Ecological Enhancement Plan – Condition 11

Land at Brook Hill
Cowfold

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Contents

1.0 INTRODUCTION 3
2.0 ECOLOGICAL BASELINE 5
3.0 PURPOSE AND CONSERVATION OBJECTIVES 7
4.0 ENHANCEMENT DETAILS SPECIFIC FOR TARGET SPECIES 8
5.0 PERSONS RESPONSIBLE FOR IMPLEMENTING THE WORKS 12
6.0 CONCLUSIONS 12
APPENDIX 1: LOCATION OF BOXES AND HEDGEHOG HIGHWAYS 14

LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on a site at a later date.

The views and opinions contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

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

1.0 Introduction

Purpose of the Report

1.1 This report was instructed by Bruckland Homes in order to support the discharge of condition 11 (detailed below) for the enhancement of biodiversity and protected species on land at Brook Hill, Cowfold, RH13 8AH.

Site Context and Proposals

1.2 The site is situated TQ 21190 23001. The main village of Cowfold is located to the south of the site, with the remainder of the surroundings consisting of pasture fields, hedgerows, blocks of woodland and low-density residential properties. The aerial photograph below (Figure 1) shows the site and its immediate surrounds with the approximate site boundary.

1.3 The current development is for the erection of 35 dwellings with associated engineering operations. Works to be carried out in accordance with Application No. DC/22/1815 submitted to the Council on 26/09/2022.

Condition 11

Pre-Commencement Condition: No development shall commence until a Biodiversity Enhancement Strategy has been submitted to and approved in writing by the Local Planning Authority. The content of the Biodiversity Enhancement Strategy shall include the following:

- *Purpose and conservation objectives for the proposed enhancement measures;*
- *Detailed designs to achieve stated objectives;*
- *Locations of proposed enhancement measures by appropriate maps and plans;*
- *Persons responsible for implementing the enhancement measures;*
- *Details of initial aftercare and long-term maintenance (where relevant).*

The works shall have regard to the Horsham District Council 'Biodiversity and Green Infrastructure' Planning Advice Note (October 2022). The works shall be implemented in accordance with the approved details and shall be retained in that manner thereafter. Reason: As these matters are fundamental to safeguard the ecology and biodiversity of the area in accordance with Policy 31 of the Horsham District Planning Framework (2015), and to enhance Protected and Priority Species/habitats and allow the LPA to discharge its duties under the s40 of the NERC Act 2006 (Priority habitats & species).



Figure 1: Approximate location of the application area (Red line)



Figure 2: Current proposals for the site

2.0 Ecological Baseline

2.1 Surveys have been conducted across the site. The type of surveys, timings and methodology of each of these surveys have been detailed below in Table 1 below.

Table 1: Species surveys undertaken on site

Faunal Group	Survey Methodology	Date of Surveys	Guidance
Initial Survey	Extended Phase 1 / PEA	1st June 2015 10th April 2019 28th September 2022 Update site review: 22nd July 2026	((JNCC 2010)
Bats – Commuting and Foraging	Transect surveys using transect methods described within the Bat Conservation Trust guidelines (Collins 2016). Anabat Express static recording devices were left on-site in three locations for at least five consecutive nights per surveyed month.	Dusk activity transects were undertaken on; 23rd May, 11th June and 17th July 2019 Anabat Express devices recorded data between:25th – 31st May, 13th – 19th June, 19th – 25th July 2019 Dusk activity surveys were conducted in June, July, August, September and October 2022. Anabat surveys 5 nights in June – October 2022	Bat Surveys – Good Practice Guidelines 3rd edition (Collins 2016).
[redacted]	[redacted]	[redacted]	[redacted]
Great Crested Newts (GCN)	A habitat suitability survey (HSI assessment) of accessible waterbodies on	The site was initially assessed on 1st June 2015	Great Crested Newt Conservation Handbook (Langton *et al.* 2001);

Faunal Group	Survey Methodology	Date of Surveys	Guidance
	and around site was undertaken during the PEA. eDNA surveys conducted	28th June 2018. Ponds P1, P2, P3 (all negative) and P4 (positive) 3rd June 2019 P4 only (negative) 29th June 2022 Ponds P1, P2, P3 and P4.	eDNA analysis to the protocol stated in DEFRA WC1067
Hazel dormice	A total of 50 dormouse tubes and were established within suitable hedgerows and along the woodland edge on site	The site was surveyed in 2019 and again in 2022 to 2023.	Dormouse Conservation Handbook - 2nd edition (Bright *et al.* 2006)
Reptiles	The edge habitats were identified as containing some suitability for reptiles. Artificial refugia (roofing felt) were placed within suitable habitat across the site. A total of seven survey visits were made to the site to check the refugia for the presence of reptiles in suitable weather conditions. In addition, any natural refugia, such as log piles and brash piles, were lifted and hand searched for evidence of reptiles.	Set up 10th April 2019 Surveys undertaken between 16th April and 10th May 2019 Set up 29th June 2022. Surveys conducted between the 25th July to 5th September 2022.	Herpetofauna Workers Manual (Gent and Gibson 1998).
Bird Surveys	Scoping surveys conducted in 2019 to assess if the habitats would support red or amber list species	18th April 2019 10th June 2019	BTO Atlas Method

2.2 Bird surveys confirmed dunnock and song thrush were breeding on site, notably on the edges of the site. Starling and swift were considered to be probably or possible breeding. Wren and woodpigeon were also confirm breeding, these are no amber list species. Other species recorded largely common and widespread.

2.3 No reptiles were recorded on site in 2019 or the update surveys in 2022.

2.4 EDNA surveys conducted in 28th June 2018 identified that ponds P1, P2, P3 were all negative and P4 was positive, albeit only 2 replicas identified. Updated eDNA survey on the 3rd June 2019 surveyed P4 only. In 2019 this pond was negative. Update eDNA surveys were conducted on the 29th June 2022. All ponds P1, P2, P3 and P4 were all negative.

2.5 Dormouse surveys were established in April 2019. In October a single nest was identified in the south western corner of the site. Update surveys conducted between July and November 2022 and April and May 2023. November 2022 survey identified a dormouse and a nest. In May 2023 a dormouse nest was recorded in the central area.

2.6 Transect activity surveys in 2019 identified species such as common pipistrelles, soprano pipistrelles, serotines, myotis and brown long eared bats. In 2022 activity surveys identified common and soprano pipistrelles, myotis species, noctule, serotine and brown long eared bat.

2.7 The 2019 Anabat surveys identified common and soprano pipistrelles (dominant), brown long eared bat, noctules, serotine, myotis and barbastelle. The 2022 anabat surveys identified common and soprano pipistrelles were the most dominant species, with myotis, serotine, leislers, noctule and barbastelle.

3.0 Purpose and Conservation Objectives

3.1 The scheme has been designed to maintain and enhance the ecological value and maintain habitat connectivity across the site and the local landscape whilst also allowing the viable development to go ahead.

3.2 These principals have been embedded within the site design and detailed within planning submission documents. The purpose of the enhancement strategy is to increase opportunities for wildlife on site, in particular protected and priority species. This will be in the form of creating additional habitat features as well as ensuring desired species can commute and forage across the site. This will be implemented on site by undertaking the following:

- Installation of new specific features for nesting, roosting, commuting, refuge and where appropriate hibernation for a range of targeted species.

3.3 Target species for this plan are legally protected and priority species that are known to be present on site or within the local area. These species are as follows:

- Dormice;
- Bats,
- Nesting Birds and
- Reptiles / common amphibians and invertebrates.

4.0 Enhancement Details Specific for Target Species

Bat Boxes

4.1 Bat boxes will be hung on mature trees at least three metres from the ground. The location of the boxes will be unobstructed by branches and foliage with a clear flight line, be sheltered from strong winds and be exposed to the sun for part of the day, ideally south-west or south-east facing. Once on site, the exact trees and locations of where the boxes should be placed will be decided by a qualified ecologist. The proposed locations are shown in Figure 3.

4.2 Recommended bat boxes include CJ Wildlife Vivara Pro Woodstone Bat Box and a CJ Wildlife Large Multi Chamber WoodStone Bat Box, or similar, should be installed and will enhance the site by creating new roosting opportunities for bats in an area of trees with little existing roosting potential.



Figure 3: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

Bird Boxes

4.3 Additional nesting opportunities will be installed within the new garage blocks across the development. Again, hardwearing woodcrete boxes, or similar, are recommended. Figure 4 below gives examples of suitable bird boxes which could be installed onto the brickwork of the units. These would cater for species such as house sparrows and wagtails and the smaller garden birds.



Figure 4: Examples of suitable bird boxes which could be installed on site – Vivara Pro WoodStone House Sparrow Nest Box (left), Vivara Pro Barcelona WoodStone Open Nest Box (centre) and Vivara Pro Seville 32mm WoodStone Nest Box (right)

Reptiles / Amphibians / Invertebrates

4.4 Whilst no reptiles or GCNs were identified in the immediate area, suitable habitat on site for common amphibian species and species which may colonise such as common reptiles. Other species such as common invertebrates and species such as hedgehogs are likely to be present on site and in the surrounding area.

4.5 The creation of the species rich grassland and SuDS, the addition of log piles would provide new opportunities for reptiles, hedgehogs, invertebrates and common amphibians post-development.

4.6 Log piles can be created from any trees that are to be removed as part of the proposals (Figure 5 and Figure 6). Planting around habitat piles with such species as honeysuckle or clematis can also add value.



Figure 5: Examples of log piles that can be made on site

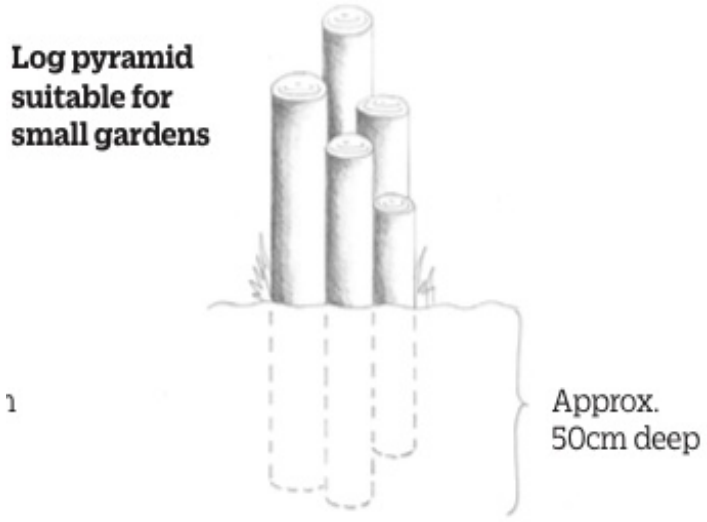


Figure 6: Example of a log pile to be built on Site

Dormouse

4.7 Nest boxes will be erected within the retained woodland and retained hedgerows on site. It should be noted that nest boxes appear to increase the 'carrying capacity' of the habitat, sometimes doubling the population density (Morris et al, 1990). Nest boxes should be

erected at about 1.5 metres above ground level as it is the height preferred by dormice (Morris, 2004).

4.8 A total of 10 dormice boxes should be established prior to any clearance works taking place on site. These should be erected by suitably qualified personnel. Increasing the offsite woodlands carrying capacity as well as creating new dormouse habitat, will mitigate against potential increased predation level from domestic cats. A mxiture of wooden and woodcrete boxes will be used as shown in Figure 7.



Figure 7: Dormouse nest box

Hedgehog Highways

4.9 All adjoining garden fences on site will have a 13cm x 13cm hole at the bottom to provide a passageway for hedgehogs to travel between gardens and other habitats on site. Fences and walls are one of the main reasons why hedgehog numbers are declining as the amount of land available to them is reduced. To ensure that new residents do not block these 'highways', small signs can be erected above the hole, such as those produced by the People's Trust for Endangered Species (PTES), informing them of their purpose (Figure 8).



Figure 8: Hedgehog highway sign for fences (hedgehogstreet.org)

5.0 Persons responsible for implementing the works

5.1 Initial site preparation and planting will be undertaken by contractors employed by Bruckland Developments. Bruckland Developments will be responsible for the first year of maintenance, management and establishment of the habitats and boxes and hedgehogs highways, after which the responsibility will be handed over to the management company who will employ suitably qualified contractors for future maintenance and management.

5.2 As far as timetable for establishment of habitats and boxes, this should be undertaken at the earliest opportunity during the construction phase and will be dictated by a number of factors including materials availability. However, the dormouse, bat and bird boxes which are to be fitted to mature trees will be established prior to any construction. The log piles can be established around site edges where some clearance has been conducted and the arisings can be utilised.

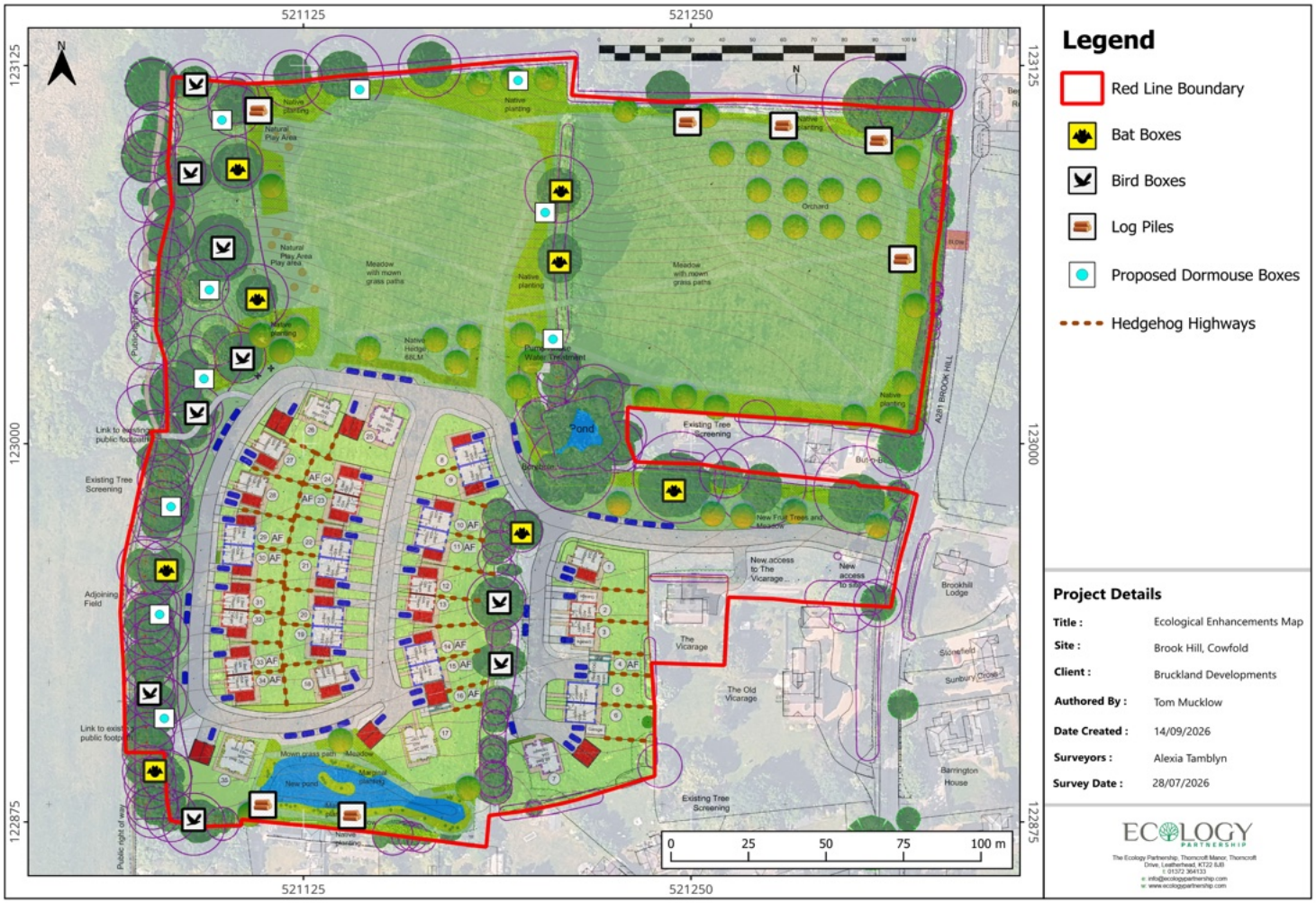
6.0 Conclusions

6.1 The habitats on site have not materially changed since the original survey. As such, it is considered that the extent of use of the site by protected species has not materially changed. The site still supports habitats which would be utilised by dormice, with bats and bird also likely. Whilst GCNs and reptiles have been scoped out as likely absent, enhancements which would benefit these species have been included.

6.2 An update walkover survey conducted in July 2026 did not identify the need for additional surveys.

6.3 If it considered that if these measures are implemented new opportunities for dormice, bats and nesting birds will be provided, and that dormouse habitats will be uplifted. In addition, new planting and ecological management (under a LEMP), will ensure these features are maintained for these species.

Appendix 1: Location of boxes and hedgehog highways



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