LIZARD
Landscape Design and Ecology

BIODIVERSITY ENHANCEMENT STRATEGY

The Barn at Brook House, Nuthurst Road, Maplehurst

On Behalf of: Manorwood

Client:	Manorwood			
Project:	The Barn at Brook House, Nuthurst Road, Maplehurst			
Reference:	LLD2949-ECO-REP-002-00-BES			
Revision:	**Date:**	**Author**	**Proof**	**Approved**
00	12/12/23	Mali Valerio QCIEEM	Caleb Fry MCIEEM	Caleb Fry MCIEEM

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Validity:

This report is valid for 18 months from the date of the site visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

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1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology (LLDE) has been commissioned by Manorhouse to produce a Biodiversity Enhancement Strategy (BES) for the proposed soft landscape scheme associated with the barn at Brook House, Nuthurst Road, Maplehurst (located around central grid reference: TQ 18862 24233 – hereafter referred to as 'the site').

1.2 Horsham District Council (HDC) granted planning permission for proposals on the 1st November 2023 (Ref: DC/23/0249) pursuant to the discharge of planning conditions, including condition no. 6, for which it is the purpose of this report to address. The condition is provided below for reference:

"No development shall commence until a Biodiversity Enhancement Strategy for Protected and Priority species has been submitted to and approved in writing by the local planning authority. The content of the Biodiversity Enhancement Strategy shall include the finalised details and locations of the enhancement measures contained within the Emergence Survey Report - Bats (Chase Ecological Consultancy, August 2021) and the following:

a) Purpose and conservation objectives for the proposed enhancement measures;
b) detailed designs to achieve stated objectives;
c) locations of proposed enhancement measures by appropriate maps and plans;
d) persons responsible for implementing the enhancement measures;
e) details of initial aftercare and long-term maintenance (where relevant).
a) 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)."

1.3 This report has been written with due consideration for existing best practice guidance in relation ecology, biodiversity, report writing, and the planning application process (CIEEM, 2017) (BSI, 2013).

Site Information

1.4 As per the ecological assessment undertaken in the addendum report (LLDE, 2023), the site includes a timber framed barn and adjoining structures, covering c. 225m^2. The site is located to the north of Brook House and is surrounded by residential gardens with farmland beyond.

Surrounding Landscape

1.5 The surrounding landscape is rural, with the village of Maplehurst located 0.9km north of the site. Pastoral farmland surrounds, with fields interspersed with mature hedgerows, treelines, and areas of woodland (LLDE, 2023).

Development Proposals

1.6 The proposals include conversion of the barn and attached cart shed to ancillary domestic accommodation following structural and repair works, and relocation of the existing carport.

2.0 PLAN OVERVIEW

Desk Study

2.1 This report has been produced largely based upon the existing landscape design, environmental and ecological assessment work produced for the project to date, including:

- *Addendum Report* (LLDE, 2023);
- *Proposed Barn Layout Plan* (Cristina Fallah Designs, 2023);
- *Emergence Survey Report - Bats* (Chase Ecological Consultancy (CEC), 2021); and
- *Preliminary Bat Roost Assessment* (CEC, 2021).

Planning Policy and Legislation

2.2 This report has been prepared with due course to the policy highlighted within Condition 6 as well as relevant legislation, which can be read in full in Appendix A – Planning Policy and Legislation. These were the following:

- *Horsham District Planning Framework 2015: policy 31;*
- *National Planning Policy Framework 2019;*
- *The Conservation of Habitats and Species Regulations 2017;*
- *The Wildlife and Countryside Act 1981 (as amended);*
- *The Natural Environment and Rural Communities (NERC) Act 2006;*

Purpose and Objectives

2.3 The purpose of this report is to provide specifications for the proposed biodiversity enhancement strategy, to provide benefits to a range of wildlife throughout the site, whilst being proportionate to the scale of the scheme. This report is written to achieve the following objectives:

- Enhance the scheme for the benefit of wildlife;
- Ensure ecological permeability throughout the site; and
- Create a manageable enhancement plan that is easy to maintain long term.

Responsibilities

2.4 The appointed project manager will be responsible for ensuring that the biodiversity enhancement measures are incorporated into the construction of the proposed building, and for organising a suitably qualified ecologist to be present on site to oversee the soft stripping of the roof. If there is any uncertainty over how the plan should be implemented, the party in question should contact a suitably qualified ecologist to agree on an approach going forward.

3.0 ENHANCEMENT MEASURES

3.1 Wildlife boxes

3.1.1 In order to ensure enhancements for wildlife are delivered, the scheme will include the following wildlife boxes on and around the site (see *Figure No. 01 – Ecological Enhancement Plan*):

- One Schwegler 2F Bat Box (general purpose);
- One Beaumaris Woodstone Bat Box; and
- One NHBS Wooden Bird Nest Box (32mm entrance hole).

3.1.2 All wildlife box models outlined herein will be ordered, subject to manufacturer's availability. If a specific make or model is not available, an alternative box will be ordered that is equal in purpose and approved by the suitably qualified ecologist.

Birds

3.1.3 The proposals shall include the installation of one NHBS Wooden Bird Nest Box (32mm entrance hole) which is suitable for a range of common garden bird species, including house sparrow *Passer domesticus*. This box will be installed on the northern aspect of the proposed dwelling, near cover and at least 3m above ground level and above any external lighting fixtures.

Bats

3.1.4 One Schwegler 2F Bat Box (general purpose) will be installed in the associated garden to the west of the site prior to the commencement of any building works, as specified in the Emergence Survey Report (CEC, 2021). This bat box is suitable for a range of species, including soprano pipistrelle *Pipistrellus pygmaeus*, of which one was identified roosting in the building (CEC, 2021). A European Protected Species Derogation Licence shall be required from Natural England to allow works to progress. The roof of the building will be soft stripped under ecological supervision, and any bats uncovered will be translocated to the pre-erected bat box by the ecologist on site. The bat box will be installed using a large nail hammered into the trunk of a suitably sized tree. It will be at least 3m high, not exposed to any external lighting, and facing a southerly direction with a clear flight path. A suitably

qualified ecologist will install the bat box to ensure the requirements are met. The bat box will remain as a permanent fixture after construction is finished.

3.1.5 One Beaumaris Woodstone Bat Box is to be fixed to the eastern aspect of the house post construction, as per the Emergence Survey Report (CEC, 2021). This will serve as an enhancement feature for bats and is suitable for crevice dwelling bat species. This box will be installed just below the eaves of the proposed development whilst ensuring a clear flight path.

Bird and bat box management

3.1.6 Once installed, there is no mandatory management required. It would be optimal to check the bird and bat boxes once a year to ensure that they are still in place, that the entrances are not compromised, and to identify any maintenance requirements. Bat boxes may not be removed unless approved by a suitably qualified ecologist as otherwise this could constitute an offence, and bird boxes may be cleaned out once a year of old nests / parasites, it possible.

3.2 Raised roof tiles

3.2.1 When tiling the roof, five tiles on the western aspect of the roof will be lifted (see *Figure No. 01 – Ecological Enhancement Plan*) to ensure bat roosting potential mimics the existing roof structure. Tiles should be raised by placing a small amount of mortar under the bottom of the tile that then allows the tile to sit slightly lifted. The gap left will be 20mm wide.

3.3 Planters

3.3.1 2no. of planters will be positioned on the southern aspect of the proposed building (see *Figure No. 01 – Ecological Enhancement Plan*) and planted with bulbs and wildflowers for the benefit of invertebrates, particularly targeting pollinators. The planters will be managed such that any dead arisings will be removed and composted once they have set seed. All seeds and bulbs will be from the RHS Plants for Pollinators British Wildflowers[1].

[1] https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/plants-for-pollinators-wildflowers.pdf

3.4 Hedgehogs

3.4.1 'Hedgehog holes' will be incorporated into the retained fencing (see *Figure No. 01 – Ecological Enhancement Plan*). The holes will be 13cm x 13cm in width and height in the fencing and brick walls. These will allow hedgehogs to pass between the garden and into the wider landscape of field and woodland. The hedgehog holes will require a small sign[2] above each one stating what they are not to be blocked, so that residents are informed. The hedgehog holes will also allow other small animals, such as reptiles and amphibians, to access the garden spaces.

3.4.2 One hedgehog home will be placed in the garden to the west of the proposed building (see *Figure No. 01 – Ecological Enhancement Plan*). This should be the NHBS Hedgehog Nest Box[3]. It should be placed in a quiet corner under the cover of vegetation. An initial layer of straw and leaves should be layered in the hedgehog home, but it is important to not fill the hedgehog home as foraging for nesting material is an important part of hedgehog nesting. Once established, the hedgehog home can be emptied of nesting material once a year in early Autumn (September and October) to avoid the build up of parasites and pathogens.

3.5 Amphibian Proof Drains

3.5.1 All drains should be amphibian proof so to prevent amphibians, and other small animals, from getting stuck in drains. This would involve installing an 'escape ladder' that allows amphibians to climb up and out of the drain. The ladder would be a strip of Enkamat and can be purchased from ARG UK[4]. A wildlife kerb should also be installed to minimise the number of amphibians falling into the drains in the first place[5].

[2] https://www.nhbs.com/hedgehog-highway-warning-sign
[3] https://www.nhbs.com/hedgehog-nest-box
[4] https://www.arguk.org/get-involved/projects-surveys/saving-amphibians-in-drains
[5] https://www.nhbs.com/hedgehog-highway-warning-sign

4.0 REFERENCES

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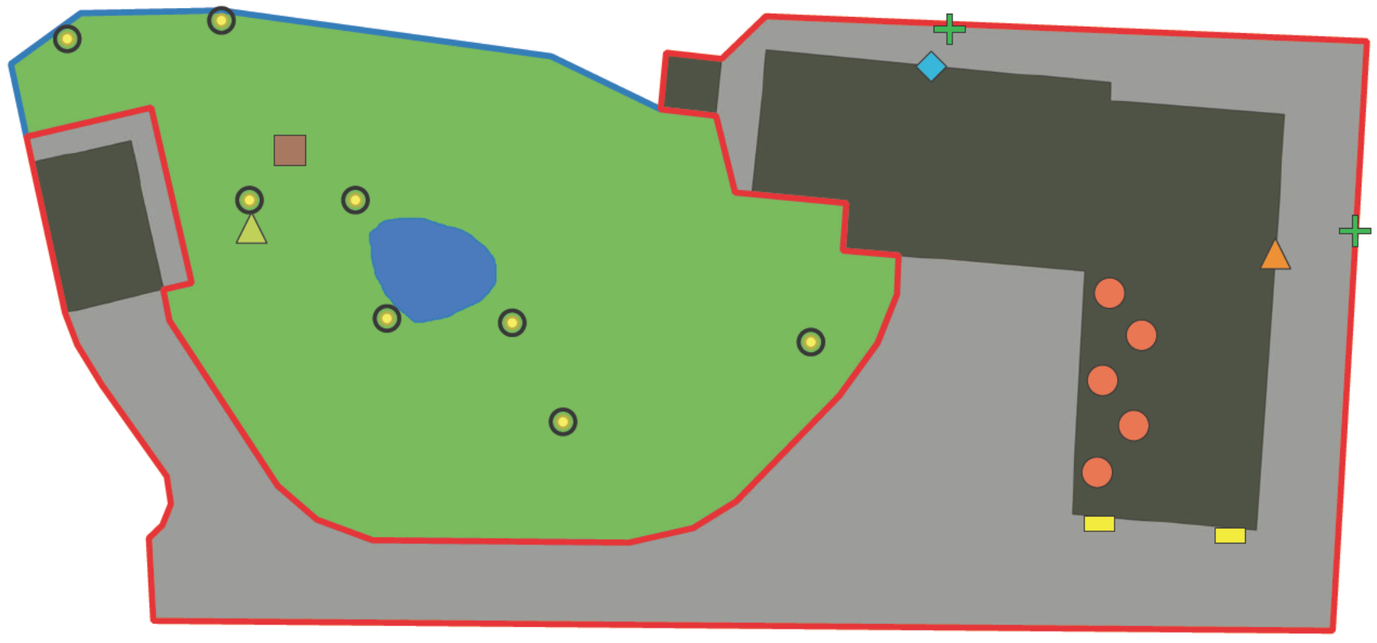
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Figure No. 01 – Ecological Enhancement Plan



Legend

- Red Line Boundary
- Blue Line Boundary
- Wildlife Planter
- NHBS Hedgehog Nest Box
- Hedgehog Holes
- NHBS Wooden Bird Nest Box (32mm entrance hole)
- Beaumaris Woodstone Bat Box
- Schwegler 2F Bat Box (general purpose)
- Raised Tiles
- Existing Tree
- Pond
- Proposed Building
- Developed Land; Sealed Surface
- Vegetated Garden

Planning Issue

Rev	Description	Date	Initials
00	Planning	12/12/23	MV

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Client
Manorwood

Project Title and Location
LLD2949 - Brook House, Maplehurst

Ecological Enhancement Plan

Scale	Drawn	Approved	Date
1:200 @A3	MV	CF	12/12/23

25 50 m

1:200

N

Figure No. 01 - Ecological Enhancement Plan
LLD2949 - Brook House, Maplehurst

Appendix A – Planning Policy and Legislation

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Legislation

Legislation relating to wildlife and biodiversity of particular relevance to this Biodiversity Enhancement Strategy includes:

- *The Conservation of Habitats and Species Regulations 2017;*
- *The Wildlife and Countryside Act 1981 (as amended);*
- *The Natural Environment and Rural Communities (NERC) Act 2006; and*
- *The Environment Act 2021.*

This above legislation has been addressed, as appropriate, in the production of this report. Further details of legislation relating to the protection of particular ecological receptors are provided in the table below:

Ecological Constraint	Rationale
SACs (Special Area of Conservation), SPAs (Special Protection Areas) and Ramsars (Wetlands of International Importance	Under the Conservation of Habitats and Species Regulations 2017 places a duty on the competent authority to maintain the favourable conservation status of designated SAC, SPA and Ramsar sites. Therefore, where it appears to the appropriate nature conservation body that a notice of a proposal relates to an operation which is, or forms, part of a plan or project which is likely to have a significant effect on a European site (either alone or in-combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, it must make an appropriate assessment of the implications for that site in view of that site's conservation objectives. In the light of the conclusions of the assessment, it may give consent for the operation only after having ascertained that the plan or project will not adversely affect the integrity of the site.
European protected species (bats, otters, dormice, water voles, great crested newts)	It is an offence under the Conservation of Habitats and Species Regulations 2017 to deliberately kill or injure a European protected species, to destroy breeding/resting sites, or to deliberately disturb these species and affect their ability to survive, rear young, breed, or hibernate.
Nationally protected species (bats, water vole, otter)	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to intentionally or recklessly disturb a species listed on Schedule 5 whilst it is in a place of shelter, or to obstruct access to a place for shelter.
Nationally protected species (reptiles)	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to kill or injure common species of reptiles.
National conservation priority species (white-clawed crayfish, fish, common toad, reptiles, noctule, water vole, otter, hedgehog), i.e., UKBAPs	Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of species and habitats that are of principal importance for the conservation of biodiversity, and to take, and promote others to take, such steps to further the conservation of these habitats and species. These species and habitats will be considered by Planning Authorities in regard to the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) to conserve and enhance the natural environment.
[redacted]	[redacted]

	[redacted]
Wild mammals (rabbits, foxes, water vole, otter, hedgehog, [redacted])	It is an offence under the Wild Mammals (Protection) Act 1996 to inflict unnecessary suffering to any wild mammal with intent.
Nesting birds	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to damage or destroy a bird's nest whilst it is in use, and to kill or injure a bird or destroy an egg.
Nonstatutory designated sites (SNCI's, LWS, LNR's, etc.)	LNRs are designated under Section 21 of the National Parks and Access to the Countryside Act 1949, which was amended by the Natural Environment and Rural Communities Act 2006. The value for biodiversity of LNRs and LWSs are recognised, and the sites and surrounding buffers are protected by the Local Plan.
Biodiversity	Section 40 of the NERC Act 2006 states that each public authority "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications. Chapter 15 of the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) states that the planning system and policies should minimise impacts on and provide net gains for biodiversity, and that, if significant harm to biodiversity would result from a development, then development should be avoided (through locating on alternative sites with less harmful impacts).
Irreplaceable habitats (ancient woodland, veteran trees, lowland meadows)	Chapter 15 of the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) states that development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Local Planning Policy

The Horsham District Planning Framework (HDC, 2015) sets out the planning policies for development in the district in relation to landscape design and biodiversity. Those of potential relevance to this assessment are highlighted in the table below:

Policy Reference	Policy Text
Policy 31 – Green Infrastructure and Biodiversity	1. Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss, and ensures that the ecosystem services of the area are retained. 2. Development proposals will be required to contribute to the enhancement of existing biodiversity, and should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to

	biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks. 3. Where felling of protected trees is necessary, replacement planting with a suitable species will be required. 4. a) Particular consideration will be given to the hierarchy of sites and habitats in the district as follows: i. Special Protection Area (SPA) and Special Areas of Conservation (SAC) ii. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above. b) Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that: i. The reason for the development clearly outweighs the need to protect the value of the site; and, ii. That appropriate mitigation and compensation measures are provided. 5. Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan.