AEWC Ltd

Animal Ecology & Wildlife Consultants

Biodiversity Net Gain Assessment

Goffsland Farm

Shipley Road
Southwater
Horsham
RH13 9BQ

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24-023
November 2024

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Report and version number	24-023-BNG-v2
Survey Date	20/05/2024

Summary

- AEWC Ltd were commissioned by Batcheller Monkhouse on behalf of their client to undertake a Biodiversity Net Gain Assessment at Goffsland Farm, Shipley Road, Southwater, Horsham, RH13 9BQ at central grid reference TQ 14876 23870 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 installation of a shepherd's hut and associated hot tub, parking spaces, rainwater harvesting tank, and ha-ha wall. This will involve hard surfacing a corner of a field of pasture. The majority of the site area will be unchanged by these proposals, with changes only to the corner of the field of pasture where the shepherd's hut will sit.

- Ecological enhancements built into the development include the enhancement of 69m^2 of the modified grassland in the field corner to other neutral grassland and the addition of three trees to native hedgerow on the eastern boundary of this field, to enhance the hedgerow type to native hedgerow with trees. In terms of the BNG metric, these are sufficient to offset the loss of the existing habitats on the site.

- The headline results show an estimated **increase of 0.02 habitat units which corresponds to a net gain of 12.55% for habitats.**

- The headline results show an estimated **increase of 0.15 hedgerow units which corresponds to a net gain of 39.76% for hedgerows.**

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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 Goffsland Farm, Shipley Road, Southwater, Horsham, RH13 9BQ 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 Previous ecology surveys have been conducted by AEWC Ltd, these are as follows:

- Protected Species Walkover Assessment and Habitat Mapping: May 2024

2.2 The proposed development site is located at Goffsland Farm, Shipley Road, Southwater, Horsham, RH13 9BQ at central grid reference TQ 14876 23870. The site is located in site is located in in a rural area in the borough of Horsham, 900m to the north of the A272 and 1.3km to the west of the A24. The surrounding landscape predominantly comprises pasture, arable land, and woodland, with scattered residential properties. See Figure 1.



FIGURE 1: SHOWING THE SITE LOCATION

2.3 The proposed development site is approximately 2,328m^2 and largely comprises a long, hardstanding access track, the corner of a field of pasture, an agricultural barn, the edge of a field of pasture adjacent to the barn, grass verges, and hardstanding yard area. See Figure 2 and photos 1-4.



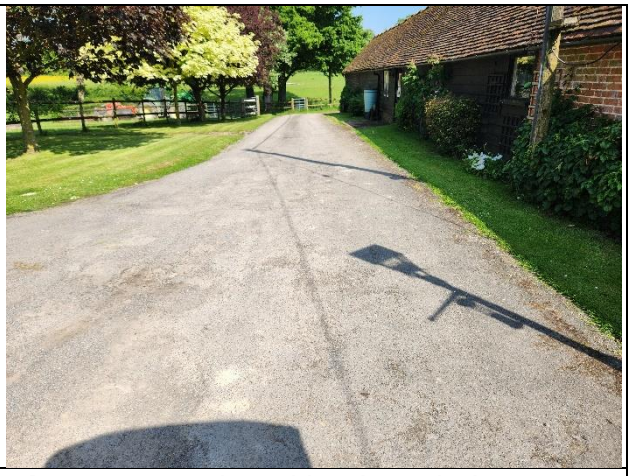
FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE BOUNDARY



Photo 1: Bare ground in the field corner that is the main development area.



Photo 2: Modified grassland in the field corner that is the main development area.

	
Photo 3: Artificial unvegetated, unsealed surface area for parking spaces.	**Photo 4:** Developed land; sealed surface access track, to be unchanged.

2.4 The proposed development involves the installation of a shepherd's hut and associated hot tub, parking spaces, rainwater harvesting tank, and ha-ha wall. This will involve hard surfacing a corner of a field of pasture. Wildflower meadow planting and the addition of trees to a hedgerow will be carried out to deliver enhancement. The majority of the site area will be unchanged by these proposals, with changes only to the corner of the field of pasture where the shepherd's hut will sit.

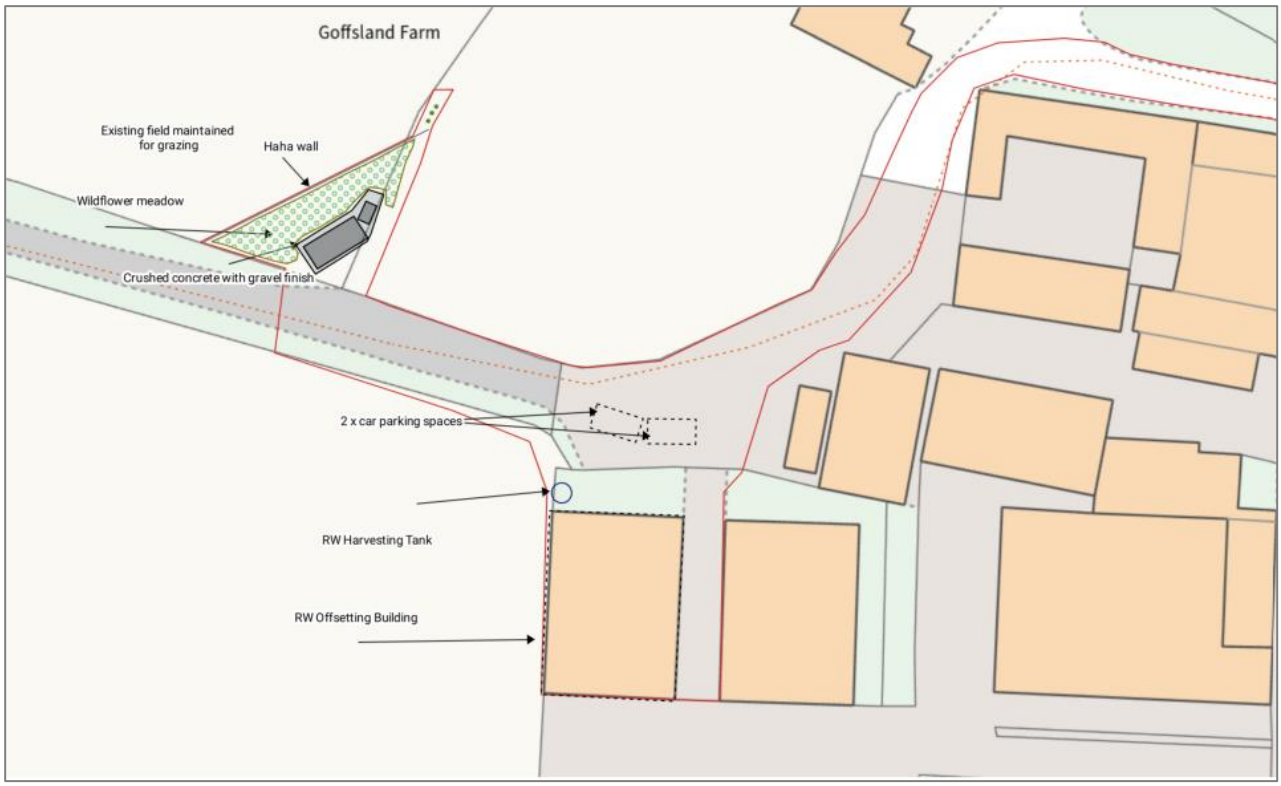


FIGURE 3: PROPOSED WORKS

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 May 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 squared and length in metres are both given to the nearest whole digit, 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).

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 -7.



FIGURE 4: EXISTING ON SITE HABITATS



FIGURE 5: EXISTING ON SITE HABITATS – DEVELOPMENT AREA



FIGURE 6: POST-DEVELOPMENT ON SITE HABITATS



FIGURE 7: POST-DEVELOPMENT ON SITE HABITATS – DEVELOPMENT AREA

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

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*	0.1592	
	Hedgerow units	0.3772	
	Watercourse units	Zero Units Baseline	
Post-development Units	*Habitat units*	0.1791	
	Hedgerow units	0.5272	
	Watercourse units	0.0000	
Total net unit change	*Habitat units*	0.0200	✓
	Hedgerow units	0.1500	✓
	Watercourse units	0.0000	
Total net % change	*Habitat units*	12.55%	✓
	Hedgerow units	39.76%	✓
	Watercourse units	% target not appropriate	
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 all bare ground in the corner of the field where the shepherd's hut will sit, and its replacement with developed land; sealed surface and modified grassland.

6.2 Ecological enhancements built into the development design include the enhancement of 69m^2 of the existing modified grassland in the field corner to other neutral grassland and the addition of three trees to native hedgerow on the eastern boundary of this field, to enhance the hedgerow type to native hedgerow with trees. 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 show an estimated **increase of 0.02 habitat units which corresponds to a net gain of 12.55% for habitats.**

6.4 The headline results show an estimated **increase of 0.15 hedgerow units which corresponds to a net gain of 39.76% for hedgerows.**

6.5 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 the existing agricultural barn on the site or on other buildings or trees within the ownership boundary.

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 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.



Reptiles and amphibians

7.5 **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.

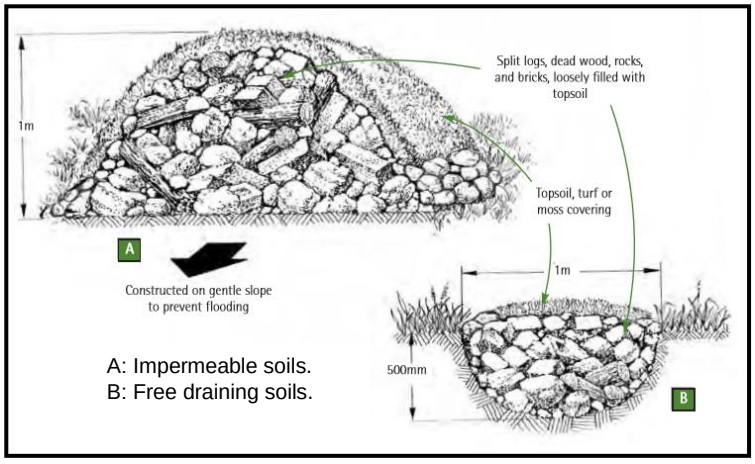


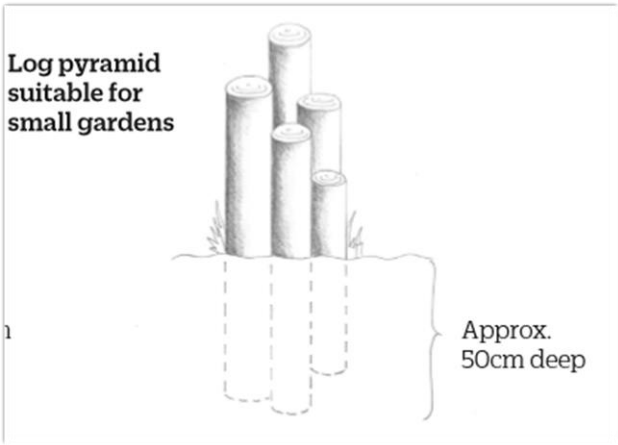
Diagram from Great Crested Newt Conservation Handbook



Stag Beetles

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

7.7 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/*)


Log pyramid
suitable for
small gardens
Approx.
50cm deep



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