Biodiversity Enhancement Strategy

Land at Sluetts Farm, Horsham

May 2024

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Land at Sluetts Farm, Horsham

10/05/2024

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1. Introduction

Background

1.1 Phlorum Limited was commissioned by Savils to compile a Biodiversity Enhancement Strategy in relation to the proposed development at Land at Sluetts farm, Horsham, RH13 0LB, here on referred to as 'The Site'.

1.2 The National Grid Reference for the centre of the site is TQ 1555 2848. The survey area extended over approximately 0.15 hectares (ha).

Proposed Development

1.3 It is understood that the proposed development involves erection of temporary agricultural workers dwellings.

Planning

1.4 We understand that planning permission has been granted for the site and Condition 4 states that a Biodiversity Enhancement Strategy is required. The sections that are covered by the conditions are stated in the brackets.

1.5 Condition 4 states:

> *"Condition 4 Pre-Commencement (Slab Level) Condition: 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 following:*
>
> *a) purpose and objectives for the proposed enhancement measures* **[Section 2.2]***;*
>
> *b) detailed designs to achieve stated objectives* **[Sections 3.2, 4.1, Appendix A, 4.1]***;*
>
> *c) locations of proposed enhancement measures by appropriate maps and plan* **[Sections 3.2, 5.1]***;*
>
> *d) persons responsible for implementing the enhancement measures, and* **[Sections 2.7, 5.1]***;*
>
> *e) details of initial aftercare and long-term maintenance (where relevant)* **[Sections, 2.7, 6.1]***.*
>
> *The works shall be carried out in strict accordance with the approved details and shall be retained and maintained 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 Local Planning Authority to discharge its duties under the s40 of the NERC Act 2006 (Priority habitats & species)."

Previous Reports

1.6 This document has been developed with reference to the findings contained within the previous Preliminary Ecological Appraisal (PEA) compiled by Bakerwell, (2022).

1.7 The site consisted of hardstanding connecting to a road, planted woodland along the northern site boundary adjacent to a bare ground track.

1.8 The PEA by Bakerwell, 2022 considered the site to offer potential for protected species foraging bats, nesting birds, badgers and hedgehogs. And included recommendations for precautionary working methods which included avoidance of nesting seasons and wildlife friendly working methods. There were no statutory sites within 2km of the site. There are no priority habitats on site, the closest area of ancient woodland was approximately 1.3km northwest of the site. No further surveys were recommended by the PEA.

The Report

1.9 This document has been compiled in the context of the proposals stated in this introduction and based on information made available by the client at the time. Alterations to the scheme and changes in ecological legislation may necessitate amendments to this document at a later stage.

1.10 This version (V1) has been produced for minor text amendments.

2. Purpose, Aims, and Objectives

2.1 The following section addresses the requirements of condition 4 for a Biodiversity Enhancement Strategy for protected species (bats, breeding birds, dormice, badgers, reptiles and hedgehog), to be submitted to and approved in writing by the local planning authority)".

2.2 Specifically, this section addresses point;

a) Purpose and objectives for the proposed works;

Purpose

2.3 As stated in the introduction, this biodiversity enhancement strategy has been produced for the purposes:

- To assist in discharging Condition 4, related to biodiversity;
- To outline measures to enhance the sites potential for protected species;
- To outline measures to prevent impacts on protected species and to avoid committing offences under the relevant legislation.

Aims

2.4 The overarching aims of this biodiversity method statement is:

"The enhancement of the sites ecology, including strategies for protected species such as bats, breeding/nesting birds, dormice, badgers, reptiles and hedgehogs".

Objectives

2.5 The Objectives of the biodiversity method statement are as follows:

- To ensure no breach of wildlife legislation occurs on site for the duration of the proposed development;
- To enhance the sites value for biodiversity;
- To protect the wildlife, particularly protected species including but not limited to bats, breeding/nesting birds, dormice, badgers, reptiles and hedgehogs for the proposed development and construction works; and
- To minimise impact on any retained habitats on site or any adjacent habitats.

Responsibilities

2.6 The list below provides information on the roles and responsibilities for the ecological works on site.

2.7 Specifically, this section addresses points;

d) persons responsible for implementing the enhancement measures;

e) initial aftercare and long-term maintenance (where relevant), and;

- The Ecological Clerk for Works (ECoW) will be responsible for ensuring compliance with nature conservation legislation. Any ECoW will be a suitably qualified ecologist, to be provided by Phlorum Limited.
- The principal contractor on site will be responsible for ensuring that there is an ECoW supervising any necessary vegetation clearance work and any demolition work on site, as required by the ECoW.
- The Site owner, or site manager, will be responsible for ensuring that that a member for the Property Care Association Invasive Weed Control Group (PCA IWCG) is contacted to manage any invasive plant species discovered on site.
- The Site owner, or site manager, will be responsible for ensuring that the principal contractor complies with the biodiversity enhancement strategy for the works, and for long term maintenance, including waste management is carried out as specified in this document.

Ecological Clerk of Works (ECoW)

2.1 The role of the ECoW is to work with the developer or contactor and provide ongoing advice and support in addition to their compliance monitoring and reporting obligations, as set out in the BS 42020:2013. The ECoW's role on site will include:

- Provision of ecological advice;
- Production and delivery of site inductions, toolbox talks and communications to contractors;
- Implementation and maintenance of exclusion zones;
- Supervision/monitoring of the activities on site, such as vegetation clearance.

2.2 In the event that any protected species are found during development, all works must stop immediately and seek advise from the ECoW on how to proceed.

2.3 The times during development when the ECoW or appointed person needs to be present on-site are shown in the timetable of ecological works in Appendix C.

Timing of Sensitive Works

2.4 Any clearance of sensitive ecological habitats will need to be supervised by a suitably qualified ecologist.

2.5 The contractors will, so far as reasonably practicable, avoid undertaking vegetation clearance during the relevant species' nesting, hibernation or rearing seasons, as appropriate.

2.6 Appendix C provides a timetable for the ecological works.

Protection of Habitats – Biodiversity Protection Zones

2.7 The principal contractor will be responsible for ensuring that the areas of vegetation outside the proposed site boundary are protected during the construction phase. This will create Biodiversity protection zones which will be protected during the works.

3. Proposed Works

Outline

3.1 This method statement describes works that are to take place in order to ensure that protected species are not adversely affected by the vegetation clearance works, demolition works, and ground works that are being carried out at the site by the Principal Contractor.

3.2 Specifically, this section addresses point;

b) detailed designs to achieve stated objectives;

c) locations of proposed enhancement measures by appropriate maps and plans

3.3 A map of the current habitats on site is shown at Appendix A. The Figure shows the habitats noted at the time of the PEA, drawn by Bakerwell, 2022.

3.4 Appendix B shows the proposed development. The Figure shows the location of the proposed concrete slab and in-situ concrete which is set on top of the existing ground, location of stone chipping to be set over the areas of current bare ground, gravel areas, locations of retained trees and hedges and areas of grass and habitat enhancement through the provision of bat and bird boxes.

3.5 Appendix C –shows the timetable of works demonstrating works are at appropriate times.

Description of Works

3.6 The works involve laying of in-situ concrete and concrete slab paving on a cleared section of the site, temporary accommodation will then be erected on top of this. Stone chipping and some areas of gravel will be lain along the southeastern boundary on the current area of bare ground. The onsite habitats will be retained and protected during works, there will be enhancements for biodiversity through the provision of bat and bird boxes around the site.

Protected Species Risk Assessments

3.7 The findings of the PEA (Bakerwell, 2022) indicated that the main ecological risks at the site that have the potential to be impacted by the proposed works are the following:

- Foraging bats:
- foraging badgers;
- breeding birds; and
- hedgehogs.

3.8 In addition to these protected species, condition 4 states this method statement must also take into account how other protected and priority species will be protected. All British herpetofauna (reptiles and amphibians) species receive full protection under the Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2 and by Schedule 5 of the Wildlife and countryside Act 1981 (as amended). The hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

3.9 Hazel dormice and amphibians were identified as being locally present by the desktop/data search undertaken by the PEA (Bakerwell, 2022). Five EPSMLs for hazel dormice were identified as being granted within 2km of the site, the closest was 0.6km southwest of the site, however the PEA considered the site unsuitable for dormice due to the lack of connectivity and suitable on-site habitat. Ten EPSMLs for great crested newt were identified as granted within 2km of the site the nearest was 0.8km northeast of the site, however there was not suitable habitat on-site to support this species.

3.10 These species/habitats will be protected by clearance works being undertaken using a precautionary approach. If any other protected species or habitats are identified during the clearance works, measures will be reviewed in order to comply with appropriate legislation to protect them.

4. Method Statement

4.1 Specifically, this section addresses point;

> *b) detailed design(s) and/or working method(s) necessary to achieve stated objectives*

Tool Box Talk

4.2 Prior to any works starting, the ECoW will give a toolbox talk to all on-site contractors in relation to all protected species at the site. A repeat toolbox talk may be required as different contractors work at the site and the site foreman must communicate this to the ECoW.

4.3 If the contractors encounter any protected species during the vegetation clearance/demolition works, they should cease works immediately and seek advice from the onsite ECoW.

Pre Clearance Checks

4.4 Prior to the clearance commencing in each area, any vegetation and buildings will be carefully inspected by the ECoW to ensure as far as possible that there are no nesting birds, reptiles, hedgehogs or suitable habitat for bats, badgers or dormice in the clearance areas. Evidence of any other protected species or habitats will also be assessed.

4.5 Searching will include any areas of vegetation/rubble or any other potential habitat or other potential refugia/roosts/nesting sites that might be disturbed by any vegetation clearance works.

4.6 A daily log will be kept that will include records and locations of any protected species or habitats found during the site clearance works.

4.7 It should be borne in mind that if any cleared vegetation is to be stockpiled it could create suitable habitat for nesting birds, reptiles, hedgehogs, or amphibians, which might not be desirable to the client.

Bats

4.8 Bats receive protection under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (as amended).

4.9 At the time of the PEA (Bakerwell, 2022), it was considered that the onsite plantation woodland and off-site hedgerows and the surrounding arable fields offered suitable habitat to support foraging/commuting bats. No potential roosting features were observed on any of the on-site trees and no further surveys were recommended as the proposed works will not impact on any of the onsite habitats.

4.10 It was recommended that works are undertaken during daylight hours only in order to minimise disturbance to any bats using the site. Additionally if the proposals change to include additional felling if the woodland outside of the redline boundary then a suitably qualified ecologist must be instructed to survey the trees and assess their potential for roosting bats. The ecologist may then return to the site to oversee certain stages of the works as considered necessary, or additional surveys may be required. If during the works a bat is found, then the ecologist needs to be informed and all work stopped until it has been assessed. If a roost is confirmed, then a bat EPSM licence may be required before the work commences.

[redacted]

[redacted]

4.18 With these measures in place, it is expected that risks to this species will be low.

Breeding Birds

4.19 The on-site buildings were considered to provide suitable nesting habitat for a range of bird species during the PEA (Bakerwell, 2022). All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

4.20 In order to avoid any potential impact on breeding birds, the clearance of the site should be undertaken outside the main bird nesting season which runs from March to August inclusive[1], with clearance works possible between September and February. Where this is not possible, the ECoW would need to check the site for active nests and signs of bird breeding activity.

4.21 In the event that a nest is found, an exclusion zone around the nest will be established. Works would have to cease within this buffer area until the young birds have fledged.

4.22 In the event that a nest is found, an exclusion zone around the nest would be established. The extent of the buffer area will be determined by the ECoW at the time and will depend on its location and proximity to the works. Works will then cease within this buffer area until the young birds have fledged. The buffer area will be delineated by tape which will either be attached using stakes or tied around trees.

4.23 The ECoW will monitor the nest over a period of a few weeks and inform the on-site contractors when the nest is no longer in use, enabling works to continue in this area.

4.24 Contractors will remain vigilant throughout the works and any breeding or nesting behaviour observed or suspected on site should be reported immediately to the ECoW. All works must cease until advice has been sought from the ECoW.

Hazel Dormice

4.25 The hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

4.26 The PEA (Bakerwell, 2022) did not identify any habitat considered suitable to support populations of hazel dormice, however several records of EPSMLs for hazel dormice within a 2km search radius of the site were returned by the data/desktop search undertaken with the PEA within 2km of the site.

4.27 In order to avoid potential impact to any dormice present on site, the ECoW must carry out an initial check of each area before they are cleared.

[1] It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

4.28 If any dormice are encountered during the works individuals should be carefully relocated to suitable cover outside the working area.

4.29 As long as this methodology is followed it is considered unlikely that any dormice will use the site prior to works taking place, and this approach ensures that any off-site dormice remain out of the development footprint.

Hedgehogs

4.30 Hedgehogs are listed on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which makes it illegal to kill or capture hedgehogs, with certain methods listed. They are also listed under the Wild Mammal Protection Act 1996, which prohibits cruel treatment of hedgehogs. They are also a species of 'principal importance' under the NERC Act 2006.

4.31 In order to avoid potential impact to hedgehogs the ECoW must carry out an initial check of each area before they are cleared.

4.32 All trenches/steep sided holes must be covered at night or if this is not possible, ramps must be installed into the trenches to enable badgers to escape should they enter the excavations. All materials must be stored safely and lids securely fitted.

4.33 Any fencing will leave a gap of 20cm at the base to ensure that permeability of the site remains in place If this is not considered viable, due to the possibility for pets to escape, [redacted] gates will be installed.

4.34 With these measures in place, it is expected that risks to this species will be low.

Reptiles & Amphibians

4.35 All reptiles and amphibians are protected under the Wildlife and Countryside Act 1981 (as amended).

4.36 The PEA (Bakerwell, 2022) did not identify any habitat considered suitable to support populations of reptiles and/or amphibians, however several records of EPSMLs for great crested newt were returned by the data/desktop search undertaken with the PEA within 2km of the site.

4.37 Potential populations of reptiles could exist in the boundary hedgerow habitats or while commuting/foraging. While no significant impacts to any local reptile populations are anticipated as a result of the proposed development, precautionary measures are advised.

4.38 In order to avoid potential impact to any reptiles or amphibians present on site, the ECoW must carry out an initial check of each area before they are cleared.

4.39 If any reptiles or amphibians are encountered during the works individuals should be carefully relocated to suitable cover outside the working area.

4.40 As long as this methodology is followed it is considered unlikely that any reptiles will use the site prior to works taking place, and this approach ensures that any off-site reptiles remain out of the development footprint.

Habitat Connectivity

4.41 The development of the site must enable wildlife, particularly hedgehogs to migrate across the area. There are currently no plans to install a solid fixed fence round the site. However, if a fence was installed then gaps must be installed in the fencing (13 x 13cm) at ground level. These gaps will also enable other wildlife such as reptiles, amphibians, and other ground dwelling species to migrate across the site.

4.42 Change in ground level, such as high kerbs, steps, terracing, sunken patios, gullies and rains, can create barriers to wildlife. As a result the landscaping should ensure sloped access/escape routes for ground dwelling species.

Species Rescue

4.43 Should a protected or priority species be discovered during the works, and it does not disperse of its own accord out of the development footprint to safety, then the ECoW must be contacted immediately, and all works stop in the area under till the ECoW has assessed the situation. In certain situation all works may need to be halted on site until an appropriate licence has been obtained.

4.44 If the species in question cannot be relocated to suitable off site habitat by the ECoW due to injury then an assessment must be made and a vet or relevant rehabilitation centre contacted. The incident will be recorded, and It may need reporting to Natural England and/or the Police.

Tree Protection

4.45 The root protection areas of retained trees must be left free from disturbance and protected from contamination or compaction during the proposed works. Protection shall comprise a combination of tree protection fencing, temporary ground protection and appropriate signage. This should be discussed with the project arboriculturist.

5. Ecological Enhancement & Design

5.1 Specifically, this section addresses point;

c) detailed designs to achieve stated objectives;

d) detailed design(s) and/or working method(s) necessary to achieve stated objectives

Ecological Impacts

5.2 The proposed development is not expected to impact on the existing habitats, as works and impacts of the new buildings are temporary, however there will be some loss of ground within the felled areas of woodland.

5.3 The surrounding vegetation and woodland may be suitable for foraging bats, badgers and hedgehogs. The loss of any trees may reduce potential breeding birds sites.

5.4 The proposed development will only have limited impact on the on-site habitats. The site is not-well lit at night, therefore any new buildings (temporary and permanent) and development should serve to maintain the site's current value for foraging bats and to minimise indirect impacts from lighting associated with the new building. This can be achieved by following accepted best practice (Institute of Ecology and Environmental Management 2006, Institute of Lighting Professionals 2018, Bat Conservation Trust, 2014):

Ecological Enhancement

5.5 The main areas of the ecological enhancement will include the following:

- Bat boxes, and;
- Bird boxes.

Bat Boxes

5.6 At least one bat box will be installed on mature trees around the site to compensate for the loss of any potential roosting features.

5.7 There are several types of bat boxes. However, the Woodcrete or WoodStone (such as Schwegler) are simple to install and are built to last at least 25 years against damage by weather, rot or natural predators. However, wooden untreated bat boxes, using rough wood, can be just as effective, although may need replacing after ten years.

5.8 The bat boxes will be positioned on surrounding trees, installed at appropriate locations in sheltered positions but exposed to the sun for part of the day. These are normally with south-east, south, or south-west facing aspects, although south and south-west orientation is normally best. They should be installed at least between 3-6m from ground level. There should be a clear flight path to the box. They area should not be installed in areas impacted by artificial lights.

5.9 Bat boxes do not need annual inspection/cleaning, and once installed it is important that the bat boxes are not disturbed, unless by a suitable qualitied bat person. Where the bat boxes have not been used, the possibility of re-siting them to more suitable areas should be explored and advice should be sought from the project ecologist.

5.10 Specific locations and installation of the bat boxes will be decided once all works have been completed to avoid any unnecessary disturbance to roosting bats (See Appendix B for approximate locations and Appendix D for bat box specifications).

Bats and Lighting

5.11 Different species of bat have been found to react differently to night-time lighting however research has found that generally, all species of bats are sensitive to artificial lighting and that excessive lighting can delay bats from emerging, thus shortening the time available for foraging, as well as causing individuals to move away from suitable foraging grounds or roost sites to alternative dark areas (Jones, 2000). Bats can also become isolated from their foraging grounds if the linear features they use for commuting are suddenly illuminated, creating a light barrier (Fure, 2006).

5.12 In order to reduce the potential impact of light on bats the following design protocols will be carried out:

- The level of artificial lighting including flood lighting will be kept to a minimum, particularly around the site boundaries;
- LED lights will be used and the lights will be directed/shielded to shine low with minimal light spillage;
- all lights should be directed at a low angle with minimal light spillage wherever possible;
- the site boundaries will be kept dark, preferably at bat emergence (0-1 hour after sunset) and during peak bat activity periods (e.g. 1.5 hours after sunset and 1.5 hours before sunrise); and
- Artificial lighting will not directly illuminate any potential bat commuting areas such as boundary features particularly along the north and south of the site. Similarly, any newly planted linear features or buffer areas around the site boundary should not be directly lit.
- If security lights are required, then they will be set on a Passive Infrared (PIR) sensor and timer so that the light is only emitted for the short time period required.

Bird Boxes

5.13 As a measure to enhance the biodiversity value of the site additional breeding bird provision will be installed throughout the survey area. This will include the installation and siting of at least one bird box, suitable for vulnerable local species such as sparrows, starlings and swifts.

5.14 There are several types of bird boxes. However, the Woodcrete or WoodStone (such as Schwegler) are simple to install, inspect and clean and are built to last at least 25 years against damage by weather, rot or natural predators. However, wooden untreated bird boxes can be just as effective, although may need replacing after ten years.

5.15 The boxes will be installed at appropriate locations which are generally given to be facing north-east or north-west, although this matters little providing that the box entrance is sheltered from the prevailing wind and rain and sheltered from direct sunlight, and at least 2m from ground level. It is advised that the bird boxes are installed on mature trees along the boundary or under the eaves of the on-site buildings. This will result in net gain of potential nesting opportunities across the site. Appendix B also highlights potential locations for the boxes.

5.16 Once installed the boxes should be left undisturbed. Once used the old nests provide an important habitat for invertebrate. .

5.17 Where the bird boxes have not been used, the possibility of re-siting them to more suitable areas should be explored, and advice should be sought from the project ecologist.

5.18 Specific locations and installation of the bird boxes will be decided once all works have been completed to avoid any unnecessary disturbance to breeding birds (See Appendix B for approximate locations and Appendix D for bird box specifications).

6. Monitoring and Maintenance

6.1 Specifically, this section addresses point;

e) details of initial aftercare and long-term maintenance (where relevant).

Monitoring

6.2 As stated earlier the proposed habitat enhancement measures, their management and maintenance should be undertaken by the client or their appointed contractors.

Bat Boxes

6.3 Bat boxes do not need annual inspection/cleaning, and should be left alone unless under the supervision of a suitably licenced bat ecologist. The

Bird Boxes

6.4 An annual observation should be undertaken to evaluate whether the boxes have been used. If not then it may be necessary to relocate them. This would be undertaken by a suitably qualified ecologist.

Evaluation of Ecological Value and Condition

6.5 The ecological value and condition of the site at handover and how this is expected to develop and change over time.

6.6 The current ecological value of the site is set out in the Preliminary Ecological Appraisal report produced by Bakerwell and dated November 2022. In summary the ecological value of the site is largely considered to be of ecological value within the immediate vicinity only and provides suitable foraging and commuting habitat for several protected species. The site is not subject to international nature conservation designations and does not include any priority habitats.

6.7 The scheme will include new habitats through installation of bird and bat boxes. The existing onsite woodland and adjacent hedgerow habitats will be retained. As a consequence of the creation of these habitats will provide more, better and joined up natural habitats enhancing the value of the site, especially during the operational phase of the scheme.

7. References

- BHPS (2019) British Hedgehog Preservation Society Hedgehogs and Development. https://www.britishhedgehogs.org.uk/wp-content/uploads/2019/05/developers-1.pdf
- BS 42020:2013. Biodiversity – Code of practice for planning and development. BSI Standards Publication.
- Bakerwell (2022) Preliminary Ecological Appraisal Sluetts Farm, Horsham. An unpublished report.
- Fure, A. (2006) *Bats and lighting*. The London Naturalist, No. 85.
- IEEM - Institute of Ecology and Environmental Management (2006). *Bats and Lighting*. Winchester: IEEM.
- ILP - Institute of Lighting Professionals (2018). *Bats and artificial lighting in the UK.* ILP and the Bat Conservation Trust Guidance Note 08/18.
- ILP - Institute of Lighting Professionals (2023). *Bats and artificial lighting at night.* ILP and the Bat Conservation Trust Guidance Note 08/23.
- Jones, J. (2000). *Impact of Lighting on Bats.* Bat Conservation Trust. [on-line]. Available from http://www.bats.org.uk/downloads/Helpline/lighting.pdf
- Schwegler (2024). *Bird and Nature Conservation Products* [on-line]. Available from http://www.schwegler-natur.de

Figures and Appendices

Appendix A

Existing Habitat Plan

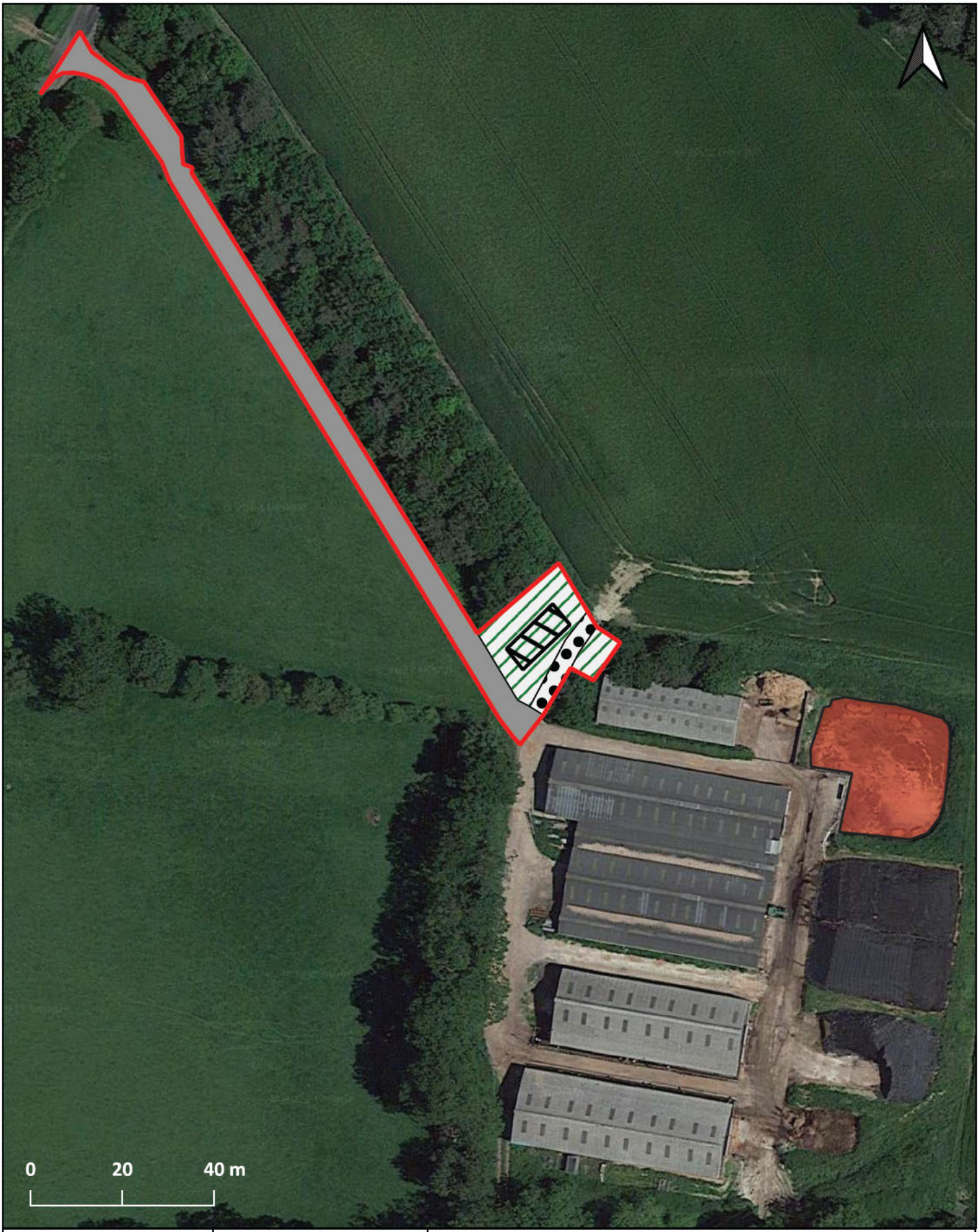

Figure 1: PEA Survey Results

Site: Sluett's Farm
Date: 24/11/2022
Job: WS 601
Author/Reviewer: SA/FB

bakerwell
ecological expertise

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Key

- Red Line Boundary
- A1.1.2 - Broad eaved Wood and - P antation
- J4 - Bare Ground
- J5 - Hardstanding
- P antation Wood and (Recent y Fe ed)
- Waterbody (Unsuitab e for HSI Survey)

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Appendix B

Proposed Development Plan

EXISTING TREE BELT CONSISTING MAINLY OAK, WITH ASH, HAWTHORNE & PINE TO BE RETAINED

CONCRETE SLAB TO BE LOCATED IN EXISTING GAP BETWEEN TREES

EXISTING TREE BELT CONSISTING MAINLY OAK TO BE RETAINED

APPROX LOCATION OF PROPOSED RWH TANKS SUBJECT TO SPECIALIST DESIGN

BiB

Field gate

3660

9140

Amenity space

BaB

BiB

4064

0665

EXISTING HEDGE CONSISTING MAINLY HAWTHORNE TO BE RETAINED

Field gate

Field gate

Field gate

HAY BARN

EXISTING HEDGE CONSISTING MAINLY HAWTHORNE AND AREA OF BRAMBLES TO BE RETAINED

0 1 2 3 4 5 10 15 20m

NOTES

Bat boxes should be installed at appropriate locations ideally with south-east, south or south-west facing aspects at least 3.0m from ground level. Ideally they need to be exposed for 6-8 hours of direct sunlight, but sheltered from strong winds.

Bird boxes should be located out of prevailing wind, rain and strong sunlight, ideally with a clear flight path to the entrance. Ideally, they should be installed two to four metres from the ground facing north or northeast.

LEGEND

EXISTING FEATURES

TREE TO BE RETAINED (location & size is approximate)

HEDGE TO BE RETAINED

STOCKPROOF FENCE

PROPOSED FEATURES

GRASS

STONE CHIPPINGS (MoT Type 1)

GRAVEL (nominal 10-15mm, stone chippings 45mm deep on 150mm Type 1 Sub base on terram 1000 membrane, with timber edge)

CONCRETE SLAB PAVING (Marshalls Saxon, 450x450mm, buff colour)

IN-SITU CONCRETE (set on top of existing ground, so no dig construction, provided with 100mm dia perforations at 1000mm centres, to promote water and gaseous exchange for tree roots)

BiB BIRD BOX (Woodcrete/Schwegler, or similar, refer to Ecology Report for details)

BaB BAT BOX (Woodcrete/Schwegler, or similar, refer to Ecology Report for details)

Rev	Date	By	Notes
B	22 Apr 24	JP	Bird & bat boxes added
A	22 Apr 24	JP	Minor revision

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Client
PHLORUM LTD.

Project
PROPOSED WORKERS DWELLING, SLUETTS FARM, HORSHAM

Drawing Title
LANDSCAPE PROPOSALS

Drawing Status
Planning

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Appendix C

Timetable of Works

Timetable of Works:

Consideration	Timing	Comments	Person Responsible
Hedgehogs	November to February	Any vegetation clearance undertaken in November to February inclusive should not occur below 60 centimetres from ground level, in order to avoid harming any hibernating hedgehogs.	Site Manager/Ecologist
	March to October	Any vegetation clearance undertaken between March and October should be undertaken in a phased manner, with contractors watching out for hedgehogs under the supervision of a the ECoW	Site Manager/Ecologist
Reptiles	October to March.	Vegetation removal should be avoided during this period but if required should not go lower than 40 centimetres from ground level. Removal of roots must not be undertaken at this time	Site Manager/Ecologist
	April to September	Vegetation can be cleared but this must be done in a phased method, under the supervision of the ECoW with surface growth being taken down to 15 centimetres on day one before being taken to ground level the following day. Should there be a delay to site development, the site must be fenced off to prevent reptiles entering until development. All materials that are stored on site must be checked carefully for the presence of reptiles, and ideally not stored for more than 24 hours unless fenced off.	Site Manager/Ecologist
[redacted]	All year	[redacted]A	Site Manager/Ecologist

Consideration	Timing	Comments	Person Responsible
Breeding Birds	October to February	Birds generally do not breed between October and February so vegetation and general site clearance can occur at this time, down to a 15 centimetres (in case of issue with hibernating species). However, birds have been known to breed at almost any time of the year so all contractors must be made aware of their potential presence. Should an active birds nest be found an exclusion zone secured around them. This zone must remain in place until the young have fledged.	Site Manager/Ecologist
	March to September	Any site clearance should be avoided at this time as it is the peak bird breeding season. If it cannot be avoided, an ECoW should undertake a site assessment before any works are undertaken, and if any nests are found an exclusion zone secured around them. This zone must remain in place until the young have fledged.	Site Manager/Ecologist
Dormice	Late September-early October	Clearance of hedgerow should be avoided outside of this time. Clearance can either be carried out in winter or summer, however methods for vegetation removal differ depending on which season is chosen. Further information should be sought from a suitably qualified ecologist..	Site Manager/Ecologist
Install bat and bird boxes	ASAP from completion of the works	The project ecologist can provide advice	Landscape contractor (with advice from project ecologist)
Install fences/ barrier/signs	ASAP	The project ecologist can provide advice	Principal contractor/ site manager (with advice from project ecologist)
Vegetation clearance (phase 1)	Late August -September after harvest (or if harvest is not occurring, October – February to avoid risk of nesting birds)	The project ecologist can provide advice	Principal contractor/ site manager (with advice from project ecologist)
Vegetation clearance (phase 2)	Late August - September	Ecological watching brief required	Principal contractor/ site manager (with advice from project ecologist)

Consideration	Timing	Comments	Person Responsible
Work near protected species [redacted]	July to October	Ecological watching brief required	Principal contractor/ site manager (with advice from project ecologist)
Site inspections to ensure ecological controls/barriers /receptors are not damage/disturbed	Every day during site works.	If there are issues, then the project ecologist can provide advice	Principal contractor/ site manager
Post development- Bat boxes inspection/cleaning	Annually, if required	**Only by a licensed ecologist**	Landowner, with assistance from the project ecologist

Appendix D

Bird and Bat Box Designs

Bird and Bat Box Designs

Bird Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**Schwegler Nest Box 1B** Hole-fronted 26mm entrance hole	16 x 16 x 23	Multi-purpose, including: blue-, marsh-, coal-, and crested tit, and possibly wren. All other species are prevented from using the nest box due to the smaller entrance hole.	Suitable walls or semi-mature/mature trees and shrubs; attached to a tree trunk or hung from branches. Ideal points include discrete areas away from predators, such as against walls, plant, and metal supports.
	**Schwegler Bird House** 32mm entrance hole	15 x 21 x 33	Multi-purpose, including: great-, blue-, marsh-, and coal tit, redstart, nuthatch, pied flycatcher, and sparrows.	Fixed to a semi-mature/mature tree trunk, wall or fence using the hanging bracket on the back. Between 1.5 m and 3 m high, and should be sited higher if area has a particularly high cat population.

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**Schwegler Sparrow Terrace 1SP**	20 x 43 x 24.5	House sparrow. It may also occasionally attract tits, redstarts, and spotted flycatchers.	In an elevated position such as on post/platform within dense shrub/tree planting or on top of lighting columns. Alternatively, they could be attached to the side of a building. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds, and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided or install directly into the wall. Cleaning is not necessary. The front panel can be removed by turning the screw hook.

Bat Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**2F Schwegler Bat Box (General Purpose) with or without Double Front Panel**	16 x 16 x 33	Without panel: Particularly successful with brown long-eared bat. Also used by noctule. With panel: Ideal for crevice-dwelling species: pipistrelles, Myotis species (particularly Daubenton's), Leisler's, and serotine.	On trees or buildings and at a height of 3 to 6m. In open sunny positions and in groups of 3 to 5 facing different directions. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.
	**Chavenage Bat Box**	10 x 18 x 38	Small crevice-dwelling bats: e.g. pipistrelles.	On trees in gardens or woodland and also on house walls. 2.5 - 5m high on a building, mature tree, or vegetation line (trees/tall hedge) or on a feeding/flight route in partial daytime sun. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.



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