



Biodiversity Net Gain Assessment

Land at 37 Barfield Park, Lancing

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

- 1.1 The Ecology Partnership was commissioned by The Community Stadium Ltd to undertake a Biodiversity Net Gain (BNG) assessment for the Land at 37 Barfield Park, Lancing, BN15 9DF, hereafter referred to as 'site'.
- 1.2 The site is characterised by other neutral grassland, with parcels of bramble scrub, mixed scrub and a hedgerow running along the northern boundary and modified grassland to the east. The site totals c. 0.14ha, situated to the north-east of Lancing (central grid reference: TQ 18859 04938). The immediate surrounding area consists of residential dwellings and Brighton & Hove Albion Training Ground to the east. The site occupies the corner plot at the north-eastern corner of Barfield Park, whilst the northern boundary runs alongside Mash Barn Lane, a road that provides access to the training ground from the A2025.
- 1.3 The red line boundary of the site and the immediate surroundings are displayed in Figure 1 overleaf.

Proposed development

- 1.4 The current proposals for the site involve the construction of a medical centre, with two flats located above with associated parking spaces and landscaping. The proposed landscape strategy for the site is displayed in Figure 2 overleaf.



Figure 1: Site red line boundary and immediate surroundings
Satellite imagery obtained from Google satellite via QGIS

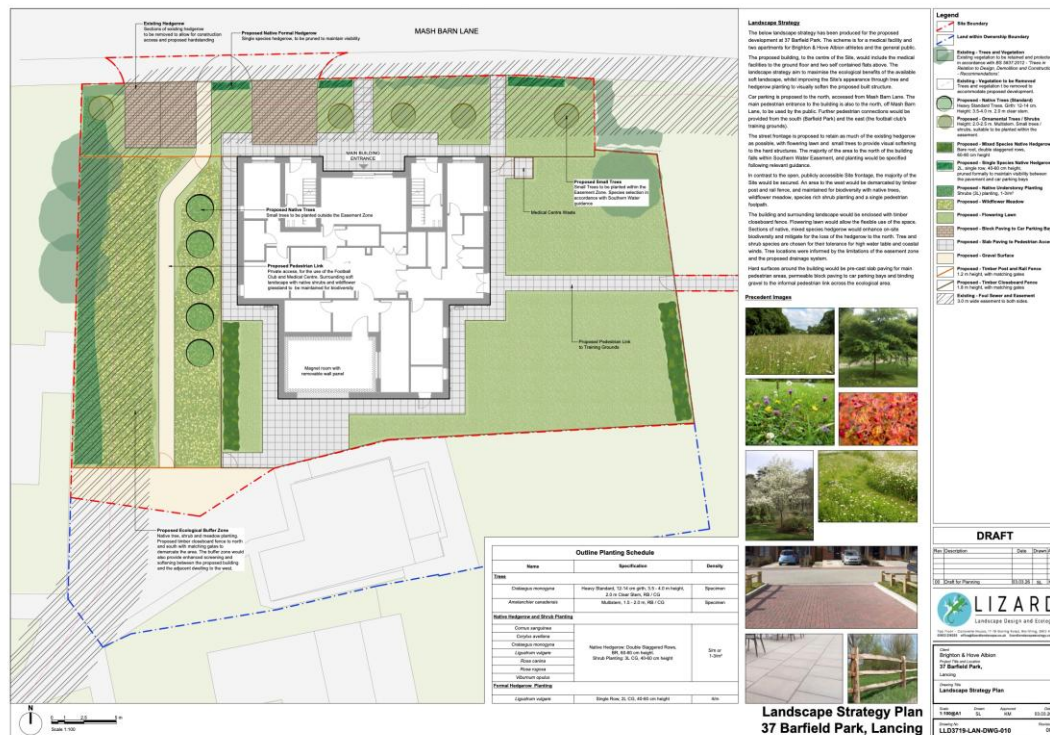


Figure 2: Proposed landscape strategy – Lizard Landscape Design and Ecology, March 2026

2.0 Methodology

2.1 BNG principles are aimed to support both the aspired green infrastructural proposals set to define the created landscape and support biodiversity and habitat enhancement. BNG principles are set within the Environment Bill (2021).

2.2 In order to determine the on-site habitat baseline, habitats were mapped and subject to a condition assessment on 15th September 2025 and an update walkover on 22nd January 2026. This work was undertaken by Chris Jennings BSc (Hons) MSc MCIEEM and Sophie Baker BSc (Hons) MSc.

2.3 The creation of areas which would support potential net-gain areas are based on the following:

- Identification / classification of the on-site baseline habitats;
- Identification of habitats which are of high ecological value;
- Provision of habitat mapping;
- Identification of potential for ecological connectivity;
- Identification of areas which support landscape development;
- Linking biodiversity net gain areas, landscape features in order to identify opportunity areas which support the Nature Recovery Network aspirations;
- Recommendations for species rich, native planting.

3.0 DEFRA Metric

3.1 The Statutory Biodiversity Metric is used to calculate biodiversity losses and gains for terrestrial habitats within the application area. This metric underpins the Environment Bill's provisions for mandatory biodiversity net-gain in England.

3.2 The Statutory Biodiversity Metric uses habitat as a proxy for wider biodiversity with different habitat types scoring different values according to their relative biodiversity value and dependent on the condition and location of the habitat, to calculate 'biodiversity units'.

Baseline Habitat Units

- 3.3 The habitats currently present on site have been identified and assessed. These are shown in Figure 3 and in Tables 1-2, overleaf. A full condition assessment is presented in Appendix 1.



Figure 3: On-Site Habitat Baseline

Table 1. On-site habitat breakdown – Pre-Development

Habitat	Area (ha)	Distinctiveness	Condition	Strategic significance	Total habitat units	Area retained	Area enhanced	Units lost	Comments
Other neutral grassland	0.0901	Medium	Poor	Low	0.36	0.00	0.00	0.36	The grassland across majority of site.
Mixed scrub	0.0067	Medium	Poor	Low	0.03	0.00	0.00	0.03	Area of mixed scrub in the centre of site.
Bramble scrub	0.0305	Medium	Condition assessment N/A	Low	0.12	0.00	0.00	0.12	Two parcels of bramble scrub located to the east and north-west of site.
Modified grassland	0.0123	Low	Poor	Low	0.02	0.00	0.00	0.02	Area of grassland within the adjacent training ground to the east.
Artificial unvegetated, unsealed surface	0.0016	V. Low	N/A - Other	Low	0.00	0.00	0.00	0.00	Section of existing gravel driveway to the south-west of site.
Developed land; sealed surface	0.0032	V. Low	N/A - Other	Low	0.00	0.00	0.00	0.00	Area of hardstanding path to the north of site.
Urban tree	0.0081	Medium	Moderate	Low	0.06	0.0081	0.00	0.00	Describes a small oak tree to the east of site and small hawthorn tree to the west.
Total area (excluding trees)	0.14	Total units/area			0.60	0.01	0.00	0.53	

Table 2. On-site hedge breakdown – Pre-Development

Habitat	Area (km)	Distinctiveness	Condition	Strategic significance	Total habitat units	Area retained	Area enhanced	Units lost	Comments
Species-rich native hedgerow	0.0397	Medium	Moderate	Low	0.32	0.019	0.00	0.17	Hedgerow running along the north of site, sections to be lost for access from Mash Barn Lane.
Total length	0.04	Total units/length			0.32	0.02	0.00	0.17	

Illustrative Proposed Habitat Units

- 3.4 Proposed habitats have been taken from plans produced by Lizard Landscape Design and Ecology; these have been detailed in Figure 4 below and broken down within Tables 3-4 overleaf.

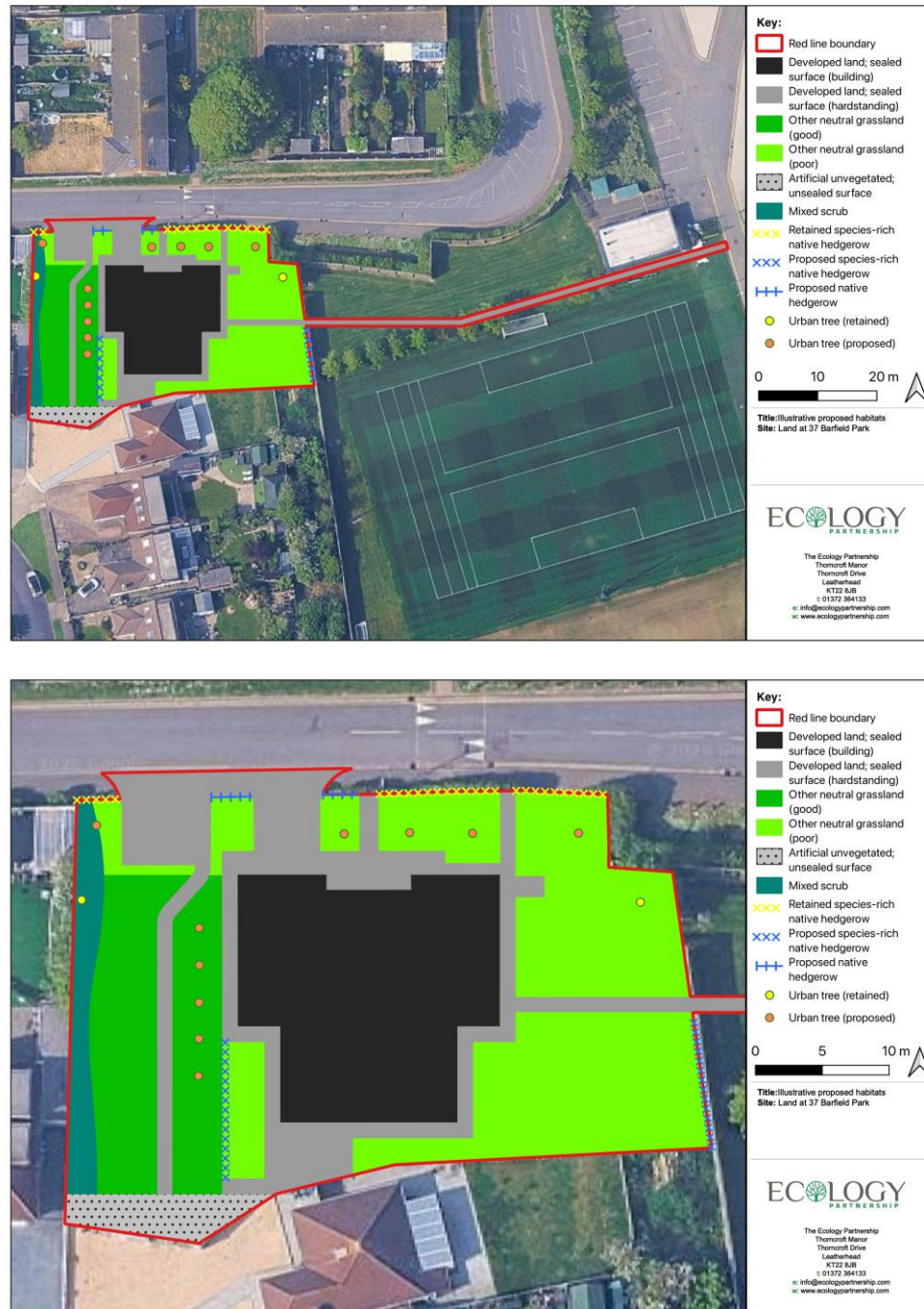


Figure 4: Proposed habitat plan for site

Table 3. On-site habitat breakdown – Post-Development Creation

Habitat	Area (ha)	Distinctiveness	Target Condition	Strategic significance	Years to target condition	Difficulty	Total habitat units	Comments
Developed land; sealed surface	0.0312	V. Low	N/A – Other	Low	0	Low	0.00	Describes the proposed building.
Developed land; sealed surface	0.0382	V. Low	N/A – Other	Low	0	Low	0.00	New areas of hardstanding for parking and access.
Other neutral grassland	0.0194	Medium	Moderate	Low	10	Low	0.13	Area of wildflower meadow planting to the west of site.
Other neutral grassland	0.0459	Medium	Poor	Low	2	Low	0.17	Proposed flowering lawn.
Artificial unvegetated, unsealed surface	0.0041	V. Low	N/A - Other	Low	0	Low	0.00	New area of gravel driveway to the south of site.
Mixed scrub	0.0056	Medium	Moderate	Low	5	Low	0.04	Strip of mixed scrub proposed along the west of site.
Urban tree	0.0407	Medium	Poor	Low	10	Low	0.11	Proposed ten small trees around site.
Total area (excl. trees)	0.14	Total units					0.49	

Table 4. On-site hedge breakdown – Post-Development

Habitat	Area (km)	Distinctiveness	Target Condition	Strategic significance	Years to target condition	Difficulty	Total units	Comments
Species-rich native hedgerow	0.0195	Medium	Moderate	Low	5	Low	0.13	New hedgerows to be planted with native woody species to the south-east of site and to the south-west of the proposed building.

Native hedgerow	0.0057	Low	Poor	Low	1	Low	0.01	Sections of new single species hedgerow proposed to the north of site.
Total length	0.03	<u>Total units</u>					<u>0.14</u>	

- 3.5 The results of the metric calculation based on the habitat input from the tables above are displayed in Figure 5.

FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-0.08	
	Hedgerow units	-0.02	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-13.61%	Total net gain achieved is less than target net ▲
	Hedgerow units	-7.57%	Total net gain achieved is less than target net ▲
	Watercourse units	0.00%	
Trading rules satisfied?	No - Check Trading Summaries ▲		

Figure 5: Illustrative masterplan BNG metric calculation headline results

- 3.6 The calculations confirm that a 10% net-gain is not currently achievable based on the current site layout, with a biodiversity net change of **-13.61%** in habitat units and **-7.57%** in hedgerow units, these proposals do not satisfy the trading rules. These credits would need to be purchased as offsite credits to achieve a 10% net gain.
- 3.7 The BNG strategy has been developed in order to adhere to good practice principles (CIEEM 2016), which references measures to review and support biodiversity initiatives during the design, building and maintenance of developments.
- 3.8 The mitigation hierarchy has been considered as part of the proposals, however, considering the small size of the site and nature of proposals, it was not possible to retain much of the existing habitats. Therefore, compensation has been made by habitat creation onsite, along with the purchase of offsite credits to ensure 10% net gain.
- 4.0 Post-development Planting Scheme**
- 4.1 Planting schemes are outlined below which aim to support details required for the BNG. Please note these may be subject to change and final approval by the project ecologist and landscape architect.
- 4.2 The proposed trees onsite are proposed to be common hawthorn *Crataegus monogyna* and service berry *Amelanchier canadensis*. Species selection for the trees to the north of the site within the Easement Zone will be selected in accordance with Southern Water guidance.

Other neutral grassland – Poor condition

- 4.3 The majority of new grassland areas will be managed as a flowering lawn post-development. This area should be sown with a native complete seed mix to increase plant diversity. Emorsgate Seeds EL1 Flowering Lawn Mixture (or suitable equivalent) are suggested to be used, including species:

- Kidney Vetch (*Anthyllis vulneraria*)
- Betony (*Betonica officinalis*)
- Common knapweed (*Centaurea nigra*)
- Hedge bedstraw (*Galium album*)
- Oxeye daisy (*Leucanthemum vulgare*)
- Birdsfoot trefoil (*Lotus corniculatus*)
- Black medick (*Medicago lupulina*)
- Ribwort plantain (*Plantago lanceolata*)
- Cowslip (*Primula veris*)
- Selfheal (*Prunella veris*)
- Meadow buttercup (*Ranunculus acris*)
- Bladder campion (*Silene vulgaris*)
- Dandelion (*Taraxacum officinale*)
- White clover (*Trifolium repens*)
- Common bent (*Agrostis capillaris*)
- Crested dogstail (*Cynosurus cristatus*)
- Red fescue (*Festuca rubra*)
- Smaller cat's-tail (*Phleum bertolonii*)
- Smooth-stalked meadowgrass (*Poa pratensis*)

Other neutral grassland – Good condition

- 4.4 The grassland area to the west will also be managed as a wildflower meadow post-development, this area is proposed to be in a 'moderate' condition. A more specialised native complete seed mix is recommended, Emorsgate Seeds EM3 Special General-Purpose Meadow Mixture (or equivalent) is suggested to be used, including species:

- Yarrow (*Achillea millefolium*)
- Agrimony (*Agrimonia eupatoria*)

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- Betony (*Betonica officinalis*)
 - Common knapweed (*Centaurea nigra*)
 - Wild carrot (*Daucus carota*)
 - Viper's-bugloss (*Echium vulgare*)
 - Meadowsweet (*Fillipendula ulamria*)
 - Hedge bedstraw (*Galium album*)
 - Lady's bedstraw (*Galium verum*)
 - Meadow Crane's-bill (*Geranium pratense*)
 - Oxeye daisy (*Leucanthemum vulgare*)
 - Musk mallow (*Malva moschata*)
 - Black medick (*Medicago lupulina*)
 - Sainfoin (*Onobrychis viciifolia*)
 - Wild parsnip (*Pastinaca sativa*)
 - Ribwort plantain (*Plantago lanceolata*)
 - Salad burnet (*Poterium sanguisorba*)
 - Cowslip (*Primula veris*)
 - Selfheal (*Prunella vulgaris*)
 - Meadow buttercup (*Ranunculus acris*)
 - Bulbous buttercup (*Ranunculus bulbosus*)
 - Yellow rattle (*Rhinanthus minor*)
 - Common sorrel (*Rumex acetosa*)
 - Small scabious (*Scabiosa columbaria*)
 - Red campion (*Silene dioica*)
 - Bladder campion (*Silene vulgaris*)
 - Dandelion (*Taraxacum officinale*)
 - Tufted vetch (*Vicia cracca*)
 - Common bent (*Agrostis capillaris*)
 - Crested dogstail (*Cynosurus cristatus*)
 - Red fescue (*Festuca rubra*)
 - Smaller cat's-tail (*Phleum bertolonii*)
 - Smooth-stalked meadowgrass (*Poa pratensis*)

- 4.5 The area of grassland to the west of site is proposed to be in a 'moderate' condition, this area is to be fenced off from surrounding areas. The remainder of the grassland around site is proposed to be in 'poor' condition and is to be managed more as short sward grassland. Condition assessment criteria for these grassland areas has been outlined within Table 5.

Table 5. Condition assessment tables for other neutral grassland

Condition Sheet: GRASSLAND Habitat Type (medium, high & very high distinctiveness)		
UKHab Habitat Type(s): All other grassland types and tall ruderal (ie. not amenity/modified)		
Condition Assessment Criteria		
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	
E	Combined cover of species indicative of sub-optimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.	
Additional Criterion - must be assessed for all non-acid grassland types		
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnotes 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving good condition for non-acid grassland types only.	

Condition		‘Moderate’ and ‘Poor’ Required
Condition Assessment Result		
Good	Passes 5 of 6 criteria, including essential criterion A and F	
Moderate	Passes 3 or 4 of 6 criteria, including essential criterion A	
Poor	Passes 0, 1, 2 criteria of 6 criteria; OR Passes 3 or 4 criteria excluding criterion A and F	
Footnote 1 – Professional judgement should be used alongside the UKHab description.		
Footnote 2 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches where not exceeding 5% cover.		
Footnote 3 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , greater plantain <i>Plantago major</i> , white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i> .		
Footnote 4 – Assess this for distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels, accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into the adjacent habitat, by applying professional judgement.		
Footnote 5 – Wildlife and Countryside Act 1981 (as amended)		

Mixed Scrub

4.6 The proposed mixed scrub along the west of site is proposed to be planted with native species including:

- Common dogwood (*Cornus sanguinea*)
- Common hazel (*Corylus avellana*)
- Common hawthorn (*Crataegus monogyna*)
- Wild privet (*Ligustrum vulgare*)
- Dog-rose (*Rosa canina*)
- Beach rose (*Rosa rugosa*)
- Guelder-rose (*Viburnum opulus*)

4.7 A proposed condition of 'moderate' has been set, the criteria to achieve this has been outlined in Table 6. It is proposed that this habitat be planted in sections rather than a line to promote the scrub nature of the area.

Table 6. Condition assessment table for scrub

Condition Sheet: SCRUB Habitat Type		
UKHab Habitat Type(s): All forms of scrub		
Condition Assessment Criteria		
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of sub-optimal condition ⁶ make up less than 5% of ground cover.	
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	
Condition		'Moderate' required
Condition Assessment Result		
Good	Passes 5 of 5 criteria	
Moderate	Passes 3 or 4 of 5 criteria	
Poor	Passes 2 or fewer criteria	
Footnote 1 – Professional judgement should be used alongside the UKHab description.		
Footnote 2 – Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) <i>Hedgerow Survey Handbook: A standard procedure for local surveys in the UK</i> . 2nd ed. [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk).		
Footnote 3 – See gov.uk standing advice on ancient and veteran species. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)		
And Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)		
Footnote 4 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.		
Footnote 5 – Wildlife and Countryside Act 1981 (as amended).		
Footnote 6 – Species indicative of suboptimal condition for this habitat type may include: non-native conifers, tree-of-heaven <i>Alianthus altissima</i> , holm oak <i>Quercus ilex</i> , European turkey oak <i>Quercus cerris</i> , cherry laurel <i>Prunus laurocerasus</i> , snowberry <i>Symphoricarpos</i> spp., shallon <i>Gaultheria shallon</i> , American skunk cabbage <i>Lysichiton americanus</i> , buddleia <i>Buddleja</i> spp.,		

cotoneaster *Cotoneaster* spp., Spanish bluebell *Hyacinthoides hispanica* and hybrid bluebells *Hyacinthoides x massartiana*. There may be additional relevant species local to the region and or site.

Native hedgerow

- 4.8 There are sections of native hedgerow proposed along the north of site, these are proposed to be a single species hedgerow to be pruned to maintain visibility for parking and access. These have been proposed to be wild privet *Ligustrum vulgare*.
- 4.9 A proposed condition of 'poor' has been set, the condition assessment criteria has been outlined within Table 7.

Species-rich native hedgerow

- 4.10 The new lengths of species-rich native hedgerow will need to consist of ≥ 5 native woody species in a 30m section to meet the criteria of a 'species-rich native hedgerow'. Two lengths of hedgerow are proposed to the south-east and to the south-west of the proposed building. These hedgerows are to be planted in double staggered rows. Hedgerow planting is proposed to include the following species:
- Common dogwood (*Cornus sanguinea*)
 - Common hazel (*Corylus avellana*)
 - Common hawthorn (*Crataegus monogyna*)
 - Wild privet (*Ligustrum vulgare*)
 - Dog-rose (*Rosa canina*)
 - Beach rose (*Rosa rugosa*)
 - Guelder-rose (*Viburnum opulus*)
- 4.11 A proposed condition of 'moderate' has been set, the condition assessment criteria has been outlined within Table 7.

Table 7. Condition assessment tables for hedgerows

Condition Assessment Criteria		Criteria achieved?
Hedgerows		
Height >1.5 m average along length		
Width >1.5 m average along length		
Gap – hedge base Gap between ground and base of canopy <0.5 m for >90% of length		
Gap – hedge canopy continuity Gaps make up <10% of total length and No canopy gaps >5 m		
Undisturbed perennial vegetation >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length (on one side of the hedge (at least))		
Undesirable species Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.		
Invasive species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.		
Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.		
Tree Age (if hedgerow with trees) There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.		
Tree health (if hedgerow with trees) At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.		
Criteria failed		
Condition (G = good; M = moderate; P = poor)		'Poor' and 'Moderate' required
Condition Assessment Result		
	Hedgerow without trees	Hedgerow with trees
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	No more than 2 failures in total; AND No more than 1 failure in any functional group.

Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition).
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).
Footnote 1 – DEFRA (2007) <i>Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.</i> Available on: layout (hedgelink.org.uk) Footnote 2 – STALEY, J.T. ET AL. (2020) <i>Definition of Favourable Conservation Status for Hedgerows.</i> Available on: Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk) Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – CHEFFINGS, C. M. et al. (2005) <i>The Vascular Plant Red Data List for Great Britain.</i> Species Status 7: 1-116. Available on: The Vascular Plant Red Data List for Great Britain (Species Status No. 7) JNCC Resource Hub Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). <i>Definitions: wild, native or alien?</i> Available on: Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org) Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) <i>Online Atlas of the British and Irish Flora.</i> Available on: Acknowledgements Online Atlas of the British and Irish Flora (brc.ac.uk) Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on: Home » NNSS (nonnativespecies.org) Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)		

5.0 Other Enhancements

- 5.1 A number of enhancements can be incorporated within the development scheme to help reduce potential ecological impacts to provide net gains to biodiversity in line with NPPF (2024) and the proposed Environment Bill, these include the installation of a log pile and enhancements for hedgehogs as detailed within the preliminary ecological appraisal document.

6.0 Conclusions

- 6.1 The current illustrative masterplan results in a biodiversity net change of **-13.61%** in habitat units and **-7.57%** in hedgerow units. This is a unit deficit of **0.14** habitat units and **0.06** hedgerow units. These credits would need to be purchased from an off-site unit provider to offset the proposals to achieve a 10% net gain.
- 6.2 Additional enhancements which are not recognised within the Defra metric have been recommended within this report. These will ensure that the proposed scheme creates opportunities for wildlife on site and within the wider area.

Appendix 1: Habitat Baseline Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)		
UKHab Habitat Type(s): Grassland - Modified grassland		
Condition Assessment Criteria		Modified grassland
A	There are 6-8 vascular plant species per m present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m~ (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	N
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note – patches of scrub with continuous (more than 90% cover should be classified as the relevant scrub habitat type.	Y
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	N
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens?).	N
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y
G	There is an absence of invasive non-native plant species? (as listed on Schedule 9 of WCA*).	Y
Condition		Poor
Condition Assessment Result		
Good	Passes 6 or 7 of 7 criteria including essential criterion A	
Moderate	Passes 4 or 5 of 7 criteria including passing essential criterion A	
Poor	Passes 3 or fewer criteria; OR 4-6 of criteria but failing criterion A	
Footnote 1 – Creeping thistle <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , greater plantain <i>Plantago major</i> , white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i> .		

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover. Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying the buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 4 – Wildlife and Countryside Act 1981 (as amended)		
Condition Sheet: GRASSLAND Habitat Type (medium, high & very high distinctiveness)		
UKHab Habitat Type(s): All other grassland types and tall ruderal (ie. not amenity/modified)		
Condition Assessment Criteria		Other neutral grassland
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	N
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	N
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	N
E	Combined cover of species indicative of sub-optimal condition³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species⁴ (as listed on Schedule 9 of WCA⁵) are present, this criterion is automatically failed.	N
Additional Criterion - must be assessed for all non-acid grassland types		
F	There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	N
Condition		Poor
Condition Assessment Result		
Good	Passes 5 of 6 criteria, including essential criterion A and F	

Moderate	◦ Passes 3 or 4 of 6 criteria, including essential criterion A
Poor	◦ Passes 0, 1, 2 criteria of 6 criteria; OR Passes 3 or 4 criteria excluding criterion A and F
Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches where not exceeding 5% cover. Footnote 3 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, curled dock <i>Rumex crispus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common nettle <i>Urtica dioica</i>, creeping buttercup <i>Ranunculus repens</i>, greater plantain <i>Plantago major</i>, white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i>. Footnote 4 – Assess this for distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into the adjacent habitat, by applying professional judgement. Footnote 5 – Wildlife and Countryside Act 1981 (as amended)	

Condition Sheet: SCRUB Habitat Type		
UKHab Habitat Type(s): All forms of scrub		
Condition Assessment Criteria		Mixed scrub
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	N
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	N
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of sub-optimal condition ⁶ make up less than 5% of ground cover.	N
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N
Condition		Poor
Condition Assessment Result		
Good	Passes 5 of 5 criteria	
Moderate	Passes 3 or 4 of 5 criteria	
Poor	Passes 2 or fewer criteria	

Footnote 1 – Professional judgement should be used alongside the UKHab description.

Footnote 2 – Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) *Hedgerow Survey Handbook: A standard procedure for local surveys in the UK*. 2nd ed. [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk).

Footnote 3 – See gov.uk standing advice on ancient and veteran species. Available from: [Keepers of time: ancient and native woodland and trees policy in England \(publishing.service.gov.uk\)](https://www.gov.uk/government/consultations/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england)

And [Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions)

Footnote 4 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 5 – Wildlife and Countryside Act 1981 (as amended).

Footnote 6 – Species indicative of suboptimal condition for this habitat type may include: non-native conifers, tree-of-heaven *Alianthus altissima*, holm oak *Quercus ilex*, European turkey oak *Quercus cerris*, cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos* spp., shallon *Gaultheria shallon*, American skunk cabbage *Lysichiton americanus*, buddleia *Buddleja* spp., cotoneaster *Cotoneaster* spp., Spanish bluebell *Hyacinthoides hispanica* and hybrid bluebells *Hyacinthoides x massartiana*. There may be additional relevant species local to the region and or site.

Condition Assessment Criteria	Criteria achieved?
Hedgerows	H1
Height >1.5 m average along length	Y
Width >1.5 m average along length	N
Gap – hedge base Gap between ground and base of canopy <0.5 m for >90% of length	Y
Gap – hedge canopy continuity Gaps make up <10% of total length and No canopy gaps >5 m	N
Undisturbed perennial vegetation >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length (on one side of the hedge (at least))	N
Undesirable species Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	N
Invasive species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Y
Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Y
Tree Age (if hedgerow with trees) There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	
Tree health (if hedgerow with trees)	

At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	
Criteria failed	4
Condition (G = good; M = moderate; P = poor)	Moderate

Condition Assessment Result		
	Hedgerow without trees	Hedgerow with trees
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	No more than 2 failures in total; AND No more than 1 failure in any functional group.
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition).
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).
Footnote 1 – DEFRA (2007) <i>Hedgerow Survey Handbook. A standard procedure for local surveys in the UK</i>. [online] Available on: layout (hedgelink.org.uk) Footnote 2 – STALEY, J.T. ET AL. (2020) <i>Definition of Favourable Conservation Status for Hedgerows</i>. [online] Available on: Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk) Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – CHEFFINGS, C. M. et al. (2005) <i>The Vascular Plant Red Data List for Great Britain</i>. Species Status 7: 1-116. [online] Available on: The Vascular Plant Red Data List for Great Britain (Species Status No. 7) JNCC Resource Hub Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). <i>Definitions: wild, native or alien?</i> [online] Available on: Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org) Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) <i>Online Atlas of the British and Irish Flora</i>. [online] Available on: Acknowledgements Online Atlas of the British and Irish Flora (brc.ac.uk)		

Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on:

[Home » NNSS \(nonnativespecies.org\)](https://www.gov.uk/government/organisations/non-native-species-secretariat)

Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from:

[Keepers of time: ancient and native woodland and trees policy in England \(publishing.service.gov.uk\)](https://www.gov.uk/government/publications/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england)

and

[Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions)

Individual trees			
UKHab Habitat Type(s): Urban tree: Covers the following topographical formations most commonly found in urban areas¹: Individual Trees (urban or rural): Young trees over 75mm in diameter at breast height whose canopies are not touching. Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies must overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.			
Condition Assessment Criteria		Hawthorn	Small oak
A	The tree is a native species (or at least 70% within the block are native species).	Y	Y
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y	Y
C	The tree is mature (or more than 50% within the block are mature) ¹ .	N	N
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain > 75% of expected canopy for their age range and height.	Y	Y
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	N
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	Y
Condition		Moderate	Moderate
Condition Assessment Result			
Good	Passes 5 or 6 criteria		
Moderate	Passes 3 or 4 criteria		

Poor	Passes 2 or fewer criteria
Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk) Footnote 2 - Enhancement of this habitat type is only possible by improving the habitat so that it meets all Criteria B, D and F. It is not possible or appropriate to enhance individual tree/s through meeting just one or two of those Criteria, nor by meeting Criteria A, C or E.	

Appendix 2: Existing Site Photographs

Photograph 1: Grassland onsite	
Photograph 2: Bramble scrub located towards the south-east of site	

Photograph 3:
Central mixed
scrub onsite



Photograph 4:
Bramble scrub
located towards the
north-west of site



Photograph 5:
Hedgerow located
along the north of
site



Photograph 6:
Hedgerow located
along the north of
site



Photograph 7:
Area of bramble
scrub to the west
between sections of
fencing



Photograph 8:
Bramble scrub and
tree to the west of
site



Photograph 9:
Modified grassland
to the east



Photograph 10:
Small oak tree and
modified grassland
to the east



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