# PRELIMINARY ECOLOGICAL ASSESSMENT

# VINCENTIAN PRESBYTERY, MILL HILL, LONDON



Commissioned by: The Vincentian Fathers

Report Number: ASW/TVF/069/24/2021 March 2021



## **ASW Ecology**

Office/Mobile: 07710 150590
London Euston Woburn Place, 16 Upper Woburn Place, London WC1H 0BS
E-mail: andrew@aswecology.co.uk
Website: www.aswecology.co.uk

## **CONTENTS**

	Page
Executive Summary	3
1. Introduction	4
2. Methodology 2.1 Ecological assessment method 2.2 Constraints	5 5 5
3. Ecological Assessment results 3.1 Birds 3.2 Bats 3.3 Badger 3.4 Reptiles 3.5 Great crested newts 3.6 Hedgehogs 3.7 Hazel dormice 3.8 Invasive plant species 3.9 Habitats present 3.10 Desktop study	6 6 7 7 8 8 8 8 9
<ul><li>4. Conclusions</li><li>4.1 Significance of the ecological assessment results</li><li>4.2 Impact assessment</li><li>4.3 Summary of the legal protection of relevant wildlife in the UK</li></ul>	13 13 14 15
<ul> <li>5. Recommendations</li> <li>5.1 Requirement for a follow-up bat emergence survey</li> <li>5.2 Vegetation management at the application site</li> <li>5.3 Best practice guidelines – breeding birds and development</li> <li>5.4 Ecological enhancements for the development scheme</li> <li>5.5 Removal of invasive plant species from the application site</li> </ul>	19 19 19 20 20 23
6. References	24
Appendix 1: Photographs A-T	25
Appendix 2:  Map A – Phase 1 Habitat Map with target notes	44

#### **EXECUTIVE SUMMARY**

- 1. The main protected species potential present at the Vincentian Presbytery application site, as identified during this ecological investigation, was for: breeding birds and bats.
- 2. Bird nesting habitat is present within the shrubs at this site but it is unlikely that the buildings have any suitable external features that may provide nesting niches for birds.
- 3. No bats or bat evidence were found within the Presbytery building or on external features of this structure.
- 4. The Presbytery building does though have some bat roosting potential as suitable features are present such as crevices underneath roof tiles, lead flashing and within boxed eaves mainly.
- 5. There were no other protected species issues at the overall application site, mainly due to the absence of any natural habitats since the site is dominated by buildings and hardstanding mainly.
- 6. Various key recommendations are set out later in this report, including the requirement for a follow-up bat emergence survey and relevant best practice guidance to be followed at all times by contractors.
- 7. A number of ecological enhancement options have also been put forward for the client, so that there is a genuine post-development biodiversity gain for wildlife at the site.
- 8. By following these recommendations, the impact on wildlife will be minimised and all legal obligations will be adhered to by both the client and the contractors.

#### 1. INTRODUCTION

- A Preliminary Ecological Assessment at the Vincentian Presbytery, Sacred Heart Church, 2 Flower Lane, Mill Hill, London NW7 2JB, was undertaken during February 2021, for the client: The Vincentian Fathers.
- This ecological assessment had been requested in regards to the proposal to demolish the existing Presbytery and to replace with a new modern building.
- The main method used for this ecological assessment, as well as the full results and the final recommendations can be found within this report.
- Both this assessment and the report were undertaken and compiled by Mr Andrew S.
   Waller, Consultant Ecologist, ASW Ecology, with the kind help from an assistant.
- Mr Andrew S. Waller MSc BSc (Hons) MCIEEM has been a Consultant Ecologist since 1997, and has very extensive experience/knowledge of protected wildlife species/issues including bats, for which he is fully licensed to survey throughout England by Natural England for consultancy purposes (Bat Class 2 Licence Registration Number: 2015-15703-CLS-CLS). He also has Natural England survey licences for great crested newts and barn owls. He has been studying bats for 28 years and wildlife in general for 40 years. He is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and meets the requirements of being a Suitably Qualified Ecologist.
- © Report copyright ASW Ecology

#### 2. METHODOLOGY

#### 2.1 Ecological assessment method

- A daytime based Preliminary Ecological Assessment was undertaken at the application site, on 5/2/2021. The method used for assessing the current habitat types followed that outlined by the Nature Conservancy Council Phase 1 survey methodology (JNCC, 1993). Please see Section 3.9 for the habitats/features listed from the site and the relevant codes given to these.
- Weather conditions were very good eg dry, light wind only, cool and cloudy, plus visibility
  was excellent on the visit. During the visit, the application site was assessed for its
  suitability for various protected wildlife species and habitats.
- The focus on habitats and protected species potential included on bats, breeding birds, reptiles, amphibians and badgers, in particular. The key methods used for specific protected species in general are listed below:
- Bats: The Presbytery and any outbuildings were assessed for any bat roosting evidence
  and potential, especially for any crevices under external features such as flat roofs, roof
  tiles, ridge tiles, slates, fascias and lead flashing. Any trees were also assessed for
  features that offer bat roosting opportunities such as presence of woodpecker holes, frost
  cracks, hazard beams, bark plates, crevices and knot holes, amongst others.
- Badgers: The presence of badgers at the existing site was assessed by finding potential
  evidence such as setts, latrines, feeding remains, badger paths and for badger hair on any
  fences
- **Breeding birds:** the presence of occupied bird territories as well as active bird nests was investigated within the sites, especially in existing vegetation and buildings. Many bird species would have only recently finished breeding before the assessment visit.
- Reptiles/Great Crested Newts: The presence of both groups was assessed by habitat
  types present and if suitable for species such as great crested newts in their terrestrial
  phase and for reptiles such as slow-worm and common lizard.

#### 2.2 Constraints

- The main constraint to this daytime based assessment was the timing of this study, where
  it was only possible to survey during the Winter months, for example, due to the
  commissioning of this study.
- However, given the actual assessment results, with only limited ecological interest at the stated site, this is seen as a minor constraint only, since it is not possible to survey all year round.
- As always though, without taking into account any further active surveying or monitoring, this study can only provide a "snapshot" of the potential presence of protected wildlife species at the site during the time of the assessment visit.

#### 3. ECOLOGICAL ASSESSMENT RESULTS

#### 3.1 Birds

- No bird nests were found during this assessment visit at the site. Birds had been observed already nesting in the UK though since mid-January 2021, so bird nests would be present in the area. Although there was the potential for the occasional hidden bird nest to be present in dense shrubs.
- There is limited bird nesting potential only at this site however, with the shrubs being the main interest, unless birds are able to nest within any of the external features of the buildings present.
- Bird species present at or over the development footprint during the survey visit included black-headed gull, woodpigeon, feral pigeon, robin, pied wagtail, jackdaw, carrion crow, magpie and starling.
- It is highly unlikely therefore that any rare breeding species would be nesting at the application site itself.
- There will only be a negative impact on birds from this development, if vegetation such as the shrubs are to be removed as part of the proposal during the nesting bird season.

#### **3.2 Bats**

#### 3.2.1 Building assessment for bats - 5/2/2021

Building description:	<ul> <li>B1 – Presbytery: This is a two storey, brick built Presbytery, with a pitched roof. Roof tiles, ridge tiles and lead flashing all present, as are boxed eaves. Fascias all noted too. Cavity walls present</li> <li>B2 – Garage: Brick built garage with a corrugated roof and a metal door</li> <li>B3 – Garage: Brick built garage with a flat roof, wooden fascias and a metal door</li> </ul>
External bat survey	<ul> <li>B1 – Presbytery: There are crevices behind roof tiles, lead flashing and under soffit boxes. Boxed eaves at gable ends have crevices, which have genuine bat roosting potential</li> <li>B2 – Garage: No crevices present</li> <li>B3 – Garage: No crevices present</li> </ul>
Internal bat survey	B1 – Presbytery: Most of the roof void has been converted for living space. Very small section

	unconverted, this had roofing felt and timbers, but had no bat roost potential  B2 – Garage: Used for storage  B3 – Garage: Used for storage
Bat evidence present	<ul> <li>B1 – Presbytery: None</li> <li>B2 – Garage: None</li> <li>B3 – Garage: None</li> </ul>
Other wildlife evidence present	<ul> <li>B1 – Presbytery: None</li> <li>B2 – Garage: None</li> <li>B3 – Garage: None</li> </ul>
Overall bat roost grading for the buildings	<ul> <li>B1 – Presbytery: LOW/MODERATE</li> <li>B2 – Garage: NIL</li> <li>B3 – Garage: NIL</li> </ul>

#### 3.3 Badger

- There were no badger field signs at the application site at the time of the ecological assessment visit. No setts, latrines, badger hair, feeding remains or footprints were noted at this site. Nor would badgers be expected to be present at this very urban site.
- There are no badger records shown within our desktop study and there is no evidence that badgers have visited this property. Badgers will therefore not be an issue in regards to the development proposal for this site, based on the evidence of this assessment visit.

## 3.4 Reptiles

- There is no reptile potential within the application site, based on the results of this
  ecological investigation. The application site has no suitable habitat such as tall grass, tall
  herbs or woodland edge. The hardstanding and short grass areas have no potential for
  reptile species such as slow-worm, for example, since they provide no cover from
  predation.
- The desktop study undertaken by us, showed slow-worm and grass snake presence in the
  much wider area and these species would not need to enter the application site due to the
  lack of natural habitats and due to busy roads, which act as impassable barriers.
- Reptiles will not be impacted therefore by the development proposal, based on the survey results.

#### 3.5 Great crested newts

- There is no great crested newt potential within the application site, based on the results of this ecological investigation.
- The application site has no suitable habitat such as tall vegetation, tall herbs or woodland.
   The hardstanding areas and short grass lawn area have no cover for newts and they would be exposed to predation otherwise.
- There are also no wetland features at the site for breeding, with no ponds, pools, pits or ditches present.
- The desktop study showed no records for this newt species in the wider area and this species would not need to enter the application site due to the lack of natural habitats and due to busy roads, which act as impassable barriers.
- It is therefore considered that great crested newts will not be impacted by the proposed development.

#### 3.6 Hedgehogs

- Hedgehogs are known to be present in the wider area, as shown from our desktop study results, but there were no field signs such as droppings to suggest they have visited the application site. There is minimal foraging habitat present here though.
- Hedgehogs are a Priority Species in England within the UK Biodiversity Action Plan.
- Therefore, it is still good practice though that hedgehogs are not impacted during the
  proposed development related works. This should include no uncovered hole during the
  works and the restoration of any valuable habitat lost by new habitat creation.

#### 3.7 Hazel dormice

- There is no potential for hazel dormice to be present at the property, since there is minimal natural habitat located here.
- Our desktop study showed no dormouse records in the wider area and this species would not need to enter the application site due to very busy roads, which will act as impassable barriers.
- It is therefore considered though that hazel dormice will not be impacted in anyway by the development proposal at this site.

#### 3.8 Invasive plant species

The only non-native invasive plant species noted at the overall application site during this
assessment visit was: a very small cherry laurel stand at the front of the Presbytery
building.

#### 3.9 Habitats present

- The main habitat types present within the proposed overall application site, are the following, with the relevant JNCC habitat codes included:
- Short mown amenity grassland J1.2 includes grassed lawn areas and plant noted within were daisy, dandelion, cleavers, bittercress, fat hen, germander speedwell, buttercup species, willowherb species, sow thistle, bristly ox tongue, ragwort, chickweed, perennial rye grass, foxglove, rosemary, lavender, borage, lamb's ear, fennel and ivy at one boundary. Trees at the lawn boundaries include holly.
- Introduced shrubs J1.4 includes various non-native, ornamental shrubs including an ornamental rhododendron species, cherry laurel, fatsia species, hydrangea species, bay laurel and firethorn.
- Hedges J2.1.2 Includes the short section of hedge at a grassed lawn boundary.
- Buildings J3.6 these include the existing Presbytery building, the two garages plus all associated hardstanding.

#### 3.10 Desktop study

- A 2km radius online ecological data search was undertaken by us for the application site. This does not replace a full county biological records search, which was not selected by the client, but does contain some of the same information and helps support this report. The NBN Gateway (with strict permission from them), the web and the MAGIC website were all used. The ASW Ecology database was also used for a data trawl for wildlife records as this has collated records in the UK for 40 years.
- The key summary findings, in no particular order, are listed below in relation to species and habitat records most relevant to the proposed development:

Protected Species Licences	<ul> <li>565m NE: Bat - BLE/CPIP/SPIP - 16/9/14-31/8/16, near St Joseph's College Grounds.</li> <li>1.3km due east: Bat - CPIP - 25/9/15-30/9/20, behind properties on Milespit Hill backing onto Mill Hill and Arrandene Open Space.</li> </ul>
Statutory Sites	<ul> <li>within SSSI Impact Risk Zones.</li> <li>1.7km NNW: Scratchwood &amp; Moat Mount Open Spaces LNR, 55.16ha.</li> <li>1.8km NNE: Totteridge Fields LNR, 6.92ha.</li> </ul>
Non-Statutory Sites	<ul> <li>London Area Greenbelt, Barnet London Borough, 2238.55ha:         <ul> <li>170m due east</li> <li>295m due north</li> <li>420m due south</li> </ul> </li> <li>1km due north: Watling Chase Community Forest.</li> <li>Source Protection Zones:         <ul> <li>1.4km ENE: Zone II - Outer Protection</li> <li>1.7km due east: Zone I - Inner Protection</li> </ul> </li> </ul>
Priority Habitats	Grassland:  • Good Quality Semi-Improved Grassland:  o 640m ESE: by Featherstone Hill, 2.08ha. o 1km due east: on Mill Hill, 1.02ha.

- 1.8km NE: around Cavendish House,
   3.07ha.
- Also of possible interest: 2.1km ENE:
   Camden Sports Ground, 4.30ha, & 2nd parcel there also at 2.5km ENE, 2.03ha.

#### Woodland:

#### Ancient & Semi-Natural Woodland:

o 1.6km NNW: Nut Wood, 10.32ha.

#### Traditional Orchards:

- 1km NNE: by allotment gardens between Abbey View & Lawrence Gardens, 0.35ha.
- 1.3km SE: by allotment gardens behind Featherstone Road & Pursley Road, 0.17ha.
- o 1.6km NE: near Folly Brook, 0.20ha.
- o 1.7km NNW: near Nut Wood, 0.16ha.
- o 2km NE: near Cavendish House, 0.12ha.
- 2km NE: at Fairlawn Cottage, 0.14ha.

#### Woodpasture & Parkland:

- 1.4km due north: around Mote End Farm, Orchard End & Beech Wood, near Mill Hill County High School, 43ha.
- **Deciduous Woodland:** limited, due to urban nature of the area. Mostly notably to the east. Closest parcels in all directions are:
  - o 365m SE: beside Mill Hill Park, 0.78ha.
  - 450m SW: bordering Lyndhurst Park, 2 parcels 0.52ha & 0.29ha.
  - 495m SE: on opposite side of the Watford Way (Barnet by-pass), 0.55ha.
  - 625m SE: on near side of the Watford Way (Barnet by-pass), 0.28ha.
  - 540m NNE: mosaic of parcels by St Joseph's College Grounds, totalling 0.48ha.
  - 670m due east: closest of several parcels across Arrandene Open Space, Mill Hill, Featherstone Hill & School Park, totalling more than 10ha.
  - 1.4km NW: ribboning along Deans Brook,
     0.55ha
  - 1.5km WNW: ribboning along Deans Brook, 0.09ha.
  - 1.5km NW: ribboning along Deans Brook at Stoneyfields Park, more than 1.63ha.
  - 1.7km WSW: ribboning along Deans Brook, 0.44ha.

# Protected Species Records

#### Amphibians at 2km:

- 3 common toad (Bufo bufo), 3 locations: 2 ENE & 1 SW dating most recently from 1988.
- 2 smooth newt (Lissotriton vulgaris), 3 locations: ENE, SW & NW dates pre-1965.
- 4 common frog (Rana temporaria) dating most recently from 1988.

#### Mammals (terrestrial) at 2km:

- 1 water vole (Arvicola amphibius), SW on the 2km boundary by the Silk Stream, dating from 2008.
- 1 hedgehog (Erinaceus europaeus) dating from 1968.
- 1 otter (Lutra lutra), at the same SW location as the water vole listed above (Silk Stream) - dating from 2008 also.
- INNS: 2 American mink (Neovison vison). One at the same SW (Silk Stream) location listed above and the other also SW but closer in on the Burnet Oak Brook above Watling Park, dating from 2008 and 2009.

#### Bats:

• 1 common pipistrelle (Pipistrellus pipistrellus), SE - dating from 1986.

#### Reptiles at 2km:

- 1 slow-worm (Anguis fragilis), both SW at different points near the Burnt Oak Brook - dating from 1987.
- 1 grass snake (Natrix helvetica), ENE, dating from 1961.

#### 4. CONCLUSIONS

#### 4.1 Significance of the ecological assessment results

- In summary, the main protected species potential present at the Vincentian Presbytery application site, was for: breeding birds and bats.
- There is bird nesting habitat present within the shrubs at this site. It is unlikely though that the buildings have any suitable external features that may provide nesting niches for birds.
- There were no bats and no bat evidence found within the Presbytery building or on external features of this structure.
- The Presbytery building does though have some bat roosting potential as suitable features
  are present such as crevices underneath roof tiles, lead flashing and within boxed eaves
  mainly.
- There were no other protected species issues at the overall application site, mainly due to the absence of any natural habitats since the site is dominated by buildings and hardstanding mainly.
- The 2km radius desktop study showed the recorded presence of a bat species, common pipistrelle, which will roost under external features such as under roof tiles. Therefore, further investigation will be required so show the presence or absence of bat roosts at this site.
- There is no reptile or great crested newt potential at the application site, due to a lack of suitable habitat features such as bramble scrub, tall grassland and tall herbs. The site is well managed.
- No badger evidence was present anywhere at the site, with certainly no setts noted anywhere. There were also no known badger records within 2km of the site, from our desktop study results.
- There were no rare habitats present within the application site boundaries. The predominant habitat features are buildings, hedges and hardstanding.
- Overall, this urban site has lower ecological interest, although the breeding bird and bat roosting potential identified will need to be addressed by the client, so that the planners are satisfied, in regards to protected wildlife species.
- Please see the next chapter of this report for the recommendations and actions that now need to be followed by the client.

#### 4.2 Impact assessment

<u>In the absence of any mitigation measures</u>, the following potential impact status identified from the proposed development related works at the application site, are considered to be:

- **Reptiles:** Without any mitigation, there is no risk of reptiles being injured or killed, during the future site clearance works. **Potential impact level: Nil**
- **Great crested newts:** With no mitigation, there would be no risk of great crested newts being impacted by the future site works. **Potential impact level: Nil**
- Bats: Without any mitigation, bats could be impacted by the proposed works eg bats could be disturbed, injured or killed, and an occasional bat roost damaged or destroyed.
   Potential: Low/Moderate
- **Badgers:** Without any mitigation, no badgers would be disturbed by the proposed works. There is no risk of badger tunnels being collapsed or setts being damaged and destroyed. **Potential impact level: Nil**
- Hazel dormice: Without any mitigation, there is no risk of dormice being injured or killed by the works or nests being damaged or destroyed by the proposed works. Potential impact level: Nil
- **Nesting birds:** Without any mitigation, there is a risk of potential nesting bird species being impacted during the works phase, with hidden nests being damaged or destroyed during any possible vegetation removal. **Potential impact level: Low**

# 4.3 Summary of the legal protection of relevant wildlife in the UK (Simplified summary only of the legislation – please see other texts for full details)

#### 4.3.1 THE LEGAL PROTECTION OF REPTILES IN ENGLAND AND WALES

In the UK, reptiles are legally protected from intentional killing and injuring, as well as against sale too under the Wildlife and Countryside Act 1981 (as amended). The offences stated may be absolute, intentional, deliberate or reckless (English Nature, 2004).

This means that reasonable steps must always be taken to avoid killing or injuring all reptiles if they are known to be present within the development footprint. A criminal conviction for injuring or killing reptiles could result in large fines being imposed, imprisonment and/or seizure of the equipment involved.

#### 4.3.2 THE LEGAL PROTECTION OF BATS IN ENGLAND AND WALES

#### Introduction

All species of bats in England and Wales are protected by law. Their legal protection derives from two sources:

- the strict species protection provisions of the EU Habitats Directive as implemented in England and Wales by Part 3 of the Conservation of Habitats and Species Regulations 2010 (the "2010 Regulations"); and
- Part 1 of the Wildlife and Countryside Act 1981 (as amended).

#### Conservation of Habitats and Species Regulations 2010 ("2010 Regulations")

The 2010 Regulations came into force on 1 April 2010. They replace the previously applicable regulations (Conservation (Natural Habitats, &c) Regulations 1994) in relation to England and Wales. The 2010 Regulations are the principal means by which the EU Habitats Directive is transposed in England and Wales.

The Regulations contain a number of Parts but Part 3 sets out the protection to be afforded to "European Protected Species" ("EPS"), which includes all species of British bats. The list also includes other species which are rare on a European scale, such as great crested newts, otters and dormice.

Under Part 3 of the 2010 Regulations both bats themselves and their "breeding sites and resting places" (most commonly their roosts) are protected.

Part 3 provides that it is a criminal offence to do the following (note that this is not an exhaustive list of all offences but rather a list of offences which will be of most relevance to developers):

- a. to damage or destroy a breeding site or resting place of a bat (Reg 41(1)(d));
- b. to deliberately capture, injure or kill any bat (Reg 41(1)(a));

- c. to deliberately disturb bats [note, wherever they are occurring] (Reg 41(1)(b)), in particular:
  - i. any disturbance of bats which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young (Reg 41(2)(a)(i)); or
  - ii. any disturbance of bats which is likely to impair their ability to hibernate or migrate (Reg 41(2)(a)(ii)); or
  - iii. any disturbance of bats which is likely to affect significantly the local distribution or abundance of the species to which they belong (Reg 41(2)(b));
- d. to have in one's possession or to control or to transport or to sell or exchange or offer to sell or exchange any live or dead bat or part of a bat which has been taken from the wild; or any part of, or anything derived from, a bat or any part of a bat (Reg 41(3) and (4)); and
- e. to attempt any of the above (Reg 116(1)).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of the company may also be prosecuted if the offence has been committed with their consent or connivance, or is attributable to their neglect (Reg 124).

#### Wildlife and Countryside Act 1981 ("WCA 1981")

The WCA 1981 protects a wide range of animals, plants and habitats in the UK. All British bat species are afforded protection under Part 1 of the WCA 1981, in addition to the protection they have under the 2010 Regulations.

As regards England and Wales the following offences apply to protect bats under the W&CA 1981:

- a. to intentionally or recklessly disturb any bat while it is occupying a structure of place which it uses for shelter or protection (s9(4)(b) WCA 1981);
- b. to intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection (s9(4)(c) WCA 1981);
- c. attempting either of the above (s18(1) WCA 1981).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of that company may also be prosecuted if the offence has been committed with their consent or connivance or is attributable to their neglect (s69(1) WCA 1981).

#### 4.3.3 THE LEGAL PROTECTION OF BIRDS IN ENGLAND AND WALES

All birds have the following legal protection (although there are exceptions for game birds, some waterfowl and designated pest species). This is listed below.

All birds, their eggs and nests are protected by law under the Wildlife and Countryside Act 1981 (as amended). It is an offence to kill, injure or take any wild bird, or to take or destroy their eggs. It is also illegal to take, damage or destroy the nest of any wild bird while it is in use or being built (RSPB, 2001). No provisions can be made for the destruction of occupied bird nests, eggs, or young for development purposes, and no licences are available for this purpose.

Certain rare and/or vulnerable bird species such black redstart, barn owl, red kite, peregrine and hobby are specially protected under Schedule 1, and have the following additional legal protection:

• It is an offence to intentionally (or recklessly, in England and Wales only) disturb any wild bird listed on Schedule 1 whilst it is nest building or is at (or near) a nest with eggs or young; or disturb the dependent young of such a bird.

# 4.3.4 THE LEGAL PROTECTION OF GREAT CRESTED NEWTS IN ENGLAND AND WALES

Great crested newts have strong legal protection under both British and European legislation. This is briefly summarised below:

Great crested newts are legally protected under provisions within the Wildlife and Countryside Act 1981 (as amended), the Conservation Regulations 2010 and the Countryside and Rights of Way Act 2000. Taken together, it is illegal to:

- Intentionally or deliberately capture or kill, or intentionally injure great crested newts.
- Deliberately disturb great crested newts or intentionally or recklessly disturb them in a place used for shelter or protection.
- Damage or destroy a breeding site or resting place.
- Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.
- Possess a great crested newt, or any part of it, unless acquired lawfully.
- Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate.

#### 4.3.5 THE LEGAL PROTECTION OF BADGERS IN ENGLAND AND WALES

In the UK, the Protection of Badgers Act 1992, is the most relevant to this mammal species. Under this legislation, it is illegal to injure, kill or take any badger or attempt to do so without a special licence. It is also illegal to dig for a badger, and to damage, destroy or obstruct access

to any part of a badger sett, or to allow a dog to enter the sett, or to disturb a badger whilst it is occupying a sett.

Certain offences can be caused by reckless, intentional or wilful behaviour, and the Act should always be read in detail for the exact wording.

Penalties for such offences can be severe, and can include fines of up to £5,000 per offence eg per badger sett or per badger, and/or up to six months imprisonment.

#### 5. RECOMMENDATIONS

#### 5.1 Requirement for a follow-up bat emergence survey

- Due to the presence of bat roosting potential at the buildings at this site, including the Presbytery, it is recommended that a standard follow-up bat emergence survey is undertaken at the application site, in suitable weather conditions.
- This bat emergence survey should be undertaken before any construction works commence and that the requirement for this survey is secured via a planning condition, that requires the bat emergence survey to be submitted for approval prior to the implementation of the development.
- Such a follow-up survey would adhere to current best practice for surveying bats by the Bat Conservation Trust (BCT, 2016) where a site such as this warrants a specialist bat survey of between one to two night based survey visits by experienced bat surveyors with bat detectors. Or one visit can be a pre-dawn visit, so to investigate if any bats are returning to the buildings before sunrise.
- Survey visits should always be well spaced out in terms of timing so that a portion of the bat flight season is sampled. Visits should be spaced at least two weeks apart but around a month apart would be better. This bat survey should be undertaken between late April to late September, when bats are most active.
- Such a survey would focus on if there is an active bat roost at the buildings present. The survey would also focus on any key bat commuting routes at the site as well as any key foraging areas.
- This bat survey should use a sufficient number of experienced bat surveyors with bat detectors and begin before sunset and last for approximately 2 hours. Or any dawn survey visit should start 2 hours before sunrise.
- If the bat emergence survey finds no roosting bats at the building then no further action will be required. However, if roosting bats are found, then recommendations will be made on a Bat EPS Mitigation Licence that will need to be applied for from Natural England, before works can begin.

#### 5.2 Vegetation management at the application site

- It is important that all grass lawn areas at the application site are managed as short mown/strimmed at all times and on a regular basis by the client.
- Even though this vegetation is extremely limited, it must be managed regularly so this does not ever become overgrown.
- This would remove any remote possibility of any wildlife using any potential new habitat for genuine shelter or foraging.
- This is a reasonable step to avoid any possible impact on any notable species in the much wider area.

• This pro-active approach should continue as per usual and certainly until the development has been completed.

#### 5.3 Best practice guidelines – breeding birds and development

- As per any development related site, the general advice is that no vegetation eg trees, bushes, shrubs, hedges, bramble scrub or dense ivy cover should be removed during the bird nesting season as all bird nests are fully protected by law, and this includes whilst a nest is being built by the adult birds.
- This includes both buildings and bird boxes, where nesting birds have been shown to be present.
- If any nests are present within the boundaries of the proposed development footprint during the clearance phase, then these must be left alone until the young birds have fully fledged from the nest and no further breeding attempts are to take place.
- The main bird nesting season in the UK, currently runs mainly from mid-January to September, but sometimes birds can start breeding before or after this period eg birds have been found by us nesting in the first half of January at other sites due to milder winters.
- Therefore, September to early January can be the best months for such vegetation clearance works, if this is to occur.
- Although it is possible for a consultant ecologist to physically search any trees, hedges, bushes and shrubs at a site to ensure no hidden nests are present beforehand.

#### 5.4 Ecological enhancements for the development scheme

The following is for the client to consider in regards to enhancing the biodiversity of the site, post-development. These options, if chosen, will provide genuine biodiversity gain for the site:

# 5.4.1 Bat boxes – This option may be revised after the recommended bat emergence survey has been completed

- The installation of an integrated bat box such as the Habibat Bat Box 001 model is recommended, to be fitted into the brickwork of the new building. This integrated bat box should be installed within the new building as a primary biodiversity gain measure.
- The boxes would need to be located South facing or close enough and between five to seven metres high, located under the eaves. It would be possible to have one to two integrated bat boxes at the gable end/southern elevation of the new building. There must be no way that any cats can reach these features and no new artificial lighting must spill onto these bat boxes at any time.
- The following weblink can be used for this model: <a href="http://www.habibat.co.uk">http://www.habibat.co.uk</a>

#### 5.4.2 Wildlife friendly planting

- It would also be advantageous if any wildlife friendly planting can be introduced to the new landscaping scheme, by the use of night scented plants, which will attract insects which bats, for example, will prey on.
- Native plants should always be chosen ideally since these species will have the most benefits to wildlife. But the occasional non-invasive hybrid or exotic would be fine.
- Suitable border plant species can include corn flower, field poppies, mallow, evening primrose, ox-eye daisy, primrose and yarrow. Herbs can also be very good for insects and include borage, coriander, fennel, lavender, rosemary and thyme.
- Trees, shrubs and climbers are listed below are suitable for wildlife and will benefit birds, bats and invertebrates. Trees include dog rose, hawthorn, blackthorn, hazel, rowan, field maple, holly, elder, dogwood and wild cherry. Shrubs and climbers include gorse, guilder rose, honeysuckle, ivy and jasmine. Further information can be provided on the above if needed.
- The firethorn, planted in the small yard behind the Presbytery, should be retained if
  possible, or replaced with like for like, as this shrub is beneficial to bird, for its berries. This
  species is not thought to be invasive, although similar species can be invasive eg in North
  America.
- A sedum green roof will also be proposed for the new building and this will also provide a
  genuine biodiversity gain for the project. It will be vital that the green roof has the correct
  depth of substrate, a suitable irrigation system if needed and also a post maintenance
  agreement which is long-term.

#### 5.4.3 Bats and lighting

- It will also be important that dark corridors are maintained for bats. This will mean that bats, if present, can use local greenspaces, especially whilst commuting between sites.
- Artificial lighting can cause a vacuum effect at greenspaces and at other sites, where such artificial light will pull flying insects at night away from areas where bats feed. So adjacent darker areas will have less insects for bats to survive on and that negatively affects the life cycles of the insect species present.
- If lighting is added in the future, this should be bat friendly and adhere to best practice on this aspect. Low pressure sodium lights are better to use than high pressure ones in regards to the impact on bats, for example.
- In regards to any future lighting, it would be beneficial for both insect populations and for bats, any new lighting is switched off at the new site well before midnight or be based on sensors.
- Light spillage should also be curtailed, as hoods can be used and light should focus on where it is needed only. Screening by vegetation such as new trees, bushes and shrubs can also be used to mitigate the effects of any new lighting scheme.

• The following latest best practice guidance note should be read and followed, in regards to how lighting affects bats and how to mitigate this at a site:

https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

#### 5.4.4 Bird nest boxes

- Bird boxes can be installed at the site and suitable integrated bird box models can be found below.
- In general, bird boxes should be spaced widely apart, away from any bird feeders, quite high up a tree (ideally at least five metres up from ground level but higher in urban areas ideally), facing North to East only and away from cats.
- Integrated boxes oxes that can be installed include both swift and house sparrow nest boxes. These can be installed as one per new building. Please see the links below for these nest boxes:

House Sparrow Terrace: https://www.nhbs.com/1sp-schwegler-sparrow-terrace

Swift triple cavity nest box: <a href="https://www.nhbs.com/no-17a-schwegler-swift-nest-box-triple-cavity">https://www.nhbs.com/no-17a-schwegler-swift-nest-box-triple-cavity</a>

#### 5.4.5 Insect nest boxes

- Invertebrate nesting boxes can also be provided in the new landscape scheme. Such bug boxes should be installed in a warm and dry place at the site, near to vegetation. Such boxes will benefit lacewings, solitary wasps, ladybirds and other species. These can be located at roof height or within the courtyard.
- Suitable models from the NHBS include the following, with one of each box being appropriate:
  - Schwegler Clay and Reed Insect Nest –

https://www.nhbs.com/equipment/nest-boxes-habitats-and-feeders?hPP=30&idx=titles&p=0&hFR%5Bsubjects\_equipment.lvl1%5D%5B0%5D=Nest%20Boxes%2C%20Habitats%20and%20Feeders%20%3E%20Insect%20Boxes&is\_v=1 &qtview=181090

Solitary beehive –

https://www.nhbs.com/equipment/nest-boxes-habitats-and-feeders?hPP=30&idx=titles&p=0&hFR%5Bsubjects\_equipment.lvl1%5D%5B0%5D=Nest%20Boxes%2C%20Habitats%20and%20Feeders%20%3E%20Insect%20Boxes&is\_v=1&qtview=186142

#### 5.4.6 Hedgehog doorways in fence panels

- It is also proposed that pre-fabricated holes in boundary fence panels can be made within
  any close boarded fences at the new development scheme, so that any hedgehogs are
  able to commute within the local landscape, without any blockages in their pathways, if
  present in the future.
- The new doorway should measure 13cms x 13cms in terms of width and length so hedgehogs can fit through.
- The following web link from the Wildlife Trusts provides very useful information on creating new hedgehog doorways:

https://www.wildlifetrusts.org/actions/how-create-hedgehog-hole

#### 5.5 Removal of invasive plant species from the application site

• Cherry laurel – This very small stand at the front of the Presbytery can be cut back to above ground level then the base and root system winched out or similar. Chemical application can be used too but physical removal is more suitable in this case. Specialist contractor advice can be sought on this if needed. No further cherry laurel should be planted at anytime at this site.

#### 6. REFERENCES

- (1) Altringham, J.D. (2003) British Bats. HarperCollins Publishers, London.
- (2) ArborEcology (2006) Assessment of Trees with Consideration of their Value for use by Bats.
- (3) Arnold, N.E. (2002) A Field Guide to the Reptiles and Amphibians of Britain and Europe. Collins, London.
- (4) Bat Conservation Trust (2008) Bats and lighting in the UK Bats and the Built Environment Series. Version 2. BCT, London.
- (5) Collins, J. (Ed) (2016) Bat Surveys for Professional Ecologists Good Practice Guidelines (3rd Ed). Bat Conservation Trust, London.
- (6) English Nature (2004) Reptiles: guidelines for developers. English Nature, Peterborough.
- (7) Entwistle, A.C. et al (2001) Habitat Management for Bats. JNCC, UK.
- (8) Gent, A.H. and Gibson, S.D. (eds) (1998) Herpetofauna Workers' Manual. Joint Nature Conservation Committee, Peterborough, UK.
- (9) HGBI (1998) Evaluating local mitigation/translocation programmes: maintaining best practice and lawful standards. HGBI advisory notes for amphibian and reptile groups (ARGs). HGBI, c/o Froglife, UK. Unpublished.
- (10) Mitchell-Jones, A.J. (2004) Bat Mitigation Guidelines. English Nature.
- (11) Mitchell-Jones, A.J. and McLeish, A.P. (2004) The Bat Workers' Manual. 3<sup>rd</sup> Ed. JNCC.
- (12) RSPB (2001) Wild Birds and the Law. RSPB, Sandy. UK.
- (13) Shawyer, C. (1998) The Barn Owl. Arlequin Press, Essex.
- (14) Treweek, J. (1999) Ecological Impact Assessment. Blackwell Science Ltd, UK

# **APPENDIX 1:**

## **PHOTOGRAPHS A-T**



Photograph A
Hardstanding with no ecological value



Photograph B
Building B2 – This garage block has no genuine value to bats



**Photograph C**Building B3 – This second garage block also had no interest for bats



**Photograph D**The hedge has bird nesting value but the grassed area has minimal ecological value



**Photograph E**Shrubs were present in the small rear yard, which have bird nesting value



**Photograph F**Firethorn, in the small rear yard, which has value for foraging birds, due to the berries present



**Photograph G**Building B1 – The Presbytery had only a very small area of remaining unconverted loft, with no bat evidence present



 $\begin{array}{l} \textbf{Photograph H} \\ \textbf{Building B1-There was no access for bats into the small loft area and bats would not be} \\ \textbf{expected inside the building} \end{array}$ 



 $\begin{array}{l} \textbf{Photograph I} \\ \textbf{Building B1} - \textbf{No interest for bats was present within the living areas of this building} \end{array}$ 



**Photograph J**Building B1 – There are external crevices present at the Presbytery, such as at the boxed eaves, which have bat roosting potential



**Photograph K**Building B1 – Further crevice behind the upper part of the soffit box at the gable end (lower part of photograph), which may have bat roosting value



Photograph L
Building B1 – The opposite gable end also has a distinct crevice in the soffit box, which may allow bat access



Photograph M
Building B1 – Crevices present under roof tiles



Photograph N
Building B1 – Crevices present under further roof tiles



Photograph O
Building B1 – Crevices present at corner of roof where there is a lifted roof tile



**Photograph P**Building B1 – Crevice under roof of small store structure at one end of the Presbytery



Photograph R
Building B1 – Crevices noted under lifted and slipped roof tiles



**Photograph S**Building B1 – Crevice present under lifted lead flashing on the roof, which provides bat roosting potential



Photograph T
A very small cherry laurel stand at the front of the Presbytery

## **APPENDIX 2:**

## MAP A - PHASE 1 HABITAT MAP WITH TARGET NOTES

