

BAT SURVEY OF TREE LINE AT ST. JOSEPH'S PLACE, BALLINASLOE, CO. GALWAY



Report Prepared for
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August/September 2022

ABSTRACT

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| Structure: | Treeline at St Joseph's Place, Ballinasloe |
| Bat species Present: | None roosting in trees, Foraging Soprano pipistrelle and Common pipistrelle; Commuting Natterer's bat and Brown long-eared bat |
| Bird species present: | No birds' nests recorded |
| Proposed Works: | Cutting back of south eastern edge of tree line |
| Impact on Bats: | None |
| Bat Survey by: | Caroline Shiel |
| Date: | 28 th August 2022, 16 th /17 th September 2022 |

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1. INTRODUCTION

I was contracted by OBFA Architects to conduct a bat survey of a tree line of deciduous species situated to the north west of St. Joseph's Place housing estate in Ballinasloe. The tree line forms the southeastern boundary to a lane running in a north-east to south-west direction to the north west of the estate.

It is proposed to cut back the trees to facilitate the development of additional houses at St Joseph's Terrace.

The tree line was surveyed during daylight hours on 28th August 2022 to assess its potential for roosting bats and nesting birds. A dusk bat detector survey was conducted at approximately 2 hours after sunset to assess foraging activity on site. A bat detector survey was also conducted after dusk on 16th September 2022 and a static bat detector was deployed overnight on 16th/17th September 2022.

2. AIMS OF BAT SURVEY

- (a) To determine the importance of the treelines for bats and birds.
- (b) To assess the impact of the proposed works on bats and birds using the site
- (c) To make recommendations in order to reduce the impact of works on bats and birds using the site.

3. BATS IN IRELAND

3.1 Bat Species

Bats belong to the Order Chiroptera and to date nine species are recorded as resident in Ireland. These nine species are divided into two families – Family Vespertilionidae which contain nine of our Irish species (Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri*, Whiskered bat *Myotis mystacinus*, Leisler's bat *Nyctalus leisleri*, Long-eared bat *Plecotus auritus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Common Pipistrelle *Pipistrellus pipistrellus* and Nathusius Pipistrelle *Pipistrellus nathusii* and one species in the family Rhinolophidae – the Lesser Horseshoe bat *Rhinolophus hipposideros*.

Brandt's bat *Myotis brandii* has only been recorded once in Ireland from a site in Co.

Wicklow and is classified as a vagrant. In 2013 a single male Greater horseshoe bat *Rhinolophus ferrumequinum* was recorded in Co. Wexford. This bat was also considered to be a vagrant.

Any/all of the nine species could potentially be recorded on site.

3.2 Legislation

The serious decline in bat populations both in Ireland and across Europe has led to conservation measures and appropriate legislation being drawn up and implemented in an attempt to stabilise population numbers. It is estimated that bat populations across Europe have decreased by up to 60% in the last 30 years. As they are highly specialised animals, bats serve as biological indicators and are often amongst the first animal species to show signs of population change due to the activities of man. Destruction of roosts and foraging areas, coupled with the widespread use of pesticides, are the key reasons for the decline in

numbers of bats in Ireland. Efforts should be made to retain known bat colonies and methods to lessen disturbance to these animals should be incorporated into any development.

Bats' dependency on insects has left them vulnerable to habitat destruction, land drainage, agricultural intensification and increased use of pesticides. Their reliance on buildings has also made them vulnerable to building repairs and the use of chemicals for timber treatment. Roosting or hibernation sites in caves, mines, trees and disused buildings are also often lost to development.

Irish Legislation

Wildlife Act 1976 – In the Republic of Ireland, under Schedule 5 of the Wildlife Act 1976 all bats and their roosts are protected by law. It is an offence to disturb either without the appropriate licence. This Act was further strengthened by the Wildlife Amendment Act 2000.

E.U. Legislation

Under the Habitats Directive 1992 (EEC 92/43), each member state of the E.U. was requested to identify habitats of national importance and priority species of flora and fauna. These habitats are now designated as Special Areas of Conservation (SAC). In Ireland, all bat species, except one are classified as Annex IV species under the Habitats Directive.

Annex IV species are species in need of strict protection. The Lesser Horseshoe bat is also an Annex II species (Priority Species). Annex II species are species requiring the designation of Special Areas of Conservation specifically for their protection.

All species of bat in Ireland are strictly protected under the Habitats Directive to include deliberate disturbance of these species, particularly during the periods of breeding, rearing and hibernation. It also specifies deterioration or destruction of breeding or resting places.

International Legislation

Ireland has ratified two international wildlife laws pertaining to bats

- (a) The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention, 1982) – part of this convention stipulates that all bat species and their habitats are to be conserved.
- (b) The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979, Enacted 1983). This was instigated to protect migrant species across all European boundaries.

4. PROPERTY: Tree line at St Joseph's Place Housing Estate, Ballinasloe

St. Joseph's housing estate is situated on the western side of Ballinasloe town. The entrance to the estate opens north off the R446 regional road. The tree line in question forms the southeastern boundary of a lane situated to the north west of St Joseph's Housing Estate.



Figure 1 – Aerial photo showing location of tree line (red line) to north west of St Joseph's Place housing estate

5. PROPOSED WORKS

It is proposed to cut back the treeline to facilitate the construction of additional houses at St Joseph's Place.

6. SURVEY METHODOLOGY

The bat surveys consisted of a daylight survey of the treeline to assess the potential for bat roosting sites in the trees. Many species of bat roost in hollows, splits and crevices in tree trunks and branches. Bats may also roost behind heavy ivy on trees. The trees and hedgerow were also searched for birds' nests. The majority of birds would have completed nesting by the date of the surveys in late August and September.

A dusk bat detector survey was conducted from 2 hours after sunset on 28th August 2022 and ran for one hour. An additional dusk bat detector survey was conducted on 16th September 2022 and ran for one hour.

The tree line was surveyed by walking both sides of the length of the tree line several times during both dusk surveys.

Equipment used included a Pettersson D240X time expansion detector, Pettersson D200 and Echometer Pros plugged into mini i-pads.

A static bat detector (Songmeter 4) was deployed approximately half way along the length of the treeline to monitor bat activity overnight on 16th /17th September 2022. It was set to record from 20 mins before sunset to 20 mins after sunrise.

7. SURVEY CONSTRAINTS

There were no constraints associated with this bat survey. The survey was conducted within the recommended time period for surveying bats in which is May to end September. The weather was favourable on both nights of the survey.

8. RESULTS

Daylight Inspection

The tree line is comprised of mature hawthorns *Crataegus monogyna* with occasional mature sycamore trees *Acer pseudoplatanus* along its length. There are also occasional elder *Sambucus nigra*, and ash *Fraxinus excelsior* saplings in the treeline. The understorey is comprised of bracken *Pteridium aquilinum*, brambles *Rubus fruticosus* and thistle. The average height of the hawthorns is c. 5m and sycamores c. 12m. There is a wire fence to the south east of the treeline. The opposite side of the lane consists of a cement wall with low hawthorn hedge.

The trees were examined for obvious features that would provide roosting sites for bats such as crevices in trunk or branches, splits, rot holes, lifting bark. No potential roost sites for bats were recorded.

Bat Detector Surveys

A dusk bat detector survey was conducted on 28th August 2022 from approximately 2 hours after sunset in order to assess bat activity at the treeline.

Sunset = 20.34

Weather = clear, calm & dry

Temperature = 13C

A single Soprano pipistrelle and single Common pipistrelle were recorded intermittently foraging on the south eastern side of the tree line. The tree line forms an effective shelter belt where insects can accumulate and are readily exploited by bats.

A second dusk bat detector survey was conducted on 16th September commencing approximately 2 hours after sunset.

Sunset = 19.49

Weather = Clear, calm and dry

Temperature = 10C

A single Soprano pipistrelle and single Common pipistrelle were recorded intermittently foraging on the south eastern side of the tree line.

Static Detector

Analysis of the sound files recorded on the Songmeter 4, revealed a total of 48 bat calls recorded overnight on 16th September 2022 until dawn on 17th September 2022. The majority of these calls were Soprano pipistrelle (21 calls) and Common pipistrelle (20 calls) with almost equal numbers of both species. Pipistrelle bats were most likely foraging in the sheltered area to the south east of the tree line. Four calls of Natterer's bats and 1 call of Brown long-eared bat were detected. These bat species were most likely commuting along the laneway. These species are reliant on landscape features for navigation. The two calls of Leisler's bats were from individuals commuting high over the site.

9. POTENTIAL IMPACTS OF THE PROPOSED WORKS ON BATS

The proposed trimming back of the tree line will have no impact on bats if conducted in a sensitive manner.

10. RECOMMENDATIONS AND MITIGATION MEASURES

10.1 Derogation Licence

The proposed trimming of the treeline will not require a derogation licence from the National Parks and Wildlife Service.

10.2 Foraging Area/Commuting Route for bats

The lane and treeline have been confirmed as both a foraging area and a commuting route for a number of bat species. Trimming of the hedgerow should be as minimal as possible.

10.3 Lighting

There should be no additional lighting of the lane and hedgerow. Many species of bat (including Natterer's and Brown long-eared) are sensitive to light. They will avoid areas that are highly lit.

10.4 Procedure if Bats are found

If any bats are found during the course of this work, work must stop immediately and the local NPWS conservation ranger or other bat specialist contacted. If bats need to be removed they may only be handled by a licenced bat worker.

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12. PHOTOGRAPHS



Photo 1 – laneway to north west of St Joseph’s Terrace with mature treeline on left hand side (North east end)



Photo 2 – further south west along laneway showing high mature hedgerow on left hand side and lower hawthorn hedge backed with cement wall on right hand side



Photo 3 – occasional species (elder) in hedgerow



Photo 4 – further south west along lane close to end point



Photo 5 – south western end of tree line looking north east. The hedgerow is mainly comprised of mature hawthorn with occasional sycamore trees



Photo 6 – semi mature sycamore tree in tree line



Photo 7 – semi-mature sycamore in tree line



Photo 8 – looking west towards tree line. The positions of the larger sycamores are obvious as they project above the height of the hawthorns



Photo 9 – walking transit along hedgerow



Photo 10 – Songmeter 4 in treeline