



Oak Hall Farm, Coddenham, Suffolk

Biodiversity Enhancement Layout & Lighting Design Scheme

Client: Mr & Mrs Wythe

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1.0 INTRODUCTION

Instruction

1.1 This report has been prepared by Liz Lord following instruction by Mr D Wythe to address conditions 6 and 7 of planning permission DC/23/03936 relating to Oak Hall Farm, Coddendam, Suffolk IP6 9UD. Permission has been granted for the erection of a new agricultural storage barn.

1.2 Condition 6 of DC/23/03936 states:

“Prior to works above slab level, a Biodiversity Enhancement Layout, providing the finalised details and locations of the enhancement measures contained within the Ecological Impact Assessment Rev A (Liz Lord Ecology, September 2023) 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 LPA to discharge its duties under the s40 of the NERC Act 2006 (Priority habitats & species).”

1.3 Condition 7 of DC/23/03936 states:

“Prior to the first beneficial use of the barn hereb (sic) approved, 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 how and where external lighting will be installed (through the provision of appropriate lighting contour plans, Isolux drawings and 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.

Reason: To allow the LPA to discharge its duties under the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife & Countryside Act 1981 as amended and s40 of the NERC Act 2006 (Priority habitats & species).”

Relevant Documents

1.4 This document is based upon the permissions granted for the site and the results of the Ecological Impact Assessment report Rev A dated 12th September 2023.



2.0 BIODIVERSITY ENHANCEMENTS

- 2.1 The aim of the enhancement measures is to increase the value of the site for protected and priority species, in a way which is appropriate to the scale and nature of the use of the site and which relates to the recommendations of the Ecological Impact Assessment report Rev A dated 12th September 2023.
- 2.2 Surveys carried out in August and September 2023 confirmed the presence of a small maternity roost of brown long-eared bats *Plecotus auritus* and a day roost of common pipistrelle *Pipistrellus pipistrellus* in the nearby farmhouse. Mitigation for these bat roosts has been agreed as part of bat mitigation licence 2023-65979-EPS-MIT, and as such is legally binding and cannot be altered. The provisions relate entirely to the retention of the farmhouse loft space and the recreation of access points during re-roofing works. No stand alone roost features are necessary as mitigation, aside from the temporary provision of two wooden Kent bat boxes whilst re-roofing works take place. Measures provided as part of 2023-65979-EPS-MIT are therefore not detailed in this document.
- 2.3 The target species specific to this site and specific to DC/23/03936 will be house sparrow *Passer domesticus*, a Priority species; and crevice dwelling bat species, many of which are also Priority species.
- 2.4 The number and type of boxes to be installed are detailed below. For locations, specifications and suppliers of boxes / roost features refer to Appendix 1.

Bird Boxes

- 2.5 **3 no. wooden bird boxes with 32mm diameter access holes** will be fixed to the north western elevation of the new storage shed, at eave height.

Bat Roost Features

- 2.6 **2 no. wooden Kent bat boxes** will be fixed to the storage shed – one each on the south western and north western walls at heights of at least 3m.



3.0 LIGHTING SCHEME

Landscape Context

- 3.1 The proposed new storage shed is located along an existing line of mature trees, with a road running immediately beyond here to the north east. The line of trees does not provide continuous habitat connectivity to the south east, but does to the north west. To the west and south west of the proposed shed is a group of mature garden trees with good connectivity to a significant area of woodland c.400m to the south west, and with a large area of parkland beyond here. To the north east of the building, beyond the road, is a well-connected network of hedges, copses and small woodlands.

Predicted Effects

- 3.2 The new building is sufficiently far from the farmhouse for external lighting features not to directly affect bats using the loft space to roost. The results of the 2023 dusk emergence surveys showed that bat activity on site was generally low to the north east of the house, and the brown long-eared bats present in the farmhouse loft space consistently exited the roof in a northerly direction, and not towards the location of the new building. However despite a relative abundance of mature hedgerow and tree lined boundaries across the surrounding landscape, an excessive lighting scheme could potentially result in the disturbance of small numbers of commuting and foraging bats using the wider site.

Wildlife Sensitive Lighting Scheme

- 3.3 One single, motion sensitive security light will be fixed to the south eastern façade (front) of the new storage building. The light will be on short duration (30 seconds) PIR sensor, and will be angled to face and illuminate the ground level hard standing immediately adjacent to the building and prevent both side and upward light spill.
- 3.4 The elevations provided in Appendix 2 show the location of the external lighting feature.
- 3.5 The light will be positioned at a height of 3.2m, which is immediately above the main door way.
- 3.6 The proposed security light is a low watt (20W) warm white (3000K) LED, to provide both a highly directional beam, and light which is less attractive to insects than blue based cool white light. Should the design overleaf be unavailable, a similar security light meeting these specifications will be used.





Fig. 1: Proposed security light design – Ledvance
3rd Generation LED Floodlight 20W Black 3000K
| Warm White | PIR Sensor | 4058075460911

From:

<https://www.savemoneycutcarbon.com/product/ledvance-3rd-generation-led-floodlight-20w-black-3000k-warm-white-pir-sensor/>

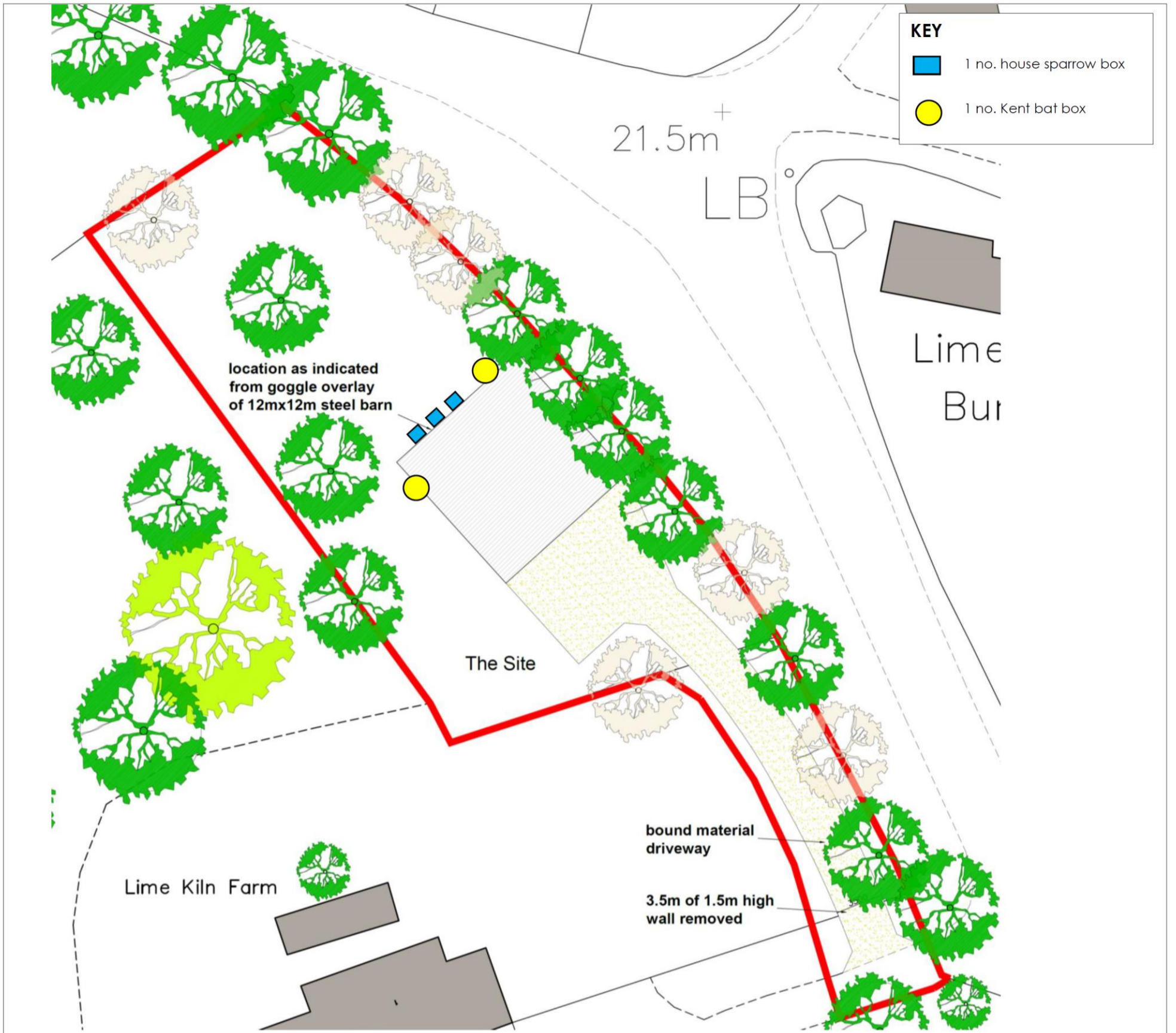
Conclusions

- 3.7 The single light fixing, the angling of the light towards the floor, the directional nature of the LED light and the positioning of the light as low as possible (immediately above the main door) will avoid illumination of the adjacent tree line and the trees offsite to the north and west. Duration of illumination will be minimised by a very short duration timer on the PIR sensor. No habitat or roost features will be illuminated by the lighting scheme, and no significant adverse impacts upon roosting, foraging or commuting bats are predicted. The use of a warm white LED also aims to minimise attraction to insects, to prevent insects migrating away from hedges and trees at night.

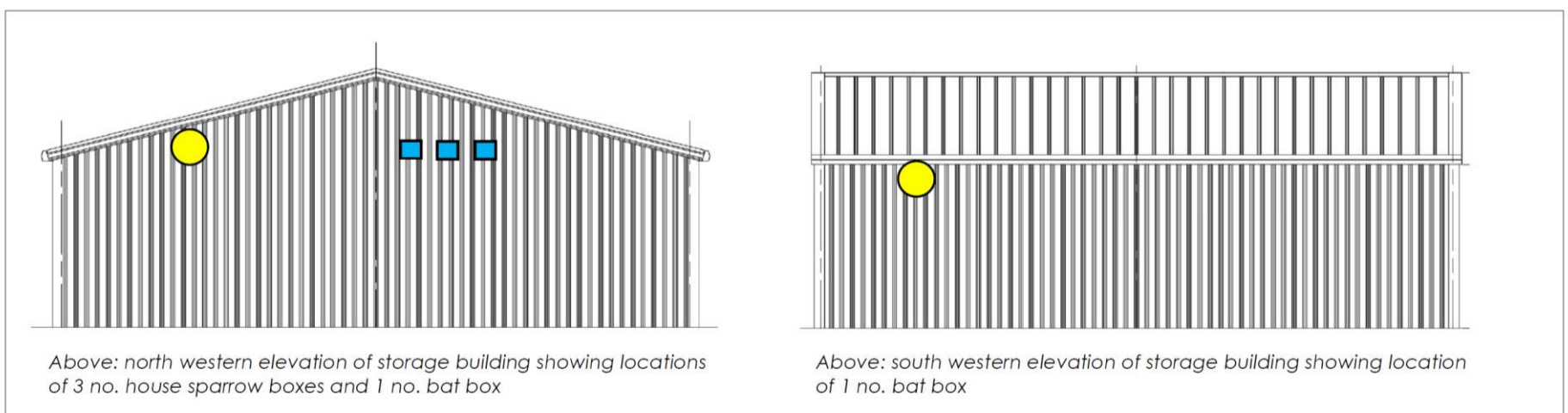


Appendix 1:
Bird & Box Locations





Above: site layout plan showing red line boundary and locations of house sparrow boxes and Kent bat boxes. Excerpt from drawing number PW1225_PL13 Rev B by Peter Wells Architects



Wooden Kent Bat Box

Made of thick, untreated wood with two vertical cavities. Based on a design by the Kent Bat Group



Wooden House Sparrow Box

Wooden nest box with 32mm diameter hole. 'Travis' style shown, however any wooden nest box with 32mm access hole will be suitable



TITLE: Enhancement Features

SITE: Oak Hall Farm

DATE: 24/10/23

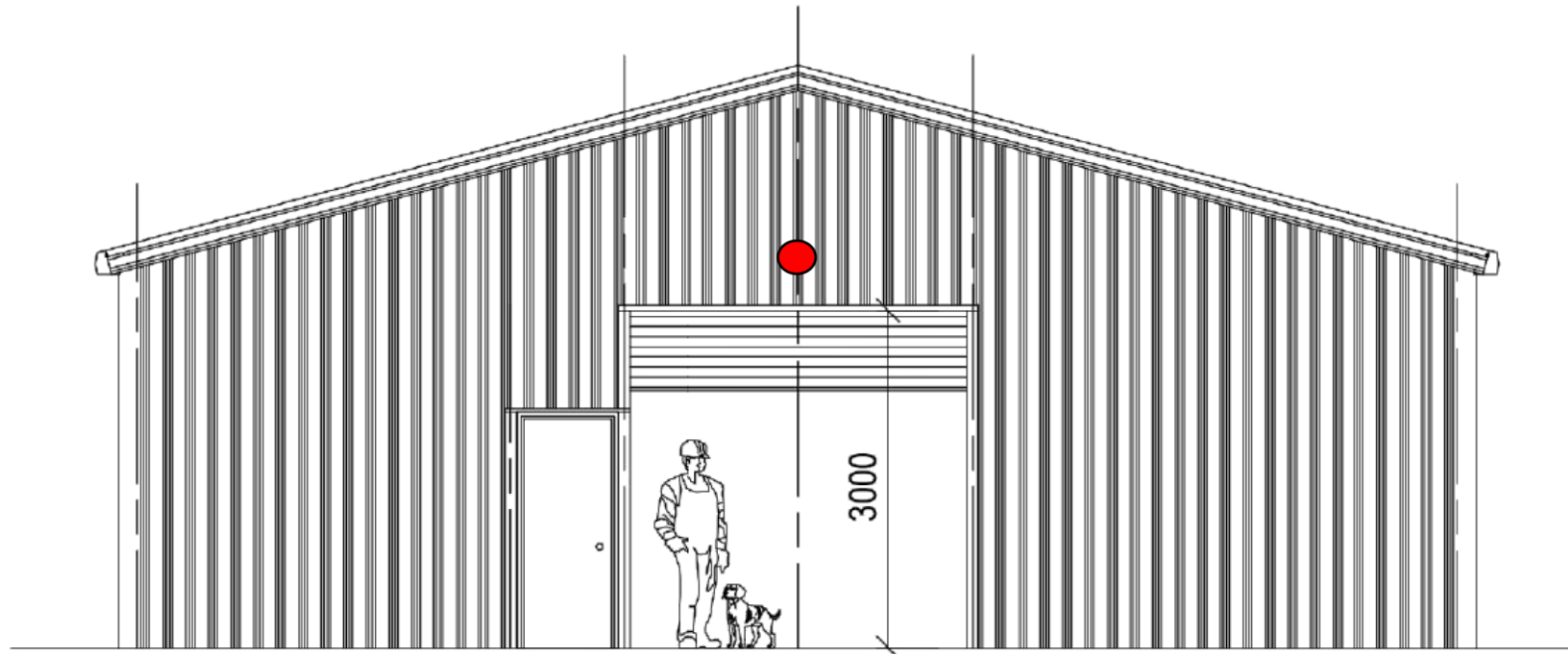
Dwg: 1855ABEL

Rev: -



**Appendix 2:
Lighting Locations**





Above: south eastern elevation of new storage barn – elevation C – showing location of single external light. Excerpt from drawing number PW1225_PL14 by Peter Wells Architects

1 no. new security light ●

- No more than 3.2m high
- Warm white (3000K) LED light, max 20 watts
- Angled towards ground
- PIR sensor with short duration (30 sec) timer

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SITE:	Oak Hall Farm
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Dwg:	1855ALDS
Rev:	-





Liz Lord Ecology

