

Libby Morris

Ecologist



Enhancement Strategy for
Cart Lodge
Rashes Farm, Turners Hill

Client

Rick Verbeeten

Date of Issue

1st November

Author

Libby Morris, BSc (Hons)

Report Summary

1. Libby Morris was commissioned by Rick Verbeeten to provide a Biodiversity Enhancement Strategy to be submitted in response to conditions made by Mid Sussex District Council. This document outlines targeted enhancement measures and details of management and remedial responsibilities as part of planning application DM/24/2127.

2. This report is submitted to further enhance the site for protected and priority species and contribute to a net gain in biodiversity in accordance with the NPPF requirements and Schedule 7A of the Town and Country Planning Act 1990, Section 40 of the NERC act 2006, as well as policies laid out in the Mid Sussex District Plan 2014-2031.

3. Section 3 of this report sets out proposed enhancements of the site which include:

- Enhancement through implementation of native planting
- Incorporation of bat-friendly lighting scheme
- Implementation of roosting provisions for bats
- Implementation of bird boxes

5. A broad methodology for these works is laid out in section 3. A further works schedule is provided in section 4, outlining management responsibilities, with section 5 detailing the specification of works that are to be undertaken, and whether a licenced individual is required for these works. This section also recommends that a site inspection is undertaken by a suitably qualified ecologist after completion of enhancement measures to ensure compliance with this report and that all enhancement measures are correctly implemented.

Table of Contents

<i>1. Introduction.....</i>	<i>5</i>
1.1 Purpose of the Report	5
1.2 Site Background	5
1.3 Management Plan	8
<i>2. Proposed Enhancements</i>	<i>8</i>
2.1 Overview	8
2.2 Native Planting.....	10
2.3 Breeding Birds	11
2.4 Roosting and Foraging Bats	12
<i>3. Post Construction Management Plan.....</i>	<i>15</i>
3.1 Native Planting	15
3.2 Breeding Birds	15
3.3 Roosting and Foraging Bats	15
<i>4. Work Schedule.....</i>	<i>16</i>
<i>5. Specifications of Works to be Undertaken</i>	<i>16</i>
<i>APPENDIX 1: Landscape and Planting Design</i>	<i>17</i>
<i>APPENDIX 2 – Legislation and Best Practice</i>	<i>18</i>
<i>APPENDIX 3 – Reducing Impacts of Artificial Light</i>	<i>25</i>
<i>APPENDIX 4 – Conditions of use.....</i>	<i>27</i>

About the Author

This report has been prepared by Libby Morris, BSc (Hons), an ecologist with seven years' experience undertaking field-based surveys as well as being a FISC level 4 accredited botanist and licensed river surveyor. She is experienced in habitat and PEA surveys as well as statutory Biodiversity Net Gain and habitat assessing.

This report has been reviewed by Kate Ellis, MSc, an ecologist with ten years' experience as an ecological advisor, as well as experience in undertaking habitat and wildlife surveys and Biodiversity Net Gain assessments.

1. Introduction

1.1 Purpose of the Report

Libby Morris has been commissioned by Rik Verbeeten to assess Cart Lodge, Rashes Farm, Turners Hill, with the purpose of designing a Biodiversity Enhancement Strategy in response to a proposed application comprising a single-storey extension of the existing building.

Enhancements to the site proposed include provisions for breeding birds and roosting bats, a bat-sensitive lighting scheme and the inclusion of native planting. This document outlines both the proposed enhancement measures and the methodology and implementation requirements for the site and must be implemented in accordance with the instructions set out below. This document will be submitted to Mid-Sussex District Council in response to Condition 5 of the Decision Notice for Application no. DM/24/2127, which states:

“Prior to any works above slab level a Biodiversity Enhancement Layout, providing the finalised details and locations of the enhancement measures contained within the Bat Emergence Report (Libby Morris Ecologist, August 2024) and Preliminary Ecological Appraisal (Libby Morris Ecologist, June 2024) shall be submitted to and approved in writing by the local planning authority.

The enhancement measures shall be implemented in accordance with the approved details prior to occupation and all features shall be retained in that manner thereafter.

Reason: To enhance protected and Priority Species and allow the Local Planning Authority to discharge its duties under the s40 of the NERC Act 2006 (as amended)”

The mitigation measures laid out within this document are to be issued to the client and all works contractors to ensure that they are carried out in full and in accordance with the methodologies described. Where applicable, implementation of this will be overseen by a suitably licensed ecologist.

1.2 Site Background

The site is located within a semi-rural location on the south eastern outskirts of Turners Hill, West Sussex, grid reference TQ 34457 35269. It is adjacent to arable and grazed fields with scattered woodland to the north and eastern aspects. The site boundary for the site is shown in Figure 1.



Figure 1. An aerial image showing the location of the site outlined in red, with the application site outlined in yellow. Image produced courtesy of Google maps (Map data ©2023 Google).

The application concerns a single-storey extension of a residential building, with existing plans shown in Figure 2 and the proposed extension plans shown in Figure 3.

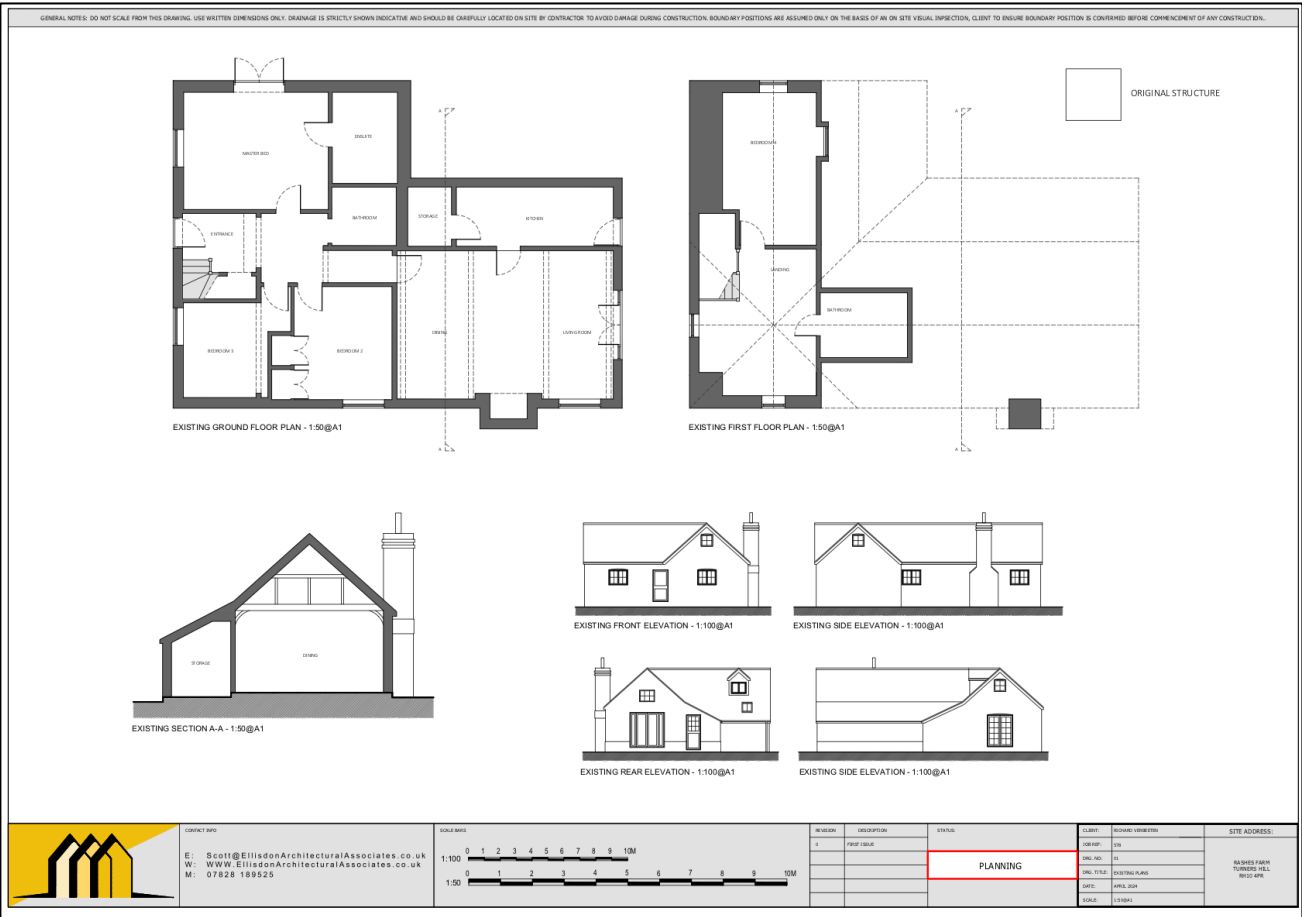


Figure 2. Existing building plans courtesy of Scott Ellisdon Architectural Associates (©2024).

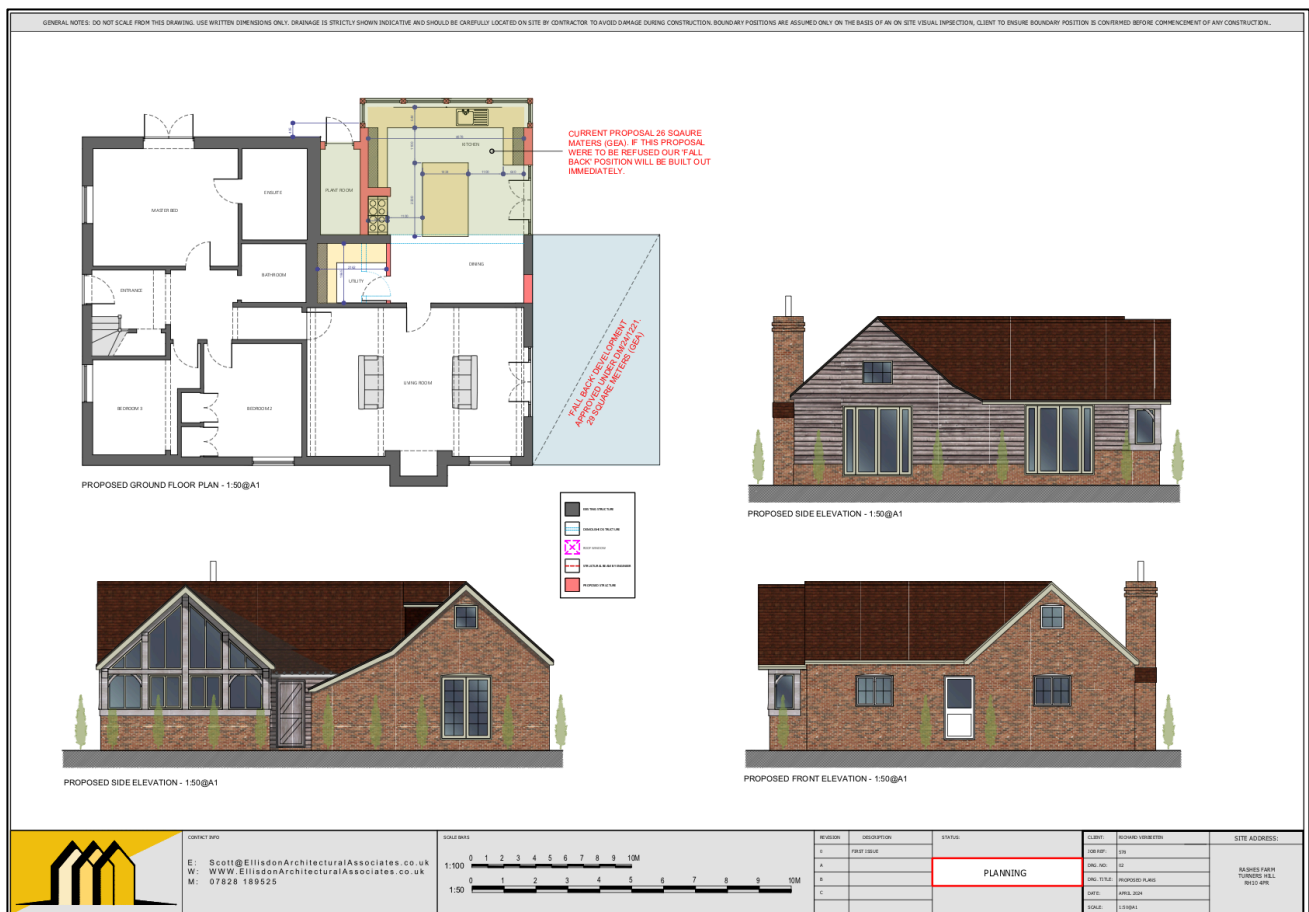


Figure 3. Proposed building plans courtesy of Scott Ellisdon Architectural Associates (©2024).

1.3 Management Plan

The aims and objectives for the landscape and biodiversity elements of this development project are as follows:

- Inclusion of native planting
- Provision of roosting features for bats
- Provision of breeding opportunities for birds
- Implementation of bat-friendly lighting

2. Proposed Enhancements

2.1 Overview

This enhancement strategy is designed to maximise the ecological value of the habitats within the site. The application site comprises a detached residential property overlooking an arable field to the north, with modified grassland surrounding the property. The property itself

is clad in wooden weatherboarding. There are further residential buildings to the west and east of the application site.

The site itself holds minimal value for biodiversity. Inclusion of native planting on site will provide opportunities for a botanically diverse habitat to establish and thereby offer ecological value for pollinating invertebrates. The provisions of bird and bat boxes will provide opportunities for breeding birds and roosting bats. The enhancements within this document are in accordance with the National Planning Policy Framework (NPPF)¹ which states in section 185:

“To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;

and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

Figure 4 shows the proposed enhancements and locations for the site.

¹ HM Government (December 2023). National Planning Policy Framework. Department for Communities and Local Government. Available [online](#).

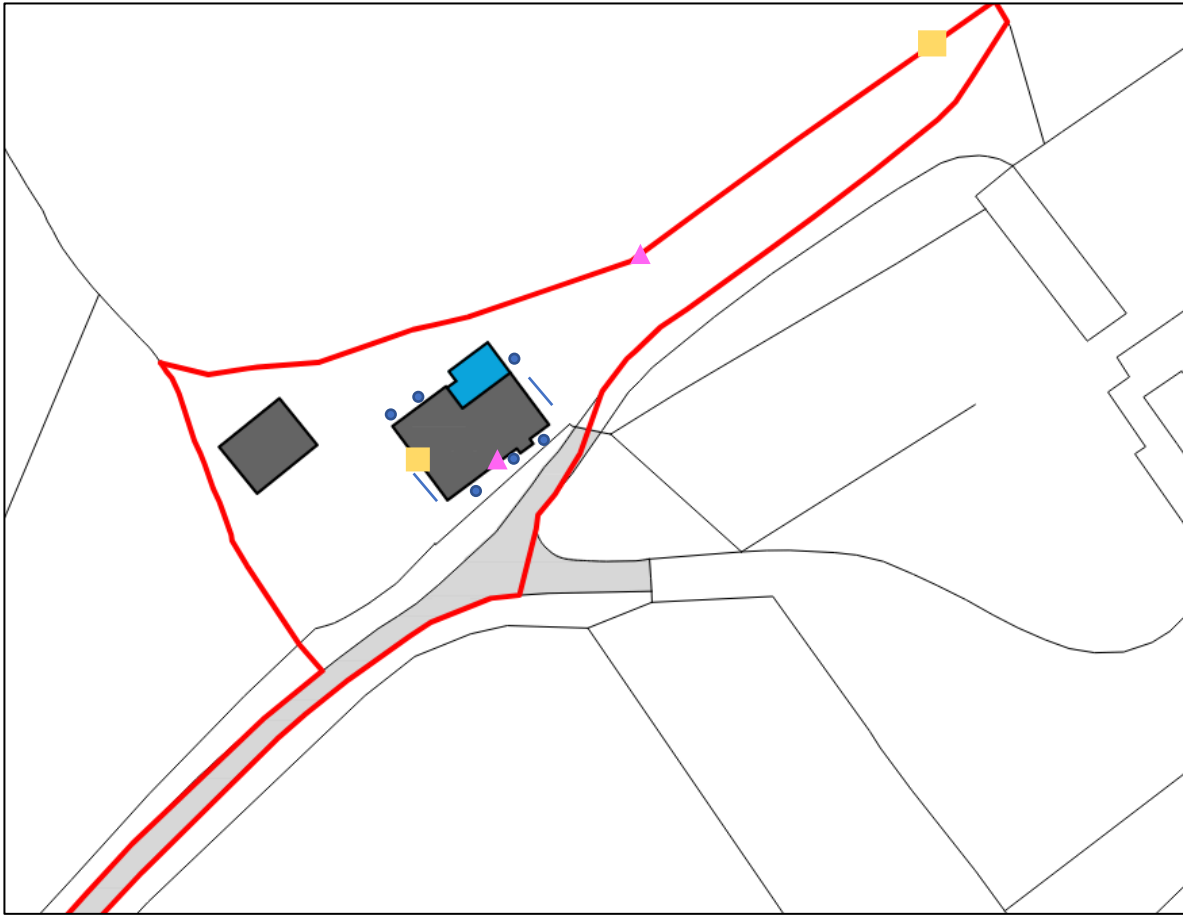


Figure 4: Plan of site with labelled enhancements: Planter locations shown in blue lines; plant pots marked as blue dots; bat box locations in yellow squares and breeding bird boxes marked in pink.

2.2 Native Planting

Native planting elements will be created around the main residence to the west and eastern edges. A minimum of two planters with a length of at least 1 metre will be included to the north of the main residence, planted with both herbaceous and climbing plants of native flowering species to benefit invertebrates. Six plant pots measuring at least 50cm in diameter planted with native flowering species will be placed across the site.

Only native species which will attract pollinating invertebrates should be introduced onto the site, and they will be maintained and watered regularly. The recommended native species for inclusion are listed in the landscape proposal in [Appendix 1](#). The plants must be placed in a location that has sunlight for at least 50% of the day.

2.3 Breeding Birds

One House Sparrow (*Passer domesticus*) bird nesting box such as the one in Figure 5 will be installed on the southern face of the building. The terrace must be installed at least 2m–4m off the ground, making sure that there is a clear flight path to the nest.



Figure 5 (left). Example of Sparrow terrace, available from www.nhbs.com



Figure 6 (right). Example of bird box for treeline, available from www.nhbs.com

A further bird box such as the one shown in Figure 6 is to be affixed within the existing treeline on the north-eastern boundary of the site. This box should be installed at least 5m above the ground on an established tree, ensuring that there is unobstructed access for birds entering and leaving. The locations for these boxes are shown in Figures 7 and 8.



Figure 7. Location of Sparrow breeding box on the existing building shown in pink

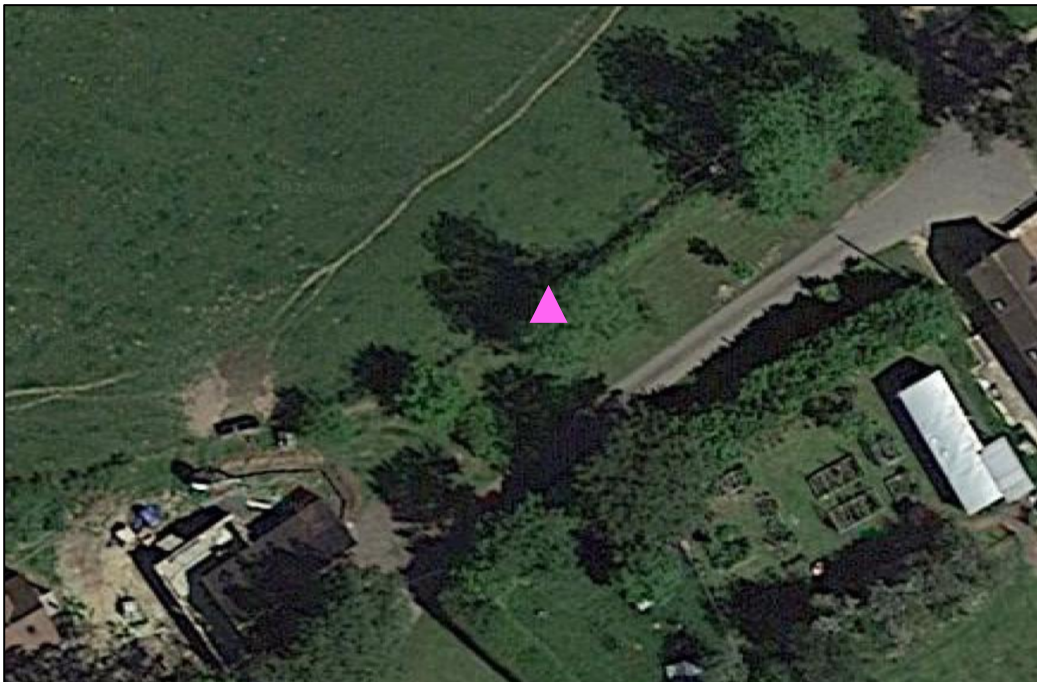


Figure 8. Location of bird box within existing treeline to the east of the site

2.4 Roosting and Foraging Bats

To provide a net positive benefit for bats within the site, the provision of two new roosting features for bats are recommended, close to the treeline to the east of the site which holds

value to foraging and commuting bats as a linear landscape features and area. Artificial light sources must be positioned facing away from flight lines and these features.

One bat box such as the one shown in Figure 9 suitable for crevice-roosting species such as Common Pipistrelle (*Pipistrellus pipistrellus*) will be placed on the building. The most suitable position is the roof elevation on the western elevation (Figure 10). The box will be placed a minimum of 3.5m high and there will be a clear flight path available to the box. No artificial light sources will be pointed towards the box.



Figure 9. Example of bat box, available from www.nhbs.com



Figure 10. Location of bat box shown in orange on western elevation of residential dwelling

Artificial light sources will be kept to a minimum on all aspects of the property. There will be no flood lighting on these elevations, and any necessary outdoor lights will comply with the artificial lighting guidelines and regulations as laid out by The Bat Conservation Trust³. The key measures recommended by the guidelines are as follows:

- Avoid unnecessary exterior lighting where possible
- Maintain a balance between appropriate lighting levels and the impact that exterior lighting will have on wildlife
- Comply with existing legislative buffers and avoid lighting key habitats and features altogether.
- Avoid lighting key habitats and features altogether
- Comply with guidance on illuminance levels and buffers

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- Lighting spectra: peak wavelength >550nm
- Colour temperature: <2700K (warm)
- Reduction in light intensity
- Minimal UV emitted

³ Bat Conservation Trust and Institute for Lighting Professionals (2023) Guidance note 8. Bats and Artificial Lighting. Available [online](#)

- Upward light ratio of 0% and good optical control

A full summary of the guidelines are laid out in [Appendix 3](#).

3. Post Construction Management Plan

3.1 Native Planting

The planters around the site will to be maintained to ensure the healthy growth and flowering of herbs and climbing species. They will also need to be monitored to check that no invasive plants become established. Replacement of dead, dying and decaying vegetation is to be with similar or the same native species, and long-term monitoring of the planting is to be undertaken to ensure it is suitable for use by pollinating invertebrates. The climbing plant species will be managed to ensure that they are able to climb, ideally through the introduction of a trellis or similar structure. All plants will need consistent and regular watering and feeding. The pots and planters are to be maintained to ensure that they are of adequate size for the shrub or plant being grown within them. Both climbing and herbaceous plants must be maintained to ensure floristic productivity for pollinators. Minimal weeding of native plant species will be undertaken of the planters and pots specifically grown for pollinating invertebrates.

3.2 Breeding Birds

The nest boxes placed on the buildings and within the treeline will be emptied of nesting material to prevent the build up of parasites. This will be undertaken outside of the breeding bird season (March–July inclusive).

3.3 Roosting and Foraging Bats

The bat boxes placed on the house will be placed as high as possible on the western elevation of the dwelling as per this strategy, with no further maintenance being required thereafter.

The lighting scheme as laid out in Appendix 3 will be implemented during construction of the extension to the property.

4. Work Schedule

Table 1 below provides a summary of the timings of works to be undertaken as enhancements across the site on an annual basis.

Table 1. Annual work schedule.

Action	Timing of Works
Planting of native plants	Between March - April
Monitoring of plants for disease	Monthly
Replacement planting of failed planting	Any time of year
Implementation of bat-friendly lighting scheme	During construction of extension
Implementation of bird and bat boxes	Any time of year
Cleaning of bird boxes	Outside of breeding season – to be cleaned between August and January

5. Specifications of Works to be Undertaken

A site inspection must be undertaken by a suitably qualified ecologist following the implementation of prescriptions under this Biodiversity Enhancement Strategy to ensure compliance with this report.

All relevant works must be carried out by someone suitably qualified as follows:

- Installation of all wildlife boxes will be undertaken or overseen by a suitably qualified ecologist;
- initial and monitoring site inspections will be undertaken by a suitably qualified ecologist.

If any protected species are found during the proposed work, work should be stopped immediately, and an ecologist must be contacted immediately for advice.

APPENDIX 1: Landscape and Planting Design

Native plant species

Herbs:

Rosemary – (*Rosmarinus officinalis*)

Caraway – (*Carum carvi*)

Hyssop – (*Hyssopus officinalis*)

English lavender – (*Lavandula angustifolia*)

Common sage – (*Salvia officinalis*)

Wild thyme – (*Thymus polytrichus*)

Fennel – (*Foeniculum vulgare*)

Chives – (*Allium schoenoprasum*)

Common mint – (*Mentha spicata*)

Wild marjoram – (*Origanum vulgare*)

Climbing plants:

Honeysuckle – (*Locinera periclymenum*)

Traveller's-joy – (*Clematis alba*)

Dog rose – (*Rosa canina*)

Tufted vetch – (*Vicia cracca*)

Broad-leaved sweet pea – (*Lathyrus latifolius*)

Hop – (*Humulus lupulus*)

APPENDIX 2 – Legislation and Best Practice

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

- **The Conservation of Habitats and Species Regulations 2017**

These regulations, referred hereafter as “the Habitats Regulations”, represent the primary method by which Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the “Habitats Directive”) is transposed for England and Wales and their territorial seas. The Habitats Directive, in conjunction with the Birds Directive (Council Directive 2009/147/EEC) forms the basis for implementation of Europe’s nature conservation policy through both habitat and species level protection. The Habitats Directive requires the designation of strictly protected European sites known as Special Areas of Conservation (SACs). Together with the Special Protection Areas (SPAs) established by the Birds Directive, these collectively form the Natura 2000 Network of protected sites. The Habitats Directive also requires the strict protection of animals and plants of Community Interest listed under Annex IV. Habitat types requiring strict protection as SACs are listed under Annex I. The conservation of animals and plants listed under Annex II requires the designation of SACs. The Habitats Regulations require that public bodies must exercise their nature conservation responsibilities to ensure compliance with the Habitats Directive. These regulations also require the conservation of natural habitats and habitats of species through the selection, designation and notification of marine and terrestrial ‘European Sites’ to be afforded protection under the Habitats Directive. The habitats and species of European Importance are listed under Annexes I and II of the Habitats Directive. The regulations also contain provision for the appropriate management of these European Sites including the control of damaging operations, special nature conservation orders and restoration orders, for example. The Habitats Regulations afford strict protection to European Protected Species of animals under Schedule 2 and plants under Schedule 5. Offences (subject to certain exceptions) include the deliberate capture, killing, disturbance or trade in these animals. Similarly plants listed under Schedule 5 are protected (subject to exceptions) from picking, collection, cutting, destruction or trade.

- **The Wildlife and Countryside Act 1981(as amended)**

The Wildlife and Countryside Act 1981(as amended) (WaCA) is still a leading mechanism for the legislative protection of wildlife and national parks across the United Kingdom. The WaCA draws on elements of pre-existing legislation and supports the Habitats Regulations in implementing the Bern Convention (1979) and Directive 2009/147/EC on the conservation of wild birds. Schedules within the WaCA provide a list of protected species and habitats, in addition to prohibited actions. It also contains measures for controlling invasive non-native species and amendments to a number of laws. Most notably within the scope of this report are Schedule 9 of the WaCA which lists non-native species that are already established in the wild and continue to pose a conservation threat to native biodiversity and habitats and stipulates that further releases should be regulated. Schedule 9 also includes some native species (for example, Barn Owl (*Tyto alba*)) in order to provide a level of control to ensure that releases, in particular re-introduction programmes, are carried out in an appropriate manner and biodiversity is properly safeguarded; and Schedule 14, which prohibits the introduction into the wild of any animal of a kind which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 of the WaCA.

- **The Natural Environment and Rural Communities (NERC) Act 2006**

The Natural Environment and Rural Communities Act imposes a Biodiversity Duty (S.40) on all public bodies to conserve biodiversity at both species and habitat levels (S40);

“Every 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.”

Section 41 of the Act requires the publication of a list of

“living organisms and types of habitat which in the Secretary of State’s opinion are of principal importance for the purpose of conserving biodiversity.”

The list generated under Section 41 of the Act contains a number of types of habitats and species of animal and plant that have the potential to be affected by development projects of a range of sizes and impacts including lowland deciduous woodland, floodplains and calcareous grassland habitats.

The Act also establishes Natural England as the independent body to:

“ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development”.

943 species and 56 habitats of principal importance are included on the S41 list as guidance for public bodies on decisions that affect biodiversity.

- **The Hedgerow Regulations 1997**

On 1 June 1997, the Hedgerow Regulations came into force under section 97 of the Environment Act 1995 to address the dramatic decline in UK hedgerows. The regulations protect important hedgerows by limiting removal through a system of notification via local planning authorities. The regulations are aimed at countryside hedgerows in England and Wales;

Section 3.6: *"on or adjoining, common land, village greens, Site of Special Scientific Interest (which include National Nature Reserves, Special Protection Areas under the Birds Directive and Special Areas of Conservation under the Habitats Directive), Local Nature Reserves, or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys"*

Written permission is required from the local planning authority before the removal of any hedgerow over 20 metres and more than 30 years old. Hedgerows less than 20 metres long may also be considered if they form part of a continuous network of hedges.

The LPA will then either issue a Hedgerow Retention or Hedgerow Removal Notice within 42 days depending on whether they define the hedgerow as important or not based on the following criteria:

- "They have been in existence 30 years or more; and"
- "They satisfy at least one of the criteria set out in Part II of Schedule 1 of the Regulations."

Exemptions to the Regulations fall into three categories:

- "small scale works;"
- "works approved under other procedures which ensure careful assessment and consideration of the impact on the local environment; and"
- "works authorised under other legislation which justify the removal of a hedgerow without first establishing its importance."

It is an offence to remove a hedgerow subject to a retention notice, or to remove a hedgerow protected under the Hedgerow Regulations without first obtaining the required removal notice.

Updated regulations as part of the Hedgerow Regulations due in 2024 regulations will include a two metre 'buffer strip' from the centre of hedgerows with no cultivation or application of pesticides or fertilisers, and a hedge cutting ban between 1 March and 31 August to protect nesting birds. These updates are also to include over 90,000km of hedgerows being managed through 16,000 agreements in the government's Countryside Stewardship and Sustainable Farming Incentive schemes, and more than 13,000km of hedgerows created or restored using Countryside Stewardship grants.

- **The UK Post-2010 Biodiversity Framework**

The UK Post-2010 Biodiversity Framework was published on 17 July 2012. It was produced by JNCC and Defra, on behalf of the Four Countries' Biodiversity Group (4CBG), through which the environment departments of all four governments in the UK work together. It covers the period from 2011 to 2020, and was developed in response to two main drivers: the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020 and its five strategic goals and 20 'Aichi Targets', published in October 2010; and the EU Biodiversity Strategy (EUBS), released in May 2011. The framework shows how the work of the four UK countries joins up with work at a UK level to achieve the 'Aichi Targets' and the aims of the EU Biodiversity Strategy. It identifies the activities required to complement the country biodiversity strategies, and where work in the country strategies contributes to international obligations. In total, 23 areas of work were identified where all the countries agreed that they wanted to contribute to, and benefit from, a continued UK focus.

The development of the framework reflects a revised direction for nature conservation, towards an approach which aims to consider the management of the environment as a whole, and to acknowledge and take into account the value of nature in decision-making. The framework sets out the common purpose and shared priorities of the UK and the four countries, and, as such, is a hugely important document, which is to be owned, governed, and implemented by the four countries.

- **National Planning Policy Framework (NPPF)**

This framework acts as guidance for planning authorities (LPAs) in England to form Local Plan policies in favour of sustainable development as part of the government's reforms to increase the accessibility of the planning system and promote long term sustainable growth.

The framework states that "planning policies and decisions should contribute to and enhance the local environment" (paragraph 170).

Chapter 15 of the framework focusses on habitats and biodiversity. Specifically, paragraph 175 states:

"...when determining planning applications, local planning authorities should apply the following principles:

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused"*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments) should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Scientific Interest (SSSI);*
- *development proposals whose primary objective is to conserve or enhance biodiversity should be supported;*
- *opportunities to incorporate biodiversity improvements in and around developments should be encouraged;*
- *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"*

The NPPF also states section 185 in regard to planning applications:

"To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of

importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

- **Circular 06/2005: Biodiversity and Geological Conservation**

The Circular 06/2005 complements the NPPF by advising on how the law relates to planning and nature conservation in England, with particular reference to designated sites and protected species;

“It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision” (Paragraph 99).

However;

“developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.”

Part IV also reminds LPAs and developers that licences and mitigation measures may be required in addition to planning permissions if protected species are to be affected by the development

“The breach of protected species legislation can often give rise to a criminal offence”
(Paragraph 101).

- **Bats**

All British bats are “European Protected Species” (EPS) and listed on Annex II and Annex IV of the EC Habitats Directive. The Directive is transposed into UK law through the Conservation of Habitats and Species Regulations 2017. The following actions affecting bats are prohibited under the legislation:

- deliberate capture, injury or killing of a bat;

- deliberate disturbance of a bat and in particular disturbance which is likely to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate;
 - or to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destruction of a breeding site or resting place;
- possessing, controlling transporting, selling or exchanging, or offering for sale or exchange any bat or any part of a bat or anything derived from one.

Bats are also afforded protection from intentional or reckless 'disturbance' by the Wildlife and Countryside Act 1981 (as amended). The deliberate or reckless obstruction of access to a structure or place used by bats for shelter and protection is also an offence under the Act.

- **Birds**

All wild birds in the UK are afforded protection under the Wildlife and Countryside Act 1981 (as amended). This protection includes killing, injuring or taking wild birds as well as taking, damaging or destroying bird nests in use or being built, and taking or destroying eggs. Birds listed under Schedule 1 of the Act are afforded additional protection from disturbance during nesting and offences relating to these birds are subject to special penalties. The nest sites of birds listed under Schedule ZA1 of the act are afforded strict, year-round protection even when the nests are not in active use.

- **Great Crested Newts**

Great Crested Newts (*Triturus cristatus*) are a "European Protected Species" (EPS) and listed as such on Annex II and Annex IV of the EC Habitats Directive. The Directive is transposed into UK law through the Conservation of Habitats and Species Regulations 2017. The following actions affecting great crested newts are prohibited under the legislation:

- deliberate capture, injury or killing of a great crested newt;
- deliberate disturbance of a great crested newt and in particular disturbance which is likely to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or

- in the case of animals of a hibernating or migratory species, to hibernate or migrate;
- or to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destruction of a breeding site or resting place;
- possessing, controlling transporting, selling or exchanging, or offering for sale or exchange any great crested newt, any part of a great crested newt or anything derived from one.

Great crested newts are also afforded protection from intentional or reckless 'disturbance' by the Wildlife and Countryside Act 1981 (as amended). The deliberate or reckless obstruction of access to a structure or place used by great crested newts for shelter and protection is also an offence under the Act. This applies to both aquatic and terrestrial habitat.

APPENDIX 3 - Reducing Impacts of Artificial Light

External lighting has been proven to have a negative impact on foraging and commuting bats, as well as impact other nocturnal species such as invertebrates, birds and mammals such as

Badger and Hedgehog. The Bat Conservation Trust has guidelines⁴ which should be referred to when designing lighting schemes for proposed developments. In areas where the introduction of lighting will have a significant impact on the surrounding environment such as rural locations it is recommended that an ecologist is consulted prior to a lighting scheme being designed. The key measures recommended by the guidelines are as follows:

- Avoid unnecessary exterior lighting where possible
- Maintain a balance between appropriate lighting levels and the impact that exterior lighting will have on wildlife
- Comply with existing legislative buffers and avoid lighting key habitats and features altogether.
- Avoid lighting key habitats and features altogether
- Comply with guidance on illuminance levels and buffers

It may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required. Baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved. As a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- Lighting spectra: peak wavelength >550nm
- Colour temperature: <2700K (warm)

⁴ Bat Conservation Trust and Institute for Lighting Professionals (2023) Guidance note 8. Bats and Artificial Lighting. Available [online](#)

- Reduction in light intensity
- Minimal UV emitted
- Upward light ratio of 0% and good optical control

APPENDIX 4 – Conditions of use

This report has been prepared by Libby Morris, with all due diligence and care within the terms of the Contract with the client. This report only becomes the property of the client once payment for it has been received in full. The author disclaims 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 the author accepts no responsibility 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.