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Biodiversity Assessment

Land Adjacent 2 And 3 Wells Cottages, Smiths End Lane, Barley, Hertfordshire,
SG8 8LJ

November 2025

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Project: Land Adjacent 2 And 3 Wells Cottages, Smiths End Lane, Barley, Hertfordshire, SG8 8LJ

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This Biodiversity Net Gain report contains recommendations on measures for achieving Biodiversity Net Gain. These recommendations do not constitute a design for Biodiversity Net Gain. In submitting these recommendations, the ecology team has no Design Liability associated with these recommendations for Biodiversity Net Gain.

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1. Executive Summary

1.1. Biodiversity Net Gain (BNG) is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. Defra's Main Sites Metric¹ uses habitats to proxy for the broader biodiversity types scored according to their relative biodiversity potential.

1.2. The proposed post-intervention biodiversity score indicates that the Biodiversity Net Gain target has been met, with a total net change of +19.37% in Area-based Habitats Units and +67.41% net change in Hedgerow Units (Main Sites Metric).

1.3. The proposed development site contains local habitats with no irreplaceable, notable, statutory, non-statutory, or priority habitats.

2. Introduction

Purpose of the Report

2.1. The report aims to provide a clear and consistent document with which the developer can demonstrate their Biodiversity Net Gain. In addition, the planning authority can check whether the proposals meet the Biodiversity Net Gain objective. The developer is committed to achieving the project's positive Biodiversity Net Gain.

2.2. The report's scope addresses the feasibility of demonstrating Biodiversity Net Gain by calculating the predicted changes in biodiversity value with the proposed development. A Biodiversity Impact Assessment is required to provide a measurable calculation of the biodiversity units on the site before and after the proposed development. In addition, the report audits the land's biodiversity value and calculates the losses and gains in biodiversity value from changes and actions that affect biodiversity.

2.3. The Main Sites Biodiversity Metric does not explicitly include species and uses habitat as a proxy for broader biodiversity. Different habitats are scored according to their relative biodiversity potential, maintaining the same levels of species protection.

2.4. As the British Standard BS 42020:2013² advised, a suitably professional ecologist is appraised to ensure a rigorous and thorough independent review.

General Description

¹ Defra (2024). *The Main Sites Metric (Statutory Biodiversity Metric) User Guide*. Natural England, Department for Environment Food and Rural Affairs.

² British Standard (2013). *Biodiversity: Code of Practice for Planning and Development, BS 42020:2013*.

2.5. The site is Land Adjacent 2 And 3 Wells Cottages, Smiths End Lane, Barley, Hertfordshire, SG8 8LJ.

Development Proposal

2.6. The proposal is for a change of use from an office to residential dwellings, including parking and a bike shelter.

Planning Status

2.7. The developer will submit a planning application.

Aims and Objectives

2.8. This report addresses the following purposes:

- To determine the predicted post-intervention percent net change in biodiversity value as calculated using the latest Defra calculation tool (Main Sites Metric).

Planning Policy and Legislation

2.9. National Planning Policy Framework policy states that planning should provide Biodiversity Net Gains. National Planning Policy Framework³ (NPPF) paragraphs 192(b), 193(d), and the Natural Environment Planning Practice Guidance (PPG) refer to this policy requirement.

3. Methodology

Assessor's Qualifications and Competence

3.1. The ecological officer overseeing this assessment has a strong academic and practical foundation in environmental conservation. With a BSc (Hons), MENV, and MSc, they have extensive experience of conducting ecological fieldwork, surveys, habitat assessments and restoration. This expertise has developed through working with key organisations such as Local & National Park Authorities, Wildlife Trusts, Thames 21, Canals & River Trust, RSPB and the National Trust to protect and enhance biodiversity across numerous habitat types.

Desk Study

3.2. A desk study assesses the publicly available Open-Source Natural England datasets for Habitats of Principal Importance, irreplaceable habitats such as ancient woodland, and designated sites for nature conservation.

Habitat Survey

3.3. The vegetation and habitat types are classified according to the UK Habitat Classification. The Main Sites Metric operates on the UK Habitat Classification system. The UK

³ Ministry of Housing, Communities and Local Government (2025). *National Planning Policy Framework*.

Habitat Classification (UKHab) is a comprehensive habitat classification system for the UK that provides outputs suitable for ecological impact assessment, habitat metrics, and better data integration between organisations.⁴

Condition Assessment

3.4. The condition of discrete habitat parcels was assessed using specific criteria from the latest Metric from Defra.

Calculating Biodiversity Units

3.5. Defra's Biodiversity Metric represents best practices for auditing the impact of development schemes upon habitats that may have a biodiversity interest. This is to ensure the proposed compensatory and enhancement measures are 'adequate' and help demonstrate 'no-net-loss' of biodiversity due to the proposed development. This approach is consistent with the National Planning Policy Framework.

3.6. The biodiversity assessment measures are for habitats only and complement protected species surveys. The method uses metrics as surrogates to quantify the biodiversity value for a particular area. Biodiversity units result from various scores, including habitat distinctiveness, habitat condition and size.

3.7. Biodiversity values are for the pre-development baseline and predicted post-development habitat and conditions. Any losses or gains are determined as the difference between the two. The metric accounts for hedgerows and other linear habitats, such as watercourses, separately from different area-based habitat types. This is due to connectivity and other ecological functions, which must be commensurate with physical area cover. Linear habitats are compared before and after development. Habitat areas and linear features must not be summed.

Assumptions and Limitations

3.8. The metric is transparent and used to calculate the biodiversity value of an application site before and after development. It is a proxy measurement to determine whether the development will result in an on-site habitat biodiversity net loss or gain. The biodiversity metric is a tool to help inform design plans and decisions, incentivising actions that benefit biodiversity and discouraging activities that harm biodiversity.

⁴ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2023). The UK Habitat Bank Classification User Manual Version 1.1. UKHab Ltd.

4. Results

Pre-Development Assessment

4.1. The proposed development site contains local habitats with no irreplaceable, notable, statutory, non-statutory, or priority habitats.

Habitat Units:

Developed land; sealed surface – other developed land (u1b6)

4.2. A car park, gravel area and other bare surfaces were present.

Developed land; sealed surface – buildings (u1b5)

4.3. An office building was present.

Artificial unvegetated, unsealed surface (u1c)

4.4. An area of bare ground was present with no vegetation cover, which will become modified grassland in good condition because of the development.

Modified grassland (g4)

4.5. Areas of modified grassland were present, in poor condition. A small parcel will be enhanced to good condition.

Individual trees (u32)

4.6. 3 individual trees were noted on site, all medium-sized and situated along the north-east boundary. Species included sycamore (*Acer pseudoplatanus*) in moderate condition, a multi-stemmed sweet chestnut (*Castanea sativa*) in moderate condition with some blackthorn (*Prunus spinosa*) and ivy (*Hedera helix*) growing around it, and an elm (*Ulmus sp.*) in good condition with ivy growth (*Hedera helix*). All 3 trees will be retained.

Native hedgerow (h2)

4.6. A recently planted native-species hedgerow in poor condition was present along the western boundary of the site. This will be retained.

Baseline Biodiversity Assessment

4.7. The baseline value of each specific habitat was measured, and a score corresponding to the criteria was assigned. The Habitat Condition Assessment categorised the functionality of these habitats.

Habitat Units

4.8. The on-site baseline biodiversity value is +0.72 Area-based Habitat Units.

Hedgerow Units

4.9. The on-site baseline biodiversity value is +0.06 Hedgerow Units.

Predicted Post-Biodiversity Assessment

4.10. The predicted post-biodiversity assessment has been undertaken based on the proposed development design and existing ecological features. Natural England automatically assigns the predicted habitats enhanced a biodiversity value based on several risk factors, such as accounting for the time it takes the habitat to reach the prescribed distinctiveness, habitat condition, or full functionality.

Habitat Units

4.11. The proposed development will create a net gain of +0.14 Area-based Habitat Units.

Hedgerow Units

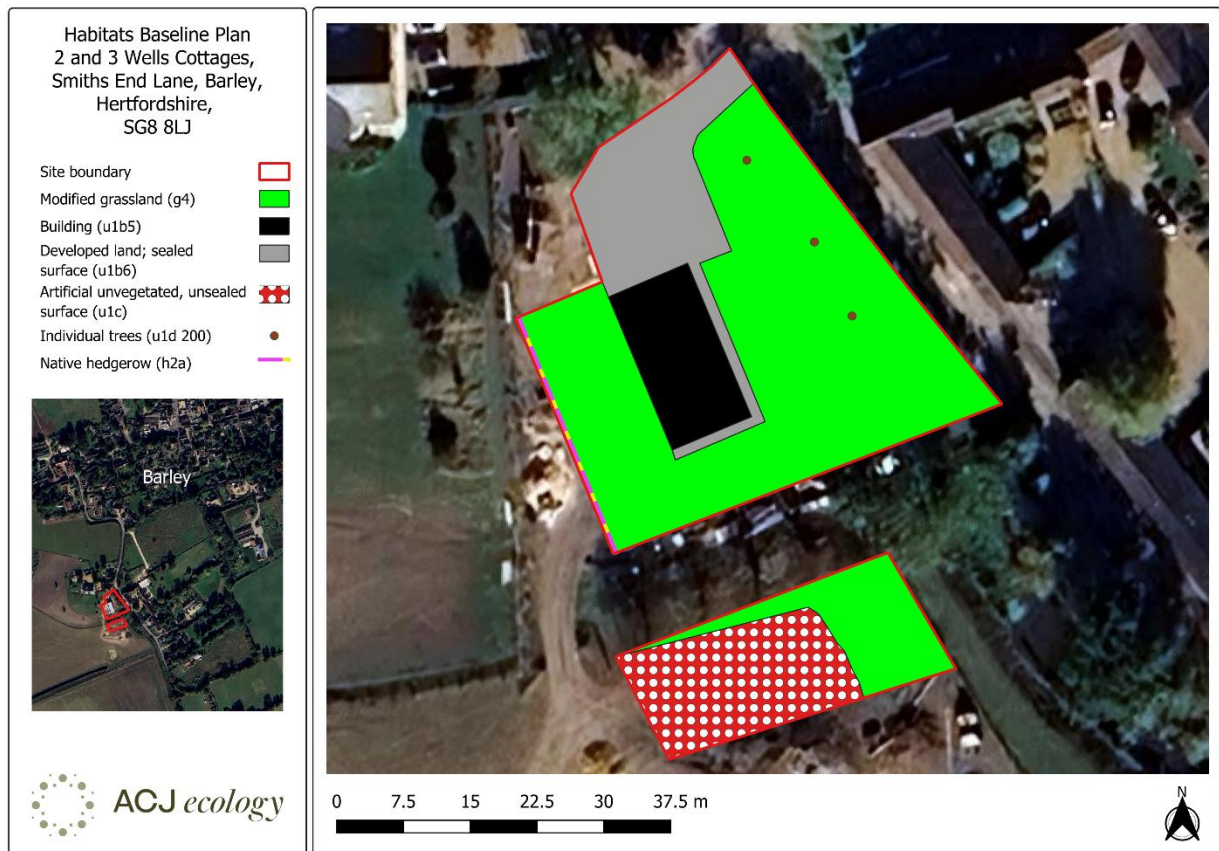
4.12. The proposed development will result in a net gain of +0.04 in Hedgerow Units as the existing hedgerow is to be retained and new one planted.

5. Conclusion and Recommendations**Biodiversity Assessment**

5.1. The proposal indicates that a biodiversity gain has been met in both Area-based Habitat Units and Hedgerow Units, no Biodiversity Units are required to achieve Biodiversity Net Gain.

6. Appendix

Map 1: Baseline Habitats Plan



Map 2: Proposed Habitats Plan

