

Biodiversity Net Gain Assessment: Design Stage

May 2025

**Land North of A507
and West of Buntingford**

Prepared by
CSA Environmental

On behalf of
Hallam Land Management Limited

Report No: CSA/6755/03

This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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CONTENTS	Page
Executive Summary	1
1.0 Introduction	1
2.0 Planning Policy & Legislation	3
3.0 Methods	5
Biodiversity Calculations	5
Baseline Habitats	5
Post-Development Habitats	6
Strategic Significance	6
Additional Considerations	6
Assumptions & Limitations	7
4.0 Baseline Biodiversity	8
Strategic Significance	8
Baseline Biodiversity Units	8
5.0 Post-Intervention Biodiversity	10
Habitat Retention & Enhancement	10
Habitat Creation	11
Strategic Significance	11
Significant On-site Gain	11
6.0 Net Effect on Biodiversity	12
Biodiversity Units	12
Habitat Coverage	12
Qualitative Appraisal	13
8.0 Management & Monitoring	15
9.0 Summary & Conclusions	16
11.0 References	17
Appendices	
Appendix A: Baseline Habitats Plan	
Appendix B: Proposed Habitats Plan	
Appendix C: Draft Biodiversity Gain Plan	
Appendix D: Habitat & Hedgerow Condition Assessments	

EXECUTIVE SUMMARY

Residential led development is proposed at Land North of A507 and West of Buntingford. Outline planning permission is sought from East Hertfordshire District Council which will be subject to the Biodiversity Gain Condition in accordance with Schedule 14 of the Environment Act (2021).

CSA Environmental was instructed by Hallam Land Management Limited to undertake a 'Design Stage' Biodiversity Net Gain Assessment (BNGA) of the proposed development. The Statutory Biodiversity Metric Calculation Tool was used to determine pre- and post- development biodiversity values, and predict the net effect of the proposed development upon biodiversity.

Baseline habitats at the Site comprise arable, grassland, woodland and hedgerows of low to very high distinctiveness. No nature conservation designations cover the Site or adjacent land. No irreplaceable habitats are present on-site.

Post-development habitats at the Site will comprise residential development of up to 600 dwellings with associated private gardens, a mixed used local centre, first school, access infrastructure, Sustainable Drainage System (SuDS) features and 24.67ha of informal open space.

A net gain of biodiversity is predicted for the proposed development of **+11.56 habitat units** (+11.22%) and **+12.23 hedgerow units** (+49.78%). This is subject to retention of priority woodland and significant on-site gains delivered within open space to include other neutral grassland, woodland, wildlife ponds and hedgerows.

Subject to securing the above through relevant legal mechanisms the Biodiversity Gain Condition could be discharged following grant of consent through submission of a Biodiversity Gain Plan template as drafted herein.

To assist East Hertfordshire District Council in their consideration of BNG and the proposed development, relevant statements have been set out in Box 1 and 2 in respect of applicable BNG policy and legal requirements.

Box 1. Biodiversity Net Gain Statements
<u>Planning permission sought for the development, if granted, would be subject to the Biodiversity Gain Condition</u> as set out within Schedule 14 of the Environment Act (2021) given that planning permission is applied for after 12 February 2024.
The biodiversity value of on-site habitats set out herein relate to the date of the planning application and not an earlier date.
The biodiversity value of on-site habitats set out herein are not lower than on date of application.
On-site biodiversity gain proposed herein is significant based upon the following: • Proposed habitats include those of medium and higher distinctiveness comprising broadleaved woodland, other neutral grassland, wildlife ponds, individual trees and hedgerows. • Proposed habitats comprise large areas of low distinctiveness habitat comprising modified grassland.
The Site does not contain any irreplaceable habitat as defined under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024).

Box 2. Accordance with 'Biodiversity Net Gain: Good Practice Principles for Development' (Baker et al., 2019).	
Principle 1. Apply the 'Mitigation Hierarchy'	Design decisions have been documented within the prepared EcIA and give due consideration for the CIEEM Guidelines for Ecological Impact Assessment (EcIA) (CIEEM, 2018) including the mitigation hierarchy. Trading rules have been accorded with in the prepared metric and ecologically justified decisions have been taken in respect of proposed habitats. The Biodiversity Gain Hierarchy has also been followed, with habitats of medium or higher distinctiveness retained on-site as far as possible and mitigation of loss of habitats through enhancement of on-site habitats and the creation of on-site habitats. No off-site offsetting or purchase of biodiversity credits is required.
Principle 2. Avoid losing biodiversity which cannot be offset by gains elsewhere (e.g., irreplaceable habitats).	No irreplaceable habitat is present on-site. However, W1 and other notable habitats and features (including hedgerows and mature trees) have been prioritised for protection as part of the proposed design.
Principle 3. Be inclusive & equitable	Design decisions taken have considered wider stakeholders including new residents and users of the site. Open space design has sought to balance biodiversity benefits and access to nature, with recreational uses and delivery of housing.
Principle 4. Address risks (e.g., difficulty of achieving habitat creation/enhancement for net gain).	A precautionary approach has been taken to grassland and woodland habitat type and condition for on-site biodiversity gain provision, with the highest provision comprising other neutral grassland and broadleaved woodland in moderate condition.
Principle 5. Make a 'measurable' Net Gain contribution (e.g., calculated using an appropriate metric).	The Statutory Biodiversity Metric has been used to demonstrate a clear and quantified calculation of the net effect of development upon biodiversity, using habitat as a proxy for wider biodiversity.
Principle 6. Ensure that Net Gain design achieves the best outcomes for biodiversity (this may require both quantitative and qualitative assessment) and create a net gain legacy for long-term benefits.	Informal Open Space has been designed to provide the best outcomes for biodiversity, including large scale habitat creation comprising open grassland, linear wooded habitats to retain and enhance connectivity, wildlife ponds, wetland features and integrated ecological niches.
Principle 7. Be additional Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).	Informal Open Space has been designed to deliver a net gain in biodiversity for the Site, in addition to providing the required levels of recreational and other public open space.
Principle 8. Create a Net Gain legacy Ensure Net Gain generates long-term benefits.	Habitat creation at the Site will be subject to on-going management to ensure long-term benefits.

Principle 9. Optimise sustainability Optimise the wider environmental benefits for a sustainable society and economy.	Informal Open Space has been designed to provide wider environmental benefits for local residents, providing a combination of spaces for recreational use alongside those dedicated for wildlife.
Principle 10. Be transparent Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	A full copy of the Statutory Biodiversity Metric calculation tool and Condition Assessments will be provided alongside this report for transparency with regard to how the BNG for the Site has been calculated.

1.0 INTRODUCTION

- 1.1 This report has been prepared by CSA Environmental on behalf of Hallam Land Management Limited and sets out the findings of a 'Design Stage' Biodiversity Net Gain (BNG) Assessment. Residential led development is proposed at the Land North of A507 and West of Buntingford (hereafter 'the Site'). This report details the predicted net effect of the proposed development upon biodiversity.
- 1.2 The report has been prepared with due consideration for the Chartered Institute of Ecology and Environmental Management's guidance for design stage reporting on Biodiversity Net Gain (CIEEM, 2021). The report has also taken into account of wider CIEEM best-practice guidance (2017 & 2018), Biodiversity Net Gain: Good practice principles for development (Baker et al., 2019) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).
- 1.3 The Site occupies an area of c. 50.12ha and consists of three arable fields, a central ditch with associated grassland, a small, wooded copse and boundary hedgerows (see Habitats Plan in Appendix A). The Site is located around central grid reference TL 3511 2995, to the west of Buntingford.
- 1.4 The report should be read in conjunction with the Ecological Impact Assessment (EclA) (CSA/6755/02/E) prepared for the proposed development which provides full baseline habitat information upon which post-development biodiversity value set out herein is based.
- 1.5 This 'Design Stage' BNG Assessment aims to:
 - Confirm whether planning permission sought for the development, if granted, would be subject to the biodiversity gain condition as set out within the Environment Act (2021) [see Box 1];
 - Provide information about "...the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat". Furthermore, evidence is provided as to how the Biodiversity Gain Hierarchy, as set out in as set out in the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024), has been applied.
 - Establish the following using the Statutory Biodiversity Metric Calculation, which uses habitat as a proxy for biodiversity comprises three separate modules (Habitat Units, Hedgerow Units & Watercourse Units);
 - 'pre-development' (baseline) biodiversity baseline value of the Site
 - 'post-development' (post-intervention) biodiversity value of the Site

- Any off-site biodiversity values (baseline & post-intervention)
- Net effect of the proposed development
- Whether relevant 'trading' rules and other controls have been accorded with
 - the Biodiversity Gain Objective (10%) is met or not
- State whether "... the biodiversity value of the on-site habitat will be lower on the date of application (or an earlier date) because of the carrying on of activities ('degradation') in which case the value is to be taken as immediately before the carrying on of the activities, and if degradation has taken place supporting evidence of this";
- State whether any on-site biodiversity provision is 'significant' and if so, how the specific gains may would secured for 30 years, in accordance with Paragraph 9, Schedule 7A of the Town & Country Planning Act (1990).
- Confirm the presence and location of any irreplaceable habitat at the Site, as set out in the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024)
- Clearly identify any assumptions made or deviation from Statutory Biodiversity Metric Guidance.
- Detail any legal frameworks for how biodiversity net gain would be secured subject to grant of planning permission.

1.6 In accordance with the Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations (2024) the following drawings have also been prepared:

- Baseline Habitats Plan (CSA/6755/109) provided in Appendix A
- Proposed Habitats Plan (CSA/6755/110) provided in Appendix B

1.7 To assist the authority in their consideration of the application, a Draft Biodiversity Gain Plan is provided in Appendix C making use of the most recently published template. A final Biodiversity Gain Plan would be prepared to discharge the biodiversity gain condition following the grant of any relevant consent.

2.0 PLANNING POLICY & LEGISLATION

- 2.1 The following legislation brings into force Schedule 14 of the Environment Act (2021), making Biodiversity Net Gain (BNG) a condition of planning permission in England from 12 February 2024.
- The Biodiversity Gain (Town and Country Planning) (Consequential Amendments) Regulations 2024
 - The Biodiversity Gain Site Register (Financial Penalties and Fees) Regulations 2024
 - The Biodiversity Gain Site Register Regulations 2024
 - The Biodiversity Gain Requirements (Exemptions) Regulations 2024
 - The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024
 - The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024
- 2.2 The National Planning Policy Framework (2024) (NPPF) sets out existing government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 180, states that the planning system and planning policies should minimise impacts on and provide net gains for biodiversity.
- 2.3 Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Practice Guidance (PPG). That relating to the protection and enhancement of the Natural Environment was most recently updated in August 2021. The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular the PPG promotes the delivery of measurable biodiversity net gain through the creation and enhancement of habitats alongside development.
- 2.4 The following policy from the East Hertfordshire District Plan makes reference to biodiversity and the protection and enhancement of priority habitats and species:

Policy NE3: Species and Habitats

*"Development should always seek to enhance biodiversity and to create opportunities for wildlife. Proposals must demonstrate how the development improves the biodiversity value of the site and surrounding environment. Evidence will be required in the form of up-to-date ecological surveys undertaken by a competent ecologist prior to the submission of an application. **The Biodiversity value of a site pre and post***

development will be determined by applying a locally approved Biodiversity Metric where appropriate. Submitted information must be consistent with BS 42020 2013. Where insufficient data is provided, permission will be refused.

Proposals should detail how physical features will be maintained in the long term.

Development which would result in the loss or significant damage to trees, hedgerows or ancient woodland sites will not be permitted. The Council will seek their reinforcement by additional planting of native species where appropriate. Protective buffers of complementary habitat will be expected to adjoin these features, sufficient to protect against root damage and improvement of their long term condition. A minimum buffer zone of 10m (or greater if required) is considered appropriate.

Proposals will be expected to protect and enhance locally important biodiversity sites and other notable ecological features of conservation value.

Proposals should avoid impacting on Species and Habitats of Principle Importance as published under section 41 of the Natural Environment and Rural Communities Act 2006 (or as subsequently amended).

Where adverse impacts are unavoidable, appropriate mitigation and compensation measures must be employed, commensurate to the importance, the legal protection or other status of the species or habitat. The District Council will impose conditions/planning obligations which seek to:

- Facilitate the survival of existing populations as well as encouraging the establishment of new populations
- Reduce disturbance to a minimum
- Provide adequate alternative habitats to sustain at least the current levels of populations

Development adjoining rivers or streams will be required to preserve or enhance the water environment in accordance with Policy WAT3 (Water Quality and the Water Environment).

Integrated bird and bat boxes will be expected in all development bordering public green space and beneficial habitat."

3.0 METHODS

Biodiversity Calculations

- 3.1 The Statutory Biodiversity Metric (Defra, 2024) was used to determine baseline (pre-development) and post-intervention (post-development) biodiversity values, and to calculate the net effect of the development upon biodiversity. Specifically, the Statutory Biodiversity Metric Calculation Tool was populated and used to run all calculations present herein, and in accordance with the Statutory Metric User Guide (Defra, 2024).
- 3.2 The Statutory Biodiversity Metric uses habitat (vegetation and edaphic conditions) as a proxy for measuring biodiversity more widely. This reductive approach allows for the relative biodiversity 'value' of land to be calculated and expressed as transferrable 'Biodiversity Units'. The metric adopts UK Habitat Classification (UK Hab; Butcher et al., 2020) system with some minor deviation.
- 3.3 The metric consists of a primarily 'Area' module which calculates 'Habitat Units' such as grassland, woodland and urban habitats, as well as two linear modules for 'Hedgerow Units' (including lines of trees) and 'Watercourse Units' (including rivers, canals and ditches). These separate Biodiversity Units types cannot be converted between these modules and are addressed separately herein. For the purposes of this report watercourses modules were not populated given the absence of these linear features from the Site.
- 3.4 A Statutory Biodiversity Metric Calculation Tool has been prepared for the proposed development and is provided separately in full for interrogation by East Hertfordshire District Council, relevant consultees and stakeholders.
- 3.5 All metric calculations have been reviewed by Alexandra Cole MCIEEM.

Baseline Habitats

- 3.6 The accompanying EclA report (CSA/6755/02/E) provides details of UKHab survey undertaken at the Site on 06 December 2023 including full survey methods.
- 3.7 Baseline (pre-development) habitat areas and linear measurements were taken from the Baseline Habitats Plan (Appendix A) prepared in mapping software Quantum Geographic Information Systems (QGIS). Mapping is based upon field survey, topographical survey, aerial photography and OS mapping to an accuracy of 10m²/0.001ha (polygons) and 5m (linear).

Habitat & Hedgerow Condition Assessment

- 3.8 An assessment of habitat and hedgerow condition was undertaken on 15 May 2024 by Alexandra Cole MCIEEM (FISC L4) and 29 May 2024 by Rhodri Gruffydd (FISC L3), in accordance with the Statutory Metric User Guide (Defra, 2024). Published condition assessment templates have been completed and provided in Appendix D alongside wider condition information. It should be noted that condition assessments are based on initial UKHab surveys undertaken outside of the optimal period for botanical surveying.

Post-Development Habitats

- 3.9 Post-development habitats areas and linear measurements were taken from the Proposed Baseline Habitats Plan (Appendix B) prepared in mapping software QGIS. This plan is based upon the Land Use Components Plan prepared by David Lock Associates (HLM082/018/R) on behalf of Hallam Land Management, along with indicative landscape designs. Wider consideration of construction methods, future land-use and management were used to determine the extent of existing habitat loss/deterioration, retention/enhancement and creation which would occur-post development.
- 3.10 Professional judgement was required throughout the calculation process to ensure target habitats were reasonable and achievable against and ecologically justified. Habitat condition for both enhanced and created habitats was assigned taking a precautionary approach and with consideration of biotic and operational phase conditions (i.e. those which may limit the extent to which 'good' condition is likely to be reached).

Strategic Significance

- 3.11 A desktop assessment was undertaken to determine relevant strategic significance multipliers for pre- and post-development habitats in accordance with Table 7 of the Statutory Metric User Guide (Defra, 2024) with particular consideration of Local Nature Recovery Strategies (LNRS).

Additional Considerations

- 3.12 In accordance with the good practice principles as set out above, the following additional considerations have been given:
- Wider consideration of ecological functionality, with a qualitative ecological assessment presented herein.
 - Consideration of non-ecological stakeholders, such as end-users (e.g. residents) of the scheme and choices with regard to access and multi-functionality.
 - Identification of opportunities to deliver wider environmental gain (e.g. carbon sequestration, water quality and climate resilience)

guiding habitat/design choices beyond certain ecological outcomes.

Assumptions & Limitations

- 3.13 Effort has been taken to ensure mapping, and measurements taken from mapping, are accurate to the level stated. However, given the nature of habitats, methods of field survey and the potential for inaccuracies in aerial photography and some other mapping, there remain some potential for errors in the calculations presented herein.
- 3.14 Professional judgement and a precautionary approach is required to establish baseline and post-development scenarios to assess current habitat type and condition, and to predict future changes. Accordingly predicted outcomes for habitats and biodiversity more widely may differ from those presented herein.
- 3.15 Specific assumptions with regard to certain existing and proposed habitats have been identified where relevant throughout the report.

4.0 BASELINE BIODIVERSITY

- 4.1 For full habitat descriptions and species lists, please refer to the EclA (CSA/6755/02/E) with baseline habitats illustrated on the Habitats Plan (Appendix A). Appendix D sets out full details of habitat condition assessment including completed standard templates.

Strategic Significance

- 4.2 There is no published Local Nature Recovery Strategy (LNRS) for the local vicinity. However, the Hertfordshire Ecological Network Map provided for the Site has been reviewed in respect of assigning significant strategic significance. Accordingly, given the entire Site and all habitats fall outside of nature conservation designation areas and ecologically important locations, all of the baseline habitat units are assigned as 'Low' strategic significance.
- 4.3 The above approach has also been adopted for post-intervention (post-development) habitat units as set out below.

Baseline Biodiversity Units

- 4.4 A summary of the on-site habitat areas and baseline biodiversity units, as calculated using the accompanying Statutory Biodiversity Metric are set out in Table 1 below. These include habitat and hedgerow units.

Table 1. Summary of On-site Baseline Biodiversity Units

HABITATS		
Habitat Type (+Assumed Condition)	Area (ha)	Habitat Units
Cereal crops	47.69	95.38
Lowland mixed deciduous woodland	0.05	0.00
Other woodland; broadleaved	0.33	1.32
Other neutral grassland	0.50	2.00
Mixed scrub	0.04	0.16
Developed land; sealed surface	0.98	0.00
Other neutral grassland	0.22	1.76
Other woodland; broadleaved	0.26	2.08
Mixed scrub	0.05	0.40
Total	50.12	103.10
HEDGEROWS		
Hedgerow Type	Length (km)	Hedgerow Units
H1 Native hedgerow with trees	0.11	0.88
H2 Native hedgerow with trees- associated with bank or ditch	0.31	3.72
H3 Native hedgerow with trees- associated with bank or ditch	0.41	4.92
H4 Species-rich native hedgerow with trees- associated with bank or ditch	0.40	6.40
H5 Species-rich native hedgerow with trees	0.40	4.80
H6 Native hedgerow with trees	0.48	3.84
Total	2.11	24.56

- 4.5 The majority of the Site area (97%) comprises habitats of 'low' or 'very low' distinctiveness comprising arable land and hardstanding, contributing the majority of its overall biodiversity value (93%). Smaller areas (3%) of 'medium' and 'high' distinctiveness habitats are present and contribute a modest proportion (7%) of overall biodiversity value.
- 4.6 Hedgerows across the Site comprise 'medium' to 'very high' distinctiveness habitats, all comprising native hedgerows. A single hedgerow, H4 is of 'very high' distinctiveness and accounts for 26% of the overall biodiversity value of hedgerows. H4 will be retained in full, with 61% of the total hedgerow length across the Site retained and enhanced.

5.0 POST-INTERVENTION BIODIVERSITY

- 5.1 The proposed development comprises the construction of 600 dwellings with associated private gardens, a mixed used local centre, first school, access infrastructure, Sustainable Drainage System (SuDS) features and 24.67ha of informal open space.
- 5.2 Post-intervention habitat areas and linear measurements are illustrated on the Proposed Habitats Plan in Appendix B. This drawing is based upon development parameters set out within the Land Use Components Plan prepared by David Lock Associates (HLM082/018/R) with consideration given to the Illustrative Masterplan (David Lock Associates; HLM082/021/H). The following assumptions have been made with regard to these plans in line with the Statutory Biodiversity Metric User Guide (2024) and professional judgement taking a precautionary approach where necessary:
- Residential development parcels are assumed to comprise 70% dwellings and built form, with 30% private gardens and incidental open space
 - School development assumed to comprise 70% built form, with 30% open space, assumed to be modified grassland in poor condition due to heavy recreational use
 - All individual trees (number taken from Illustrative Masterplan; HLM082/021/H) are assumed to be 'small' in size, and in poor condition for 'urban'/street contexts and moderate condition for 'rural' contexts
- 5.3 On-site habitat retention, enhancement and creation set out below would be secured through control of detailed development/landscape design, a Habitat Management & Monitoring Plan (HMMP) and appropriate application of a planning condition or legal condition.

Habitat Retention & Enhancement

- 5.4 The majority of area habitats at the Site will be lost to development, comprising principally arable land, with the majority of linear habitats retained. The following habitats will be retained and/or enhanced:
- 0.05ha of lowland mixed deciduous woodland (W1) will be retained and appropriately buffered from development/edge effects.
 - 0.27ha of broadleaved woodland (W2) will be retained and appropriately buffered from development/edge effects.
 - 0.98ha of existing infrastructure (developed land; sealed surface) will be retained.
 - Hedgerows H1-H6 will be enhanced and subject to gapping up, improvement of adjacent habitats and favourable long-term management.

5.5 As set out within the accompanying EclA the retention of these habitats will require protections during construction and in operation through the following:

- Tree protection measures in line with standard arboricultural practice (BS5837: 2012)
- Construction Environmental Management Plan, to include standard pollution control measures to be implemented during construction
- Landscape and Ecology Management Plan

5.6 Enhancements works would be delivered and secured through the HMPP.

Habitat Creation

5.7 As part of the proposed development a range of habitats will be created including residential dwellings and associated infrastructure, vegetated gardens and incidental greenspace, and large-scale habitat creation within 'Buntingford Park' to include grassland, linear wooded habitats and wildlife ponds.

Strategic Significance

5.8 An equivalent approach to strategic significance as been taken for post-intervention biodiversity units as for baseline units above, with all habitats having 'low' strategic significance.

Significant On-site Gain

5.9 The following proposed habitat enhancement and creation proposals are likely to be considered 'significant' by East Hertfordshire District Council:

- Creation of habitats of medium distinctiveness, including broadleaved woodland, other neutral grassland and individual trees
- Creation of high distinctiveness priority ponds
- Creation of extensive areas of low distinctiveness habitat as part of 'Buntingford Park'
- Enhancement of hedgerows H1-H5 to 'good' condition
- Creation of 0.91km of medium distinctiveness hedgerow

5.10 In accordance with Paragraph 9, Schedule 7A of the Town & Country Planning Act (1990) these habitats contributing to significant on-site gains require additional mechanisms to secure their creation/enhancement and management over 30-years, such as through an appropriate planning condition and/or legal agreement in accordance with an on-site HMMP.

6.0 NET EFFECT ON BIODIVERSITY

Biodiversity Units

- 6.1 The net effect on biodiversity as a result of the proposed development is set out within the accompanying Statutory Biodiversity Metric and summarised below in Table 2A and 2B.

Table 2A. Net Effect on Biodiversity: Habitat Units

	Habitat Units	% Change
On-site baseline	103.10	
On-site post-intervention	114.66	
On-site net change	+11.56	+11.22%
Total net change	+11.56	+11.22%
<i>Trading Rules Satisfied</i>		

Table 2B. Net Effect on Biodiversity: Hedgerow Units

	Habitat Units	% Change
On-site baseline	24.56	
On-site post-intervention	36.79	
On-site net change	+12.23	+49.78%
Total net change	+12.23	+49.78%
<i>Trading Rules Satisfied</i>		

- 6.2 It is demonstrated that the proposed development will result in a net gain in excess of 10% for habitat units and hedgerow units. All trading rules are satisfied.

Habitat Coverage

- 6.3 The net change in cover (area and linear) for broad and priority habitat is summarised in Table 3 below.

Table 3. Net Effect Habitat Coverage

	Area (ha) / Length (km) change	% Change
Urban	+18.93ha	n/a
Arable	- 47.69ha	-100%
Woodland	+1.31ha	+205%
Grassland	+27.47ha	+3801%
Scrub	-0.04ha	-22%
Wetland/Aquatic	+0.02ha	+100%
Hedgerow (priority habitat)	+1.37km	+65%

- 6.4 The proposed development will inevitably result in the net losses of arable habitats and a significant increase in urban habitats within residential development parcels. Several habitats, entirely unrepresented at the Site are proposed, including other neutral grassland and wildlife ponds.

- 6.5 No net loss of priority hedgerow habitat is predicted, due to the planting of new species-rich hedgerows across the proposed development.

Qualitative Appraisal

- 6.6 A wider appraisal of the proposed development's effects upon biodiversity is set out below in Table 4 below. This includes factors not fully captured through the Statutory Biodiversity Metric, which uses only habitat type and condition as a proxy for biodiversity, omitting important factors such as connectivity and functioning of habitats.

Table 4. Qualitative Appraisal of effects upon Biodiversity

Ecological Features, Functions & Factors	Baseline Conditions	Potential Effects
Habitat Connectivity	Arable land at the Site contributes little to local ecological networks, with the exception of field hedgerows to the boundaries of the Site.	Residential development will impede habitat connectivity through the east of the Site for many species. Garden habitats and structural landscaping provide some ancillary benefits to certain mobile species. New habitats to the peripheries of the Site and within Informal Open Space to the west, including hedgerows, grassland and woodland provide significant increase in habitat availability and connectivity for certain species, north to south through the Site, contributing to wider ecological networks.
Structural diversity	The Site has very limited habitat structure with little or no interfaces between broad habitat types	Proposed development and landscaping on-site will increase the structural diversity of habitat at the Site. Interfaces between formal (short mown) and informal habitats, as well as between broad habitat types (grassland, woodland, ponds and hedgerow) will provide a greater range of opportunities for biodiversity, at a number of scales.
Habitat Mosaics	The Site has a very low diversity of habitats.	Proposed development and habitats on-site will increase the number of habitat types and their structural diversity. The combination of grassland, woodland, wildlife ponds, trees and hedgerows will provide a mosaic of habitat to benefit biodiversity.
Soil biodiversity	Arable land which dominates the site is subject to frequent chemical inputs (fertiliser, pH correction and herbicides) and physical disturbance. The soil biota is likely to be significantly impacted by such works, reducing soil carbon, other nutrient cycling and wider environmental benefits.	Residential development will include the loss and damage of soils to built form and will prevent natural functioning of this habitat. Where arable is converted to permanent grassland and other habitats including woodland, substantive benefits are anticipated to soil environments and biodiversity.

8.0 MANAGEMENT & MONITORING

8.1 Full details of management and monitoring for delivery of the on-site biodiversity gains will be provided within a Habitat Monitoring and Management Plan (HMMP) for a 30-year period. This HMMP will include the following principal elements:

- Establishment and management of the following 'significant' biodiversity gains:
 - Broadleaved woodland, other neutral grasslands and individual tree planting within informal open spaces
 - Extensive areas of modified grassland within informal open spaces
 - Wildlife ponds
 - Hedgerow enhancement measures and hedgerow planting
- Adaptive management options
- Monitoring regime and reporting process
- Roles and responsibilities
- Processes to ensure remedial measures can be undertaken in the event that target habitat or condition is not achieved

9.0 SUMMARY & CONCLUSIONS

- 9.1 Planning permission sought for the proposed development will be subject to the Biodiversity Gain Condition in accordance with Schedule 14 of the Environment Act (2021).
- 9.2 As set out herein, a net gain in biodiversity in excess of 10% is predicted as a result of the proposed development, based upon provision of significant on-site gains. The Statutory Biodiversity Metric Calculation Tool was used to calculate the following outcomes:
- +11.56 habitat unit gain or +11.22%
 - +12.23 hedgerow unit gain or +49.78%
 - All trading rules satisfied
- 9.3 Following any grant of planning permission an application to discharge the Biodiversity Gain Condition would be submitted completing the Biodiversity Gain Plan provided in draft in Appendix C.
- 9.4 On-site significant biodiversity gain would be secured through an appropriate legal mechanism (as such planning condition) subject to an on-site HMMP for a 30-year period.

11.0 REFERENCES

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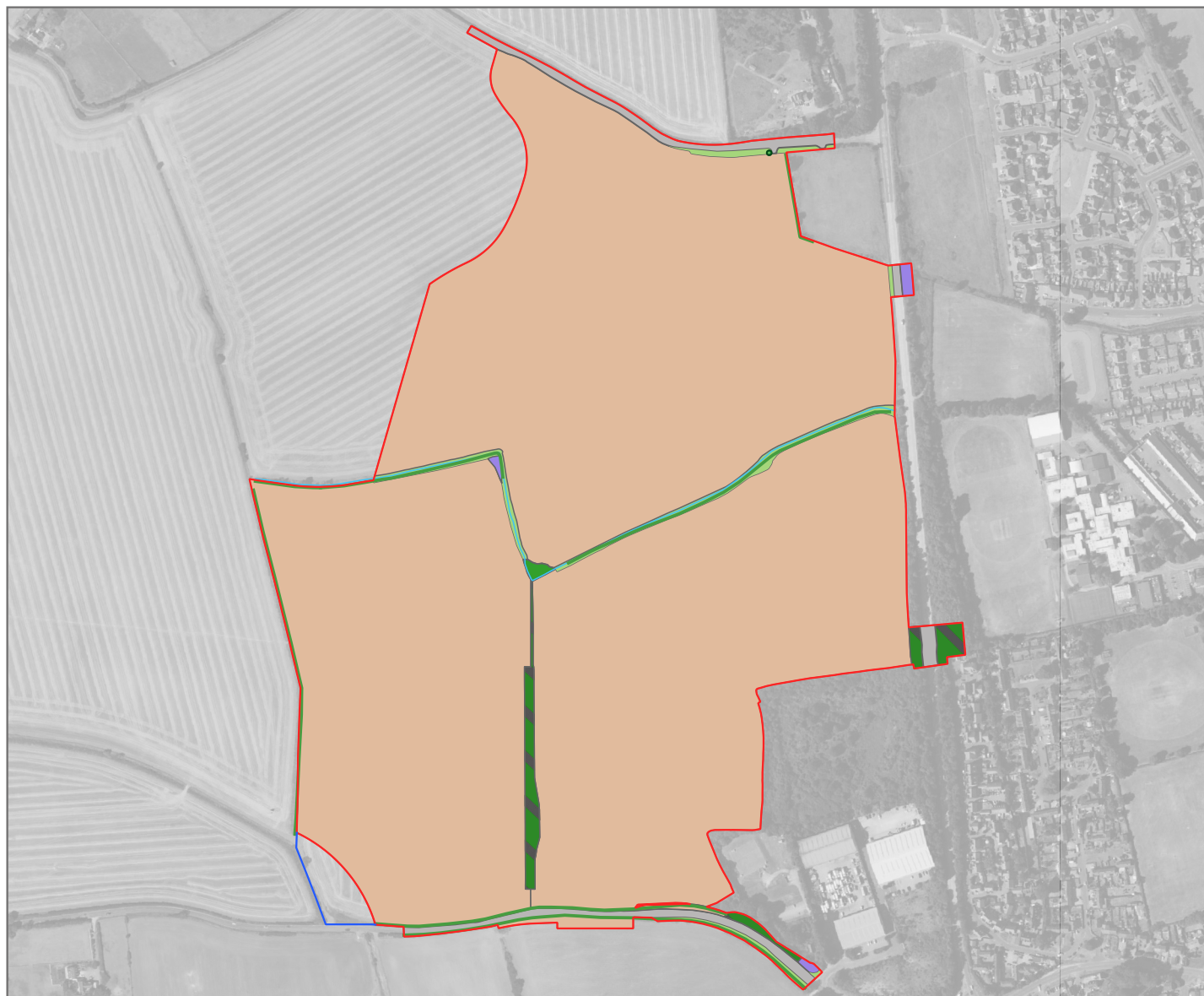
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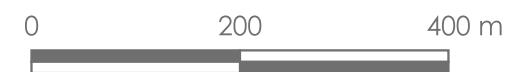
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Appendix A

Baseline Habitats Plan



- Site boundary
- Other land in applicant's control
- Arable and horticulture (c1)
- Other neutral grassland (g3c)
- Other woodland-broadleaved (w1g)
- Developed land, sealed surface (u1b)
- Lowland mixed deciduous woodland (w1f)
- Mixed scrub (h3h)
- Hedgerows (h2a)
- Ditch (r1)
- Individual trees
No trees are proposed to be removed, therefore only individual trees not within hedgerows are shown:
1 small rural tree

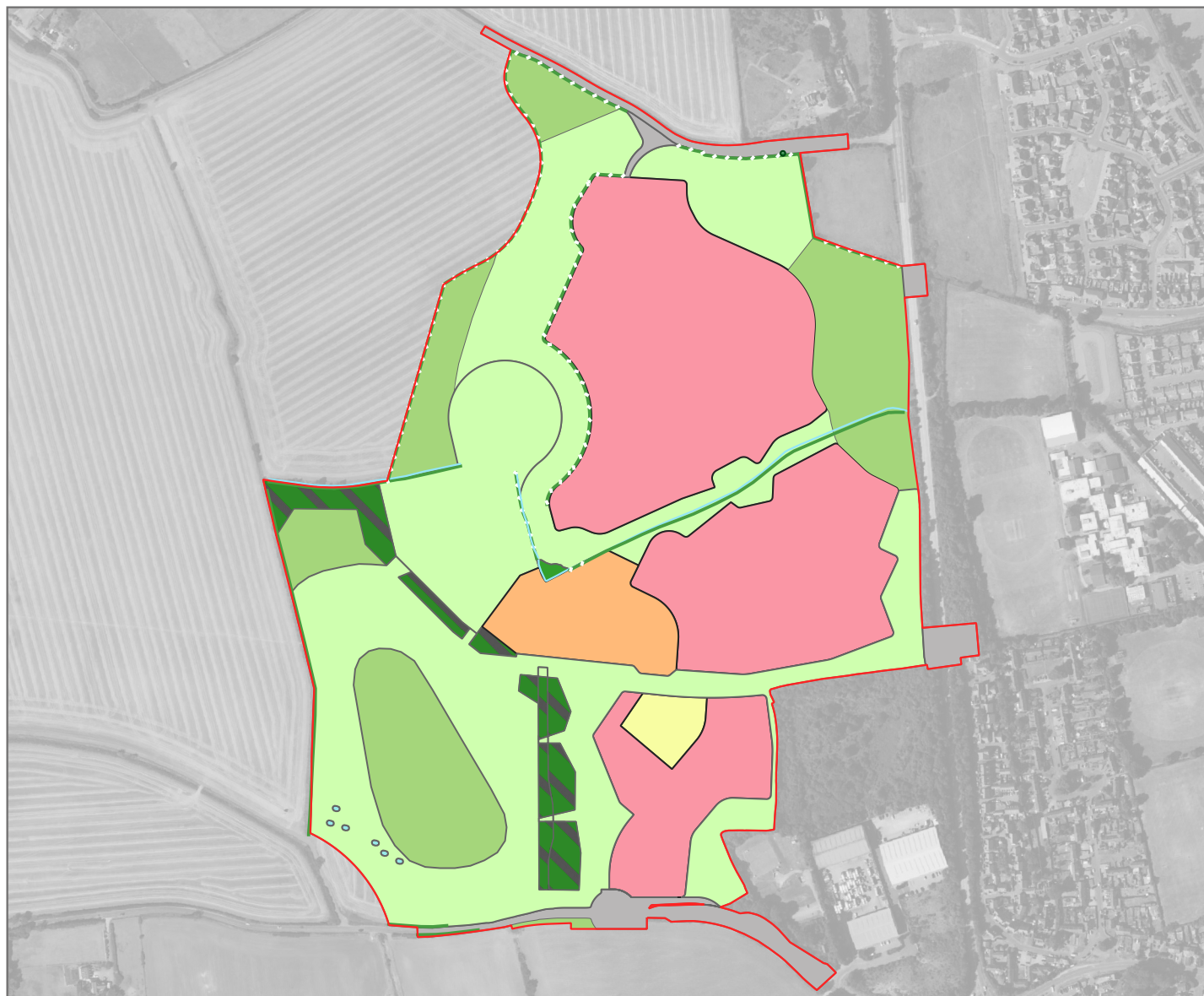


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Project	Land North of A507 and West of Buntingford	Date	May 2024	Drawing No.	CSA/6755/109
Drawing Title	Baseline Habitats Plan	Scale	1:7250 on A4	Rev	B
Client	Hallam Land Management Limited	Drawn	RG	Checked	AC

Appendix B

Proposed Habitats Plan



- Site boundary
- Residential area
70% Developed land; sealed surface (u1b)
30% Vegetated garden (u1 828)
- School
50% Developed land; sealed surface (u1b)
50% Modified grassland (g4)
- Mixed use area
Developed land; sealed surface (u1b)
- Developed land, sealed surface (u1b)
- Modified grassland (g4)
- Other neutral grassland (g3c)
- Other woodland-broadleaved (w1g)
- Lowland mixed deciduous woodland (w1f)
- Wildlife pond (r1g)
- Retained hedgerows (h2a)
- Proposed hedgerows (h2a)
- Retained ditch (r1)
- Individual trees
No trees are proposed to be removed,
therefore only retained individual trees not
within hedgerows are shown:
1 small rural tree retained
235 small urban trees proposed
220 small rural trees proposed
(proposed trees based on illustrative masterplan
(HLM082-029B- Illustrative Masterplan North of
Baldock Road)

0 200 400 m

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Project	Land North of A507 and West of Buntingford	Date	May 2025	Drawing No.	CSA/6755/110
Drawing Title	Proposed Habitats Plan	Scale	1:7250 on A4	Rev	D
Client	Hallam Land Management Limited	Drawn	RG/RT	Checked	AC

Appendix C

Draft Biodiversity Gain Plan

Biodiversity gain plan

Submit a biodiversity gain plan to show how your development will achieve biodiversity net gain.

When to use this form

A biodiversity gain plan shows how a development will achieve 10% biodiversity net gain (BNG). Submit this form to your local planning authority after they approve your planning application.

Unless your development is exempt, you cannot start the development until the LPA approves your biodiversity gain plan and biodiversity metric calculation tool.

1. Submission details

1.1 Date

For example, 3/11/2023

1.2 Planning application reference number

1.3 Local planning authority (LPA)

1.4 Development site address

If the site does not have an address, enter the OS grid reference.

1.5 Describe the development

Tell us about the proposed development and any changes of use (250 words).

2. Developer details

2.1 Applicant name

2.2 Company name

2.3 Address

2.4 Email address

2.5 Telephone number

2.6 Declaration

By signing this declaration, you confirm that the information you give is complete and correct. Any opinions are your genuine opinions.

2.7 Signature

2.8 Date

3. Responsible person details

Tell us about who is responsible for completing the biodiversity gain plan. For example, a consultancy ecologist or planning agent.

3.1 Name

3.2 Company name

3.3 Address

3.4 Email address

3.5 Telephone number

3.6 Declaration

By signing this declaration, you confirm that the information you give is complete and correct. Any opinions are your genuine opinions.

3.7 Signature

3.8 Date

4. Biodiversity net gain strategy

4.1 Is the relevant date for the pre-development biodiversity value the same date as the planning application?

- ☐ Yes
☐ No

4.2 If no, what earlier date did you agree with the LPA?

4.3 How have you met the guidance on ‘what counts towards your BNG’?

[Find out what you can count towards a development's BNG](#)

4.4 How will you avoid or minimise impacts to habitats?

Tell us about the steps you've taken on site, including to avoid or minimise the impact on irreplaceable habitats.

4.5 Did you use your local nature recovery strategy to inform the strategic significance of habitats?

This includes other specified strategies if you do not have a local nature recovery strategy.

- ☐ Yes
☐ No

4.6 How will you achieve the target net gain percentage?

- ☐ On-site
☐ Off-site
☐ Both

4.7 Are any of your on-site enhancements considered ‘significant’?

[Find out what counts as a significant on-site enhancement.](#)

- ☐ Yes
☐ No

4.8 If yes, tell us about the significant on-site enhancements

Include the appropriate planning condition or how you've secured the habitat.

4.9 How many off-site biodiversity units do you need to meet 10% net gain?

4.10 Explain why you're using off-site biodiversity units

Only answer this question if you're planning to use off-site biodiversity units (250 words).

4.11 Explain why you're planning to use statutory biodiversity credits

Only answer this question if you're planning to use statutory biodiversity credits (250 words).

4.12 Do you have a habitat management and monitoring plan?

- ☐ Yes
☐ No

4.13 Have you used the statutory biodiversity metric tool?

- ☐ Yes
☐ No

4.14 Biodiversity metric calculation

Send your biodiversity metric calculation to the LPA and enter the file name.

4.15 Condition assessments

Send your condition assessments to the LPA and enter the file name.

4.16 Pre-development habitat survey report and map

Send your baseline habitat survey report and map to the LPA. Enter the file name.

4.17 Post-development habitat map or landscape plan

Send your post-development habitat survey report and map to the LPA. Enter the file name.

4.18 Have you included an approved habitat degradation in the baseline?

If yes, include the relevant consenting body and reference number.

☐ Yes

☐ No

Consenting body

Reference number

5. Irreplaceable habitats

5.1 Does the development impact any irreplaceable habitats?

If yes, tell us if you've submitted an approved compensation plan.

☐ Yes

☐ No

5.2 Have you submitted an approved compensation plan?

☐ Yes

☐ No

6. On-site habitat enhancements

Answer this section if your development includes on-site habitat enhancements.

6.1 Survey date

For example, 3/11/2023

6.2 Survey constraints

For example, access issues, weather, or seasonal constraints.

6.3 Total pre-development biodiversity value

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

Number of hedgerow biodiversity units

Number of watercourse biodiversity units

6.4 Total post-development biodiversity value

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

Number of hedgerow biodiversity units

Number of watercourse biodiversity units

6.5 Total net change in biodiversity units

Enter the number from the headline results in your statutory biodiversity metric calculation.

Area habitat biodiversity units

Area habitat biodiversity units % change

Hedgerow biodiversity units

Hedgerow biodiversity units % change

Watercourse biodiversity units

Watercourse biodiversity units % change

6.6 Will you register and allocate any biodiversity units from your site to other developments?

If yes or provisionally, give details.

☐ Yes

☐ No

6.7 Give details

Tell us about the amount of biodiversity units and the development location (250 words).

7. Off-site habitat enhancements

Answer this section if your development includes off-site habitat enhancements.

7.1 Tell us about the off-site habitat enhancements

Include whether you're delivering the off-site enhancements or buying biodiversity units.

7.2 Biodiversity gain site register reference number

7.3 How have you secured the off-site habitat enhancements?

Tell us about any responsible bodies and whether you've used an S106 or conservation covenant.

7.4 Total baseline biodiversity value

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

Number of hedgerow biodiversity units

Number of watercourse biodiversity units

7.5 Total biodiversity value post-intervention

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

Number of hedgerow biodiversity units

Number of watercourse biodiversity units

7.6 Total net change in biodiversity units

Enter the number from the headline results in your statutory biodiversity metric calculation.

Area habitat biodiversity units

Area habitat biodiversity units % change

Hedgerow biodiversity units

Hedgerow biodiversity units % change

Watercourse biodiversity units

Watercourse biodiversity units % change

8. Statutory biodiversity credits

Answer this section if you need to use statutory biodiversity credits.

8.1 Do you need to use statutory biodiversity credits?

- ☐ Yes
☐ No

8.2 How many statutory biodiversity credits do you need?

Tell us the unit shortfall by tier, including the spatial risk multiplier. Enter the number from the headline results in your statutory biodiversity metric calculation.

A1

A2

A3

A4

A5

H

W

8.3 What evidence is there that no units are available through the market?

Send a message from at least 3 habitat providers, or a search result from online registers.

8.4 Proof of purchase

Send proof of purchase and enter the reference number.

9. Trading summary

9.1 Distinctiveness group

Tell us if you met the BNG trading rules on habitat compensation for each distinctiveness group. If you did not meet the trading rules, tell us if you agreed bespoke habitat compensation.

Check the rules on habitat compensation in the [statutory biodiversity metric user guide](#).

Very high

High

Medium

Low

10. Sharing data (optional)

10.1 Can we share your ecological survey data with the Local Environmental Records Centre or other bodies?

- ☐ Yes
☐ No

Appendix D

Habitat & Hedgerow Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)			
UK Habitat Classification (UKHab) Habitat Types			
Grassland - Lowland calcareous grassland Grassland - Lowland dry acid grassland Grassland - Lowland meadows Grassland - Other lowland acid grassland Grassland - Other neutral grassland Grassland - Tall herb communities (H6430) [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.] Grassland - Upland acid grassland Grassland - Upland calcareous grassland Grassland - Upland hay meadows Sparsely vegetated land - Calaminarian grassland			
On-site or off-site, site name and location	On-site, Land North of A507 and West of Buntingford	Survey date and Surveyor name	06/12/2023 Alexandra Cole
Limitations (if applicable)	The UKHab survey was conducted outside of the optimal period for botanical surveying when some plant species may not be visible above ground. Confirmatory surveys are to be undertaken in 2024.	Survey reference (if relating to a wider survey)	
Grid reference	TL 35024 29979	Habitat parcel reference	
Habitat Description			
Grassland adjacent to on-site ditch.			
ukhab – UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
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	Narrow field margin c. 3m wide. Management and species indicative of location adjacent to cropland and high nutrient substrate.
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.	N	Sward height maintained at c. 20cm throughout.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Y	Bare ground between 1-5%.
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%.	Y	No bracken present.
E	Combined cover of species indicative of suboptimal 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	Cow parsley, creeping thistle, spear thistle, common nettle and creeping buttercup present at greater than 5% of total area. No invasive species present.

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 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	Less than 10 species per m2. Confirmatory surveys to be undertaken in 2024.
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		N	
Number of criteria passed		2	
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	
Acid grassland types (Result out of 5 criteria)			
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)		
Non-acid grassland types (Result out of 6 criteria)			
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)		
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)		
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	Y	
Suggested enhancement interventions to improve condition score			
Notes			
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 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> . There may be additional relevant species local to the region and or site. 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, by applying professional judgement. Footnote 5 – Wildlife and Countryside Act 1981 (as amended).			

Condition Sheet: SCRUB Habitat Type			
Habitat Types			
Heathland and shrub - Blackthorn scrub Heathland and shrub - Gorse scrub Heathland and shrub - Hawthorn scrub Heathland and shrub - Hazel scrub Heathland and shrub - Mixed scrub Heathland and shrub - Dunes with sea buckthorn (H2160) Heathland and shrub - Willow scrub			
Habitat Description			
For Dunes with sea buckthorn see:	Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas of Conservation (jncc.gov.uk)		
For other scrub types see:	ukhab – UK Habitat Classification		
On-site or off-site, site name and location	On-site, Land North of A507 and West of Buntingford	Survey date and Surveyor name	06/12/2023 Alexandra Cole
Limitations (if applicable)	The UKHab survey was conducted outside of the optimal period for botanical surveying when some plant species may not be visible above ground. Confirmatory surveys are to be undertaken in 2024.	Survey reference (if relating to a wider survey)	
Grid reference	TL 35010 30035	Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
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	Less than three woody species (blackthorn and elder), more than 75% of cover comprised of bramble.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	N	No range in age class.
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Y	No invasive species present.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	N	Scrub borders arable cropland and ditch, no well-developed edge.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	Scrub c. 0.01ha, no clearings etc.
Number of criteria passed			1
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved x/√	

Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)	Y	
Suggested enhancement interventions to improve condition score			

H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback ⁹ .	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	1	3											
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.	2	1											
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .	2	1											
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	2	1											
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	2	1											
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground ¹⁴ .	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground ¹⁴ .	1	1											
Total Score (out of a possible 39)					25	23											
Condition Assessment Result			Condition Assessment Score		Result Achieved												
Total score >32 (33 to 39)			Good (3)														
Total score 26 to 32			Moderate (2)														
Total score <26 (13 to 25)			Poor (1)		Y	Y											
Suggested enhancement interventions to improve condition score																	

Condition sheet: HEDGEROW Habitat Types														
Habitat Type														
Native hedgerow Native hedgerow - associated with bank or ditch Native hedgerow with trees Native hedgerow with trees - associated with bank or ditch Species-rich native hedgerow Species-rich native hedgerow - associated with bank or ditch Species-rich native hedgerow with trees Species-rich native hedgerow with trees - associated with bank or ditch														
Habitat Description														
See the Statutory Biodiversity Metric Technical Annex 2 and UK Habitat Classification:										ukhab – UK Habitat Classification				
On-site or off-site, site name and location	On-site, Land North of A507 and West of Buntingford			Survey date and Surveyor name	06/12/2023 Alexandra Cole									
Limitations (if applicable)	The UKHab survey was conducted outside of the optimal period for botanical surveying when some plant species may not be visible above ground. Confirmatory surveys are to be undertaken in 2024.			Survey reference (if relating to a wider survey)	Based on UKHab & Tree Surveys, confirmatory surveys scheduled for 2024.									
Condition Assessment Details														
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria. This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook. Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.														
Hedgerow favourable condition attributes														
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for 'favourable condition'	Criteria description	Habitat parcel reference											
			H1	H2	H3	H4	H5							
			Grid reference											
Core groups - applicable to all hedgerow types				Criterion passed (Yes or No)										Notes (such as justification)
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	Y	Y	Y	Y	Y						
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Y	Y	Y	Y	Y						
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y	Y	Y	Y	Y						

B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	N	N	N	Y	Y										
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length; · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	N	N	N	N	N										
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	N	N	N	N	N										
D1.	Invasive and neophyte 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.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Y	Y	Y	Y	Y										
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	N	N	Y	Y	Y										
Additional group - applicable to hedgerows with trees only																		
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N	N	-	N	N										
E2.	Tree health	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.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y	Y	-	Y	Y										

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees

Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2

Poor	Fails a total of more than 4 attributes; OR Fails <u>both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		
Condition categories for hedgerows with trees		
Category	Category Requirements	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; AND Does not fail <u>both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; OR Fails <u>both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		
Suggested enhancement interventions to improve condition score		
H1= moderate, H2= moderate, H3= moderate, H4= moderate, H5= moderate		



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