



The Elms, Darland Lane Rossett

Ecology Scoping Report

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1 Introduction

1.1 Background

Kingdom Ecology have carried out an Ecology Scoping Survey including a Bat Scoping Assessment of The Elms which is a detached house located on Darland Lane, Darland, Rossett, Wrexham, LL12 0BA (National Grid Reference SJ 3792 5792). Proposals are to demolish an existing detached garage, construct a new garage and to extend the main dwelling which will require works to the existing roof. Works will also affect some garden shrubbery, garden hedge and young trees.

Field surveys comprising of an ecology walkover of the site with a daytime bat inspection of the buildings were undertaken on the 19th March 2021. Surveys were carried out by Richard Roe (BSc, MSc, MIEEM, CEnv). Richard has extensive experience of undertaking bat surveys as a professional ecological consultant with over twenty years' experience. Richard is also a licensed bat worker (Level 4 Class License).

1.2 Purpose of Report

This report provides and outlines the findings of field surveys undertaken at the site.

The field surveys examined habitats present with a focus on the house and garage's suitability to support roosting bats. Survey also examined the suitability of the site to support breeding birds, great crested newt or any other protected species. Survey comprised of a daytime walkover of the gardens with an assessment examining the interior and exterior of the buildings.

Following a description of the survey findings and an evaluation of habitats at the site, the report goes on to make recommendations for further works, mitigation and ecological enhancement measures where relevant.

1.3 Protected Species Legislation

1.3.1 Bats

All British bat species are fully protected under the Wildlife and Countryside Act 1981 (as amended) and through their inclusion in Schedule II of the Habitats Regulations 2010 which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("EC Habitats Directive") which defines European protected species of animals.

British bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

Taken together, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

A bat roost is interpreted as “any structure or place, which any wild bat uses for shelter or protection.” (Bat Conservation Trust 2016¹). A bat roost is protected whether or not bats are present at the time.

All species of British bat are considered a European Protected Species (EPS). The Conservation of Habitat and Species Regulations (2010) provide derogation against certain offences which could potentially affect an EPS through the EPS Licensing system.

1.3.2 Birds

All wild birds in England and Wales are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs.

1.3.3 Great Crested Newt

The great crested newt receives full protection under the Wildlife and Countryside Act 1981 (as amended) and through their inclusion in Schedule II of the Habitats Regulations 2010. This legislation makes it an offence to:

- intentionally kill, injure or take a great crested newt;
- disturb a great crested newt;
- intentionally or recklessly damage, destroy, obstruct access to a breeding site or resting place of a great crested newt;
- sell, offer for sale, possess or transport a great crested newt for the purpose of sale.

The great crested newt is considered a European Protected Species (EPS). The Conservation of Habitat and Species Regulations (2010) provide derogation against certain offences which could potentially affect an EPS through the EPS Licensing system.

¹ Bat Conservation Trust (2016) ‘Bat Surveys: Good Practice Guidelines 3rd Edition’

2 Field Survey Methods

2.1 Survey Aims and Objectives

Survey comprised of an ecology walkover of the study site with an inspection of the affected buildings. The survey aim was to assess the site as to its suitability to support roosting bats and to identify suitable habitats for any other protected species including breeding birds and great crested newt.

Survey also aimed to identify opportunities for ecological enhancement and to inform potential mitigation measures if required to ameliorate any negative impacts attributable to the proposed works.

2.2 Survey Methods

2.2.1 Daytime Bat Inspection

Each building was assessed as to its suitability to support bats following standard methodologies prescribed in English Nature's *Bat Mitigation Guidelines* (Mitchell-Jones 2004)² and the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines* 3rd Edition (BCT 2016)³.

Survey, comprising of an inspection of the interior and exterior of the buildings, was undertaken during daylight conditions using binoculars and a high-powered torch. The survey was undertaken during daylight hours on the 19th March 2021.

In addition to searching for evidence of an actual bat roost the survey also aimed to assess the suitability of the building to support bats and consequently the likelihood of a bat roost being present but with no obvious field signs.

Survey assessed the building's roost suitability by examining structural features and the surrounding habitat. Structural features that will influence the suitability of a building to support roosting bats include the presence of a roof void; access points into a building including gaps beneath barge boards, gaps under lead flashing, gaps within masonry, loose tiles etc, complexity of any roof void, daytime light levels in roof void etc.

² Mitchell-Jones, A.J. 2004. *Bat Mitigation Guidelines*. English Nature, Peterborough.

³ Bat Conservation Trust (2016) '*Bat Surveys: Good Practice Guidelines* 3rd Edition'

Important habitat features surrounding the structures which could influence roost potential include: whether the structure is in a semi-rural or parkland location, proximity to a significant linear feature (e.g. watercourse, mature hedgerow, wooded lane) or an area of woodland etc.

Taking account of these architectural and habitat features, the building was assigned a level of roost suitability based upon professional judgement.

3 Survey Results

3.1 Site Description and Habitats

The study site comprises of a detached two storey house and detached garage located on Darland Lane, Darland, Rossett. The house is currently occupied.

The original house is considered to be of 19th century origin with a 20th century extension at its north face. The garage building is also relatively modern (late 20th origin).

The house has established gardens to the side and rear comprising of mown lawn with ornamental shrubbery and young trees including maple, elder, hawthorn and holly. None of the trees are considered to offer suitable habitat for roosting bats.

There is a garden hedgerow along the site's boundary with Darland Lane. The hedgerow comprises of laurel and cypress.

The house is located in a semi-rural setting on the eastern edge of the village of Rossett. Surrounding habitats comprise of further residential properties within large established gardens plus areas of agricultural grassland with associated hedgerows and trees. There is a moderately sized pond located approximately 30m to the southwest of the site on the opposite side of Darland Lane.

Surrounding habitats are considered to offer 'moderate' quality bat foraging habitat.

The study site's location and site layout are shown on Figures 1 and 2 in the Appendix. Photographs of the site are also provided in the Appendix.

3.2 Bat Survey

3.2.1 Bat Scoping Assessment

The site comprises of a detached, two storey house of 19th century origin with a 20th century extension (Building 1) plus a detached modern garage building (Building 2).

Works proposals are to demolish the garage, construct a new garage and to extend the main dwelling which will require works to the roof.

The site layout is shown on Figure 2 (in The Appendix), with potential bat roosting features/ bat target notes.

Building 1

The southern half of the main house is constructed of brick and has a gable ended roof clad in slate.

The northern half of the house comprises of the newer extension. This section of the building is constructed of rendered brick and has gable ended roofs with dormer windows at its west and north faces.

The southern half of the house has a small loft space. The loft is approximately 1.5m in height and is approximately 9m x 7m in area and is used for storage.

The loft space is lined with fibrous insulation felt and the internal face of the roof has been torched with lime mortar. The mortar has begun to decay and so the loft space is relatively dusty.

The loft space was found to be heavily cobwebbed with extensive cobwebbing at the gable ends, along the ridge and spanning the void space.

No evidence of bat activity was found within the loft space. No obvious potential bat access points to the loft space interior were found.

The newer extension does not have a separate loft space with the upper floor rooms extending into the roof void.

Externally, the building is generally in good condition with roof slates and ridge tiles largely intact and well sealed. However, the building was found to have several potential bat roosting features located at the building's eaves and around the dormers and verges of the newer extension. These features are numbered and shown on Figure 2.

There are occasional crevices located at the east and west facing eaves of the original section of house (Bat Target Notes 1 on Figure 2). These crevices comprise of narrow gaps (0.5cm-3cm in width) between a horizontal wooden beam and the external brickwork located immediately below the guttering of the house. These features offer suitable bat roosting habitat with bats potentially able to squeeze under the wooden beam and some of the larger gaps offer suitable nesting habitat for birds.

There are further potential bat roosting crevices at the south facing gable of the house (Bat Target Note 3) where there are gaps beneath the eaves where the gable brick work does not extend fully behind the roof soffit. A house sparrow was observed to fly into one of these crevices and so it is very likely that they are at least used by nesting birds.

There are additional potential roosting crevices associated with the roof of the newer extension, these are located under areas of loose lead flashing at the corners of the building's north and west facing dormer windows (Bat Target Notes 2 on Figure 2).

No evidence of bat roosting activity was found associated with the building exterior.

Taking account of the potential bat roosting feature identified and the building's location, the building was assessed as offering '**moderate**' bat roosting suitability.

Building 2

The garage building is a single storey structure with a double set of garage doors and small storage rooms to the rear. The building is constructed of rendered cinder block and has a pitched roof clad in slate. The garage has gables at its east, west and north faces.

The garage is used for storage and suffers regular disturbance. The garage does not have a separate void space with the roof supported on a lattice of narrow, soft wood trusses, arranged in a 'W-shape' providing a cluttered void space. The internal face of the roof is lined with traditional, bitumastic hessian felt.

No bat droppings or other bat field signs were found within the garage interior.

Externally, the garage is generally in good condition but there are some limited areas of potential bat roosting habitat. These are located at the north facing gable where there is a gap in the verge mortar (approximately 10cm x 2.5cm in size) providing potential bat access between the slates and the roofing felt (Bat Target Note 4). The garage has wooden fascia boarding at each gable. This was observed to have a narrow crevice between the walls and the boarding. This crevice is cobwebbed over at the building's east and north faces but at the west face there is an approximately 1.5cm wide crevice which was not cobwebbed. A single old bat dropping was recovered from behind this section of fascia boarding. No other droppings could be found.

It is considered likely that the fascia boarding has been used as a pipistrelle day roost by low numbers of bats in the recent past.

No other bat field signs were found associated with the building.

Taking account of the potential bat roosting features identified, the presence of a single bat dropping and the building's location, the building was assessed as offering '**moderate**' bat roosting suitability.

3.2.2 Breeding Birds

It is considered likely that the main house is used by nesting house sparrows during the breeding bird season with birds potentially nesting within crevices at east and west facing eaves of the house and at the south facing gable (Target Notes 1 and 3 on Figure 2).

Further potential bat roosting habitat is offered within the areas of privet hedgerow, shrubbery and young trees located in the gardens of the site.

3.2.3 Great Crested Newt

There is a moderately sized pond located approximately 30m to the southwest of the site on the opposite side of Darland Lane. The pond measures approximately 700m² in area and is unlikely to dry out.

The pond supports a good coverage of aquatic vegetation comprising of extensive areas of *Elodea* waterweed, with fringes of fools' watercress, brooklime and bulrush. The pond is partly shaded by willow with some open unshaded banks. There is a reasonable likelihood of the pond supporting fish.

The pond appears to offer high quality great crested newt breeding habitat however this suitability would be significantly reduced if the pond supports fish.

Terrestrial habitats within the proposed works area are largely of low suitability for great crested newt comprising of hardstanding, buildings plus some areas of garden, closely mown lawn and flower bed. Newts can take refuge under loose paving stones however the paving blocks at the study site are largely tightly sealed. There are further areas of potential newt refuge habitat offered within the hedge bottoms and roots of the garden shrubs/young trees in the gardens. There are no areas of obvious high value newt terrestrial habitat located within the proposed development area.

There are more suitable areas of great crested newt terrestrial habitat in the wider landscape; located immediately around the pond and within adjacent farmland including areas of rough grassland and hedgerow.

Nevertheless, if the pond supports great crested newt, given the pond's proximity there is still considered to be a low risk of encountering/disturbing great crested newt during the development.

4 Summary and Recommendations

4.1 Habitats

The study site is considered to support habitats which are of limited ecological value (the proposed development site comprises of hardstanding, garden amenity lawn, ornamental trees/shrubbery, flower beds and buildings).

There is a garden hedgerow located along the southern boundary of the site. This comprises of laurel and privet and is also considered to be of limited biodiversity value. A section of this garden hedge may need to be removed to facilitate the development.

Although the site is generally of low conservation value it is recommended that opportunities to enhance the biodiversity value of the proposed development are taken. This could include the replacement of removed garden trees and hedging with native species or species which offer valuable foraging resources to wildlife (through either fruits or nectar sources).

Recommended small trees of value to wildlife that could be used include the following:-

- Crab apple
- Buckthorn
- Blackthorn
- Hawthorn
- Cherries
- Elder
- Plums
- Hazel
- Holly
- Rowan
- Willows

4.2 Protected Species

4.2.1 Bats

The site is located on the edge of the village of Rossett with some areas of good bat foraging habitat located nearby including a nearby pond plus associated areas of hedgerow and small woodlands. Consequently, habitats around the site are considered likely to be of at least 'moderate' value to foraging bats.

The main house supports a single loft space which was found to be heavily cobwebbed and supporting no obvious access points to its interior for roosting bats.

Externally the house offers potential bat roosting habitat where there are crevices beneath the building's eaves, at its south facing gable and beneath lifting areas of lead flashing associated with the dormer windows of a newer extension.

No evidence confirming the presence of bats was found. Nevertheless, the house is considered to offer '**moderate**' bat roosting potential.

There is also a double garage building at the site. This is a relatively modern structure and is generally well sealed. However, there are some potential bat roosting features offered at the building's north facing gable where decayed verge mortar offers potential access between the roof slates and underfelt; and at the building's west facing gable where there is a narrow crevice between a length of fascia boarding. A single bat dropping (likely from a pipistrelle bat species) was found behind the fascia boarding. This dropping confirms that the gap has been used by roosting bats in the past.

No other bat field signs were found associated with the garages.

Taking account of the potential bat roosting features identified, the presence of a single bat dropping and the building's location, the building was also assessed as offering '**moderate**' bat roosting suitability.

The proposed works would result in the loss of the garages and would also affect the roof structure of the main house.

In order to further assess the potential bat roosting features associated with both buildings, it is recommended that at least two dusk/dawn bat activity surveys are carried out during the active bat survey season (May-September inclusive with at least one survey completed between early June and the end of August).

The surveys should use four bat surveyors so that identified potential bat roosting features can be fully assessed. The surveys would aim to confirm the presence or otherwise of any bat roosts associated with the building. Recommended surveyor locations are shown on Figure 2.

If any roosting bats are encountered, further nocturnal surveys may be required and any future development of the site may need to be carried out following a European Protected Species License.

Pending the findings of the further nocturnal bat surveys, further recommendations regarding bat roost mitigation measures and compensation habitat should be provided by an appropriately qualified ecologist.

Even if no evidence of roosting bats is found during further surveys, it is recommended that additional bat roosting habitat is provided at the site. This should comprise of bat boxes which can be built into the proposed new garage building and the new extension. The model and location of bat boxes should be determined by an appropriately qualified ecologist.

4.2.2 Breeding Birds

The main house is likely to support nesting house sparrow during the breeding bird season. In addition, the areas of hedge, trees and shrubbery present could support nesting birds during the breeding bird season.

It is therefore recommended that any works to remove/manage tall vegetation and works to the house roof avoid taking place during the breeding bird season (March-August inclusive). Where this is not possible, a check for nesting birds should be completed immediately prior to removal by an appropriately qualified ecologist.

It is recommended that a bird box scheme is produced for the site including suitable nesting features for house sparrows which should be built into the proposed buildings for the site.

4.2.3 Great Crested Newt

There is a moderately sized pond located approximately 30m to the southwest of the site on the opposite side of Darland Lane. The pond appears to offer high quality great crested newt breeding habitat (however this suitability would be significantly reduced if the pond supports fish).

Terrestrial habitats within the proposed works area are largely of low suitability for great crested newt comprising of hardstanding, with areas of suitable habitat largely restricted to the hedge bottoms and roots of the garden shrubs/young trees.

There are more suitable areas of great crested newt terrestrial habitat located immediately around the pond and within adjacent farmland including areas of rough grassland and hedgerow.

Nevertheless, given the pond's proximity there is still considered to be a low risk of encountering/disturbing great crested newt during the development.

In order to further assess the site for great crested newt, it is recommended that great crested newt presence/absence surveys are undertaken of the nearby pond. The great crested newt survey season runs from mid-April until the end of June (for eDNA presence/absence surveys).

If no great crested newts are recorded in this pond, then it should be considered very unlikely that they are present at the site and works should be permitted to progress without any further constraints relating to great crested newt.

However, if great crested newt is recorded, future development of the site may need to be carried out under a European Protected Species License or as a minimum, following a Method Statement of Reasonable Avoidance Measures (RAMs). The RAMs would seek to further reduce the risk of works impacting upon any hypothetical great crested newt population that may be present in the wider landscape.

Further recommendations should be provided pending the findings of the addition survey of the pond.

4.2.4 Other Protected Species

No other protected species are considered likely to be present at the site

5 Appendix

PHOTOGRAPHS

Photograph 1- West face of house



Photograph 2- North face of house



Photograph 3- West and south face of garage (Target Note 5 circled)



Photograph 4- Crevice at Tare Note 5



Photograph 5- Loft space of house



Photograph 6- Garden habitats at proposed new garage location



Photograph 7- Hedge on Darland Lane



Photograph 8- Pond located opposite the site



**FIGURE 1-
Site Location**

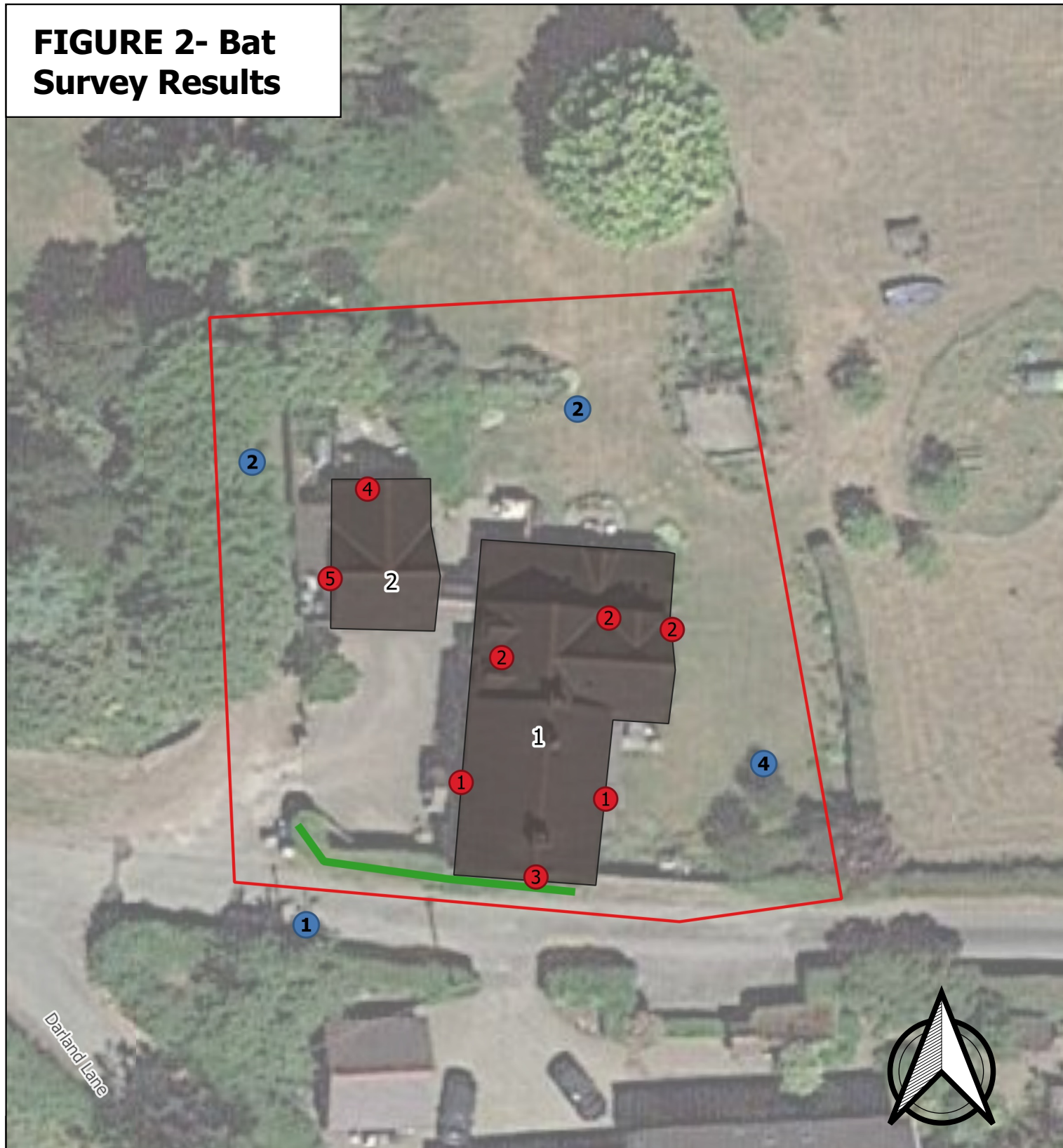


KEY

 Study Site

0 50 100 150 200 m

**FIGURE 2- Bat
Survey Results**



KEY

-  Study Site
-  Building
-  Bat Target Note
-  Recommended bat surveyor location
-  Hedgerow

0 5 10 15 20 m