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Ecological walkover at Perrywood, Sudbury

This document provides the results of an ecological walkover at Perrywood Sudbury Garden Centre, Newton Road, Sudbury, CO10 0PZ (grid reference: TL 90303 41686). A site visit was conducted by Nathan Duszynski (Bat level 2 2017-31943-CLS-CLS, Great crested newt level 1 2016-24303-CLS-CLS, Barn owl level 1 2023-11104-CL29-OWL) on 26th September 2023.

Bats:

A bat loft was constructed in accordance with the granted European Protected Species (EPS) mitigation licence (Natural England reference: 2019-43917-EPS-MIT), with the watching brief conducted on 21st February 2020.

The bat loft has been inspected on several occasions between 2020 and 2023. Two brown long-eared were released into the bat loft on 30th April 2021, having been identified trying to return to the former maternity roost. On the 2nd May 2021, the bat loft was reinspected to check if the bats were in good health. During the inspection, one brown long-eared was observed, with the second having safely left the roost during the preceding nights. The latest inspection occurred on 26th September 2023, with no bats or fresh evidence of bats observed.

In accordance with the approved licence, monitoring is scheduled to be conducted between May and August 2022 and 2024 and comprised of a single dusk emergence survey and visual inspection of the bat roosts (loft space and crevice roost).

Reptiles:

A reptile translocation was conducted across the site, with 146 site visits taking place in suitable weather between 1st August 2021 and 27th July 2022. The site was subdivided into three parcels: i) north, ii) south and iii) west (Appendix C). The south and west parcels were successfully cleared of reptiles, with 10 clear days recorded during the peak season. The vegetation within these areas have

been kept short and the exclusion fencing well maintained. Therefore, no further surveys or mitigation are required for these parcels. Due to changes in the scope of the project, the northern section was not cleared of reptiles, but remains ring-fenced with the exclusion fencing being well maintained.

The receptor site to the east has established well, with a tussocky sward that provides optimal habitat for reptiles and is of a greater quality than the existing site. Although a number of artificial refugia were inspected during the site visit, no common lizards were identified. This is to be expected, with the site visit being conducted during the middle of the day, with a temperature of 24°C. Members of staff have reportedly seen common lizards within the receptor site on numerous occasions throughout 2023.

Barn owls:

Several barn owl pellets were observed along the fence perimeter of the receptor site, with the fence posts considered to be used for perch hunting. As the receptor site is creating a deep litter layer for small mammals, the site has become a suitable foraging site for barn owls. Therefore, as an additional enhancement the following measures could be implemented:

- i. Installation of two barn owl nest boxes (External Barn Owl Box - Appendix B and C), installed on suitable trees within the eastern field. If no suitable trees are present, pole mounted boxes can be installed.
- ii. Several timber fence posts measuring 2-3m high to be installed throughout the reptile receptor area and ≥ 10 m apart (Appendix C). This will provide greater opportunity for perch-hunting by barn owls. Please note, posts must be installed using hand tools only.

Please let me know if there are any queries or if anything else is required at this stage.

Regards.

Yours faithfully

Prepared by:

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Appendix A - Photographs



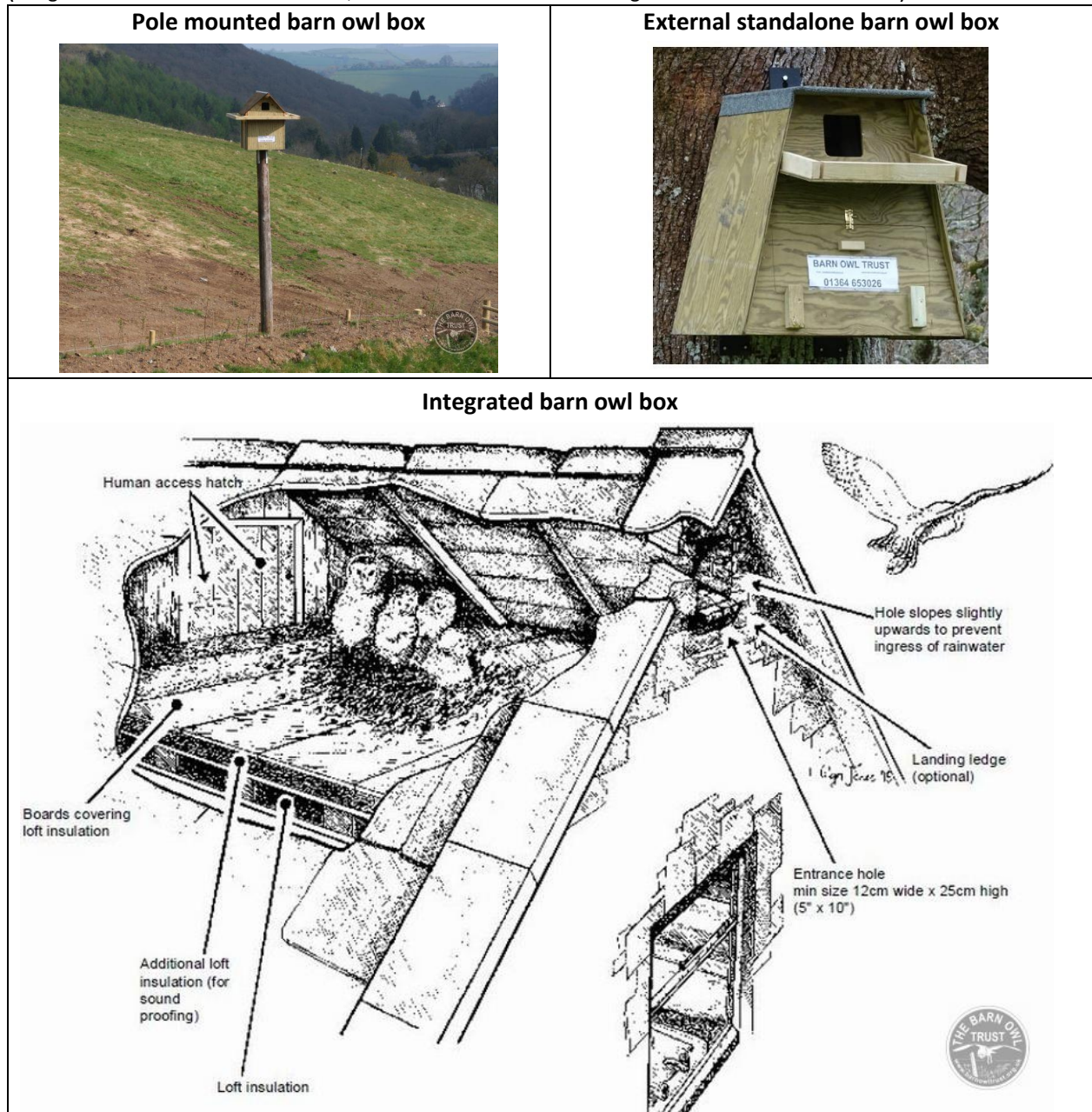
Photo 1, reptile receptor area, looking east.



Photo 2, southern parcel cleared of reptiles, with vegetation kept short, looking southeast.

Appendix B Examples of bat boxes

(images sourced from www.nhbs.com, www.habibat.co.uk and www.greenwoodsecohabitats.co.uk)



Recommendations for installing integrated barn owl box:

(Sourced from Barn Owl Trust www.barnowltrust.org.uk)

Standalone barn owl boxes:

Tips for putting up barn owl boxes:

- The box should be installed on a building or tree in open farmland, on an isolated hedgerow or along the edge of a woodland.
- Boxes should be sited at least 3m from the ground, with a clear flight-path for entry and exit.
- Where possible, install boxes facing suitable habitat and ideally away from the prevailing wind.
- Nest boxes should ideally be installed in pairs.

Integrated barn owl boxes:

Design requirements – entrance hole dimensions and ledge (exercise platform):

- Entrance hole minimum size: 100mm wide x 200mm high, optimum size: 130mm x 250mm, maximum size: 200mm x 300mm.
- The bottom of the hole must not have any sharp edges or narrow gaps in which a toe or talon could get caught.
- Where necessary there can be a ‘tunnel’, minimum 150mm wide x 200mm high, between the entrance hole and the nest space.
- A grippable ledge (e.g. stone or slatted timber) below the entrance hole provides an exercise platform for emerging owlets.
- In cases where the entrance hole goes directly into a nest space less than 700mm deep, an exercise platform is essential; the bigger the better, but not less than 250mm x 500mm wide with a grippable raised edge.

Design requirements – nest space & dimensions:

- Floor area of nest chamber: absolute minimum 0.4m² (e.g. 500mm wide x 800mm high or 400mm wide x 1m high), ideal size is 1m² (1m x 1m). These dimensions are bigger than those for nestboxes, because built-in provision usually lacks an external exercise platform that would permit maximum wing stretching prior to fledging.
- Where there is no external exercise platform the internal box depth from the bottom of the entrance hole to floor of nesting area must not be less than 700mm. Note: the ideal depth for Barn Owls is at least 1m, which should be achieved wherever space permits.
- Depth from the bottom of the entrance hole to floor of nesting area must be not less than 450mm provided that there will definitely be an easy-to-grip external exercise platform for fledglings to stand on outside the entrance hole.
- In a large loft simply partition off a section behind the owls’ entrance hole.
- Stone, brick and timber are all suitable materials. Although owls are not destructive and seem unharmed by soft insulation materials, these are usually best avoided.
- In an unheated building, no insulation is required.
- Lining the space is not essential.
- An internal perch positioned as high or higher than the access hole may be beneficial as long as the space is big enough to accommodate one without resulting in one perched bird defecating on another underneath.

Design requirements – insulation:

- From the owls’ point of view, insulation is not required.
- However, there should be some form of moisture insulation between the owl space and the building interior.
- Where space is at a premium, use a highly efficient heat insulation board (e.g. 50mm Celotex polyurethane foam).
- Where space allows, use a more environmentally sustainable (and thicker) heat insulation board (e.g. a wood fibre board like Pavatex) to which a sound insulation board can be added (e.g. 60mm Pavatherm) if required.

Design requirements – human access and cleaning out:

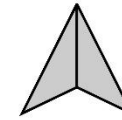
- Human access is essential as the nest space will need to be cleared out very occasionally.
- A generous removable inspection hatch or door in the back of the owl space (accessible from the building interior) is usually the preferred option but in some cases an external arrangement may be a practical option.
- In the case of a loft partition, create an integral crawl-through doorway.
- The access should permit all or most of the nest space floor to be reached by hand.

Pole mounted boxes








- Entrance hole size: optimum 100 x 130mm; min. 100 x 100mm; max. 150 x 150mm.
- Floor area of nest chamber: size range 0.3-0.4 m². (e.g. 600 x 600mm).
- Depth from bottom of entrance hole to nest floor must be not less than 540mm.

- There must be an external platform below the entrance hole that allows ample room for an entire brood of young birds to exercise and await food deliveries; minimising the danger of young birds falling before fledging. External platform size should be at least 0.125 m².
- The platform must have a raised edge high enough for barn owls to grip easily.
- Interior must remain dry during prolonged heavy rain coming from any direction.
- The platform should be positioned, and have sufficient shelter and drainage, to prevent rainwater getting into the nest box entrance.
- There should be enough height difference between the nest and the external platform to prevent the accumulation of a continuous (internal/external) layer of pellet debris allowing rainwater to soak through to the inside thereby chilling the nest contents.
- All sides should overhang the floor which needs adequate drainage. The installation of a (drier) false floor can be an advantage.
- Roof should be covered in thick roofing felt guaranteed for not less than 10 years, applied by heat or adhesive (not nailed or pierced in any way). Very steeply sloping roofs may not need covering but any apex joint must be permanently waterproofed.
- A flat or slightly sloping roof that provides additional exercise space for the young is advantageous.
- Human access for easy clearing-out of nest debris is essential.
- Timber liable to decay within 20 years must be treated with long-lasting preservative: either pressure treated (e.g. Tanalith E) or surface treated including all edges of all component parts. Plywood used must be manufactured using a waterproof adhesive.
- All screws/nails and any metal fittings used should be rust proof.
- Should be substantially constructed yet light enough to permit safe erection using normal lifting equipment. Normal polebox weight range is 18-30kg. Any polebox under 13kg is probably not substantial enough.
- Should not be constructed from tropical hardwood unless the timber is FSC certified as sustainably grown.
- Within the box, a separate entrance hole into a small compartment so as to provide a secluded roosting space for an adult owl can be advantageous. (However, it should be designed so as to minimise the chances of this inferior cavity being used for nesting by Barn Owls).
- Measures aimed at reducing the chances of entry by other species (such as Jackdaws) are to be encouraged provided that they do not significantly reduce the box's suitability for barn owls.
- Boxes should be supplied with information that specifies an erection height of not less than 4 metres above ground level and stresses the importance of using a substantial pole of not less than 150mm diameter (normally 6 metres long, 1.5 metres underground and 4.5 metres in height).

Appendix C Reptile zones and potential enhancements



Legend

-  Reptile receptor area
 -  Approx bund/log pile locations
 -  Zone - West (cleared)
 -  Zone - South (cleared)
 -  Zone - North (reptiles present)
- Potential enhancements**
-  Barn owl nest boxes
 -  Barn owl feeding perches

Please note, not all habitats located within zones north, south and west were suitable for reptiles. Upon completion of works, reptiles will also be able to occupy surrounding areas (e.g. attenuation basins, etc.), that have the potential to offer additional suitable habitats.

0 50 100 m

