

Biodiversity Net Gain Assessment: Design Stage

October 2025

**Land off Echo Hill,
Royston**

Prepared by
CSA Environmental

On behalf of
Gladman Developments
Ltd

Report No: CSA/7494/03

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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EXECUTIVE SUMMARY

Outline planning consent is sought from North Hertfordshire District Council for residential development at Land off Echo Hill, Royston. This will be subject to the Biodiversity Gain Condition in accordance with Schedule 14 of the Environment Act (2021).

CSA Environmental was instructed by Gladman Developments Ltd 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 two 'other neutral' grassland fields and boundary hedgerows, which are of low to medium distinctiveness. A residential property and associated vegetative garden are present in the north of the Site, these habitats are of low to very low distinctiveness. No irreplaceable habitats are found on site.

Post-development habitats at the Site will comprise residential development and infrastructure, and Sustainable Drainage Systems (SuDS). Public open space will comprise traditional orchard of high distinctiveness, other neutral grassland scrub, ponds, rural trees and native hedgerows of medium distinctiveness, and modified grassland of low distinctiveness.

A net loss of biodiversity is predicted for the proposed development of -18.45 Habitat Units (-32.27%). A net gain of 1.87 Hedgerow Units (+20.79%) is predicted for the proposed development. This is subject to creation/enhancement of other neutral grassland, scrub, scattered trees and Sustainable Urban Drainage (SuDS) as part of the Public Open Space (POS). Trading rules have not been met on-site for Habitat Units, but they have been met for Hedgerow Units.

A 10% gain in biodiversity would be achieved through securing off-site registered biodiversity gains of at least 24.17 Habitat Units. Subject to securing the above via third party, the Biodiversity Gain Condition could be discharged following grant of consent through submission of a Biodiversity Gain Plan.

To assist North 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
Planning permission sought for the development, if granted, would be subject to the Biodiversity Gain Condition as set out within Schedule 14 of the Environment Act (2021) given the following: Planning permission is applied for after 12 February 2024 Impacts to habitats are predicted on-site that either exceed 25 square metres per 5 linear metres with a value greater than zero, and/or impacts to any 'Section 41' habitat of principal importance Planning permission sought does not relate to a 'householder application' or 'the high-speed railway transport network' Planning permission is not for self-build or custom housebuilding and relates to more than 9 dwellings and/or proposals cover over 0.5ha Planning permission does not relate directly to off-site gain developments to fulfil other BNG requirements
The biodiversity value of on-site habitats set out herein relate to the date of the planning application and not an earlier date. A correction has been made to the strategic significance value of the baseline habitats in line with the Hertfordshire Ecological Network Map (which should be used in lieu of the Local Nature Recovery Strategy), as advised by North Herts Council.
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 do include those of medium and higher distinctiveness comprising other neutral grassland, mixed scrub and traditional orchard Proposed habitats comprise large areas of low distinctiveness habitat comprising modified grassland.
The Site does not contain irreplaceable habitat as defined under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024).
As set out herein measures have been taken in a step-wise fashion to: First avoid adverse effects of the development upon on-site medium or higher distinctiveness habitat and, where they cannot be avoided, the mitigate these effects; Taking an approach to first seek on-site habitat enhancement, then habitat creation Where above cannot fully compensate, seek registered off-site gains And finally, where off-site gains cannot be secured, seeking purchase of biodiversity credits

Box 2. Accordance with 'Biodiversity Net Gain: Good Practice Principles for Development' (Baker et al., 2019).

Principle 1. Apply the 'Mitigation Hierarchy'	Designs decisions have been documented within the prepared EcIA due consideration for the CIEEM Guidelines for Ecological Impact Assessment (EcIA) (CIEEM, 2018) including mitigation hierarchy. Ecologically justified decisions have been taken for proposed habitats. The Biodiversity Gain Hierarchy has been followed, with habitats of medium or higher distinctiveness retained onsite where possible and mitigation of loss of habitats through enhancement and creation of onsite habitats.
Principle 2. Avoid losing biodiversity which cannot be offset by gains elsewhere (e.g., irreplaceable habitats).	No ancient woodland habitats are present on-site and those nearby have been protected from loss or deterioration through indirect impact pathways. Notable habitats and features (Including old hedgerows and mature trees) have been prioritised for protection as part of the proposed design.
Principle 3. Be inclusive & equitable	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)	A precautionary approach has been taken to grassland habitat type and condition for on-site biodiversity gain provision, with the highest provision comprising other neutral grassland in good 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 (quantitative and qualitative assessment) and create a net gain legacy for long-term benefits.	Informal open space has been designed to include open grassland, buffering of hedgerows bounding the Site, and provision of SuDS features to diversify habitats on site.
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 biodiversity enhancement 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 and enhancement 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 users of the Site, providing a combination of spaces for recreational use alongside those dedicated for wildlife and SuDS.
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 Gladman Developments Limited and sets out the findings of a 'Design Stage' Biodiversity Net Gain (BNG) Assessment. Residential development is proposed at Land at Echo Hill, Royston (hereafter 'the Site'). This report details the predicted net effect of the proposed development upon biodiversity.
- 1.2 This 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 also takes into account 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. 8.91ha and comprises two other neutral grassland fields with native boundary hedgerows. A residential house and associated garden is present in the north (see Habitats Plan in Appendix A). The Site occupies an area of c. 8.90ha and is located around central grid reference TL 35378 39946, to the south of Royston.
- 1.4 This report should be read in conjunction with the Ecological Impact Assessment (EclA) (CSA/7494/02) prepared for the proposed development which provides full baseline habitat information upon which the 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 on-site 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 and comprises three separate modules (Habitat Units, Hedgerow Units & Watercourse Units):
 - 'pre-development' (baseline) biodiversity 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
 - Whether 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 would be 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 the 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/7494/108/A) provided in Appendix A
 - Proposed Habitats Plan (CSA/7494/110/A) provided in Appendix B
- 1.7 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 (NPPF) (Department for Levelling Up, Housing & Communities, 2023) 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 February 2024. 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.

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 the UK Habitat Classification (UK Hab; Butcher et al., 2023) 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). The separate Biodiversity Unit 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 'Habitat trading' controls are integrated into the Statutory Metric to ensure any losses of habitat are mitigated or compensated for appropriately, in respect of conservation priorities and ecological functionality. Any deviation from habitat trading is cleared flagged within the Statutory Metric, and justifications, where necessary, are set out herein.
- 3.5 Any consideration of temporary impacts, those where habitats can be reinstated within 2 years of impacts as set out within the User Guide, will be explained in full herein.
- 3.6 A Statutory Biodiversity Metric Calculation Tool has been prepared for the proposed development and is provided separately in full for interrogation by North Hertfordshire District Council, relevant consultees and stakeholders.
- 3.7 All metric calculations have been reviewed by Jamie Woollam CEcol MCIEEM who has completed numerous net gain assessments.

Baseline Habitats

- 3.8 The accompanying EclA report (CSA/7494/02) provides details of the UKHab survey undertaken at the Site on 20 February 2025 and 19 June 2025 including full survey methods.
- 3.9 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 (polygons) or 5m (linear).

Habitat & Hedgerow Condition Assessment

- 3.10 An assessment of habitat and hedgerow condition was undertaken on 19 June and 25 June 2025, in accordance with the Statutory Metric User Guide (Defra, 2024). Published condition assessment templates have been completed and are provided in Appendix D alongside wider condition information.

Post-Development Habitats

- 3.11 Post-development habitat areas and linear measurements were taken from the Proposed Habitats Plan (Appendix B) prepared in mapping software QGIS. This plan is based upon the Illustrative Landscape Strategy (Iceni Projects Limited, 2025; Drawing Ref: 537_DL05). 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.
- 3.12 Professional judgement was required throughout the calculation process to ensure target habitats were reasonable, achievable 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

- 3.13 A desktop assessment was undertaken to determine relevant strategic significance multipliers for pre- and post-development habitats in accordance with Table 8 of the Statutory Metric User Guide (Defra, 2024) with particular consideration of Local Nature Recovery Strategies (LNRS).

Additionality & Wider Considerations

- 3.14 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

- 3.15 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.
- 3.16 Professional judgement and a precautionary approach are required to establish baseline and post-development scenarios to assess current habitat type and condition, and to predict future changes. Accordingly outcomes for habitats and biodiversity more widely may differ from those presented herein.
- 3.17 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 EcIA (CSA/7494/02) 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 relevant administrative area. North Hertfordshire District Council have advised that the Hertfordshire Ecological Network (HEN) Map should be used to assess strategic significance.
- 4.3 The Site lies within the HEN 'High' Strategic Significance Zone. The accords with a 'No known habitats present (high priority for habitat creation) HEN category description, with grassland stated as the priority for habitat creation, in particular chalk grassland creation.
- 4.4 Table 8 of the Statutory Biodiversity Metric Guidelines specifies how strategic significance should be applied if an alternative document is specified to be used in lieu of a published LNRS. As Field F2 comprises other neutral grassland of moderate species diversity with some calcareous grassland indicators it is considered to meet the criteria for high strategic significance. However, Field F1 comprises other neutral grassland in poor condition, with limited species diversity and as such it is not considered to be 'locally ecologically important' and is therefore assigned low strategic significance.
- 4.5 The above approach has also been adopted for post-intervention (post-development) habitat units as set out below.

Baseline Biodiversity Units

- 4.6 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 (Condition)	Area (ha)	Habitat Units
Other neutral grassland (good)	2.22	30.59
Other Neutral Grassland (poor)	6.64	26.54
Vegetative garden (n/a)	0.03	0.05
Developed land; sealed surface (n/a)	0.03	0.00
Total	8.91ha	57.18
HEDGEROWS		
Hedgerow Type	Length (km)	Hedgerow Units
Native hedgerow (H2, H4, H5, H6, H7, H8)	0.88	4.82
Native hedgerow – associated with bank and ditch (H1, H3)	0.35	4.18
Total	1.23km	8.99

5.0 POST-INTERVENTION BIODIVERSITY

5.1 The proposed development comprises the construction of up to 84 dwellings with associated private gardens, access infrastructure, Sustainable Drainage System (SuDS) features and 5.89ha of Public Open Space.

5.2 Post-intervention habitats are illustrated on the Proposed Habitats Plan in Appendix B. This drawing is based upon development parameters set out within Illustrative Landscape Masterplan. The following assumptions have been made with regard to these plans in line with the Statutory Metric User Guide (Defra, 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
- All individual trees are assumed to be 'small' in size, and in poor condition for 'urban'/street contexts and moderate condition for 'rural' contexts. It is assumed that 12 individual trees will be planted per ha.
- The public open space is assumed to comprise modified grassland (poor condition, in intensively used areas), other neutral grassland (moderate condition) and mixed scrub (moderate condition)
- The SuDS basins are assumed to be in moderate condition
- A Traditional Orchard in moderate condition is proposed

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 other neutral grassland, with the majority of linear habitats retained. The following habitats will be retained and/or enhanced:

- 0.73ha of other neutral grassland within Field F1 will be retained
- 0.78ha of other neutral grassland within Field F2 will be enhanced to moderate condition
- Hedgerows H1 and H4 will be enhanced and subject to gapping up and favourable long-term management to increase species-richness.

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 Enhancement works would be delivered and secured through a Habitat Management and Monitoring Plan (HMMP).

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 to include grassland, mixed scrub, traditional orchard and SuDS.
- 5.8 Other neutral grassland enhancement and creation within the south of the Site will include calcareous grassland indicator species introduction through seed mixes.

Strategic Significance

- 5.9 An equivalent approach to strategic significance has been taken for post-intervention Biodiversity Units as for baseline units above, with proposed species-rich other neutral grassland, all habitats having High strategic significance.

Significant On-site Gain

- 5.10 The following proposed habitat enhancement and creation proposals are likely to be considered 'significant' by North Hertfordshire District Council:
- Creation of habitats of medium distinctiveness, including other neutral grassland, individual trees and mixed scrub
 - Creation of high distinctiveness traditional orchard
 - Creation of extensive areas of low distinctiveness habitat as part of POS
- 5.11 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 Tables 2A and 2B.

Table 2A. Net Effect on Biodiversity: Habitat Units

	Habitat Units	% Change
On-site baseline	57.19	
On-site post-intervention	38.73	
Total net change	-18.45	+32.27%
<i>Trading Rules Not Satisfied</i>		

Table 2B. Net Effect on Biodiversity: Hedgerow Units

	Hedgerow Units	% Change
On-site baseline	8.99	
On-site post-intervention	10.86	
Total net change	+1.87	+20.79%
<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 Hedgerow Units with relevant trading rules satisfied. A net loss of -18.45 (32.27%) in Habitat Units is predicted.
- 6.3 Given the above, to achieve a 10% net gain in biodiversity in line with statutory requirements, registered off-site units will be secured of at least 24.17 Habitat units (18.45 net loss plus 5.72 to 10% gain). These off-site units would be secured via third party provider prior to development commencement through submission and approval of the Biodiversity Gain Plan.

Qualitative Appraisal

- 6.4 A wider appraisal of the proposed development's effects upon biodiversity is set out within the EcIA (CSA/7494/02).

7.0 MANAGEMENT & MONITORING

7.1 Full details of management and monitoring for delivery of on-site biodiversity gains will be provided within the 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:
 - Other neutral grasslands within informal open spaces and SuDS features
 - Wildlife ponds
 - Traditional orchard
 - Mixed native scrub
 - Hedgerow enhancement measures
- 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

8.0 SUMMARY & CONCLUSIONS

- 8.1 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).
- 8.2 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 and off-site biodiversity delivery at (offset Site name). The Statutory Biodiversity Metric Calculation Tool was used to calculate the following outcomes:
- +18.45 Habitat Unit gain or -32.27%
 - +1.87 Hedgerow Unit gain or +20.79%
- 8.3 To achieve a 10% net gain in biodiversity 24.17 habitat units would be secured via registered biodiversity gains off-site.
- 8.4 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.
- 8.5 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.

10.0 REFERENCES

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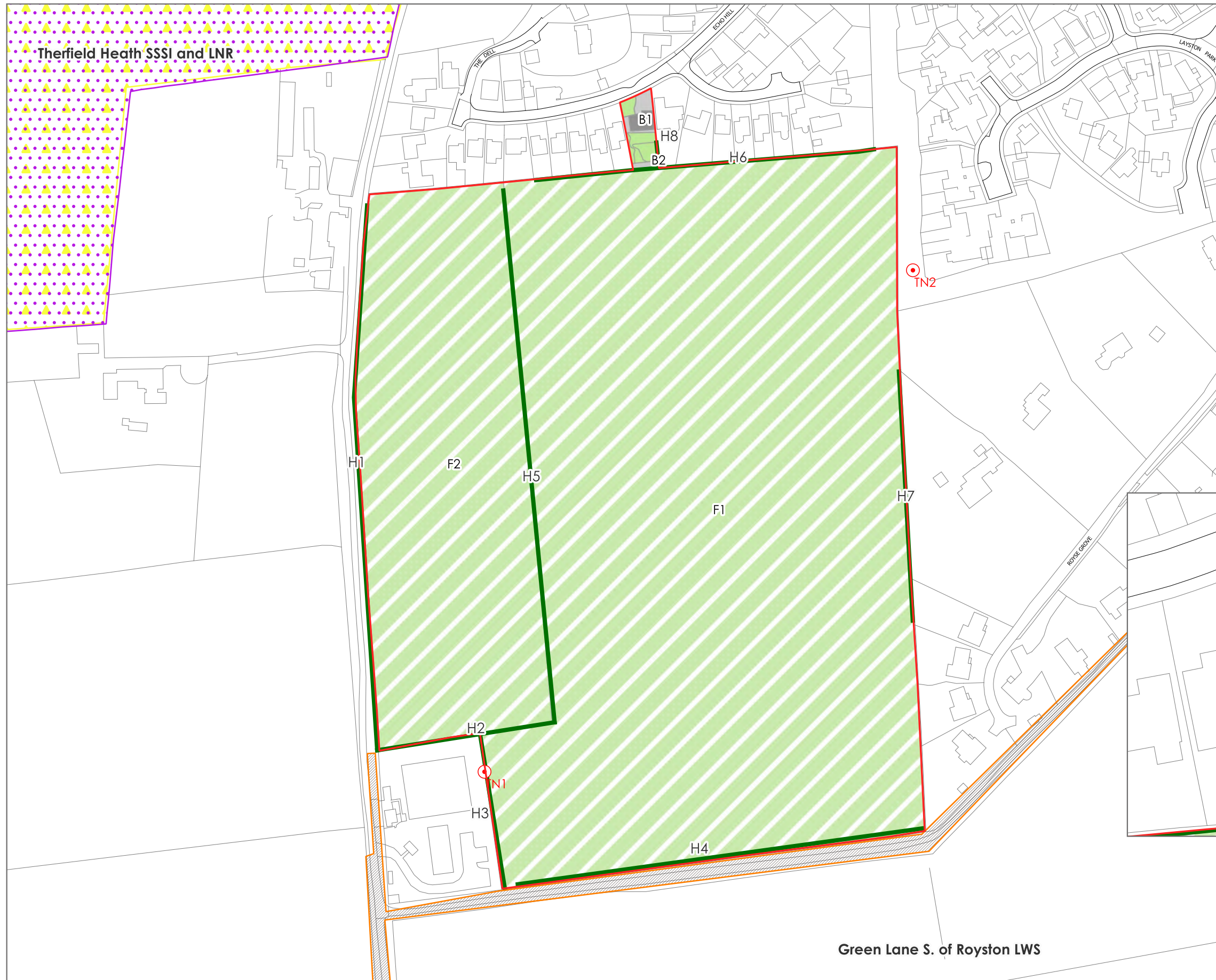
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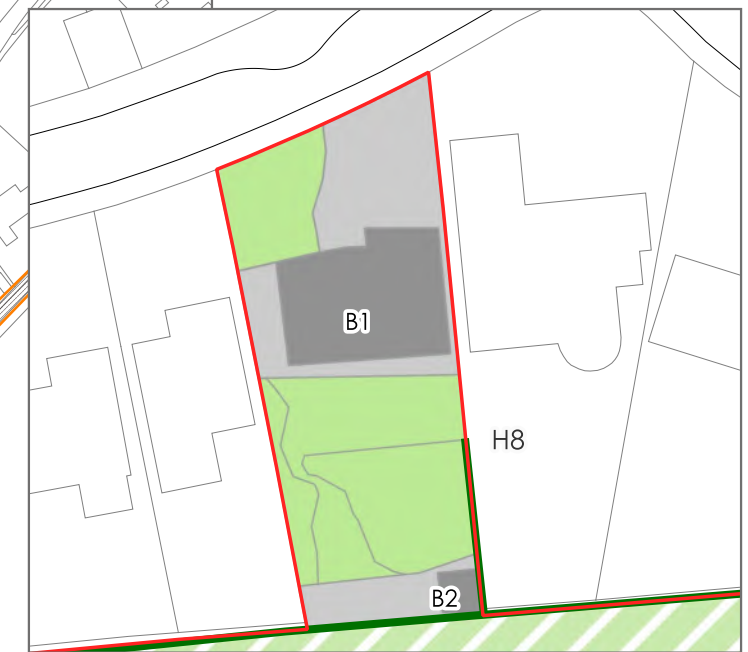
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Appendix A

Baseline Habitats Plan



- Site boundary
- Other neutral grassland (g3c)
- Suburban mosaic of developed and natural surface (u1d)
- Developed land, sealed surface (u1b6)
- Buildings (u1b5)
- Native hedgerows (h2a)
- Target notes:
 - TN1 - Barn owl pellets
 - TN2 - Offsite trees with bat roosting potential
- Therfield Heath SSSI
- Therfield Heath LNR
- Green Lane S. of Royston LWS



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Project	Land off Echo Hill, Royston	Date	October 2025	Drawing No.	CSA/7494/108
Drawing Title	Habitats Plan	Scale	1:2000 at A3	Rev	A
Client	Gladman Developments Ltd	Drawn	FS/RT	Checked	BW

Appendix B

Proposed Habitats Plan



- Traditional Orchard (g 27)
(0.1ha in 'Moderate' condition)
- Retained - Other neutral grassland (g3c)
(0.73ha in 'Good' condition)
- Enhanced - Other neutral grassland (g3c)
(0.78ha in 'Moderate' condition)
- Other neutral grassland (g3c)
(1.27ha 'Moderate' condition;
0.21ha 'Poor' condition)
- SuDS (g 848)
(0.7ha in 'Moderate' condition)
- Modified grassland (g4)
(1.47ha in 'Poor' condition)
- Dense scrub (h3h)
(0.23ha in 'Moderate' condition)
- Proposed roads; Developed land:
ha sealed surface (0.67ha)
- Residential Parcels (2.34ha) split 70:30
sealed surface to vegetative gardens
- Scrub/thicket (h3h)
(0.45ha in 'Moderate' condition)
- Retained - Native Hedgerows (h2a)

Individual trees are not shown but include: 36 small urban trees ('Poor' condition) and 70 small rural trees ('Moderate' condition)



Project	Land off Echo Hill, Royston	Date	October 2025	Drawing No.	CSA/7494/110
Drawing Title	Proposed Habitats Plan	Scale	A3@1:1750	Rev	A
Client	Gladman Developments Ltd	Drawn	RT	Checked	BW

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												
Habitat Description												
Refer to associated reporting for habitat descriptions and flora list/quadrat information.												
ukhab – UK Habitat Classification												
On-site or off-site, site name and location	Echo Hill, Royston (7494)		Survey date and Surveyor name	Jamie Woollam (19.06.2025)								
			Survey reference (if relating to a wider survey)									
Limitations (if applicable)			Habitat parcel reference									Notes (such as justification)
			F1	F2								
Condition Assessment Criteria			Grid reference									
			Criterion passed (Yes or No)									
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.		No	Yes								
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.		No	No								
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .		Yes	Yes								
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%.		Yes	Yes								
E	Combined cover of species indicative of suboptimal 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.		No	Yes								
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).	Yes	Yes											
	Note - this criterion is essential for achieving Good condition for non-acid grassland types only.													
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)														
Number of criteria passed														
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)		Good											
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)	Poor												
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: 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													
Refer to associated reporting for habitat descriptions and flora list/quadrat information.													
ukhab – UK Habitat Classification													
On-site or off-site, site name and location	Echo Hill, Royston (7494)			Survey date and Surveyor name	Jamie Woollam (19.06.2025)								
Limitations (if applicable)				Survey reference (if relating to a wider survey)									
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	H6	H7	H8			
			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	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	Y	Y	N		
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	N	Y	N		

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).	Y	Y	Y	Y	Y	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.	Y	Y	Y	Y	Y	Y	Y	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.	Y	Y	Y	Y	Y	Y	Y	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	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).	Y	Y	Y	Y	Y	N	Y	N				

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.	-	-	-	-	-	-	-	-				
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.	-	-	-	-	-	-	-	-				

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 <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		H1-H5, H7=Good, H6 = Mod
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 <u>Does not fail 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 <u>Fails 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-H5, H7 = Good H6 = Mod H8 = Poor		



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