

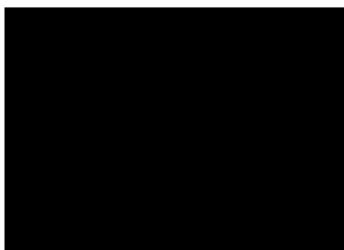


# Stage 1 Bat Survey – Padel Tennis Courts Lighting

Client: Tessa Godbert

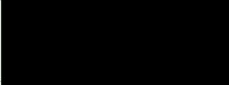
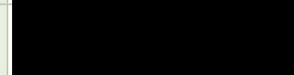
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## Contents

1	SUMMARY	3
2	INTRODUCTION	4
3	METHODOLOGY	6
4	SURVEY FINDINGS	9
5	EVALUATION, POTENTIAL IMPACTS AND RECOMMENDATIONS	18
6	REFERENCES	19
7	APPENDIX 1 - LEGISLATION AND POLICY GUIDANCE	20
8	APPENDIX 2 FIGURES	23

# 1 Summary

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Proposal Outline	It is intended to apply for planning permission to allow for the installation of floodlighting to a padel tennis court at Worldham Golf Club. The scheme includes the installation of four LED lighting masts to the court.
Survey area and Zone of Influence	The survey area comprises two padel tennis courts along with the likely Zone of Influence (ZOI) surrounding the courts, which encompasses gravel walkways, areas of regularly mown modified grassland along with a drainage ditch, woodland edge and scattered trees.
Surveys Undertaken	A Preliminary Ecological Appraisal (PEA) and daytime walkover survey for bats was undertaken on the 12 <sup>th</sup> of October 2023. An online desk study to look for features of interest within 2km of the site was undertaken.
Results	During the daytime walkover survey, habitat with suitability for commuting and foraging bats was identified and features with potential to support roosting bats were recorded on one tree within the ZOI. The desk study revealed that there are no designated sites within 2km for which bats are the primary reason for the designation. The nearest EPSL granted for bats related to a common pipistrelle roost 1.7km to the west.
Limitations	There were no limitations on the survey.
Potential Impacts	No significant impacts of the proposed lighting are predicted on any roosts, potential roosts or upon any commuting and foraging habitat.
Recommendations	No further survey is required provided planning permission is applied for before May 2026. Opportunities for biodiversity enhancement are included in the main body of the report.

## 2 Introduction

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### 2.1 Background and development proposals

- 2.1.1 Planning permission was granted in April 2023 by East Hampshire District Council for the erection of three padel tennis courts at Worldham Gold Club, under the condition that no external lighting or floodlights be installed on site without prior approval by the Local Planning Authority. Two courts have been constructed, with permission for the construction of a third.
- 2.1.2 It is intended to apply for planning permission to install lighting to Court 1 to enable use during the evening. The scheme includes the installation of four, 5m LED lighting masts to the court.

### 2.2 Survey area and zone of influence

- 2.2.1 The survey area includes two 20m x 10m padel tennis courts with synthetic turf along with the likely Zone of Influence (ZOI) surrounding the courts defined as the area with potential for an increase in lux levels as a result of the lighting scheme. The ZOI encompasses a gravel walkway around the courts, and areas of regularly mown modified grassland along with a drainage ditch and scattered trees. The survey area is situated to the east of the putting green and crazy golf course and is accessed from a private access road off Cakers Lane (GU34 3BF, grid reference SU 73122 38481). A site plan is shown in Figure 1.
- 2.2.2 Worldham Golf Club is an 18-hole golf course and driving range which has been in operation since 1992. The golf club is located to the east of the Alton by-pass, outside of the South Downs National Park boundary. The surrounding area in Hampshire is primarily rural in character, with the market town of Alton to the west and northwest, and a patchwork of farmland and woodland areas interspersed with villages in all other directions.

### 2.3 Purpose and scope

- 2.3.1 CA Ecology Ltd was contracted to conduct a Preliminary Ecological Appraisal (PEA) and daytime walkover survey for bats within the application site boundary.
- 2.3.2 The key aims and objectives of the survey are to:
- Establish baseline conditions and collect robust data in order to allow an assessment of potential impacts of the proposals upon bat populations on and off site;
  - Establish any requirements for more detailed or further surveys, taking a proportionate approach and ensuring the provision of information is appropriate for the environmental risk associated with the development;
  - Identify key constraints to the project and make recommendations for design options to avoid significant impacts;

Identify the mitigation and enhancement measures that may be required, following the mitigation hierarchy;

Identify the opportunities offered by the project to deliver ecological enhancement and support conservation of bat populations.

## 3 Methodology

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### 3.1 Desk study

3.1.1 The MAGIC website is reviewed for information on designated sites for which bats are the qualifying feature or key feature of interest within 2km radius of the site and details of European Protected Species Licences granted for bats within 2km of the site. Using a combination of OS map and online aerial imagery, an estimate of the proportion of suitable commuting and foraging habitat within 500m of the building is made. Measurements of the distance to nearest woodland and water are also recorded. This data is then taken together and used to inform the overall assessment.

### 3.2 Daytime bat walkover survey

#### Habitat assessment

3.2.1 A walkover is undertaken to assess suitability of habitats on site for bats, including recording locations of any lighting fixtures. The habitats on site are classified, recorded and mapped in accordance with standard methodology published in the UK Habitat Classification User Manual. This allows a rapid visual assessment of the extent and distribution of different habitat types.

3.2.2 The habitats are then evaluated for their suitability to provide commuting, foraging, swarming or roosting opportunities for bats. Each habitat is assigned a potential based on the criteria set out in Table 1 below.

Table 1: Buildings and habitats are categorised as follows:

Potential Suitability	Description – roosting habitats in structures	Description – potential flight-paths and foraging habitats
Confirmed	Building with confirmed roost presence either in the form of droppings, bats present or other incontrovertible signs.	NA
High	Building or structure has a numerous suitable access points and potential roost locations, suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time with good connectivity to high quality foraging habitat. Buildings with potential for high conservation status roosts such as maternity sites or classic hibernation sites are included in this category.	Continuous, high-quality habitat, well-connected to wider landscape likely to be used regularly by bats for flight paths such as river valleys, streams, hedgerows, lines of trees and woodland edge or for foraging such as broadleaved woodland, tree-lined watercourses, or high-quality grassland. Site is close to and has connectivity to known roosts.
Medium	Building has some features suitable for use by roosting bats. Unlikely to support a roost of high conservation status.	Continuous habitat with connectivity to the wider landscape that could be used by bats for flight paths, including lines of trees and scrub or linked residential gardens or for foraging such as trees, scrub, grassland or water.
Low	Building has features likely to be used opportunistically but does not provide conditions for use on a regular basis or by large numbers of bats.	Habitat such as gappy hedgerow or unvegetated stream that could be used by bats for flight paths, but not well-connected to the surrounding landscape. Suitable foraging habitat present such as a lone tree or patch of scrub, but isolated from other suitable habitat.
Negligible	No features suitable for use by roosting bats or features where the potential of use by roosting bats is so low as to be negligible.	No habitat likely to be routinely used by commuting or foraging bats.



## Potential roost features

- 3.2.3 A ground-level assessment of buildings and trees within the Zone of Influence (ZOI) is undertaken.
- 3.2.4 Individual trees are inspected from the ground for any crevices or cavities that can be used by roosting bats. Features such as ivy can also provide roosting opportunities. Table 2 below shows how trees are categorised during the ground-level tree assessment.
- 3.2.5 Suitable access points and potential roost locations on buildings include but are not limited to slipped or missing tiles, missing mortar, lifted lead flashing, gaps behind or into cladding or hanging tiles, gaps and cracks in walls or around windows and doors, gaps at eaves or behind barge and soffit boards, or access into cavity walls.
- 3.2.6 The number of locations and aspect of potential access points is taken into consideration along with the number of potential roost locations, any history of use of the site by bats and results of the desk study, together with the surrounding habitat and connectivity to water and woodland, to give overall potential for the building to support roosting bats (see Table 1 above).
- 3.2.7 Further consideration for the building or tree to have potential for non-classic winter use is given following the rationale provided in Figure 4.1 of the BCT Good Practice Guidelines.

Table 2: Trees are categorised as follows:

Tree Suitability	Description
NONE	No potential roost features (PRFs) were recorded or the tree is highly unlikely to have any PRFs.
FAR	Further assessment is required to establish if any PRFs are present.
PRF	At least one PRF is present.

## 3.3 Assessing impacts

- 3.3.1 Potential impacts from light spill were evaluated based on the Technical Report prepared by DFL on behalf of the client. The isolux contours shown on the light spill diagram (3208-DFL-ELG-XX-LD-EO-13001) were overlaid onto the georeferenced position of the two existing padel tennis courts in QGIS. This was then used to determine if any habitat suitable for commuting or foraging bats or any potential roost features will be affected by the increased lux levels.

## 4 Survey findings

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### 4.1 Desk study



- 4.1.1 There are no designated sites for which bats are a qualifying feature nor are there any other statutory sites designated for wildlife within 2km of the site. The site does fall within a SSSI Impact Risk Zone but the development does not fall within any of the risk categories considered to have the potential to impact upon a SSSI. The nearest woodland is an approximately 0.27ha area of woodland to the west of the drainage ditch, and there is a line of trees along the ditch which provides commuting habitat for bats. There are also a number of trees and patches of woodland areas across the golf course which provide good quality foraging habitat for bats, as well as hedgerow connectivity to nearby woodland areas, particularly to the east.
- 4.1.2 There have been three European Protected Species Licences (EPSL) granted for bats within 2km of the site. The nearest is a property 1.7km to the west and affected the resting place of common pipistrelles (*Pipistrellus pipistrellus*). Other records involved common pipistrelles, soprano pipistrelles (*Pipistrellus pygmaeus*) and brown long-eared bats (*Plecotus auritus*).




## 4.2 Daytime walkover survey

### Habitat assessment

- 4.2.1 On the 12<sup>th</sup> of October 2023 the site was visited by Claire Andrews BSc (Hons) MCIEEM, a licenced bat surveyor (WML CL16, 19 & 20 2015-12722-CLS-CLS, 2015-12723-CLS-CLS and 2015-12725-CLS-CLS). Claire is a bat specialist with over 25 years' experience of conducting bats surveys. Claire is also author and agent of numerous European Protected Species licences and a Registered Consultant for the Low Impact Class Licence. Claire was assisted by ecologist Allyson Hawkins BA (Hons) MSc with three years' experience of conducting bat surveys. Allyson is currently working toward applying for a level 1 bat licence. All trees within the ZOI were assessed from ground level. There were no buildings within the ZOI. See Figure 2 for a habitat plan showing the suitability of the habitats on site for commuting or foraging bats
- 4.2.2 The survey area comprises mainly anthropogenic habitats which includes two padel tennis courts and gravel walkways surrounding the courts, along with areas of mown grassland, the edge of woodland area to the southwest, a drainage ditch along the southwest side of the courts, and scattered trees. Habitat types represented across the site are shown in Table 3 below.

Table 3: Habitat types recorded on site

Primary habitat	Description	Potential for commuting bats	Potential for foraging bats	Photo
Grassland	<p>The padel courts are surrounded by regularly mown grassland, including a putting green to the northwest and driving range to the north. There is also an area of grassland to the west of the ditch which was formerly dominated by scrub but has since been cleared. This area is now managed as grassland. The grassland is shown as g on Figure 2.</p> <p>There are four scattered trees within these grassland areas that were evaluated for their potential to support roosting bats, and details of the assessment are provided in section 4.2.3.</p>	This habitat is not suitable for commuting bats.	<p>The grassland to the east of the ditch which includes the putting green and driving range is heavily managed and the sward kept short, providing low quality foraging habitat for bats.</p> <p>The grassland to the west of the ditch is similarly managed, providing low quality foraging habitat for bats.</p>	
Broadleaved woodland	There is an area of woodland approximately 20m to the southwest of the padel courts and the edge of this woodland falls within the ZOI.	The woodland edge provides moderate quality habitat for commuting bats and is well-connected to hedgerows and woodland in the surrounding area, particularly to the south.	The woodland provides high quality foraging habitat for bats.	

Primary habitat	Description	Potential for commuting bats	Potential for foraging bats	Photo
Drainage ditch	There is a drainage ditch which runs to the southwest of the padel courts. The ditch is shown on Figure 2 as r1 50.	The ditch provides low quality commuting habitat for bats.	The presence of this ditch supports an increase in insect abundance, providing enhanced foraging opportunity for bats.	
Padel tennis courts	There are two 20m x 10m padel tennis courts with synthetic turf each enclosed with an approximately 3m high mesh and glass fence, shown on Figure 2 as u1b.	The courts have negligible potential for commuting bats.	The courts have negligible potential for foraging bats.	
Walkways and seating area	The courts are surrounded by a self-binding gravel walkway with bench seating to the front. There is also a gravel path leading into the golf course to the front of the courts. These areas are shown on Figure 2 as u1c.	This habitat has negligible potential for commuting bats.	This habitat has negligible potential for foraging bats.	

## Potential roost features

4.2.3 There are four trees within the survey area, each was assessed for their potential to support roosting bats. One of the trees, a mature oak (*Quercus robur*) to the south-east of the padel courts has multiple potential roost features, the other three trees were considered to have no potential to support roosting bats. Table 4 below shows the results of the ground level tree assessment and tree locations are shown on Figure 2.

Table 4: Results of ground level tree assessment

Figure ID (shown on Figure 2)	Species	Age class	Description	Potential (See Table 2 for definition)	Lux-level under current proposals	Photo
T1	<i>Pinus sylvestris</i>	Mature	Scots pine alongside the main path to the north of the padel courts. No potential roost features recorded.	NONE	50.0-100.0 lux	



Figure ID (shown on Figure 2)	Species	Age class	Description	Potential (See Table 2 for definition)	Lux-level under current proposals	Photo
T2	Prunus sp.	Mature	Cherry tree alongside the main path to the north of the padel courts. No potential roost features recorded.	NONE	1.0 – 5.0 lux	

Figure ID (shown on Figure 2)	Species	Age class	Description	Potential (See Table 2 for definition)	Lux-level under current proposals	Photo
T3	Quercus robur	Mature	English oak to the approximately 11m to the south of Court 2 and 17m to the south of Court 1. A number of potential roost features visible from the ground.	PRF	<0.25 lux	  



Figure ID (shown on Figure 2)	Species	Age class	Description	Potential (See Table 2 for definition)	Lux-level under current proposals	Photo
T4	Acer campestre	Mature	Field maple to the southwest of the padel courts on the other side of the drainage ditch. No potential roost features recorded.	NONE	1.0 – 10.0 lux	

### 4.3 Limitations

- 4.3.1 The survey was carried out with no limitations and in line with BCT Good Practice Guidelines 2023 and the Chartered Institute of Ecology and Environmental Management (CIEEM) Bat Mitigation Guidelines (Reason and Wray, 2023).

## 5 Evaluation, potential impacts and recommendations

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- 5.1.1 Bats are protected from killing or injury and their roosts are protected from destruction, damage or disturbance whether bats are present or not. Disturbance could include increases in the amount of lighting on or around roost entrances (see [Appendix 2](#) for details).
- 5.1.2 The padel tennis courts are finished with a synthetic substrate and do not provide suitable habitat for foraging or commuting bats. The grassland surrounding the courts is heavily managed and provides low quality foraging habitat for bats. The woodland edge provides commuting habitat and the wider woodland provides high quality foraging habitat. However, the illumination spill will 5.0 lux on a single tree on the edge of the woodland, and this tree has negligible potential for roosting bat. The lux levels beyond this tree are less than 0.5 lux. Therefore, the proposed lighting scheme will not have a significant impact on the woodland area.
- 5.1.3 There is only one tree within the ZOI with potential roost features, and this tree will not be significantly impacted by the proposed lighting scheme. DFL have confirmed that the predicted illumination levels in the vertical grid will not exceed 0.21 lux. As set out in the ILP guidance note Bats and Artificial lighting at night, complete darkness can be considered to be at or below 0.4 lux on the vertical plane.
- 5.1.4 Potential impacts are shown on Figure 3.
- 5.1.5 There are no significant impacts predicted on any commuting or foraging habitat or on any roosts under the current lighting proposals. No further survey is required providing the proposals remain the same and planning permission is applied for before May 2025; after this date updated surveys may be necessary.
- 5.1.6 In line with the National Planning Policy Framework (NPPF) and local planning policy (see [Appendix 2](#)), measures to protect and enhance along with providing net gains in biodiversity on site should be incorporated into the scheme. Purpose-built roosting opportunities could be incorporated in the nearby woodland. Bat boxes can be purchased as off-the-shelf solutions; details of different options can be found here: <https://uk.pinterest.com/caecology/>

## 6 References

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- 6.1.1 Bat Conservation Trust and Institute of Lighting Professionals (2023) Guidance Note 08/23 Bats and Artificial Lighting at Night.
- 6.1.2 Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London.
- 6.1.3 Defra, J. a. (2012). UK Post-2010 Biodiversity Framework.
- 6.1.4 MAGIC. (accessed 13.03.24). MAGIC Map. Retrieved from (<http://magic.defra.gov.uk>)
- 6.1.5 Reason, P. F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

## 7 Appendix 1 - Legislation and policy guidance

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### 7.1 Legal protection

7.1.1 Bats and their roost receive full protection. Under the Conservation of Habitats and Species Regulations 2017 it is an offence (with few exceptions) to:

Deliberately capture, injure or kill a bat

Deliberately disturb - insofar as to impair its ability to survive, reproduce or rear young, hibernate, migrate, or significantly affect distribution and abundance

Damage or destroy a breeding site or resting place - even if no bats present

Possess or control, sell, exchange, offer for sale or exchange or to transport any live or dead specimen or anything derived from a bat

7.1.2 Further protection is provided in England under Section 9 of the Wildlife and Countryside Act (as amended), which adds the following offences:

To intentionally or recklessly disturb bats whilst occupying a structure or place used for shelter or protection (which means disturbance remains an absolute offence)

To intentionally or recklessly obstruct access to any structure or place used by bats for shelter or protection

To sell, advertise for sale, offer for sale, possess, or transport any live or dead or any part of a bat

7.1.3 Additional protection is provided for soprano pipistrelle, noctule and brown long-eared bats, all of which are included on a list of species of principal importance for the conservation of biodiversity in England, created by the Secretary of State as a requirement under section 41 (S41) of the Natural Environment and Rural Communities Act 2006 (NERC Act).

7.1.4 Under section 40 of the NERC Act all public bodies have a duty to have regard to conservation and biodiversity when carrying out their functions, the S41 list is a guide for decision makers when implementing their duty. This duty extends to all public bodies the duty of Section 74 of the Countryside and Rights of Way Act 2000, which placed a duty on government ministers.

## 7.2 National planning policy

7.2.1 The National Planning Policy Framework (NPPF) and the supporting ODPM circular 06/2005 provides the basis for making planning decisions with respect to conserving and enhancing the natural environment. It specifically sets out how the planning system should minimise impacts on biodiversity and provide net gains, including establishing coherent ecological networks. In addition to confirming that the presence of a protected species is a material consideration in the making of planning decisions, it sets out a list of principals, which local planning authorities should follow when determining planning applications. These include:

‘if significant harm resulting from a development cannot be avoided...adequately mitigated, or as a last resort compensated for, then planning permission should be refused.’

‘...opportunities to incorporate biodiversity in and around developments should be encouraged.’

The circular goes on to make it clear that Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System states it is essential that the presence or otherwise of protected species and the extent that they may be affected by the proposed development, is established before planning permission is granted.

## 7.3 Local planning policy

7.3.1 Policy CP21 of the East Hampshire District Local Plan states that, “New development will be required to maintain, enhance and protect district wide biodiversity” and to “contribute towards maintaining a district-wide network of local wildlife sites, wildlife corridors and stepping stones between designated sites and other areas of biodiversity value or natural green space. This will help to prevent the fragmentation of existing habitats and allow species to respond to the impacts of climate change by making provision for habitat adaptation and species migration.”

7.3.2 In relation to lighting schemes, policy CP27 states that, “Development which includes a lighting scheme will not be permitted unless the minimum amount of lighting necessary to achieve its purpose is proposed. Glare and light spillage from the site must be minimised. In determining an application, consideration will be given to the aesthetic effect of the light produced and to its effect on local residents, vehicle users, pedestrians and the visibility and appreciation of the night sky.”

## 7.4 Biodiversity Action Plans and Biodiversity Opportunity Areas

- 7.4.1 The United Kingdom Biodiversity Action Plan (UK BAP) is a national strategy drawn up by UK Government to conserve threatened native species and habitats. The UK post-2010 Biodiversity Framework 2012 (Defra, 2012) means that the listing of species and habitats on the S41 list and its associated requirements under the NERC Act supersedes the UK BAP. However, the UK BAP action plans remain relevant to conservation aims and objectives. The UK BAP is supported by a series of Local Biodiversity Action Plans (LBAPs) which translate the targets identified in the UK BAP into targets for species and habitats appropriate to the local area. Each LBAP identifies those habitats and species considered most important in that area, commonly an LBAP will identify a number of habitats and species for which “action plans” have been prepared. In the Southeast region, the Biodiversity Opportunity Areas will be the focus for delivery of UK BAP habitats targets.
- 7.4.2 In 2009 The South East Biodiversity Forum has identified Biodiversity Opportunity Areas (BOAs), which represent a targeted landscape-scale approach to conserving biodiversity and the basis for an ecological network. BOAs identify where the greatest opportunities for habitat creation and restoration lie, enabling the efficient focusing of resources to where they will have the greatest positive conservation impact.

## 8 Appendix 2 Figures

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Figure 1 – Location map

Figure 2 – Daytime Walkover Survey Results

Figure 3 – Potential Impacts

NB figures attached separately.