

26 New Lane Hill
Reading
Berkshire
RG30 4JP

Biodiversity Net Gain Assessment

Report ref.: R3164_BNG_b

Report Quality Control Information	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by the Keen Partnership to undertake a Biodiversity Net Gain (BNG) Assessment to accompany a full planning application to be submitted to Reading Borough Council seeking consent for the construction of two new single residential dwelling following the demolition of the existing bungalow and outbuilding at 26 New Lane Hill, in Reading, Berkshire. The BNG Assessment follows a Preliminary Ecological Appraisal (PEA), including a Preliminary Roost Assessment (PRA) carried out by John Wenman Ecological Consultancy.
- 1.1.2** The PEA survey baseline habitats for the site comprise: Buildings (u1b5); Developed land - sealed surface (u1b), Vegetated garden (u1 828), Introduced shrubs (u1 847) and individual trees (32).
- 1.1.3** The site is not designated for its wildlife interest, is not ecologically connected to the designated sites in the search area and does not fall under any areas highlighted within the Berkshire Local Nature Recovery Strategy.
- 1.1.4** The post development habitats are derived from the proposed site plan which comprises two new residential dwellings and associated access and garden habitat that comprise: Buildings (u1b5); Vegetated garden (u1 828); and Unvegetated garden (u1 829).
- 1.1.5** The Biodiversity Metric calculation tool demonstrates that a biodiversity net gain cannot be achieved as part of the proposals within the site boundary. The tool gives a total onsite net change of -16.30% in habitat units and deficit of 0.06 habitat units will be required to reach a 10% gain. The '*26 New Hill Lane, Reading – Statutory Biodiversity Metric (R3164_BNG_b)*' document should be referred to separately for the full calculation.
- 1.1.6** To meet the mandatory requirement of a minimum of 10% net gain for biodiversity, offsite gains will need to be made by purchasing units from a registered offsite habitat bank, which is to be finalised as part of the Biodiversity Gain Plan condition attached to planning consent.

2 INTRODUCTION

2.1 Project Background

- 2.1.1** John Wenman Ecological Consultancy LLP was instructed by the Keen Partnership, on behalf of his clients, to undertake a Biodiversity Net Gain (BNG) Assessment to accompany a full planning application to be submitted to Reading Borough Council seeking consent for the construction of two new single residential dwelling following the demolition of the existing bungalow and outbuilding at 26 New Lane Hill, in Reading, Berkshire.
- 2.1.2** This report follows a Preliminary Ecological Appraisal (PEA) that included a Preliminary Roost Assessment for bats, carried out by John Wenman Ecological Consultancy and is reported separately (JWEC; March 2026; R3164_PEA_a).

2.2 Site Location and Context

- 2.2.1** The application site is 0.08ha residential dwelling, detached outbuilding and associated front and rear gardens, located on the north-eastern side of New Lane Hill, in Reading, Berkshire (OS grid ref.: SU 67739 72365).
- 2.2.2** The site is in an urban setting surrounded by similar residential and their associated gardens. Calcot Park Golf Course, an area of open grassland, woodland and a large pond, is situated approximately 50 metres to the south-west of the bungalow. The golf course also contains large areas of ancient woodland, Churchend Copse and Curtis's Wood, approximately 565 metres north west and 1130 metres to the north-west of the bungalow. An area of open grassland is present within the grounds of King's Academy Prospect, approximately 290 metres to the north-east and Prospect Park, and an area of open grassland with scattered trees and a large pond, is situated approximately 760 metres to the north-east of the bungalow.

2.3 Objectives

- 2.3.1** The aim of this BNG Assessment is to demonstrate that a minimum of 10% on-site net gain in biodiversity can be achieved as part of the proposed development. The key objectives are to:
- detail the approach taken for the BNG calculation (i.e. the Statutory Biodiversity Metric);
 - describe and map the baseline habitats and important ecological features on site;
 - describe and map the proposed habitats based on post-development design;

- complete the biodiversity metric tool with supporting condition assessment sheets;
and
- outline the implementation of the design concepts and the long-term management to deliver BNG.

2.3.2 This BNG Assessment report should be read in conjunction with the completed Statutory Biodiversity Metric calculation tool and habitat condition assessment documents.

3 POLICY BACKGROUND

3.1 National Planning Policy

3.1.1 The biodiversity duty imposed through the Environment Act 2021 states that Local Planning Authorities (LPAs) must consider what action they can take to conserve and enhance biodiversity in England.

3.1.2 The National Planning Policy Framework (NPPF), published in December 2024, sets out the Government's planning policies for England and how they should be applied. Section 15 of the NPPF sets out the approach LPAs should adopt to conserve and enhance the natural environment when determining planning applications. The selection of excerpts taken from Section 15 refer to Biodiversity Net Gain (BNG) as follows:

'Paragraph 187. minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs [...]

Paragraph 192. To protect and enhance biodiversity and geodiversity, 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 [...]

Paragraph 193. When determining planning applications, local planning authorities should apply the following principles: [...] d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate [...]

3.1.3 In England, BNG became mandatory for major development from the 12th February 2024 and for minor development (small sites) from the 2nd April 2024 under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). In practice, planning permission in England is now subject to a condition to secure a minimum 10% net gain for biodiversity, unless the development is a type that is exempt from mandatory BNG requirements.

3.2 Local Planning Policy

3.2.1 The planning policy within the Reading Borough is defined by the policies within the Local Plan (adopted Nov 2019). The policy relevant to biodiversity and natural environment is as follows:

'EN12: BIODIVERSITY AND THE GREEN NETWORK

a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:

- Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and*
- Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.*

New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.

b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible.

Development should:

- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and*
- Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*

In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new

development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats and should be provided prior to development.’

4 METHODOLOGY

4.1 Baseline Information

Desk Study

- 4.1.1** A desktop study was conducted by Lauren Hayward. The study utilised data from the Thames Valley Environmental Record Centre (TVERC) and online resources to acquire information on the nature of the site and its surroundings and highlight any potential ecological features.
- 4.1.2** TVERC was commissioned to undertake a search of pre-existing records of protected and/or notable species and non-statutorily designated wildlife sites held by them within a 1km radius around a central point inside the site.
- 4.1.3** The DEFRA Data Services Platform was used to obtain geospatial datasets for designated sites (i.e., RAMSAR, SPA, SAC, SSSI) and habitat inventories (i.e., Priority Habitat Inventory, Ancient Woodland Inventory) to be analysed in QGIS. The Multi-Agency Geographical Information Centre (MAGIC) website was examined for granted European Protected Species (EPS) licence applications. Furthermore, open access geospatial datasets and Google Earth satellite imagery were used to determine the extent and connectivity of habitats, how the site is linked to the surrounding landscape and whether the development could have wider scale impacts on biodiversity.
- 4.1.4** Google Earth satellite imagery was consulted to provide insight into historic and current land use; such information helps contextualise the continuity of habitats and determine the importance of existing ecological features.

UK Habitat Classification

- 4.1.5** A site walkover was undertaken on 2nd March 2025 by Ecologist Meghan Porter-Smith and Assistant Ecologist Lauren Hayward (qualifying member of CIEEM). The site was surveyed using the UK Habitat Classification (UKHab) system (UKHab Ltd 2023) in accordance with the CIEEM Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM 2017). Particular attention was given to evidence of protected and priority species (NERC Act 2006 Section 41 species of principal importance) and the site's potential to support such species. Habitat condition assessments (where applicable) were carried out in accordance with the Statutory Biodiversity Metric (July 2025).

Biodiversity Net Gain Approach

4.1.6 This Biodiversity Net Gain (BNG) Assessment uses the Statutory Biodiversity Metric (February 2024; updated July 2025) to calculate the losses and gains in biodiversity unit value resulting from the proposed redevelopment. The biodiversity metric tool has been used to guide the proposed site layout and landscaping in order to deliver a minimum 10% net gain for biodiversity.

4.1.7 The biodiversity metric rules must be followed for a valid biodiversity net gain and are as follows:

***Rule 1:** The trading rules of this biodiversity metric must be followed.*

***Rule 2:** Biodiversity unit outputs, for each type of unit, must not be summed, traded, or converted between types. The requirement to deliver at least a 10% net gain applies to each type of unit.*

***Rule 3:** To accurately apply the biodiversity metric formula, you must use the statutory biodiversity metric calculation tool or small sites biodiversity metric tool (SSM) for small sites.*

The tools remove the need for a user to manually calculate the change in biodiversity value.

The tool will summarise the results of the calculation and inform a user whether the biodiversity net gain objective has been met.

***Rule 4:** In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority.*

4.1.8 The biodiversity metric principles inform the use of the biodiversity metric tool and are as follows:

***Principle 1:** The metric assessment should be completed by a competent person.*

***Principle 2:** The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licensing processes, for example woodlands.*

***Principle 3:** This biodiversity metric should be used in accordance with established good practice guidance and professional codes.*

***Principle 4:** This biodiversity metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.*

***Principle 5:** Biodiversity units are a proxy for biodiversity and should be treated as*

relative values.

Principle 6: *This biodiversity metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.*

Principle 7: *Habitat interventions need to be realistic and deliverable within a relevant project timeframe.*

Principle 8: *Created and enhanced habitats should be, where practical and reasonable, local to any impact and deliver strategically important outcomes for nature conservation.*

Principle 9: *This biodiversity metric does not enforce a minimum habitat size ratio for compensation of losses. Proposals should aim to:*

- *maintain habitat extent - supporting more, bigger, better and more joined up ecological networks*
- *ensure that proposed or retained habitat parcels are of sufficient size for ecological function'*

5 BASELINE INFORMATION

5.1 Desk Study

Designated Sites and Priority Habitats

5.1.1 The desk study highlighted no internationally designated statutory sites within a 5km radius of the application site and four nationally designated statutory site within a 2km radius: the closest being Lousehill Copse LNR situated approximately 897 metres to the north east of the site. Furthermore, four locally designated non-statutory sites were identified within a 1km radius of the application site, with the closest being Prospect College LWS situated approximately 295 metres to the north-east of the property.

5.1.2 There are no irreplaceable habitats (e.g. Ancient Semi-natural Woodland) or priority habitats (Section 41 NERC Act 2006 habitats of principle importance) on site or mapped within 50m of the site.

Protected and Notable Species

5.1.3 The search of the TVERC database revealed a range of protected and/or notable species records dating from 1990 onwards; no records were found for the site.

5.1.4 A search of MAGIC revealed one granted EPS licence applications for bats within a 2km radius of the site. The licence was granted in 2020 for the destruction of a resting place for Soprano pipistrelle (*P. pygmaeus*) bats approximately 960m to the south-east of the site.

5.1.5 The PRA (JWEC; March 2026; R3164_PEA_a) revealed that there were no sign of bat activity or evidence of bats during the internal and external inspection of the property. Externally, there were limited suitable bat roosting features, confined to lifted roof tiles to the east of the chimney located on the front elevation of the bungalow, however upon close inspection these gaps were shown to be of limited extent. Therefore, the property and detached outbuilding were classified as negligible potential suitability for bat roosts.

5.1.6 The NatureSpace District Level Licensing impact risk map for Reading Borough Council shows the application site falling within a green zone, i.e. moderate habitat suitability where GCN may be present. A search on MAGIC revealed no granted European Protected Species (EPS) mitigation licence applications and no class survey licences for GCN within a 1km radius of the property. The site lacks any suitable

waterbodies and only one potential GCN breeding ponds was identified on OS mapping within a 500m radius of the site, which was located within Calcot Park Golf Course approximately 460 metres to the north-west. The landscape within the application site, comprising managed vegetated garden and unvegetated garden habitats is considered to be of low suitability terrestrial habitat typically used by GCN when traversing within 250 metres of their breeding pond.

5.1.7 The importance of the site to great crested newts if present within the near surroundings is considered likely to be minimal on account of the limited presence of suitable ponds within the surrounding area and limited amount of suitable habitat onsite and surrounding the site, including neighboring houses and their associated managed gardens.

5.1.8 Recommendations for ecological enhancements were made to improve the site for protected/notable species including a sensitive lighting scheme for bats, precautions for mammals, reptiles, nesting birds and amphibians, biodiversity enhancements and wildlife-friendly landscaping.

5.2 Baseline Habitats Onsite

5.2.1 The UK Habitat Classification (UKHab) habitats identified on site were: u1b5 Buildings; u1b Developed land; sealed surface; u1 828 Vegetated; u1 847 Introduced shrubs; garden and individual trees – refer to **Figure 1** below.



Figure 1. Baseline Habitats Plan

5.2.2 Condition assessments of each habitat, where applicable, were completed and detailed in **Appendix 1** and the following was noted:

- The vegetated garden and introduced shrubs are urban habitats that cannot be assigned a habitat condition.
- A condition assessment of the medium-sized Norway spruce tree within the rear garden of the property was completed and this was defined as being in moderate condition.
- The small fruit trees in the rear garden and trees in the front garden were too small a size and therefore does not need to be included within the baseline value for the site.

5.3 Post-development Habitat Onsite

5.3.1 The post-development habitat onsite is derived from the proposed landscape plan (refer to **Appendix 2**) and shown in **Figure 2** below, and includes the following minor changes:

- The removal of the existing residential bungalow and detached outbuilding and construction of two detached residential houses (0.0155ha).
- The majority of the existing vegetated garden and hardstanding on-site will be lost.
- The new plots will have new front and rear vegetated gardens (0.0358ha).
- There will be separate access driveways for the two dwellings, along with footpaths and patios around the side of both dwellings (0.0201ha).
- The Norway spruce tree and an area of shrubs in the rear garden will be retained (0.0032ha).



Figure 2. Post-development Habitat Plan

5.4 Calculation Result

5.4.1 The Biodiversity Metric calculation tool demonstrates that a 10% onsite net gain for biodiversity is not possible within the scope of the proposals – see metric calculation tool enclosed separately (*26 New Lane Hill, Reading – Statutory Biodiversity Metric; R3164_BNG_b*). The results taken from the tool gives a total onsite net % change of 16.03 and a loss of 0.04 units (with a deficit 0.06 habitat units to achieve 10% gain) – see **Figure 3** below.

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Return to results menu

Headline Results

Scroll down for final results ▲

On-site baseline	Area habitat units	0.25		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Area habitat units	0.21		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site net change (units & percentage)	Area habitat units	-0.04	16.30%	On site net gain is less than target set ▲
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-0.04		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-16.30%	Total net gain achieved is less than target set ▲	
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Trading rules satisfied?		No - Check Trading Summaries ▲		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Area habitat units	10.00%	0.25	0.27	0.06
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓

Figure 3. Final Results taken from the Statutory Biodiversity Metric calculation tool.

5.4.2 The onsite post-development habitats do not achieve 10% net gain for habitats. As the proposals include the construction of two residential dwellings, all proposed landscape planting can only be mapped as vegetated garden, as habitats within private residences cannot be legally secured for 30 years.

5.4.3 To meet the mandatory requirement of a minimum of 10% net gain for biodiversity, offsite gains will need to be delivered e.g. through an offsite habitat bank on the register of offsite providers.

6 REFERENCES

CIEEM (2021). *Biodiversity Net Gain Report and Audit Templates*. Chartered Institute of Ecology and Environmental Management, Winchester, UK.

DEFRA (updated July 2025). *The Statutory Biodiversity Metric – User Guide*. DEFRA

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

APPENDIX 1 – CONDITION ASSESSMENT SHEETS

Condition Sheet: INDIVIDUAL TREES Habitat Type			
Habitat Types			
Individual trees – Urban trees Individual trees – Rural trees Complete a condition sheet for each tree or block of trees. <i>Please see the separate Line of trees condition sheet for a line of <u>rural</u> trees. You should only use the Line of trees condition assessment and record that habitat type in <u>rural</u> locations.</i>			
Habitat Description			
Scattered tree within a residential garden surrounded by introduced shrubs			
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching. Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.			
On-site or off-site, site name and location	On-site, 26 New Lane Hill, Reading	Survey date and Surveyor name	02/03/2026 Meghan Porter-Smith and Lauren Hayward
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	SU 67756 72378	Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	No	Non-native Norway spruce tree
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Individual tree
C	The tree is mature (or more than 50% within the block are mature) ¹ .	Yes	The tree is mature
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	No evidence of adverse impact by human activities
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	Not many ecological niches visible
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	Tree is present within a vegetated garden habitat.
Number of criteria passed		4	
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/✓	
Passes 5 or 6 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)	X	
Passes 2 or fewer criteria	Poor (1)		
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.			

