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Wildlife
Surveys
Ireland

A bat and bird assessment of Castlelost Church

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For Westmeath County Council

Aug 1 2025



Summary

Six species of bat were recorded within the site.

Common pipistrelles and soprano pipistrelles fed around the church throughout the night. There are no bats currently within the chamber where a roost was found, however a swallow is sitting on eggs within the building. This may be preventing the bats from roosting close by. A myotis, probably a natterer's bat, and a Daubenton's bat were recorded passing near the roost chamber during the night. A Leisler's bat also flew over the site during the night. There is one signal of a brown long eared bat flying near the southern wall of the church.

Bat species found roosting in 2023/2024.

Daubenton's bat - *Myotis daubentonii*

Brown long eared bat – *Plecotus auritus*

Bat species found feeding and commuting 2025.

Common pipistrelle – *Pipistrellus pipistrellus* -

Soprano pipistrelle – *Pipistrellus pygmaeus* –

Leisler's bat – *Nyctalus leisleri*

Daubenton's bat - *Myotis daubentonii*

Natterer's bat *Myotis nattereri*

Brown long eared bat – *Plecotus auritus*

(1) The church is a roost of two species, and a derogation licence must be applied for prior to the commencement of any work on the site. An ecologist must supervise the work. The work must not commence in the underground area or that part of the church until the swallow chicks have fledged

The wildlife ranger must be contacted before commencement of any work.

(2) If a bat access area is blocked, a bat access brick must be fitted in this area, to allow bat access if the other exits are inadvertently blocked. It can be purchased from –

<https://www.nhbs.com/1fe-schwegler-bat-access-panel?bkfno=183033>

or

<https://www.veldshop.nl/en/ans-3-bat-box.html>

It must be used without the back plate to allow access into the roost area.



As an alternative, a gap can be retained in the existing area.

These have been used successfully in Golashane Nature Reserve in Meath.

In addition, cracks and crevices must be retained where possible. At least 15 crevices must be retained the church wall.

Two 2FN Schwegler bat boxes must be placed outside but near the graveyard. These have housed Brown long eared bats and Daubenton's bats in the VWT bat box project in Coole - Garryland. A problem with these boxes is that they tend to be taken over by blue tits. To avoid this happening a nest box should be placed near the bat box. This has been successful in preventing blue tits from nesting in the bat boxes. They will form a territory, preventing other birds from nesting in the bat boxes. The nest boxes can be purchased from - <https://birdwatchireland.ie/product/oakwell-nest-box-32mm/>

(3) If bats are discovered at any stage of the building work, building work must cease and myself and the wildlife ranger must be contacted.



(4) No work can take place from May to September as bats may be breeding. Crevices must be checked carefully with a torch and/or fibrescope before repointing.

(5) Providing long swards of grass by fencing livestock out of the church area, would provide bat feeding and additional areas for the ghost moth and shrews which were noted in 2023. It is important that adequate fencing is used to keep livestock out of the church area.

(6) There are low light levels on sites, and this is crucial to the usage of the bats and the buildings. Lighting levels must remain low.

(7) No vegetation can be removed during the nesting season.

Preliminary survey details

Results from 2024 bat survey

Summary of report

Although the numbers of individual bats on this site are low, there are six of our nine species present, and two species – Daubenton's and brown long eared bats – are roosting within the underground chamber. The brown long eared bat may be using this area as a night perch, as it was only seen during the night. The Daubenton's bat was present within the stonework at dusk and dawn.

Six species of bat were recorded within the site.

Bat species found roosting

Daubenton's bat - *Myotis daubentonii*

Brown long eared bat – *Plecotus auritus*

Bat species found feeding and commuting

Common pipistrelle – *Pipistrellus pipistrellus* -

Soprano pipistrelle – *Pipistrellus pygmaeus* –

Leisler's bat – *Nyctalus leisleri*

Daubenton's bat - *Myotis daubentonii*



Natterer's bat *Myotis nattereri*

Brown long eared bat – *Plecotus auritus*

Results from the survey in 2023 of Castlelost church and castle

Bat species found roosting at Castle Lost Church

Brown long eared bat – *Plecotus Auritus*

Bat species found feeding and commuting on the church site

Common pipistrelle -*Pipistrellus pipistrellus*

Soprano pipistrelle –*Pipistrellus pygmaeus*

Leisler's bat – *Nyctalus Leisleri*

Brown long eared bat – *Plecotus Auritus*

Bat species found roosting at Castle Lost Castle

Soprano pipistrelle –*Pipistrellus pygmaeus* – roosting in 2 places

Natterer's bat – *Myotis nattereri*

Brown long eared bat – *Plecotus Auritus*

Bat species found feeding and commuting on the site of the castle

Common pipistrelle -*Pipistrellus pipistrellus*

Soprano pipistrelle –*Pipistrellus pygmaeus*

Leisler's bat – *Nyctalus Leisleri*

Brown long eared bat – *Plecotus Auritus*



Natterer's bat – *Myotis Nattereri*

Report on the implementation of derogation licence recommendations 2024 and 2025

Recommendation

(1) The church is a roost of two species, and a derogation licence must be applied for prior to the commencement of any work on the site. Although the work on the exterior wall is away from the roost, the presence of scaffolding and people will impact the roost area. An ecologist must supervise the work.

The wildlife ranger must be contacted before commencement of any work.

Measures Implemented

Two derogation licences were issued to allow work to proceed.

DER-BAT-2024-142 valid from Sept 12 to December 31st, 2024

DER-Bat-2025-01 valid from January 1st, 2024 – April 30th, 2025

Recommendation

(1) Damian Murtagh NPWS was contacted prior to commencement of the work.

The work was supervised by ecologist Donna Mullen, with site visits and weekly updates via WhatsApp.

Recommendation

(2) With the permission of the landowner, 2 2F Schwegler bat boxes could be placed near this site. These must be placed on trees, buildings, or poles, at least 3 meters high, with a clear drop below them – as bats must drop to fly. They must be placed in a dark area. They can be purchased here - <https://www.veldshop.nl/en/schwegler-bat-box-2f.html?id=46351610>

In addition, cracks and crevices must be retained where possible. At least 30 crevices must be retained in each wall. Two Schwegler 2FR bat tubes must be built into the wall for restoration. (<https://www.veldshop.nl/en/bat-tube-1fr-and-2fr.html>)

Measures Implemented

A tree on the site was identified for the bat boxes, which have been purchased and installed.



It was not possible to purchase the Schwegler bat tubes, so a similar type – Vivara pro bat tubes, and Woodstone bat boxes have been ordered. I have successfully used these boxes in Meath and Leitrim.



Installed bat tubes.

Each wall has at least 30 retained crevices of different depths and sizes.



Recommendation

(3) If bats are discovered at any stage of the building work, building work must cease and myself and the wildlife ranger must be contacted.

Measures Implemented

All stonework was undertaken carefully by hand.



On 26th September Donna Mullen discovered a brown long eared bat in the underground section of the church. This area was previously a roost and is not scheduled for stonework. The area was made safe from disturbance by people and animals. It was not present on a subsequent visit in October .Pallets blocking one of the roost exits on 25 October, were removed, and goats at the area were securely fenced.



Bat in crevices and retention of bat access

(4) No work can take place from May to September as bats may be breeding. Work on the nave must take place after Sept 1st as there is a nest present.

Measures Implemented

No work has taken place in the nesting season.



Recommendation

(5) To compensate for the loss of vegetation with the removal of ivy, some new hedgerows should be installed and allowed to grow tall, with the landowner's permission. These should be native and include native trees. A company such as Ramor landscaping can provide the hedge planting service - <https://www.ramorlandscaping.ie/>.

In addition, providing long swards of grass by fencing livestock out, would provide additional areas for the ghost moth and shrews which were noted in 2023.

Measures Implemented

Discussions with the landowner on habitat enhancement are ongoing.

Recommendation

(6) There are low light levels on sites, and this is crucial to the usage of the bats in the buildings. Lighting levels must remain low.

Measures Implemented

Lighting levels on site are low, with no external lighting.

Recommendation

(7) It is possible that the castle and church is used by bats as a hibernation or swarming site. A remote song meter mini could be placed in the underground section of the castle and church at intervals over the autumn and winter to see if there is bat activity.

Measures Implemented

Brown long eared bats have been found at intervals in the autumn. No Daubenton's bats were seen.

Recommendation

(8) No vegetation can be removed during the nesting season.

Measures Implemented

No vegetation was removed in the nesting season.



Conclusion

Gaps have been retained in the new stonework, and bat boxes have been built into the new stonework. There was no disturbance to the existing bat roost, and a brown long eared bat was seen continuing to use the roost during the building work.

Desktop survey of the existing environment

Thanks to Bat Conservation Ireland for their data. All data from this report will be placed on their database.

Bat data from within 1km of the site:

BCIreland data: search results 5 Aug 2025					
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all species within 1000m of N4493741809					
Roosts					
Name	Grid reference	Grid ref easting	Grid ref northing	Address	Species observed
Castle Lost Castle	N4507941369	245079	241369	Castle Lost, Westmeath	Myotis nattereri, Pipistrellus pipistrellus (45kHz), Plecotus auritus
Castle Lost Church	N4493741784	244937	241784	Near Rocherfordbridge westmeath	Plecotus auritus, Myotis daubentonii



Transects					
Name	Grid reference start	Grid ref easting start	Grid ref northing start	Species observed	
Ad-hoc observations					
Survey	Grid reference	Grid ref easting	Grid ref northing	Date	Species observed
BATLAS 2020	N4421042340	244210	242340	#####	Pipistrellus pygmaeus
BATLAS 2020	N4421042340	244210	242340	6/9/2016	

See Appendix III for bat data from within 10km of the site.

Habitat classification and descriptions (Fossitt 2000)

WD5 Scattered trees and parkland.

This category can be used in situations where scattered trees, standing alone or in small clusters, cover less than 30% of the total area under consideration but are a prominent structural or visual feature of the habitat. This usually occurs in areas of cultivated grassland, particularly amenity areas. In the case of parkland or parks which originate from former planting and landscaping, the proportion of non-native trees is



typically high. This category can also be used for scattered fruit trees in orchards but commercial orchards with heavily pruned trees should be considered under horticultural land - BC2.

This habitat is present onsite

BL3 Buildings and artificial surfaces

This broad category incorporates areas of built land that do not fit elsewhere in the classification. It includes all buildings (domestic, agricultural, industrial and community) other than derelict stone buildings and ruins (see stone walls and other stonework - BL1). It also includes areas of land that are covered with artificial surfaces of tarmac, cement, paving stones, bricks, blocks or astroturf (e.g. roads, car parks, pavements, runways, yards, and some tracks, paths, driveways and sports grounds). Unpaved areas are excluded (see spoil and bare ground - ED2). Any other built structures that are not made of natural stone, including walls made of bricks, cement blocks and mass concrete, should be considered here. Note that greenhouses and polythene tunnels are excluded (see horticultural land - BC2), as are refuse dumps (see refuse and other waste - ED5). Plant cover should not exceed 50%.

This habitat is present onsite

Connectivity – Map of site showing the wider area with ecological features



Yellow circle = Castlelost church

The site connects to farmland on all sides, with the castle to the south and a conifer plantation to the east.

Date: Aug 1, 2025

Sunrise time: 5.45

Sunset time: 21.25

Lux Levels 0 lux

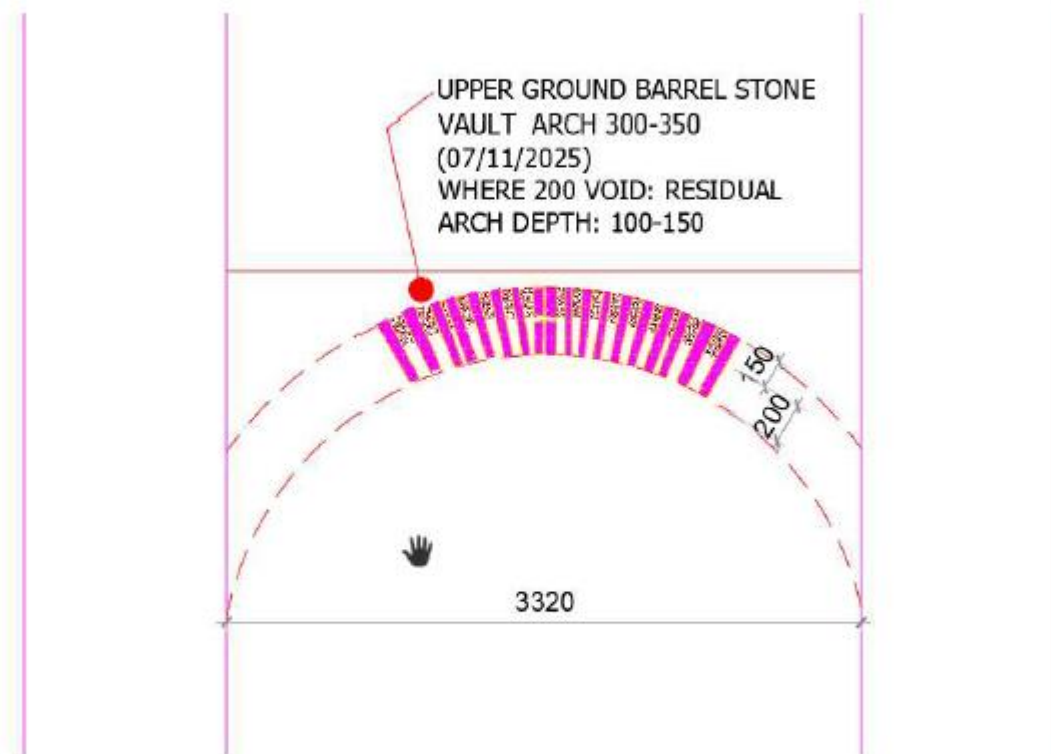
Temperature and weather conditions 14C to 10C .Slight rain during the night

Proposed works



Works to the Vault area (where the bats are roosting)

5.1 Deep Pointing: The vault has collapsed and failed locally to the south end and there is notable washing out of the joints to the remainder of the vault structure. As noted in the simplified graphic below, the effective compressive zone section is comprised. A reduced compression area from 350mm to 100- 150mm can be assumed in places concentrated near midspan where the cover at first floor level is at its thinnest (see simplified graphic below). This reduced sectional depth compromises the compressive strength of the arch. Deep pointing to the soffit of the arch is recommended to address this. In addition to the proposed lime mix, pinnings may be employed where the void width is greater than 30mm. This deep repointing will require dry conditions to allow for the initial hydraulic set of the mortart and the provision of rainwater protection above the vault fill is proposed. This protection will be placed in advance of the works and remain in place for 4-6 weeks following the works. Given the arch is depended on each voussoir to voussoir contact making up the 3.2m span, any proposal to provide crevices for wildlife will create a discontinuity in the structure and is regrettably not advised.



Simplified Graphic of Wall and Arch Construction at Castlelost

5.2 Proposed Infilling of Void: As noted there is an approximately 1.3m long x 1m collapsed section of arch forming a void to the southern end of the 6.3m long x 3.3m wide first floor plan. The church ruins are located in a remote area with little control of members of the public wishing to visit the site. A void left in the vault presents as significant health and safety risk.

Rendering this section of the structure inaccessible by local screening has been considered unviable given the extent of screening required. The insertion of screening was also considered as having a potentially unsympathetic impact on the monument.



Importantly, the continued decay of the unsupported sections of the partially collapsed arch is not favourable to arresting the continued deterioration of the north tower.

Based on the judgement of what is structurally most favourable to the conservation of the ruin, the current proposal is to locally provide centring below the intrados of the remaining section and re-build the collapsed middle section of the vault to the southern end. An assessment of what sections of the springing stones to each side of the void can be retained will be made on site once the centring is in place.

The arch will match the stone materials of the original vault where salvageable by triage of the collapsed stone within the vault. A means of clearly identifying or reading the reconstructed elements from the original will be agreed prior to construction. This may be by means of a recorded note at ground and first floor level of the monument rather than a delineation in the construction. A method statement from the contractor tendering for the works shall include all centring and temporary supports. Fill material to match the fill over the existing vault will be placed over the reconstructed section.

No fill material is to be removed above the existing stone arch.

Complexity of lands and ability to cover ground during surveys

All areas were accessible

Ownership of the land

Westmeath County Council. The adjacent land is owned by

Mary Casserly-Gavin
Knocknacrieve
Slanmore
Mullingar
Co Westmeath



Survey constraints

(1) Mobility of bats: Bat species are mobile and can move from roost to roost, depending on roost availability, feeding availability and weather conditions. They may move to roosts which have not been identified in this report in order to hibernate or create mating or feeding perches. A bat survey is a snapshot of bat activity over the survey time.

(2) Identification of bats: It can be difficult to differentiate *Myotis* species. For this reason, sound files are included within the report. Brown long eared bats are very quiet, and their presence can be overlooked in bat surveys as they may not register on bat detectors.

(3) Timing of survey: Bat surveys generally take place when the bats are active – May – September. A bat survey which takes place outside these dates may miss roosting activity. Because of this the precautionary principle is applied and trees will be checked manually for roosting bats prior to any felling.



Methodology

Surveyors

Donna Mullen and Brian Keeley of Wildlife Surveys Ireland carried out this survey.

Equipment

- Exide Lamps (one per surveyor)
- Petzl Tikka Head torches (one per surveyor)
- Batlogger M2 time expansion detectors and Kaleidoscope Pro sound analysis software with GPS (one per surveyor)
- One thermal imager per surveyor
- Two Songmeter Mini Bat detector placed overnight at the southern wall, and the underground roost area.
- Mobile phones for communication during the survey (one per surveyor)
- One lux meter per surveyor

Survey procedure

Surveyors arrive on site shortly before sunset. All lands, trees, buildings and hedgerows are assessed for suitability for bats, including their suitability as feeding habitat and/or suitability as bat roosts. Areas and features with high potential are identified throughout the site and used as points of interest during the active survey. Survey routes are planned so that a surveyor can efficiently cover as much land as possible while maintaining a focus on these key points of interest. Larger sites are divided up into sections to be covered across multiple nights. Static bat monitoring devices are placed near areas and features of especially high interest, particularly features that bats may be using as roosts, in order to provide a timeline of bat activity throughout the night.

Over the next 90 minutes, surveyors cover the walkable area of the site along their planned routes, with adjustments being made to account for especially high or low bat



activity in an area – for example, a surveyor may examine a tree associated with a high level of bat activity, as it may be a bat roost. After the 90 minutes have elapsed, most bats will already have emerged from their roosts in order to feed for the night, making the period shortly after sunset one of the best times to identify roosts and feeding habitats.

Surveyors return to a site approximately 90 minutes before sunrise the next morning. At this time, any changes in temperature and weather conditions are noted, as well as any other factors (e.g. street lighting) that may have impacted bat activity during the night. Surveyors cover the site area again, this time with particular attention paid to possible roosts, as bats can be seen returning to their roosts during this time period. Any static monitors left out the previous night are collected for analysis.

Surveys are conducted with reference to the following documents –

- (1) NPWS BAT MITIGATION GUIDELINES FOR IRELAND – V2 Ferdia Marnell, Conor Kelleher & Enda Mullen
- (2) Heritage Council's Bat Survey Guidelines for the Traditional Farm Buildings Scheme
- (3) Bat Surveys for Professional Ecologists – Good Practice Guidelines 4th Edition, 2024. Developed on behalf of the Bat Conservation Trust
- (4) C.I.E.E.M Bat Mitigation Guidelines 2023

We feel that both emergence and return surveys are necessary on most occasions and go beyond these guidelines to ensure dawn roosts are located.

Survey:

Assessment of buildings as potential roosts with photos



Castlelost church

Very high bat roost potential. Crevices, cracks and built in bat boxes.

Map of the placement of the static detectors.



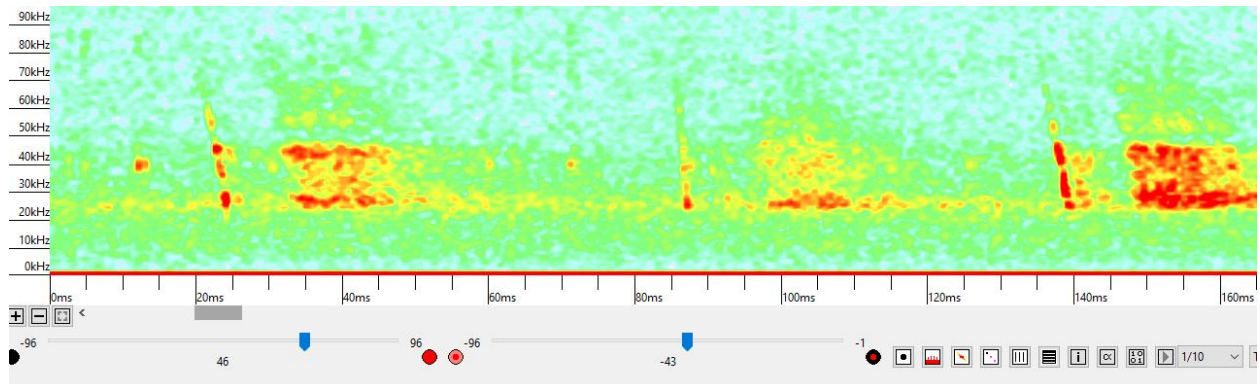
Blue circles – Placement of static detectors. One was placed in the underground area, and the other on a wall.

Results of survey

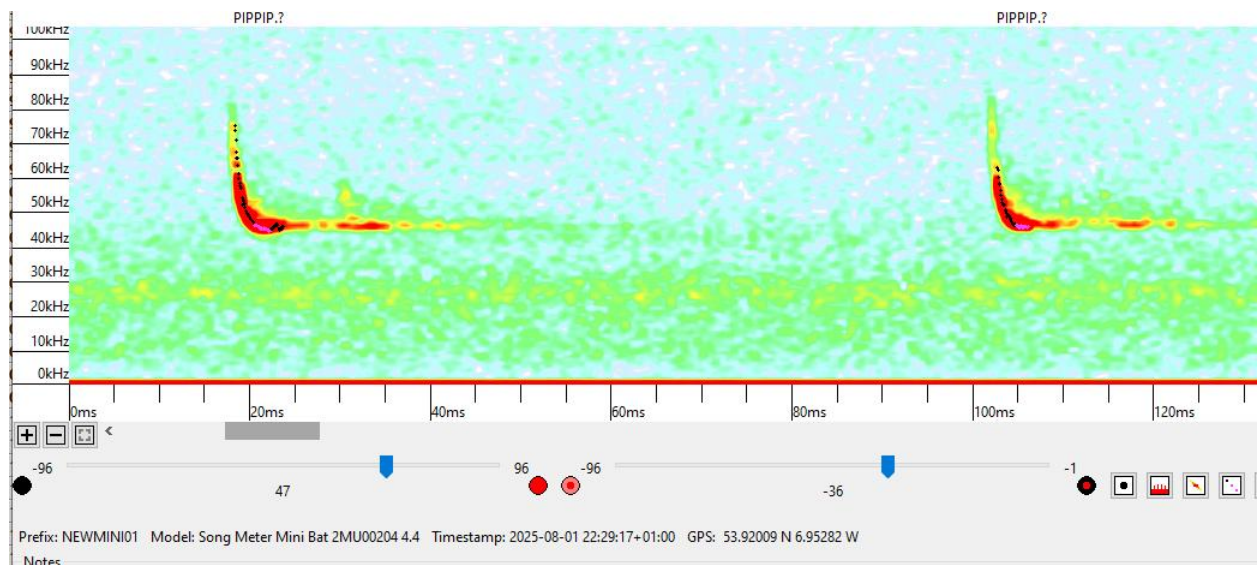
The survey commenced at 21.00. One static detector was placed high on the southern wall and a second was placed in the underground chamber. A swallow was sitting on eggs in the underground chamber.

At 20.59 a soprano pipistrelle flew from the east, past the church. It fed around the church until 22.05. At 22.13 a soprano pipistrelle flew from the eastern forestry area, onto the site, feeding around the vestry and moving east at 22.26. A common pipistrelle fed around the church from 22.33 until 22.39, moving to the south at 22.43, and a second common pipistrelle came onto the site then moved off towards the eastern forest at 22.43.

A faint Daubenton's bat signal was recorded to the west at 23.24.

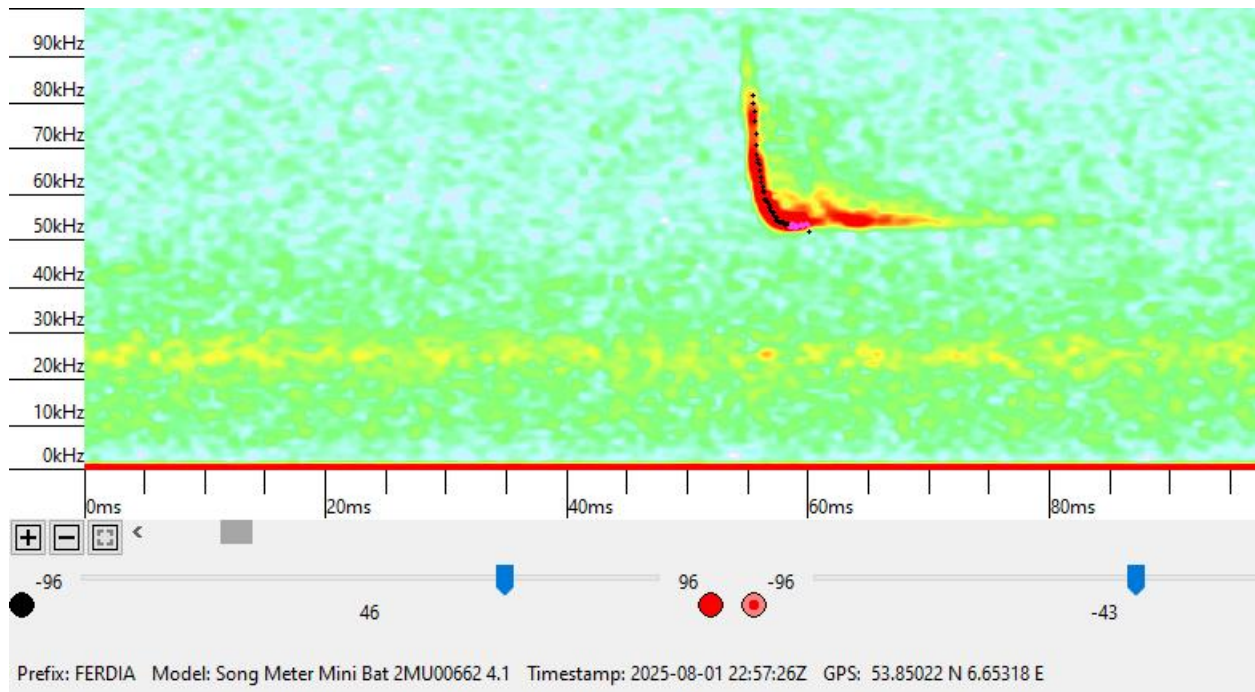


Daubenton's bat 23.24



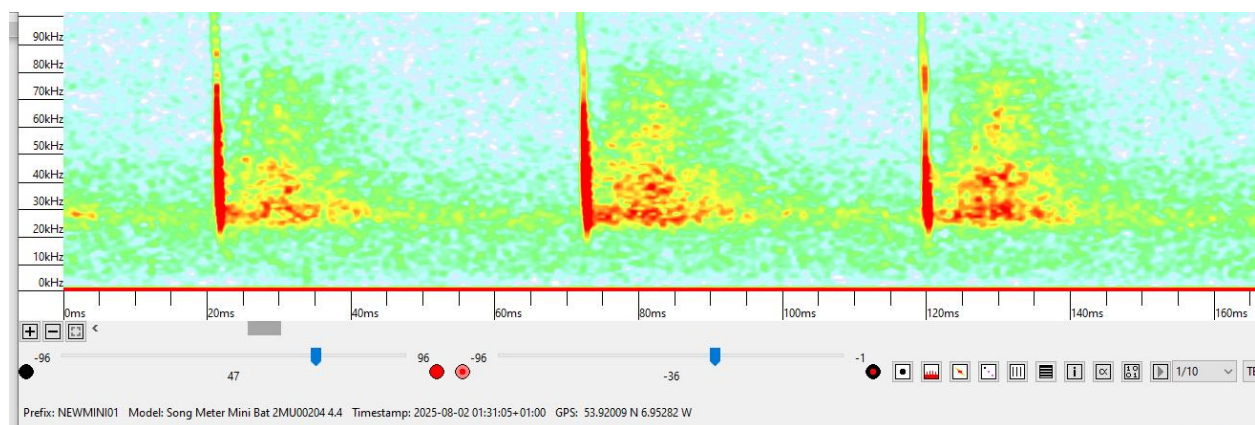
Common pipistrelle 22.29

A common pipistrelle was seen to the north of the church at 22.46, feeding until 22.55, then moving east. A soprano pipistrelle fed at the sycamore to the front (south) of the church at 23.00.



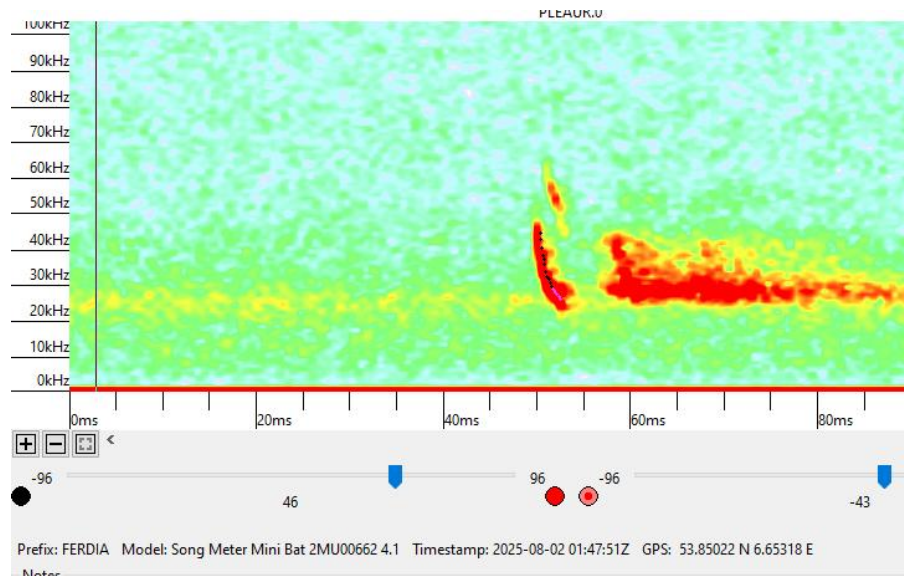
Soprano pipistrelle 22.57

At 1.31, a Natterer's bat was recorded by the static detector underground.



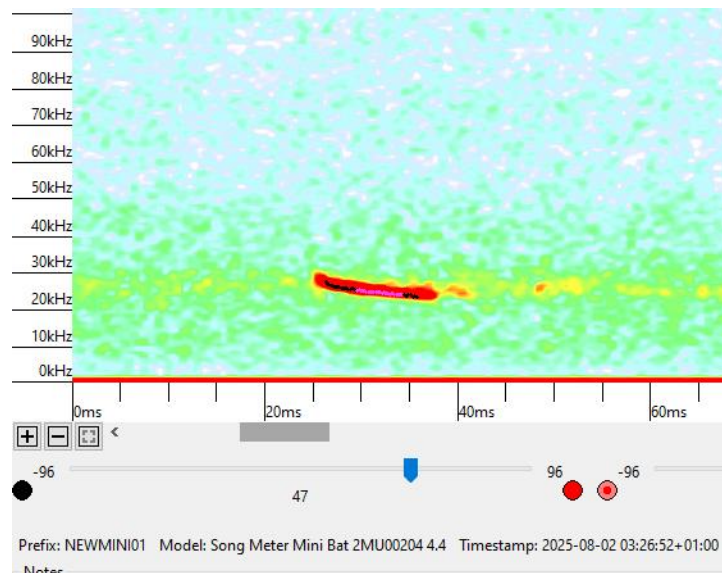
Natterer's bat

At 1.47 a brown long eared bat flew south of the church



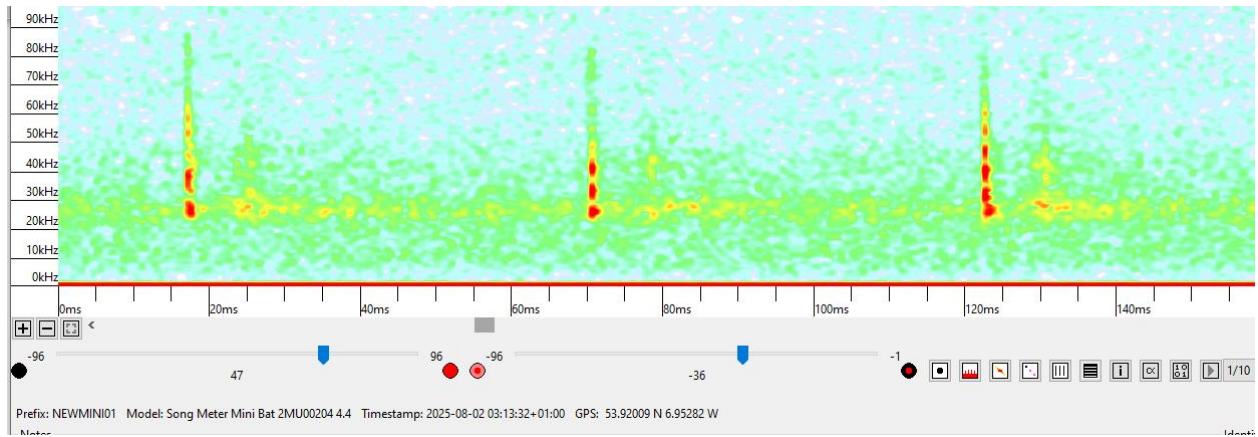
Brown long eared bat

A Leisler's bat was recorded in this area at 3.06.



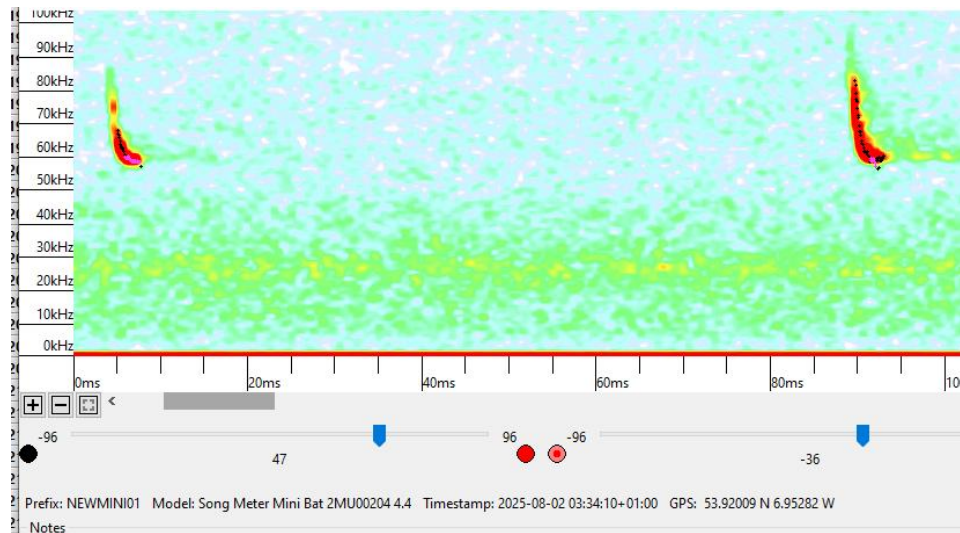
Leisler's bat

At 3.12 a myotis was recorded on a static detector at the southern wall of the church



Myotis 3.12

A soprano pipistrelle was recorded in this area at 3.34.



Soprano pipistrelle 3.34

At 4.25 a common pipistrelle was seen feeding around the trees in the graveyard, moving over the church until 4.38. At 4.46 a common pipistrelle was seen commuting at the east of the churchyard, then feeding around the yew and sycamore, before moving offsite at 4.52.

Results

Common pipistrelles and soprano pipistrelles fed around the church throughout the night. There are no bats currently within the chamber where a roost was found, however a swallow is sitting on eggs within the building. This may be preventing the bats from roosting close by. A myotis, probably a natterer's bat, and a Daubenton's bat were recorded passing near the roost chamber during the night. A Leisler's bat also flew over the site during the night. There is one signal of a brown long eared bat flying near the southern wall of the church.

Six species of bat were recorded within the site.

Bat species found roosting in 2023

Daubenton's bat - *Myotis daubentonii*

Brown long eared bat – *Plecotus auritus*

Bat species found feeding and commuting

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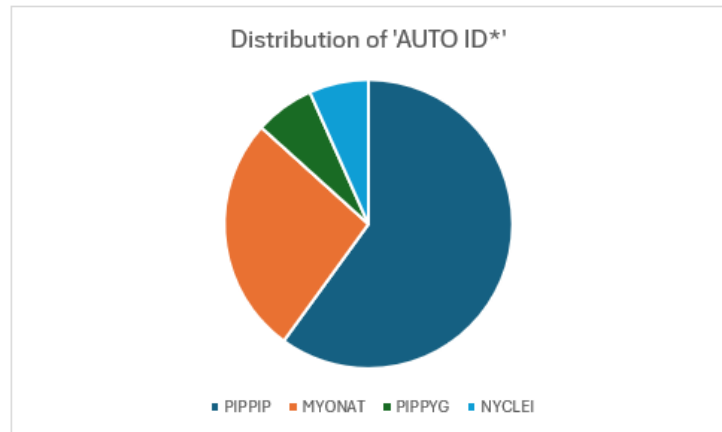
Brown long eared bat – *Plecotus auritus*

Distribution of calls from static detector placed in the chamber.

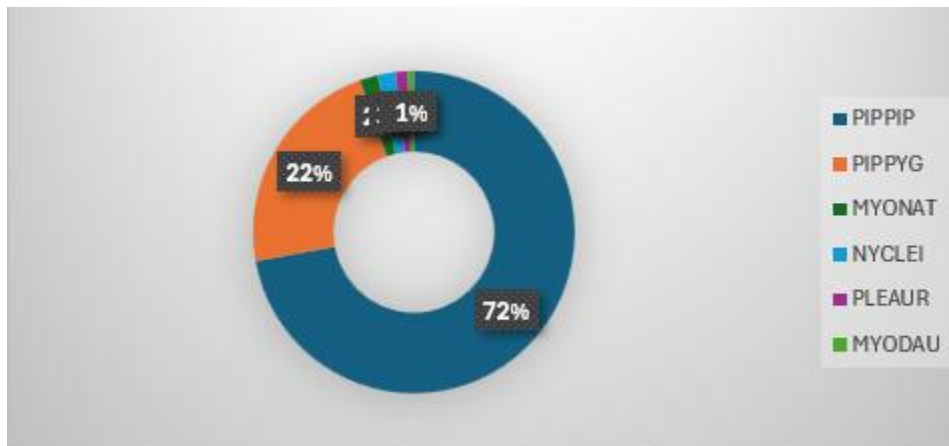


Distribution of 'AUTO ID'*

AUTO ID*	Count of AUTO ID*
PIPPIP	9
MYONAT	4
PIPPYG	1
NYCLEI	1
Grand Total	15

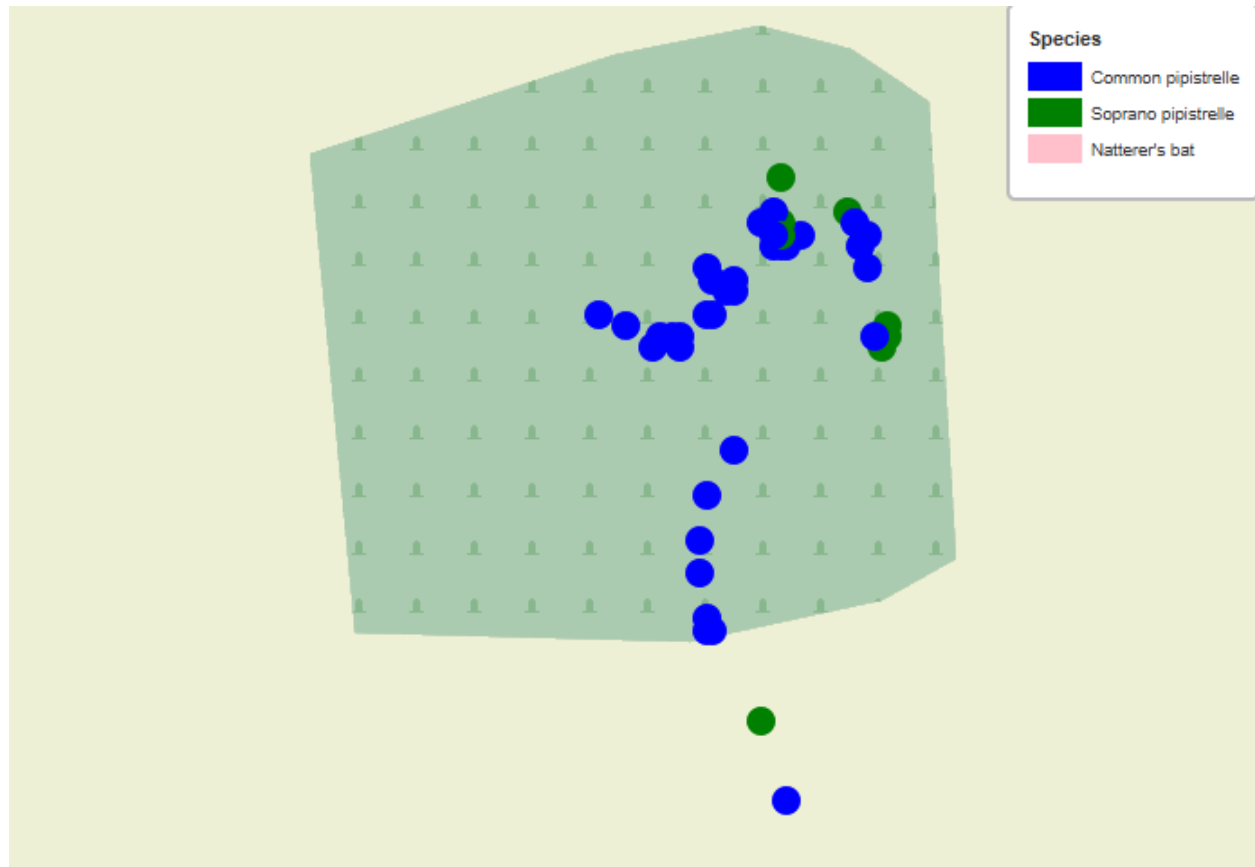


Distribution of bat calls from static detector placed on the southern wall.



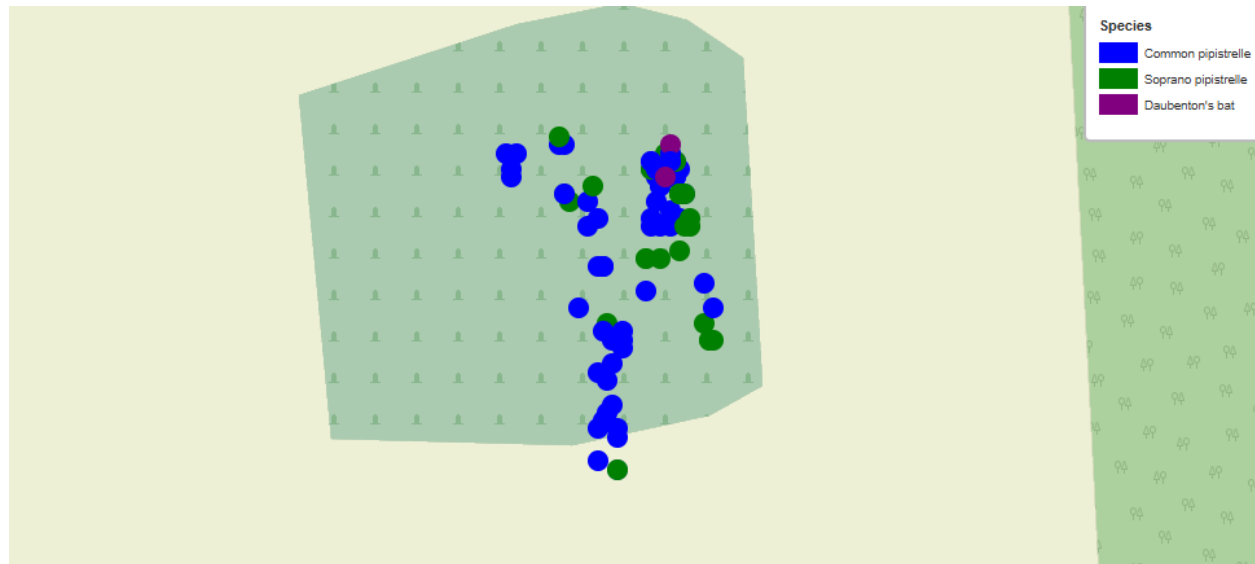
	AUTO ID*	Count of AUTO ID*
2		
3	PIPPIP	119
4	PIPPYG	37
5	MYONAT	3
5	NYCLEI	3
7	PLEAUR	2
3	MYODAU	1
9	Grand Total	165
0		

Map from Batlogger handheld by Donna Mullen





Map of Batlogger data handheld by Brian Keeley



Potential impacts

Predicted Impacts Before Mitigation

(1) Loss of feeding and commuting habitat.

Removal of vegetation will have a moderate long-term impact on individuals within these species.

(2) Loss of roosting habitat. Work on the repointing of the walls of the roost without mitigation could cause entombment or roost loss. This would have a permanent long term negative effect on individual bats.

Mitigation and recommendations

Mitigation measures should follow the hierarchy of 1) avoid the impact, 2) reduce or minimise the scale or severity of the impact and, if these are not possible, then 3) abate the impact at the source or 4) abate the impact at the receptor through provision of alternative feeding areas, roosts or flight path features (e.g. hedgerows, treelines). (*Bat Conservation Ireland Appropriate Assessment Guidelines*)

Mitigation by remedy

Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere

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The wildlife ranger must be contacted before commencement of any work.

(2) If the bat access area is blocked, a bat access brick must be fitted in this area, to allow bat access if the other exits are inadvertently blocked. It can be purchased from –

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It must be used without the back plate to allow access into the roost area.



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(6) There are low light levels on sites, and this is crucial to the usage of the bats and the buildings. Lighting levels must remain low.

(7) No vegetation can be removed during the nesting season.

Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations. Data from The Status of EU Protected Habitats and Species in Ireland SPECIES ASSESSMENTS Volume 3 2019

Daubenton's bat

5 Range within the biogeographical/marine region concerned.

5.1 Surface area 74,200 km²

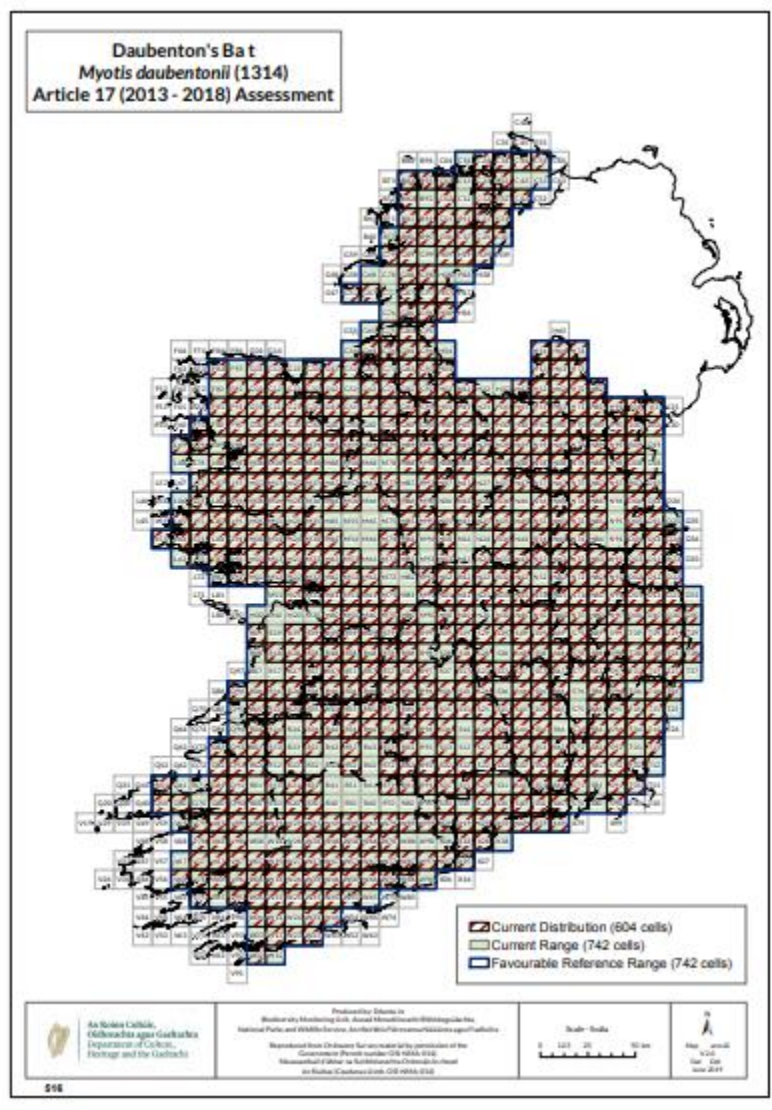
5.2 Short-term trend Period 2007–2018

5.3 Short-term trend Direction stable

8.2 Sources of information <i>Optional</i>	
8.3 Additional information <i>Optional</i>	Light pollution has been identified as a particular concern for <i>Myotis</i> bats such as Daubenton's bat (Matthews <i>et al.</i>, 2015; Voigt <i>et al.</i> 2018). F24 has been selected to represent this pressure, although lighting from industrial developments and roadway developments also contribute to the problem. Despite some growing awareness of light pollution this pressure is likely to continue into the future and it is also listed as a threat. Ranking of importance is based on expert opinion on likely impact of the pressure on the species. Removal of riparian vegetation, bridge repairs and drainage works may also provide some cause for concern for this species and these issues merit further study. There is no evidence to date of an impact on Daubenton's bat distribution due to these issues and hence they are not listed in 8.1.

10 Future prospects		
10.1 Future prospects of parameters	a) Range	<u>Good</u> / Poor / Bad / Unknown
	b) Population	<u>Good</u> / Poor / Bad / Unknown
	c) Habitat of the species	<u>Good</u> / Poor / Bad / Unknown

The Daubenton's bat is widespread across all parts of the country and Range is assessed as Favourable as there is no evidence of any decline since the Directive came into force. Recent estimates for this species suggest a population size in the order to 57,000-79,000 animals. Ongoing monitoring indicates that the population is stable or even slightly increasing and there is no evidence of decline in suitable habitat. Although some pressures/threats have been noted, there is no indication of any major pressures currently impacting on the species and future prospects are considered good. Overall, the species is assessed as Favourable and the overall trend is demonstrating an on-going increase. There were no qualifiers for Favourable assessments in 2013.



Brown long eared bat

5 Range within the biogeographical/marine region concerned.

5.1 Surface area 62,200 km²

5.2 Short-term trend Period 2007–2018

5.3 Short-term trend Direction stable

8.3 Additional information -As this bat regularly roosts in old buildings (e.g., churches) it can come into conflict with roost owners. The loss of roosts in mature trees due to felling, light pollution and the absence of data on swarming and winter sites are also concerns. However, there is no evidence that any of these issues are impacting on distribution or population and hence they are not listed as medium or important threats for this species.

10 Future prospects		
10.1 Future prospects of parameters	a) Range	<u>Good</u> / Poor / Bad / Unknown
	b) Population	<u>Good</u> / Poor / Bad / Unknown
	c) Habitat of the species	<u>Good</u> / Poor / Bad / Unknown
10.2 Additional information <i>Optional</i>	The dedicated roost-based monitoring programme provides evidence of a significant increase in the population; there is no evidence of any decline in Range or Habitat. In general the Future prospects of these parameters are considered to be good.	

11 Conclusions

Assessment of conservation status at end of reporting period

11.1 Range	<u>Favourable (FV)</u> / Inadequate (U1) / Bad (U2) / Unknown (XX)
11.2 Population	<u>Favourable (FV)</u> / Inadequate (U1) / Bad (U2) / Unknown (XX)
11.3 Habitat for the species	<u>Favourable (FV)</u> / Inadequate (U1) / Bad (U2) / Unknown (XX)
11.4 Future prospects	<u>Favourable (FV)</u> / Inadequate (U1) / Bad (U2) / Unknown (XX)

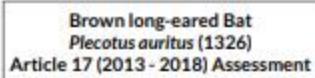
Article 17 report format 2013-2018

538

1326 Brown Long-eared Bat (*Plecotus auritus*)

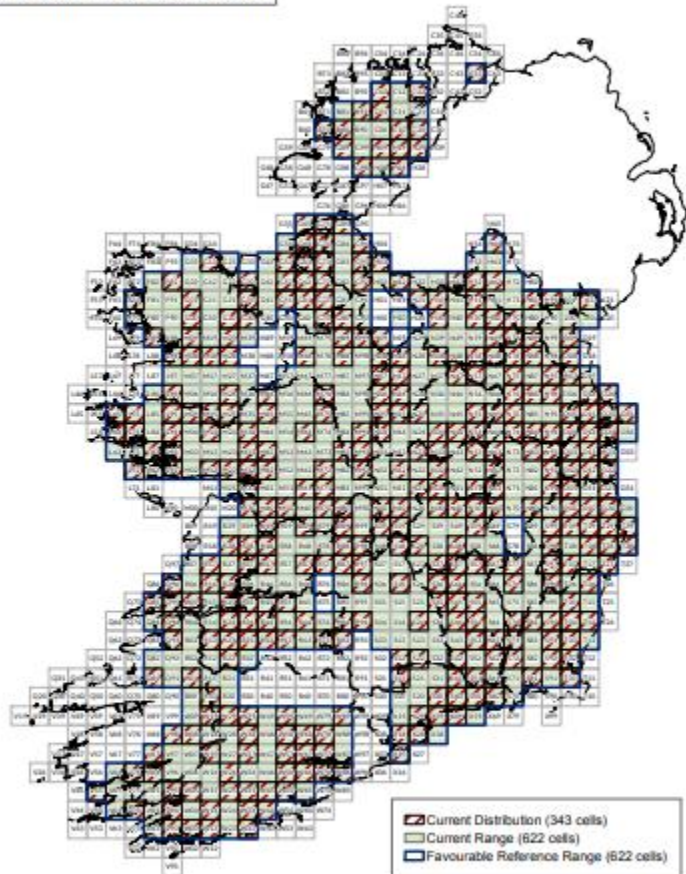
11.5 Overall assessment of Conservation Status	<u>Favourable (FV)</u> / Inadequate (U1) / Bad (U2) / Unknown (XX)
11.6 Overall trend in Conservation Status	Indicate the trend (qualifier) for FV, U1 and U2: <u>improving</u> / deteriorating / stable / unknown

11.8 Additional information - Recent estimates put the Irish population of brown long-eared bats at 60,000-100,000 animals. Monitoring data suggests a recent significant increase in numbers and both Range and Habitat are considered to be stable and Favourable. There is no indication of any major pressures currently impacting the population and Future prospects are considered good. Overall, the species is assessed as Favourable and the overall trend is demonstrating an on-going increase. There were no qualifiers for Favourable assessments in 2013.



Plecotus auritus (1326)

Article 17 (2013 - 2018) Assessment



Current Range (622 cells)

☐ Favourable Reference Ra

2010 2011

Annette Kuhn,
Oldenhead, Upper Gwentshire
Department of Culture,
Heritage and the Gwentshire

Produced by: *Exhibits in
Wildlife Monitoring Unit, Animal Health Research Institute,
National Parks and Wildlife Service, Dublin City Zoo and Wildlife Centre*

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Scale - Dollars

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Impacts after mitigation

(1) Loss of feeding and commuting habitat. The addition of areas of long grass will reduce the impact to a slight long-term negative impact.

(2) Loss of roosting habitat. The addition of bat boxes will reduce the impact to a slight long term negative impact on individual bats.



Bat Biology

Female bats gather in groups known as maternity roosts in summer to have their young. They generally have one baby each year, so are slow to reproduce, and disturbance of a maternity roost can be catastrophic.

In winter bats move to old stonework, trees and caves to hibernate. They are especially vulnerable here as they are slow to awaken, and if tree felling is carried out, they can easily be killed.

Species descriptions from Bat Conservation Ireland (2025), Biodiversity Ireland (2025) and further as listed below:

Common Pipistrelle and Soprano Pipistrelle

Pipistrellus pipistrellus and *Pipistrellus pygmaeus*

Ireland's two smallest bat species, and also the commonest, the common and soprano pipistrelles are the bats most likely to be seen flying around soon after dusk in both urban and rural areas. Both have a rapid, twisting flight as they pursue tiny prey of midges, mosquitoes and small moths. A single pipistrelle (weighing no more than 5-6g, the weight of a 1-euro piece) may consume as many as 3,000 of these insects in one night. Pipistrelles are frequently found roosting in houses, although they also roost in other locations such as tree holes. In houses they prefer to occupy confined spaces such as behind hanging tiles and soffit boards or between roofing felt and roof tiles, rather than the main attic space.

The two are called common and soprano because the latter echolocates at a higher frequency peaking at 55kHz, compared with the former which echolocates at a peak frequency of 46kHz. The soprano pipistrelle tends to form nursery (or maternity) roosts with larger numbers of individuals (up to 1,500) compared with the common pipistrelle which would typically have a much smaller nursery roost size.



Trends in these species are monitored annually using the [Car-based Bat Monitoring Scheme](#). Results from this scheme indicate that since 2003 the soprano pipistrelle has increased significantly while the common pipistrelle has also increased, albeit more slowly. The reasons for these increases are poorly understood but both species may be recovering from past declines, or responding to increased woodland cover and/or climate change.

Conservation status

HABITATS DIRECTIVE ARTICLE 17 REPORTING

Range: Favourable

Population: Favourable

Habitat: Favourable

Future Prospects: Favourable

Overall Assessment of Conservation Status: Favourable

Overall Trend in Conservation Status: N/A

Source: NPWS 2013.

IUCN Conservation Status

Ireland: Least Concern

Europe: Least Concern

Global: Least Concern

Sources: (1) Marnell, F. et al 2009; (2) Hutson T., et al 2007 (3) Hutson, A.M. et al 2008

Legal status

Protected by the following legal instruments:

- Habitats Directive (92/43/EEC), Annex IV
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II
- Agreement on the Conservation of Populations of European Bats (EUROBATS)
- Wildlife Act (1976)
- Wildlife (Amendment) Act (2000)
- Wildlife (N.I.) Order of 1985



Leisler's bat

Nyctalus leisleri

This is the biggest Irish bat and it is often found roosting in buildings although 13% of its roosts recorded in Ireland have been in trees. The Leisler's bat has distinctive level flight at greater heights than the other Irish species, from which it dives down after dung flies and beetles. It can be seen soon after sunset flying over open spaces such as parks and fields. Because it is one of the first bats to emerge in the evening and is quite large, the Leisler's may be confused with swifts that may also be flying around. They are best told apart by the wing shape, the swift's wings are smoothly curved and scimitar-like. Swifts also shriek, while the Leisler's bat is inaudible without a bat detector. The Leisler's bat is rare in Britain and the rest of Europe but it is relatively common here. For this reason the Irish population of Leisler's bats is considered of International Importance.

Leisler's bat is monitored by the [Car-based Bat Monitoring Scheme](#) and its annual trend has shown significant increases since 2003. The reasons for the increase is poorly understood but it may be recovering from past declines, or responding to increased woodland cover and/or climate change.

Conservation status

HABITATS DIRECTIVE ARTICLE 17 REPORTING

Range: Favourable

Population: Favourable

Habitat: Favourable

Future Prospects: Favourable

Overall Assessment of Conservation Status: Favourable

Overall Trend in Conservation Status: N/A

Source: NPWS 2013.

IUCN Conservation Status

Ireland: Near Threatened

Europe: Least Concern

Global: Least Concern



Sources: (1) Marnell, F. et al 2009; (2) Hutson T., et al 2007 (3) Hutson, A.M. et al 2008

Legal status

Protected by the following legal instruments:

- Habitats Directive (92/43/EEC), Annex IV
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II
- Agreement on the Conservation of Populations of European Bats (EUROBATS)
- Wildlife Act (1976)
- Wildlife (Amendment) Act (2000)
- Wildlife (N.I.) Order of 1985

Daubenton's bat

Myotis daubentonii

Often called the 'water bat', this species is easily recognised in flight by its low, level flight a few centimetres above the surface of lakes, slow-moving rivers and canals. It skims like a hovercraft above the water in search of caddisflies, mayflies and midges, and may even scoop prey from the water surface using its big feet. Many other bats feed over lakes and rivers, but none has such a close association with water as the Daubenton's. The Daubenton's bat can even swim if it makes a mistake and ends up in the water.

Daubenton's bats roost under stone bridges, in ruins, canal tunnels, trees and damp caves.

The Daubenton's bat annual trend is monitored using a volunteer-based programme – the [All Ireland Daubenton's Bat Waterways Survey](#). This scheme has been ongoing since 2006 and the Daubenton's bat trend has been reasonably stable since this time.

Conservation status

HABITATS DIRECTIVE ARTICLE 17 REPORTING

Range: Favourable

Population: Favourable

Habitat: Favourable

Future Prospects: Favourable

Overall Assessment of Conservation Status: Favourable

Overall Trend in Conservation Status: N/A

Source: NPWS 2013.

IUCN Conservation Status

Ireland: Least Concern

Europe: Least Concern

Global: Least Concern

Sources: (1) Marnell, F. et al 2009; (2) Hutson T., et al 2007 (3) Hutson, A.M. et al 2008

Legal status

Protected by the following legal instruments:

- Habitats Directive (92/43/EEC), Annex IV
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II
- Agreement on the Conservation of Populations of European Bats (EUROBATS)
- Wildlife Act (1976)
- Wildlife (Amendment) Act (2000)
- Wildlife (N.I.) Order of 1985

Natterer's bat

Myotis nattereri

One of the rarer Irish bat species, the Natterer's bat likes woodland, mature hedgerow and pasture habitats. The Natterer's bat has broad wings so can fly with great manoeuvrability among trees and around hedgerows. It sometimes gleans insects or even spiders from foliage and may eat larger prey at a feeding

perch. Its usual roost sites are in tree holes, old stone buildings such as churches and barns, and under bridges. This species has a fringe of stiff bristles along the trailing edge of its tail membrane, which may help to hold or trap its prey.

Conservation status

HABITATS DIRECTIVE ARTICLE 17 REPORTING

Range: Favourable

Population: Favourable

Habitat: Favourable

Future Prospects: Favourable

Overall Assessment of Conservation Status: Favourable

Overall Trend in Conservation Status: N/A

Source: NPWS 2013.

IUCN Conservation Status

Ireland: Least Concern

Europe: Least Concern

Global: Least Concern

Sources: (1) Marnell, F. et al 2009; (2) Hutson T., et al 2007 (3) Hutson, A.M. et al 2008

Legal status

Protected by the following legal instruments:

- Habitats Directive (92/43/EEC), Annex IV
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II
- Agreement on the Conservation of Populations of European Bats (EUROBATS)
- Wildlife Act (1976)
- Wildlife (Amendment) Act (2000)
- Wildlife (N.I.) Order of 1985

Brown long eared bat

Plecotus auritus

The huge ears of this bat are its most distinctive feature – they are almost as long as the body. Although they are probably quite common in Ireland, it is difficult to see long-eared bats in flight because they prefer to forage in woodland flying amongst the foliage, picking moths and other insects off leaves. These bats emit their quiet echolocation sounds through their nose. Larger prey items such as noctuid moths are taken to a feeding perch, often in a porch or outhouse. These perches are recognisable by the piles of insect remains, such as moth wings, which collect under them. The long-eared bat roosts in buildings such as houses with large attic spaces, churches, outbuildings and in tree holes.

A scheme for monitoring the brown long-eared bat at its roosts was developed in 2007 (the [Brown Long-eared Bat Roost Monitoring Scheme](#)). Thus far its population has been stable.

Conservation status

HABITATS DIRECTIVE ARTICLE 17 REPORTING

Range: Favourable

Population: Favourable

Habitat: Favourable

Future Prospects: Favourable

Overall Assessment of Conservation Status: Favourable

Overall Trend in Conservation Status: N/A

Source: NPWS 2013.

IUCN Conservation Status

Ireland: Least Concern

Europe: Least Concern

Global: Least Concern

Sources: (1) Marnell, F. et al 2009; (2) Hutson T., et al 2007 (3) Hutson, A.M. et al 2008

Legal status

Protected by the following legal instruments:

- Habitats Directive (92/43/EEC), Annex IV



- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II
- Agreement on the Conservation of Populations of European Bats (EUROBATS)
- Wildlife Act (1976)
- Wildlife (Amendment) Act (2000)
- Wildlife (N.I.) Order of 1985

Legislation

Bats are protected under the 1996 Wildlife Act, the 2000 Wildlife (Amendment) Act, S.I. No 477 of 2011, The Habitats Directive, The Bonn and Bern Convention, and the Eurobats agreement.

The European Community (Natural Habitats) Regulations S.I. No 477 of 2011 states:

51. (1) The Minister shall take the requisite measures to establish a system of strict protection for the fauna consisting of the species referred to in Part 1 of the First Schedule. (2) Notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under Regulation 54, a person who in respect of the species referred to in Part 1 of the First Schedule— (a) deliberately captures or kills any specimen of these species in the wild, (b) deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration, (c) deliberately takes or destroys eggs of those species from the wild, (d) damages or destroys a breeding site or resting place of such an animal, or (e) keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence. (3) The prohibitions referred to in paragraph (2) shall apply to all stages of life of the biological cycle of fauna to which this Regulation applies. (4) The Minister shall establish a system to monitor the incidental capture and killing of fauna consisting of the animal species referred to in Part 1 of the First Schedule and, having regard to the information gathered, he or she shall conduct further research or take such conservation measures as required to ensure that incidental capture and killing does not have a significant negative impact on the species concerned.



The EU Habitats Directive (92/43/EEC) lists all Irish bat species in Annex IV and one Irish species, the lesser horseshoe bat (*Rhinolophus hipposideros*), in Annex II. Annex II includes animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation (SACs) because they are endangered, rare, vulnerable or endemic. Annex IV includes various species that require strict protection. Article 11 of the Habitats Directive requires member states to monitor all species listed in the Habitats Directive and Article 17 requires States to report to the EU on the findings of monitoring schemes.

The Bern and Bonn Conventions:

Ireland is also a signatory to a number of conservation agreements pertaining to bats such as the Bern and Bonn Conventions. The European Bats Agreement (EUROBATS) is an agreement under the Bonn Convention. Ireland and the UK are two of the 31 signatories. The Agreement has an Action Plan with priorities for implementation. Devising strategies for monitoring of populations of selected bat species in Europe is among the resolutions of EUROBATS.

1.3.1 The Bern Convention:

Article 6 of the "Convention on the Conservation of European Wildlife and Natural Habitats" (Berne Convention) reads:

"Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species:

- a) all forms of deliberate capture and keeping and deliberate killing;
- b) the deliberate damage to or destruction of breeding or resting sites;
- c) the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention; ...

Appendix II lists strictly protected fauna species and this list includes "Microchiroptera, all species except *Pipistrellus pipistrelles*".



The EUROBATS Agreement:

The 'Agreement on the Conservation of Populations of European Bats' (EUROBATS) was negotiated under the 'Convention for the Conservation of Migratory Wild Species' (Bonn Convention) and came into force in January 1994. The legal protection of bats and their habitats are given in Article III as fundamental obligations:

“1. Each Party shall prohibit the deliberate capture, keeping or killing of bats except under permit from its competent authority

2. Each Party shall identify those sites within its own area of jurisdiction which are important for the conservation status, including for the shelter and protection, of bats. It shall, taking into account as necessary economic and social considerations, protect such sites from damage or disturbance. In addition, each Party shall endeavour to identify and protect important feeding areas for bats from damage or disturbance.”

The Agreement covers all European bat species.

website is <https://www.wildlifesurveys.net/>



About Our Team

Wildlife Surveys Ireland Ltd. was founded by Brian Keeley and Donna Mullen. The company undertakes a variety of ecological evaluations and operations and have provided advice to County Councils, government departments, NPWS, OPW, developers, individuals applying for planning applications, local community groups, Tidy Towns organisations and many more. Brian and Donna have been engaged in bat detector surveys since the late 1980s on a voluntary basis, and were first trained by Bat Conservation Trust in 1992. They have been involved in surveying for over 30 years and have surveyed in every county on the island of Ireland.

Brian and Donna are engaged in all surveys undertaken by Wildlife Surveys Ireland and are involved in the fieldwork for all larger projects or where there is a project that requires long-term experience and expertise. All reports are co-written by either Director and the principal fieldworker, to ensure that they address the issues of bat conservation correctly and thoroughly.

We trial our mitigation at our own nature reserve in North Meath – Golashane Nature Reserve, so we have firsthand knowledge of working mitigation.

Our company was a finalist in the RDS Rural Sustainability Awards in May 2022. In 2019, we achieved a Rural Inspiration Award, and presented our work on our nature reserve to Mr Phil Hogan in Brussels. A tree is planted on our reserve for each survey and 5% of our company profits are given to charities.

Brian Keeley BSc (Hons) zool

Director

Brian has been involved in overseas survey work in Wales, England, France, Hungary and Poland and was involved in the compilation of the NRA / TII publications on bat survey and mitigation for roads. Brian has been involved in bat conservation since 1988 and founded the Dublin Bat Group (and later Bat Conservation Group Dublin) and Bat Conservation Ireland and has served as chair of this group for much of its existence. Brian is still a Council member of BC Ireland. Brian has been vaccinated against Rabies and is licensed to disturb roosts for the purpose of survey.



Donna Mullen M.P.P.M D.E.N.V.S.P

Director

Donna Mullen is a founder member of Bat Conservation Ireland and the Irish Environmental Network. She was involved in drawing up the guidelines for the Heritage Council on bats and traditional farm buildings and has worked on providing new roosts and adapting old roosts to facilitate bats. This work includes surveying, advising architects, working with derogations and monitoring. She has also worked with the Irish Landmark Trust and the OPW providing advice on castles and old buildings. She has a strong interest in environmental law and worked on case 183/05 which was successful in the ECJ. She has recently published a book "Make Your Home A Nature Reserve" – O'Brien Press, and is a frequent contributor on wildlife matters with the Claire Byrne Show on RTE. Donna has been vaccinated against Rabies and is licensed to disturb roosts for the purpose of survey.

Ferdia Keeley BSc (Hons). Cert in Field survey techniques

Field ecologist

Ferdia Keeley has been undertaking bat surveys for seven years. During this time, he has been tutored by both Brian and Donna in bat activity survey techniques and has operated a variety of bat detectors including Echometer EM2 and EM3, Echometer Touch, Echometer Touch 2 Pro, Anabat, Batbox III, Pettersson D240X and most recently Batlogger M2. Ferdia has also installed static monitors within sites: Songmeter 2, Songmeter Mini Bat and Songmeter Mini Bat 2. Ferdia has been trained in bat tree surveys with Flight Ecology Surveying England.. He is training with Bat Conservation Ireland for trapping techniques and has been training with WSI in capturing and handling bats and identification of Irish bats. Ferdia has been vaccinated against Rabies and is licensed to disturb roosts for the purpose of survey. (Note: the welfare of bats is paramount in the survey work of WSI and once a roost has been established, no further disturbance to the roost is permitted).

Saoirse Keeley BCL(Hons) (Law and business, Maynooth University)

Legal support

Saoirse has a bachelor's degree in law and business, and has a particular interest in European Law and Environmental Regulation. She helps with the preparation of



environmental reports and contributes to applications for derogation licences. Her understanding of legal frameworks – particularly around EU and constitutional environmental legislation – has been really useful in ensuring our work meets regulatory requirements. She also brings strong research, analytical and communication skills to the team. Saoirse has also trained with Bat Conservation Ireland and frequently leads bat walks. Saoirse is rabies vaccinated.

Hugh Keeley

Student surveyor

Hugh assists in surveying under instruction from a senior ecologist. Hugh has an interest in business economics and is studying for a degree in Maynooth University. Hugh assists with bat walks and talks and is particularly good in dealing with bat rehabilitation. Hugh is vaccinated against rabies.

Appendix I -Definition of Effects – EPA 2017

TABLE 3. DEFINITION OF SIGNIFICANCE OF EFFECTS.

Significance of Effects	Definition
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics

3.5.2.3 Criteria Used to Define Duration of Effects

In line with the EPA Guidelines (EPA, 2017), the following terms are defined when quantifying duration and frequency of effects. See Table 4, below.

TABLE 4. DEFINITION OF DURATION OF EFFECTS.

Quality	Definition
Momentary Effects	Effects lasting from seconds to minutes
Brief Effects	Effects lasting less than a day
Temporary Effects	Effects lasting less than a year
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years
Permanent Effects	Effects lasting over sixty years
Reversible Effects	Effects that can be undone, for example through remediation or restoration

Appendix II – Bat Data

Data from Song meter mini placed underground



File Help

	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
1	NEWMINI01_20250802_031332.wav	NEWMINI01_20250802_031332_000.wav	MYOMYS	3	2	0.667000		2025-08-02	03:13:32
2	NEWMINI01_20250802_031305.wav	NEWMINI01_20250802_031305_000.wav	MYONAT	6	7	0.875000		2025-08-02	03:13:05
3	NEWMINI01_20250802_030512.wav	NEWMINI01_20250802_030512_000.wav	MYONAT	5	4	0.800000		2025-08-02	03:05:12
4	NEWMINI01_20250802_031357.wav	NEWMINI01_20250802_031357_000.wav	MYONAT	3	3	1.000000		2025-08-02	03:13:57
5	NEWMINI01_20250802_022404.wav	NEWMINI01_20250802_022404_000.wav	MYONAT	2	2	1.000000		2025-08-02	02:24:04
6	NEWMINI01_20250802_032652.wav	NEWMINI01_20250802_032652_000.wav	NYCLEI	5	5	1.000000		2025-08-02	03:26:52
7	NEWMINI01_20250801_213918.wav	NEWMINI01_20250801_213918_000.wav	NoID	2	0	0.000000	Noise	2025-08-01	21:39:18
8	NEWMINI01_20250802_024819.wav	NEWMINI01_20250802_024819_000.wav	NoID	2	0	0.000000	Noise	2025-08-02	02:48:19
9	NEWMINI01_20250802_030212.wav	NEWMINI01_20250802_030212_000.wav	NoID	4	0	0.000000	Noise	2025-08-02	03:02:12
10	NEWMINI01_20250802_030818.wav	NEWMINI01_20250802_030818_000.wav	NoID	2	0	0.000000	Noise	2025-08-02	03:08:18
11	NEWMINI01_20250802_031122.wav	NEWMINI01_20250802_031122_000.wav	NoID	2	0	0.000000	MYOTIS	2025-08-02	03:11:22
12	NEWMINI01_20250802_052827.wav	NEWMINI01_20250802_052827_000.wav	NoID	3	0	0.000000	Noise	2025-08-02	05:28:27
13	NEWMINI01_20250802_052859.wav	NEWMINI01_20250802_052859_000.wav	NoID	2	0	0.000000	Noise	2025-08-02	05:28:59
210	NEWMINI01_20250802_054447.wav	NEWMINI01_20250802_054447_000.wav	Noise					2025-08-02	05:44:47
211	NEWMINI01_20250802_054503.wav	NEWMINI01_20250802_054503_000.wav	Noise					2025-08-02	05:45:03
212	NEWMINI01_20250802_054524.wav	NEWMINI01_20250802_054524_000.wav	Noise					2025-08-02	05:45:24
213	NEWMINI01_20250802_054544.wav	NEWMINI01_20250802_054544_000.wav	Noise					2025-08-02	05:45:44
214	NEWMINI01_20250802_030313.wav	NEWMINI01_20250802_030313_000.wav	PIPPIP	9	9	1.000000	PIPPIP	2025-08-02	03:03:13
215	NEWMINI01_20250802_035517.wav	NEWMINI01_20250802_035517_000.wav	PIPPIP	10	9	0.900000	PIPPIP	2025-08-02	03:55:17
216	NEWMINI01_20250801_222917.wav	NEWMINI01_20250801_222917_000.wav	PIPPIP	8	8	1.000000		2025-08-01	22:29:17
217	NEWMINI01_20250802_031234.wav	NEWMINI01_20250802_031234_000.wav	PIPPIP	6	6	1.000000		2025-08-02	03:12:34
218	NEWMINI01_20250802_042816.wav	NEWMINI01_20250802_042816_000.wav	PIPPIP	5	5	1.000000		2025-08-02	04:28:16
219	NEWMINI01_20250802_030403.wav	NEWMINI01_20250802_030403_000.wav	PIPPIP	3	3	1.000000		2025-08-02	03:04:03
220	NEWMINI01_20250801_230648.wav	NEWMINI01_20250801_230648_000.wav	PIPPIP	4	3	0.750000		2025-08-01	23:06:48
221	NEWMINI01_20250802_002336.wav	NEWMINI01_20250802_002336_000.wav	PIPPIP	2	2	1.000000		2025-08-02	00:23:36
222	NEWMINI01_20250802_052544.wav	NEWMINI01_20250802_052544_000.wav	PIPPIP	2	2	1.000000		2025-08-02	05:25:44
223	NEWMINI01_20250802_033410.wav	NEWMINI01_20250802_033410_000.wav	PIPPYIG	2	2	1.000000		2025-08-02	03:34:10

Data from song meter mini placed on the south wall

File Help

	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
1	FERDIA_20250801_232452.wav	FERDIA_20250801_232452_000.wav	MYODAU	2	2	1.000000	MYODAU	2025-08-01	23:24:52
2	FERDIA_20250802_003315.wav	FERDIA_20250802_003315_000.wav	MYONAT	4	4	1.000000	MYONAT	2025-08-02	00:33:15
3	FERDIA_20250802_012654.wav	FERDIA_20250802_012654_000.wav	MYONAT	3	3	1.000000	MYONAT	2025-08-02	01:26:54
4	FERDIA_20250801_232437.wav	FERDIA_20250801_232437_000.wav	MYONAT	2	2	1.000000		2025-08-01	23:24:37
5	FERDIA_20250802_022849.wav	FERDIA_20250802_022849_000.wav	NYCLEI	24	24	1.000000		2025-08-02	02:28:49
6	FERDIA_20250802_003530.wav	FERDIA_20250802_003530_000.wav	NYCLEI	12	12	1.000000		2025-08-02	00:35:30
7	FERDIA_20250801_232035.wav	FERDIA_20250801_232035_000.wav	NYCLEI	5	4	0.800000		2025-08-01	23:20:35
8	FERDIA_20250802_032521.wav	FERDIA_20250802_032521_000.wav	NoID	7	0	0.000000		2025-08-02	03:25:21
9	FERDIA_20250802_020713.wav	FERDIA_20250802_020713_000.wav	NoID	7	0	0.000000		2025-08-02	02:07:13
10	FERDIA_20250802_033650.wav	FERDIA_20250802_033650_000.wav	NoID	11	0	0.000000		2025-08-02	03:36:50

File Help

	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
182	FERDIA_20250802_044739.wav	FERDIA_20250802_044739_000.wav	Noise					2025-08-02	04:47:39
183	FERDIA_20250802_044754.wav	FERDIA_20250802_044754_000.wav	Noise					2025-08-02	04:47:54
184	FERDIA_20250802_032900.wav	FERDIA_20250802_032900_000.wav	PIPPIP	149	140	0.940000		2025-08-02	03:29:00
185	FERDIA_20250801_214920.wav	FERDIA_20250801_214920_000.wav	PIPPIP	122	122	1.000000		2025-08-01	21:49:20
186	FERDIA_20250801_215439.wav	FERDIA_20250801_215439_000.wav	PIPPIP	120	119	0.992000		2025-08-01	21:54:39
187	FERDIA_20250802_032915.wav	FERDIA_20250802_032915_000.wav	PIPPIP	116	104	0.897000		2025-08-02	03:29:15
188	FERDIA_20250802_033329.wav	FERDIA_20250802_033329_000.wav	PIPPIP	103	100	0.971000		2025-08-02	03:33:29
189	FERDIA_20250801_214104.wav	FERDIA_20250801_214104_000.wav	PIPPIP	99	98	0.990000		2025-08-01	21:41:04
190	FERDIA_20250802_033048.wav	FERDIA_20250802_033048_000.wav	PIPPIP	95	95	1.000000		2025-08-02	03:30:48
191	FERDIA_20250801_213650.wav	FERDIA_20250801_213650_000.wav	PIPPIP	93	93	1.000000		2025-08-01	21:36:50
192	FERDIA_20250802_032946.wav	FERDIA_20250802_032946_000.wav	PIPPIP	93	93	1.000000		2025-08-02	03:29:46
193	FERDIA_20250802_032930.wav	FERDIA_20250802_032930_000.wav	PIPPIP	83	82	0.988000		2025-08-02	03:29:30
194	FERDIA_20250802_033028.wav	FERDIA_20250802_033028_000.wav	PIPPIP	103	81	0.786000		2025-08-02	03:30:28
195	FERDIA_20250802_033302.wav	FERDIA_20250802_033302_000.wav	PIPPIP	81	79	0.975000		2025-08-02	03:33:02
196	FERDIA_20250802_033241.wav	FERDIA_20250802_033241_000.wav	PIPPIP	86	78	0.907000		2025-08-02	03:32:41
197	FERDIA_20250801_221503.wav	FERDIA_20250801_221503_000.wav	PIPPIP	78	75	0.962000		2025-08-01	22:15:03
198	FERDIA_20250802_031907.wav	FERDIA_20250802_031907_000.wav	PIPPIP	73	71	0.973000		2025-08-02	03:19:07
199	FERDIA_20250802_032827.wav	FERDIA_20250802_032827_000.wav	PIPPIP	68	68	1.000000		2025-08-02	03:28:27
200	FERDIA_20250802_031430.wav	FERDIA_20250802_031430_000.wav	PIPPIP	67	65	0.970000		2025-08-02	03:14:30
201	FERDIA_20250801_232645.wav	FERDIA_20250801_232645_000.wav	PIPPIP	62	62	1.000000		2025-08-01	23:26:45
202	FERDIA_20250802_033301.wav	FERDIA_20250802_033301_000.wav	PIPPIP	61	61	1.000000		2025-08-02	03:33:01
203	FERDIA_20250802_033116.wav	FERDIA_20250802_033116_000.wav	PIPPIP	64	61	0.952000		2025-08-02	03:31:16
204	FERDIA_20250801_232702.wav	FERDIA_20250801_232702_000.wav	PIPPIP	76	61	0.803000		2025-08-01	23:27:02
205	FERDIA_20250801_213705.wav	FERDIA_20250801_213705_000.wav	PIPPIP	62	60	0.968000		2025-08-01	21:37:05
206	FERDIA_20250802_031757.wav	FERDIA_20250802_031757_000.wav	PIPPIP	60	59	0.983000		2025-08-02	03:17:57
207	FERDIA_20250802_035104.wav	FERDIA_20250802_035104_000.wav	PIPPIP	62	58	0.935000		2025-08-02	03:51:04
208	FERDIA_20250802_032309.wav	FERDIA_20250802_032309_000.wav	PIPPIP	60	57	0.950000		2025-08-02	03:23:09
209	FERDIA_20250801_213422.wav	FERDIA_20250801_213422_000.wav	PIPPIP	59	55	0.932000		2025-08-01	21:34:22
210	FERDIA_20250802_033016.wav	FERDIA_20250802_033016_000.wav	PIPPIP	54	54	1.000000		2025-08-02	03:30:16
211	FERDIA_20250802_032844.wav	FERDIA_20250802_032844_000.wav	PIPPIP	58	50	0.862000		2025-08-02	03:28:44
212	FERDIA_20250801_212943.wav	FERDIA_20250801_212943_000.wav	PIPPIP	48	48	1.000000		2025-08-01	21:29:43
213	FERDIA_20250801_213119.wav	FERDIA_20250801_213119_000.wav	PIPPIP	48	48	1.000000		2025-08-01	21:31:19
214	FERDIA_20250802_032231.wav	FERDIA_20250802_032231_000.wav	PIPPIP	49	47	0.959000		2025-08-02	03:22:31
215	FERDIA_20250801_214429.wav	FERDIA_20250801_214429_000.wav	PIPPIP	50	47	0.940000		2025-08-01	21:44:29
216	FERDIA_20250802_032631.wav	FERDIA_20250802_032631_000.wav	PIPPIP	46	46	1.000000		2025-08-02	03:26:31
217	FERDIA_20250802_031817.wav	FERDIA_20250802_031817_000.wav	PIPPIP	48	46	0.958000		2025-08-02	03:18:17
218	FERDIA_20250802_021020.wav	FERDIA_20250802_021020_000.wav	PIPPIP	45	45	1.000000		2025-08-02	02:10:20
219	FERDIA_20250802_031857.wav	FERDIA_20250802_031857_000.wav	PIPPIP	44	44	1.000000		2025-08-02	03:18:57
220	FERDIA_20250802_025717.wav	FERDIA_20250802_025717_000.wav	PIPPIP	45	44	0.978000		2025-08-02	02:57:17
221	FERDIA_20250802_032651.wav	FERDIA_20250802_032651_000.wav	PIPPIP	43	43	1.000000		2025-08-02	03:26:51
222	FERDIA_20250802_005610.wav	FERDIA_20250802_005610_000.wav	PIPPIP	44	42	0.955000		2025-08-02	00:56:10



File Help

	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
301	FERDIA_20250801_214146.wav	FERDIA_20250801_214146_000.wav	PIPPIP	2	2	1.000000		2025-08-01	21:41:46
302	FERDIA_20250802_003632.wav	FERDIA_20250802_003632_000.wav	PIPPIP	2	2	1.000000		2025-08-02	00:36:32
303	FERDIA_20250801_225726.wav	FERDIA_20250801_225726_000.wav	PIPPYVG	117	117	1.000000		2025-08-01	22:57:26
304	FERDIA_20250801_224119.wav	FERDIA_20250801_224119_000.wav	PIPPYVG	56	56	1.000000	PIPPYVG	2025-08-01	22:41:19
305	FERDIA_20250802_030203.wav	FERDIA_20250802_030203_000.wav	PIPPYVG	54	53	0.981000		2025-08-02	03:02:03
306	FERDIA_20250802_010543.wav	FERDIA_20250802_010543_000.wav	PIPPYVG	49	49	1.000000		2025-08-02	01:05:43
307	FERDIA_20250802_030546.wav	FERDIA_20250802_030546_000.wav	PIPPYVG	46	46	1.000000		2025-08-02	03:05:46
308	FERDIA_20250802_011732.wav	FERDIA_20250802_011732_000.wav	PIPPYVG	45	45	1.000000		2025-08-02	01:17:32
309	FERDIA_20250802_004536.wav	FERDIA_20250802_004536_000.wav	PIPPYVG	47	41	0.872000		2025-08-02	00:45:36
310	FERDIA_20250802_030525.wav	FERDIA_20250802_030525_000.wav	PIPPYVG	37	37	1.000000		2025-08-02	03:05:25
311	FERDIA_20250802_034441.wav	FERDIA_20250802_034441_000.wav	PIPPYVG	35	34	0.971000		2025-08-02	03:44:41
312	FERDIA_20250801_232733.wav	FERDIA_20250801_232733_000.wav	PIPPYVG	29	29	1.000000		2025-08-01	23:27:33
313	FERDIA_20250802_034832.wav	FERDIA_20250802_034832_000.wav	PIPPYVG	26	22	0.846000		2025-08-02	03:48:32
314	FERDIA_20250802_034443.wav	FERDIA_20250802_034443_000.wav	PIPPYVG	20	20	1.000000		2025-08-02	03:44:43
315	FERDIA_20250801_205853.wav	FERDIA_20250801_205853_000.wav	PIPPYVG	19	19	1.000000		2025-08-01	20:58:53
316	FERDIA_20250802_033454.wav	FERDIA_20250802_033454_000.wav	PIPPYVG	19	19	1.000000		2025-08-02	03:34:54
317	FERDIA_20250802_035037.wav	FERDIA_20250802_035037_000.wav	PIPPYVG	19	19	1.000000		2025-08-02	03:50:37
318	FERDIA_20250802_033137.wav	FERDIA_20250802_033137_000.wav	PIPPYVG	31	19	0.613000		2025-08-02	03:31:37
319	FERDIA_20250802_033146.wav	FERDIA_20250802_033146_000.wav	PIPPYVG	31	19	0.613000		2025-08-02	03:31:46
320	FERDIA_20250802_030239.wav	FERDIA_20250802_030239_000.wav	PIPPYVG	19	18	0.947000		2025-08-02	03:02:39
321	FERDIA_20250802_033501.wav	FERDIA_20250802_033501_000.wav	PIPPYVG	20	17	0.850000		2025-08-02	03:35:01
322	FERDIA_20250801_223730.wav	FERDIA_20250801_223730_000.wav	PIPPYVG	16	16	1.000000		2025-08-01	22:37:30
323	FERDIA_20250802_030346.wav	FERDIA_20250802_030346_000.wav	PIPPYVG	17	16	0.941000		2025-08-02	03:03:46
324	FERDIA_20250801_205148.wav	FERDIA_20250801_205148_000.wav	PIPPYVG	15	15	1.000000		2025-08-01	20:51:48
325	FERDIA_20250802_000815.wav	FERDIA_20250802_000815_000.wav	PIPPYVG	15	15	1.000000		2025-08-02	00:08:15
326	FERDIA_20250802_012510.wav	FERDIA_20250802_012510_000.wav	PIPPYVG	15	15	1.000000		2025-08-02	01:25:10
327	FERDIA_20250802_030813.wav	FERDIA_20250802_030813_000.wav	PIPPYVG	14	13	0.929000		2025-08-02	03:08:13
328	FERDIA_20250802_023650.wav	FERDIA_20250802_023650_000.wav	PIPPYVG	15	10	0.667000		2025-08-02	02:36:50
329	FERDIA_20250801_220259.wav	FERDIA_20250801_220259_000.wav	PIPPYVG	8	8	1.000000		2025-08-01	22:02:59
330	FERDIA_20250802_023722.wav	FERDIA_20250802_023722_000.wav	PIPPYVG	9	8	0.889000		2025-08-02	02:37:22
331	FERDIA_20250802_004449.wav	FERDIA_20250802_004449_000.wav	PIPPYVG	12	8	0.667000		2025-08-02	00:44:49
332	FERDIA_20250801_232133.wav	FERDIA_20250801_232133_000.wav	PIPPYVG	7	7	1.000000		2025-08-01	23:21:33
333	FERDIA_20250802_010714.wav	FERDIA_20250802_010714_000.wav	PIPPYVG	6	6	1.000000		2025-08-02	01:07:14
334	FERDIA_20250802_023613.wav	FERDIA_20250802_023613_000.wav	PIPPYVG	5	5	1.000000		2025-08-02	02:36:13
335	FERDIA_20250802_023705.wav	FERDIA_20250802_023705_000.wav	PIPPYVG	5	5	1.000000		2025-08-02	02:37:05
336	FERDIA_20250802_030234.wav	FERDIA_20250802_030234_000.wav	PIPPYVG	4	4	1.000000		2025-08-02	03:02:34
337	FERDIA_20250802_030224.wav	FERDIA_20250802_030224_000.wav	PIPPYVG	4	4	1.000000		2025-08-02	03:02:24
338	FERDIA_20250802_004551.wav	FERDIA_20250802_004551_000.wav	PIPPYVG	7	4	0.571000		2025-08-02	00:45:51
339	FERDIA_20250802_004516.wav	FERDIA_20250802_004516_000.wav	PIPPYVG	2	2	1.000000		2025-08-02	00:45:16
340	FERDIA_20250802_015626.wav	FERDIA_20250802_015626_000.wav	PLEAUR	9	8	0.889000		2025-08-02	01:56:26
341	FERDIA_20250802_014751.wav	FERDIA_20250802_014751_000.wav	PLEAUR	2	2	1.000000		2025-08-02	01:47:51

Data from handheld Batlogger DM

C:\Users\donna\OneDrive\Documents\castlelost batloggerdm\id.csv

File Help

	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
1	22200102.wav	22200102_00000_000.wav	MYONAT	17	12	0.824000		2025-08-02	04:28:19
2	22200137.wav	22200137_00000_000.wav	NoID	7	0	0.000000	Noise	2025-08-02	04:47:59
3	22200004.wav	22200004_00000_000.wav	Noise					2025-08-01	21:55:27



File Help

	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
52	22200130.wav	22200130_00000_000.wav	Noise					2025-08-02	04:34:26
53	22200134.wav	22200134_00000_000.wav	Noise					2025-08-02	04:44:09
54	22200136.wav	22200136_00000_000.wav	Noise					2025-08-02	04:47:18
55	22200110.wav	22200110_00015_000.wav	Noise					2025-08-02	04:29:47
56	22200053.wav	22200053_00000_000.wav	PIPPIP	98	98	1.000000		2025-08-01	22:59:41
57	22200029.wav	22200029_00000_000.wav	PIPPIP	92	92	1.000000		2025-08-01	22:40:28
58	22200027.wav	22200027_00000_000.wav	PIPPIP	91	91	1.000000		2025-08-01	22:36:19
59	22200063.wav	22200063_00000_000.wav	PIPPIP	94	88	0.936000		2025-08-01	23:06:07
60	22200039.wav	22200039_00000_000.wav	PIPPIP	86	86	1.000000		2025-08-01	22:54:03
61	22200037.wav	22200037_00000_000.wav	PIPPIP	84	84	1.000000		2025-08-01	22:48:44
62	22200074.wav	22200074_00000_000.wav	PIPPIP	78	76	0.974000		2025-08-01	23:08:04
63	22200073.wav	22200073_00000_000.wav	PIPPIP	85	76	0.894000		2025-08-01	23:07:50
64	22200070.wav	22200070_00000_000.wav	PIPPIP	81	73	0.901000		2025-08-01	23:07:11
65	22200068.wav	22200068_00000_000.wav	PIPPIP	85	73	0.859000		2025-08-01	23:06:52
66	22200067.wav	22200067_00000_000.wav	PIPPIP	73	67	0.918000		2025-08-01	23:06:38
67	22200110.wav	22200110_00000_000.wav	PIPPIP	64	64	1.000000		2025-08-02	04:29:32
68	22200035.wav	22200035_00000_000.wav	PIPPIP	68	63	0.926000		2025-08-01	22:43:51
69	22200048.wav	22200048_00000_000.wav	PIPPIP	55	55	1.000000		2025-08-01	22:58:51
70	22200109.wav	22200109_00000_000.wav	PIPPIP	53	52	0.981000		2025-08-02	04:29:20
71	22200034.wav	22200034_00000_000.wav	PIPPIP	58	50	0.862000		2025-08-01	22:43:40
72	22200135.wav	22200135_00000_000.wav	PIPPIP	49	49	1.000000		2025-08-02	04:47:03
73	22200083.wav	22200083_00000_000.wav	PIPPIP	50	47	0.940000		2025-08-01	23:12:21
74	22200075.wav	22200075_00000_000.wav	PIPPIP	48	46	0.958000		2025-08-01	23:08:20
75	22200047.wav	22200047_00000_000.wav	PIPPIP	46	45	0.978000		2025-08-01	22:58:38
76	22200050.wav	22200050_00000_000.wav	PIPPIP	52	45	0.865000		2025-08-01	22:59:16
77	22200046.wav	22200046_00000_000.wav	PIPPIP	42	42	1.000000		2025-08-01	22:58:22
78	22200038.wav	22200038_00000_000.wav	PIPPIP	38	38	1.000000		2025-08-01	22:49:25
79	22200056.wav	22200056_00000_000.wav	PIPPIP	35	35	1.000000		2025-08-01	23:01:53
80	22200111.wav	22200111_00000_000.wav	PIPPIP	35	35	1.000000		2025-08-02	04:29:47
81	22200066.wav	22200066_00000_000.wav	PIPPIP	34	33	0.971000		2025-08-01	23:06:30
82	22200028.wav	22200028_00000_000.wav	PIPPIP	32	32	1.000000		2025-08-01	22:36:33
83	22200036.wav	22200036_00000_000.wav	PIPPIP	31	30	0.968000		2025-08-01	22:44:03
84	22200104.wav	22200104_00000_000.wav	PIPPIP	32	30	0.938000		2025-08-02	04:28:31
85	22200091.wav	22200091_00000_000.wav	PIPPIP	28	28	1.000000		2025-08-02	04:19:58
86	22200107.wav	22200107_00000_000.wav	PIPPIP	28	28	1.000000		2025-08-02	04:29:04
87	22200049.wav	22200049_00000_000.wav	PIPPIP	28	27	0.964000		2025-08-01	22:59:06
88	22200106.wav	22200106_00000_000.wav	PIPPIP	26	26	1.000000		2025-08-02	04:28:58
89	22200031.wav	22200031_00000_000.wav	PIPPIP	27	26	0.963000		2025-08-01	22:41:13
90	22200018.wav	22200018_00000_000.wav	PIPPIP	26	25	0.962000		2025-08-01	22:30:44
91	22200077.wav	22200077_00000_000.wav	PIPPIP	26	24	0.923000		2025-08-01	23:10:01
92	22200058.wav	22200058_00000_000.wav	PIPPIP	22	22	1.000000		2025-08-01	23:04:55



	IN FILE	OUT FILE FS	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID	DATE	TIME
109	22200089.wav	22200089_00000_000.wav	PIPIIP	11	11	1.000000		2025-08-02	04:19:49
110	22200095.wav	22200095_00000_000.wav	PIPIIP	11	11	1.000000		2025-08-02	04:22:05
111	22200014.wav	22200014_00000_000.wav	PIPIIP	10	10	1.000000		2025-08-01	22:26:05
112	22200103.wav	22200103_00000_000.wav	PIPIIP	10	10	1.000000		2025-08-02	04:28:26
113	22200071.wav	22200071_00000_000.wav	PIPIIP	11	10	0.909000		2025-08-01	23:07:25
114	22200022.wav	22200022_00000_000.wav	PIPIIP	9	9	1.000000		2025-08-01	22:33:45
115	22200114.wav	22200114_00000_000.wav	PIPIIP	9	9	1.000000		2025-08-02	04:30:22
116	22200131.wav	22200131_00000_000.wav	PIPIIP	9	9	1.000000		2025-08-02	04:34:32
117	22200020.wav	22200020_00000_000.wav	PIPIIP	8	8	1.000000		2025-08-01	22:33:35
118	22200090.wav	22200090_00000_000.wav	PIPIIP	7	7	1.000000		2025-08-02	04:19:56
119	22200127.wav	22200127_00000_000.wav	PIPIIP	7	7	1.000000		2025-08-02	04:33:17
120	22200121.wav	22200121_00000_000.wav	PIPIIP	6	6	1.000000		2025-08-02	04:32:27
121	22200011.wav	22200011_00000_000.wav	PIPIIP	5	5	1.000000		2025-08-01	22:25:22
122	22200061.wav	22200061_00000_000.wav	PIPIIP	6	5	0.833000		2025-08-01	23:06:00
123	22200120.wav	22200120_00000_000.wav	PIPIIP	7	5	0.714000		2025-08-02	04:32:08
124	22200030.wav	22200030_00000_000.wav	PIPIIP	4	4	1.000000		2025-08-01	22:40:43
125	22200093.wav	22200093_00000_000.wav	PIPIIP	4	4	1.000000		2025-08-02	04:20:56
126	22200069.wav	22200069_00000_000.wav	PIPIIP	6	4	0.667000		2025-08-01	23:07:07
127	22200012.wav	22200012_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-01	22:25:41
128	22200013.wav	22200013_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-01	22:25:56
129	22200032.wav	22200032_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-01	22:43:21
130	22200041.wav	22200041_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-01	22:56:51
131	22200045.wav	22200045_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-01	22:58:13
132	22200055.wav	22200055_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-01	23:00:04
133	22200139.wav	22200139_00000_000.wav	PIPIIP	3	3	1.000000		2025-08-02	04:50:18
134	22200019.wav	22200019_00000_000.wav	PIPIIP	2	2	1.000000		2025-08-01	22:33:31
135	22200025.wav	22200025_00000_000.wav	PIPIIP	2	2	1.000000		2025-08-01	22:34:42
136	22200033.wav	22200033_00000_000.wav	PIPIIP	2	2	1.000000		2025-08-01	22:43:32
137	22200052.wav	22200052_00000_000.wav	PIPIIP	3	2	0.667000		2025-08-01	22:59:36
138	22200132.wav	22200132_00000_000.wav	PIPIIP	3	2	0.667000		2025-08-02	04:36:41
139	22200128.wav	22200128_00000_000.wav	PIPPYG	28	28	1.000000		2025-08-02	04:34:02
140	22200054.wav	22200054_00000_000.wav	PIPPYG	32	24	0.750000		2025-08-01	22:59:55
141	22200133.wav	22200133_00000_000.wav	PIPPYG	22	22	1.000000		2025-08-02	04:44:02
142	22200129.wav	22200129_00000_000.wav	PIPPYG	16	16	1.000000		2025-08-02	04:34:16
143	22200008.wav	22200008_00000_000.wav	PIPPYG	15	15	1.000000		2025-08-01	22:10:53
144	22200002.wav	22200002_00000_000.wav	PIPPYG	12	12	1.000000		2025-08-01	21:54:47
145	22200005.wav	22200005_00000_000.wav	PIPPYG	8	8	1.000000		2025-08-01	21:55:29
146	22200138.wav	22200138_00000_000.wav	PIPPYG	7	7	1.000000		2025-08-02	04:50:01
147	22200003.wav	22200003_00000_000.wav	PIPPYG	6	6	1.000000		2025-08-01	21:55:16
148	22200009.wav	22200009_00000_000.wav	PIPPYG	3	3	1.000000		2025-08-01	22:23:44
149	22200116.wav	22200116_00000_000.wav	PIPPYG	4	3	0.750000		2025-08-02	04:30:55

Batlogger data handheld by Brian Keeley



DATE	TIME	LATITUDE	NS	LONGITUDE	EW	NAME	
8/1/20 25	21:59: 13	53.4243 4	N	7.32452	W	22070000_00000 _000	PIPPIP
8/1/20 25	22:00: 10	53.4243 2	N	7.32446	W	22070001_00000 _000	PIPPY G
8/1/20 25	22:13: 45	53.4244 8	N	7.32455	W	22070002_00000 _000	PIPPY G
8/1/20 25	22:19: 58	53.4244 7	N	7.32454	W	22070003_00000 _000	PIPPY G
8/1/20 25	22:20: 20	53.4244 8	N	7.32455	W	22070004_00000 _000	NOISE
8/1/20 25	22:29: 50	53.4244 9	N	7.32453	W	22070005_00000 _000	NOISE
8/1/20 25	22:31: 09	53.4237	N	7.32423	W	22070006_00000 _000	NOISE



8/1/20 25	22:34: 51	53.4213 7	N	7.32202	W	22070007_00000 _000	PIPPY G
8/1/20 25	22:36: 41	53.4203 2	N	7.32185	W	22070008_00000 _000	NOISE
8/1/20 25	22:36: 52	53.4202 1	N	7.32187	W	22070009_00000 _000	NOISE
8/1/20 25	22:39: 44	53.4212 1	N	7.32176	W	22070010_00000 _000	PIPPIP
8/1/20 25	22:39: 52	53.4213	N	7.32191	W	22070011_00000 _000	PIPPIP
8/1/20 25	22:40: 58	53.4217 9	N	7.32287	W	22070012_00000 _000	PIPPIP
8/1/20 25	22:42: 13	53.4241 5	N	7.32448	W	22070013_00000 _000	PIPPIP
8/1/20 25	22:42: 25	53.4241 9	N	7.32448	W	22070014_00000 _000	PIPPIP
8/1/20 25	22:42: 31	53.4242	N	7.32447	W	22070015_00000 _000	PIPPIP
8/1/20 25	22:43: 09	53.4242 6	N	7.32448	W	22070016_00000 _000	PIPPIP
8/1/20 25	22:45: 28	53.4245 3	N	7.32467	W	22070017_00000 _000	PIPPIP
8/1/20 25	22:45: 52	53.4245 1	N	7.32466	W	22070018_00000 _000	PIPPIP
8/1/20 25	22:49: 23	53.4244 5	N	7.32431	W	22070019_00000 _000	PIPPIP
8/1/20 25	22:49: 54	53.4244 6	N	7.32434	W	22070020_00000 _000	NOISE
8/1/20 25	22:50: 34	53.4244 5	N	7.32437	W	22070021_00000 _000	PIPPIP
8/1/20 25	22:50: 38	53.4244 4	N	7.32437	W	22070022_00000 _000	NoID
8/1/20 25	22:50: 48	53.4244 4	N	7.32437	W	22070022_00010 _001	PIPPIP
8/1/20 25	22:51: 23	53.4244 7	N	7.32436	W	22070023_00000 _000	PIPPIP



8/1/20 25	22:53: 30	53.4244 5	N	7.32448	W	22070024_00000 _000	PIPPIP
8/1/20 25	22:54: 42	53.4244 6	N	7.32433	W	22070025_00000 _000	NOISE
8/1/20 25	22:54: 52	53.4244 5	N	7.32433	W	22070026_00000 _000	PIPPIP
8/1/20 25	22:55: 56	53.4244 4	N	7.32433	W	22070027_00000 _000	PIPPIP
8/1/20 25	22:56: 03	53.4244 4	N	7.32435	W	22070028_00000 _000	PIPPIP
8/1/20 25	23:00: 18	53.4243 1	N	7.32447	W	22070029_00000 _000	PIPPIP
8/1/20 25	23:00: 34	53.4242 9	N	7.32443	W	22070030_00000 _000	PIPPIP
8/1/20 25	23:00: 49	53.4243	N	7.32445	W	22070031_00000 _000	PIPPIP
8/1/20 25	23:01: 01	53.4242 7	N	7.32445	W	22070032_00000 _000	PIPPIP
8/1/20 25	23:01: 11	53.4242 2	N	7.32445	W	22070033_00000 _000	NoID
8/1/20 25	23:01: 21	53.4242 2	N	7.32445	W	22070033_00010 _001	PIPPIP
8/1/20 25	23:01: 30	53.4241 8	N	7.32444	W	22070034_00000 _000	NoID
8/1/20 25	23:01: 40	53.4241 8	N	7.32444	W	22070034_00010 _001	NOISE
8/1/20 25	23:01: 44	53.4241 4	N	7.32444	W	22070035_00000 _000	NoID
8/1/20 25	23:01: 54	53.4241 4	N	7.32444	W	22070035_00010 _001	PIPPY G
8/1/20 25	23:03: 47	53.4229 8	N	7.32378	W	22070036_00000 _000	PIPPIP
8/1/20 25	23:06: 47	53.4214 4	N	7.32227	W	22070037_00000 _000	PIPPIP
8/1/20 25	23:08: 02	53.4211 4	N	7.32162	W	22070038_00000 _000	NoID



8/1/20 25	23:08: 12	53.4211 4	N	7.32162	W	22070038_00010 _001	PIPPIP
8/1/20 25	23:08: 17	53.4211 4	N	7.32162	W		
8/1/20 25	23:08: 18	53.4210 6	N	7.32164	W	22070039_00000 _000	PIPPIP
8/1/20 25	23:08: 24	53.4210 6	N	7.32162	W	22070040_00000 _000	NoID
8/1/20 25	23:08: 34	53.4210 6	N	7.32162	W	22070040_00010 _001	PIPPIP
8/1/20 25	23:08: 39	53.4210 6	N	7.32162	W		
8/1/20 25	23:08: 39	53.4209 8	N	7.32167	W	22070041_00000 _000	NoID
8/1/20 25	23:08: 49	53.4209 8	N	7.32167	W	22070041_00010 _001	PIPPIP
8/1/20 25	23:08: 54	53.4209 8	N	7.32167	W		
8/1/20 25	23:08: 53	53.4209 9	N	7.32172	W	22070042_00000 _000	NoID
8/1/20 25	23:09: 03	53.4209 9	N	7.32172	W	22070042_00010 _001	PIPPIP
8/1/20 25	23:09: 08	53.4209 9	N	7.32172	W		
8/1/20 25	23:09: 08	53.4209 9	N	7.32172	W	22070043_00000 _000	PIPPIP
8/1/20 25	23:09: 15	53.4209 9	N	7.32172	W	22070044_00000 _000	PIPPIP
8/1/20 25	23:09: 20	53.4209 9	N	7.32172	W	22070045_00000 _000	PIPPIP
8/1/20 25	23:09: 29	53.4209 9	N	7.32172	W	22070046_00000 _000	PIPPIP
8/1/20 25	23:09: 44	53.4209 8	N	7.32173	W	22070047_00000 _000	NoID
8/1/20 25	23:09: 54	53.4209 8	N	7.32173	W	22070047_00010 _001	PIPPIP



8/1/20 25	23:09: 59	53.4209 8	N	7.32173	W		
8/1/20 25	23:09: 58	53.4209 9	N	7.32174	W	22070048_00000 _000	NoID
8/1/20 25	23:10: 08	53.4209 9	N	7.32174	W	22070048_00010 _001	PIPPIP
8/1/20 25	23:10: 13	53.4209 9	N	7.32174	W		
8/1/20 25	23:10: 14	53.4208 9	N	7.32177	W	22070049_00000 _000	PIPPIP
8/1/20 25	23:11: 56	53.4200 5	N	7.32191	W	22070050_00000 _000	PIPPIP
8/1/20 25	23:12: 09	53.4200 4	N	7.3219	W	22070051_00000 _000	PIPPIP
8/1/20 25	23:13: 21	53.4199 7	N	7.32189	W	22070052_00000 _000	NOISE
8/1/20 25	23:14: 02	53.4199 6	N	7.32189	W	22070053_00000 _000	PIPPIP
8/1/20 25	23:14: 09	53.4199 6	N	7.32189	W	22070054_00000 _000	PIPPIP
8/1/20 25	23:14: 15	53.4199 6	N	7.32187	W	22070055_00000 _000	NoID
8/1/20 25	23:14: 25	53.4199 6	N	7.32187	W	22070055_00010 _001	PIPPIP
8/1/20 25	23:14: 32	53.4199 7	N	7.32188	W	22070056_00000 _000	PIPPIP
8/2/20 25	4:15:5 2	53.4214 3	N	7.32209	W	22070059_00000 _000	PIPPIP
8/2/20 25	4:17:0 2	53.4219 5	N	7.32268	W	22070060_00000 _000	PIPPIP
8/2/20 25	4:17:1 7	53.4221 2	N	7.32276	W	22070061_00000 _000	PIPPIP
8/2/20 25	4:17:2 8	53.4222 7	N	7.32283	W	22070062_00000 _000	PIPPY G
8/2/20 25	4:18:4 3	53.4230 3	N	7.32333	W	22070063_00000 _000	PIPPY G



8/2/20 25	4:19:4 4	53.4236 1	N	7.32376	W	22070064_00000 _000	PIPPY G
8/2/20 25	4:21:1 1	53.4241 9	N	7.32444	W	22070065_00000 _000	NoID
8/2/20 25	4:21:2 1	53.4241 9	N	7.32444	W	22070065_00010 _001	NOISE
8/2/20 25	4:21:3 8	53.4242 1	N	7.32446	W	22070066_00000 _000	PIPPIP
8/2/20 25	4:21:4 5	53.4242 5	N	7.32446	W	22070067_00000 _000	PIPPIP
8/2/20 25	4:21:5 4	53.4243	N	7.32443	W	22070068_00000 _000	PIPPIP
8/2/20 25	4:21:5 7	53.4243 1	N	7.32443	W	22070069_00000 _000	PIPPIP
8/2/20 25	4:22:0 9	53.4243 6	N	7.32438	W	22070070_00000 _000	PIPPIP
8/2/20 25	4:22:5 0	53.4245	N	7.32436	W	22070071_00000 _000	PIPPIP
8/2/20 25	4:23:2 0	53.4245 4	N	7.32455	W	22070072_00000 _000	PIPPIP
8/2/20 25	4:23:2 5	53.4245 4	N	7.32456	W	22070073_00000 _000	PIPPIP
8/2/20 25	4:23:5 4	53.4245 3	N	7.32465	W	22070074_00000 _000	PIPPIP
8/2/20 25	4:24:0 2	53.4245	N	7.32466	W	22070075_00000 _000	NOISE
8/2/20 25	4:27:3 3	53.4244 7	N	7.3245	W	22070076_00000 _000	PIPPIP
8/2/20 25	4:27:4 9	53.4244 4	N	7.3245	W	22070077_00000 _000	NoID
8/2/20 25	4:27:5 9	53.4244 4	N	7.3245	W	22070077_00010 _001	PIPPIP
8/2/20 25	4:28:0 8	53.4243 9	N	7.32447	W	22070078_00000 _000	PIPPIP
8/2/20 25	4:28:2 3	53.4243 9	N	7.32447	W	22070079_00000 _000	PIPPIP



8/2/20 25	4:28:3 4	53.4243 9	N	7.32447	W	22070080_00000 _000	PIPPIP
8/2/20 25	4:28:4 7	53.4243 9	N	7.32448	W	22070081_00000 _000	NoID
8/2/20 25	4:28:5 7	53.4243 9	N	7.32448	W	22070081_00010 _001	PIPPIP
8/2/20 25	4:28:5 9	53.4243 9	N	7.32447	W	22070082_00000 _000	PIPPIP
8/2/20 25	4:29:4 9	53.4244 9	N	7.32435	W	22070083_00000 _000	PIPPIP
8/2/20 25	4:30:0 0	53.4244 9	N	7.32435	W	22070084_00000 _000	NOISE
8/2/20 25	4:30:0 3	53.4244 9	N	7.32435	W	22070085_00000 _000	PIPPIP
8/2/20 25	4:30:1 8	53.4245	N	7.32434	W	22070086_00000 _000	NoID
8/2/20 25	4:30:2 8	53.4245	N	7.32434	W	22070086_00010 _001	PIPPIP
8/2/20 25	4:30:3 3	53.4245	N	7.32434	W		
8/2/20 25	4:30:3 2	53.4245 1	N	7.32434	W	22070087_00000 _000	NoID
8/2/20 25	4:30:4 2	53.4245 1	N	7.32434	W	22070087_00010 _001	PIPPIP
8/2/20 25	4:30:4 7	53.4245 1	N	7.32434	W		
8/2/20 25	4:30:4 8	53.4245 1	N	7.32431	W	22070088_00000 _000	PIPPIP
8/2/20 25	4:30:5 6	53.4245 1	N	7.32432	W	22070089_00000 _000	NoID
8/2/20 25	4:31:0 6	53.4245 1	N	7.32432	W	22070089_00010 _001	NOISE
8/2/20 25	4:31:0 8	53.4245	N	7.32433	W	22070090_00000 _000	NoID
8/2/20 25	4:31:1 8	53.4245	N	7.32433	W	22070090_00010 _001	PIPPIP



8/2/20 25	4:31:2 3	53.4245	N	7.32432	W	22070091_00000 _000	PIPPIP
8/2/20 25	4:31:2 5	53.4245	N	7.32432	W	22070092_00000 _000	NoID
8/2/20 25	4:31:3 5	53.4245	N	7.32432	W	22070092_00010 _001	PIPPIP
8/2/20 25	4:31:4 0	53.4245	N	7.32432	W		
8/2/20 25	4:31:4 0	53.4245 1	N	7.32437	W	22070093_00000 _000	PIPPIP
8/2/20 25	4:31:4 5	53.4245 2	N	7.32437	W	22070094_00000 _000	PIPPIP
8/2/20 25	4:31:5 4	53.4245 1	N	7.32436	W	22070095_00000 _000	PIPPIP
8/2/20 25	4:32:0 4	53.4245 1	N	7.32434	W	22070096_00000 _000	PIPPIP
8/2/20 25	4:32:1 0	53.4245 1	N	7.32434	W	22070097_00000 _000	PIPPIP
8/2/20 25	4:32:1 5	53.4245 1	N	7.32433	W	22070098_00000 _000	PIPPIP
8/2/20 25	4:32:2 5	53.4245 1	N	7.32434	W	22070099_00000 _000	NoID
8/2/20 25	4:32:3 5	53.4245 1	N	7.32435	W	22070100_00000 _000	PIPPIP
8/2/20 25	4:32:4 1	53.4245 1	N	7.32435	W	22070101_00000 _000	PIPPIP
8/2/20 25	4:32:4 8	53.4245 1	N	7.32436	W	22070102_00000 _000	NOISE
8/2/20 25	4:32:5 0	53.4245 1	N	7.32436	W	22070103_00000 _000	PIPPY G
8/2/20 25	4:32:5 4	53.4245 1	N	7.32437	W	22070104_00000 _000	PIPPY G
8/2/20 25	4:33:0 3	53.4245 1	N	7.32437	W	22070105_00000 _000	PIPPY G
8/2/20 25	4:33:0 9	53.4245 1	N	7.32435	W	22070106_00000 _000	PIPPY G



8/2/20 25	4:33:1 5	53.4245 1	N	7.32434	W	22070107_00000 _000	NoID
8/2/20 25	4:33:1 9	53.4245 1	N	7.32434	W	22070108_00000 _000	NOISE
8/2/20 25	4:33:2 8	53.4245 2	N	7.32433	W	22070109_00000 _000	NOISE
8/2/20 25	4:33:3 0	53.4245 2	N	7.32434	W	22070110_00000 _000	PIPPY G
8/2/20 25	4:33:3 3	53.4245 2	N	7.32435	W	22070111_00000 _000	NOISE
8/2/20 25	4:33:4 1	53.4245 1	N	7.32435	W	22070112_00000 _000	NoID
8/2/20 25	4:33:4 5	53.4245 1	N	7.32436	W	22070113_00000 _000	NoID
8/2/20 25	4:33:5 5	53.4245 1	N	7.32436	W	22070113_00010 _001	PIPPIP
8/2/20 25	4:34:0 0	53.4245 1	N	7.32436	W		
8/2/20 25	4:34:0 0	53.4245 1	N	7.32434	W	22070114_00000 _000	PIPPIP
8/2/20 25	4:34:0 9	53.4245	N	7.32434	W	22070115_00000 _000	PIPPIP
8/2/20 25	4:34:2 0	53.4245	N	7.32434	W	22070116_00000 _000	PIPPIP
8/2/20 25	4:34:3 2	53.4245 1	N	7.32432	W	22070117_00000 _000	NOISE
8/2/20 25	4:34:4 6	53.4245 2	N	7.32433	W	22070118_00000 _000	PIPPIP
8/2/20 25	4:35:0 1	53.4245 2	N	7.32432	W	22070119_00000 _000	PIPPIP
8/2/20 25	4:35:1 2	53.4245 2	N	7.32434	W	22070120_00000 _000	NOISE
8/2/20 25	4:36:0 0	53.4245 2	N	7.32432	W	22070121_00000 _000	PIPPY G
8/2/20 25	4:36:1 1	53.4245 3	N	7.32433	W	22070122_00000 _000	PIPPY G



8/2/20 25	4:36:1 7	53.4245 3	N	7.32434	W	22070123_00000 _000	PIPPY G
8/2/20 25	4:36:2 7	53.4245 2	N	7.32433	W	22070124_00000 _000	NoID
8/2/20 25	4:36:3 4	53.4245 2	N	7.32437	W	22070125_00000 _000	PIPPIP
8/2/20 25	4:37:1 1	53.4245 3	N	7.32433	W	22070126_00000 _000	PIPPIP
8/2/20 25	4:38:0 4	53.4245 4	N	7.32433	W	22070127_00000 _000	NoID
8/2/20 25	4:38:4 0	53.4245 2	N	7.32433	W	22070128_00000 _000	PIPPIP
8/2/20 25	4:41:3 2	53.4245	N	7.32434	W	22070129_00000 _000	MYOM YS
8/2/20 25	4:46:0 2	53.4244 9	N	7.32449	W	22070130_00000 _000	PIPPY G
8/2/20 25	4:48:0 5	53.4245 5	N	7.32456	W	22070131_00000 _000	PIPPY G
8/2/20 25	4:48:5 2	53.4244 8	N	7.3243	W	22070132_00000 _000	PIPPIP
8/2/20 25	4:49:0 1	53.4244 8	N	7.32431	W	22070133_00000 _000	NOISE
8/2/20 25	4:49:0 3	53.4244 8	N	7.32431	W	22070134_00000 _000	PIPPY G
8/2/20 25	4:49:1 0	53.4244 8	N	7.32431	W	22070135_00000 _000	PIPPY G
8/2/20 25	4:49:1 3	53.4244 8	N	7.3243	W	22070136_00000 _000	NoID
8/2/20 25	4:49:2 3	53.4244 8	N	7.3243	W	22070136_00010 _001	NOISE
8/2/20 25	4:49:2 8	53.4244 8	N	7.32431	W	22070137_00000 _000	PIPPY G
8/2/20 25	4:49:5 0	53.4244 8	N	7.3243	W	22070138_00000 _000	PIPPY G
8/2/20 25	4:49:5 7	53.4244 5	N	7.32429	W	22070139_00000 _000	PIPPY G



8/2/20 25	4:50:0 6	53.4244 4	N	7.3243	W	22070140_00000 _000	PIPPY G
8/2/20 25	4:50:1 6	53.4244 4	N	7.32429	W	22070141_00000 _000	PIPPY G
8/2/20 25	4:50:2 3	53.4244 4	N	7.32429	W	22070142_00000 _000	PIPPY G
8/2/20 25	4:50:3 4	53.4244 1	N	7.32431	W	22070143_00000 _000	NOISE
8/2/20 25	4:50:5 2	53.4244	N	7.32438	W	22070144_00000 _000	PIPPY G
8/2/20 25	4:51:0 0	53.4244	N	7.32438	W	22070145_00000 _000	PIPPY G
8/2/20 25	4:51:1 1	53.4244	N	7.32435	W	22070146_00000 _000	PIPPY G
8/2/20 25	4:51:3 3	53.4243 2	N	7.32426	W	22070147_00000 _000	PIPPY G
8/2/20 25	4:51:4 0	53.4243	N	7.32425	W	22070148_00000 _000	PIPPY G
8/2/20 25	4:51:4 5	53.4243	N	7.32425	W	22070149_00000 _000	NOISE
8/2/20 25	4:51:4 8	53.4243	N	7.32424	W	22070150_00000 _000	PIPPY G
8/2/20 25	4:52:1 3	53.4243 4	N	7.32424	W	22070151_00000 _000	PIPPIP
8/2/20 25	4:52:1 7	53.4243 7	N	7.32426	W	22070152_00000 _000	PIPPIP
8/2/20 25	5:30:3 0	53.4245	N	7.32455	W	22070154_00000 _000	NOISE
8/2/20 25	5:37:5 7	53.4242	N	7.32442	W	22070155_00000 _000	NOISE
8/2/20 25	5:38:0 8	53.4241 8	N	7.32441	W	22070156_00000 _000	NOISE
8/2/20 25	5:38:2 5	53.4241 8	N	7.32443	W	22070157_00000 _000	NOISE



Appendix III – Data from Bat Conservation Ireland – Records from within a 10km radius of the site

BCIreland data: search results 5 Aug 2025					
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all species within 10000m of N4493741809					
Roosts					
Name	Grid reference	Grid ref easting	Grid ref northing	Address	Species observed
09WHS1 WC	N3787336 256	2378 73	23625 6	Split Hills Esker Woodland, Tyrrellspass, Co. Westmeath	Pipistrellus pygmaeus
10WHNF1 WC	N3803937 697	2380 39	23769 7	New Forest Golf Course, Tyrrellspass, Co. Westmeath	Unidentified bat
10WHNF2 WC	N3801837 696	2380 18	23769 6	New Forest Golf Course, Tyrrellspass, Co. Westmeath	Nyctalus leisleri
11WHN521 WC	N4137043 062	2413 70	24306 2	N52, Mullingar, Co. Westmeath	Pipistrellus pygmaeus
11WHN522 WC	N4137243 062	2413 72	24306 2	N52, Mullingar, Co. Westmeath	Unidentified bat
11WHN523 WC	N4137443 065	2413 74	24306 5	N52, Mullingar, Co. Westmeath	Unidentified bat
11WHN524 WC	N4137443 069	2413 74	24306 9	N52, Mullingar, Co. Westmeath	Unidentified bat
11WHN525 WC	N4242545 233	2424 25	24523 3	N52, Mullingar, Co. Westmeath	Pipistrellus spp. (45kHz/55kHz)
11WHN526 WC	N4242545 233	2424 25	24523 3	N52, Mullingar, Co. Westmeath	
Castle Lost Castle	N4507941 369	2450 79	24136 9	Castle Lost, Westmeath	Myotis nattereri, Pipistrellus pipistrellus (45kHz), Plecotus auritus
Castle Lost Church	N4493741 784	2449 37	24178 4	Near Rocherfordbridge westmeath	Plecotus auritus, Myotis daubentonii



Commercial grain stores	N503511	250300	251100	Three storey farm building with barns and commercial grain stores, Downes, County Westmeath	Pipistrellus pipistrellus (45kHz)
Knockmant	N5267850933	252678	250933	Knockmant, County Westmeath N91 Y02P	Pipistrellus pygmaeus
Ladestown	N4049	240000	249000	Lough Ennel, Mullingar, County Westmeath	Unidentified bat
Lynburry Stable	N4305048800	243050	248800	Lynnbury B&B, Mullingar, County Westmeath	Myotis spp., Pipistrellus pygmaeus
Lynnbury House	N4305048800	243050	248800	Mullingar, County Westmeath	Pipistrellus pygmaeus
Tudenham Park	N419472	241900	247200	Mullingar, County Westmeath	Myotis daubentonii, Plecotus auritus, Pipistrellus pygmaeus
Transects					
Name	Grid reference start	Grid ref easting start	Grid ref northing start	Species observed	
Ballinagore Transect	N3605938950	236059	238950	Unidentified bat, Myotis daubentonii, Nyctalus leisleri, Pipistrellus spp. (45kHz/55kHz)	
Ballinea Bridge Transect	N3850051100	238500	251100	Myotis daubentonii, Unidentified bat	
Ballynagore Transect spot 1	N3605938950	236059	238950	Myotis daubentonii	
Ballynagore Transect spot 10	N3560039600	235600	239600	Myotis daubentonii, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri	
Ballynagore Transect spot 2	N3598739039	235987	239039		
Ballynagore Transect spot 3	N3588439059	235884	239059	Unidentified bat	



Ballynagore Transect spot 4	N3579039 095	2357 90	23909 5		
Ballynagore Transect spot 5	N3570739 167	2357 07	23916 7		
Ballynagore Transect spot 6	N3564439 264	2356 44	23926 4	Unidentified bat	
Ballynagore Transect spot 7	N3559439 358	2355 94	23935 8	Myotis daubentonii, Unidentified bat	
Ballynagore Transect spot 8	N3555339 483	2355 53	23948 3		
Ballynagore Transect spot 9	N3557339 575	2355 73	23957 5		
Baltrasna Bridge Transect	N4718051 300	2471 80	25130 0	Unidentified bat, Myotis daubentonii	
Bellmount Bridge Transect	N3950051 100	2395 00	25110 0	Myotis daubentonii, Unidentified bat, Nyctalus leisleri, Pipistrellus pipistrellus (45kHz)	
Butle	N4200050 300	2420 00	25030 0	Myotis daubentonii, Unidentified bat, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri	
Butler	N4200050 300	2420 00	25030 0		
Coola Mills Transect	N4200050 200	2420 00	25020 0	Myotis daubentonii, Unidentified bat	
Gaybrook Transect 1	N4520046 950	2452 00	24695 0	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz)	
Gaybrook Transect 2	N4740047 950	2474 00	24795 0	Nyctalus leisleri	
Gaybrook Transect 3	N4935047 650	2493 50	24765 0	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz)	
Gaybrook Transect 4	N4920045 350	2492 00	24535 0	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz)	
Gaybrook Transect 5	N4895043 150	2489 50	24315 0	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz)	
Gaybrook Transect 6	N4705044 750	2470 50	24475 0	Nyctalus leisleri	



Gaybrook Transect 7	N4710045 900	2471 00	24590 0	Nyctalus leisleri, Pipistrellus pygmaeus	
Gaybrook Transect 8	N4755044 350	2475 50	24435 0	Nyctalus leisleri	
Littlewood	N529479	2529 00	24790 0		
N11 (3) 2003-	N3570034 700	2357 00	23470 0	Pipistrellus pygmaeus, Nyctalus leisleri, Plecotus auritus, Pipistrellus pipistrellus (45kHz), Pipistrellus spp. (45kHz/55kHz), Pipistrellus nathusii	
N11 (4) 2003-	N3980032 900	2398 00	23290 0	Pipistrellus pipistrellus (45kHz), Pipistrellus spp. (45kHz/55kHz), Myotis spp., Unidentified bat, Pipistrellus pygmaeus, Plecotus auritus, Nyctalus leisleri, Pipistrellus nathusii	
Newells Bridge Transect	N3830042 300	2383 00	24230 0	Myotis daubentonii, Unidentified bat, Myotis nattereri, Pipistrellus spp. (45kHz/55kHz)	
Royal Canal, Coralstown	N5478749 802	2547 87	24980 2	Myotis daubentonii	
The Downs Kinnegad Transect	N5008550 707	2500 85	25070 7	Myotis daubentonii, Unidentified bat, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus	
Ad-hoc observations					
Survey	Grid reference	Grid ref east ing	Grid ref north ing	Date	Species observed
Ad Hoc Records collected during Monitoring	N356396	2356 00	23960 0	8/8/2012	Nyctalus leisleri, Pipistrellus spp. (45kHz/55kHz)
Ad Hoc Records collected during Monitoring	N3950051 100	2395 00	25110 0	8/10/2012	Pipistrellus pipistrellus (45kHz)
Bat Conservati on Ireland Bat Walks	N3951	2390 00	25100 0	5/17/2008	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri, Myotis daubentonii



Bat Survey - Scott Cawley	N503511	2503 00	25110 0	9/2/2008	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Myotis daubentonii, Pipistrellus pygmaeus
Bat Surveys - Tina Aughney	N4854444 585	2485 44	24458 5	5/10/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis spp.
Bat Surveys - Tina Aughney	N4838244 470	2483 82	24447 0	5/10/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
Bat Surveys - Tina Aughney	N4585944 383	2458 59	24438 3	5/10/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
Bat Surveys - Tina Aughney	N4582944 718	2458 29	24471 8	5/10/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis spp.
Bat Surveys - Tina Aughney	N4617845 310	2461 78	24531 0	5/10/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri, Myotis spp., Plecotus auritus
Bat Surveys - Tina Aughney	N4578745 519	2457 87	24551 9	5/11/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri, Plecotus auritus
Bat Surveys - Tina Aughney	N4608745 503	2460 87	24550 3	5/11/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Myotis spp.
Bat Surveys - Tina Aughney	N4604145 346	2460 41	24534 6	5/11/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri, Myotis spp., Plecotus auritus
Bat Surveys - Tina Aughney	N4563144 981	2456 31	24498 1	5/29/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz)



Bat Surveys - Tina Aughney	N4545045 610	2454 50	24561 0	5/29/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri
Bat Surveys - Tina Aughney	N4594045 022	2459 40	24502 2	5/29/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Myotis spp., Pipistrellus nathusii
Bat Surveys - Tina Aughney	N4582444 688	2458 24	24468 8	5/29/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis spp., Pipistrellus nathusii
Bat Surveys - Tina Aughney	N4794143 314	2479 41	24331 4	6/2/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
Bat Surveys - Tina Aughney	N4802843 404	2480 28	24340 4	6/2/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Myotis spp., Nyctalus leisleri
Bat Surveys - Tina Aughney	N4781143 605	2478 11	24360 5	6/2/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis spp.
Bat Surveys - Tina Aughney	N4767243 091	2476 72	24309 1	6/2/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri
Bat Surveys - Tina Aughney	N4745843 302	2474 58	24330 2	6/9/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
Bat Surveys - Tina Aughney	N4799146 474	2479 91	24647 4	6/9/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis spp.
Bat Surveys - Tina Aughney	N4756446 482	2475 64	24648 2	6/9/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri



Bat Surveys - Tina Aughney	N4768943 088	2476 89	24308 8	6/9/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
BATLAS 2010	N384424	2384 00	24240 0	5/18/2009	Myotis daubentonii, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Plecotus auritus
BATLAS 2010	N416377	2416 00	23770 0	5/18/2009	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis spp.
BATLAS 2010	N486388	2486 00	23880 0	5/18/2009	Pipistrellus pygmaeus, Myotis daubentonii
BATLAS 2020	N4148537 849	2414 85	23784 9	7/11/2018	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri
BATLAS 2020	N4852938 884	2485 29	23888 4	7/11/2018	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri
BATLAS 2020	N3561939 691	2356 19	23969 1	7/2/2018	Pipistrellus pygmaeus, Myotis daubentonii
BATLAS 2020	N4069040 998	2406 90	24099 8	6/9/2016	Pipistrellus pygmaeus, Nyctalus leisleri
BATLAS 2020	N4000041 500	2400 00	24150 0	#####	Pipistrellus pygmaeus
BATLAS 2020	N5139242 081	2513 92	24208 1	9/26/2018	
BATLAS 2020	N4332042 304	2433 20	24230 4	#####	Pipistrellus pipistrellus (45kHz), Pipistrellus spp. (45kHz/55kHz)
BATLAS 2020	N4332042 304	2433 20	24230 4	6/9/2016	Pipistrellus spp. (45kHz/55kHz)
BATLAS 2020	N3840642 325	2384 06	24232 5	6/1/2016	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
BATLAS 2020	N3840642 325	2384 06	24232 5	10/1/2015	Pipistrellus pygmaeus, Nyctalus leisleri, Myotis daubentonii
BATLAS 2020	N4421042 340	2442 10	24234 0	#####	Pipistrellus pygmaeus



BATLAS 2020	N4421042340	244210	242340	6/9/2016	
BATLAS 2020	N3714943687	237149	243687	10/1/2015	Pipistrellus pygmaeus
BATLAS 2020	N3714943687	237149	243687	6/1/2016	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
BATLAS 2020	N3737443687	237374	243687	6/1/2016	Pipistrellus pygmaeus
BATLAS 2020	N3737443897	237374	243897	10/1/2015	Pipistrellus spp. (45kHz/55kHz)
BATLAS 2020	N3681747434	236817	247434	#####	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri
BATLAS 2020	N3971948437	239719	248437	#####	Pipistrellus pygmaeus
BATLAS 2020	N5288849234	252888	249234	9/26/2018	Pipistrellus pipistrellus (45kHz)
BATLAS 2020	N5453649795	254536	249795	9/26/2018	
BATLAS 2020	N4193950096	241939	250096	7/27/2016	Pipistrellus pygmaeus, Nyctalus leisleri, Myotis spp.
BATLAS 2020	N5010550681	250105	250681	6/16/2015	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis daubentonii
BATLAS 2020	N5010550681	250105	250681	6/16/2015	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis daubentonii
BATLAS 2020	N3887251054	238872	251054	7/27/2016	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis daubentonii
BATLAS 2020	N4074451303	240744	251303	7/27/2016	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
BATLAS 2020	N4716651306	247166	251306	5/23/2017	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
National Biodiversity Data Centre	N529479	252900	247900	5/18/2014	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus



Bat Records					
National Biodiversity Data Centre Bat Records	N373342	237300	234200	7/27/2013	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
National Biodiversity Data Centre Bat Records	N375342	237500	234200	7/27/2013	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
National Biodiversity Data Centre Bat Records	N375342	237500	234200	8/20/2013	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
National Biodiversity Data Centre Bat Records	N376343	237600	234300	8/20/2013	Plecotus auritus, Pipistrellus pygmaeus, Nyctalus leisleri, Pipistrellus pipistrellus (45kHz)
National Biodiversity Data Centre Bat Records	N414466	241400	246600	4/4/2024	Unidentified bat
National Biodiversity Data Centre Bat Records	N467468	246700	246800	4/27/2024	Unidentified bat
National Biodiversity Data Centre Bat Records	N469468	246900	246800	1/10/2024	Unidentified bat
Wildlife Surveys Ireland Surveys	N3704049149	237040	249149	8/3/2023	Nyctalus leisleri



Wildlife Surveys Ireland Surveys	N4132451 752	2413 24	25175 2	5/15/2025	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
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