

Stourhead Western Estate - Top Lane Development

BIODIVERSITY NET GAIN – ASSESSMENT REPORT



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November 2025

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Non -technical summary

Vikki Gallagher, sub-consulted through D & H Pengelly, has been commissioned by Nick Hoare of Stourhead Western Estate, to produce a BNG assessment report for their small build site at Top Lane.

The proposed development is for the construction of two residential bungalows. The project has been designed to ensure that any habitat losses arising from the development are appropriately mitigated and that opportunities for ecological enhancement are incorporated to align with the surrounding landscape character.

This report provides an assessment of the site's baseline ecological condition and identifies suitable measures to achieve, and exceed, the mandatory 10% biodiversity net gain requirement.

The client is committed to following the process set out in BS 8683 and the implementation of the proposed habitat creation and management measures will be secured through a long-term management plan, ensuring that biodiversity gains are maintained for the minimum period of 30 years.

These commitments are expected to be formalised through the appropriate planning mechanism, such as a Section 106 agreement or conservation covenant, to ensure ongoing compliance and effective delivery of the BNG objectives.

1. Introduction

This first-stage report provides a baseline habitat assessment and feasibility appraisal for achieving Biodiversity Net Gain (BNG) within the proposed development site. It is prepared to support a planning application / pre-application consultation with Wiltshire Council and follows Defra / Natural England guidance and the Biodiversity Metric v4.0.

1.1 Site Background

The proposed 0.17ha development site at Top Lane (BA12 6QA) lies within the southeast corner of a larger (4.92 ha) permanent grassland parcel situated within the Cranborne Chase National Landscape (formally AONB).

Historically and currently, the grassland is managed under a low-intensity regime, involving seasonal sheep grazing and the exclusion of artificial inputs, reseeding, or ploughing to maintain the sward's natural composition.

The development site forms part of a wider mosaic of semi-natural habitats, including permanent grassland, hedgerows, small areas of scrub, and patches of deciduous woodland. This network of habitats provides important ecological connectivity across the surrounding landscape, supporting the movement and dispersal of wildlife typical of the Blackmore Vale and Vale of Wardour character area to which it belongs.

1.2 Project Proposal and Description

The proposed development site is within a semi-rural setting characterised by approximately six existing dwellings within a few hundred metres of the site, forming a small rural cluster.

The site itself is adjacent a public road, providing direct access without the need for significant alteration to the surrounding landscape or access routes.

The proposal outlines the construction of two single-storey residential bungalows with associated garden areas and small sheds; stock proof fencing will surround the site.

The development footprint has been carefully considered to minimise land take and landscape impact, with gardens designed to include vegetated areas to provide both amenity and biodiversity value. Due to the natural slope of the land, the small rear garden strip will be formed as a stepped terrace, ensuring level plots while maintaining soil stability and opportunities for planting.

In addition, small green roofs are proposed for the garden sheds to provide minor biodiversity enhancements, this feature is below the minimum mapping threshold for inclusion within the biodiversity metric.

It is proposed that the land immediately surrounding the built footprint will be established as mixed native scrub, creating a natural transition between the developed plots and the wider rural landscape.

The surrounding area is characterised by a mosaic of woodland, parkland, and grassland, and the introduction of native scrub will strengthen ecological connectivity within this network.

This habitat will provide valuable resources for local wildlife, including nesting opportunities for birds, foraging for pollinators, and shelter for small mammals. In addition to its ecological benefits, the mixed scrub will help to soften the visual impact of the new dwellings, ensuring the development integrates sympathetically with the existing landscape character.



Figure 1 – Map highlighting the redline boundary and proposed development/mitigations areas.

2. Methodology

This UKHab and BNG assessment uses the following industry recognised best practice methodologies:

- UKHab Ltd (2023) UKHabitat Classification Version 2.0
- CIEEM, IEMA & CIRIA (2019) Biodiversity Net Gain: Good Practice Principles for Development. A Practical Guide
- Natural England (2024) The Biodiversity Metric 4.0: User Guide

2.1 Desk Based Study

A desk-based study was conducted before undertaking the required UKHab survey. This was to establish the location of any significant habitats or species within the project area as well as statutory or non-statutory designations within proximity to the proposed development area.

The desk research entailed data collection from the records available online from the NBN Gateway, Natural England, Magic Map and LandApp.

The search included a 2 km radius around the site for statutory and non-statutory designations, with an extended 5 km radius applied for international designations (Special Areas of Conservation, Special Protection Areas, and Ramsar sites) in accordance with CIEEM (2019) and Natural England guidance.

Priority habitats and species records were reviewed within 1 km of the site to identify any potential ecological constraints or opportunities relevant to the small site context (<1 ha)

The following classifications have been identified within the project vicinity (there were no international designations within the 5km search radius):

- **Statutory designated sites within 2km radius of the proposed site:** Sites of Special Scientific Interest (SSSI), Scheduled Monuments (SM), Conservation Area, Registered Parks and Gardens.
- **Priority habitats within 1km radius of the proposed site:** plantation on ancient woodland sites (PAWS), Deciduous woodland, good quality semi-improved grassland, wood pasture and parkland

A species search was undertaken using data from the **NBN Atlas** (National Biodiversity Network). The search covered a **1 km radius** from the site centre. No notable or legally protected species records of relevance to the proposed development were identified within this search area.

A summary of species records, including mammals, birds, amphibians, reptiles, and invertebrates, is provided in the accompanying information pack.

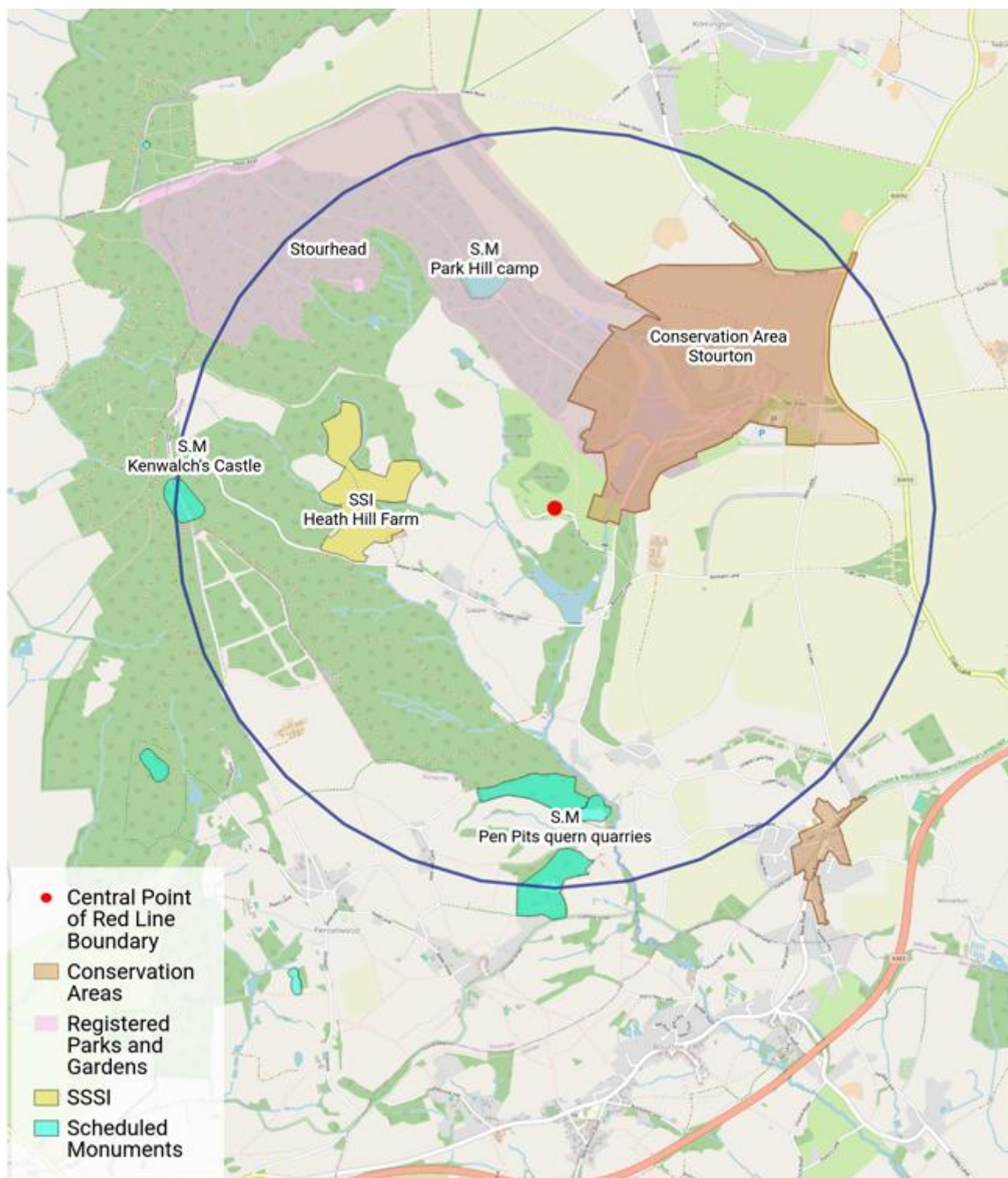


Figure 2 – Map highlighting statutory designation sites within the 2km search radius

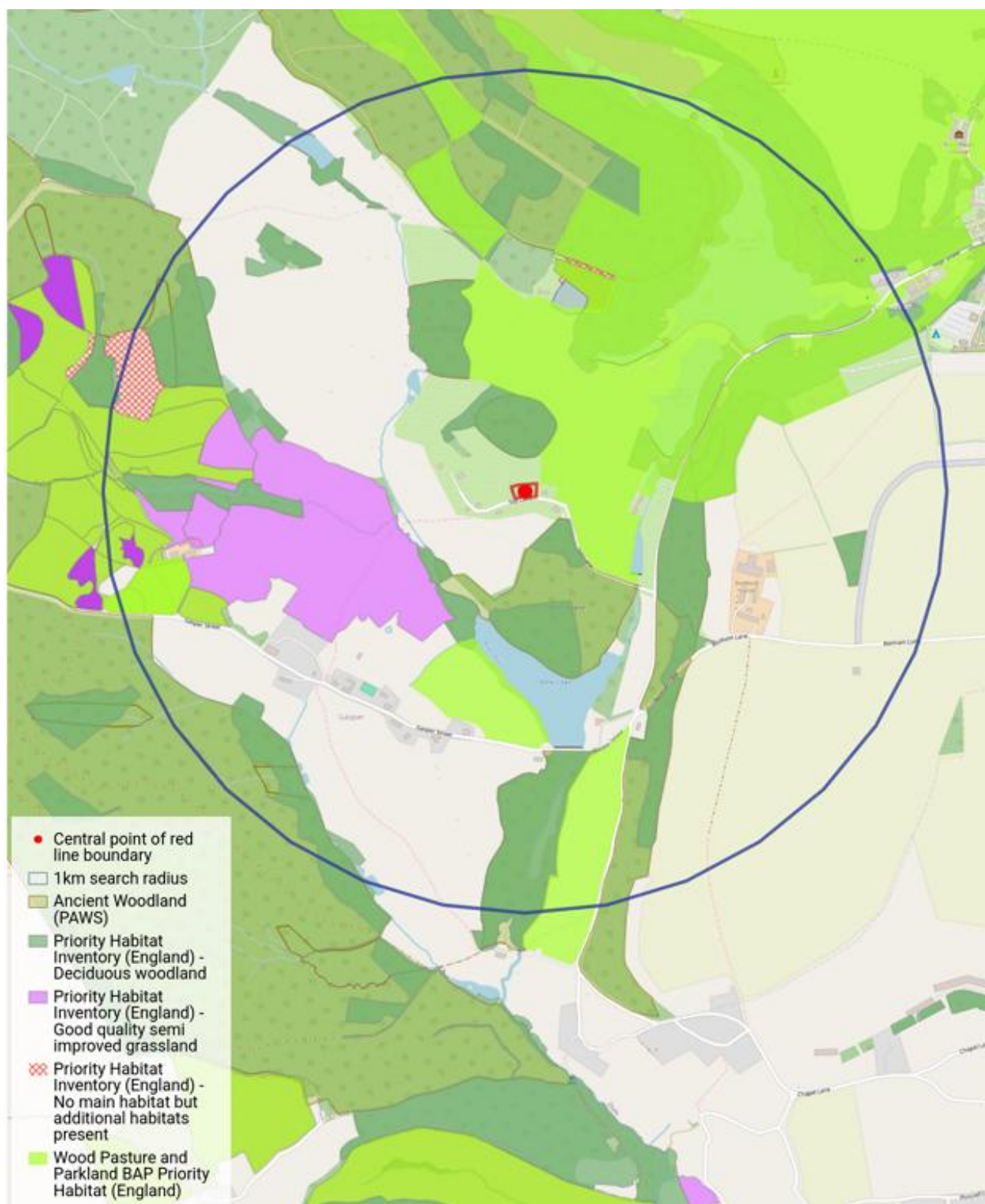


Figure 3 – Map highlighting the priority habitats within the 1km search radius

2.2 Field Survey

A baseline habitat survey was conducted on 23/10/2025 by Vikki Gallagher of D & H Pengelly Partnership. The weather conditions were mild, dry and bright for the time of year. The UKHab survey was a walkover of the redline boundary using the 'W' technique and followed the standard methodology published in the UK Habitat Classification User Manual V2.

A Habitat Condition Assessment was carried out for the grassland to determine the ecological status of that habitat. The condition assessment forms were identified during the desk-based study and assessed using criteria in the Natural England Biodiversity Metric 4.0.

Full survey results, including species lists and photographs/photo location maps can be seen in associated information pack.

2.3 Considerations

The survey was undertaken outside the optimal period for botanical assessment, and as such, flowering species were largely absent at the time of survey. This limited the ability to undertake a full botanical inventory and to accurately assess the species richness of the grassland habitat.

The assessment therefore relied on vegetative characteristics, sward structure, and management indicators to determine habitat type and condition in accordance with the UKHab classification and Biodiversity Metric guidance.

While a spring or summer survey may record additional species diversity, the data collected are considered sufficient to provide a reliable baseline for Biodiversity Net Gain calculations and habitat enhancement planning.

The surveyor is an independent environmental consultant who specialises in mainly agri environment schemes, her background is within archaeology and environmental land management, and she has worked for a range of environmental charities undertaking habitat surveys and projects.

She recently completed a UKHab survey course, a UKHab course on condition assessments and a BNG metric course with CIEEM.

3. Results

3.1 UKHab survey and condition assessment

The UKHab Assessment identified two broad habitat types within the redline boundary:

- Grasslands
- Bracken

The location, extent, and UKHab codes of these habitats can be seen on the map below. Full definitions of these habitats and the use of the coding hierarchy can be found in the document 'UKHab Category Definitions V2'.

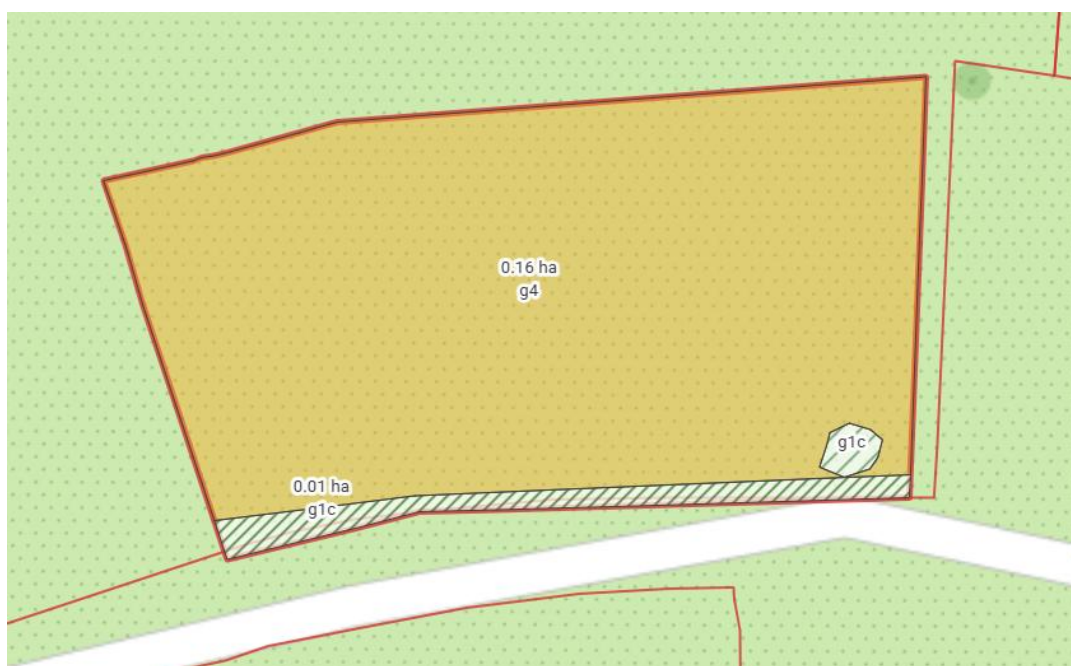


Figure 4 – Map showing UKHab coding and area size

The grassland within the red-line boundary has been classified as Modified Grassland (UKHab code g4c).

The sward is dominated by grasses, visible were common bent (*Agrostis capillaris*) and brome (*Bromus* sp.). Creeping buttercup (*Ranunculus repens*) and clover (*Trifolium* sp.) were frequent while occasional herbs such as yarrow (*Achillea millefolium*), mouse-ear (*Cerastium fontanum*), and thistle (*Cirsium* sp.) were also present.

Scattered tussocks of soft rush (*Juncus effusus*) are present across the site but comprise less than 25% of the total cover; these can be described as *frequent to locally abundant* in small patches.

Overall, the sward is species-poor and representative of modified grassland typical of lowland pastoral landscapes, supporting low to moderate ecological value.

A condition assessment was carried out for the grassland survey, a summary of this is in the table below. A full copy of the condition assessment form is attached.

Condition sheet	Total N° of sheets used	Number of parcels each condition achieved		
		Good	Moderate	Poor
Grassland – Low distinctiveness	1			1

Table 1 – Summary of condition score

The grassland was assessed as being in Poor condition based on DEFRA Metric 4.0 condition assessment criteria.

During the survey, the sward did not consistently support six to eight vascular plant species per 1 m², and in most areas, fewer than two forb species were observed within a typical sampling area.

The sward is dominated by common grasses with low structural diversity, limited evidence of indicator species, and localised dominance of *Juncus effusus* and *Ranunculus repens*, both of which are characteristic of modified grassland.

4. Biodiversity Net Gain (BNG) Calculation Results

Although the development at Top Lane qualifies as a small site, the habitat data were entered into the Full Biodiversity Metric 4.0 rather than the Small Sites Metric (SSM).

This decision was made as the proximity to nearby priority habitats (within 500m of the site) resulted in the SSM recommending the use of the full metric. Accordingly, the full metric was adopted to ensure a robust and proportionate assessment.

The strategic significance of each habitat was determined using professional judgement, informed by the Cranborne Chase National Landscape (AONB) Management Plan (2024–2029) and relevant Wiltshire Landscape Character Assessments.

Where no specific references were found, habitats were classified as “Area/compensation not in local strategy” in accordance with the DEFRA Metric 4.0 guidance.

Given that local authorities may hold additional spatial strategies or unpublished biodiversity opportunity data, the classifications used here should be reviewed and confirmed by the LPA’s ecology or biodiversity officer.

4.1 Baseline result

Based on the UKHab survey and associated condition assessment, the current baseline value of the site totals **0.34 habitat units**.

On-site baseline	<i>Area habitat units</i>	0.34
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00

4.2 Development and Habitat Creation

The proposed development of two residential bungalows and associated infrastructure inevitably results in a loss of baseline habitat, primarily through the conversion of areas of modified grassland and bracken to sealed surfaces and managed garden space. When modelled within the Biodiversity Metric, the development alone would result in a net loss of biodiversity units.

To establishment of mixed native scrub around the built footprint provides meaningful ecological enhancement, improving structural diversity and connectivity with the surrounding grassland and woodland landscape.

The client intends to manage the mixed scrub habitat to achieve good condition in accordance with the metric criteria.

4.3 Summary

In total, after development and creation of native mixed scrub to the potential Biodiversity units total is increased to 0.72. That is an overall change of 0.38 habitat units from the baseline.

The metric summary table below shows a breakdown of the results. It clearly shows that the on-site net change and the percentage increase exceed the standard 10% net gain above baseline conditions.

On-site baseline	Area habitat units	0.34	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Area habitat units	0.72	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	Area habitat units	0.38	113.02%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

5. Next Steps

The UKHab survey and associated metric results provide a basis for the project and its potential BNG status going forward.

If planning permission is granted, any biodiversity units generated or retained on-site will need to be formally recorded and secured through one of the recognised mechanisms — either via the Local Planning Authority (LPA), through Nature Credits/Nature Banks, or by entering a Conservation Covenant with a responsible body.

In any scenario the regulator will need to be satisfied that the baseline is accurate and a new UKHab survey within a more favourable time of year may need to be undertaken.

Any biodiversity units claimed are deliverable over a minimum of 30-year period. Therefore, a habitat monitoring, and management plan (HMMP) should be put in place. This will detail the ongoing management and a monitoring schedule which will demonstrate how the project will fulfil its biodiversity obligations and actions over the coming years and decades.

References

CIEEM (2019) [Biodiversity net gain. Good practice principles for development. A practical guide \(cieem.net\)](https://cieem.net)

Cranborne Chase AONB Partnership (2019). Cranborne Chase Partnership Plan 2019-2024. Available at: [Cranborne Chase Partnership Plan 2019-2024](#)

Natural England: National Character Area Profile 133: Blackmore Vale and Vale of Wardour. Available at: [Blackmore Vale and Vale of Wardour - National Character Area Profiles](#)

Natural England (2023) [The Biodiversity Metric 4.0 - User guide.pdf](#)

UK Biodiversity Action Plan Priority Habitat Descriptions. Available: [UK BAP Priority Habitats | JNCC - Adviser to Government on Nature Conservation](#)

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

[Wiltshire Biodiversity Action Plan \(BAP\) 2008](#)