



Biodiversity Metrics Report

Land North of Camp Road, Upper Heyford

For

David Wilson Homes Ltd

Report Ref.: DWH001-029-002/001/001

October 2023

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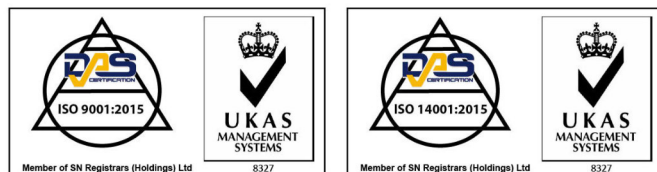
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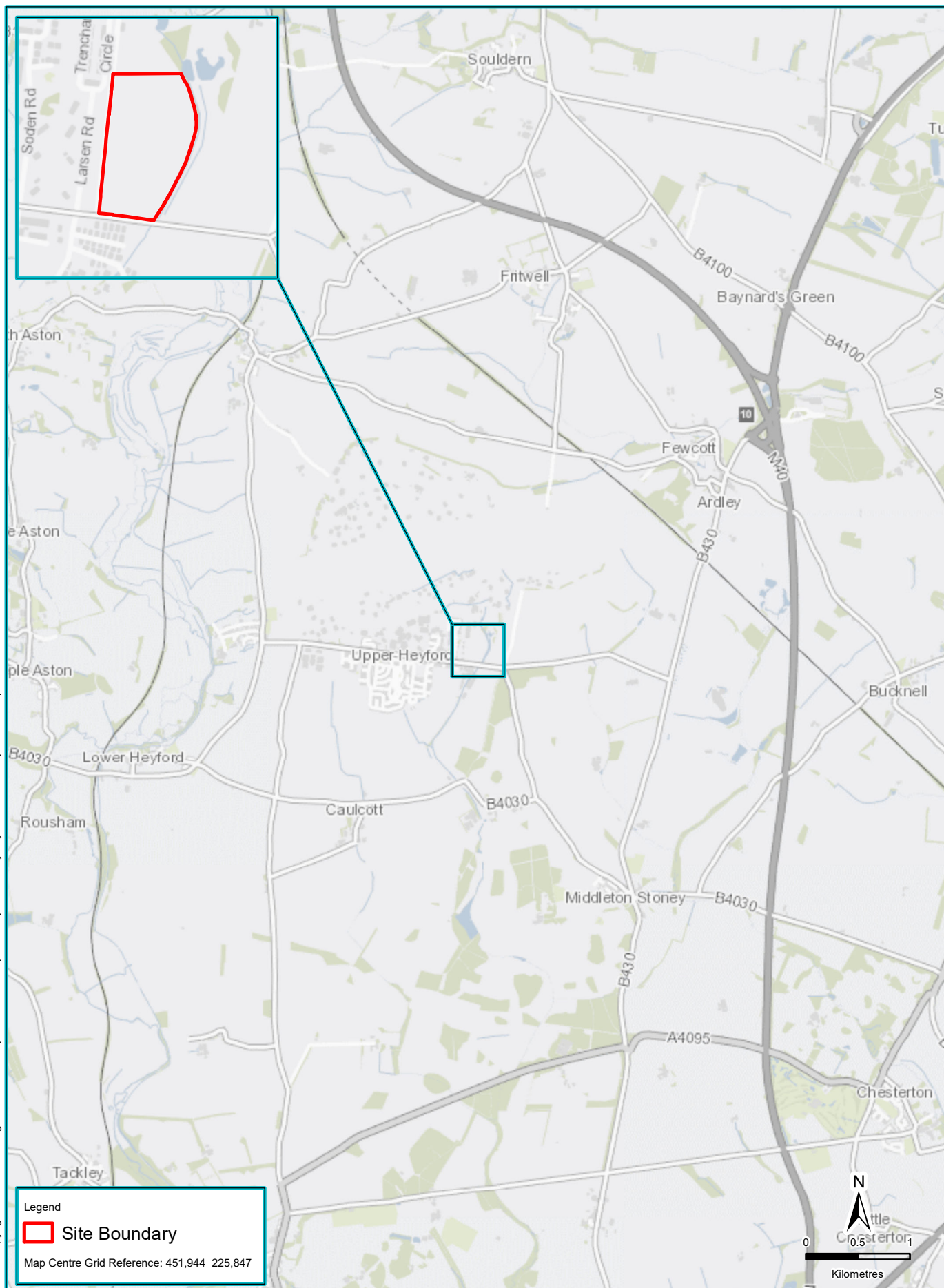
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1. Summary

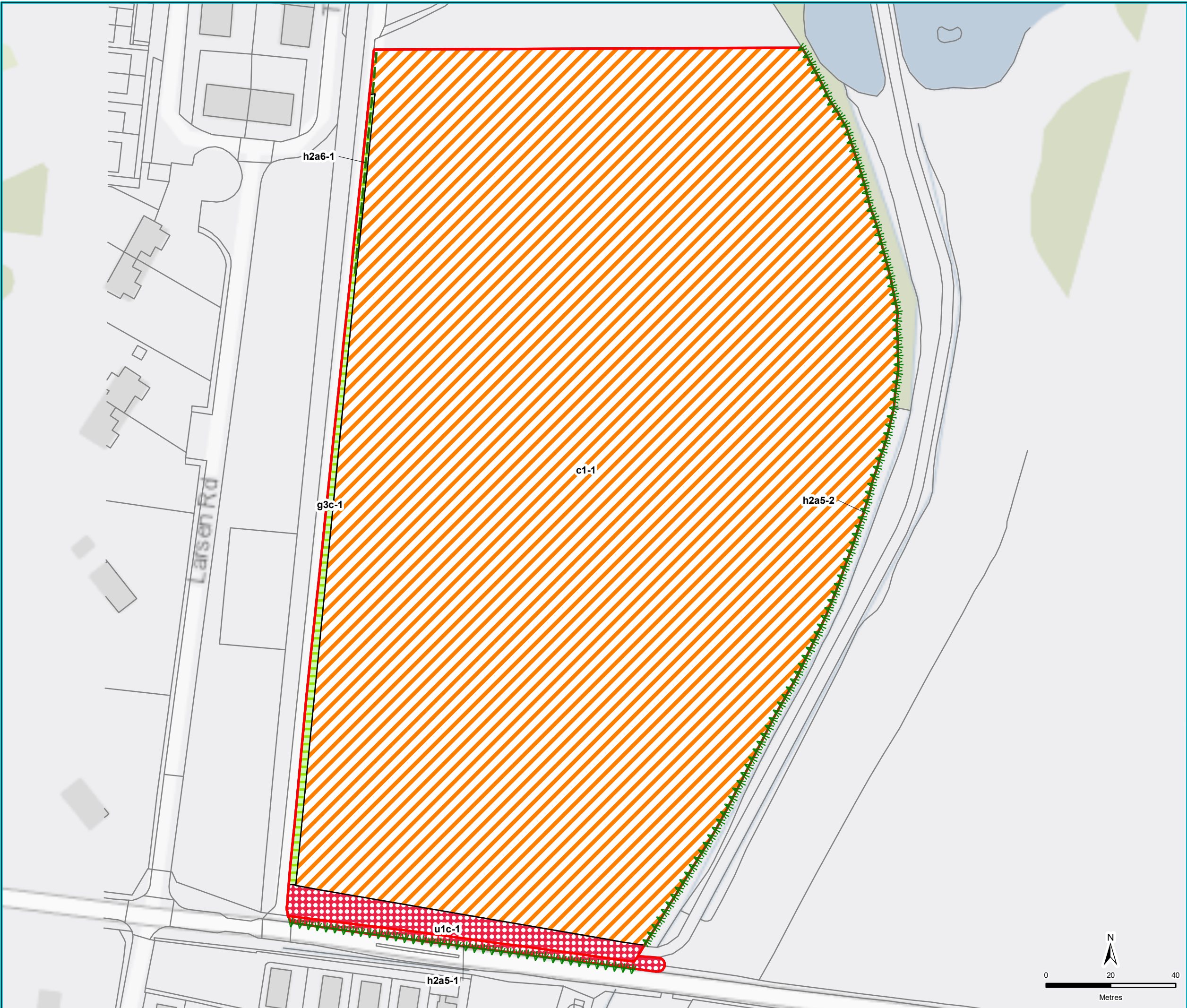
- 1.1.1 Thomson Environmental Consultants has undertaken a biodiversity net gain calculation using the Natural England Biodiversity Metric 4.0 for a residential development on a 4.3 hectare site in Upper Heyford, Bicester, OX25 5BP. The location of the site is shown on Figure 1.
- 1.1.2 A UK Habitat Classification System survey and condition assessment was undertaken in September 2023 to determine the baseline biodiversity value of habitats on site pre-development. Due to recent habitat changes on the site, where habitats had changed significantly surveys and assessments undertaken by Aspect Ecology Ltd in 2021 and 2022 were also used to determine the site's biodiversity unit baseline. The 2023 habitat survey results are shown on Figure 2 and the 2021 habitat survey results are shown on Figure 3. The site was found to have a baseline biodiversity value of 27.34 habitat units and 9.41 hedgerow units.
- 1.1.3 Under the current proposals, the development will result in a net loss of 22.40 habitat units (representing a net change of -81.94%) and a net gain of 1.52 hedgerow units (representing a net gain of 16.18%). The current plans do not satisfy the trading rules under the Biodiversity Metric 4.0 for medium-distinctiveness habitat units.
- 1.1.4 In order for the development to be compliant with forthcoming legislation and policy relating to biodiversity net gain, a strategy of offsetting has been agreed Cherwell District Council and biodiversity units will be purchased off-site to offset the net losses on site. To achieve a 10% net gain, an additional 25.14 habitat units will be required to be offset as part of this scheme.
- 1.1.5 In order to satisfy the trading rules, 24.08 habitat units delivered by the development (either on-site or off-site) must be habitats of medium distinctiveness or higher

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Figure Number	1		Scale at A3	1:50,000	
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- Legend
- h2a5 - Species-Rich Native Hedgerow
 - h2a6 - Other Native Hedgerow
 - c1 - Arable and
 - g3c - Other Neutral Grassland
 - u1c - Artificial Unvegetated Unsealed Surface
 - Survey Extent
 - Site Boundary

Site Grid Reference: 451,945 225,849

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This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a UK Habitat Classification survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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Figure Number
2

Figure Title
UK Habitat
Classification Survey Results

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Legend

- Existing Tree
- h2a5 - Species-Rich Native Hedgerow
- h2a6 - Other Native Hedgerow
- 81 - Ruderal / Ephemeral
- g3c - Other Neutral Grassland
- g4 - Modified Grassland
- h3d - Bramble Scrub
- u1c - Artificial Unvegetated Unsealed Surface
- Degraded Habitats
- Survey Extent

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Figure Number
3

Figure Title
Baseline
(Pre-Development) Habitats

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- Legend
- Tree
 - Retained Species-Rich Native Hedgerow
 - Native Hedgerow
 - Species-Rich Native Hedgerow
 - Species-Rich Native Hedgerow with Trees
 - Amenity Grass
 - Native Shrub Planting
 - Ornamental Planting
 - Wildflower Meadow
 - Swale
 - Hard Standing - Play Area
 - Hard Standing - Footpath
 - Hard Standing
 - Houses & Gardens
 - Building
 - Site Boundary

Map Centre Grid Reference: 451,944 225,847
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Client
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Figure Number
4

Figure Title
Post Development
Habitats

2. Introduction

2.1 Overview

2.1.1 David Wilson Homes Ltd (DWH) commissioned Thomson Environmental in September 2023 to undertake a Biodiversity Net Gain (BNG) assessment and report of a site in Upper Heyford.

2.1.2 BNG is a way to contribute to the recovery of nature while developing land. It is making sure the habitat for wildlife is in a better state than it was before development. A biodiversity metric (Panks *et al.*, 2023), based on a habitat survey, is used to calculate the biodiversity value of a land area pre-development (baseline value) and the predicted biodiversity value post development is calculated from a proposed landscape plan. The difference in 'biodiversity units' pre and post development indicates if the proposed development scenario will result in a biodiversity loss or gain.

2.2 Development Background

2.2.1 The proposals comprise to construction of 126 residential dwellings and associated hard and soft landscaping, including native shrub planting, ornamental planting, wildflower meadow planting, hedgerow planting and swales. These proposals are hereafter referred to as "the development".

2.2.2 The development will be located on 4.3 hectares (ha) area of land north of Camp Road, Upper Heyford, Bicester, OX25 5BP (central grid reference: SP 51944 25847). The area of land affected by the development is hereafter referred to as "the site". The location of the site is shown on Figure 1.

2.2.3 DWH is seeking full planning permission from for the development of the site. A previous planning application for the site, submitted in two phases (15/01357/F and 21/03523/OUT), which included biodiversity net gain calculations, has been submitted for a total of 120 units, and DWH proposes to increase this by six units to 126 units. This BNG report considers the outcome for biodiversity of the proposed development of 126 units.

2.3 Ecology Background

2.3.1 A Preliminary Ecological Assessment (PEA) was carried out on the site by Aspect Ecology for Pye Homes in 2021 (Aspect Ecology, 2021a; 2021b) and concluded with recommendations such as hedgerow and tree protection, district level licensing for great crested newts and pollution prevention.

2.3.2 Ecological enhancements were also suggested by Aspect Ecology for Pye Homes (2021a; 2021b) including new planting, wildflower grassland, bat boxes, hedgehog nest domes, bird boxes, insect boxes and habitat piles.

2.3.3 A BNG assessment report based on the Natural England Biodiversity Metric 3.1 (Panks *et al.*, 2022) was carried out for the site by Aspect Ecology for Pye Homes in 2022 (Aspect Ecology,

2022a; 2022b). A net loss in habitat units for biodiversity was calculated for the site while a net gain was recorded for linear habitat (hedgerows):

- Phase 1 (25.48 baseline units) resulted in a -19.2 (-75.37%) net loss in habitat units and a +3.15 (+58.22%) net gain for linear habitats. A requirement of 21.76 habitat units was recommended to achieve 10% net gain.
- Phase 2 (2.01 baseline units) resulted in a -0.89 (-44.23%) net loss in habitat units and a +1.51 (+133.94%) net gain for linear habitats. A requirement of 1.09 habitat units was recommended to achieve 10% net gain.

2.4 The Brief and Objectives

2.4.1 David Wilson Homes Ltd commissioned Thomson Environmental Consultants on 8th September 2023 to undertake an assessment of the site in relation to emerging BNG requirements to understand the options for achieving 10% BNG increase in line with the minimum requirement set out in the Environment Act 2021. The brief comprised:

- A site visit by a suitably qualified ecologist to map and assess the condition of the habitats present on the site to determine the baseline (pre-development) biodiversity value of the site using the Natural England Biodiversity Metric 4.0 (Panks *et al.*, 2023); and
- A written report to present the results of the habitat survey and baseline biodiversity value assessment, as well as calculating the post-development units delivered for the development.

2.4.2 The objective of the Biodiversity Metrics Report is to identify if the site is suitable for development whilst maintaining compliance with biodiversity requirements established in local plans.

2.5 Limitations

2.5.1 The survey was carried out on 25th September 2023 which could be considered a sub-optimal time of year for habitat surveying. This is not considered to be a significant limitation, however, as the species recorded at this time were a suitable representation of the habitats present on site and the habitats could still be classified and assessed according to the UK Habitat (UKHab) Classification System methodology and the relevant Natural England Biodiversity Metric 4.0 condition assessment criteria.

2.5.2 Habitats recorded on site had changed significantly from those reported by Aspect Ecology 2022a and 2022b due to recent management. Guidance included in the Natural England Joint Publication JP039 (2023a) includes the following to account for degraded sites:

If a habitat has been cleared, destroyed or degraded previously, and an earlier baseline should be used, assessors must use the following approach in the metric:

- *Use of pre-degradation habitat type as the site's baseline.*
- *Note how this habitat type and condition has been determined.*

- *Account for the time between the habitat loss and compensation through the temporal risk function.*

2.5.3 A previous baseline for the site is available as reported by Aspect Ecology (Aspect Ecology 2022a; 2022b) therefore this will be use as the baseline for this report. The previous baseline is shown on Figure 3.

2.5.4 Post-development calculations are based on the development boundary and layout as included the Planning Layout (ref: 0778-102 A.D3 Planning Layout-A0P (002)) and the Landscaping Plan (ref: 2099.16 / 01D). Subsequent changes to either layout will result in a requirement to reassess the potential impacts of the development and the requirements for avoidance, mitigation and enhancement.

2.6 Surveyors

2.6.1 The survey was conducted by Ecological Consultant Charlotte Scrivens BSc (Hons).

3. Legislation and Planning Policy Considerations

3.1 Overview

- 3.1.1 This section provides an overview of policy and strategies relevant to the production and implementation of this strategy.

3.2 Legislation

- 3.2.1 The Environment Act received royal assent and became law on 9th November 2021 and provides a framework to improve and protect the natural environment. This will be overseen by the new Office for Environmental Protection.
- 3.2.2 One of the provisions of the Act is the mandatory requirement for most new developments to provide a 10% net gain in biodiversity. Both onsite and offsite enhancements will need to also be maintained for a period of at least 30 years following completion of a development.
- 3.2.3 The requirements of the Act do not have legal effect at the time of writing this report, however it is anticipated they are to become legal requirements from January 2024.

3.3 National Planning Policy

- 3.3.1 The National Planning Policy Framework (NPPF) 2023 sets out the Government's planning policies for England and how these should be applied.
- 3.3.2 Paragraph 174 of the NPPF: *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*
- *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soil; and*
 - *d) minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks that are more resilient to current and future pressures;'*
- 3.3.3 Paragraph 175: *'plans should b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.'*

3.4 Local Policy

- 3.4.1 Cherwell's development plan currently comprises:
- Adopted Cherwell Local Plan 2011 - 2031 Part 1 (July 2015)
 - Adopted Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxford's Unmet Housing Need (September 2020)
 - Minerals and Waste Core Strategy (September 2017)
 - 'Made' Neighbourhood Plans in Cherwell District
 - Saved, retained policies of the Adopted Cherwell Local Plan 1996
 - Saved policies from Oxfordshire County Council's Minerals and Waste Local Plan 1996

- 3.4.2 Decisions on planning applications must be made in line with the development plan, unless there are clear material considerations which dictate why this should not be the case.
- 3.4.3 A Sustainability Appraisal (SA) and Strategic Environmental Assessments (SEA) were incorporated for the Local Plan Part 1 Partial Review and the new Cherwell Local Plan Review 2040 being produced for Cherwell.
- 3.4.4 The survey area is located within the Policy Villages 5: Former RAF Upper Heyford area, an area allocated for development. Policy Villages 5: Former RAF Upper Heyford states that:
- *'Development Area: 520 ha*
Development Description: This site will provide for a settlement of approximately 1,600 dwellings (in addition to the 761 dwellings (net) already permitted) and necessary supporting infrastructure, including primary and secondary education provision and appropriate community, recreational and employment opportunities, enabling environmental improvements and the heritage interest of the site as a military base with Cold War associations to be conserved, compatible with achieving a satisfactory living environment. A comprehensive integrated approach will be expected.'
 - *'Proposals must demonstrate that the conservation of heritage resources, landscape, restoration, enhancement of biodiversity and other environmental improvements will be achieved across the whole of the site identified as Policy Villages 5.'*
 - *'The release of greenfield land within the allocated site Policy Villages 5 will not be allowed to compromise the necessary environmental improvements and conservation of heritage interest of the wider site'*
 - *'The conservation and enhancement of the ecological interest of the flying field through appropriate management and submission of an Ecological Mitigation and Management Plan, with biodiversity preserved and Cherwell Local Plan 2011-2031 Part 1 259 Section C - Policies for Cherwell's Places enhanced across the site identified as 'Policy Villages 5', and wildlife corridors enhanced, restored or created, including the provision for habitat for great crested newts and ground nesting birds in particular. A net gain in biodiversity will be sought'*
 - *'Development should protect and enhance the Local Wildlife Site (including the new extension to the south)'*
 - *'Provision of Green Infrastructure links to the wider development area and open countryside'*

4. Methodology

4.1 Habitat Survey

- 4.1.1** A survey area was defined as an area of land of approximately 4.3ha that encompassed the land north of Camp Road. The survey area and the site cover the same boundary and are shown in Figure 1 and 2.
- 4.1.2** A survey using the UKHab Classification system (UKHab LTd., 2023) was conducted throughout the survey area. This is a nationally recognised habitat classification system that is compatible with the Natural Biodiversity Metric 4.0 for calculating biodiversity net gain values (Panks *et al.*, 2023).
- 4.1.3** The UKHab has five hierarchical levels and includes the identification of priority habitats (Habitats of Principal Importance listed under the Natural Environment and Rural Communities Act 2006) and Annex I habitats as listed under the European Habitats Directive. The five levels are:
- Level 1 - Biomes/major ecosystems (terrestrial, freshwater and coastal);
 - Level 2 - Ecosystem types (i.e. woodland, grassland, heathland and scrub);
 - Level 3 - Broad Habitats, based on those of the UK Biodiversity Action Plan (UKBAP);
 - Level 4 - Habitats, including 46 priority habitats; and
 - Level 5 - Habitats, including Annex I habitats.
- 4.1.4** In addition, non-hierarchical secondary codes were used to provide supplementary information. These included mandatory codes for habitat mosaics/complexes, priority and Annex I habitats that occur in multiple primary habitats and habitat origins, plus any additional relevant secondary codes.
- 4.1.5** Prior to the survey, the potential habitats on the site were mapped using aerial imagery and government datasets (such as <http://www.magic.gov.uk/>) to the highest level of UKHab classification possible, which in most cases was either level 3 or 4.
- 4.1.6** During the field survey, the habitat map was ground-truthed, with all habitats mapped to the highest level possible.
- 4.1.7** Table 4.1 shows the meta-data used for this survey.

Table 4-1: Survey meta-data

Scope and purpose of the survey	Biodiversity Metrics Report
Area surveyed	See Figure 2
Edition of UKHab used	UKHab v2.0-Professional
Minimum Mapping Unit (MMU)	25m ² for areas, 5m for linear features

Level of UKHab Primary Hierarchy used	Level 5, where possible
List of Secondary Code groups recorded	All secondary codes
Additional attributes recorded	Habitat condition assessment
Map projection and units	Figure 2
Date of survey	25 th September 2023
Organisation and individual undertaking the survey	Thomson Environmental Consultants, Charlotte Scrivens
References for any existing datasets that have been used	www.magic.gov.uk

4.1.8 The dominant and readily identified species of higher plant species from each habitat type within the survey area were recorded and their abundance was assessed on the DAFOR scale:

- D Dominant;
- A Abundant;
- F Frequent;
- O Occasional; and
- R Rare.

4.1.9 These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (2019).

4.1.10 Target notes were made for any habitat features which were too small to map or are of particular ecological interest.

4.2 Biodiversity Metric

Good Practice Principles for Biodiversity Net Gain

4.2.1 The Chartered Institute for Ecology and Environmental Management (CIEEM) has set out ten guiding principles for achieving BNG which must be applied all together, as one approach. The principals are summarised below:

- Principle 1: Apply the mitigation hierarchy. Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.

- Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve No Net Loss or Net Gain.
- Principle 3: Be inclusive and equitable. Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.
- Principle 4: Address risks mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.
- Principle 5: Make a measurable Net Gain contribution. Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.
- Principle 6: Achieve the best outcomes for biodiversity. Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when:
 - i. Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses
 - ii. Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation
 - iii. Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels
 - iv. Enhancing existing or creating new habitat
 - v. Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity
- Principle 7: Be additional. Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).
- Principle 8: Create a Net Gain legacy. Ensure Net Gain generates long-term benefits by:
 - i. Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity
 - ii. Planning for adaptive management and securing dedicated funding for long-term management
 - iii. Designing Net Gain for biodiversity to be resilient to external factors, especially climate change
 - iv. Mitigating risks from other land uses
 - v. Avoiding displacing harmful activities from one location to another
 - vi. Supporting local-level management of Net Gain activities
- Principle 9: Optimise sustainability Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.

- Principle 10: Be transparent. Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

Biodiversity Metric Calculation Methodology

- 4.2.2** The metric calculates the biodiversity value by multiplying the area (hectares), distinctiveness (habitat type), condition (quality) and strategic significance (local significance for biodiversity) of each habitat parcel. To calculate the BNG units which may be achieved post-development, risk multipliers are also introduced to account for difficulty of habitat creation (delivery/risk factor) and time for created habitats to reach target condition (time to target factor). The calculations were carried out using the “The Biodiversity Metric 4.0 Calculation Tool” provided by Natural England (Natural England Joint Publication JP039, 2023c).
- 4.2.3** The baseline BNG unit calculation in this report represents the biodiversity value of the site as it was recorded in 2022 by Aspect Ecology (2022a; 2022b) for habitats identified during the site visit that have been cleared, destroyed, or degraded. This follows guidance (Natural England Joint Publication JP039, 2023a) regarding degraded habitats and applies a discounting rate used for temporal risk of 1 year (0.965) (Natural England Joint Publication JP039, 2023b). The anticipated future BNG units for the site, following habitat creation and enhancement, have also been determined. The net change in BNG units was then calculated by subtracting the number of baseline BNG units from the future number of post-development/enhancement BNG units to get the number of BNG units that will be created or lost by the proposed works. If this number is positive, the development/enhancements have achieved biodiversity net gain. If the number is negative, there is a loss.
- 4.2.4** Area based habitats, hedgerow habitats and river habitats are considered separately in the tool to account for the differences in their ecological values and functions.

Baseline Formula

- 4.2.5** To calculate pre-development/enhancement baseline BNG units, habitat distinctiveness and condition are given numerical ‘scores’ which are multiplied, together with hectares or kilometres of habitat.

Habitat Distinctiveness

- 4.2.6** Habitats such as hard standing and buildings are assumed to have very low distinctiveness and are not included. The distinctiveness has been reduced for habitats which are either very small or created primarily for recreation/sport rather than biodiversity.
- 4.2.7** Each habitat parcel is assigned a multiplier based on the habitat distinctiveness. As a first step the area of the habitat parcel is multiplied by the habitat distinctiveness multiplier.

Condition Weighting

- 4.2.8** To enable the calculation of BNG units, an assessment of the condition of each habitat was made in accordance with The Biodiversity Metric 4.0 - habitat condition assessment sheets

(Natural England Joint Publication JP039, 2023d). These sheets provide a series of condition assessment criteria, specific to each habitat type. A condition score of 'good' is awarded when a habitat passes the majority of the criteria (the number of which varies between habitat types). A condition score of 'moderate' is awarded when a habitat pass just over half of the criteria and 'poor' to habitats that pass just under half or less. A habitat parcel comprising areas of differing condition should be assessed separately to one another.

- 4.2.9** Once all applicable criteria have been assessed, assign a condition score of Good, Moderate or Poor based on the scoring instructions provided within the condition sheets. An interim score of Fairly Poor or Fairly Good should only be used in exceptional circumstances where a habitat does not fit the standard outcome of Good, Moderate or Poor. Justification for allocating an interim condition score must be provided within the condition assessment proforma and within the Biodiversity Metric 4.0 assessors comments.
- 4.2.10** Some habitats are allocated a fixed condition score in the metric and do not require a condition assessment for the metric to be completed. For certain low and medium distinctiveness habitats there is a fixed option in the metric Condition Assessment N/A, for very low distinctiveness habitats the fixed option is N/A - Other (Natural England Joint Publication JP039, 2023d).
- 4.2.11** Habitat condition (or target condition when calculating post development BNG units from habitat creation or restoration) is assessed in the field and a multiplier applied, as shown in Table 4.2 below.

Table 4-2: Habitat condition weightings

Habitat Condition Multipliers	
Good	3.0
Fairly Good	2.5
Moderate	2.0
Fairly Poor	1.5
Poor	1.0
Condition Assessment N/A	1.0
N/A - Other	0

Strategic Significance

- 4.2.12** The location of habitat parcels is factored into the calculation based on whether the location has been identified locally as significant for nature conservation, as shown in Table 4.3.

Table 4-3: Strategic significance multipliers

Strategic Significance Multipliers		
High strategic significance	Within area formally identified in local strategy	1.15
Medium strategic significance	Location ecologically desirable but not in local strategy	1.1
Low strategic significance	Area/compensation not in local strategy/ no local strategy	1.0

Difficulty/Risk Factor

- 4.2.13** The risk associated with the creation or enhancement of a given habitat, and the difficulty of certain habitats to be successfully created, is assigned a difficulty multiplier to account for the uncertainty and risk of failure inherent in any action to create new habitat because of the unique physical and ecological features of every site, see Table 4.4.

Table 4-4: Risk multipliers

Difficulty categories	
Very High	0.10
High	0.33
Medium	0.67
Low	1.00

Time to Target Factor

- 4.2.14** The time scale of the creation/enhancement of habitats is assigned a temporal risk multiplier to compensate for the fact that there will not be an instant change in habitats and conditions which may result in a biodiversity deficit until the habitat has matured.
- 4.2.15** These time multipliers cover from zero years to over 30 years to reach the desired state and can be found in the “User Guide” (Natural England Joint Publication, 2023a).

5. Current Habitat Survey Results

5.1 Background

- 5.1.1 The purpose of this section is to provide habitat descriptions and condition assessments for the habitats recorded on the site during the most recent site visit. The current habitats on site are shown on Figure 2.

5.2 Habitat Description and Condition Assessment

- 5.2.1 The following UKHab habitat types were identified, with secondary codes given in brackets:

- c1 (10, 517, 600, 612) - Arable and horticulture (scattered scrub, recent management, ploughed, fence);
- g3c (801) - Other neutral grassland (road verge or island);
- h2a5 (11, 50) - Species-rich native hedgerow (Hedgerow with trees, ditch);
- h2a5 - Species-rich native hedgerow;
- h2a6 (516) - Other native hedgerow (active management)
- u1c (839) - Artificial unvegetated, unsealed surface (track)

- 5.2.2 These habitats are described below.

c1 (10, 517, 600, 612) Arable and Horticulture (Scattered Scrub, Recent Management, Ploughed, Fence)

- 5.2.3 This parcel comprises an arable field that has been recently ploughed (c1-1 on Figure 2). Wooden fences divide the field into section with scattered scrub in the form of bramble (*Rubus fruticosus* agg.) and young sycamore trees (*Acer pseudoplatanus*) growing on these fences.

- 5.2.4 This habitat does not require a condition assessment and is classified as Condition Assessment N/A.

g3c (801) Other Neutral Grassland (Road Verge or Island)

- 5.2.5 A grass verge along a road adjacent to site and the arable field (g3c-1 on Figure 2). Species recorded included occasional false oat grass (*Arrhenatherum elatius*) and cock's foot (*Dactylus glomerata*). Forbs included abundant dandelion (*Taraxacus officinalis* agg.), white clover (*Trifolium repens*), occasional thistle (*Cirsium* sp.), common ragwort (*Jacobaea vulgaris*), and rare common nettle (*Urtica dioica*).

- 5.2.6 The condition of the habitat was assessed as Poor, as the habitat passes three of six criteria for this habitat type and fails criterion A.

h2a5 (11, 50) Species-Rich Native Hedgerow (Hedgerow with Trees)

- 5.2.7** A well-established hedgerow with trees is present at the south of the site (h2a5-1 on Figure 2). Woody species included abundant hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*), rare oak (*Quercus robur*), and occasional spindle (*Euonymus europaeus*), wild privet (*Ligustrum vulgaris*), willow (*Salix* sp.), ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*) and dog rose (*Rosa canina*). Other species included abundant bramble and common ivy (*Hedera helix*), with ground flora including frequent cock's foot (*Dactylus glomerata*), and common nettle, occasional willowherb (*Epilobium* sp.), false oat grass, and cow parsley (*Anthriscus sylvestris*).
- 5.2.8** The condition of the habitat was assessed as Good, as the habitat passes eight out of 10 criteria for this habitat type, failing criteria C2 (nutrient enriched perennial vegetation) and D2 (current damage).

h2a5 (11) Species-Rich Native Hedgerow (Hedgerow with trees)

- 5.2.9** A hedgerow runs along the eastern boundary (h2a5-2 on Figure 2) of the site and includes dominant hawthorn, frequent elm (*Ulmus* sp.), occasional ash, sycamore, hazel (*Corylus avellana*) and dog rose. Other species included abundant bramble, and common ivy, with ground flora including abundant cock's foot, and common nettle, frequent cow parsley (*Anthriscus sylvestris*), and rare mugwort (*Artemisa vulgaris*), herb robert (*Geranium robertianum*) and dock (*Rumex* sp.). A wet ditch runs at the base of the hedgerow, but lies outside the red line boundary.
- 5.2.10** The condition of the habitat was assessed as Good, as the habitat passes eight out of 10 criteria for this habitat type, failing criteria C2 (nutrient enriched perennial vegetation) and D2 (current damage).

h2a6 (516) Other Native Hedgerow (Active Management)

- 5.2.11** A species poor hedgerow is located in the north west of the site (h2a6-1 on Figure 2). The hedgerow contains willow, hawthorn, beech (*Fagus sylvatica*) and blackthorn.
- 5.2.12** The condition of the habitat was assessed as Moderate, as the habitat passes four out of eight criteria for this habitat. The hedgerow fails criteria A1 (height), A2 (width), C1 (undisturbed ground and perennial vegetation), and D2 (current damage), which includes two attributes in one functional group.

u1c (839) Artificial Unvegetated Unsealed Surface (Track)

- 5.2.13** An access track containing vegetation such as ribwort plantain (*Plantago lanceolata*) and dandelion (*Taraxacum officinale* agg.) is present in the south of the site (u1c-1 on Figure 2).
- 5.2.14** This habitat does not require a condition assessment and is classified as Condition Assessment N/A.

6. Baseline Habitats

6.1 Background

- 6.1.1 The purpose of this section is to note the habitats on site prior to their alteration for which the baseline will be calculated from that included in Aspect Ecology (2022a; 2022b) reports. The habitats used for the baseline are shown on Figure 3.

6.2 Habitat Description and Condition Assessment

- 6.2.1 The following UKHab habitat types were noted for the parcel habitats currently corresponding to c1-1:

- h3d (612) - Bramble scrub (fence);
- g3c (81, 103) - Other neutral grassland (ruderal or ephemeral, horse grazed); and
- g4 (103) - Modified grassland (horse grazed).

- 6.2.2 These habitats are described in detail within the Aspect Ecology PEA reports (2021a; 2021b) and BNG assessment reports (2022a; 2022b). A brief description and the habitat conditions are provided below.

h3d (612) - Bramble Scrub (Fence)

- 6.2.3 The habitat is described as: *"Areas of bramble scrub associated with the post and rail fences."*

- 6.2.4 This habitat does not require a condition assessment and is classified as Condition Assessment N/A.

g3c (81, 103) Other Neutral Grassland (Ruderal/Ephemeral, Horse Grazed)

- 6.2.5 The habitat was *"considered to be other neutral grassland due to the species per m²."* The field was horse grazed with a uniformly short sward height of 2cm in the centre and a longer sward height at the edges and there was *"a single small area of tall ruderal vegetation to the southeast and a farm track at the south"*.

- 6.2.6 The condition of the other neutral grassland habitat was assessed as Moderate, as it passed five of seven criteria for this habitat type. The habitat failed criteria C and E. The small patch of tall ruderal vegetation was assessed as being in **Poor** condition as it passed only one criterion for this habitat type.

g4 (103) Modified Grassland (Horse Grazed)

- 6.2.7 The habitat was *"classified as modified grassland, and as it supports less than 6 species per m²."*

- 6.2.8** The condition of the habitat was assessed as Poor, as it passed four of six criteria for this habitat type. The parcel failed criteria A, B and E.

7. Biodiversity Metric

7.1 Background

7.1.1 The full workings of the assessment and calculations are provided within the Biodiversity Metric 4.0 calculator, shown in Appendix 1.

7.1.2 The pre-development layout is shown on Figure 3 and the post-development layout is shown on Figure 4.

7.2 Biodiversity Net Gain

7.2.1 The headline results of the BNG assessments are provided in Table 7-1 below. Overall, the development will result in a loss of 22.40 habitat units (-81.94%) but a net gain of 1.52 hedgerow units (+16.18%). The current plans do not satisfy the trading rules regarding habitats, as there is insufficient medium distinctiveness habitats to offset what has been lost. Guidance on how to fulfil the trading rules is provided in

7.2.2

7.2.3 Table 7-3.

Table 7-1 Headline BNG results

	Baseline Units	Post-Development Units	Net Change
Habitats	27.34	4.94	-22.40 (-81.94%)
Hedgerow	9.41	10.35	+1.52 (16.18%)

7.2.4 As shown above, the proposed development will deliver a net loss of habitat units on site. Therefore, in order to achieve a 10% gain, this development will need to provide off-site habitat creation to obtain the required units and to satisfy the trading rules. Table 7-2 indicates that an additional 25.14 habitat units will need to be delivered to achieve 10% net gain.

Table 7-2 Units required to achieve 10% net gain

	Baseline Units	Baseline Units +10%	Post-Development Units	Additional Units Required to Achieve 10% Net Gain
Habitats	27.34	30.07	4.94	25.14

7.2.5 Table 7-3 outlines which habitat units are required in order to fulfil the trading summary.

Table 7-3 Units required to fulfil trading summary

Habitat / Hedgerow / Watercourse	Habitat Distinctiveness	Trading Rule	Number of Units Required
Other neutral grassland	Medium	Same broad habitat or higher distinctiveness habitat required	24.08

8. Conclusion

- 8.1.1** A BNG calculation was undertaken for a residential development on an area of land north of Camp Road, Upper Heyford. In line with Natural England guidance, the baseline units were calculated using the PEA and BNG assessments undertaken by Aspect Ecology for Pye Homes in 2021 and 2022, respectively, and the UKHab survey undertaken by Thomson Environmental Consultants in September 2023. Under the current proposals, the development will result in a net loss in habitat units but a net gain of hedgerow units. The current plans do not satisfy the trading rules regarding the habitat units. David Wilson Homes will need to provide off-site habitat creation, in agreement with Cherwell District Council, to obtain the required units and to satisfy the trading rules to ensure the development is compliant with legislation and policy relating to BNG.

9. References

Aspect Ecology Ltd (2021a) Land off Larsen Road, Upper Heyford Updated Ecological Appraisal, September 2021.

Aspect Ecology Ltd (2021b) Land south of Heyford Grange, Letchmere Farm, Upper Heyford, Oxfordshire Ecological Appraisal. October 2021.

Aspect Ecology Ltd (2022a) Land off Larsen Road, Upper Heyford Biodiversity Net Gain Assessment. December 2022.

Aspect Ecology Ltd (2022b) Land south of Heyford Grange, Letchmere Farm, Upper Heyford, Oxfordshire Biodiversity Net Gain Assessment. December 2022.

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester, England.

Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment. E & FN Spon, London, England.

Natural England Joint Publication JP039 (2023a) The Biodiversity metric 4.0 User Guide. Natural England.

Natural England Joint Publication JP039 (2023b) The Biodiversity metric 4.0 User Guide - Technical Annex 2. Natural England.

Natural England Joint Publication JP039 (2023c) The Biodiversity Metric 4.0 Calculation Tool. Natural England.

Natural England Joint Publication JP039 (2023d) The Biodiversity Metric 4.0 Technical Annex 1: Condition Assessment Sheets and Methodology, Natural England

Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S. J., Heaver, M., Scott, S. H., Treweek, J., Butcher, B., Stone, D. (2022) Biodiversity metric 3.1: Auditing and accounting for biodiversity - Metric 3.1 Calculation Tool. Natural England.

Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S. J., Heaver, M., Scott, S. H., Treweek, J., Butcher, B., Stone, D. (2023) Biodiversity metric 4.0: Auditing and accounting for biodiversity - Metric 4.0 Calculation Tool. Natural England.

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UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at www.ukhab.org)

Appendix 1: BNG Calculator

The Biodiversity Metric 4.0 - Calculation Tool

Start page

Project details			
Planning authority:	Cherwell District Council		
Project name:	Land North of Camp Road		
Applicant:	David Wilson Homes		
Application type:	Full		
Planning application reference:			
Completed by:			
Date of metric completion:	Alice Samuel		
Reviewer:			
Version control:			
Consenting body reviewer:			
Date of consenting body review:			
Target % net gain:	10%		
Irreplaceable habitat present on-site at baseline:	No		
Total site area (including irreplaceable habitat area):	4.19	Irreplaceable habitat area at baseline:	0.00

Instructions

Main menu

Results

Land North of Camp Road
Headline Results
Scroll down for final results ▲

Return to
results menu

On-site baseline	Habitat units	27.34
	Hedgerow units	9.41
	Watercourse units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	4.94
	Hedgerow units	10.93
	Watercourse units	0.00
On-site net change (units & percentage)	Habitat units	-22.40
	Hedgerow units	1.52
	Watercourse units	0.00

On-site net gain is less than target set ▲

Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
Off-site net change (units & percentage)	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-22.40
	Hedgerow units	1.52
	Watercourse units	0.00
Spatial risk multiplier (SRM) deductions	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-22.40
	Hedgerow units	1.52
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-81.94%
	Hedgerow units	16.18%
	Watercourse units	0.00%

Total net gain achieved is less than target set ▲

Trading rules satisfied?	No - Check Trading Summaries ▲
--------------------------	--------------------------------

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	27.34	30.07	25.14
Hedgerow units	10.00%	9.41	10.35	0.00
Watercourse units	10.00%	0.00	0.00	0.00

Unit requirement met or surpassed ✓
Unit requirement met or surpassed ✓

Return to
results
menu

Trading
summary
hedgerows

Trading
summary
Watercourses

Trading Summary

Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Beispoke compensation likely to be required K	Yes ✓
High	Same habitat required =	Yes ✓
Medium	Same broad habitat or a higher distinctiveness habitat required (S)	No ▲
Low	Same distinctiveness or better habitat required ≥	No ▲

Very High Distinctiveness

Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Unit losses
Grassland - Lowland dry and grassland	Grassland	0.00	0.00	0.00	
Grassland - Lowland meadows	Grassland	0.00	0.00	0.00	
Grassland - Upland hay meadows	Grassland	0.00	0.00	0.00	
Heathland and shrub - Mountain heaths and willow scrub	Heathland and shrub	0.00	0.00	0.00	
Lakes - Aquifer fed naturally fluctuating water bodies	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Calaminarian grasslands	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Limestone pavement	Sparsely vegetated land	0.00	0.00	0.00	
Wetland - Reesiter bog	Wetland	0.00	0.00	0.00	
Wetland - Depressions on peat substrates (H7150)	Wetland	0.00	0.00	0.00	
Wetland - Peats (upland and lowland)	Wetland	0.00	0.00	0.00	
Wetland - Lowland raised bog	Wetland	0.00	0.00	0.00	
Wetland - Cossack valley mires (J1 D23.1)	Wetland	0.00	0.00	0.00	
Wetland - Purple moor grass and rush pastures	Wetland	0.00	0.00	0.00	
Wetland - Transition mires and quaking bogs (H7140)	Wetland	0.00	0.00	0.00	
Woodland and forest - Wood-pasture and parkland	Woodland and forest	0.00	0.00	0.00	
Rocky shore - High energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral seapools on peat, clay or chalk	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

Very High Distinctiveness Summary

Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
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High Distinctiveness

Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Losses not yet accounted for
Grassland - Traditional orchards	Grassland	0.00	0.00	0.00	
Grassland - Floodplain wetland meadows and CPGM	Grassland	0.00	0.00	0.00	
Grassland - Lowland calcareous grassland	Grassland	0.00	0.00	0.00	
Grassland - Tall herb communities (H6430)	Grassland	0.00	0.00	0.00	
Grassland - Upland calcareous grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Lowland Heathland	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Dunes with sea buckthorn (H2160)	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Upland heathland	Heathland and shrub	0.00	0.00	0.00	
Lakes - High alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Low alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Marl lakes	Lakes	0.00	0.00	0.00	
Lakes - Moderate alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Peat lakes	Lakes	0.00	0.00	0.00	
Lakes - Ponds (priority habitats)	Lakes	0.00	0.00	0.00	
Lakes - Temporary lakes ponds and pools (H3170)	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Coastal sand dunes	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Coastal vegetated shingle	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Inland rock outcrop and scree habitats	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Maritime cliff and slopes	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Open mosaic habitats on previously developed land	Urban	0.00	0.00	0.00	
Wetland - Reedbeds	Wetland	0.00	0.00	0.00	
Woodland and forest - Felled	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland beech and yew woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Native pine woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland birchwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland mixed sitewoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland oakwood	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Wet woodland	Woodland and forest	0.00	0.00	0.00	
Coastal lagoons - Coastal lagoons	Coastal lagoons	0.00	0.00	0.00	
Rocky shore - High energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral mud	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00	
Coastal saltmarsh - Saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Mussels	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Sabellaria	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Features of littoral sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral muddy sand	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral seapools	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

High Distinctiveness Summary

High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Unit Deficit: Like for like not satisfied	0.00

Medium Distinctiveness

Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change	Cumulative broad habitat change
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins pollen and nectar	Cropland	0.00	0.00	0.00	0.00
Cropland - Arable field margins meadow	Cropland	0.00	0.00	0.00	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Other neutral grassland	Grassland	-24.08	0.00	-24.08	-24.08
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Bracken scrub	Heathland and shrub	-0.98	0.00	-0.98	
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	0.98
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Willow scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	0.98	0.00	0.98	
Lakes - Ponds (non-priority habitats)	Lakes	0.00	0.00	0.00	0.00
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.00
Urban - Biodiverse green roof	Urban	0.00	0.00	0.00	
Individual trees - Urban tree	Individual trees	0.00	0.00	0.00	1.04
Individual trees - Rural tree	Individual trees	0.00	0.00	0.00	
Woodland and forest - Other broad-leaf pine woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland, broadleaved	Woodland and forest	0.00	0.00	0.00	0.00
Woodland and forest - Other woodland, broad	Woodland and forest	0.00	0.00	0.00	
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures with integrated greening of grey infrastructure (IGGI)	Intertidal hard structures	0.00	0.00	0.00	
		-22.98	0.00	-22.98	

Medium Distinctiveness Summary

Medium Distinctiveness Units available to offset Lower Distinctiveness Deficit	1.10
Medium Distinctiveness Broad Habitat Deficit to be offset by trading up	-24.08
Higher Distinctiveness Surplus Units minus Medium Distinctiveness Broad Habitat Deficit	-24.08
Cumulative surplus of units	-22.98

Low Distinctiveness

Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change
Cropland - Cereals crops	Cropland	0.00	0.00	0.00
Cropland - Horticulture	Cropland	0.00	0.00	0.00
Cropland - Intensive arable	Cropland	0.00	0.00	0.00
Cropland - Non-cereal crops	Cropland	0.00	0.00	0.00
Cropland - Temporary grass and clover leys	Cropland	0.00	0.00	0.00
Cropland - Winter stubble	Cropland	0.00	0.00	0.00
Grassland - Mixed grassland	Grassland	0.00	0.00	0.00
Grassland - Bracken	Grassland	0.00	0.00	0.00
Heathland and shrub - Biodiversity scrub	Heathland and shrub	0.00	0.00	0.00

Low Distinctiveness Summary

Low Distinctiveness net change in units	0.58
Cumulative surplus of units	-22.40

Lakes - Ornamental lake or pond	Lakes	0.00	0.00	0.00
Sparsely vegetated land - Bare ground/interior	Sparsely vegetated land	0.00	0.00	0.00
Sparsely vegetated land - Tall forbs	Sparsely vegetated land	0.00	0.00	0.00
Urban - Backwater	Urban	0.00	0.00	0.00
Urban - Bare ground	Urban	0.00	0.00	0.00
Urban - Alleys/paths	Urban	0.00	0.00	0.00
Urban - Fences/bound green wall	Urban	0.00	0.00	0.00
Urban - Ground based green wall	Urban	0.00	0.00	0.00
Urban - Ground level planters	Urban	0.00	0.00	0.00
Urban - Other green roof	Urban	0.00	0.00	0.00
Urban - Intensive green roof	Urban	0.00	0.00	0.00
Urban - Introduced shrub	Urban	0.00	0.00	0.00
Urban - Rain garden	Urban	0.00	0.00	0.00
Urban - Actively worked sand pit/quarry or open cast mine	Urban	0.00	0.00	0.00
Urban - Sustainable drainage system	Urban	0.00	0.00	0.00
Urban - Vacant or derelict land	Urban	0.00	0.00	0.00
Urban - Vegetated garden	Urban	0.00	0.00	0.00
Woodland and forest - Other coniferous woodland	Woodland and forest	0.00	0.00	0.00
Coastal saltmarsh - Artificial saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00
Intertidal sediment - Artificial littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mud	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral muddy sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral seagrass	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral biogenic reefs	Intertidal sediment	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures	Intertidal hard structures	0.00	0.00	0.00
Intertidal hard structures - Artificial features of hard structures	Intertidal hard structures	0.00	0.00	0.00
Heathland and shrub - Other sea buckthorn scrub	Heathland and shrub	0.00	0.00	0.00
		0.00	0.00	0.00

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Trading summary Area Habitats

Trading summary Watercourses

Trading Summary			
Distinctiveness Group	Trading Rule		Trading Satisfied?
Very High	Same habitat required =		Yes ✓
High	Like for like or better		Yes ✓
Medium	Same distinctiveness or better habitat required		Yes ✓
Low/Very Low	Same distinctiveness or better habitat required		Yes ✓

Very High Distinctiveness

Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Species-rich native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00
	0.00	0.00	0.00

High Distinctiveness

Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Species-rich native hedgerow with trees	0.16	0.00	0.16
Species-rich native hedgerow - associated with bank or ditch	0.00	0.00	0.00
Native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00
	0.16	0.00	0.16

Medium Distinctiveness

Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Species-rich native hedgerow	1.37	0.00	1.37
Native hedgerow - associated with bank or ditch	0.00	0.00	0.00
Native hedgerow with trees	0.00	0.00	0.00
Ecologically valuable line of trees	0.00	0.00	0.00
Ecologically valuable line of trees - associated with bank or ditch	0.00	0.00	0.00
	1.37	0.00	1.37

Low/Very Low Distinctiveness

Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Native hedgerow	0.00	0.00	0.00
Line of trees	0.00	0.00	0.00
Line of trees - associated with bank or ditch	0.00	0.00	0.00
Non-native and ornamental hedgerow	0.00	0.00	0.00
	0.00	0.00	0.00

Very High Distinctiveness Summary

Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Unit Deficit: Like for like not satisfied	0.00

High Distinctiveness Summary

High Distinctiveness Units available to offset lower distinctiveness deficit	0.16
High Distinctiveness Deficit to be offset by trading up	0.00
Higher Distinctiveness surplus units minus any high distinctiveness deficit	0.00

Medium Distinctiveness Summary

Units available from higher distinctiveness habitats	0.16
Medium Distinctiveness net change in units	1.37
Cumulative availability of units	1.53

Low Distinctiveness Summary

Low Distinctiveness net change in units	0.00
Cumulative availability of units	1.53

Project Name: Land North of Camp Road Map Reference:

A-1 On-Site Habitat Baseline

Condensed / Show Columns

Condensed / Show Rows

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Area habitat summary	
Total Net this Change	-52.49
Total Net Wt Change	-81.549
Trading Rules Satisfied	No - check trading summary A

Existing area habitats				Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline
Ref	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier		
1	Crowland	Modified grassland	0.8442	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	None Distinctiveness or better habitat required 0	1.49
2	Crowland	Other neutral grassland	3.1718	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	None Distinctiveness or better habitat required 0	25.37
3	Sparsely vegetated land	Buckley/Hymenai	0.007	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	None Distinctiveness or better habitat required 0	0.01
4		Bramble and shrub		0.0654	Medium	4	Condition Assessment N/A	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	None Distinctiveness or better habitat required 0
5	Urban	Developed land, sealed surface	0.1057	Very Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00

Retention category biodiversity value						Single-point compensation agreed for unacceptable losses	Comments		
Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost		User comments	Consenting body comments	OS reference number
		0.00	0.00	0.04	1.49				01 - and 01-2
		0.00	0.00	3.17	25.37				02-1
		0.00	0.00	0.01	0.01				01-1
		0.00	0.00	0.02	0.26				03-1 - 03-5
		0.00	0.00	0.10	0.00				01b-1

Project Name: Land North of Camp Road Map Reference:				Hedgerow summary				
B-1 On-Site Hedge Baseline				Total Net Unit Change		1.83		
				Total Net % Change		16.18%		
				Trading Rules Satisfied		Yes ✓		
Condensate / Show Columns		Condensate / Show Rows						
Main Menu		Instructions						
	Existing hedgerow habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
Baseline ref	Hedge number	Hedgerow type	Length (km)	Distinctiveness	Condition	Strategic significance		Total hedgerow units
1	h2a5-1	Species-rich native hedgerow with trees	0.107	High	Good	Area/compensation not in local strategy/ no local strategy	Like for like or better	1.93
2	h2a5-2	Species-rich native hedgerow with trees - associated with bank or ditch	0.3	V.High	Good	Area/compensation not in local strategy/ no local strategy	Like for like	7.20
3	h2a5-1	Native hedgerow	0.07	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness based on better	0.28

Retention category biodiversity value						Comments		
Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	User comments	Consenting body comments	GIS reference number
		0.00	0.00	0.11	1.93			
0.3		7.20	0.00	0.00	0.00			
		0.00	0.00	0.07	0.28			

Project Name: Land North of Camp Road Map Reference: B-2 On-Site Hedge Creation				Hedge row summary			
				Total Net Unit Change		1.68	
				Total Net % Change		18.18%	
				Treeding Rules Detailed		Yes ✓	
Condense / Show Columns				Condense / Show Rows			
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Baseline ref	New hedge number	Proposed habitats		Length (m)	Distinctiveness		Score	Condition		Strategic significance				Temporal multiplier				Difficulty risk multipliers				Hedge units delivered	Comments		
		Habitat type			Distinctiveness	Score		Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Standard Time to target condition (years)	Habitat created in advance (years)	Delay in starting habitat creation (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation		Difficulty multiplier applied	User comments	Consenting body comments
1		Native hedge row	0.144	Low	2	Poor	1	Arrecompensation not in local strategy or local strategy	Low Strategic Significance	1	1	0	0	Standard time to target condition applied	1	0.048	Low	Standard difficulty applied	Low	1	0.08				
2		Species rich native hedge row	0.024	Medium	4	Moderate	2	Arrecompensation not in local strategy or local strategy	Low Strategic Significance	1	6	0	0	Standard time to target condition applied	6	0.017	Low	Standard difficulty applied	Low	1	1.07				
3		Species rich native hedge row with trees	0.048	High	6	Moderate	2	Arrecompensation not in local strategy or local strategy	Low Strategic Significance	1	10	0	0	Standard time to target condition applied	10	0.030	Low	Standard difficulty applied	Low	1	2.08				