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**

5. EVALUATION

Habitats

5.1 As explained in **Section 2**, the evaluation of habitats is typically contained within the evaluation of their component flora and vegetation, as habitat type does not convey an intrinsic level of importance on the CIEEM geographic scale. However, some vegetation communities overlap with habitat types, which are afforded weight in planning policy, and this is taken into account where relevant.

5.2 An exception is made for hedgerows/tree lines and individual trees, which fall under neither flora nor vegetation, but are of ecological importance due to the habitat they provide for other taxa.

Hedgerows and Tree Lines

5.3 The on-site hedgerows and tree lines comprise common and widespread species. Hedgerows are a Section 41 Priority Habitat, however as noted in the Priority Habitat description (BRIG, 2008), this applies to most native countryside hedgerows. The value of the hedgerows lies in their role as habitat for other taxa such as bats, birds, invertebrates and terrestrial mammals – for example by providing nesting, shelter and foraging resources and connectivity to the wider landscape. Those at the Site are largely intact (lacking gaps) and well connected to on and off-site woodland habitats. Therefore, they are of ecological importance at the **Local Level**.

Individual Trees

5.4 The three Field Maples do not qualify as veteran trees under the NPPF 2024, but they do support veteran features such as deadwood, rot holes and cavities and are considered to meet the alternative definition of a veteran tree as set out in the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. These features have the potential to provide habitat for specialist invertebrates, lichens and fungi, and are therefore considered to be of ecological importance at the **Local Level**.

5.5 The other individual trees within the Site are of limited habitat value and are of ecological importance at the **Within the Zone of Influence Level** only.

Flora

5.6 The flora recorded at the Site does not meet the criteria for selection as a SSSI for vascular plants (Taylor *et al*., 2021), nor does it meet the selection criteria for consideration as an LWS. Overall, the assemblage of plant species recorded at the Site is of ecological importance the **Within the Zone of Influence Level** only.

5.7 In terms of individual species of conservation interest, Crosswort is present within grassland G8a and the margins of S6 and G8b. This species is listed on the red-data list for England (Stroh *et al.*, 2014) as near threatened and is also listed on the Rare Plant Register (RPR) for Kent as a relatively frequent plant. However, this plant is a common and widespread plant within Kent and nationally (Kent Botanical Record Group, 2019). The small population within the Site is therefore considered to be of ecological importance at the **Within the Zone of Influence Level** only.

5.8 The woodland supports Bluebell, which is listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended), but in respect of sale only. Bluebell is a common and widespread plant, and this population is also considered to be of ecological importance at the **Within the Zone of Influence Level** only.

Vegetation

Grasslands

5.9 None of the grassland communities recorded at the Site would meet the thresholds for selection as an SSSI (Jefferson *et al*., 2019) and are therefore not considered to be of national importance.

5.10 The Kent Local Wildlife Site selection criteria v1.9 (KWT, 2024) set out definitions for neutral grasslands of nature conservation interest, including criteria relating to levels of artificial improvement, species diversity, presence of indicator species, and associated fauna of conservation importance. The grassland communities at the Site do not meet any of the core criteria for consideration as a LWS for neutral grassland and are therefore not of County level importance in terms of their vegetation as outlined in **Table 4.1**.

5.11 With reference to the survey results set out in **Sections 3 and 4**, the following grassland types are of ecological importance at the **Local Level** in respect of their vegetation:

- MG5 *Cynosurus cristatus-Centaurea nigra* grasslands: an increasingly uncommon grassland community resulting from agricultural intensification. Those at the Site support a diversity of common and widespread plant species, but are significantly degraded due to intensive grazing, fertilisation and re-seeding causing a transition towards MG6 type grasslands. They are also a poor example of the Section 41 habitat Lowland Meadows; and
- MG6 *Lolium perenne-Cynosurus cristatus* grasslands: widespread and common in Kent. Those found at the Site are relatively species-rich and contribute to the diversity of habitats and species in the landscape.

5.12 Grasslands with lower species richness, such as the margins and verges with no recognisable NVC community, are of ecological importance at the **Within the Zone of Influence Level** only.

Woodlands

5.13 The on-site woodland does not meet the thresholds for consideration as an SSSI (Latham *et al.*, 2018) and is therefore not of national importance.

5.14 The Kent Local Wildlife Site selection criteria v1.9 (KWT, 2024) set out definitions for woodlands of nature conservation interest at the County level, including criteria relating to ancient woodlands, wet woodlands and Lowland Beech and Yew woodlands, and a minimum size threshold of 5ha. The woodland at the Site is less than 5ha in size and does not meet the core criteria for consideration as a LWS and is therefore not considered to be of County level importance.

5.15 The LWS criteria do, however, state the following in relation to ancient woodland:

Ancient woodland in Kent should be identified by reference to the provisional ancient woodland inventory produced by Natural England (and/or shown with the habitat data on www.magic.gov.uk). Where a wood is not indicated as ancient, it may nonetheless be considered as ancient if - It holds at least ten ancient woodland indicator species drawn from the list in Appendix 1 (…)

5.16 As set out in **Appendix 2**, the on-site woodland supports more than ten of the ancient woodland indicators listed in the Kent LWS guidance and could therefore be considered ancient in nature. On this basis and given that the associated habitat type Lowland Mixed Deciduous Woodland is also a Section 41 Priority Habitat, the woodland community present in polygons C1, C2 and W1 is of ecological importance at the **Local Level.**

Scrub

5.17 The scrub communities at the Site do not meet the thresholds for consideration as an SSSI at the national level or LWS at the County level. Those represented are common and widespread and are of ecological importance at the **Within the Zone of Influence Level** only.

Summary

5.18 **Table 5.1** below sets out a summary evaluation of the habitats, flora and vegetation recorded at the Site.

Table 5.1: Summary evaluation – habitats, flora and vegetation

Feature	Importance	ID	Notes
Habitats			
Hedgerows and Tree Lines	Local	H1, H2, H3, H4, H5, TL5	Of value as habitat for other taxa. The hedgerows ae also typical examples of Hedgerow S41 Habitat.
Veteran Trees (BNG definition)	Local	FM1, FM2 FM3	Three veteranizing Field Maples associated with a historic boundary. The trees do not meet the NPPF criteria for Veteran trees. Of value as habitat for other taxa.
Other Trees	Within the ZoI	Various	Other individual trees of limited habitat value.
Flora			
Population of Crosswort	Within the ZoI	S6, G8a, G8b	Listed on the Kent Rare Plant Register as frequent and in the England red-data book as Near Threatened.
Population of Bluebell	Within the ZoI	W1, C1 and C2	Listed on Schedule 8 of the Wildlife and Countryside Act 1981 in respect of sale only
Site-wide flora	Within the ZoI	All other parcels	Scattered communities of common and widespread plants. Distributed throughout patches of Neutral Grassland, Woodland, Scrub and Hedgerow habitat.
Vegetation			
MG5 grasslands	Local	G5b, G6, G7b, G8a, G8c, G9a, G9b	Diverse and species rich neutral grasslands maintained through intensive grazing. A poor example of Lowland Meadow S41 Habitat that does not meet the Kent Local Wildlife Selection criteria.
MG6 grasslands	Local	G3, G5a, G7a and G8b	Widespread and common in Kent, and species-rich contributing to the diversity of habitats and species in the landscape. The habitat does not meet the Kent Local Wildlife Selection criteria.
W8 woodland	Local	W1, C1 and C2	Woodland shaw forming a less than 1ha area of habitat supporting a wide range of vascular plant indicators of ancient woodland. The habitat does not meet the Kent Local Wildlife Selection criteria. A typical example of Lowland Mixed Deciduous Woodland S41 Habitat.
All other communities	Within the ZoI	All other parcels	Communities of limited botanical importance that are common and widespread in the landscape including grassland margins and verges with no recognisable NVC community, scattered scrub and single species dominated scrub.

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FIGURES

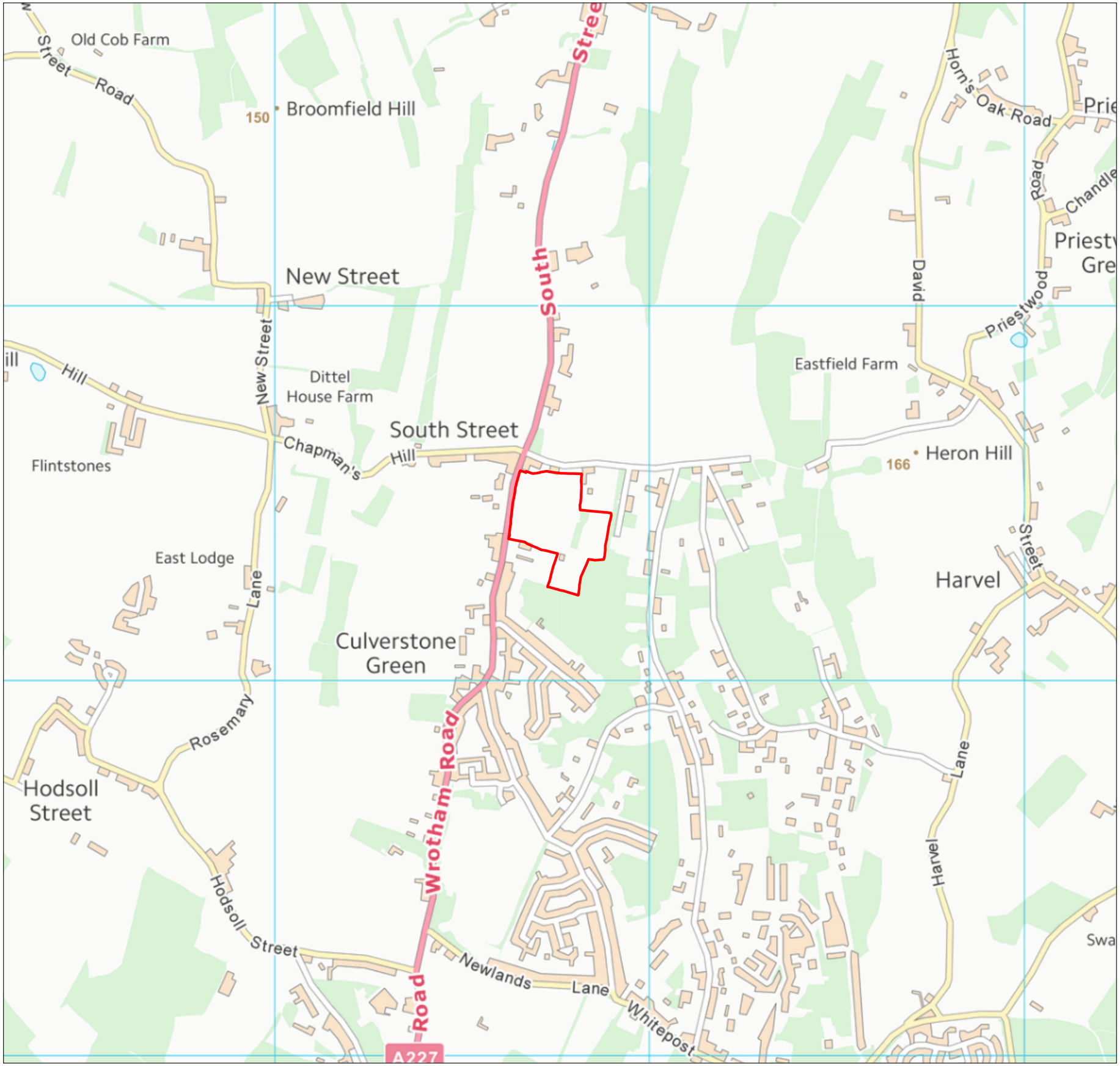

Figure 1 Site Location

KEY

Site boundary

SCALE: 1:10,000 at A3

0 100 200 300 400 500 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Culverstone Green

DATE: 15 July 2025

Y:\Blackthorn Farm, Meopham 3274\GIS\Breeding Birds\Figure1_SiteLocation_P3274_3932_150725.aprx

P32/74

Figure 2 Quadrat Locations

KEY

Site boundary

1x1m

2x2m and 1x1m

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm

DATE: 21 August 2025

Y:\Blackthorn Farm, Mecpham 3274\GIS\EcIA\Botany\Figure2_QuadratLocations_P3274_4022_210825.aprx

P32/74

Basemap: Maxar, Microsoft

Figure 3a UK Habitat Classification Area Habitats

KEY

- Site boundary
- g3a - Lowland meadows
- g3c - Other neutral grassland
- h3a - Blackthorn scrub
- h3d - Bramble scrub
- h3h - Mixed scrub
- u1b5 - Buildings
- u1c - Artificial unvegetated, unsealed surface
- u1d - Suburban mosaic of developed and natural surface
- w1f - Lowland mixed deciduous woodland

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm

DATE: 23 September 2025

Y:\Blackthorn Farm, Meopham 3274\GIS\Ecl\A\Botany\Figure3a_UKHabitatClassificationAreas_P3274_4107_230925.aprx

P32/74

Aerial Image: Maxar, Microsoft

Figure 3b UK Habitat Classification Linear Features

KEY

- Site boundary
- h2a - Native hedgerow
- h2a5 - Species-rich native hedgerow
- w - Woodland and forest

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm

DATE: 23 September 2025

Y:\Blackthorn Farm, Mecpham 3274\GIS\Ecl\Botany\Figure3b_UKHabitatClassificationLinear_P3274_4107_230925.aprx

P32/74

Aerial Image: Maxar, Microsoft

Figure 4 National Vegetation Classification (NVC)

KEY

- Site boundary
- MG5
- MG6

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N

EPR

CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm

DATE: 05 September 2025

Y:\Blackthorn Farm, Mecpham 3274\GIS\Ecl\Botany\Figure4_NationalVegetationClassification_P3274_4069_050925.aprx

P32/74

Aerial Image: Maxar, Microsoft

Appendix 1
Relevant Legislation and Policy

LEGISLATION

The Environment Act 2021

The Environment Act 2021 placed a requirement on the Secretary of State to make regulations setting out long-term targets for air quality, water, biodiversity, resource efficiency and waste reduction. It also required the Government to produce an Environmental Improvement Plan, to report on progress towards its goals annually, to meet the targets that are set in relation to the improvement of the natural environment and to produce remedial plans should this not be achieved.

In relation to water quality, the Act placed new duties on the Government, Environment Agency and sewerage undertakers to reduce the frequency and harm of discharges from storm overflows on the environment, and for monitoring the quality of watercourses affected by those overflows.

It also included a requirement for an independent Office for Environmental Protection (OEP) to be established, with responsibilities for monitoring and reporting on progress against environmental improvement plans and targets. The OEP also has investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act made provision for 10% biodiversity gain to become a condition of planning permission in England, through amendments to the Town and Country Planning Act 1990. These amendments came into force on the 12th February 2024 (delayed to 2nd April 2024 for 'small sites') and are implemented through a series of new statutory instruments collectively referred to in this document as the 'Biodiversity Net Gain Regulations' (detailed further below). The 10% biodiversity gain is measured through a biodiversity metric published by the Department of the Environment, Food and Rural Affairs (DEFRA) on behalf of the Secretary of State. The Act also establishes Biodiversity Net Gain as a requirement for Nationally Significant Infrastructure Projects (NSIPs).

The Act also strengthens the biodiversity duty placed on public authorities through amendments to the Natural Environment and Rural Communities Act 2006 Section 40, requiring such authorities to not only conserve but also enhance biodiversity when exercising their functions. Public authorities will also be required to publish summary reports of actions taken under Section 40 at least every five years.

The Act provides the legal basis for the creation of Local Nature Recovery Strategies (LNRSs) for England (including specifying their content), and the preparation and publication of species conservation strategies and protected sites strategies.

The Act also created a new legal vehicle known as a 'Conservation Covenant' which is a voluntary, legally binding private agreement between landowners and responsible bodies (the latter designated by the Secretary of State) which conserve the natural or heritage features of the land, enabling long-term conservation. Conservation Covenants are designed to 'run with the land' when it is sold or passed on and are intended to become a primary mechanism for the delivery of Biodiversity Net Gain (BNG).

The Act provides new powers for the Government to amend in future Regulation 9 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') –

but “only if satisfied that the regulations do not reduce the level of environmental protection provided by the Habitats Regulations”.

Several aspects of protected species licencing have also been adjusted by the Act. These include the removal of several inconsistencies between the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended), ensuring that licences issued under the former piece of legislation also apply under the latter, and making it now possible for licences to be issued under Section 16(3) of the Wildlife & Countryside Act 1981 (as amended) for purposes of overriding public interest. The maximum term of a licence that can be issued by Natural England has also been extended from 2 to 5 years.

The Biodiversity Net Gain Regulations

The Biodiversity Net Gain provisions of the Environment Act 2021 referred to above were implemented through several pieces of secondary legislation, collectively referred to in this document as the ‘Biodiversity Net Gain Regulations’, that came into force on 12 February 2024 (delayed to 2 April 2024 for sites meeting the published definition of a ‘small site’). The Biodiversity Net Gain Regulations are as follows:

- The Biodiversity Gain (Town and Country Planning)(Modifications and Amendments)(England) Regulations 2024
- The Biodiversity Gain (Town and Country Planning)(Consequential Amendments) Regulations 2024
- The Biodiversity Gain Site Register Regulations 2024
- The Biodiversity Gain Site Register (Financial Penalties and Fees) Regulations 2024
- The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024
- The Biodiversity Gain Requirements (Exemptions) Regulations 2024
- The Environment Act 2021 (Commencement No. 8 and Transitional Provisions) Regulations 2024

Collectively, these Regulations implement the requirement under the Environment Act 2021 for a 10% biodiversity gain, as measured by a metric, to become a condition of planning permission in England.

A publicly accessible register of Biodiversity Gain Sites was published on the date that these Regulations came into force, along with the Statutory Biodiversity Metric (produced by Defra on behalf of the Secretary of State) and associated guidance (see below).

The required biodiversity gain can be delivered on and/or offsite (subject to adherence to a biodiversity net gain hierarchy detailed in guidance – see below) and establishes the basis for purchasing off-site credits to meet the 10% obligation if required. In most cases the land used to deliver biodiversity gain must be maintained for at least 30 years, and the biodiversity gain planning condition requires a Biodiversity Gain Plan to be submitted to and approved by the planning authority prior to commencement of development.

Off-site biodiversity gains must be secured either through a Section 106 Agreement or Conservation Covenant, and 'significant' on-site biodiversity gains must be secured either through a Section 106 Agreement or a planning condition.

The legislation also clarifies that the baseline biodiversity value of a site should be taken from the date on which planning consent is granted, unless otherwise agreed with the LPA. This excludes any activities undertaken without planning permission (or other relevant permissions) after 30 January 2020 which have had the effect of reducing the biodiversity value of the land. In such cases, "the pre-development biodiversity value is to be taken to be its biodiversity value immediately before the carrying on of the activities."

Through the above Regulations, the Government has established an initial list of 'irreplaceable habitats' that must be recorded in the metric if present on site but which cannot be 'traded' through the biodiversity net gain process. Defra has confirmed the intention to consult on this initial list of habitats during 2024 and adjust it if necessary.

Guidance on Biodiversity Net Gain

To help those involved in the planning process, the Defra and the Department for Levelling Up, Housing and Communities (DLUHC) have published guidance on the technical aspects of biodiversity net gain and planning practice guidance respectively, available at the links below:

https://www.gov.uk/guidance/understanding-biodiversity-net-gain

https://www.gov.uk/guidance/biodiversity-net-gain

Biodiversity net gain (BNG) is already enshrined in the key principles of the National Planning Policy Framework (NPPF), and some local planning policies include a requirement to deliver net gain above the minimum statutory 10% figure.

In addition to the above, British Standard BS: 8683:2021 *Process for Designing and Implementing Biodiversity Net Gain – Specification* builds on and adds to previous UK Good Practice Guidance on Biodiversity Net Gain produced by CIEEM, CIRIA and IEMA.

In addition to habitat creation or enhancement undertaken to achieve biodiversity net gains, the NPPF (and often local policy) also seeks general biodiversity enhancement measures, which often include measures not directly accounted for in the Defra Metric, such as the provision of nest boxes.

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (known as the "Habitats Regulations") were originally drawn up to transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive") into UK legislation. Following the UK's exit from the European Union, the Habitats Regulations – as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – remain in force until such a time as they are superseded by new or updated domestic legislation.

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which previously formed part of the Natura 2000 network of protected areas across Europe and are now part of the UK's "National Sites Network". New National Sites may be designated under the Regulations.

The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra*, Sand Lizard *Lacerta agilis*, Smooth Snake *Coronella austriaca* and all native species of bat.

Further information on SPAs, SACs and European Protected Species is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is a key mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000 have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a ‘Biodiversity Duty’ on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. This was published in 2007 and is commonly referred to as the “S41 list”. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Appendix.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory (legal) protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites: International

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2017 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK.

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the European Habitats Directive 92/43/EEC. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the European Birds Directive 2009/147/EC. Following the UK's exit from the EU, these now form part of the "National Sites" network rather than the EU Natura 2000 network.

Ramsar sites are wetlands of international importance designated under the Ramsar Convention held in Iran in 1971 and although not covered under the Habitats Regulations they are, as a matter of national planning policy, subject to the same strict protection as SACs and SPAs. The majority of terrestrial Ramsar sites in England are also notified as SPAs, SACs and/or Sites of Special Scientific Interest (SSSIs).

To avoid confusion with the nationally designated sites described below, EPR refers to SACs and SPAs as 'International sites', given the reasons for their designation.

Any plan or project considered likely to affect an International site (SAC, SPA or Ramsar) must be subject to a Habitats Regulations Assessment (HRA), as set out under Regulation 63 (and Regulation 105 in respect of Land Use Plans) of the Conservation of Habitats and Species Regulations 2017 (as amended) and the National Planning Policy Framework (NPPF) 2024.

The 'competent authority' determining whether a plan or project should proceed carries out the HRA, but the onus is on the developer to provide the necessary information to inform this process, usually in the form of a report.

Under the Conservation of Habitats and Species Regulations 2017 (as amended), the competent authority must determine in the first instance whether a proposed development is 'likely to have a significant effect on the International Site, either alone or in combination with other plans and projects'. This stage of the HRA process is known as 'screening', and 'measures intended to avoid or reduce the harmful effects' of the subject plan or project cannot be taken into account at this stage.

If a likely significant effect cannot be precluded (screened out) on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives, to determine if there would be an adverse effect on the integrity of the affected International Site(s). A precautionary approach must be taken with respect to determining whether or not there would be an adverse effect, and the appropriate nature conservation

body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed and no alternative to achieving the objectives of these reasons that are less harmful to the International Site(s), the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the International Site. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Regulation 16A of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 sets out the management objectives of the National Site Network, which can be summarised as follows:

- to maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive within the UK's territory to a favourable conservation status (FCS); and
- contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

The appropriate authorities must also have regard to:

- the importance of protected sites in meeting the above objectives, including breeding, moulting, staging and wintering areas for in the case of migratory bird species;
- their importance for the coherence of the national sites network; and
- the threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

Government guidance[1] also states that competent authorities have a duty to help protect, conserve and restore the designated features of SACs and SPAs when carrying out their statutory work, including taking decisions that might affect a site. They also have a duty to consider how they can help to prevent the deterioration of the site's habitats from human activity or natural changes, including habitats that support designated species, and prevent significant disturbance of the site's designated species from human activity or natural changes.

Depending on which entity is responsible for authorising a plan or project, competent authorities can include (but are not limited to) local planning authorities, planning committees, the Secretary of State and statutory agencies such as Natural England and the Environment Agency.

Statutory Sites: National

Nationally important sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). A development proposal that is likely to affect a nationally important site will be subject to special scrutiny by the local planning authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites, as set out in Section 15 of the National Planning Policy Framework (NPPF).

Sites of Special Scientific Interest

The Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSIs). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity. Natural England are responsible for assessing the condition of these areas and agreeing management plans for their conservation.

Public bodies have a duty to take reasonable steps to conserve and enhance the special features of sites of special scientific interest (SSSIs) when carrying out their statutory duties and giving others permission for works, such as reviewing planning applications.

Natural England has produced, for every SSSI in England, a list of 'Operations Requiring Natural England's Consent' (ORNECs). Activities listed as ORNECs cannot be carried out within the relevant SSSI unless Natural England has issued their written assent to the activity taking place.

National Nature Reserves

National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

Statutory Sites: Regional/Local

Local Nature Reserves

Local Nature Reserves (LNRs) are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local planning authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. Guidance for selecting and designating such sites have been produced by Defra. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites' (CWSs), 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy and related guidance.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance, the NERC Act 2006 and the Environment Act 2021 place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

The S41 list also includes species as explained below under 'Species of Principal Importance in England'.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal Importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow classed as 'important' under the criteria set out by the Regulations without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain important hedgerows unless satisfied that the circumstances justify their removal.

Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are primarily put in place to preserve amenity or for landscape conservation reasons. The importance of trees as wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation and are generally dealt with by an arboricultural consultant rather than an ecologist.

Further guidance on TPOs in relation to development is available from the Department for Levelling Up, Housing and Communities.

Ancient Woodland & Veteran Trees

Ancient woodlands are defined in England as areas continuously wooded since at least 1600 AD (although certain open areas such as rides and glades within woodlands are also considered part of a woodland and brief periods of tree cover removal will not remove ancient woodland status). Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. For this reason, Natural England's Provisional Ancient Woodland Inventory (PAWI) draws a distinction between Ancient and Semi Natural Woodland (ASNW) and 'Plantation on an Ancient Woodland Site' (PAWS). The inventory also lists ancient pasture woodland.

Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are directed under the NPPF and National Planning Practice Guidance (NPPG) not to grant planning permission for any development that would result in the 'loss or deterioration' of irreplaceable habitats such as ancient woodland, ancient trees or veteran trees unless there are 'wholly exceptional reasons' and 'a suitable compensation strategy in place'. Local Planning Authorities must take into account Natural England and the Forestry Commission's *Standing Advice for Ancient Woodland and Veteran Trees,* available at: https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions

Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature.

Guidance on pollution prevention is hosted on the Government's website and focuses on regulatory requirements. This covers topics including the prevention of pollution if you are a business, managing business and commercial waste, oil storage, working on or near water, and managing water on land. Careful planning and the application of these guidelines can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

Water Resources Act (WRA) 1991 (as amended)

Under the WRA there is strict regulation of discharges (including sediment, chemicals, nutrients) to rivers, lakes, estuaries and groundwaters. It also aims to ensure that polluters cover the costs associated with pollution incidents.

Appendix 2
Full Species Lists and Quadrat Data

Full species data tables for each of the habitat parcels are provided below. These have been split up by broad habitat type (e.g. woodland, grassland) for ease of reference.

The DAFOR scale of relative frequency is used, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. The prefix ‘L’ is used for ‘locally’ and ‘V’ for ‘very’. ‘P’ denotes ‘Present’, where no record of frequency was recorded.

1x1m and 2x2m quadrat data from the grasslands is also tabulated below.

For the 1x1m quadrats, which were undertaken for the purposes of assigning UKHab types and to inform Biodiversity Net Gain condition assessments, species were simply recorded as ‘present’, denoted by a 1.

For the 2x2m NVC quadrats, the DOMIN scale of cover was used where 10 = 91-100% cover, 9 = 76-90%, 8 = 51-75%, 7 = 34-50%, 6 = 26-33%, 5 = 11-25%, 4= 4-10%, 3 = <4% (many individuals), 2 = <4% (several individuals) and 1 = <4% (few individuals). NVC quadrats were completed in grasslands a in order to inform an assessment of whether they met the criteria for Lowland Meadow habitat.

Table A2.1: Woodland flora within polygon W1 (including C1 and C2, old pits supporting occasional flora). 1 = Kent Local Wildlife Site Indicator Species, 2 = indicator species as per Rose (1999)

Species		Frequency (DAFOR)	Indicator Species
Common Name	**Scientific Name**		
Field Layer			
Moschatel	*Adoxa moschatellina*	R	1, 2
Garlic Mustard	*Alliaria petiolata*	VLO	
Wood Anemone	*Anemone nemorosa*	F-A	1, 2
Cow Parsley	*Anthriscus sylvestris*	A	
Lords and Ladies	*Arum maculatum*	R	
Pendulous Sedge	*Carex pendula*	R	1, 2
Scaly Male Fern	*Dryopteris affinis*	R	1, 2
Lesser Celandine	*Ficaria verna*	O	2
Cleavers	*Galium aparine*	F	
Herb Robert	*Geranium robertianum*	O/F	
Wood Avens	*Geum urbanum*	F	2
Ground Ivy	*Glechoma hederacea*	R	
Ivy	*Hedera helix*	LF	
Hogweed	*Heracleum sphondylium*	R	
Bluebell	*Hyacinthoides non-scripta*	A/LD	2
Yellow Archangel	*Lamium galeobdolon*	F-A	1, 2
Toothwort	*Lathraea squamaria*	VLO/R	1, 2
Dog's Mercury	*Mercurialis perennis*	F/VLA	2
Rough Meadow Grass	*Poa trivialis*	LF	
Wild Cherry	*Prunus avium*	R	1, 2
Meadow Buttercup	*Ranunculus acris*	R	
Creeping Buttercup	*Ranunculus repens*	R	
Bramble	*Rubus fruticosus*	O	
Wood Dock	*Rumex sanguineus*	R	
Common Nettle	*Urtica dioica*	F/LD	
Ivy-leaved Speedwell	*Veronica hederifolia*	O	
Wood Speedwell	*Veronica montana*	F	1, 2
Dog Violet	*Viola riviniana*	R/O	
Shrub Layer			
Hazel	*Corylus avellana*	A	
Hawthorn	*Crataegus monogyna*	A	
Holly	*Ilex aquifolium*	O	1, 2
Elder	*Sambucus nigra*	LO	
Yew	*Taxus baccata*	R	
Canopy Layer			
Field Maple (coppiced)	*Acer campestre*	LF	1, 2
Hornbeam	*Carpinus betulus*	O	1, 2
Ash (Coppiced)	*Fraxinus excelsior*	A	

Cherry	*Prunus avium*	R	1, 2
English Oak (some coppiced)	*Quercus robur*	F	
Willow sp	*Salix sp*	R	

Table A2.2: Fields G1-G4 species lists

Species	Common Name	G1	G2	G3	G4	Kent Neutral Grassland LWS Species	UKHab g3a Indicator Species
Grasses							
Agrostis capillaris	Common Bent			R			
Agrostis stolonifera	Creeping Bent			F	O		
Alopecurus pratensis	Meadow Foxtail		O		R		
Anisantha sterilis	Barren Brome	F		O			
Anthoxanthum odoratum	Sweet Vernal Grass				O		
Arrhenatherum elatius	False Oat-grass	R		O-F	O		
Bromus hordaceus	Soft Brome				O		
Cynosurus cristatus	Crested Dog's-tail						
Dactylis glomerata	Cocksfoot	A	A	R	LA		
Festuca rubra	Red Fescue			A	A		
Holcus lanatus	Meadow Soft-grass	F	F	F	F		
Hordeum secalinum	Meadow Barley				O	1	
Lolium perenne	Perennial Rye-grass	R	A	F	A		
Poa pratensis	Smooth-stalked Meadow-grass		R	F	O		
Poa trivialis	Rough-stalked Meadow-grass	A	A				
Herbaceous species							
Achillea millefolium	Yarrow			F			
Agrimonia eupatoria	Agrimony				R	1	
Alliaria petiolata	Wild Garlic	F	R				
Anthriscus sylvestris	Cow Parsley	R		R			
Bellis perennis	Daisy		O	R			
Cirsium vulgare	Spear Thistle	R		R			
Convolvulus arvensis	Field Bindweed		O	R	F		
Galium aparine	Cleavers	O		VLO	LF		
Geranium dissectum	Cut-leaved Crane's-bill	R	R	R	R		
Geranium robertianum	Herb Robert	VLO			R		

Species	Common Name	G1	G2	G3	G4	Kent Neutral Grassland LWS Species	UKHab g3a Indicator Species
Geum urbanum	Wood Avens	R		R			
Glechoma hederacea	Ground Ivy	VLA					
Heracleum sphondylium	Hogweed	R					
Hypochaeris radicata	Cat's-ear			O			
Jacobaea vulgaris (Senecio jacobaea)	Ragwort		R	O			
Lamium album	White Dead-nettle	VLA	R	VLA			
Lamium purpureum	Red Hemp Nettle	R					
Lapsana communis	Nipplewort				R		
Leucanthemum vulgare	Ox-eye Daisy	R	R			1	
Lotus corniculatus	Bird's-foot Trefoil			R			1
Plantago lanceolata	Ribwort Plantain			F-A			
Potentilla reptans	Creeping Cinquefoil		F				
Prunella vulgaris	Selfheal			F			
Ranunculus acris	Meadow Buttercup		F	A			
Ranunculus repens	Creeping Buttercup	O	O	LO			
Rubus fruticosus	Blackberry	R		R	R		
Rumex obtusifolius	Broad-leaved Dock	R	O	O	R		
Senecio vulgaris	Sticky Groundsel	R					
Sonchus arvensis	Perennial Sow-thistle	R			R		
Sonchus asper	Prickly Sow-thistle	R					
Stachys sylvatica	Hedge Woundwort	R					
Stellaria media	Common Chickweed		R	R			
Taraxacum sp.	Dandelion	R	R	O	R		
Trifolium pratense	Red Clover			O			
Trifolium repens	White Clover		R	F-A			
Urtica dioica	Stinging Nettle	A	VLA	VLA	LD		
Veronica chamaedrys	Germander Speedwell		VLO	LO			
Veronica filiformis	Slender Speedwell			R			

Species	Common Name	G1	G2	G3	G4	Kent Neutral Grassland LWS Species	UKHab g3a Indicator Species
Veronica serpyllifolia	Thyme-leaved Speedwell			R			
Vicia sativa	Common Vetch			R	R		
Total number of species		**27**	**22**	**36**	**22**	**2**	**1**

Table A2.3: Field G1 to G4 1x1m Quadrats.

Species	Common Name	G1Q1 Species List	G2Q1 Species List	G3Q1 Species List	G4Q1 Species List
Agrostis capillaris	Common Bent			1	
Agrostis stolonifera	Creeping Bent				1
Anisantha sterilis	Barren Brome	1			
Anthoxanthum odoratum	Sweet Vernal Grass			1	
Arrhenatherum elatius	False Oat-grass	1			1
Dactylis glomerata	Cocksfoot			1	
Festuca rubra	Red Fescue			1	
Holcus lanatus	Meadow Soft-grass	1	1	1	1
Hordeum secalinum	Meadow Barley				1
Lolium perenne	Perennial Rye-grass	1	1	1	1
Poa pratensis	Smooth-stalked Meadow-grass				1
Poa trivialis	Rough-stalked Meadow-grass	1	1		
Achillea millefolium	Yarrow			1	
Convolvulus arvensis	Field Bindweed		1		1
Galium aparine	Cleavers	1			
Geranium dissectum	Cut-leaved Crane's-bill		1		1
Hypochaeris radicata	Cat's-ear			1	
Lamium album	White Dead-nettle	1			
Lotus corniculatus	Bird's-foot Trefoil			1	
Plantago lanceolata	Ribwort Plantain			1	
Potentilla reptans	Creeping Cinquefoil		1		
Ranunculus acris	Meadow Buttercup		1	1	
Ranunculus repens	Creeping Buttercup	1		1	
Rumex obtusifolius	Broad-leaved Dock		1		1
Sonchus arvensis	Perennial Sow-thistle				1
Sonchus asper	Prickly Sow-thistle	1			

Species	Common Name	G1Q1 Species List	G2Q1 Species List	G3Q1 Species List	G4Q1 Species List
Stellaria media	Common Chickweed			1	
Taraxacum sp.	Dandelion		1		
Urtica dioica	Stinging Nettle		1		
Veronica filiformis	Slender Speedwell			1	
Total number of species		**9**	**10**	**14**	**10**

Table A2.4: Field G5 Species List and 2x2 Quadrat data

Species	Common Name	G5 Species List	G5 – 2x2 Quadrats				Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	*Q3b*	*Q4b*	*Q5b*		
Grasses								
Agrostis capillaris	Common Bent	A	*5*	*8*	*8*	*7*		
Anthoxanthum odoratum	Sweet Vernal Grass	F	*4*			*3*		
Cynosurus cristatus	Crested Dog's-tail	O		*4*	*2*	*3*		
Festuca rubra	Red Fescue	A	*8*	*3*		*3*		
Holcus lanatus	Meadow Soft-grass	O			*3*	*4*		
Lolium perenne	Perennial Rye-grass	A	*6*	*7*	*6*	*5*		
Poa annua	Annual Meadow-grass	O			*2*			
Poa trivialis	Rough-stalked Meadow-grass	R			*1*			
Other herbaceous species								
Achillea millefolium	Yarrow	O - LF	*5*	*1*		*3*		
Bellis perennis	Daisy	O	*1*	*3*				
Centaurea nigra	Black Knapweed	R				*2*	1	1
Geranium dissectum	Cut-leaved Crane's-bill	R						
Hypochaeris radicata	Cat's-ear	F	*4*	*3*		*3*		
Leontodon saxatilis	Lesser Hawkbit	O						
Leucanthemum vulgare	Ox-eye Daisy	R					1	1
Lotus corniculatus	Bird's-foot Trefoil	O-LF	*4*			*5*		1
Odontites vernus	Red Bartsia	O	*2*	*2*	*3*	*3*		
Plantago lanceolata	Ribwort Plantain	F	*6*	*3*	*3*	*3*		
Potentilla reptans	Creeping Cinquefoil	R		*1*				
Prunella vulgaris	Selfheal	F	*4*	*4*	*3*	*3*		
Ranunculus acris	Meadow Buttercup	F-LA	*3*	*3*		*3*		
Ranunculus bulbosus	Bulbous Buttercup	R		*1*				
Ranunculus repens	Creeping Buttercup	F-LA		*4*	*6*	*4*		
Rumex acetosa	Common Sorrel	R			*1*	*1*		

Species	Common Name	G5 Species List	G5 – 2x2 Quadrats				Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	*Q3b*	*Q4b*	*Q5b*		
Sagina apetala	Annual Pearlwort	R	*2*					
Scorzoneroides autumnalis	Autumn Hawkbit	O	*5*	*3*	*3*	*3*	1	1
Stellaria graminea	Lesser Stitchwort	O	*3*					
Taraxacum sp.	Dandelion	O	*5*	*1*				
Trifolium dubium	Lesser Trefoil	F	*4*	*3*	*3*	*1*		
Trifolium pratense	Red Clover	O	*3*					
Trifolium repens	White Clover	A	*3*	*5*	*5*	*7*		
Veronica serpyllifolia	Thyme-leaved Speedwell	R		*2*				
Total number of species		**32**	***19***	***19***	***14***	***19***	**3**	**4**
NVC Type		MG6/MG5	*MG5*	*MG6*	*MG6*	*MG5*		

Table A2.5: Field G5 1x1 Quadrats

Species	Common Name	G5 – 1x1 Quadrats				
		Q1a	Q2a	*Q3a*	*Q4a*	*Q5a*
Grasses						
Agrostis capillaris	Common Bent	*1*	*1*	*1*	*1*	*1*
Anthoxanthum odoratum	Sweet Vernal Grass	*1*	*1*			*1*
Cynosurus cristatus	Crested Dog's-tail			*1*	*1*	*1*
Festuca rubra	Red Fescue	*1*		*1*		*1*
Holcus lanatus	Meadow Soft-grass		*1*		*1*	*1*
Lolium perenne	Perennial Rye-grass	*1*	*1*	*1*	*1*	*1*
Poa annua	Annual Meadow-grass				*1*	
Poa trivialis	Rough-stalked Meadow-grass				*1*	
Other herbaceous species						
Achillea millefolium	Yarrow	*1*		*1*		*1*
Bellis perennis	Daisy	*1*		*1*		
Centaurea nigra	Black Knapweed					*1*
Geranium dissectum	Cut-leaved Crane's-bill		*1*			
Hypochaeris radicata	Cat's-ear	*1*		*1*		*1*
Lotus corniculatus	Bird's-foot Trefoil	*1*				*1*
Odontites vernus	Red Bartsia	*1*	*1*	*1*	*1*	*1*
Plantago lanceolata	Ribwort Plantain	*1*	*1*	*1*	*1*	*1*
Potentilla reptans	Creeping Cinquefoil			*1*		
Prunella vulgaris	Selfheal	*1*		*1*	*1*	*1*
Ranunculus acris	Meadow Buttercup	*1*	*1*	*1*		*1*
Ranunculus bulbosus	Bulbous Buttercup			*1*		
Ranunculus repens	Creeping Buttercup		*1*	*1*	*1*	*1*
Rumex acetosa	Common Sorrel				*1*	*1*
Sagina apetala	Annual Pearlwort	*1*				
Scorzoneroides autumnalis	Autumn Hawkbit	*1*		*1*	*1*	*1*
Stellaria graminea	Lesser Stitchwort	*1*				

Species	Common Name	G5 – 1x1 Quadrats				
		Q1a	Q2a	*Q3a*	*Q4a*	*Q5a*
Taraxacum sp.	Dandelion	*1*	*1*	*1*		
Trifolium dubium	Lesser Trefoil	*1*		*1*	*1*	*1*
Trifolium pratense	Red Clover	*1*	*1*			
Trifolium repens	White Clover	*1*	*1*	*1*	*1*	*1*
Veronica serpyllifolia	Thyme-leaved Speedwell			*1*		
Total number of species		**19**	**12**	**19**	**14**	**19**

Table A2.6: Field G6 Species List and 2x2 Quadrats

Species	Common Name	G6 Species List	G6 – 2x2 Quadrats				Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	*Q2b*	*Q3b*	*Q4b*		
Grasses								
Agrostis capillaris	Common Bent	F	*5*	*6*	*7*	*6*		
Anthoxanthum odoratum	Sweet Vernal Grass	A	*4*	*6*	*7*	*7*		
Cynosurus cristatus	Crested Dog's-tail	F	*6*	*5*	*5*			
Dactylis glomerata	Cocksfoot	O						
Festuca rubra	Red Fescue	F	*5*		*3*	*7*		
Holcus lanatus	Meadow Soft-grass	F	*4*	*6*	*6*	*5*		
Lolium perenne	Perennial Rye-grass	F-A	*4*	*4*	*2*	*5*		
Poa annua	Annual Meadow-grass	R						
Poa pratensis	Smooth-stalked Meadow-grass	O	*1*	*3*	*2*			
Poa trivialis	Rough-stalked Meadow-grass	O- VLF		*2*				
Other herbaceous species								
Achillea millefolium	Yarrow	O-LF		*4*				
Agrimonia eupatoria	Agrimony	R	*1*				1	1
Bellis perennis	Daisy	O		*1*				
Cerastium fontanum	Common Mouse-ear	R	*1*	*1*		*3*		
Cerastium glomeratum	Sticky Mouse-ear	O	*1*					
Convolvulus arvensis	Field Bindweed	O						
Hypochaeris radicata	Cat's-ear	F-A	*5*	*5*	*5*	*4*		
Jacobaea vulgaris (Senecio jacobaea)	Ragwort	O		*1*	*1*	*1*		
Leontodon saxatilis	Lesser Hawkbit	F	*2*	*3*	*4*	*4*		
Leucanthemum vulgare	Ox-eye Daisy	VLO			*4*		1	1
Lotus corniculatus	Bird's-foot Trefoil	A	*2*	*6*	*6*	*5*		1
Odontites vernus	Red Bartsia	F	*2*	*3*	*3*	*3*		
Plantago lanceolata	Ribwort Plantain	A	*4*	*5*	*4*	*6*		
Plantago major	Greater Plantain	R						

Species	Common Name	G6 Species List	G6 – 2x2 Quadrats				Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	*Q2b*	*Q3b*	*Q4b*		
Potentilla reptans	Creeping Cinquefoil	R						
Prunella vulgaris	Selfheal	O	*4*	*2*		*3*		
Ranunculus acris	Meadow Buttercup	A	*3*	*4*	*4*	*2*		
Ranunculus bulbosus	Bulbous Buttercup	R	*3*					
Ranunculus repens	Creeping Buttercup	R	*1*					
Rumex obtusifolius	Broad-leaved Dock	R	*1*					
Sagina apetala	Annual Pearlwort	R		*1*				
Sagina procumbens	Mossy Pearlwort	R						
Scorzoneroides autumnalis	Autumn Hawkbit	O	*3*	*4*	*3*	*3*	1	1
Stellaria graminea	Lesser Stitchwort	O	*3*	*3*	*3*	*3*		
Taraxacum sp.	Dandelion	O			*2*	*2*		
Trifolium dubium	Lesser Trefoil	O-LF	*2*	*3*	*3*			
Trifolium pratense	Red Clover	A	*5*	*5*	*5*	*3*		
Trifolium repens	White Clover	O-LF	*3*	*2*	*2*	*2*		
Urtica dioica	Stinging Nettle	VLF						
Veronica chamaedrys	Germander Speedwell	R						
Veronica serpyllifolia	Thyme-leaved Speedwell	R		*1*	*1*			
Total number of species		**41**	***25***	***25***	***22***	***19***	**3**	**4**
NVC Type		MG5	*MG5*	*MG5*	*MG5*	*MG5*		

Table A2.7: Field G6 1x1 Quadrats

Species	Common Name	G6 – 1x1 Quadrats			
		Q1a	Q2a	Q3a	Q4a
Grasses					
Agrostis capillaris	Common Bent	*1*	*1*	*1*	*1*
Anthoxanthum odoratum	Sweet Vernal Grass	*1*	*1*	*1*	*1*
Cynosurus cristatus	Crested Dog's-tail	*1*	*1*	*1*	
Festuca rubra	Red Fescue	*1*		*1*	*1*
Holcus lanatus	Meadow Soft-grass	*1*	*1*	*1*	*1*
Lolium perenne	Perennial Rye-grass	*1*	*1*	*1*	*1*
Poa pratensis	Smooth-stalked Meadow-grass	*1*	*1*		
Poa trivialis	Rough-stalked Meadow-grass		*1*		
Other herbaceous species					
Agrimonia eupatoria	Agrimony	*1*			
Bellis perennis	Daisy		*1*		
Cerastium fontanum	Common Mouse-ear		*1*		*1*
Cerastium glomeratum	Sticky Mouse-ear	*1*			
Hypochaeris radicata	Cat's-ear	*1*	*1*	*1*	*1*
Jacobaea vulgaris (Senecio jacobaea)	Ragwort		*1*	*1*	
Leontodon saxatilis	Lesser Hawkbit	*1*	*1*	*1*	*1*
Leucanthemum vulgare	Ox-eye Daisy			*1*	
Lotus corniculatus	Bird's-foot Trefoil	*1*	*1*	*1*	*1*
Odontites vernus	Red Bartsia	*1*	*1*	*1*	
Plantago lanceolata	Ribwort Plantain	*1*	*1*	*1*	*1*
Prunella vulgaris	Selfheal	*1*	*1*		
Ranunculus acris	Meadow Buttercup	*1*	*1*	*1*	*1*
Ranunculus bulbosus	Bulbous Buttercup	*1*			
Ranunculus repens	Creeping Buttercup	*1*			
Rumex obtusifolius	Broad-leaved Dock	*1*			
Scorzoneroides autumnalis	Autumn Hawkbit	*1*	*1*	*1*	*1*

Species	**Common Name**	**G6 – 1x1 Quadrats**			
		Q1a	Q2a	Q3a	Q4a
Stellaria graminea	Lesser Stitchwort	*1*	*1*	*1*	*1*
Taraxacum sp.	Dandelion			*1*	*1*
Trifolium dubium	Lesser Trefoil	*1*	*1*	*1*	
Trifolium pratense	Red Clover	*1*	*1*	*1*	*1*
Trifolium repens	White Clover	*1*		*1*	*1*
Veronica serpyllifolia	Thyme-leaved Speedwell		*1*	*1*	
Total number of species		**24**	**22**	**21**	**16**

Table A2.8: Field G7 Species List and 2x2 Quadrats

Species	Common Name	G7 Species List	G7 – 2x2 Quadrats				Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	*Q3b*	*Q4b*	Q5b		
Grasses								
Agrostis capillaris	Common Bent	A	5	8	7	4		
Agrostis stolonifera	Creeping Bent	O						
Alopecurus pratensis	Meadow Foxtail	VLO						
Anthoxanthum odoratum	Sweet Vernal Grass	F	3		5	5		
Cynosurus cristatus	Crested Dog's-tail	F		6	5	3		
Dactylis glomerata	Cocksfoot	O			2	4		
Festuca rubra	Red Fescue	A	4	5	7	8		
Holcus lanatus	Meadow Soft-grass	O		4	3	4		
Hordeum secalinum	Meadow Barley	O					1	
Lolium perenne	Perennial Rye-grass	F-VLA	8	5	4	5		
Poa annua	Annual Meadow-grass	O	1					
Poa pratensis	Smooth-stalked Meadow-grass	O	3					
Poa trivialis	Rough-stalked Meadow-grass	VLA*			3			
Other herbaceous species								
Achillea millefolium	Yarrow	A	5	4	6	3		
Bellis perennis	Daisy	O	3	3	3	3		
Cerastium fontanum	Common Mouse-ear	R			3	1		
Cerastium glomeratum	Sticky Mouse-ear	O	3	2	2	1		
Convolvulus arvensis	Field Bindweed	F		2	3			
Hypochaeris radicata	Cat's-ear	O		2	3	4		
Jacobaea vulgaris (Senecio jacobaea)	Ragwort	R	1					
Leontodon saxatilis	Lesser Hawkbit	O	1					
Leucanthemum vulgare	Ox-eye Daisy	O			3	4	1	1
Lotus corniculatus	Bird's-foot Trefoil	A	2	1	7	6		1
Odontites vernus	Red Bartsia	F	3	3	3	2		

Species	Common Name	G7 Species List	G7 – 2x2 Quadrats				Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	*Q3b*	*Q4b*	Q5b		
Plantago lanceolata	Ribwort Plantain	A		4	1	4		
Plantago major	Greater Plantain	R						
Potentilla reptans	Creeping Cinquefoil	R*						
Prunella vulgaris	Selfheal	F	4	4	4	3		
Ranunculus acris	Meadow Buttercup	A	3	4	3	4		
Ranunculus bulbosus	Bulbous Buttercup	O						
Ranunculus repens	Creeping Buttercup	VLA*		2				
Rumex obtusifolius	Broad-leaved Dock	VLA*						
Sagina apetala	Annual Pearlwort	O		1		1		
Sagina procumbens	Mossy Pearlwort	O	1		2			
Scorzoneroides autumnalis	Autumn Hawkbit	F		4	4	3	1	1
Stellaria graminea	Lesser Stitchwort	O				2		
Taraxacum sp.	Dandelion	F	4	4	3	3		
Trifolium dubium	Lesser Trefoil	A	3	4	4	6		
Trifolium pratense	Red Clover	O		1	3	3		
Trifolium repens	White Clover	A	6	6	5	3		
Urtica dioica	Stinging Nettle	VLO*						
Veronica serpyllifolia	Thyme-leaved Speedwell	R		1		2		
Total number of species		**42**	**19**	**23**	**26**	**26**	**3**	**3**
NVC Type		MG6/MG5	*MG6*	*MG5*	*MG5*	*MG5*		

* = only present on the edge of fields

Table A2.9: Field G7 1x1 Quadrats

Species	Common Name	G7 – 1x1 Quadrats				
		Q1a	Q2a	Q3a	Q4a	Q5a
Grasses						
Agrostis capillaris	Common Bent	1		1	1	1
Agrostis stolonifera	Creeping Bent		1			
Anthoxanthum odoratum	Sweet Vernal Grass	1			1	
Cynosurus cristatus	Crested Dog's-tail			1	1	
Dactylis glomerata	Cocksfoot					1
Festuca rubra	Red Fescue	1		1	1	1
Holcus lanatus	Meadow Soft-grass			1	1	1
Lolium perenne	Perennial Rye-grass	1		1	1	1
Poa pratensis	Smooth-stalked Meadow-grass	1				
Poa trivialis	Rough-stalked Meadow-grass		1		1	
Other herbaceous species						
Achillea millefolium	Yarrow	1		1	1	1
Bellis perennis	Daisy	1		1	1	1
Cerastium fontanum	Common Mouse-ear				1	
Cerastium glomeratum	Sticky Mouse-ear	1		1	1	
Convolvulus arvensis	Field Bindweed			1	1	
Hypochaeris radicata	Cat's-ear				1	1
Leucanthemum vulgare	Ox-eye Daisy				1	1
Lotus corniculatus	Bird's-foot Trefoil	1			1	1
Odontites vernus	Red Bartsia	1		1	1	
Plantago lanceolata	Ribwort Plantain			1	1	1
Prunella vulgaris	Selfheal	1		1	1	1
Ranunculus acris	Meadow Buttercup	1	1	1	1	1
Ranunculus repens	Creeping Buttercup		1	1		
Rumex obtusifolius	Broad-leaved Dock		1			

Species	Common Name	G7 – 1x1 Quadrats				
		Q1a	Q2a	Q3a	Q4a	Q5a
Sagina apetala	Annual Pearlwort			1		1
Sagina procumbens	Mossy Pearlwort	1				
Scorzoneroides autumnalis	Autumn Hawkbit	1		1	1	1
Stellaria graminea	Lesser Stitchwort					1
Taraxacum sp.	Dandelion	1		1	1	1
Trifolium dubium	Lesser Trefoil	1		1	1	1
Trifolium pratense	Red Clover				1	1
Trifolium repens	White Clover	1		1	1	1
Veronica serpyllifolia	Thyme-leaved Speedwell			1		1
Total number of species		**17**	**5**	**20**	**24**	**21**

Table A2.10: Field G8 Species List and 2x2 Quadrats

Species	Common Name	G8 Species List	G8 – 2x2 Quadrats					Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	Q2b	Q3b	Q4b	Q5b		
Grasses									
Agrostis capillaris	Common Bent	A-LD	6	5	8	7	7		
Agrostis stolonifera	Creeping Bent	VLA		8	8				
Alopecurus pratensis	Meadow Foxtail	R-LO							
Cynosurus cristatus	Crested Dog's-tail	LF				6			
Dactylis glomerata	Cocksfoot	F	6	5	5	4	4		
Festuca rubra	Red Fescue	A	4		4	5	6		
Holcus lanatus	Meadow Soft-grass	A		3	3	3	6		
Hordeum secalinum	Meadow Barley	O						1	
Lolium perenne	Perennial Rye-grass	F-LA	7	5	6	6	6		
Poa pratensis	Smooth-stalked Meadow-grass	R		3					
Poa trivialis	Rough-stalked Meadow-grass	F	2	3	4		4		

Species	Common Name	G8 Species List	G8 – 2x2 Quadrats					Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	Q2b	Q3b	Q4b	Q5b		
Other herbaceous species									
Agrimonia eupatoria	Agrimony	O			2			1	1
Bellis perennis	Daisy	O	1			1			
Cerastium fontanum	Common Mouse-ear	O		1	2	2	3		
Cirsium arvense	Creeping Thistle	R							
Cirsium vulgare	Spear Thistle	R							
Convolvulus arvensis	Field Bindweed	LO	4		3				
Geranium dissectum	Cut-leaved Crane's-bill	R							
Jacobaea vulgaris (Senecio jacobaea)	Ragwort	O				4	1		
Lathyrus pratensis	Meadow vetchling	R						1	1
Leucanthemum vulgare	Ox-eye Daisy	LF			4	4		1	1
Lotus corniculatus	Bird's-foot Trefoil	F-LA			3	5	7		1
Odontites vernus	Red Bartsia	O				3			
Plantago lanceolata	Ribwort Plantain	F				5	3		
Plantago major	Greater Plantain	VLF							
Potentilla reptans	Creeping Cinquefoil	F	3	2			3		
Prunella vulgaris	Selfheal	O-LF	5			3	3		
Ranunculus acris	Meadow Buttercup	A	4			5	5		
Ranunculus bulbosus	Bulbous Buttercup	R							
Ranunculus repens	Creeping Buttercup	VLA-R	2						
Rubus fruticosus	Blackberry	R							
Rumex acetosa	Common Sorrel	R			3				
Rumex crispus	Curled Dock	R							
Rumex obtusifolius	Broad-leaved Dock	VLA*							
Stellaria graminea	Lesser Stitchwort	R					2		
Taraxacum sp.	Dandelion	O	3				2		
Trifolium pratense	Red Clover	O		2	2	4	4		

Species	Common Name	G8 Species List	G8 – 2x2 Quadrats					Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	Q2b	Q3b	Q4b	Q5b		
Trifolium repens	White Clover	O-LF		3			4		
Veronica chamaedrys	Germander Speedwell	O					2		
Total number of species		***39***	**12**	**11**	**14**	**16**	**18**	**4**	**4**
NVC Type		*MG5/MG6*	*MG6*	*MG6*	*MG6*	*MG5*	*MG5*		

Table A2.11: Field G8 1x1 Quadrats

Species	Common Name	G8 – 1x1 Quadrats				
		Q1a	Q2a	Q3a	Q4a	Q5a
Grasses						
Agrostis capillaris	Common Bent	1	1	1	1	1
Agrostis stolonifera	Creeping Bent		1	1		
Cynosurus cristatus	Crested Dog's-tail				1	
Dactylis glomerata	Cocksfoot	1	1	1	1	1
Festuca rubra	Red Fescue	1		1	1	1
Holcus lanatus	Meadow Soft-grass		1	1	1	1
Lolium perenne	Perennial Rye-grass	1	1	1	1	1
Poa pratensis	Smooth-stalked Meadow-grass		1			
Poa trivialis	Rough-stalked Meadow-grass			1		1
Other herbaceous species						
Agrimonia eupatoria	Agrimony			1		
Bellis perennis	Daisy				1	
Cerastium fontanum	Common Mouse-ear			1	1	1
Convolvulus arvensis	Field Bindweed	1		1		
Jacobaea vulgaris (Senecio jacobaea)	Ragwort				1	
Leucanthemum vulgare	Ox-eye Daisy			1	1	
Lotus corniculatus	Bird's-foot Trefoil			1	1	1
Odontites vernus	Red Bartsia				1	
Plantago lanceolata	Ribwort Plantain				1	1
Potentilla reptans	Creeping Cinquefoil	1				1
Prunella vulgaris	Selfheal	1	1		1	1
Ranunculus acris	Meadow Buttercup	1	1		1	1
Rumex acetosa	Common Sorrel			1		
Stellaria graminea	Lesser Stitchwort					1
Taraxacum sp.	Dandelion					1

Species	Common Name	G8 – 1x1 Quadrats				
		Q1a	Q2a	Q3a	Q4a	Q5a
Trifolium pratense	Red Clover			1	1	1
Trifolium repens	White Clover					1
Veronica chamaedrys	Germander Speedwell		1			1
Total number of species		**8**	**9**	**14**	**16**	**17**

Table A2.12: Field G9 Species Lists and 2x2 Quadrats

Species	Common Name	G9 Species List	G9a – 2x2 Quadrats					G9b – 2x2 Quadrats		Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	Q2b	Q3b	Q4b	Q5b	Q1b	Q2b		
Grasses											
Agrostis capillaris	Common Bent	A	7	7	5	5	6	7	7		
Alopecurus pratensis	Meadow Foxtail	LF									
Anthoxanthum odoratum	Sweet Vernal Grass	O				5	4				
Cynosurus cristatus	Crested Dog's-tail	F-LA	7	6	5	4	4	5	5		
Dactylis glomerata	Cocksfoot	R		4	1						
Festuca rubra	Red Fescue	F	4	3	3	4	4	4	3		
Holcus lanatus	Meadow Soft-grass	A	3	4	7	6	7		4		
Lolium perenne	Perennial Rye-grass	A	5	5	5	4	4	6	7		
Phleum pratense	Meadow Cat's-tail	R									
Other herbaceous species											
Achillea millefolium	Yarrow	LA	4	3				3	1		
Bellis perennis	Daisy	O	2						3		
Cerastium fontanum	Common Mouse-ear	O	3	2	2	3	3	2	2		
Cirsium arvense	Creeping Thistle	VLF									
Cirsium vulgare	Spear Thistle	VLO									
Convolvulus arvensis	Field Bindweed	VLA							3		
Crepis capillaris	Smooth Hawk's-beard	O	3			2		4	3		
Galium album	Hedge Bedstraw	R									
Geranium dissectum	Cut-leaved Crane's-bill	VLO									
Heracleum sphondylium	Hogweed	R									
Hypochaeris radicata	Cat's-ear	A	4	4	5	5	4	2	3		
Jacobaea vulgaris	Ragwort	R				1					
Leontodon saxatilis	Lesser Hawkbit	VLA-F		6	6		3				
Leucanthemum vulgare	Ox-eye Daisy	O	1			4				1	1
Lotus corniculatus	Bird's-foot Trefoil	A	4	3	7	5	6	7	6		1

Species	Common Name	G9 Species List	G9a – 2x2 Quadrats					G9b – 2x2 Quadrats		Kent Neutral Grassland LWS Species	UK Hab g3a Indicator Species
			Q1b	Q2b	Q3b	Q4b	Q5b	Q1b	Q2b		
Odontites vernus	Red Bartsia	F	3	3	3	2		3	3		
Plantago lanceolata	Ribwort Plantain	A	5	5	4	4	3	3	3		
Prunella vulgaris	Selfheal	A	5	3	4	4	3	5	3		
Ranunculus acris	Meadow Buttercup	F	2	2	3	3	3	2	2		
Ranunculus repens	Creeping Buttercup	O	3					3	3		
Rubus fruticosus	Blackberry	VLD									
Rumex acetosa	Common Sorrel	R					1				
Rumex obtusifolius	Broad-leaved Dock	R									
Sagina apetala	Annual Pearlwort	O						1			
Scorzoneroides autumnalis	Autumn Hawkbit	F	5	4	3	3	3	4	4	1	1
Stellaria graminea	Lesser Stitchwort	O									
Taraxacum sp.	Dandelion	F	4	4	3	3	2	3	5		
Trifolium dubium	Lesser Trefoil	O	2		2			2			
Trifolium pratense	Red Clover	F	4	3	4	4	5	3	3		
Trifolium repens	White Clover	F	4	4	4	3	3	4	4		
Urtica dioica	Stinging Nettle	VLO									
Total number of species		**40**	**22**	**19**	**19**	**20**	**18**	**20**	**21**	**2**	**3**
Uk Habitat Type		*MG5/ MG6*	*MG5*	*MG5*	*MG5*	*MG5*	*MG5*	MG5	MG5		

Table A2.13: Field G9 1x1 Quadrats

Species	Common Name	G9a – 1x1 Quadrats						G9b – 1x1 Quadrats	
		Q1a	Q2a	Q3a	Q4a	Q5a	Q6a	Q1a	Q2a
Grasses									
Agrostis capillaris	Common Bent	1	1	1	1	1	1	1	1
Anthoxanthum odoratum	Sweet Vernal Grass				1	1			

Species	Common Name	G9a – 1x1 Quadrats						G9b – 1x1 Quadrats	
		Q1a	Q2a	Q3a	Q4a	Q5a	Q6a	Q1a	Q2a
Cynosurus cristatus	Crested Dog's-tail	1	1	1	1	1	1	1	1
Dactylis glomerata	Cocksfoot		1						
Festuca rubra	Red Fescue	1	1	1	1	1		1	1
Holcus lanatus	Meadow Soft-grass	1	1	1	1	1	1		1
Lolium perenne	Perennial Rye-grass	1	1	1	1	1	1	1	1
Phleum pratense	Meadow Cat's-tail						1		
Other herbaceous species									
Achillea millefolium	Yarrow	1	1					1	
Bellis perennis	Daisy	1							1
Cerastium fontanum	Common Mouse-ear	1	1	1	1	1			1
Cirsium arvense	Creeping Thistle						1		
Convolvulus arvensis	Field Bindweed						1		1
Crepis capillaris	Smooth Hawk's-beard	1						1	1
Geranium dissectum	Cut-leaved Crane's-bill						1		
Hypochaeris radicata	Cat's-ear	1	1	1	1	1		1	1
Jacobaea vulgaris (Senecio jacobaea)	Ragwort				1				
Leontodon saxatilis	Lesser Hawkbit		1	1		1			
Leucanthemum vulgare	Ox-eye Daisy	1			1				
Lotus corniculatus	Bird's-foot Trefoil	1	1	1	1	1		1	1
Odontites vernus	Red Bartsia	1	1	1	1		1	1	1
Plantago lanceolata	Ribwort Plantain	1	1	1	1	1		1	1
Prunella vulgaris	Selfheal	1	1	1	1	1	1	1	1
Ranunculus acris	Meadow Buttercup	1	1	1	1	1	1	1	1
Ranunculus repens	Creeping Buttercup	1					1	1	1
Rumex acetosa	Common Sorrel					1			
Sagina apetala	Annual Pearlwort							1	
Scorzoneroides autumnalis	Autumn Hawkbit	1	1	1	1	1		1	1

Species	Common Name	G9a – 1x1 Quadrats						G9b – 1x1 Quadrats	
		Q1a	Q2a	Q3a	Q4a	Q5a	Q6a	Q1a	Q2a
Taraxacum sp.	Dandelion	1	1	1	1	1		1	1
Trifolium dubium	Lesser Trefoil	1		1				1	
Trifolium pratense	Red Clover	1	1	1	1	1		1	1
Trifolium repens	White Clover	1	1	1	1	1		1	1
Total number of species		**21**	**19**	**18**	**19**	**18**	**12**	**18**	**19**