

Biodiversity Net Gain Assessment

Land at Moonshine

Meadow

Cuckfield Road, Ansty

West Sussex

RH17 5AL

NGR: TQ 28715 21501



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Sylvatica Ecology Ltd

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Limitations and Liabilities

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It should be borne in mind that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats, or that they will not occur in locations or habitats that appear unsuitable.

In order to minimise the likelihood of adverse effects on protected animal species over time, it is accepted good practice, in accordance with Natural England (NE) (formerly English Nature) guidance for ecological surveys to be repeated should works be deferred for over 12 - 18 months from the date of initial survey.

It is the duty of the landowner, developer and operations managers to act responsibly and to comply with current environmental legislation if protected species are suspected or found prior to, or during works.

The recommendations and information contained within this report are based on the information provided on the development works prior to the surveys being carried out. Should the development proposals change then the findings and recommendations contained within would potentially require revision.

The findings within this report do not constitute legal advice. Should this be required, then a suitably qualified professional practitioner should be contacted.

Author	Signed	Contact
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1.0 INTRODUCTION

- 1.1 This document presents the biodiversity net gain (BNG) assessment relating to the land at Moonshine Meadow, Cuckfield Road, Ansty, West Sussex, RH17 5AL, NGR: TQ 28715 21501. This assessment aims to quantify the predicted change in ecological value of the site following the proposed development works to be carried out at this location.
- 1.2 BNG became effective in January 2024 (April 2024 for smaller sites) following the Environmental Act 2021, which states that a target of 10% net gain in biodiversity should be achieved, with biodiversity value being maximised on site whenever possible.
- 1.3 Should any changes to the design of the development be made then the BNG score and metric would need to be updated in-line with any such changes. The measures would be carried forward for a period of 30 years after planning permission has been granted and also during the construction phase.

Previous Surveys

- 1.4 A site walkover to map the habitats was conducted in accordance with guidance on the UK Habitat Classification System (UKHab) and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal, in accordance with BS42020:2013 Biodiversity. The overall assessment consisted of:
- Site specific biological information from statutory and non-statutory consultation; and,
 - A site walkover survey, protected species scoping assessment and UKHAB survey.
- 1.5 The walkover survey to map the habitats was conducted by Sylvatica Ecology Ltd on the 24th July 2024.

Development Proposal

- 1.6 A planning application is to be made for the installation of six static caravan pitches with associated amenity space, including an access track connecting the site to the road to the east.

Site Description and Adjacent Habitat

- 1.7 The site survey area consisted of modified grassland, scattered trees, native and non-native hedgerow, neutral grassland and one building. The hedgerows were on the north and western boundaries and most of the site was lawn which, with its regular mowing was assessed as modified grassland. The east and south perimeter are enclosed within a two-metre-high wooden fence, which is dug into the ground on the east side, chicken wire extends from the base of the fence on the south border and into the ground.

1.9 **Figure 1: Site Survey Location (Red Line Boundary)**



2.0 METHODOLOGY

Good Practice Principles

- 2.1 To calculate the ecological value of the pre and post development site, the Department for Environmental, Food & Rural Affairs (DEFRA) Statutory Biodiversity Metric (4.0) was used, following best practice from DEFRA and Natural England.
- 2.2 Good practice guidance from the Chartered Institute for Ecology and Environmental Management (CIEEM) provides a framework that helps to improve the UK's biodiversity by contributing towards strategic protocols to conserve and enhance nature while progressing with sustainable development.

2.3 **Table 1: Good Practice Principles and Discussion**

Good Practice Principle	Discussion
<i>1: Apply the Mitigation Hierarchy</i>	The habitats that were likely to be impacted were modified grassland and a very small area of neutral grassland
<i>2: Avoid Losing Biodiversity that Cannot be Offset by Gains Elsewhere</i>	There were not any irreplaceable habitats affected by the proposed development.
<i>3: Be Inclusive and Equitable</i>	Sylvatica Ecology has provided advice on measures to achieve the 10% net gain target.
<i>4: Address Risks</i>	The ecologists at Sylvatica Ecology have provided input to both protect and improve biodiversity. The statutory biodiversity metric also included inbuilt risk factors with contribute towards calculating overall biodiversity value.
<i>5: Make a Measurable Net Gain Contribution</i>	The development is likely to achieve a net gain in biodiversity due to the installation of additional habitats for biodiversity. There will be 130m of native hedgerow installed as well as a small area of neutral grassland. The planting of 24 medium sized trees within the site boundary. This will enable the development to obtain the required net gain.
<i>6: Achieve the Best Outcomes for Biodiversity</i>	The landscape design improves the biodiversity value on site and will provide habitat that will both act as a barrier to the habitats.
<i>7: Be Additional</i>	The proposals will achieve a biodiversity net gain of 13.59%. This is with the recommended tree planting measures to install native medium sized tree species and for the creation of the small area of neutral grassland habitat.

<i>8: Create a Net Gain Legacy</i>	The detail relating to the proposed ecological enhancements have been provided for within the landscape implementation and management plan.
<i>9: Optimise Sustainability</i>	The design has been created with biodiversity in mind.
<i>10: Be Transparent</i>	Advice on enhancing the ecological value of the site was provided for during the design process.

Habitat Mapping, Condition Assessment and Baseline Calculation Methods

- 2.4 Each specific habitat was assessed according to the condition assessment characteristics on the Biodiversity Net Gain Metric 4.0 Technical Annex 1. This provides specific criteria for each habitat classification utilising the United Kingdom Habitat Classification System. The mapping was carried out using QGIS V 3.22.14-Bailowieza for MacOS 14.1. Habitat areas and pond distances from site were calculated using this QGIS software.
- 2.5 The standard statutory metric was used due to the size of the site, potential impact on adjacent habitats and as a precaution.

Successful Habitat Creation and Condition

- 2.6 The time that will elapse between site habitat clearance and habitat re-creation is, as yet, unknown. This time is recorded within the Statutory Biodiversity Metric as a temporal multiplier called 'delay in starting habitat', which is added to each post development habitat type, and increases 'time to target condition'. As a general pattern, the longer the time elapsed between habitat clearance and creation, the longer it takes to achieve the targeted habitat condition, which can lower the metric score.
- 2.7 Currently it is assumed that a 0-year delay has currently been used for each post-development habitat type. The target habitat conditions for the created habitats post development are given as good.

Competencies

- 2.8 The survey work and reporting has been led by Richard Law BSc MRes CEnv MCIEEM FLS. Richard has been undertaking ecological survey work within the last 18 years on many different locations throughout the United Kingdom, for a variety of protected species, including bats (Class 2 2015-12576), reptiles, amphibians including great crested newt (*Triturus cristatus*) (Class 1 2016-20290) and terrestrial mammals including dormice (*Muscardinus avellanarius*) (Class 1 2015-13188) and birds including barn owl (*Tyto alba*) licence (CL29/00236).

3.0 RESULTS

- 3.1 This section presents the findings of the biodiversity net gain calculation, the units present onsite prior to development (baseline), the units present post development and the total biodiversity net gain as a percentage calculation.

Baseline Conditions

3.2 ***Table 2: Onsite Baseline Conditions***

Onsite Baseline	Habitat Units	2.69
	Hedgerow Units	0.07
	Watercourse Units	0.00

- 3.3 The size and condition of habitats present onsite give a total of 2.69 habitat units and 0.07 hedgerow units.

Post Development Conditions

3.4 ***Table 3: Poste Development Conditions***

Onsite Post Intervention	Habitat Units	3.05
	Hedgerow Units	0.33
	Watercourse Units	0.00

- 3.5 With the post development habitats created with the associated conditions achieved, this gives a total of 3.05 habitat units and 0.33 hedgerow units present on site post development. This increase would be achieved by planting sufficient trees, the creation of a small area of neutral grassland habitat and planting of 130m of hedgerow.

Net Gain

3.6 ***Table 4: Total Net Unit Change and Percentage Change***

Total Net % Change	Habitat Units	+0.37
	Hedgerow Units	+0.26
	Watercourse Units	N/A

- 3.7 The post development habitat creation within the design of the scheme have given a total increase of habitat units of +0.37, which give a biodiversity net gain of 13.59%. There will be an increase of hedgerow units of +0.26, giving a net gain in hedgerow units of +374.81%

4.0 REFERENCES

CIEEM (2016) Biodiversity Net Gain – Good Practice Principles for Development

DEFRA (2023) Statutory Biodiversity Metric Draft User Guide

Natural England (2023) The Statutory Biodiversity Metric and Small Sites Metric – QGIS Template and QGIS Import Tool User

APPENDIX A: PRELIMINARY ECOLOGICAL WALKOVER SURVEY HABITAT MAP



APPENDIX B: CONDITION ASSESSMENT TABLE

Habitat Type	Total Habitat Area (ha) or length (km)		Distinctiveness	Score	Habitat Condition	Condition Assessment Scoring
Native Hedgerow	17m long		N/A	4	Poor	1
	Species Present		hawthorn (<i>Crataegus monogyna</i>), blackthorn (<i>Prunus spinosa</i>)			
Non-Native Hedgerow	35m long		N/A	N/A	N/A	N/A
	Species Present		cherry laurel (<i>Prunus laurocerasus</i> , 85%) bramble (<i>R.fruticosus</i> , 15%)			
Modified Grassland	0.25ha		Low	6	Good	3
	Species Present	Rye-grasses (<i>Lolium spp.</i>) dandelion (<i>Taraxacum officinale</i>), daisy (<i>Bellis perennis</i>), ribwort plantain (<i>Plantago lanceolata</i>), self-heal (<i>Prunella vulgaris</i>), brown knapweed (<i>centaurea jacea</i>) and common sorrel (<i>Rumex acetosa</i>)				
Buildings and Hardstanding	0.006ha		N/A	N/A	N/A	N/A
Other Neutral Grassland	0.018ha		Medium	4	Moderate	2
	Species Present	common ragwort (<i>Jacobaea vulgaris</i>), bent grass (<i>Agrostic spec.</i>), burdock (<i>Arctium spec.</i>), greater plantain (<i>Plantago major</i>), broad-leaved doc (<i>Rumex obtusifolius</i>), ryegrasses (<i>Lolium spp.</i>), square-stemmed willowherb (<i>Epilobium tetragonum</i>), birds foot trefoil (<i>Lotus corniculatus</i>), bramble (<i>Rubus fruticosus</i>), creeping thistle (<i>Cirsium arvense</i>), yorkshire fog (<i>Holcus lanatus</i>), wood dock (<i>Rumex sanguineus</i>), pendulous sedge (<i>Carex pendula</i>), cotoneaster (<i>Cotoneaster horizontalis</i>), bristly oxtongue (<i>Helminthotheca echinoides</i>), common knapweed (<i>Centaurea nigra</i>), common evening-primrose (<i>Oenothera biennis</i>), and box honeysuckle (<i>Lonicera nitida</i>).				

APPENDIX C: SITE PLAN POST DEVELOPMENT

