Biodiversity Net Gain Assessment: Design Stage

March 2024

Land North-East of Humber Doucy Lane, Ipswich

Prepared by
CSA Environmental

On behalf of
Barratt David Wilson Homes
& Hopkins Homes

Report No: CSA/6675/06

CSA environmental

urban design | ecology | landscape | heritage

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

Report Reference	Revision	Date	Prepared by	Approved by	Comments
CSA/6675/06	-	05/03/2024	CH	JW	
	A	05/03/2024	CH	JW	Small amendments as requested by client

CONTENTS

EXECUTIVE SUMMARY

Residential development is proposed at Land North-East of Humber Doucy Lane, Ipswich. Outline planning permission is sought from Ipswich Borough Council and East Suffolk 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 Barratt David Wilson Homes and Hopkins Homes 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 land and modified grassland of limited ecological interest, with narrow field margins. Greater interest is associated with field hedgerows and small areas of woodland and scrub habitat.

No nature conservation designations are present on site or adjacent to it. A single irreplaceable habitat, a potentially veteran tree is present within scrub habitat and will be entirely retained alongside development.

Post-development habitats at the Site will comprise residential development of up to 660 dwellings, construction of associated gardens, parking, access infrastructure, play areas, establishment of Sustainable Urban Drainage Systems (SUDS) including attenuation basins, and Public Open Space (POS) comprising other neutral grassland, a community orchard, dog's off-lead area, and wildlife ponds, as well as recreation routes around the periphery of residential areas.

A net gain of biodiversity is predicted for the proposed development of +0.40 habitat units (+0.55%) and +7.59 hedgerow units (+17.29%). This is subject to significant on-site gains delivered within open space. Off-site biodiversity gain will be sought through a relevant mechanism or third party provider to deliver a 10% net gain in biodiversity.

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 Ipswich Borough Council and East Suffolk Council in their consideration of BNG and the proposed development, relevant statements have been set out Box 1 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 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 (29/02/2024) 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 given that proposed habitats do include those of medium and higher distinctiveness comprising neutral grassland, mixed scrub and ponds.
The Site contains a single irreplaceable habitat as defined under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024) comprising a potential veteran tree. This potential veteran tree is to be retained as part of the proposed scheme.

1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf of Barratt David Wilson Homes and Hopkins Homes and sets out the findings of a 'Design Stage' Biodiversity Net Gain (BNG) Assessment. Residential/mixed use development is proposed at the Land North-East of Humber Doucy Lane, Ipswich (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 takes 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 report should be read in conjunction with the Ecological Impact Assessment (EcIA) (CSA/6675/04) prepared for the proposed development which provides full baseline habitat information upon which post-development biodiversity value set out herein is based.

1.4 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.

1.5 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/6675/111) provided in Appendix A
- Proposed Habitats Plan (CSA/6675/118) provided in Appendix B

1.6 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.

Planning Policy and Legislation

1.7 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

1.8 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.

1.9 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.

1.10 The following policies from the Ipswich and East Suffolk Local Plans make reference to biodiversity and the protection and enhancement of priority habitats and species:

<u>Ipswich Local Plan 2018-2036</u>

Policy ISPA4: Cross Boundary Working to Deliver Sites

- …iv. Landscaping and development proposals must take account of the Ipswich Wildlife Audit (2019) recommendations for the site, contribute positively to the enhancement of strategic green infrastructure both on and off the site in its vicinity as appropriate, include a 10% biodiversity net gain, and provide a soft edge to the urban area where it meets the countryside…

Policy CS4: Protecting our assets

- … The Council will also seek to protect and enhance local biodiversity, trees and soils in accordance with the National Planning Policy Framework and national legislation by:

  …b) Requiring new development to incorporate provision for protecting and enhancing geodiversity interest and provide biodiversity net gain that is proportion to the scale and nature of the proposal. Reference should be made to the information and recommendations of the Wildlife Audit in relation to any proposals on, or that may affect, sites identified within it…

  …g) Identifying, protecting and enhancing an ecological network across Ipswich linking into adjacent areas, in accordance with Policy DM8, maximising the benefits to the local ecosystem and providing biodiversity net gains beyond the level anticipated through the scale of development proposed;

Policy CS16: Green infrastructure, sport and recreation

- … The Council will safeguard, protect and enhance biodiversity and the environment by working in partnership with others to ensure that our parks and open spaces are well-designed, well managed, safe and freely accessible, encouraging use and benefitting the whole community. The Council will enhance and extend the ecological network and green corridors, blue corridors, open spaces and sport and recreation facilities for the benefit of biodiversity, people and the management of local flood risk…

Policy DM8: The Natural Environment

- …All development must incorporate measures to provide net gains for biodiversity.
  Proposals which would result in significant harm or net loss to biodiversity, having appropriate regard to the 'mitigation hierarchy', will not normally be permitted...
- …Enhancing Ecological Networks:
  The Council will enhance the ecological network across the Borough as identified on Plan 5. The designated sites are ranked 1 and 2 High Conservation Value. Within the remaining core areas of the ecological network and the corridors which link them, development proposals will be required to have regard to existing habitat features and the wildlife corridor function, through their design and layout, and achieve net biodiversity gains commensurate with the scale of the proposal, through measures such as retaining existing habitat features, habitat restoration or re-creation and comprehensive landscaping, which is appropriate to local wildlife. Development which that would fragment the corridor function will not be permitted unless there is adequate mitigation…

Policy DM9: Protection of Trees and Hedgerows

- …The Council will protect existing trees and seek to secure additional trees that increase canopy cover in the interests of amenity and biodiversity…
- … Applications for development should retain existing trees and hedgerows of amenity or biodiversity value where possible…
- …Where appropriate, new tree planting will be encouraged within landscaping schemes to increase the Borough's tree canopy cover. Soft landscaping shall include plants which encourage biodiversity, such as nectar rich plants.

Suffolk Coastal Local Plan (adopted 2020)

Policy SCLP10.1: Biodiversity and Geodiversity

- Development will be supported where it can be demonstrated that it maintains, restores or enhances the existing green infrastructure network and positively contributes towards biodiversity and/or geodiversity through the creation of new habitats and green infrastructure and improvement to linkages between habitats, such as wildlife corridors and habitat 'stepping stones'. All development should follow a hierarchy of seeking firstly to avoid impacts, mitigate for impacts so as to make them insignificant for biodiversity, or as a last resort compensate for losses that cannot be avoided or mitigated for. Adherence to the hierarchy should be demonstrated.

- Proposals that will have a direct or indirect adverse impact (alone or in-combination with other plans or projects) on locally designated sites of biodiversity or geodiversity importance, including County Wildlife Sites, priority habitats and species, will not be supported unless it can be demonstrated with comprehensive evidence that the benefits of the proposal, in its particular location, outweighs the biodiversity loss.

- New development should provide environmental net gains in terms of both green infrastructure and biodiversity. Proposals should demonstrate how the development would contribute towards new green infrastructure opportunities or enhance the existing green infrastructure network as part of the development. New development must also secure ecological enhancements as part of its design and implementation, and should provide a biodiversity net gain that is proportionate to the scale and nature of the proposal.

- Where compensatory habitat is created, it should be of equal or greater size and ecological value than the area lost as a result of the development, be well located to positively contribute towards the green infrastructure network, and biodiversity and/or geodiversity and be supported with a management plan.

2.0 METHODS

Biodiversity Calculations

2.1 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, 2023).

2.2 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.

2.3 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.

2.4 A Statutory Biodiversity Metric Calculation Tool has been prepared for the proposed development and is provided separately in full for interrogation by Ipswich Borough Council and East Suffolk Council, relevant consultees and stakeholders.

2.5 All metric calculations have been reviewed by Jamie Woollam CEcol MCIEEM who has completed numerous net gain assessments.

Baseline Habitats

2.6 The accompanying EcIA report (CSA/6675/04) provides details of UKHab survey undertaken at the Site on16 August including full survey methods.

2.7 Baseline (pre-development) habitat areas and linear measurements were taken from the 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 100m2/0.001ha (polygons) and 5m (linear).

<u>Habitat & Hedgerow Condition Assessment</u>

2.8 An assessment of habitat and hedgerow condition was undertaken in September 2023 by Carly Howes ACIEEM, Mathew Dale ACIEEM, and

Laura Farrar ACIEEM, in accordance with the Statutory Metric User Guide (DEFRA, 2023). Published condition assessment templates have been completed and provided in Appendix D alongside wider condition information.

Post-Development Habitats

2.9 Post-development habitats 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 (CSA/6675/116). 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.

2.10 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

2.11 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, 2023) with particular consideration of Local Nature Recovery Strategies (LNRS).

Additional Considerations

2.12 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

2.13 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.

2.14 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.

2.15 Specific assumptions with regard to certain existing and proposed habitats have been identified where relevant throughout the report.

3.0 BASELINE BIODIVERSITY

3.1 For full habitat descriptions and species lists, please refer to the EcIA (CSA report ref) with baseline habitats illustrated on the Habitats Plan (Appendix A). Appendix D sets out full details of habitat condition assessment including completed standard templates.

3.2 The following Important Ecological Features were identified within the EcIA and have been considered in the preparation of this report:

- Other Woodland – Broadleaved
- Hedgerows & Trees
- Bats
- Badger
- Dormouse
- Nesting Birds
- Reptiles
- Great Crested Newt

3.3 The following habitats and linear features are present at the Site with relevant condition assessments found in Appendix D:

- Arable land (27.68ha condition n/a)
- Modified grassland (2.7ha moderate condition)
- Other neutral grassland
    - 0.14ha moderate condition
    - 0.06ha poor condition
- Mixed scrub (0.35ha poor condition)
- Other Broadleaved Woodland (0.42ha moderate condition)
- Hardstanding (0.18ha condition n/a)
- Hedgerows (various 15no. 3.04km, good condition)

Strategic Significance

3.4 There is no published Local Nature Recovery Strategy (LNRS) for the local vicinity and no published documents for the identification of strategic significance prior to LNRS publication. Accordingly, given the entire site and all habitats fall outside of nature conservation designation areas and/or are in ecologically important locations, all of the baseline habitat units are assigned as 'Low' strategic significance.

3.5 The above approach has also been adopted for post-intervention (post-development) habitat units as set out below.

Baseline Biodiversity Units

3.6 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**
Arable (n/a)	27.68	55.36
Modified grassland (moderate)	2.70	10.80
Other Neutral Grassland (moderate)	0.14	1.12
Other Neutral Grassland (poor)	0.06	0.24
Mixed scrub	0.35	1.40
Other broadleaved woodland	0.42	3.36
Hardstanding	0.18	0.00
Total	**31.53 ha**	**72.28**
HEDGEROWS		
Hedgerow Type	**Length (km)**	**Hedgerow Units**
Native hedgerow	0.882	5.29
Native hedgerow- associated with bank or ditch	0.004	0.48
Native hedgerow with trees	0.415	0.48
Native hedgerow with trees- associated with bank or ditch	0.490	4.98
Species-rich native hedgerow with trees	0.817	14.70
Species-rich native hedgerow with trees- associated with bank or ditch	0.400	9.60
Total	**3.044**	**43.878**

*Area measurements attributed to 'individual trees' are not included in the total area as trees oversail other habitats. **The area of a watercourse may be recorded in the area module as the category 'watercourse footprint'. There are no biodiversity units associated with this category and all biodiversity units generated by watercourses are reported on within the watercourse module

3.7 The majority of the Site area (97%) comprises habitats of 'low' or 'very low' distinctiveness such as arable land and agriculturally modified grasslands, contributing the majority of its overall -biodiversity value (91%). Smaller areas (3%) of 'medium' and 'high' distinctiveness habitats are present and contribute a modest proportion (8%) of overall biodiversity value.

4.0 POST-INTERVENTION BIODIVERSITY

4.1 The proposed development comprises the construction of up to 660 dwellings with associated private gardens, access infrastructure, Sustainable Drainage System (SuDS) features and public open space.

4.2 The proposed scheme was subject to an iterative design process with the following specific aims and advice provided in accordance with the mitigation Hierarchy:

- Avoid entirely direct losses or deterioration of irreplaceable habitat, a potentially veteran tree with scrub habitat.
- Minimise necessary losses of hedgerows for vehicular and pedestrian access
- Enhancement of retained hedgerows alongside development
- Inclusion of habitats of habitats on-site which combine biodiversity interest with benefits to new residents and wider environmental benefits, such as orchards, wildlife ponds and wetland features

4.3 Post-intervention habitats are illustrated on the Proposed Habitats Plan in Appendix B. This drawing is based upon development parameters set out within the Illustrative Landscape Masterplan (drawing reference CSA/6675/116 Rev A). The following assumptions have been made with regard to these plans in line with Statutory 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, netting out footprint of spine roads
- All proposed individual trees are assumed to be 'small' in size, and in poor condition for 'urban'/street trees and moderate condition for 'rural' trees within open spaces
- The nursery school has been assumed to comprise 50% built form and 50% modified grassland

4.4 On-site habitat retention, enhancement (/restoration) and creation set out below would be secured through a 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

4.5 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:

- 0.77ha of mixed scrub and broadleaved woodland will be retained and enhanced
- 0.22ha of modified grassland will be retained
- Mature trees, including veteran T56, will be retained and protected
- 1.928km of hedgerow will be retained and protected alongside development
- 0.757km of hedgerow will be enhanced and subject to gapping up and favourable long-term management

4.6 As set out within the accompanying EcIA the retention of these habitats will require protections during construction and in operation through the following strict protection measures for the root protection areas and crowns of retained trees, in accordance with BS5837:2012.

4.7 On-site enhancements works would be delivered and secured through an HMMP.

Habitat Creation

4.8 The following habitats will be created on-site as part of the proposed development:

- 16.99ha residential development parcels comprising:
  - Dwellings and associated infrastructure (11.89ha / 70%)
  - Vegetated gardens and incidental green space (5.1ha / 30%)
- 2.28ha other infrastructure including roads, paths and play areas
- 0.33ha school site comprising 50% developed land and 50% play fields/grassed surface
- 4.37ha formal amenity spaces comprising modified grassland in poor condition
- 4.13ha of informal open space comprising:
  - Other neutral grassland in poor/moderate condition (2.22ha)
  - Native thicket (mixed scrub) planting in moderate condition (0.55ha)
  - Other broadleaved woodland planting (1.21ha)
  - A community orchard (0.07ha)
  - Wildlife ponds (priority ponds) created in moderate condition (0.08ha)
- Sustainable Drainage Systems (SuDS) features comprising periodically wet, other neutral grassland in moderate condition (2.3ha)
- 204no small 'street' (urban) trees in poor condition
- 234no small 'rural' trees in moderate condition
- 2km of native mixed hedgerows in poor condition planted around permitter of development parcels.
- 0.17km of mixed native hedgerow with trees in moderate condition planted to replace removed sections of H8 and H15

Strategic Significance

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

Significant On-site Gain

4.10 The following proposed habitat enhancement and creation proposals are likely to be considered 'significant' by the local planning authorities:

- Creation of habitats of moderate distinctiveness, including other neutral grassland, individual trees and mixed scrub
- Creation of high distinctives priority ponds
- Creation of extensive areas of low distinctiveness habitat as part of
- Planting of new hedgerows and enhancement of others

4.11 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.

5.0 NET EFFECT ON BIODIVERSITY

5.1 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 3A and 3B below.

Table 3A. Net Effect on Biodiversity: Habitat Units

	Habitat Units	% Change
On-site baseline	72.28	
On-site post-intervention	72.68	
On-site net change	+0.40	+0.55%
Total net change	**+0.40**	**+0.55%**
Trading Rules Satisfied (10% target not met)		

Table 3B. Net Effect on Biodiversity: Hedgerow Units

	Habitat Units	% Change
On-site baseline	43.88	
On-site post-intervention	51.47	
On-site net change	+7.59	+17.29
Total net change	**+7.59**	**+17.29%**
Trading Rules Satisfied		

5.2 As set out above the proposed development with result in a net gain for of +0.40 habitat units (+0.55%) and +7.59 hedgerow units (+17.29%) with trading rules satisfied. Accordingly, the 10% biodiversity gain target for habitat units only is not met on-site.

5.3 It is therefore proposed that biodiversity gain to deliver the 10% target will be achieved through off-site biodiversity gain which will be sought through a relevant mechanism or third party provider, to deliver the residual 6.83 habitat units.

6.0 MANAGEMENT AND MONITORING

6.1 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 willincludes the following principal elements:

- Establishment and management of the following 'significant' biodiversity gains:
    - Other neutral grasslands within informal open spaces and SuDS features
    - Mixed scrub
    - Wildlife ponds
    - Hedgerow creation and enhancement measures
    - Individual tree planting and maintenance
- Adaptive management options
- Monitoring regime and reporting process
- Roles and responsibilities
- Processes to ensure remedial

6.2 Off-site biodiversity gains will be appropriately registered through the Biodiversity Gain Register and subject to separate management and monitoring through a/the off-site HMMP.

7.0 REFERENCES

Baker, J., 2016. Biodiversity Net Gain: Good practice principles for development. CIEEM, CIRIA & IEMA.

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Natural England, 2020. National Habitat Network Maps; User Guide V.2. Available at: https://magic.defra.gov.uk/Metadata_for_magic/Habitat%20Network%20Mapping%20Guidance.pdf

DEFRA, 2023. Statutory Biodiversity Metric. The Statutory Biodiversity Metric. User Guide (draft)

UKHab Ltd 2023. UK Habitats Classification Version 2.0 (at https://www.ukhab.org)

Appendix A

Habitats Plan

N

- Site boundary
- Arable and horticulture (c1)
- Modified grassland (g4)
- Mixed scrub (h3h)
- Other woodland-broadleaved (w1g)
- Other neutral grassland (g3c)
- Hedgerows (Priority Habitat) (h2a)
- Mature Trees
- Fn Field reference

0 100 200 m

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Project	Land East of Humber Doucy Lane, Ipswich	Date	February 2024	Drawing No.	CSA/6675/111
Drawing Title	Habitats Plan	Scale	Refer to scale	Rev	-
Client	Barratt David Wilson & Hopkins Homes	Drawn	LF/MD	Checked	CH

Appendix B

Proposed Habitats Plan

N

- Site boundary
- Urban (u) - Residential areas
- Urban (u) - School
- Developed land. sealed surface (u1b)
- Other neutral grassland (g3c)
- Modified grassland (g4)
- Mixed scrub (h3h)
- Other woodland-broadleaved (w1g)
- Traditional Orchard (g 27)
- Ponds (Priority Habitat) (r1)
- Hedgerows (Priority Habitat) (h2a)

0 100 200 m

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Project	Land East of Humber Doucy Lane, Ipswich	Date Feb 2024	Drawing No. CSA/6675/118
Drawing Title	Proposed Habitats Plan	Scale Refer to scale	Rev -
Client	Barratt David Wilson & Hopkins Homes	Drawn MD	Checked CH

Appendix C

Draft Biodiversity Gain Plan

Department
for Environment
Food & Rural Affairs

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

TBC

1.2 Planning application reference number

PP-12804607

1.3 Local planning authority (LPA)

Ipswich Borough Council and East Suffolk Council

1.4 Development site address

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

Land North-East of Humber Doucy Lane, Ipswich

1.5 Describe the development

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

Hybrid Application - Full Planning Permission for the means of external access/egress to and from the site. Outline planning application (all matters reserved) for a mixed use development for up to 660 dwellings (Use Class C3), up to 400 sq m (net) of non-residential floorspace falling within Use Class E and/or Use Class F2(b), an Early Years facility, and associated vehicular access and highway works, formal and informal open spaces, play areas, provision of infrastructure (including internal highways, parking, servicing, cycle and pedestrian routes, utilities and sustainable drainage systems), and all associated landscaping and engineering works.

2. Developer details

2.1 Applicant name

TBC

2.2 Company name

Barratt David Wilson Homes and Hopkins Homes

2.3 Address

TBC

2.4 Email address

TBC

2.5 Telephone number

TBC

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

TBC

2.8 Date

TBC

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

TBC

3.2 Company name

TBC

3.3 Address

TBC

3.4 Email address

TBC

3.5 Telephone number

TBC

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

TBC

3.8 Date

TBC

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

The creation and enhancement of habitats as part of the development, including habitat creation to comply with statutory obligations such as sustainable drainage. These provisions have been included in the statutory biodiversity metric.

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.

Boundary habitats and hedgerows and those of ecological interest (woodland, neutral grassland and scrub) will be retained and buffered from the development as far as possible. Green links across the site have also been retained and strengthened through the provision of green infrastructure.

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.

Other neutral grassland, mixed scrub, individual trees, traditional orchard and wildlife pond. To be secured through condition

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

6.86 habitat units

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).

To allow for development of up to 660 residential dwellings on-site (as noted in the site allocation in both the adopted Ipswich Local Plan and the Suffolk Coastal Local Plan as a cross boundary allocation to meet local housing needs on the edge of the Ipswich urban area).

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.

6675_20240304_Statutory_Biodiversity_Metric_Calculation_Tool_Macro_enabled

4.15 Condition assessments

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

Condition Assessments provided in Appendix G of EcIA Report (6675_4_B_EcIA)

4.16 Pre-development habitat survey report and map

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

EcIA Report (6675_4_B_EcIA)

Map provided in Appendix A

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.

6675_118_Proposed Habitats Plan

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

September and October 2023

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

No significant 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

72.28

Number of hedgerow biodiversity units

43.88

Number of watercourse biodiversity units

0

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

72.68

Number of hedgerow biodiversity units

51.47

Number of watercourse biodiversity units

0

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

0.40

Area habitat biodiversity units % change

0.55

Hedgerow biodiversity units

7.59

Hedgerow biodiversity units % change

17.29

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.

TBC

7.2 Biodiversity gain site register reference number

TBC

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.

TBC

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

TBC

Number of hedgerow biodiversity units

TBC

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

TBC

Number of hedgerow biodiversity units

TBC

Number of watercourse biodiversity units

TBC

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

TBC

Area habitat biodiversity units % change

TBC

Hedgerow biodiversity units

TBC

Hedgerow biodiversity units % change

TBC

Watercourse biodiversity units

TBC

Watercourse biodiversity units % change

TBC

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

Satisfied

High

Satisfied

Medium

Satisfied

Low

Satisfied

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

Habitat Description

ukhab – UK Habitat Classifica

On-site or off-site, site name and location	On-site - Land East of Humber Doucy Lane, Ipswich	**Survey date and Surveyor name**	28/09/2023 Carly Howes and Matthew Dale
		Survey reference (if relating to a wider survey)	
Limitations (if applicable)		**Habitat parcel reference**	
		Area A	Area B
		Grid reference	

	Condition Assessment Criteria	**Criterion passed (Yes or No)**		**Notes (such as justification)**
		Area A	Area B	
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	Area A only meets two of the essential criteria (3 and 4).
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	Yes	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].	Yes	Yes	
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* 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	No	
	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.**	No	No	
	Essential criterion for Good condition achieved (for non-acid	No	No	
	Number of criteria passed	3	4	

Condition Assessment Resi	**Condition Assessment Score**	**Score Achieved ×/✓**	
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)	✓	

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 *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*. 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: GRASSLAND Habitat Type (low distinctiveness)

UK Habitat Classification (UKHab) Habitat Type

Grassland - Modified grassland

On-site or off-site, site name and location	On-site - Land East of Humber Doucy Lane, Ipswich	**Survey date and Surveyor name**	28/09/2023 Carly Howes and Matthew Dale
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	TM 18935 46454	**Habitat parcel reference**	

Habitat Description

ukhab – UK Habitat Classificatic

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	Yes	
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Yes	
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Yes	
	Essential criterion achieved (Yes or No)		No
	Number of criteria passed		5

Condition Assessment	Condition Assessment Score	Score Achieved ×/✓
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	✓
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – 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	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 East of Humber Doucy Lane, Ipswich	**Survey date and Surveyor name**	21/09/2023 Carly Howes
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	TM 18234 47043	**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 *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* or box *Buxus sempervirens*, which can be up to 100% cover).	Yes	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran[3]) shrubs are all present.	No	
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.	No	Frequent butterfly-bush
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	No	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Yes	
		Number of criteria passed	

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	✓

Suggested enhancement interventions to improve condition score

Footnotes

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

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

Footnote 3 – See gov.uk standing advice on ancient and veteran species. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and

Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

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

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

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

Condition Sheet: WOODLAND Habitat Type

UK Habitat Classification (UKHab) Habitat Type(s)

Woodland and forest - Lowland beech and yew woodland
Woodland and forest - Lowland mixed deciduous woodland
Woodland and forest - Native pine woodlands
Woodland and forest - Other coniferous woodland
Woodland and forest - Other Scot's pine woodland
Woodland and forest - Other woodland; broadleaved
Woodland and forest - Other woodland; mixed
Woodland and forest - Upland birchwoods
Woodland and forest - Upland mixed ashwoods
Woodland and forest - Upland oakwood
Woodland and forest - Wet woodland

ukhab – UK Habitat Classification

This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here:

Woodland Wildlife Toolkit (sylva.org.uk)

IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of this condition assessment are not equivalent to, nor are they comparable with the scores from the EWBG condition assessment, because the EWBG assessment has been adapted for the biodiversity metric, including the removal of EWBG Indicator 7 (Proportion of favourable land cover around woodland) and Indicator 14 (Size of woodland), and minor changes to other indicators.

Site name and location	Land East of Humber Doucy Lane, Ipswich	**On-site or off-site**	On-site	**Habitat parcel reference**		
				W1	W2	
Limitations (if applicable)	-	**Survey reference (if relating to a wider survey)**	-	**Grid reference**		
				TM 18849 46856	TM 18689 47180	

Condition Assessment Criteria

Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator		Notes (such as justification)
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	2	2	
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in 40% or less of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	3	
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] >10% cover.	3	3	
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	3	3	
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	3	3	

F	**Open space within woodland**	10 - 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	3	3	
G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	2	2	
H	**Tree health**	Tree mortality less than 10%, 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].	3	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	2	
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].	1	2	
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1	1	
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing 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 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 deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	1	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].	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground[14].	2	2	
				Total Score (out of a possible 39)	29	30	

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)			

Suggested enhancement interventions to improve condition score

Footnotes

Footnotes below refer to the EWBG woodland condition assessment methodology: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available from: Woodland Wildlife Toolkit (sylva.org.uk)

When applying this condition sheet, good practice would be to use the methodology associated with the EWBG toolkit.

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 - 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or *Sorbus* species; 0 - 20 years = Young; 21 - 60 years =Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees.

Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Alianthus altissima*.

Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

Footnote 7 – Given the increased ratio of edge habitat to woodland where the woodland is <10ha.

Footnote 8 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening.

Footnote 9 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level.

Footnote 10 - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this.

Footnote 11 – This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

Footnote 12 - See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)

and:

Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 13 – See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

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 - Haresfoot Farm, Berkhamsted	**Survey date and Surveyor name**	09/08/2023 Carly Howes and Matthew Dale
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	H9	H10	H11	H12	H13	H14	H15	
				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).	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
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 *Prunus spinosa* 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).	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	

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).	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
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)	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	
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.	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	
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 *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
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	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
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	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
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[6]), 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.	Pass	Fail	Pass	-	Pass	-	-	-	-	Pass	Pass	-	-	Pass	-	
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.	Pass	Pass	Pass	-	Pass	-	-	-	-	Pass	Pass	-	-	Pass	-	

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** Does not fail both attributes 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 both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1

Score achieved:				Good		Good	Good	Good	Good			Good	Good		Good

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 both attributes 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 both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1

Score achieved:	Good	Good	Good		Good					Good	Good			Good	

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.* [online] Available on:
layout (hedgelink.org.uk)

Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows.* [online] Available on:
Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk)

Footnote 3 – Wildlife and Countryside Act 1981 (as amended).

Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain.* Species Status 7: 1-116. [online] Available on:
The Vascular Plant Red Data List for Great Britain (Species Status No. 7) | JNCC Resource Hub

Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). *Definitions: wild, native or alien?* [online] Available on:
Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org)

Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora.* [online] Available on:
Acknowledgements | Online Atlas of the British and Irish Flora (brc.ac.uk)

Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on:
Home » NNSS (nonnativespecies.org)

Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from:
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)
and
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

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