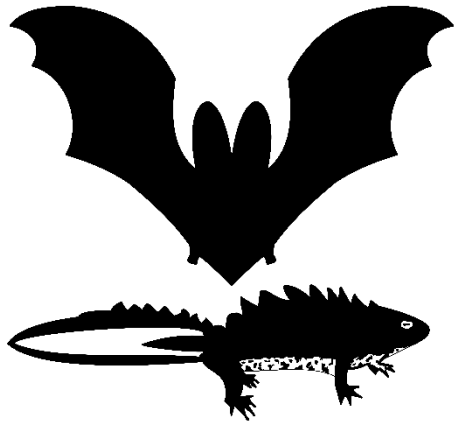




AEWC Ltd

Animal Ecology & Wildlife Consultants

Biodiversity Net Gain Assessment

Land at Byfields

**Nyton Lane
Westergate
West Sussex
PO20 3US**

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**20-061-BNG
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Summary

- AEWCLtd were commissioned by Elizabeth Halton to undertake a Biodiversity Net Gain (BNG) Assessment for the land at Byfields, Nyton Road, Westergate, PO20 3US at grid reference SU 93732 05602 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 Biodiversity Metric 2.0 Calculation Tool Beta Test - December 2019 Update.
- The development includes the loss of much of the amenity grassland on the site but retention of the mature tree lines and planting around the boundaries of the site.
- Ecological enhancements built into the development design include the provision of an area of green roof, the retention of ornamental planting in the residential area and installation of bird and bat boxes on site. However, in terms of the BNG metric, these are not sufficient to offset the loss of the existing habitats on the site.
- The headline results indicate that there is an estimated negative BNG (i.e. loss) of -3.15% for habitats and no change in result for hedge lines.

This report has been prepared by AEWCLtd, 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 AEWCLtd were commissioned by Elizabeth Halton to undertake a Biodiversity Net Gain (BNG) Assessment for the land at Byfields, Nyton Road, Westergate, PO20 3US at grid reference SU 93732 05602 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 proposed development site is located adjacent to Byfields, Nyton Road, Westergate, PO20 3US, central grid reference SU 93732 05602. See Figure 1.
- 2.2 The site is located on the edge of Westergate in West Sussex. The surrounding landscape largely comprises residential areas to the east of the site, with a mosaic of agricultural land and woodland blocks with connective hedge and tree lines to the west of the site.
- 2.3 The proposed development site is approximately 0.05ha and largely comprises amenity grassland and planting with mature trees to the northern boundary and scrub to the southern boundary.
- 2.4 Surveys of the site were carried out by The Ecology Co-op in 2017 and 2018, including a full phase 1 habitat survey, Preliminary Ecological Appraisal in 2017 and subsequent phase 2 surveys for bats, reptiles and great crested newts in 2018. An update bat assessment and ecological walkover of the site was carried out by AEWCLtd in January 2021.



FIGURE 1: SHOWING THE SITE LOCATION



FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE BOUNDARY

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 Biodiversity Metric 2.0 Calculation Tool Beta Test - December 2019 Update.
- 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 January 2021;
 - Post-development habitats have been inferred from those given with the Proposed Site Layout provided by the client;
 - All areas and lengths are approximate;
 - The existing BNG metric is not designed for small sites. Areas in hectares and length in km are both given to three decimal places, 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 area and length used for this assessment are illustrated in Figures 3 and 4 respectively.



FIGURE 3: EXISTING ON-SITE HABITATS



FIGURE 4: 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

On-site baseline	Habitat units	0.11
	Hedgerow units	0.06
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.10
	Hedgerow units	0.06
	River units	0.00
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-3.15%
	Hedgerow units	0.00%
	River units	0.00%

6. Other considerations for the site

- 6.1 The BNG calculation deals solely with habitat units with no value to species-specific enhancements. As the site is known to be within an area of particular importance for bats, specific enhancements and requirements for these and other species are detailed below.

Species Enhancement

Bats

- 6.2 Whilst the site subject to this calculation has no existing roosting features for bats, a bat roost is known within Byfields, which will remain as existing in the neighbouring plot following the proposed construction of the new dwelling within the site subject to this report. Due to the close proximity of bats and the presence of a known commuting route to the north of the site, integrated bat roosting features in the form of raised access tiles, or integrated bat boxes will be installed within south and south-westerly elevations of the new property.



- 6.3 External lighting will be carefully designed with all lights fitted with baffles to minimise light spill and the installation of PIR sensors to limit lighting time.

Reptiles and amphibians

- 6.4 To enhance the area for reptiles and amphibians a 'hibernaculum' will be created in a sunny corner to the south of the site within the neighbouring plot which is currently under the same ownership. 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.

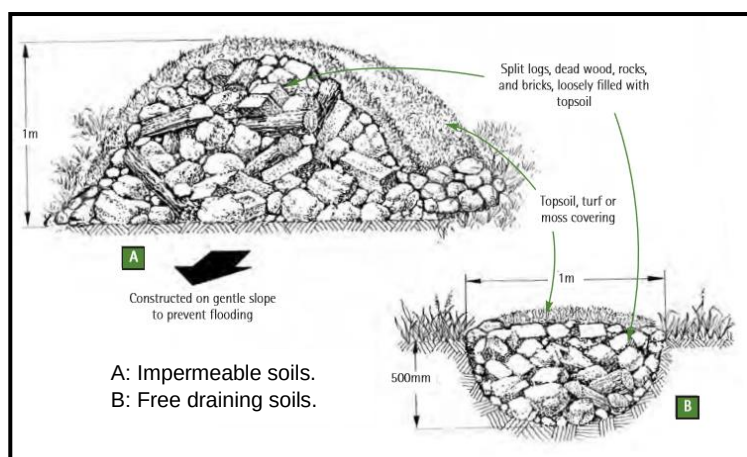
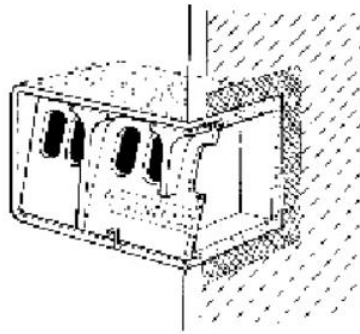


Diagram from Great Crested Newt Conservation Handbook

Birds

- 6.5 A sparrow terrace will be integrated within the eastern elevation of the new property.
- 6.6 A minimum of 1 small bird nest box will be installed on a retained tree on the northern boundary to enhance the suitability of the site for nesting birds.
- 6.7 Bird boxes will comprise of a traditional '32mm round holed' (below left: which are suitable for tits, sparrows, redstarts and nuthatches) 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.



Hedgehogs

- 6.8 A hedgehog nesting box will be installed within retained shrub on site, with a second nesting box within the plot to the south which is under the same ownership and contains habitat of higher value for this species.
- 6.9 New close board fencing will be set high to ensure that the site remains accessible for hedgehogs and to allow movement within and across the site.

7. Conclusions & Recommendations

- 7.1 The development includes the loss of much of the amenity grassland on the site.
- 7.2 Ecological enhancements built into the development design include the provision of an area of green roof, the retention of ornamental planting in the residential area and installation of bird and bat boxes on site. However, in terms of the BNG metric, these are not sufficient to offset the loss of the existing habitats on the site.
- 7.3 The headline results indicate that there is a negative BNG (i.e. loss) of 3.15% for habitats and no change for hedgerows.
- 7.4 The BNG value achievable on the site can be increased by reducing the built footprint and / or increasing the area or quality of the habitats post-development. Some examples include:
 - Including further areas of green roof
 - Including green walls or vertical planting
 - Replacing areas of hard standing with grasscrete or other planted surface
 - Replacing ornamental planting with native or wildlife-friendly planting.
- 7.5 The National Planning Policy Framework (NPPF) (updated Feb 2019) places a responsibility on local planning authorities (LPAs) to encourage BNG to be sought through planning policies and decisions. However, BNG is currently not mandatory for developments (although this is expected to come into force in 2022) and systems for purchasing off-site statutory credits, where necessary, are currently not consistently in place. As a general rule a BNG of 10% should be aimed for.

References

CIEEM (2015) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester

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UK Habitat Classification Working Group (2018) *UK Habitat Classification User Manual* at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>