Robson Ecology Ltd.

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Amphibian Method Statement, Biodiversity Enhancement Strategy, and Wildlife Sensitive Lighting Scheme

for

Buttons Green Farm, Buttons Green, Cockfield, Bury St Edmunds, Suffolk, IP30 0JF.

Survey Commissioned by:	Emily Ackroyd-Cooper
Project Number:	REP23048
Report issued:	16th January 2024
Project Ecologist:	Odette Robson BSc (Hons) PhD MCIEEM *Bat Licence ref: CL18:2015 10940-CLS-CLS. Natural England Registered Consultant, accredited under the low impact Bat Mitigation Class Licence (BMCL), Bats in Churches Class Licence (BiCCL), and Bat Earned Recognition Class Licence (BERCL) - accreditation Level 2.*

Project number:	Title:	Revision:	Issued:
REP23048	Amphibian Method Statement, Biodiversity Enhancement Strategy, and Wildlife Sensitive Lighting Scheme for Buttons Green Farm, Buttons Green, Cockfield, Bury St Edmunds, Suffolk, IP30 0JF	**Final**	16th January 2024

Disclaimer

The findings detailed in this report are based on evidence from thorough review of existing documents, where every effort has been taken to provide an accurate assessment of the site. No liability can be assumed for omissions or changes since the surveys were undertaken.

This report was instructed by Emily Ackroyd-Cooper, and following the brief agreed. Robson Ecology has made every effort to meet the client's brief.

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Information supplied by the Client or any other parties and used in this report is assumed to be correct and Robson Ecology accepts no responsibility for inaccuracies in the data supplied.

This report must not be submitted to the Local Planning Authority until payment has been received in full.

The report may need to be updated (at the discretion of the Local Planning Authority) if site conditions change, or if not submitted to the LPA within 12 months or implemented within 18 months of the report issue date.

1 Summary

Site:	Buttons Green Farm Barn, Buttons Green, Cockfield, Suffolk, IP30 0JF
Grid Reference	TL 91895 53200
Planning reference	Ref. DC/23/03374 (Babergh District Council)
Commissioned by:	Emily Ackroyd-Cooper
Surveys/reports used to inform the AMS and BES	*Practical Ecology (2022)* Buttons Green Farm House Barn, Cockfield. Preliminary Ecological Appraisal Report - On behalf of: John Stebbing Architects Ltd. Version 1 | December 2022 *Skilled Ecology (2023)* Further Bat Survey Report (Including a Hibernation Survey & Dusk Emergence Surveys) for Proposed Development of a Barn at Button's Green Farmhouse Cockfield, IP30 0JF. On behalf of: John Stebbing Architects Ltd. July 2023.
Lighting	No lighting directed towards sensitive habitats (mature trees; garden vegetation; bird and bat boxes on barn and trees). A lighting scheme sensitive to wildlife is specified.
Requirements before starting on site and Precautionary Working Methods during site/construction works	- Achieve and implement Bat Mitigation Class Licence (legal obligation) prior to start of any works on, or close to, the barn. - Ecological supervision during site/ground clearance around the barn. - Protection of exclusion zones (pond/mature trees and hedges) with temporary barrier fence. - Good-practice construction precautions will be implemented (including providing escape routes from any trenches or deep footings; and safe storage of materials). - Pollution prevention measures to protect ponds close to the working zone. - Protection of retained sensitive habitats close to the construction zone, or adjacent to the access route used by construction traffic: Fenced exclusion zone to avoid damage from construction activites. - A nesting bird survey to be carried out if shrub clearance is within the breeding season (March to August inclusive).
Timing Considerations	Bat licence can be implemented between **1st April and 30th October**, and within timeframe specified on licence. Updating bat surveys would be needed if the project is delayed beyond the next survey season (starting May 2024). Any vegetation removal (shrub/bushes) or works to the barn will be carried out outside the nesting bird season or preceded by a nesting bird survey. Ground clearance will be carried out when amphibians are in breeding ponds (February to July), and under ecological supervision.
Biodiversity Enhancement	Bird Boxes: targeting house sparrow and barn owl. These high conservation priority species are present in the area and use boxes of the types specified.
	Bat Boxes: Targeting species recorded during surveys that use bat boxes.
	Hibernaculum/log pile – to provide refuge opportunities for any amphibians/reptiles.

Contents

2 Introduction

2.1 Background

The report is required to discharge Conditions relating to a planning application at Buttons Green Farm, Buttons Green, Cockfield, IP30 0JF (Babergh District Council, BDC Ref. DC/23/03374). A planning application was approved on 23rd November 2023 for:

> *Change of use and conversion of existing curtilage listed barn/outbuilding to music studio/home office for use ancillary to main dwelling. Addition of insulation, insertion of glazed doors behind the existing timber barn doors, insertion of two new skylights to the rear elevation, creation of a new mezzanine floor.*

This document presents the Amphibian Method Statement (AMS), Biodiversity Enhancement Strategy (BES), and Wildlife Sensitive Lighting Scheme (WSLS), as required to discharge Conditions relating to ecology.

This document is to be read in conjunction with:

> Practical Ecology (2022) Buttons Green Farm House Barn, Cockfield. Preliminary Ecological Appraisal Report - On behalf of: John Stebbing Architects Ltd. Version 1 | December 2022
>
> Skilled Ecology (2023) Further Bat Survey Report (Including a Hibernation Survey & Dusk Emergence Surveys) for Proposed Development of a Barn at Button's Green Farmhouse Cockfield, IP30 0JF. On behalf of: John Stebbing Architects Ltd. July 2023.

No development shall take place (including ground works and vegetation clearance) until the AMS, BES and WSLS has been approved by the Local Planning Authority (BDC) and their consultees. This shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by BDC.

2.2 Planning Conditions

The following conditions which relate to ecology have been requested for Buttons Green Farm Barn as part of the planning consent and as detailed in the decision notice (BDC; 26/01/23; Ref. DC/23/03374).

Condition 7: Great Crested Newt Method Statement

Prior to the commencement of any works to alter the building, a Great Crested Newt Method Statement shall be submitted to and approved, in writing, by the Local Planning Authority. this will contain precautionary mitigation measures and/or works to reduce potential impacts to Great Crested Newts during the construction phase.

Condition 8: Biodiversity Compensation and Enhancement Strategy

Prior to the commencement of any works, a Biodiversity Compensation and Enhancement Strategy for protected and Priority species prepared by a suitably qualified ecologist shall be submitted to and approved, in writing, by the Local Planning Authority. The content of the Biodiversity Compensation and Enhancement Strategy shall include the following:

a) Purpose and conservation objectives for the proposed compensation and enhancement measures;

b) Detailed designs or product descriptions to achieve stated objectives;

c) Locations. Orientations and heights of proposed compensation and enhancement measures by appropriate maps and plans (where relevant);

d) Persons responsible for implementing the compensation and enhancement measures; and
e) Details of initial aftercare and long-term maintenance (where relevant).

Condition 9: Wildlife Sensitive Lighting Design Scheme
Prior to first use, a lighting design scheme for biodiversity shall be submitted to and approved, in writing, by the Local Planning Authority. The scheme shall identify those features on site that are particularly sensitive for bats and that are likely to cause disturbance along important routes used for foraging; and show and where external lighting will be installed (through the provision of appropriate technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent bats using their territory.
All external lighting shall be installed in accordance with the specifications and locations set out in the scheme and maintained thereafter in accordance with the scheme. Under no circumstances should any other external lighting be installed without prior consent from the Local Planning Authority.

3 Construction Management, Precautions and Working Methods

3.1 Non-Licenced Method Statement for Great Crested Newts

3.1.1 Habitat Management (Pre-start)

Amenity grass/lawn areas will be kept short (<5cm sward height) prior to groundworks/site clearance to avoid creating refuges/habitat that may attract great crested newts or reptiles into the clearance zone.
Any longer vegetation surrounding the base of the barn will be strimmed by hand and under supervision prior to start of external works on the barn and any ground clearance.

3.1.2 Sensitive Habitat Protection Fencing (Pre-start)

Sensitive habitat within 5m of the working zone or adjacent to the access route used by delivery lorries/site traffic, will be protected during the works within an exclusion zone: This will protect wildlife using the trees/ponds/garden habitats and avoid root compaction. Appendix A shows the indicative location of protective fencing (Heras and or barrier mesh – as appropriate) which will separate the construction activities from sensitive habitat.

- There will be strictly no contractor access, storage of materials, site compound, vehicular access, parking, or other incidental entry into the exclusion zone at any time without ecological supervision and/or written agreement of extent/methods of works.
- Warning signs stating '*Protection Zone – Keep Out*' will be fixed at regular intervals along the exclusion fence.
- All site workers must be made aware that the area beyond the fence is a strict exclusion zone, with no access for any purpose. The location of the exclusion zone will be covered within the site-induction process which all site contractors will undergo, and sign when completed (Appendix E).

3.1.3 Supervised Destructive Search for Great Crested Newts.

- Before ground clearance, any refuge features (hedge-base, tall vegetation, stones/wood, paving slabs, plant-pots etc) within the clearance/working zone (see Appendix A) will be checked by an ecologist licenced to handle great crested newts, then sensitively removed (or dismantled/made unsuitable for amphibians) under

supervision and precautionary working practices. This will be done during the active newt season (February to November inclusive), and preferably when newts are in the ponds (April to June inclusive).

- Any reptiles or common amphibians found will be relocated to the adjacent pond/tree-lined garden boundary habitat and allowed to disperse naturally. If great crested newts are found, site works will stop while the ecologist evaluates the situation to determine whether a European Protected Species licence would be needed to proceed. Great crested newts must only be handled by a Natural England licensed ecologist.

3.2 Good Practice Precautions for Wildlife During Construction

- All trenches/deep footings will be fully covered overnight, or a secured plank/scaffold board will be placed in such that any wildlife falling in can climb out safely. Alternatively, one end of the trench will be sloped or stepped to enable animals to escape.
- Storage: Construction materials will be kept off the ground on pallets to prevent small animals seeking refuge beneath them.
- Waste Management: Waste and debris will be removed from site immediately, or placed in skips, to avoid forming refuge opportunities for small animals.
- Dust: Contractors will ensure that all loose materials are covered or damped down by a suitable water device; ensure that all cutting/breaking is appropriately damped down; and ensure the site is appropriately screened to prevent dust deposition in the adjacent garden areas (pond/tree areas).
- Temporary pools of water must not be allowed to form during the construction phase.
- All caustic materials (e.g., cement,) must be mixed on boards or tarpaulin and removed at night or locked in a sealed site-cabin/building.
- Works to be conducted in daylight hours only - when newts are less likely to be moving/active.
- Any heavy machinery should be stored on hard-standing.
- A single route for contractors should be marked out from the parking area to the rear of the Barn (construction/working zone).
- If a great crested newt is found during unsupervised works, and despite the avoidance and precautionary measures, work must stop immediately pending advice from the Project Ecologist on how to proceed. An assessment will be made to determine whether the work can proceed without committing an offence. Contact details of the Project Ecologist must be present on site at all times and NE will be contacted for advice if necessary.

3.3 Pond Protection (Pollution Prevention)

Pollution prevention measures and controls must be implemented, to ensure that there are no pollution incidents and/or damage/access to the pond or ditches during construction/conversion works.

Caustic material must not be allowed to form run-off that could contaminate the adjacent ground or allowed to enter the ponds or ditches.

Standard good-practice precautions for construction works adjacent to water-courses should be implemented. All works should follow the Environment Agency's **Pollution Prevention Guidelines** (PPG)* documents available at: http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspxx Particularly the following:

- *PPG01 Understanding Your Environmental Responsibilities – Good Environmental Practices.*
- *PPG05 Works and maintenance in or near water.*
- *PPG06 Working on construction and demolition sites.*

(*These documents have been archived but still provide useful guidance in the absence of new published guidance).

3.4 Additional Precautions – Sensitive Lighting

Lighting at the site will be minimized to encourage nocturnal animals to use the site, both during the construction phase, and on completion.

- LED luminaires will be used (No UV elements: Metal halide, fluorescent sources will not be used).
- Only luminaires with an upward light ratio of 0% and with good optical control will be used (See ILP 2011).
- Any external lighting will be set on motion-sensors sensitive to large moving objects only, and short (<1 minute) timers.
- All external lighting will be kept to the minimal feasible level and be directed downward: Baffles, hoods or louvres will be used to reduce light spill and direct it only to where needed.
- Lighting will be appropriately directed to avoid illuminating the boundary hedges and trees, pond, and mitigation/enhancement habitat boxes (on the Barn and trees).
- There will be no task lighting adjacent to, or directed towards, any mature trees or buildings/barns during the construction phase.
- Construction work will not be carried out at night, or within half an hour of dawn or dusk.

3.5 Timing of Works, Precautions, and Enhancement Implementation

A summary of sensitive works, and timing to avoid harm to biodiversity, is listed in Table 3.1. This includes the times during construction when a suitably qualified ecologist will be present on site to oversee works. Any deviations to the programme of works, construction materials or methods must be discussed with the Project Ecologist prior to implementation – to ensure that there will be no impact to wildlife.

Table 3.1: Key ecological survey and implementation dates (ecological supervision and/or advice required for items highlighted in green)

Activity	Implementation Date	Action Required/Constraint	Responsible Persons
Bat Surveys	Dec 2023 – Feb 2024	Three hibernation checks in December, January and February to update the single survey carried out by Skilled Ecology (February 2023).	Bat-licensed ecologist/ Project Ecologist
Bat Licence Application	February/March 2024	**Registered Consultant** (RC) to apply for licence and confirm to project team when approval from Natural England has been received.	Registered Consultant / Project Ecologist
Licensable work Exclusion devices fitted.	By end April 2024	To be completed by beginning of May. RC to advise when weather is suitable. Full scaffolding must be provided.	Registered Consultant
Licensable work Removal of roost features	Five days after exclusions fitted (before mid-May 2024)	Removal of roost features **under supervision of RC. To be completed by mid-May**	Registered Consultant
Nesting Bird Survey.	March to August inclusive: Any tree-works, scrub removal, or works to the existing Barn within the nesting season: Survey for active nests within three days of start of works.	If active nests are recorded, there will be a delay to works in that part of the site (and an appropriate exclusion zone – as advised by the ecologist) until all young birds have fledged and left the nest area.	Suitably experienced ecologist
Precautionary measures to avoid harm to amphibians and reptiles	Before start of groundworks/ clearance.	Pre-start destructive search of potential herptile refuges, and supervision of works in areas where protected species could be encountered (supervised removal of hedge/vegetation surrounding the Barn, stones/wood, paving slabs and plant pots).	Suitably experienced ecologist

Site Induction	Prior to any new contractors starting on the site	Registered Consultant on the BMCL licence will need to provide a toolbox talk immediately before works to the barn start. A site induction/ecology briefing for all site workers involved in the project, prior to start of works. Induction record (Appendix E) to be signed to provide written record.	Project Ecologist Site Manager Project Manager
Sensitive Habitat protection fence (Exclusion Zone).	Prior to any work starting, or vehicular access, the site will be fenced to protect the sensitive garden habitats to the east.	Protective fencing (Heras or barrier mesh – as appropriate) to separate the construction/groundwork zone from the pond/garden sensitive habitats. The fence to remain *in situ* for the duration of construction activity, as shown in Appendix A.	Site Manager.
Bird boxes	At the start of the project (tree box). At appropriate stage of the build-program (box on barn).	Location – see Appendix B, and note details on optimal height, location and orientation in Section 4.2.	Project Ecologist
Bat boxes	At the start of the project (tree boxes). At appropriate stage of the build-program (integrated boxes)	Location – see Appendix B. Optimal height, location and orientation – see Section 4.1.	Project Ecologist
Hibernacula/ Habitat Pile	At the start of the project (before ground-clearance)	Location – see Appendix B. Constructed using native hardwood logs/brash, and rubble.	Project Ecologist
Lighting	During construction and operational phases.	Lighting will not be directed at the enhancement/habitat boxes, or garden habitats/trees/pond (dark zone – Appendix C), during the operational or construction phases.	Site Manager
Long-term maintenance and monitoring	Post Completion	Table 3.2	Project Manager

3.6 Ongoing Monitoring and Maintenance - Post-completion

Monitoring requirements, to ensure that conservation aims and objectives are being met and identify any contingencies and/or remedial actions to achieve the fully functioning biodiversity objectives of the scheme.

Table 3.2: Monitoring during and post-construction

Feature	Action Required	Frequency
Bird boxes	Check for presence and damage – replace if damaged/missing. Ensure vegetation (Ivy or branches) is not obstructing access to the boxes. Clean out bird boxes once a year (November to February) following RSPB guidance (hot water – no chemicals). **All boxes must be checked at least annually by a competent person to ensure that the fittings are safe, and the boxes securely fixed to the tree/building. Adjust methods of securing the box if deemed not secure.**	Annually – during and post construction
Bat boxes	Check for presence and damage – replace if damaged/missing. Maintenance/cleaning is **not** required for bat boxes. Ensure vegetation is not obstructing access to the boxes. **Only a bat-licensed ecologist can legally open/move a bat box.** **All boxes must be checked at least annually by a competent person to ensure that the fittings are safe, and the boxes securely fixed to the tree. Adjust methods of securing the box to the tree if deemed not secure. The integral boxes on the barn do not require maintenance.**	Annually – during and post construction

3.7 Responsible persons and lines of communication.

If, at any time during the works which are not supervised by the Project Ecologist, the presence of protected species is suspected or identified, works will stop immediately and the Project Ecologist, or Natural England, contacted for advice on how to proceed. Table 3.3, details contact information for the key persons involved with the project.

Table 3.3: Responsible persons - contact details.

	Project Manager	**Project Ecologist**	**Site Manager**
Name:	**Cassie Godfrey** John Stebbing Architects Ltd.	**Odette Robson** Robson Ecology Ltd.	**Alistair Eady** Building Contractor
[redacted]			
Responsibilities:	Overall project decisions. Obtaining advice from Project Ecologist on any changes to programme, design or project that could impact the legal obligations of contractors and/or developer, with regards wildlife legislation (disturbance to protected species). Maintenance and management of site during construction and post-completion.	Responsible for advising on ecological issues, particularly in relation to protection of key wildlife habitats and monitoring, during construction. derogation licence for works to the barn/bat roost.	Responsible for induction of all site workers and sub-contractors; keeping the project on schedule and notifying LPA/Ecologist of any changes to programme timings, materials or working methods. Compliance with all documentation and checking integrity of exclusion zones and fencing.

3.8 Site Induction/Monitoring

All contractors will receive an induction/toolbox talk from the Project Ecologist (or be fully briefed by the Site Manager during the formal site induction process) prior to works starting. A copy of all relevant documents will be available at all times in the Site Office, along with contact details for the Project Ecologist (Table 3.3).

The induction of all site workers will include information on sensitive habitats/species, including:

- The legally protected status of herptiles, bats, and nesting birds;
- Areas of the site where protected species may be present;
- Sensitive habitat exclusion zone (no access at any time without confirmation from the Project Ecologist);
- Working methods in sensitive areas;
- Timing of any sensitive works with potential to impact birds, bats, and amphibians;
- Programme of works and importance of maintaining the schedule.
- All works will stop immediately if active bird nests, or signs of bats, newts, reptiles, or other protected species, are found during works at any time: Site Manager and Project Ecologist will be consulted for advice on how to proceed.

A written record of this will be kept, confirming that site staff have received induction relating to wildlife and biodiversity; All present will sign to confirm attendance at the toolbox talk and/or induction (Appendix E), confirming that they are aware of the potential presence of protected species, the implications of disturbance, and how to deal with a situation if protected species are encountered during works or if pollution incidents occur.

4 Biodiversity Enhancement Strategy

The addition of ecological enhancements listed below will enhance the value of the site for bats, birds, herptiles and other wildlife, as encouraged through the National Planning Policy Framework (MHCLG 2021), and to help achieve Suffolk biodiversity targets.

4.1 Bat Boxes

Schwegler 2F and 2FN woodcrete bat boxes (which are more durable and long-lasting than wooden alternatives) will be erected within a mature Cherry tree (Location Appendix B). These will be 4m to 6m above ground level. Bat boxes will face south-east and south-west (both boxes on the same tree, to give bats a choice of thermal opportunities) and be sited out of reach of cats. There must be unobstructed flight access enabling entry/exit for bats, but with suitable flight-lines in close proximity. The access hole is at the base so that the boxes are self-cleaning and do not require any maintenance.

Bat boxes should be left in perpetuity, checked annually for safety, and only opened or moved by individuals licenced by Natural England to survey and handle bats.

4.2 Bird Boxes

Bird boxes, targeting local priority species have been specified; barn owl and house sparrow. These species are likely to be present in the area and regularly use boxes of the type specified.

Nest boxes will be to BTO/RSPB specification, and of woodcrete in preference to wood construction: This material is durable, has good thermal properties and lasts longer than wooden alternatives.

The approximate location of bird-boxes on the site is shown on the Biodiversity Enhancement Plan (Appendix B), and specification in Appendix D.

4.2.1 House Sparrow Terrace

House sparrow is listed on the Birds of Conservation Concern red-list and is a Species of Principal Importance for conservation of biodiversity in England (SPIE) - formally Biodiversity Action Plan BAP species. House sparrows have been recorded locally and will readily use nesting boxes. Sparrow terraces, such as the *Schwegler 1SP,* or *Vivara Pro WoodStone House Sparrow Nest Box,* would be suitable for the barn - installed on the north-east facing gable end. Alternatively, three individual boxes with 32mm hole (e.g., Schwegler 1B nest box) could be used.

4.2.2 Barn Owl Box

The barn owl box will be located in a mature tree on the boundary to the south of the barn, where it will be minimally disturbed and there is direct access to open pasture and rough grass field-boundaries in the wider agricultural landscape (see Appendix B for location and Appendix D for specification).

To ensure maximum effectiveness, installation of the box will be approved by an ecologist with knowledge of barn owl behaviour. The box will be a specifically designed tree-box (not an internal-building box) and be sited facing open foraging habitat, not facing the prevailing wind direction, and at a height and position providing clear flight access Aspect and height of the box are also considerations: two to four meters above ground level is usually appropriate.

4.3 Hibernaculum - Habitat Piles.

A hibernacula will be created by filling a hole (0.5m x 1m in extent and up to 50cm deep) with rubble and wood from native hardwood species to provide reptile and amphibian refuge and hibernation opportunities. This will be topped with 50cm of brash and logs. The location is shown in Appendix B - close to the pond on the garden boundary, which will be minimally disturbed on completion of works.

5 References

Bat Conservation Trust. (2009). Bats and lighting in the UK- bats and the built environment series www.bats.org.uk

Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.

ILP (2023) Institute of Lighting Professionals. Bats and Artificial Lighting at Night. Guidance Note GN08/23.

IPE (2011) Institution of Lighting Engineers Guidance Notes for the Reduction of Obstructive Light

Ministry of Housing, Communities and Local Government - MHCLG (2021). National Planning Policy Framework. Available to download online from the Government website https://www.gov.uk/government/publications/national-planning-policy-framework--2

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Skilled Ecology (2023) Further Bat Survey Report (Including a Hibernation Survey & Dusk Emergence Surveys) for Proposed Development of a Barn at Button's Green Farmhouse Cockfield, IP30 0JF. On behalf of: John Stebbing Architects Ltd. July 2023.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The Status of Our Bird Populations: The Fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and Second IUCN Red List Assessment of Extinction Risk for Great Britain. British Birds 114: 723-747.

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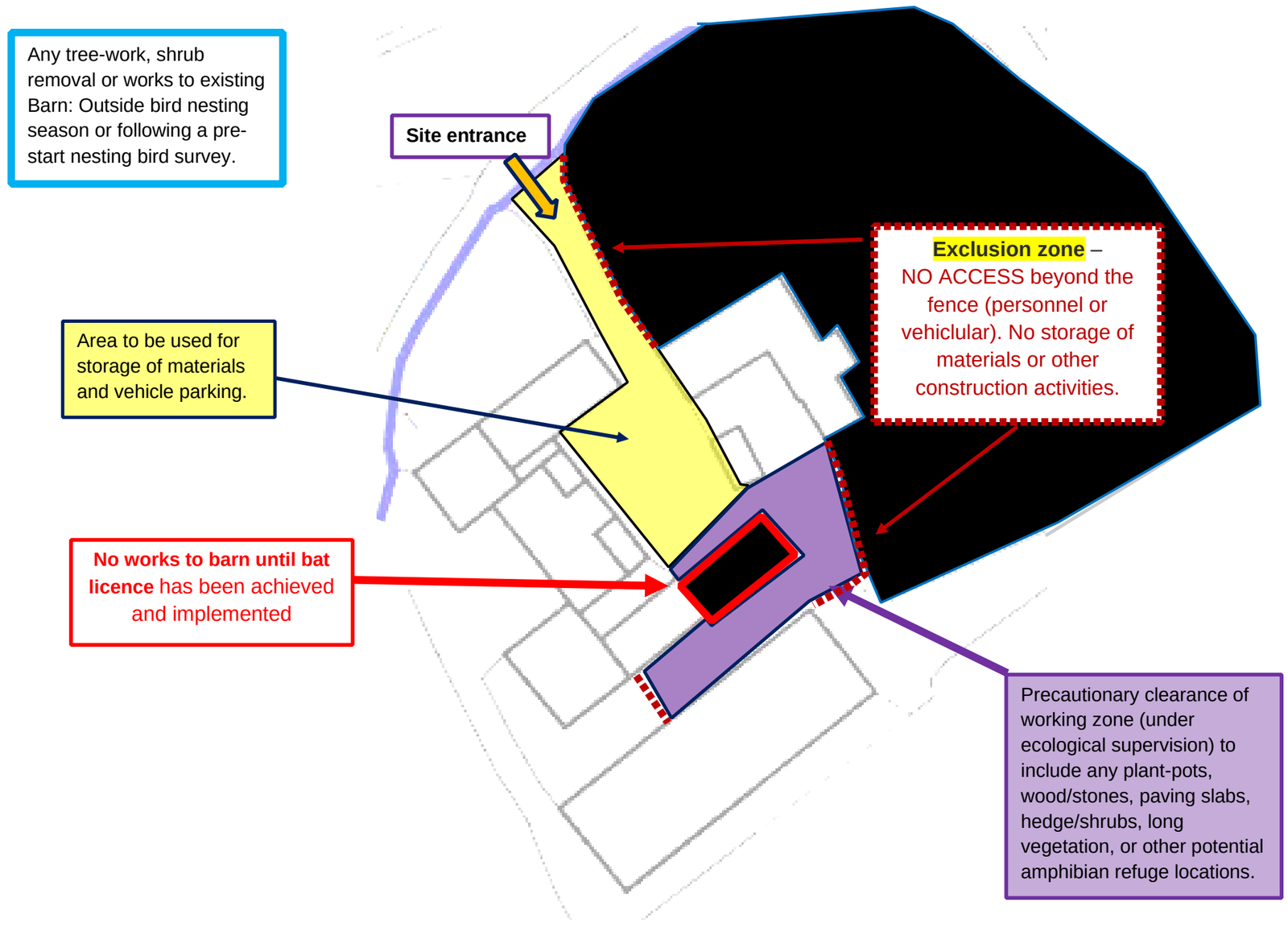
Appendix A: Wildlife Protection Measures



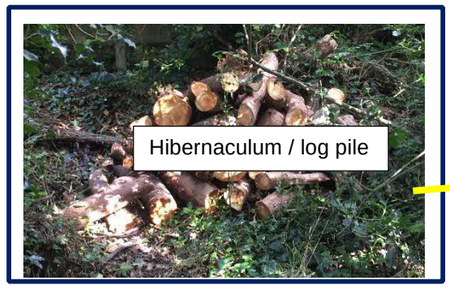
Robson Ecology Ltd.
2 Frogs Hall Road,
Lavenham,
Suffolk CO10 9QH
[redacted]

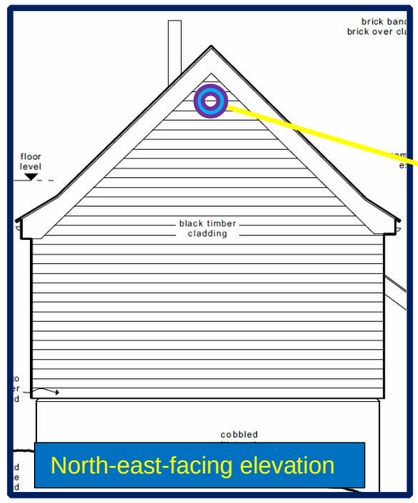
	Exclusion Zone – No access
	Existing building
	Precautionary Clearance of potential newt refuge locations.
	Site Entrance
	BAT LICENCE required before any works can proceed on the existing Barn Precautionary Clearance – and ecological supervision (bats and birds).
	Protection fence (Heras)
	Material storage and parking area

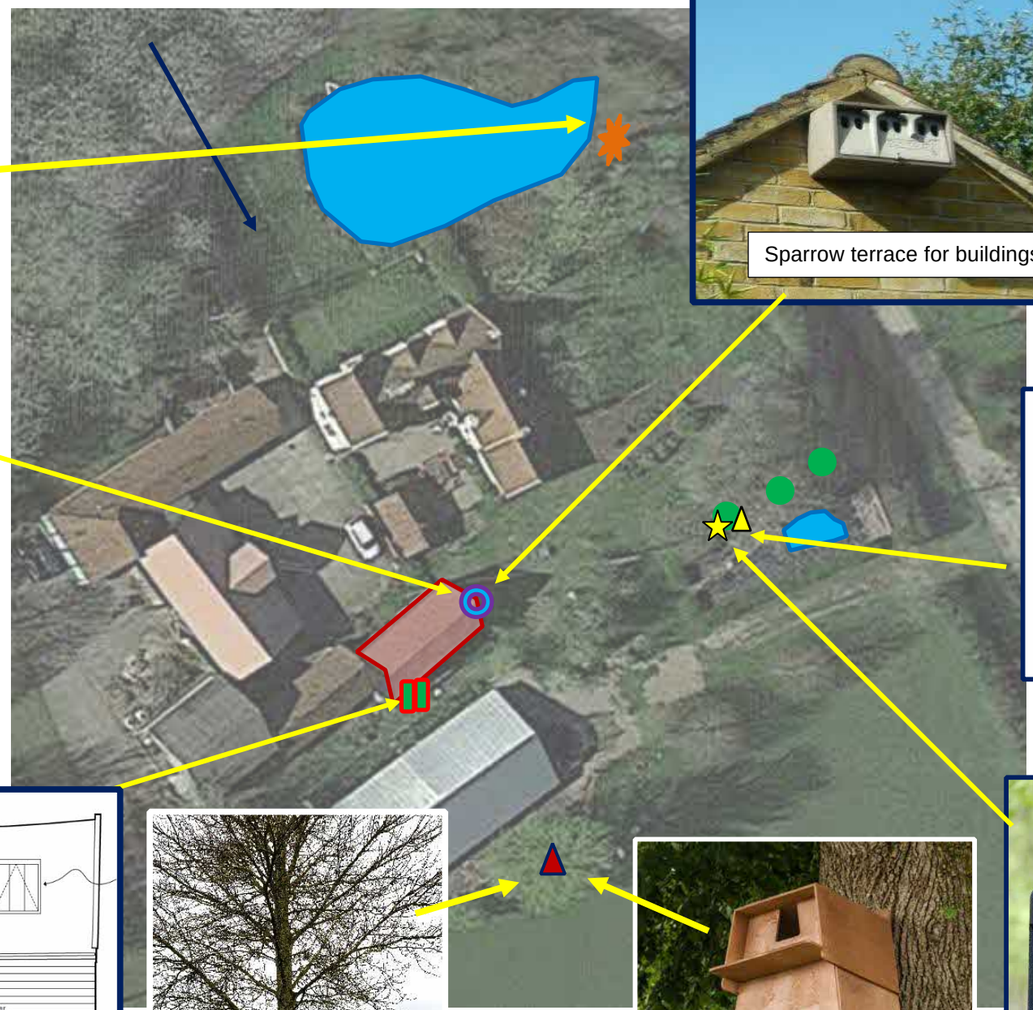
Project: Buttons Green Farm Barn
Drawing Title: Wildlife Protection Plan
Client: Emily Ackroyd-Cooper

Project Number: REP23048
Drawing Number: REP23048/WPP
Date: January 2024

Appendix B: Biodiversity Enhancement Plan







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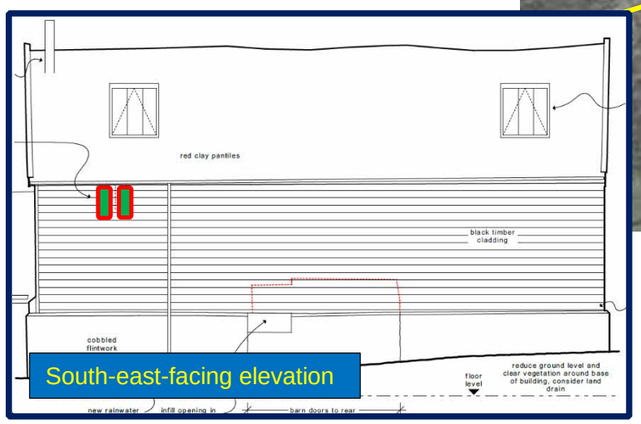
Schwegler 1FN Bat Box



Schwegler 2F Bat Box

Robson Ecology Ltd.
2 Frogs Hall Road,
Lavenham,
Suffolk CO10 9QH

[redacted]

★	Schwegler 2F bat box
▲	Schwegler 2FN bat box
▲	Barn Owl tree-box
▮	Integrated bat box
✸	Hibernaculum
◎	Sparrow Terrace
⬭	Existing pond.
●	Existing tree (indicative)
▭	Barn

Project: Buttons Green Farm Barn
Drawing Title: Biodiversity Enhancement Plan
Client: Emily Ackroyd-Cooper

Project Number: REP23048
Drawing Number: REP23048/BES
Date: January 2024

Appendix C: Lighting Strategy for Wildlife

No flood-lighting and no security lighting.

External luminaires on converted barn will be **Passive Infra-Red (PIR) controlled**, with sensitivity set to large moving objects only, and <1minute timers.

Arcus

Item number: 2019001003 Black
EAN: 5704924000478

Packaging unit 3
Material: Aluminium/Plastic
IP54, Class 1 (Earth contact), 230V
LED MODUL, Light source incl. 9,5w led

Area: Outdoor
Transformer/driver placement: I lampen

Lightsource info (pr. light-source)

Lumen: 440
Lumen/Watt: 46,32
Lifetime: 30000
On/Off: 15000
Colour temperature: 2700K
RA: 80
Beam angle: 148°
Dimmable: No

Energy class A+

Arcus is a beautiful timeless outdoor lamp with the latest LED and IoT technology. The wall lamp has integrated LED and two light functions, consisting of indicator light, which is lit when it is dark, and automatic activation of light when movement is detected (Nordlux Smart Sensor needed). Arcus has Bluetooth connection and is part of the Nordlux Smart Light range, which allows you to control the light from your mobile phone, with voice control or via the Nordlux Smart Sensor.

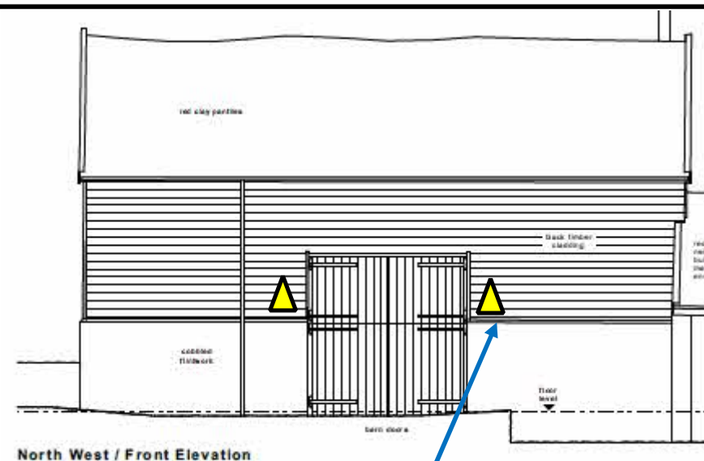
nordlux 2019001003

This luminaire contins built-in LED lamps

The lamps cannot be changed in the luminaire.

874/2012

Nordlux A/S - nordlux@nordlux.com - www.nordlux.com



Robson Ecology Ltd.
2 Frogs Hall Road,
Lavenham,
Suffolk CO10 9QH

[redacted]

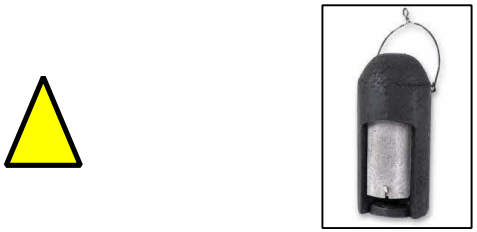
	Dark Zone: No external lighting
	Barn
	'***Nordlux Arcus'*** wall-mounted down-lighters, capped to prevent upwards light-spill. With ***Nordlux Smart Sensor***: PIR-operated LED fitting: Warm white spectrum (2700Kelvin).

N

Project: Buttons Green Farm Barn
Drawing Title: Lighting Strategy for Wildlife
Client: Emily Ackroyd-Cooper

Project Number: REP23048
Drawing Number: REP23048/LSW
Date: January 2024

Appendix D: Habitat Box Specification

Habitat Box	Specification (or similar and approved)	Suggested Suppliers (suggestions only - other suppliers are available)
	**Schwegler 2FN Bat Box** The 2FN bat box is for bigger bats (e.g., noctule, brown long-eared) and should be sited in trees and is best positioned at a height of between 3 to 6 metres.	https://www.arkwildlife.co.uk/product/schwegler-2fn-special-bat-box/ https://gardenature.co.uk/product/2fn-special-bat-box
	**Schwegler 2F Bat Box** Multi-purpose bat box for pipistrelles – tree-mounted. Manufactured from long-lasting Woodcrete, a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years.	https://www.nhbs.com/2f-schwegler-bat-box-general-purpose https://www.arkwildlife.co.uk/product/schwegler-2f-bat-box/ https://gardenature.co.uk/product/2f-standard-bat-box
 	**Schwegler 1SP Sparrow Terrace** This terrace provides nesting opportunities for three families. Made of wood-concrete mix, this terrace is durable, breathable and will last many decades. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. Place the terrace two metres or more above the ground or install directly into the wall. Cleaning is advisable but not necessary. The front panel can be removed by turning the screw hook. As high as possible (at apex of gable, or below eaves)	https://www.arkwildlife.co.uk/Item/Wildlife_Habitats~Ark_Environmental~Bird_Nest_Boxes/SC-1SP-G/Schwegler_1SP_Nest_Box_-_Sparrow_Terrace_-_Grey.html https://www.nhbs.com/1sp-schwegler-sparrow-terrace?bkfno=185099&ca_id=1495&gclid=Cj0KCQiAuf7fBRD7ARIsACqb8w4AWI5RsmdqIh7jXGzu_nDHRExlrOJ_OKJb4S_NBLQZQ05UIFFuKBAaAgQmEALw_wcB https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box

Barn Owl Nest Box (tree-mounted)

Dimensions
Height: 74cm; Width: 59cm; Depth: 50cm;
Weight: 8kg approx.
Specification:
Height: 74cm; Width: 59cm; Depth: 50cm; Depth of enclosed box: 34cm; Entrance hole: 13cm high x 12cm width;
Weight: 8kg approx. Material: FSC certified exterior plywood.
Please note: Barn Owls are a Schedule 1 species and so an occupied box must only be disturbed or inspected by a licensed individual.

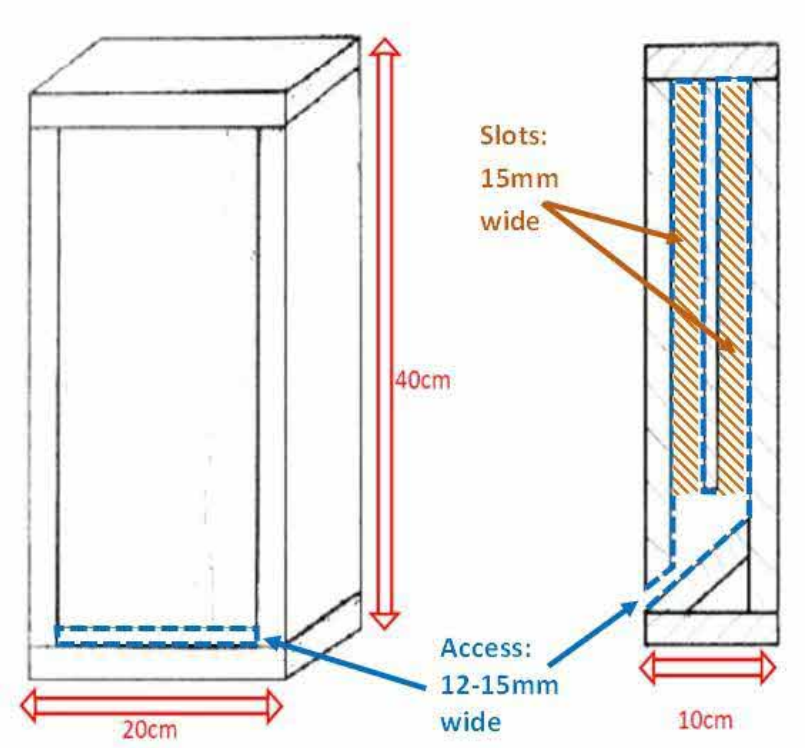
Barn owl boxes can be purchased from various sources such as The Barn Owl Conservation Trust:

http://www.barnowltrust.org.uk/product-category/nestboxes/

https://www.nhbs.com/barn-owl-nest-box?bkfno=216673&ca_id=1495&gclid=Cj0KCQiA5vb-BRCRARIsAJBKc6IB22mYn9koPk5OYV2R-CjUwvCpn7c-1urMF7ss5kB4Bu41gD21e0gaAjy5EALw_wcB

Bespoke Bat Box (integral – behind weather-boarding)

Built into barn wall beneath weather-boarding.



Appendix E: Record of Attendance at Ecology Briefing

Record of Attendance at Ecology Induction Briefing:			
Wildlife legislation/Protected Species briefing at Buttons Green Farm (Barn).			
NAME:	COMPANY and POSITION:	Date:	Signed:

Ecology issues: Any questions or concerns relating to wildlife/ecology, please call Project Ecologist for advice on how to proceed:

Odette Robson (Licensed by Natural England to survey and handle bats under Class Licence CLS001262, bats (Level 2).

[redacted]