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**3 Butts Orchard, Wrington  
Preliminary Roost Assessment  
December 2023**

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3 Butts Orchard, Wrington Preliminary Roost Assessment

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## Summary

Fenswood Ecology was commissioned by Mr Chris and Mrs Paula Burnett to undertake a Preliminary Roost Assessment (PRA) of a parcel of land at 3 Butts Orchard, Wrington (centred around Ordnance Survey Grid Reference: ST 46900 62400). An ecological assessment of the site was undertaken by Grace Temlett in December 2023.

An assessment was completed on the site and adjacent to site habitats which is proposed to have a three bay garage and store space built with dimensions of approximately 12m x 6m.

The site was found to have **negligible bat and bird roost potential**, due to the site being hard standing in its entirety and a lack of roosting features and therefore no further surveys have been recommended.

## Introduction

Fenswood Ecology was commissioned by Mr Chris and Mrs Paula Burnett to undertake a Preliminary Roost Assessment (PRA) of a parcel of land at 3 Butts Orchard, Wrington (centred around Ordnance Survey Grid Reference: ST 46900 62400). An ecological assessment of the site was undertaken by Grace Temlett in December 2023.

Bats are protected and considered to be of primary importance under UK legislation, namely the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Natural Environment and Rural Communities Act 2006.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) against destruction of the nest during the bird nesting season, which falls between March and August, inclusive.

This report details the findings of the survey work, methodologies employed are described including site surveys and evaluation and the need for any further survey work and/or mitigation measures are included, where appropriate.

## Site Location

The site is approximately 75m<sup>2</sup> in size and is currently part of a gravel driveway within the private garden curtilage of 3 Butts Orchard, located in the southern region of the village of Wrington. The only habitat type recorded within site was hard standing. The surrounding garden curtilage to the south and west is amenity grassland. There is a newly planted evergreen hedge along the eastern border of the hard standing area – to the east of this there is an unnamed stream with associated vegetated banks. There is an existing gravel access track to the west connecting the site to the public highway. The residential dwelling is located approximately 36m west of the site.

The site is surrounded by agricultural land and more residential dwellings with the centre of the village to the north. The River Congresbury Yeo is approximately 365m south but with connecting tributaries approximately 50m east of site.

Figure 1: MAGIC map showing surrounding landscape in relation to the survey site.



## Project Overview

An assessment was completed on the site habitats and adjacent to site habitats. Proposals for the site are to build a three bay garage and store space approximately 12m x 6m. The design provided by I S Ford Building Surveying and Planning Ltd (Drawing no. 2078/23/02) shows a timber framed building with concreted footings.

## Methodology

### *Desk Study*

Records held on Magic.gov.uk on designated sites and granted European protected species licences were reviewed in December 2023.

### *Field Study*

The survey was undertaken by Grace Temlett, BSc (Hons), Arb L2, ACIEEM on 5<sup>th</sup> December 2023.

The site habitats were inspected to assess its potential to support roosting bats, in accordance with current best practice guidelines (Collins, 2016).

The site habitats were also inspected to assess its potential to support nesting birds.

An inspection on site was undertaken during daylight to determine the suitability for bats and breeding birds and establish if bats and breeding birds are using the site habitats or have been using the site in the past.

All accessible parts of the site were inspected, to look for bats and breeding birds and signs of the presence of the species, including:

- Droppings.
- Feeding remains including moth and butterfly wings.
- Staining from urine or oils near crevices or holes
- Scratch marks on walls and timber.
- Squeaking or chattering calls.
- Bird nests or signs of nesting (i.e eggshell, feathers, faeces)
- Owl Pellets

A building or tree may have several features of potential interest to roosting bats. It is not always possible to confirm usage of a feature by bats as often the animals may be present on one day and no evidence of occupation may be found on the next. Consequently, it is normal practice when undertaking such surveys to assign each feature to a defined category of roosting potential as follows:

**Negligible:** Negligible habitat features onsite likely to be used by roosting bats

**Low:** A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation.)

**Moderate:** A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed)

**High:** A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat

**Confirmed:** This category is used where positive evidence of bats usage has been recorded from a feature. For example, bats or bat droppings may be present, or existing bat records may be associated with the feature. A licence from Natural England is likely to be required if the bat roost is to be disturbed by the development.

## Limitations to Survey

Access to the full application site was provided.

The survey was undertaken within the optimal survey season, and as such it is considered that a robust evaluation of bat roosting potential within the site character has been made.

## Findings and Evaluation

### Designated Sites

There is one statutory designated site within 2km of the proposed site - Kings Wood and Urchin Wood SSSI (approximately 1.7km north) which is also covered by the North Somerset and Mendip Bat SAC. The site also falls within the SSSI impact zone for Goblin Combe SSSI (approximately 2.5km north) which is also included within the North Somerset and Mendip Bat SAC.

The site does falls within the boundary of the Forest of Avon Community Forest.

According to the North Somerset Council (NSC) guidance in relation to the North Somerset and Mendip Bat SAC, the site also falls within consultation zone B (NSDC, 2018).

See appendix for designated site locations.

### European Protected Species Mitigation (EPSM) Licences

There are three records of granted European Protected Species Mitigation (EPSM) Licences for bats or Schedule 1 bird species shown on MAGIC within 2km of the site.

Case Reference	Species	Start of Licence	End of Licence	Distance from Site	Impact
2017-27948-EPS-MIT	Lesser horseshoe, Greater horseshoe	10/05/2017	10/05/2027	393m north	Damage of a resting place
2017-28274-EPS-MIT	Soprano pipistrelle	21/03/2017	31/10/2017	1.5km south	Destruction of a resting place
2014-4618-EPS-MIT	Common pipistrelle, Lesser horseshoe, Greater horseshoe, Soprano pipistrelle	22/12/2014	31/12/2020	1.9km southwest	Damage and Destruction of a resting place

See appendix for EPSM licence locations.



## Field Survey

### Preliminary Roost Appraisal

The site in its entirety is currently part of a gravel hard standing area where the client parks cars. The area is well maintained with no encroaching vegetation. This habitat is species poor and man-made.



View of site from northern elevation.



Western elevation, hard standing site with mature tree approximately 10m from edge of proposed site boundary.

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View from proposed western elevation, hard standing area with amenity grassland adjacent.



View of eastern elevation with evergreen hedge and unnamed stream.



Mature tree approximately 10m from northern elevation of proposed site within another private garden.

## Conclusion & Recommendations

The site did not display any opportunities for bats or breeding birds to roost/nest. As such, it is considered that the site has **negligible** suitability for roosting bats and breeding birds.

There is potential for the nearby hedge and tree lines to be used as part of a wider bat foraging and commuting resource, but these will be retained and not impacted as part of the proposed development but in order to ensure the development does not have any light disturbance on these habitats or the wider landscape the scheme should adhere to a sensitive lighting scheme (See Appendix 2 for further details).

No further survey work is recommended.

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## References

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn.)*. Bat Conservation Trust, London

Multi-Agency Geographical Information for the Countryside (MAGIC),  
<http://magic.defra.gov.uk>  
accessed December 2023

NSC (2018) *North Somerset and Mendip Bats SAC Guidance on Development: Supplementary Planning Document*.

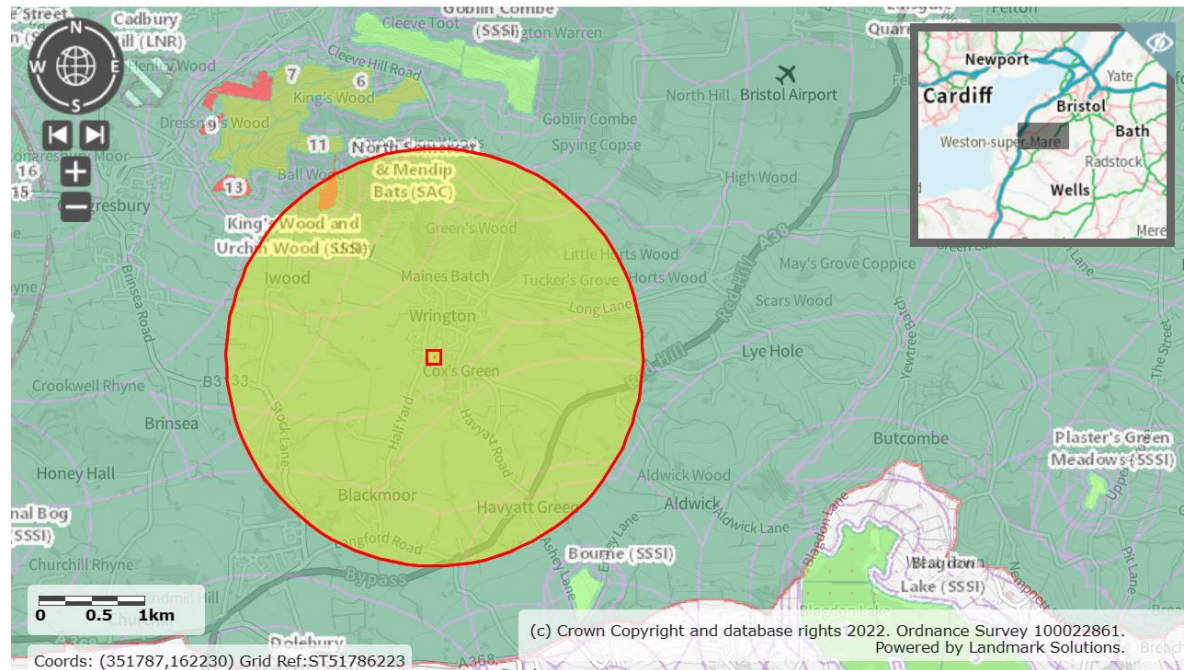
Natural England (1990) Kings Wood and Urchin Wood SSSI Citation

Natural England (1999) Goblin Combe SSSI Citation

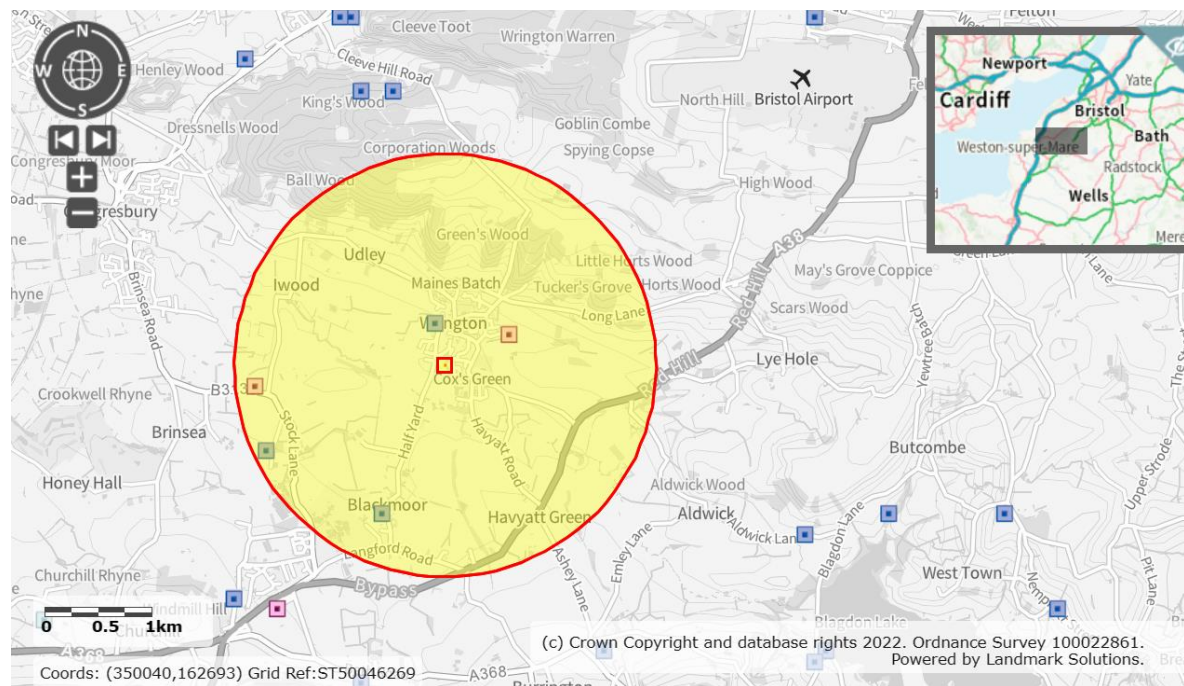


## Appendix 1 – Desk Top Study

### Designated Sites 2km buffer



### Granted European Protected Species Mitigation Licenses within 2km



## Appendix 2 – Sensitive lighting for bats guidance

### Bats and lighting

Artificial lighting is known to have significant impacts for slower-flying, rarer species, and even for fast-flying species, potentially affecting reproductive, foraging and roosting opportunities. On a population and ecosystem level, impacts may affect the overall genetic pool of bat species and their prey species (BCT, 2018).

Studies have shown that continuous lighting in the landscape, such as along roads or waterways, creates barriers which many bat species cannot cross, especially the slower-flying species (Fure, A. 2012), even at very low light levels. Lesser horseshoe bats have been shown to move their flight paths which link their roosts and foraging grounds to avoid artificial light installed on their usual commuting route. Significant impacts have been recorded from as low as 3.6 lux (Stone et al 2012). Furthermore, the average light level on hedgerows most regularly used by this species has been recorded at 0.45 lux (Stone et al 2009).

Another group of studies have shown that noctule, Leisler's bat, serotine and pipistrelle bats can congregate around white mercury streetlights (Rydell J et al 1993, Blake et al 1994) and white metal halide lamps (Stone et al 2015b) feeding on the insects attracted to the light, but this behaviour is not true for all bat species. The slower flying broad winged species such as long-eared bats, Myotis species (which include Brandt's bat, whiskered, Daubenton's bat, Natterer's bat and Bechstein's bat), barbastelle, and greater and lesser horseshoe bats generally avoid all street lights (Stone et al 2009, 2012, 2015a). Consequently, bat species less tolerant of light are put at a competitive disadvantage and are less able to forage successfully and efficiently. This can have a significant impact upon fitness and breeding success (BCT, 2018)

### Mitigation and lighting design

Bat friendly lighting plans should firstly look to avoid lighting where possible and minimise lighting impacts by adopting the following measures:

- **Lighting curfews or use of PIR sensors.** Lighting curfews can be an effective way of avoiding impacts on bats. These curfews may involve either turning off lighting or dimming light units at specific times of the night, dimming units at key times of the year, providing the luminaire allows for this option via a control unit. Lighting to be triggered by PIR sensors can be expected to be illuminated only when required and for a low proportion of the overall time.
- **Consider no lighting solutions where possible.** Options such as white lining, good signage and LED cats eyes, should be considered as preferable, especially within Zones 1 and 2. Reflective fittings may help make use of headlights to provide any necessary illumination in some areas.
- **Use only high pressure sodium or warm white LED lamps where possible.** High pressure sodium and warm white LED lamps emit lower proportions of insect attracting UV light than mercury, metal halide lamps and white LED lighting. Generally lamps should have a lower proportion of white or blue wavelengths, with a colour temperature <4200 kelvin recommended (BCT, 2014).
- **Minimise the spread of light.** Light spread should be kept at or near horizontal in order to ensure that only the task area is lit. Flat cut-off lanterns or

accessories should be used to shield or direct light to where it is required. Baffles, hoods, louvres and shields should be used where necessary to reduce light spill.

- **Consider the height of lighting column.** Whilst downward facing bollard lighting is often preferable, it should be noted that a lower mounting height does not automatically reduce impacts to bats as bollard lighting can often be designed to provide uplighting. Where bollard lighting is considered to be the most appropriate system, bollard spacing, or unit density should be kept to a minimum and units should be fitted with the appropriate hoods/deflectors to reduce uplighting. Column height should be carefully considered to balance task and mitigation measures.
- **Avoid reflective surfaces below lights.** The polarisation of light by shiny surfaces attracts insects increasing bat activity (BCT, 2012). Consequently, surface materials around lighting require consideration.

#### References

BCT (2018) *Bats and artificial lighting in the UK* Guidance Note 08/18. Bat Conservation Trust.

BCT (2014) *Artificial lighting and wildlife. Interim Guidance: Recommendations to help minimise the impact of artificial lighting.*

Downs N., Beaton, V., Guest J., Polanski S., Robinson, S. & P. Racey (2003) *The effects of illuminating the roost entrance on the emergence behaviour of Pipistrellus pygmaeus.* Biological Conservation, 111: 247-252.

Fure, A (2012) Bats and Lighting – six years on. The London Naturalist No. 85

Hundt (2012) *Bat Surveys: Good Practice Guidelines, 2<sup>nd</sup> edition.* Bat Conservation Trust.

Stone, E.L., Jones, G., Harris, S. (2009). *Street lighting disturbs commuting bats.* Curr. Biol. 19, 1123–1127.

Stone, E., Jones, G. & S. Harris (2012) *Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats.* Global Change Biology, 18: 2458-2465