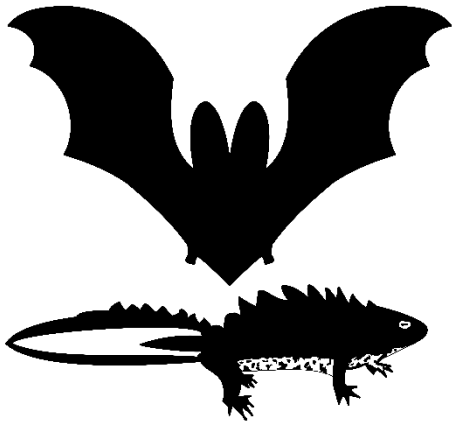

AEWC Ltd

Animal Ecology & Wildlife Consultants

Biodiversity Net Gain Assessment

South House Farm

Marringdean Road
Billingshurst
RH14 9HH

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24-003
June 2024

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Summary

- AEWC Ltd were commissioned Batcheller Monkhouse on behalf of their client to undertake an extended Phase 1 habitat survey at South House Farm, Marringdean Road, Billingshurst, RH14 9HH at grid reference TQ 09587 23542 to help inform the proposed development of the site.

- The estimated existing and post-development biodiversity value of the habitats on the site is calculated using the Defra Statutory Biodiversity Small Site Metric Calculation Tool.

- The development includes the loss of modified grassland for the creation of a turning area, parking area, pathway, and new porch.

- Ecological enhancements built into the development design include the enhancement of modified grassland to other neutral grassland, creation of other neutral grassland in place of introduced shrub, creation of mixed scrub in place of ruderal/ephemeral, planting of two new trees, creation of three new native hedgerows, and enhancement of the wet ditch by planting aquatic and marginal vegetation. In terms of the BNG metric, these are sufficient to offset the loss of the existing habitats on the site.

- The headline results indicate that there is an estimated **positive (i.e. gain) BNG of 10.02% for habitat units, 12.54% for hedgerow units, and 43.36% for watercourse units.**

This report has been prepared by AEWC Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

The information and data which has been prepared and provided is true and has been prepared and provided in accordance with the 'Guidelines for Preliminary Ecological Appraisal' and 'Code of Professional Conduct' issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

1. Introduction

1.1 AEWC Ltd were commissioned by Batcheller Monkhouse on behalf of their client to undertake a Biodiversity Net Gain Assessment at South House Farm, Marringdean Road, Billingshurst, RH14 9HH to help inform the proposed development of the site.

1.2 The purpose of this report is to give an estimate of the BNG units that may be achieved under the current development proposals, where a BNG of +10% is not achieved suggestions for additional ecological enhancement are provided.

2. Background

2.1 The following previous ecology survey has been conducted by AEWC Ltd:

- Preliminary Ecological Appraisal: April 2024

2.2 The proposed development site is located at South House Farm, Marringdean Road, Billingshurst, RH14 9HH at central grid reference TQ 09587 23542, in a rural area to the southeast of Billingshurst, 900m to the southwest of the A272. The surrounding landscape comprises predominantly pasture and agricultural land, with small blocks of woodland and scattered residential properties. See Figure 1.



FIGURE 1: SHOWING THE SITE LOCATION

2.3 The proposed development site is approximately 0.35ha and largely comprises buildings, a driveway, grass lawn, a swimming pool, and a pond. There is a hedgerow with trees on the northern boundary and lines of trees on the southern and western

boundaries. The site is bordered by pasture to the north and south, the associated residential property to the east, and a separate residential property to the west. See Figure 2 and photos 1 and 2.



FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE BOUNDARY



Photo 1: View from the site entrance.



Photo 2: Onsite pond.

2.4 The proposed development consists of the conversion of an existing barn and modifications to the existing cottage and adjoining outbuilding to create an enlarged dwelling. An enlarged parking area and a turning area will be created adjoining the existing driveway, as well as a new pathway to the buildings. The remainder of the site will be largely unimpacted except for habitat creation and enhancements. See Figure 3.

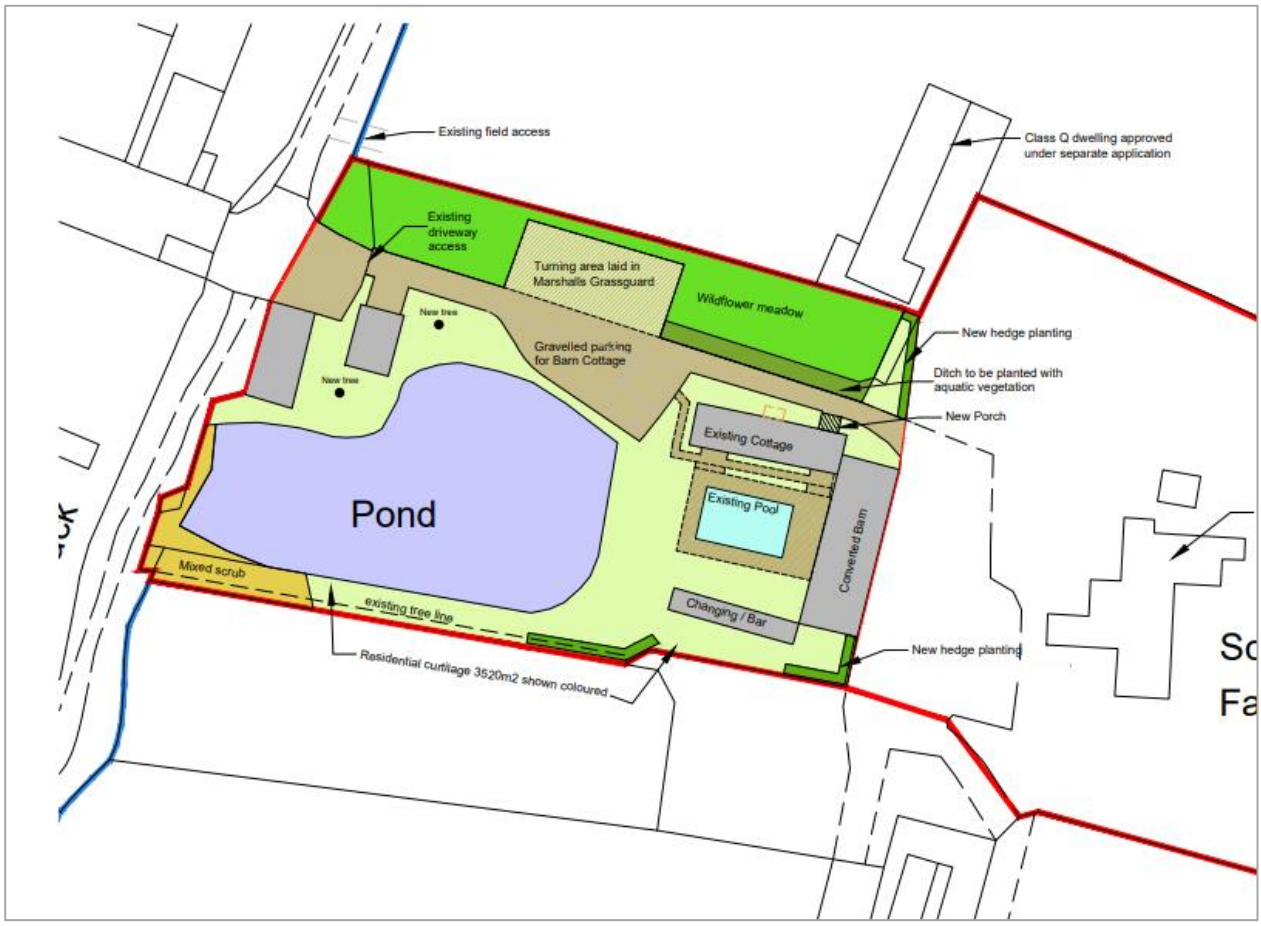


FIGURE 3: PROPOSED WORKS

3. Method and Constraints

3.1 The estimated existing and post-development biodiversity value of the habitats on the site is calculated using the Defra Statutory Biodiversity Small Site Metric Calculation Tool.

3.2 The following assumptions have been made and therefore associated constraints should be considered when looking at BNG unit values obtained:

- The potential for protected and notable species is not covered within the scope of this report;
- Existing habitats on-site are taken from those identified within the survey undertaken in April 2024;
- Post-development habitats have been inferred from those given with the Proposed Site Layout as shown in Figure 3;
- All areas and lengths are approximate;
- Areas in metres are both given to the nearest whole value, therefore rounding errors and occasional adjustments to values, to ensure consistency of total areas in existing and post-development habitat size, are unavoidable;
- Habitat quality has been estimated in some instances (i.e. for post-development habitats);
- Tree areas are calculated using the tree helper tool within the metric; and
- The area of planted trees was estimated using small trees in the tree helper tool.

3.3 Given the above constraints the values for BNG obtained should be considered to be an **estimate** only.

3.4 Calculations may need to be adjusted in future should the BNG metrics or requirements be revised.

4. Habitat data

4.1 The values for existing and post-development habitats and their areas and lengths used for this assessment are illustrated in Figures 4 and 5 respectively.



FIGURE 4: EXISTING ON SITE HABITATS



FIGURE 5: POST-DEVELOPMENT ON SITE HABITATS

5. Results

5.1 The headline results using the above habitats and calculations are given below (refer to the metric for full details).

Table 1: Headline estimated BNG values

Site Name		Old Stable Cottage and adjacent barns at South House Farm	
Sheet Name		Headline Results	
Headline Results			
Headline		BNG Targets Met ✓	
Trading Rules		Trading Rules Satisfied ✓	
Next steps		Check for input errors/rule breaks present in the metric ⚠	
Baseline Units	*Habitat units*	2.1215	
	Hedgerow units	1.0680	
	Watercourse units	0.1360	
Post-development Units	*Habitat units*	2.3341	
	Hedgerow units	1.2019	
	Watercourse units	0.1950	
Total net unit change	*Habitat units*	0.2126	✓
	Hedgerow units	0.1339	✓
	Watercourse units	0.0590	✓
Total net % change	*Habitat units*	10.02%	✓
	Hedgerow units	12.54%	✓
	Watercourse units	43.36%	✓
Habitats units required to meet target		0.0000	
Hedgerow units required to meet target		0.0000	
Watercourse units required to meet target		0.0000	

6. Conclusions & Recommendations

6.1 The development includes the loss of modified grassland for the creation of a turning area, parking area, pathway, and new porch.

6.2 Ecological enhancements built into the development design include the enhancement of modified grassland to other neutral grassland, creation of other neutral grassland in place of introduced shrub, creation of mixed scrub in place of ruderal/ephemeral, planting of two new trees, creation of three new native hedgerows, and enhancement of the wet ditch by planting aquatic and marginal vegetation. In terms of the BNG metric, these are sufficient to offset the loss of the existing habitats on the site.

6.3 The headline results indicate that there is an estimated **positive (i.e. gain) BNG of 10.02% for habitat units, 12.54% for hedgerow units, and 43.36% for watercourse units.**

6.4 In England BNG is becoming mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). This came into force in February 2024 for major developments and April 2024 for minor developments. Under the legislation developers must deliver a biodiversity net gain of 10%.

7. Wildlife Enhancements

Bats and Birds

7.1 To enhance the site for bats and birds known to be present within the local area it is recommended that two bat boxes and two bird boxes be installed within the site. Boxes could be installed on existing retained trees within the site or integrated into the new development.

7.2 Ideally bat boxes would be woodcrete or similar hard-wearing material (rather than the less durable wooden boxes) and should be installed at least 3m above the ground (where safe installation is possible), sheltered from strong winds and exposed to the sun for part of the day (usually south or south-west facing).

7.3 Example tree-mounted bat boxes are shown below: Schwegler 1FF bat box (below left, suitable for pipistrelle bats *Pipistrellus sp*.), and a Schwegler 2F bat box (below right, suitable for long-eared bats *Plecotus sp.*), or similar bat boxes.



7.4 Example integrated bat boxes are shown below: Integrate Eco Bat Box (below left), Habibat Bat box - Plain for rendering (below centre) and a Schwegler 1WI Summer and Winter bat box (below right) or similar bat boxes.







7.5 Tree-hung bird boxes should comprise a mix of traditional ‘32mm round-holed’ (below left: which are suitable for tits, sparrows, redstarts and nuthatches) and open-fronted boxes (below right: these are suitable for pied wagtails, robins and wrens) and also ideally be woodcrete or similar hard wearing material (rather than the less durable

traditional wooden boxes). Boxes should be installed with an aluminium nail or screw to prevent tree damage between 2m and 4m above ground for round-holed and low down, below 2m, well hidden in vegetation for open-fronted boxes and (unless shaded by buildings or trees) be facing north or east.



7.6 Integrated bird boxes should comprise of swift bricks which are suitable for a range of species (below left), these should be installed at a minimum of 4m above the ground, north or east facing and with open flight access, or sparrow terraces (below centre) which should be installed in line with vegetation such as trees or hedge lines to allow the birds the use of jumping off points and be installed a minimum of 3m above the ground on a north or east elevation. Where suitable overhanging eaves are present house martin cups (below right) may also be suitable.



Reptiles and amphibians

7.7 **To enhance the site for reptiles and amphibians a 'hibernaculum' could be created in a sunny corner of the site.** This will use materials such as logs, inert hardcore, bricks or building rubble to form the body of each hibernaculum, ensuring that materials likely to decompose are not placed beneath bricks or rubble to avoid collapse. Woodchips or soil may be incorporated to fill some of the larger cavities within the structure.

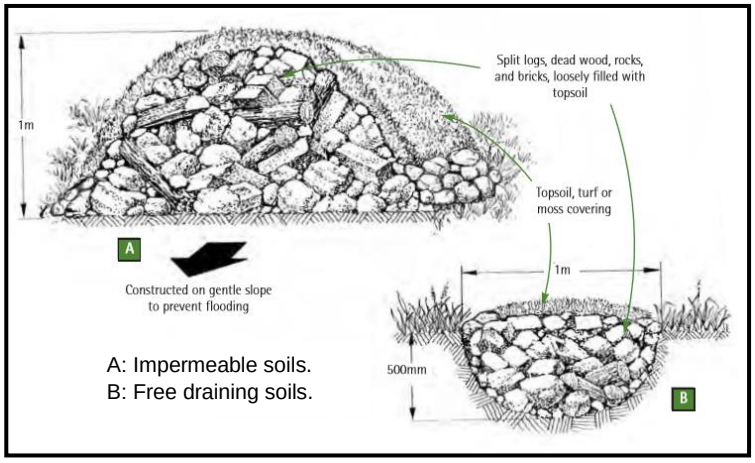


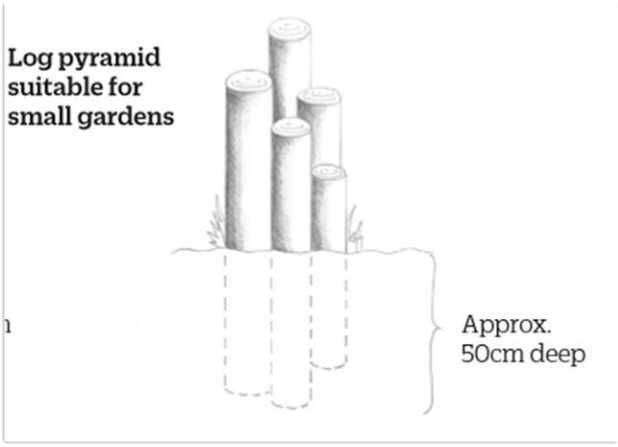


Diagram from Great Crested Newt Conservation Handbook

Stag Beetles

7.8 **A log stack could be created in a discrete corner of the site to provide dead wood habitat features for stag beetle another species.**

7.9 A suitable logpile comprises of a variety of lengths of hard wood at least 5cm in diameter, this should be sighted in partial shade and the wood partially buried to prevent it drying out. See below diagram and picture below from the PTES 'how to build a loggery' factsheet, (*https://ptes.org/get-involved/wildlife-action/help-stag-beetles/*)





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