



Lindsell, Dunmow

Preliminary Roost Assessment Report

**On Behalf of KANE GOODCHILD
PROPERTY LTD.**

Version 1 | August 2022



Building 1, Occupied Bungalow Dwelling Onsite.

Document Control

Version	Date	Produced by	Reviewed by	Notes
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This report does not purport to provide legal advice. This report provides baseline ecological conditions for the aforementioned site and is considered relevant for a period of no more than 12 months.




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Ecological Risk Assessment

The following Ecological Risk Assessment provides an infographics summary of the recommendations made following a Preliminary Roost Assessment of Lindsell, Dunmow. This Eco RA is not intended as a substitute for reading the full report as set out in the proceeding pages.

Risk Code Key		
	High Risk- Likely foreseen issue	Further survey work and mitigation recommended
	Moderate Risk- Some potential foreseen issue	Low-level mitigation required; no further survey work recommended
	Low Risk- No foreseen issue	No further action required

Risk Code	Factor	Comments and Actions Required	Timings
	Bats	<p>Building 1 and Building 2 were externally and internally inspected.</p> <p>Building 1 is considered to have suitability for a low status roost due to lifted tiles on the roof. An internal inspection of the loft void did not reveal any evidence of bat use, although two places of light ingress were noted on the west and north elevations of the building where bats could gain internal access.</p> <p>Building 2 is not considered to have potential roost features and therefore has negligible suitability.</p> <p>Requirements: A precautionary method statement to be produced and followed during works on Building 1, to include the removal of any suitable features by hand, namely the roof tiles, under the supervision of a suitably qualified bat worker.</p> <p>Any proposed lighting to be tailored to reduce any light spill on to potential foraging and commuting habitats for bats.</p> <p>Install an integrated bat tube within each new building, or if this is not possible on all buildings, bat boxes should be pole mounted near boundary trees instead.</p>	<p>Pre-construction</p> <p>Design Stage</p> <p>Design Stage</p>

Risk Code	Factor	Comments and Actions Required	Timings
	<p>Birds</p>	<p>Building 1 and 2 were assessed for their suitability for nesting birds.</p> <p>Under the tiles of Building 1, a nest was noted, most likely belonging to house sparrow.</p> <p>Building 2 had multiple old house martin/swallow nests internally.</p> <p>The Site has trees that provide suitable nesting habitat; however, these will be retained.</p> <p>Requirements: Demolition of buildings to take place outside of the nesting bird season (March to September inclusive), following recommendations for bats; Or</p> <p>If demolition needs to be undertaken in the nesting bird season, then nesting bird checks will need to be undertaken by an ecologist, within 24-48 hours prior to works; &</p> <p>If an active nest is found, then demolition cannot occur until the young have fledged and the nest is abandoned; and</p> <p>Installation of two house sparrow terrace and two general purpose boxes as compensatory nesting habitat.</p>	<p>October to February (inclusive)</p> <p>March to September (inclusive)</p> <p>Design Stage</p>

1 Introduction

1.1 Background

Practical Ecology Ltd were commissioned by KANE GOODCHILD PROPERTY LTD to undertake a Preliminary Roost Assessment (PRA) at Lindsell, Dunmow, herein referred to as the 'Site'.

As part of PRA assessments, nesting bird assessments are generally incorporated, since both bats and birds utilise similar features within buildings and trees. As such, this report includes an assessment of the site's potential for nesting birds as well as roosting bats.

This report presents ecological information gathered during an initial assessment of the site undertaken on 15th July 2022.

The purpose of this report is to provide an assessment of the buildings in relation to bats and birds, along with recommendations for further surveys and mitigation as deemed appropriate.

The Site has been granted outline with reserved matters, application number UTT/21/0690/OP. A Preliminary Ecological Appraisal Incorporating Bat Survey Inspection¹ was already carried out by T4 Ecology Ltd. The report findings suggested the two buildings to be demolished onsite have negligible suitability for bats and therefore no further bat surveys or mitigation were necessary. However, the survey was undertaken during the Covid-19 pandemic and an internal inspection of the loft void in the occupied bungalow dwelling was not undertaken due to health and safety reasons.

1.2 The Site

The site is approximately 0.5ha (central OS grid reference TL 64032 27982, postcode CM6 3QL) and is located in Lindsell, Dunmow in Essex. The site comprises of a bungalow dwelling with outbuildings and car breaking facilities. The surrounding landscape is comprised of the village of Lindsell and predominantly of arable land to the wider area, with areas of woodland, lines of trees and hedgerows. A site boundary (red line) and wider land holdings (blue line) are provided in Figure 1 below.



Figure 1: Site Boundary

1.3 Proposed Development

The proposed development of the site includes demolishing the bungalow dwelling and one outbuilding to construct five residential dwellings.

A proposal plan has been included in Appendix 1 (Drawing number: 17/130/02).

2 Methods of Assessment

2.1 Preliminary Roost Assessment and Nesting Bird Assessment

A site visit was undertaken on 15th July 2022 date by Ana Pino-Blanco BSc (Hons) MSc an Ecologist with over three years' experience (Natural England Bats Level 1: 2020-50789-CLS-CLS) and Sammi Smith MSc, an Assistant Ecologist with one years' experience.

An assessment of the potential value of the bungalow dwelling and the spray/paint shop outbuilding as a roosting site for bats was carried out using the protocol set out in Collins (2016)ⁱⁱ. This included an internal and external search of all buildings to search for signs of bats and potential roosting features (PRFs). PRFs were assessed using ladders, binoculars, high-powered torches and an endoscope where appropriate. Accessible holes, cracks, crevices and other potential bat roosting features were thoroughly inspected for bats themselves or for signs (e.g. staining, droppings, scratch marks) of past bat presence.

An assessment of both buildings suitability to support nesting birds was also undertaken, since nesting birds and roosting bats utilise similar features for breeding and nesting. The buildings were searched internally and externally for signs of nesting birds, including nests, moulted feathers and droppings.

The weather during the PRA on 15th July was 27c with <10% cloud cover, and Beaufort scale 0-1 wind.

2.2 Limitations to Survey

The baseline conditions reported and assessed in this document represent those identified during a single site visit on 15th July 2022. Signs of bat presence, such as droppings, are short-lived and can be subtle and/or hard to distinguish. Bats also regularly move between roosts and roost usage varies between seasons and with the weather. This is not considered to have significantly impacted upon the results of the assessment as the survey methodology takes this into account by considering the suitability of a building as well as the evidence (or lack of evidence) found.

3 Bats

3.1 Desk Study

The following species of bat were noted within the 1km data search occurring within the last 10 years.

- Natterer's bat (*Myotis nattereri*)
- Common pipistrelle (*Pipistrellus pipistrellus*)
- Pipistrelle species (*Pipistrellus pipistrellus*)
- Brown long-eared bat (*Plecotus auritus*)

3.2 Preliminary Roost Assessment

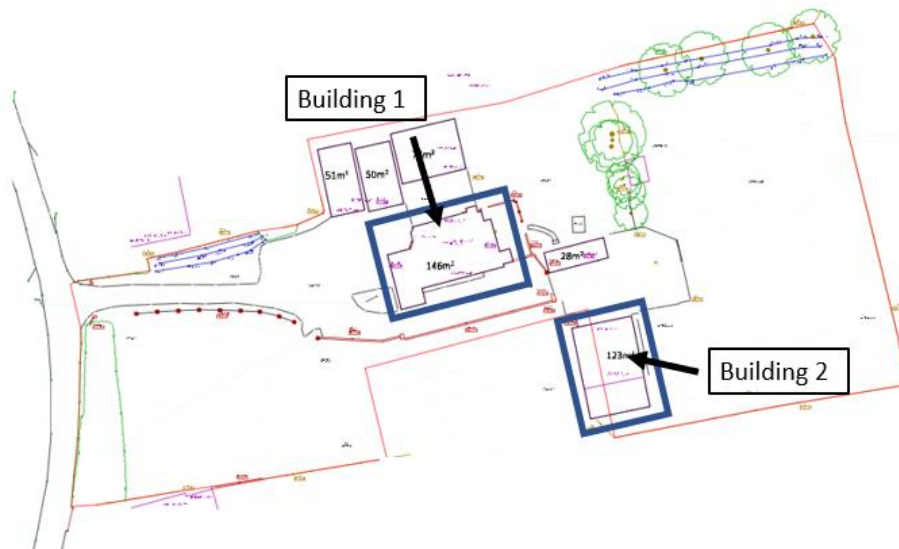


Figure 2: Plan of Buildings Inspected

Building 1 – Low suitabilityⁱⁱ

External – The bungalow has pale rendered walls, with a predominately hipped tiled roof with flat felt roof extensions to the east and west elevations. The fascias were tightly sealed with wooden soffits. To the north elevation of the building, damage to the soffit box has been fixed with plywood to seal it, although a small hole is present and this was inspected with an endoscope. The inspection revealed the hole leads to an open cavity that does not lend itself to a suitable roosting feature. This damage to the soffit box was not mentioned in the previous report by T4 Ecology Ltd, therefore suggesting the damage and repair of the soffit box is less than two years old. Some of the roof tiles are noted to have lifted, with a birds nest under one revealing the tiles are lifted enough for access.

Internal – The loft void in the bungalow, contained a water tank taking up a significant amount of the roof space. Light ingress is noted coming from the north and west elevations and the eaves are covered with a metal mesh. No evidence of bats is noted such as a scattering or accumulation of droppings and is heavily cobwebbed suggesting the space is not utilised although there may be access points to the void through the gaps creating light ingress.

Building 1 was assessed as having ‘**low**’ suitability for roosting bats, which means the building has suitability for a low status roost to be present

Building 2 – Negligible suitabilityⁱⁱ

External – An outbuilding that is used as a spray/paint shop. A structure with an asbestos roof, corrugated roof and metal sheet and framed structure with internal wooden beams and open entrances on its north and east elevations is situated inside a larger open metal frame. Externally there are no potential roost features on either the building structure or the outside frame.

Internal – Internally there are no potential roost features and the openness of the structure along with the light ingress makes the structure unsuitable for roosting bats.

Building 2 was assessed as having ‘**negligible**’ suitability for roosting bats.

Trees

No trees are being removed to facilitate the development.

Foraging and Commuting

The Site provides foraging and commuting opportunity. The surrounding areas of gardens and a woodland parcel to the southeast also provide foraging and commuting habitat, along with potential roosting habitat. Therefore, it is likely that bats utilise the Site.

3.3 Assessment of Effects

The original Preliminary Ecological Appraisal Incorporating Bat Survey Inspection carried out by T4 Ecology Ltd. in 2021 classed Building 1 and 2 to have negligible suitability without an internal inspection of Building 1. An internal inspection of Building 1 did not provide any evidence of bats roosting internally. However, the external inspection of Building 1 revealed lifted tiles that are considered to be potential roost features and therefore it is possible a bat roost could be destroyed or an individual injured, disturbed or killed during demolition of this building.

Building 2 did not provide any potential roost features and this PRA agrees with T4 Ecology Ltd. in that this building is not considered able to support bats and has negligible suitability. Therefore, bats will not be impacted by the demolition of Building 2.

No other buildings or trees will be removed to facilitate the development.

3.4 Recommendations

Pre-construction

A precautionary method statement should be produced and followed during works, to mitigate any residual risk to Building 1 which is assessed as having low suitability. This will include soft stripping the building by the removal of any suitable features, namely the roof tiles, by hand under the supervision of a suitably qualified bat worker. If evidence of bats is found, then work must stop, and advice of an ecologist obtained.

Design Stage

Install an integrated bat tube within each new building. They should be on an eastern or southern elevation and at least 4-5m high, away from windows and doors. Or, if this is not possible on all new buildings, then bat boxes should be pole mounted near boundary trees onsite instead.

Any lighting schemes to be installed during and post-construction must be designed to prevent unnecessary light spill onto boundary vegetation and any bat boxes installed as part of the development. The following guidance^{iiiiv} must be followed:

- Minimise light spill by eliminating any bare bulbs and upward pointing light fixtures. The spread of light must be kept near to or below the horizontal plane, by using as steep a downward angle as possible and/or shield hood. Flat, cut-off lanterns are best.
- Luminaires must feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats^v.
- A warm white spectrum (ideally <2700 Kelvin) must be adopted to reduce blue light component.
- All luminaires must lack UV elements when manufactured. Metal halide, fluorescent sources must not be used.
- Limiting the height of lighting columns to eight metres and increase the spacing of lighting columns^{vi} will reduce the spill of light into unwanted areas such as the aforementioned habitats.
- Artificial lighting proposals must not directly illuminate boundary habitats, trees, or bat box locations.

With these lighting measures implemented, it is considered that any potential adverse effects from lighting upon bats will be minimised.

4 Nesting Birds

4.1 Field Survey

No birds were noted onsite during the survey.

Evidence of a house sparrow (*Passer domesticus*) nest under a lifted tile of Building 1 was noted. Therefore, Building 1 is considered to provide nesting opportunities for small passerine birds, such as house sparrow.

Within Building 2, at least three old house martin (*Delichon urbicum*) or swallow (*Hirundo rustica*) nests were present within the structure, within the frame and above a light fitting. Therefore, Building 2 is considered to provide nesting opportunities for Hirundinidae.

4.2 Assessment of Effects

The demolition of Building 1 and 2 could see the damage or destruction of active nests if clearance is undertaken during the nesting season. It will also result in the loss of nesting habitat onsite.

4.3 Recommendations

Demolition of Building 1 and 2 should be undertaken outside of the nesting bird season (the nesting bird season is considered to run from March to September, inclusive, but does vary depending on weather).

If this is not possible and works are undertaken during the nesting season, then it should only be undertaken within 24-48 hours of a nesting bird check undertaken by a suitably experience ecologist. Should nests be encountered then clearance around the nest will be paused, and a reasonable buffer installed until young have fledged the nest.

Installation of two house sparrow terrace and two general purpose boxes as compensatory nesting habitat. These should be mounted at least 3-4m above ground with a clear line of flight. If it is not suitable to mount all the bird boxes onto the new dwellings, then the general hole fronted boxes should be pole mounted and placed near retained trees.

5 References

ⁱ T4 Ecology Ltd., Preliminary Ecological Appraisal Incorporating Bat Survey Inspection, Lindsell Car Breakers, January 2021.

ⁱⁱ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed). The Bat Conservation Trust, London.

ⁱⁱⁱ Miles, J., Ferguson, J., Smith, N., and Fox, H., 2018. Guidance Note 08/18 Bats and artificial lighting in the UK. [pdf] Available at: <https://cdn.bats.org.uk/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf>.

^{iv} Gunnell, K., Grant, G., and Williams, C., 2012. Landscape and urban design for bats and biodiversity. Bat Conservation Trust, London, UK.

^v Stone, E.L., Jones, G., Harris, S., 2012. Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats. *Glob. Change Biol.* 18, 2458–2465.

^{vi} Fure, A., 2012. Bats and Lighting – six years on. *The London Naturalist* 91, 69-88.

Appendix 1: Site Proposals



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DATE	27.04.2020
BY	J.H.
CHECKED	J.H.
SCALE	AS SHOWN
PROJECT	RESIDENTIAL DEVELOPMENT
CLIENT	MR & MRS J. WALSH
DESCRIPTION	RESIDENTIAL DEVELOPMENT
DATE	27.04.2020
BY	J.H.
CHECKED	J.H.
SCALE	AS SHOWN
PROJECT	RESIDENTIAL DEVELOPMENT
CLIENT	MR & MRS J. WALSH
DESCRIPTION	RESIDENTIAL DEVELOPMENT

Appendix 2: Site Photos

Photo 1: Building 1, west elevation.



Photo 2: Building 1, west elevation.



Photo 3: Building 1, south elevation.



Photo 4: Building 1, south elevation.



Photo 5: Building 1, east elevation.



Photo 6: Building 1, north elevation.



Photo 7: Building 1, soffit box, north elevation.



Photo 8: Building 1, tiles w/ house sparrow nest under (N)



Photo 9: Building 1, loft void. Heavily cobwebbed.



Photo 10: Building 1, loft void. Light ingress.



Photo 11: Building 2, north elevation.



Photo 12: Building 2, internal.



Photo 13: Building 2, old house martin/swallow nests.



Photo 14: Building 2, old swallow nest.



Appendix 3: Legislation

The following sections outline the legislation protecting each species or group of species where appropriate which have been considered as part of the preceding report.

Important notes:

- Practical Ecology Ltd's reports do **not** purport legal advice.
- The outline of legislation provided is not comprehensive and the original texts of the relevant legislation must be referred to for a full list of offences.

5.1 European Protected Species

5.1.1 Overview

The Bern Convention (The Convention on the Conservation of European Wildlife and Natural Habitats) was adopted in 1979. To implement the agreement, the European Community adopted the EC Habitats Directive.

The EC Habitats Directive has been written into UK law in the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. In addition, the Countryside and Rights of Way Act 2000 strengthened the wildlife legislation in the UK.

In relation to development, a person commits an offence regarding a species protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 if they:

- Deliberately capture, injure or kill an EPS;
- Deliberately or recklessly disturb wild animals of any such species in such a way as to be likely to significantly affect;
 - The ability of any significant group of animals to survive, breed or rear or nurture their young;
 - The local distribution or abundance of that species.
- Damages or destroys a breeding site or resting place (even if unintentional or when the animal is not present);
- Intentionally or recklessly obstructs access to a structure or place used for protection or shelter; and
- This applies regardless of the life stage (i.e. eggs, young, adult).

The following sections outline the offences that can be committed against each species or group of species which are protected by European law and tranches of UK law which strengthen that protection.

5.1.2 Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 and Section 9 of the Wildlife and Countryside Act 1981.

It is an offence to:

- intentionally kill, injure or handle a bat;
- to possess a bat (whether live or dead);
- disturb a roosting bat; or
- sell or offer a bat for sale without a licence.

It is also an offence to intentionally or recklessly damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

A roost is defined as 'any structure or place which (a bat) uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of the survey.

5.1.3 Birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built;
- intentionally take or destroy the nest or eggs of any wild bird. [Special penalties are liable for these offences involving birds listed on **Schedule 1**].

Birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) have an additional level of protection. With regards to these species, it is an offence to deliberately or recklessly:

- disturb them whilst they are nesting, building a nest, in or near a nest that contains their young;
- disturb their dependent young.

5.1.4 Invasive Species

Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife & Countryside Act 1981 (as amended) prohibits the release of any animal species that are 'not ordinarily resident or is not a regular visitor to Great Britain in a wild state'.

Therefore, under Section 14 it is an offence to allow the establishment of plant species listed on Schedule 9 Part 2 in the wild.