

BIODIVERSITY NET GAIN CALCULATION

BULLOCKS FARMHOUSE EXTENSION HILLSIDE ODIHAM HOOK RG29 1HX

Client: Sarah Turgoose

Our reference: ECO2379b

Report date: 19 January 2024

Author: Justine Whitehead

Checked by: Giles Sutton MCIEEM CEnv

Report issued in electronic format only



Tel: 01189 759387

Email: info@gsecology.co.uk

Web: www.gsecology.co.uk

This page is intentionally blank



Contents

1.0 Background 2

2.0 Biodiversity net gain – legislative and policy background 4

3.0 The DEFRA metric 5

Appendix 1 – DEFRA 4 Metric summary sheet..... 8

Appendix 2 – Habitats before development 9

Appendix 3 – Habitats after development10

Appendix 4- About GS Ecology..... 11

1.0 Background

1.1.1 Planning permission and listed building consent for the:

“Erection of a two storey rear extension, removal of existing modern boiler chimney. Internal refurbishments. Replacement of windows to rear elevation and removal of hedges.

1.1.2 At Bullocks Farmhouse, Hillside, Odiham, Hook, RG29 1HX was granted by Hart District council on 12 November 2021.

1.1.3 7 planning conditions were set, number 7 of which read:

“Prior to occupation of the extension hereby approved details of ecological enhancement(s) to achieve a biodiversity net gain shall be submitted to, and approved in writing by, the Local Planning Authority. The development shall take place in accordance with the approved details.

Reason: To ensure ecological enhancement and biodiversity net gain and to satisfy Hart Local Plan (Strategy and Sites) 2032 Policy NBE4 and the National Planning Policy Framework.”

1.1.4 The extension has now been built and will soon be occupied. This report sets out a Biodiversity Net Gain Calculation for the extension and includes details of ecological enhancements, in the form of two new trees planted in a field owned by the applicant, which will ‘ensure ecological enhancement and biodiversity net gain’.

1.1.5 It should be noted that due to the construction of the extension (mainly glazed) there are no opportunities to install integrated bird and bat boxes into the extended building.

1.1.6 The calculation was undertaken using the DEFRA Statutory Metric published on 29/11/23.

1.2 Surveys to inform the assessment

1.2.1 GS Ecology Ltd have worked at Bullocks House since 2019 and have undertaken a series of ecological surveys.

1.2.2 The main house, which hosts a brown long eared bat maternity roost and two common pipistrelle day roosts was re-roofed in September and October 2020 under licence to Natural England. The bat roosts were re-instated with new bat access tiles and breathable membrane used throughout the roof.

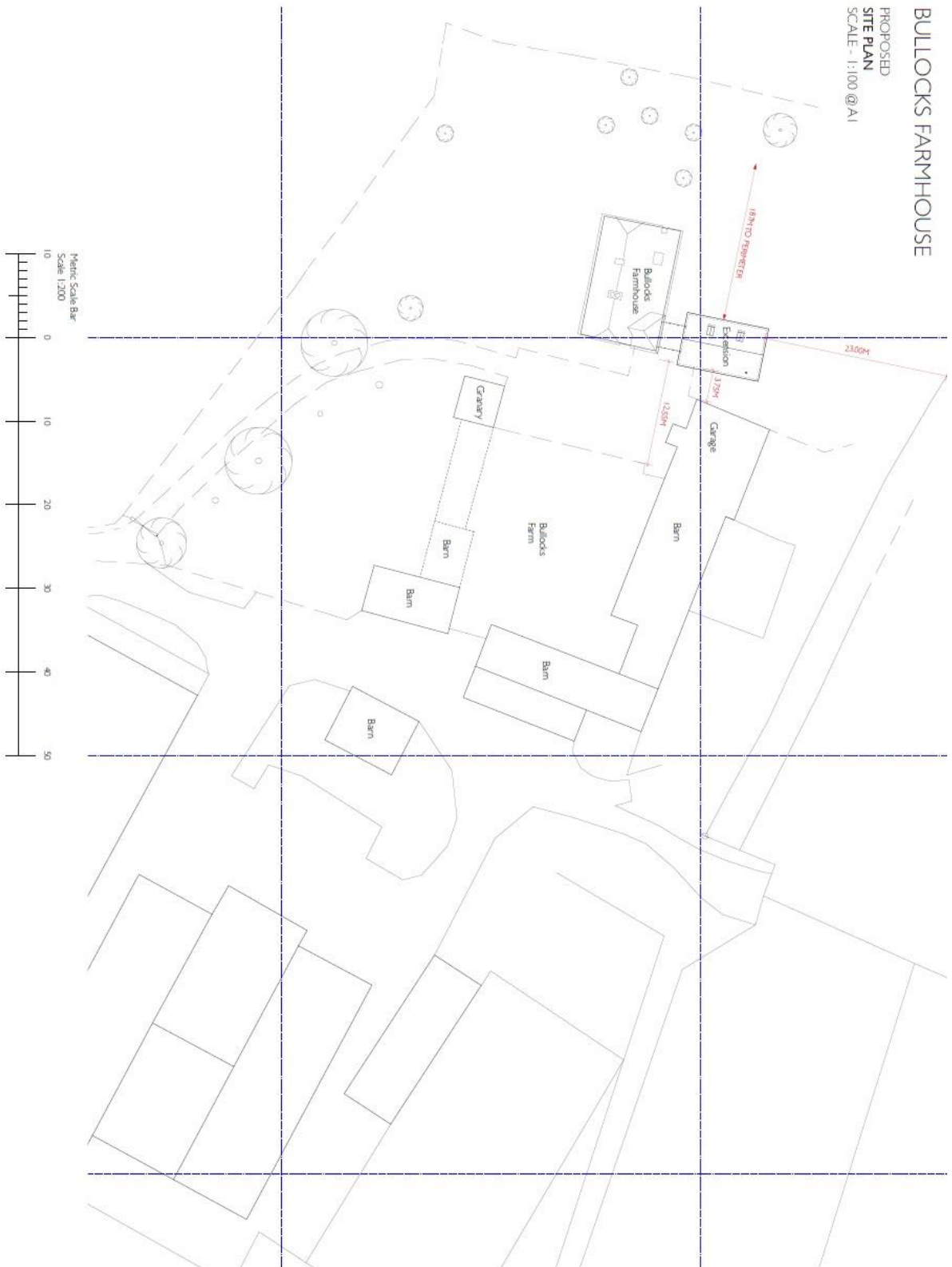
1.2.3 The new extension has been built on a short cut garden lawn and two small garden privet hedges (which were part of the ‘vegetated garden’) were removed. No trees were affected by the proposals.

1.3 Surveyor details

1.3.1 The survey to inform this assessment was undertaken by Giles Sutton MCIEEM CEnv.

1.3.2 Giles is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and is a Chartered Environmentalist with more than 20 years’ experience as professional ecologist.

Figure 1 – Proposed site plan



2.0 Biodiversity net gain – legislative and policy background

The 2021 Environment Act

- 2.1.1 The Environment Act 2021 became law on 9 November 2021. It will require (through amendments to the Town and Country Planning Act 1990) all planning permissions in England, with some exemptions, to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity gain plan.
- 2.1.2 These plans will need to demonstrate that a development will result in a net gain in biodiversity of at least 10% above baseline levels using habitats as a proxy for biodiversity.
- 2.1.3 This system is commonly referred to as Biodiversity Net Gain and it is a cornerstone of the government's 25 Year Environment Plan. The system will become mandatory on 12 February 2024 for major applications and 2 April 2024 for minor applications. It will not apply to householder applications such as this one.

Planning policy and legislation

- 2.1.4 Planning policy promotes biodiversity improvements through the planning system. The NPPF reads:

“Planning policies and decisions should contribute to and enhance the natural and local environment by:

[..]

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;”

[Paragraph 174]

“To protect and enhance biodiversity and geodiversity, plans should:

[...] pursue opportunities for securing measurable net gains for biodiversity.”

[Paragraph 179]

“When determining planning applications, local planning authorities should apply the following principles:

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.”

[Paragraph 180]

In relation to BNG, Policy NBE 4 – Biodiversity in the Hart Local Plan¹ reads:

C) “All development proposals will be expected to avoid negative impacts on existing biodiversity and provide a net gain where possible.”

¹ <https://www.rbwm.gov.uk/home/planning-and-building-control/planning-policy/development-plan/adopted-local-plan>

3.0 The DEFRA metric

- 3.1.1 The DEFRA Statutory BNG Metric is a system for calculation habitat losses or gains from a project using habitats, measured using Habitat Units (HUs) as a proxy measure. It is accompanied by an excel spreadsheet calculator that assigns values to habitats before a change (PRE-intervention values) and assumed habitat values after the change (POST-intervention values).
- 3.1.2 The metric uses the habitat categories that align with UK Habitat Classification Habitat (which is a system for habitat classification that has been developed as an alternative to the Phase 1 Habitat Classification).
- 3.1.3 The metric calculates two values: PRE-intervention HU Values and POST-intervention HU values – described below.

PRE-intervention Habitat Unit Values

- 3.1.4 The baseline or PRE-intervention Habitat Unit (HU) Value is a factor of:
- The area of the habitat parcel
 - The distinctiveness of the Habitat Type [Very Low; Low; Medium; High; Very High]
 - The habitat condition assessed using the Condition assessment sheets - [Poor; Moderate; Good]
 - The strategic significance [High, within area formally identified in local strategy; Moderate - location ecologically desirable but not in local strategy; Low - area/compensation not in local strategy/ no local strategy]

POST-intervention HU values

- 3.1.5 The POST-intervention HU value is a factor of:
- The area of the habitat parcel
 - The distinctiveness of the Habitat Type ranging [Very Low; Low; Medium; High; Very High]
 - The target habitat condition at a defined number of years [Poor; Moderate; Good]
 - The strategic significance [High, within area formally identified in local strategy; Moderate - location ecologically desirable but not in local strategy; Low - area/compensation not in local strategy/ no local strategy]
 - The time to target condition [assigned by the Metric to a default time]
 - The difficulty of creation of that habitat [assigned by the Metric]
 - The spatial risk category - a multiplier to discourage creation of habitats far from the site of biodiversity loss.

Types of HU

- 3.1.6 There are three types of HU:
- Area habitats (such as grasslands and woodlands) – “A-HUs”
 - Linear hedgerows and lines of trees – “L-HUs”
 - Linear rivers and streams – “R-HUs”

3.1.7 The HU types are not interchangeable.

3.2 Calculation for this site

Assumptions

3.2.1 The ecological survey was used to assess pre-intervention habitats.

3.2.2 The proposed site plan (Figure 1 above) was used to assess post-intervention habitats.

Pre-intervention

3.2.3 The DEFRA Metric Habitats within the application site at the time of our survey, and their extent and condition pre-development are as follows:

Urban – Developed land; sealed surface (0.066 hectares)

3.2.4 The existing buildings and hardstanding entrance.

3.2.5 There is no condition assessment for this habitat type as the metric does not require one.

Urban – Vegetated Garden (0.4 hectares)

3.2.6 The UK Habitat Classification definition for ‘Vegetated Garden’ is:

“Garden [see definition below] that is principally vegetated, for example with large areas of grass and flower beds.”

3.2.7 The UK Habitat Classification definition for ‘garden’ is:

“Land within the curtilage of a residential property, managed for leisure, visual amenity, wildlife or food production, or unmanaged.”

3.2.8 It includes:

“Detached garages, greenhouses, polytunnels, sheds, communal amenity areas, pathways, drives and small or large patches of regularly mown grass.”

3.2.9 It excludes:

“The food production or grazed parts of smallholdings and crofts. Mappable habitat patches of habitats other than ‘regularly mown grass’ within gardens. Rain gardens (see 850).”

3.2.10 All of the land affected by the proposed development, including the 2 small privet hedges, fall within the definition of ‘vegetated garden’.

Linear Habitat Units

3.2.11 There are no linear features within the application site and as such no hedgerow or river units have been calculated.

Post intervention

3.2.12 The DEFRA Metric Habitats and their extent and condition post-development are as follows:

Developed land – sealed surface (0.073 hectares post-development.).

3.2.13 The new houses and associated hardstanding

3.2.14 There is no condition assessment for this habitat type as the metric does not require one.

Urban – Vegetated Garden (0.201 ha.)

3.2.15 The retained garden.

3.3 Results

3.3.1 The calculation shows that there are 0.80 A-HUs before development and 0.77 A-HUs after development.

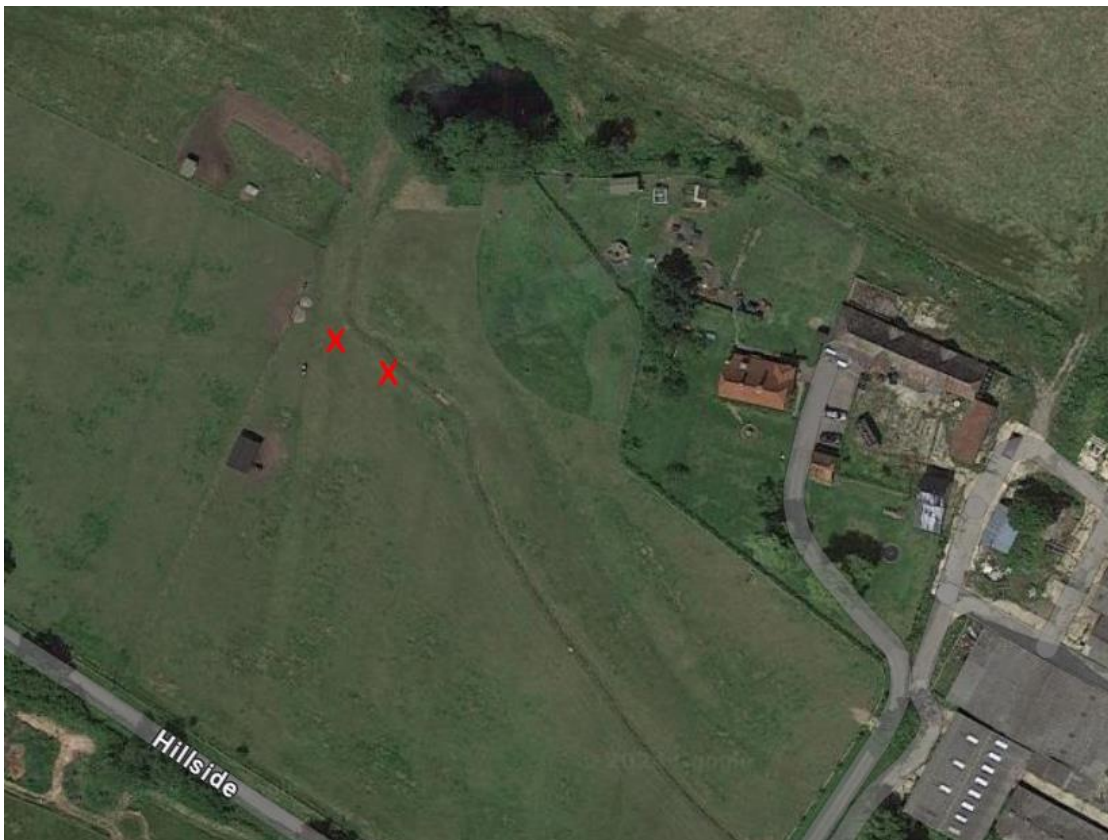
3.3.2 This equates to a loss of 0.03 A-HUs or 4.00% below the on-site A-HU baseline.

3.4 Offset proposals

3.4.1 To offset the very small loss of habitat units on site it is proposed to plant two new English oak (*Quercus robur*) trees in the field next to the house. This is not part of the garden and has a stream running through it. The trees will provide habitat for wildlife and will be a significant landscape feature in the years to come. They will be planted as heavy standards and protected from grazing animals (the fields is grazed by sheep and cattle) by wooden tree guards.

3.4.2 Taking these two trees into account this equates to a total net gain of 0.09 AHU-s (11.62% above the onsite baseline). The summary sheet from the Metrix is given in Appendix 1. Figure 2 below shows the suggested locations for the trees.

Figure 2 –Plan showing locations where two English oak (*Quercus robur*) will be planted [Map data ©2024 Google]



Appendix 1 – DEFRA 4 Metric summary sheet

Bullocks Farmhouse		Return to results menu		
Headline Results				
Scroll down for final results ▲				
On-site baseline	Habitat units	0.80		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.77		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site net change <small>(units & percentage)</small>	Habitat units	-0.03	-4.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	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 <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.12		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change <small>(units & percentage)</small>	Habitat units	0.12	N/A	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Zero baseline units - % cannot be calculated				
Combined net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	0.09		
	Hedgerow units	0.00		
	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 <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	0.09		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	11.62%		
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Trading rules satisfied?	Yes ✓			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.80	0.88	0.00
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00
No additional area habitat units required to meet target ✓ No additional hedgerow units required to meet target ✓ No additional watercourse units required to meet target ✓				

Appendix 2 – Habitats before development



Appendix 3 – Habitats after development



Appendix 4- About GS Ecology

Established in 2009, GS Ecology is an independent ecological consultancy in Berkshire. We carry-out surveys and ecological consultancy services for public and private sector clients. .

Our work is undertaken by experienced and qualified ecologists, who are members of the Chartered Institute of Ecology and Environmental Managers. Our services include:

- Ecology surveying and reporting to inform planning applications, e.g.
 - Preliminary Ecological Appraisal
 - Extended Phase 1 Habitat Survey
 - Protected species surveys, e.g. bats, badgers, dormouse, great crested newts
- BREEAM ecology assessments – to demonstrate the sustainability of a new building
- Protected species licensing such as bat and great crested newt licences for development sites after planning permission has been obtained
- Providing advice to land managers and writing ecological management plans, such as woodland management plans and farm environmental plans for England woodland Grant Scheme and Environmental Stewardship applications
- Providing ecology advice to Local Authorities and Local Planning Authorities