

Appendix 6-1 Eire Ecology - Bat Survey Report





Environmental Consultants

Baseline Bat Survey Report

Scartmountain Windfarm,

Co. Waterford.



DOCUMENT DETAILS

Client:	FuturEnergy Ireland
Project Title:	Scart Mountain Windfarm
Document Title:	Bat Survey Report
Prepared By:	John Curtin – Consultant Ecologist
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Abstract:	The following report details the results of the 2022 and 2023 bat surveys undertaken for the proposed Scartmountain Wind Farm, Co. Waterford. This bat report is required to assess the impacts of the proposed development on bat species within and surrounding the proposed wind farm site. The proposed Scartmountain Wind farm consists of 15 no. wind turbines.



EXECUTIVE SUMMARY

The methodology for the 2022 and 2023 bat survey at Scart Mountain wind farm adhered to Scottish National Heritage guidance published 2021 (SNH (2021) guidance) for assessing the impact of proposed wind farm developments on local bat species. Surveys were conducted at the site of a proposed windfarm located some 12km to the north-west of Dungarvan, Co. Waterford. Surveys included pre-construction bat surveys focusing on proposed turbine locations, surrounding habitats and connectivity with the wider landscape.

Thirteen static detectors (SNH 2021) were placed within the site for a minimum of 10 nights over five periods encompassing Spring, Summer and Autumn. In addition, dusk and dawn bat detector surveys were conducted examining habitats onsite alongside potential roost features of structures in the wider landscape.

During static surveys, a total of seven species of bats were recorded in 2022: Common Pipistrelle, Soprano Pipistrelle, Nathusius Pipistrelle, Leisler's bat, Natterer's bat, Daubenton's bat and Brown long-eared bat. In addition, several unidentified Myotis species were recorded; several of which were likely whiskered bats.

The most frequently recorded species was Common Pipistrelle, followed by Leisler's bat and Soprano Pipistrelle, with lower levels of Myotis species and Brown long-eared bat detected.



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1 INTRODUCTION

FuturEnergy Scart Mountain Designated Activity Company commissioned Eire Ecology to conduct baseline bat surveys for a proposed fifteen turbine wind farm in March 2022.

The purpose of this report is to identify species of bats utilising the site, quantify activity levels, particularly from those species most at risk to turbine collision and to examine feeding, roosting and commuting routes in the locality.

1.1 SITE DESCRIPTION

Scart Mountain proposed windfarm is located 4km northeast of Cappoquin in Co Waterford (52.20280, - 7.79955).

The site is located in a rural area. The settlement pattern in the area is linear, made up of one-off rural housing and farmyards generally located along the local road network.

The majority of the proposed development is located within conifer plantation with some turbines on degraded peatland habitats on Knocknanask and Knocknasheega mountains. A small section of Eucalyptus has been planted to the west of proposed turbine 15. Several streams can be found within the site including the Glenshelane River; a tributary and component of the Blackwater River Special Area of Conservation (SAC Site Code 002170). Figure 6-1 shows a site layout for the proposed development. The project also includes a grid connection route (GCR) and turbine delivery route (TDR).

1.2 PURPOSE OF THIS REPORT

This document reports on the findings of bat surveys conducted in 2022 and 2023. This report aims to;

- Identify species of bats using the site.
- Examine trees and buildings within and surrounding the site for roosting potential.
- Examine feeding and commuting routes.
- Potential impacts of bats by the proposed development.

In order to assess the presence and activity of bats within the proposed development grounds the following surveys were undertaken within and adjacent to the proposed planning boundary:

- Preliminary roost assessment
- Bat activity (walked, driven transects and emergence surveys); and
- Static detector (six survey periods).



1.3 RELEVANT LEGISLATION

There are two main pieces of legislation which cover wildlife protection in Ireland – the Wildlife Act and the Birds and Natural Habitats Regulations. These are outlined below, with particular reference to the protection afforded to bat species in Ireland.

The Wildlife Acts 1976 and 2000

The primary domestic legislation providing for the protection of wildlife in general, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976, as amended. The aims of the wildlife act according to the National Parks and Wildlife Service are "... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All bat species are protected under the act. The Wildlife (Amendment) Act of 2000 amended the original Act to improve the effectiveness of the Act to achieve its aims.

It is an offence to:

- Intentionally kill, injure or take a bat
- Possess or control any live or dead specimen or anything derived from a bat
- Wilfully interfere with any structure or place used for breeding or resting by a bat
- Wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose

1.3.1.1 European Communities (Birds and Natural Habitats) Regulations 2011 to 2021

The EC (Birds and Natural Habitats) Regulations 2011-2021 provide strict protection for all of the Irish species listed on Annex IV of the EU's Habitats Directive. It does this by prohibiting certain activities which could impact on the conservation status of those species. Those activities may only be permitted by way of a derogation licence. All bat species found in Ireland are listed under Annex IV of the Directive, while the lesser horseshoe bat is afforded further protection under Annex II.



2 METHODS

2.1 SCOPE

All surveys adhered to SNH (2021) guidelines. Emergence surveys were conducted from June to September 2022 and June 2023. Static detector surveys were carried out between April and November 2022 in five rounds. An issue with the spring data resulted in the loss of recordings thus these surveys were repeated in June 2022 and again in May 2023 thus six rounds of surveys were conducted in total. The survey types were determined most appropriate to establish a baseline species assemblage, along with spatial and temporal distribution of species activity within the proposed planning boundary.

2.2 DESK STUDY

An assessment was conducted for Scartmountain by examining the BCI database, NBDC records, BCI landscape model for bat suitability, Ordinance survey, aerial photos and google street view.

A data search was conducted in March 2022 and again in June 2023 to revise existing information from the surrounds of the proposed planning boundary. The following information sources were examined:

- Known bat records within a 10 km radius of the proposed sites from the Bat Conservation Ireland database
- Ad hoc and observational bat records from the National Bat Database held by the National Biodiversity Data Centre (www.biodiversityireland.ie)
- Review of Ordnance Survey mapping and aerial photography of the proposed wind farm boundaries and their environs (i.e. 200 m plus rotor radius of the boundary of the proposed development)
- Records of designated sites within a 6 km radius of the proposed sites where bats form part or all of the reason for designation (<u>https://www.npws.ie/protected-sites</u>)
- Collation of data on known caves within a 4 km radius of the proposed sites from the Cave Database for the Republic of Ireland, compiled by Trinity College (<u>http://www.ubss.org.uk/search_irishcaves.php</u>)
- Review of bat survey data from Ecological Impact Assessments from proposed and permitted developments within the wider environs of the site.
- Bat Tree Habitat Key Database (BTHK) was examined in order to assess likelihood of bats roosting in conifer plantation.

2.2.1 Bat Landscapes

Bat Conservation Ireland produced a landscape conservation guide for Irish bat species using their database of species records collated during the 2000-2009 survey seasons. An analysis of the habitat and landscape associations of all bat species deemed resident in Ireland was undertaken and reported in Lundy et al., 2011.

The degree of favourability ranges from 0 - 100, with 0 being least favourable and 100 most favourable for bats. The values of the grid squares represent the range of habitat suitability values the bat species can tolerate within each individual square.

A caveat is attached to the model, and it is that the model is based on records held on the Bat Conservation Ireland database, while core areas have been identified, areas outside the core area should not be discounted as unimportant as bats are a landscape species and can travel many kilometres between roosts and foraging areas nightly and seasonally.



2.2.2 Designated Sites

A search was made for designated sites within 6 km of the proposed planning boundary. These included sites designated at the European level (in the context for bats, this refers to Special Areas for Conservation or SACs) and the Irish level (Natural Heritage Areas or NHAs and proposed Natural Heritage Areas or pNHAs). The Habitats Directive (Article 6) forms a basis for the designation of SACs. Further information on the context of SACs for bats is given in section 3.1.

NHAs are areas considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation.

All pNHAs were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. However, for the purposes of this assessment all pNHAs have been considered as fully designated sites.

Both NHAs and pNHAs may be designated due to the presence of bats.

2.3 FIELD STUDY

2.3.1 Bat activity and emergence surveys

The bat detectors used during the walked and driven surveys were Wildlife Acoustics Inc. (Massachusetts, USA) Echo Meter Touch Pro 2's which are triggered to record when a bat call is emitted louder than 18dB for 1sec (On occasion during emergence surveys Song meter minis were also utilised in order to assist surveys. These detectors were set at the same settings as handheld ones). These detectors use full spectrum sampling; detecting all frequencies simultaneously, meaning that multiple bat calls can be recorded at the same time.

Nighttime surveys combined emergence surveys towards dusk and dawn and a combination of walked and driven transects of bat favourable habitats within and surrounding the study. Surveys were carried outside the site due to potential effects of bat foraging habitat. In 2016, the Bat Conservation Trust (BCT) carried out a review of literature pertaining to mean and maximum bat foraging distances (BCT, 2016). In their review, a Core Sustenance Zone (CSZ) refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost. (BCT, 2020) provided CSZ distances from UK bat roosts. It lists Natterers bat as having a 4km CSZ. Shiel (1999) found that the maximum (mean) flight distance recorded for individuals from two Irish Leisler's bat maternity roosts ranged from approximately 4.5 km to 7.5 km throughout the year. As such it is possible Irish Leisler's bat species CSZ may be greater than the UK species; stated as 3km.

Transects targeted a range of foraging and commuting habitats present within and surrounding the study area, those associated with linear features such as roadside margins, woodland plantation edges, hedgerows and treelines Attempting to identify commuting corridors and links between the site and potential roosting features. Due to safety concerns, transects were typically confined to roads and tracks. Details of transects are shown in Appendix 4, table 4-4 while transect maps can be found in figure 6-5.

A contact describes a bat observed by the surveyor. This contact can range from a commuter passing quickly to a foraging bat circling a feature lasting for several minutes. Some observations contain multiple bats. When several bats of the same species are encountered together, they are recorded under the one contact. A separate contact is recorded for each species. A contact finishes when the recorder assumes the bat is no longer present.



It is likely that the same bat is recorded in several contacts throughout the night. This survey type cannot estimate abundance of bats, rather activity; *the amount of use bats make of an area / feature*.

Where possible, a positive identification to species level was made. Information on the behaviour was also recorded where available.

Bat activity is governed by the activity of their insect prey and insect abundance is in turn governed by weather conditions and climate. Insects, and therefore bats, are unlikely to be present at temperatures below 7°C or during periods of strong winds or heavy rainfall so surveying in such conditions is not possible. All field surveys were undertaken within the active bat season and during good weather conditions (dry conditions and temperature at 8°C and greater).

Bats were identified by their ultrasonic calls coupled with behavioural and flight observations and on computer by sound analysis of recorded echolocation and social calls with dedicated software (Wildlife Acoustic's Kaleidoscope Pro; version 5.6.0)¹.

2.3.2 Static bat detector surveys

14 Song Meter Mini and SM4BAT Full spectrum bat recorders SM4BAT were deployed within the study area at the site of the proposed turbines for a minimum of ten nights in the spring, summer and autumn periods. Each bat pass does not correlate to an individual bat but is representative of bat activity levels. Some species such as the pipistrelles will continuously fly around a habitat and therefore it is likely that a series of bat passes within a similar time frame is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and therefore an individual sequence or bat pass is more likely to be indicative of individual bats.

Per SNH (2019) guidance, static units (Song Meter SM4BAT and SM-Mini) were programmed to commence half an hour before sunset and finish half an hour after sunrise to ensure that bat species that emerge early in the evening and return to roosts late are recorded. See Appendix 1, table 1-1 for further details.

SNH (2021) guidance states that "Detectors should be placed at all known turbine locations at wind farms containing less than ten proposed turbines. Where developments have more than ten turbines, detectors should be placed within the developable area at ten potential turbine locations plus a third of additional potential turbine sites up to a maximum of 40 detectors for the largest developments". Turbine layout for the development has undergone numerous changes since the initial inception. As such detector locations were chosen based on numerous factors including habitat composition, geographical spread and potential turbine locations. The subject site contains two main habitat types; open upland bog and conifer plantation in addition to recently felled plantation. 4 detectors were placed in the upland open bog located to the north of the site, 7 detectors spread through conifer plantation with another detector situated at conifer edge breaking onto bog. A final detector was situated within pre-thicket plantation.

The data was analysed with Wildlife Acoustic's Kaleidoscope Pro; version 2.1.0). All calls were manually verified, while 20% of 'Noise' calls were verified.

¹ Although there are later editions to this software the surveyor manually verified all calls rather than depending on auto identification. It is the surveyor's opinion that auto-id features frequently misidentify bat species



2.3.3 Surveyor Information

Bat surveys were designed by John Curtin BSc. John qualified in Environmental Science at NUI Galway in 2010 and has been working as an ecologist ever since. John has been conducting bat surveys at windfarm sites since 2012.

Night-time detector surveys (excluding surveys conducted from 13th to the 14th of September) were supported by Rory O' Callaghan, Louis Peacock and Karolina Illien.

Rory has a Masters in Animal behaviour and worked as an intern at the National Biodiversity Data Centre, is the National Coordinator for Seasearch Ireland – Citizen science in Irish marine waters and has volunteered for Bat Conservation Ireland monitoring programs such as the Daubenton's waterways survey.

Louis has a degree in Wildlife Biology and has been working as an ecologist and ECoW since 2021.

Karolina has a Masters in Environmental Leadership and has worked as an ecologist since 2022.

2.3.4 Limitations

- An issue with the spring data resulted in the loss of recordings thus these surveys were repeated in June 2022 and again in May 2023 thus six rounds of surveys were conducted in total. (SNH, 2021) states "The objective" of static surveys "is to complete these surveys within a single calendar year, but in a few situations it is accepted that this may not be possible. In such cases, surveys can be split over two successive calendar years, but a justification must be provided to explain the reason(s) for this. Given the extensive data collated over the two year period the author feels the dataset sufficiently assess bat activity within the site.
- It is not always possible to identify a bat call to species level due to the recorded call not being clear. Recorded files from automated detectors may contain only fragments of a call, or the bat may be calling from a distance (from the detector) in which case it may not be clear enough to assign the call to a specific species. In these cases the call has been assigned to genus level;
- Some caution must be taken when comparing activity levels between species, as bias can be shown towards those species with 'louder' or 'lower frequency' echolocation calls. For example, Nyctalus species have louder and low frequency echolocation calls which carry further than the quieter and more broad-band brown long-eared bat echolocation calls;
- A bat contact (for static surveys) is defined as a single detector file which contains at least one bat call. Multiple contacts at any given detector location do not necessarily indicate the presence of more than one bat and should therefore be interpreted as a level of activity rather than the number of bats recorded;
- Typically, ECOBAT analysis (provides tools for the standardised, rigorous interpretation of bat activity data) is used to assign activity levels based on bat passes per night compared with environmental data such as location, weather etc. It works by contrasting the users data with previously uploaded data from other users. This tool is currently offline (since November 2022) thus the author has had to evaluate this dataset by using ECOBAT percentiles from previously used analysis on different sites that share similar attributes (upland bog and conifer plantation).
- Following the conservative approach 40kHz activity was included with Nathusius Pipistrelle.



3 RESULTS

3.1 DESK STUDY

BCI and NBDC records do not record any roost within 6km of the subject site; the closest historical roost being over 8km away. The bat report for the adjacent Dyrick Hill proposed windfarm show 5 bat roosts within 3km of the site. Full details on historical records can be found in Appendix 2. Six of the nine known Irish species of bat (Bat conservation Ireland) have also been recorded (observed) within 5km of the site. These are Common Pipistrelle, Soprano Pipistrelle, Leisler's bat, Daubenton's bat, Whiskered bat and Brown Long-eared bat.

Review of the NPWS Lesser Horseshoe bat database indicates that there are no records of roosts within a 2.5 km buffer (Core Sustenance Zone (CSZ) of the proposed wind farm site boundary (NPWS 2021).

The Cave Database for the Republic of Ireland does not hold any records of caves within a 4 km radius of the proposed wind farm site boundary.

3.1.1 Sites Designated for Nature Conservation

Two SAC's can be found within 6km (the probable max CSZ for an Irish bat species; Leisler's bat); the Blackwater River (Cork/Waterford) SAC and the Lower River Suir SAC. Neither site is designated for bat species. The site synopsis of the two pNHA's found within 6km of the site do not refer to bats.

Table 3-1: Natura 2000 sites within 6km of subject site

Name	Site Code	Distance (km)	Designated for Lesser Horseshoe	Site within designated roost's CSZ?
Blackwater River (Cork/Waterford) SAC	002170	0.59	No	-
Lower River Suir SAC	002137	5.9	No	-

Table 3-2:Nationally designated sites within 10km of subject site

Name	Site Code	Distance (km)	Does Site Synopsis mention bats?	Site within designated roost's CSZ?
Glenboy Wood pNHA	000952	0.59	No	-
Blackwater River and Estuary pNHA	000072	4.96	No	-

3.1.2 Bat Landscape

(Lundy, 2011) produced a landscape model by analysing data contained in the Irish National Bat Database, maintained by Bat Conservation Ireland and the National Lesser Horseshoe Bat database maintained by National Parks and Wildlife Service. The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats.



Table 3-3 shows the BCI bat landscape model with the site divided into three sections. Section 3 to the south represents 46% of the site (by area) and has the highest levels of bat suitability. Brown Long-eared, Common and Soprano Pipistrelle, Leisler's bat and Natterer's bat are ranked high suitability for the southern section and decreasing to the north.

Turbines	Location	Overall Risk level BCI	Species	Suitability result
			Nyctalus leisleri	14
			Pipistrellus pipistrellus	21
			Pipistrellus pygmaeus	16
			Pipistrellus nathusii	0
1 and 2	NW Knocknanask	12	Plecotus auritus	25
			Rhinolophus hipposideros	1
			Myotis mystacinus	7
			Myotis daubentonii	9
			Myotis nattereri	15
			Nyctalus leisleri	23
	NE Broemountain	17.22	Pipistrellus pipistrellus	30
			Pipistrellus pygmaeus	23
			Pipistrellus nathusii	0
3, 4, 5, 7, 8, 9			Plecotus auritus	31
			Rhinolophus hipposideros	2
			Myotis mystacinus	10
			Myotis daubentonii	14
			Myotis nattereri	22
			Nyctalus leisleri	36
			Pipistrellus pipistrellus	45
			Pipistrellus pygmaeus	37
			Pipistrellus nathusii	4
10, 11, 12, 13, 14, 15	S Scartmountain	32	Plecotus auritus	51
,	Section		Rhinolophus hipposideros	8
			Myotis mystacinus	28
			Myotis daubentonii	31
			Myotis nattereri	48

Table 3-3: La	andscape mod	lel for areas o	of the site	(green is	low suitability	for bats.	red is high)
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3.1.3 Bat landscape features in proximity to proposed turbines.

The subject site is situated on peatland, the majority of which has been planted with conifer. A small section of Eucalyptus has been planted to the west of proposed turbine 15.

Appendix 1 details habitats within 200m of each proposed turbine alongside details of which detector was used in the assessment of its impacts. Figure 6-2 shows the location of detectors in relation to turbines.



3.2 FIELD SURVEYS

Bat surveys were undertaken in July and September 2022 and June 2023 in line with recommendations in Chapter 10 of the Bat Conservation Trust 'Good Practice Guidelines, 3rd edition, 2016' (Bat Conservation Trust, 2016).

3.2.1 Potential tree roosts

There are no trees suitable for use by roosting bats present within 200 m of any of the turbine locations. The conifers within the plantation are aged between x and y years old and are not sufficiently mature to develop cavities suitable for roosting bats. Plantation conifers are generally clear-felled between the age of 30 and 50 years. (Teagasc, 2022). A review of the BTHK Database (to end of August 2022) showed no bat roost found in Sitka Spruce. These records are recorded through Britain and Ireland. Only two records has been recorded from a conifer within commercial conifer plantations; a Scot's Pine subsidence crack contained a single Soprano Pipistrelle and a Larch hazard beam contained a Leisler's bat.

The small area of Eucalyptus plantation west of proposed turbine 15 was examined for suitable roosting features. It is possible that the peeling bark of the eucalyptus trees provides some opportunity for use by individual bats to roost an emergence survey found no evidence. A data search did not reveal any evidence of roosting bats in this tree species within Ireland or the UK.

A preliminary tree roost assessment was conducted on the 13th of October 2023 along the GCR, TDR and internal layout where the potential for tree felling could occur (see figure 6-3). Table 3-4 below summarises results with full assessment found in Appendix 3.

Area	Description of area	Count of category 1 and 2 trees	Location	Details
1	Centre of site where new road is constructed through conifer plantation, scrub and crosses stream	0	52.211327, -7.8082604	No potential
2	Centre of site by firebreak	0	52.207699, -7.8130747	No potential
3	Main/TDR entrance to site	0	52.167498, -7.8135467	No potential
4	GCR exiting site	0	52.170079, -7.7837480	No potential
5	TDR route; Crinnaghtaun West	1	52.138442, -7.8224990	Sycamore with potential. It is likely this tree will be avoided.
6	East of Colligan river and along forest track	2	52.123549, -7.6670380	One beech that has good potential but is off the path so unlikely to be impacted. Oak with broken limbs, unlikely to be impacted as cable should be placed on path instead.

Table 3-4: Summary of results from preliminary tree roost assessment.

3.2.2 Structures examined

No buildings or built structures suitable for usage by bats was found within 200m of any turbine location. Several derelict sheds and dwellings were examined in the wider landscape. A search was conducted of sheds and derelict dwellings of highest potential that were close to the site or showed connectivity. In situations where access was not possible the surveyor conducted nighttime surveys from the road examining bats and attempting to located commuting routes and roosts.

Table 3-5Potential roost structures examined during daylight preliminary searches.



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No	Description	Lat	Long	Distance to closest turbine	Nighttime survey	Nighttime survey results
1	Derelict dwelling near river	52.169363	-7.770107	1.7km to T7 2.2km to T4	Yes	Common, Soprano Pipistrelle and Brown Long-eared roost. Likely maternity roost for Common Pipistrelle.
2	Farmstead	52.202114	-7.8350682	1.1km to T5	Yes	Inconclusive
3	Derelict ruins scrub	52.201644	-7.8399265	1.2km to T2	Yes	None found
4	Bridge	52.205165	-7.8379681	820m to T1	Yes	No bridge
5	Potential ruins treelines	52.205465	-7.8403516	850m to T1	Yes	None found
6	Derelict dwelling scrub near plantation	52.1981566	-7.8255918	1.3km to T5	Yes	No roost found
7	Stone bridge	52.1586817	-7.7826991	1.7km to T16	Yes	No roost found
8	Stone bridge	52.2131768	-7.8127227	700m to T4	Yes	No roost found
9	Stone bridge	52.21241433	-7.8081309	710m to T7	Yes	No roost found
10	Modern dwellings	52.174507	-7.8132126	1.1km to T15	Yes	Inconclusive
11	Stone bridge	52.169513,	-7.770457	1.6km to T16	Yes	Day roost for single Soprano Pipistrelle
12	Derelict dwelling	52.1793239	-7.7996167	1.5km to T4	Yes	No roost found
13	Eucalyptus trees	52.169363	-7.770107	180m W of T15	Yes	No roost found



3.2.2.1 Building 1

Emergence Surveys were conducted at building 1 (52.221032, -7.791357) in September 2022 (dawn and dusk). 15 to 20 Common and Soprano Pipistrelle were recorded entering the roost along. The site was re-surveyed in June 2023 with the aim of establishing links between the roost and the Scart Mountain proposed windfarm site.

One surveyor watched the building for emerging bats while a second was positioned on the most likely route between the roost and the proposed development (52.218522, -7.804158). A FS SM-Mini detector was deployed at another possible commuting route from the roost to the Scart Mountain site (52.208839, -7.796654). Surveyors also used a Canon XA10 night vision camera to aid identification of emerging bats and a Guidetrack Pro 19mm thermal imaging scope to search for commuting bats.

Common and Soprano Pipistrelle were observed emerging from the dwelling at 22:03 before feeding along the adjacent treelines by 22:04. In total four Pipistrelle were observed emerging. A Brown long-eared bat emerged from the roost building at 22:36 while a non-echolocating bat was observed leaving the house through a doorway at 23:13. The second surveyor did not record any commuting behaviour. This emergence survey showed lower numbers of bats using the building as a roost than the September 2022 survey with four Pipistrelle, one Brown Long-eared bat and a non-echolocating bat recorded emerging. No commuting links were established between the roost and the subject site. Open areas devoid of landscape features likely lower connectivity between the sites.

3.2.2.2 Structure 11

A dawn survey conducted on the 13th of September 2023 by a stone bridge located to the south-east of the site was examined with the aid a Guide track 19mm thermal scope. The survey revealed a single Soprano Pipistrelle roosting under bridge. The bridge is situated along a river valley with deciduous woodland with some connectivity to the subject site. The closest proposed turbine lies 1.6km to the north-west.

3.3 STATIC DETECTOR RESULTS

The results of the static detector surveys deployed over five rounds in 2022; spring (repeat survey conducted in June), summer, August, September and October) in 2022 and Spring of 2023 are shown below. Overall, seven bat species were recorded (Common Pipistrelle, Soprano Pipistrelle, Nathusius' pipistrelle, Leisler's bat, Brown Long-eared bat, Natterer's bat and Daubenton's bat). Where the call could not be identified to species, the identification was determined to the highest level possible. Several registrations were recorded with a peak frequency of 40kHz. These bats will have been either common or Nathusius's Pipistrelle. Further Myotis calls were identified only to genus level. More detailed results are provided in Appendix 5.



Table 3-6: Static Results

Common Name	Species	No. of registrations
Brown long-eared bat	Plecotus auritus	1,923
Common pipistrelle	Pipistrellus pipistrellus	33,517
Daubenton's bat	Myotis daubentoniid	3
Leisler's bat	Nyctalus leisleri	27,168
Nathusius' pipistrelle	Pipistrellus nathusii	220
Soprano pipistrelle	Pipistrellus pygmaeus	13,971
40 kHz Pipistrelle	-	974
Unidentified Myotis species	1,772	
Natterer's bat	149	
Total registrations	79,697	



Figure 3-1: Total number of bat passes recorded for Leisler's bat at each of the static locations







Figure 3-2: Total number of bat passes recorded for Common Pipistrelle at each of the static locations



Figure 3-3: Total number of bat passes recorded for Soprano Pipistrelle at each of the static locations





Figure 3-4: Total number of bat passes recorded for remaining bat species at each of the static detector locations in 2022 and 2023.

Highest overall activity was recorded from Detector 14 set towards the southwest of the site within conifer plantation with an average of 18.4 bat passes per hour. Next highest activity was recorded from detectors set similarly positioned towards the southwest at D11 and 15 with BP/Hr of 17.9 and 17.3 respectfully. Lowest activity was recorded from upland peatland detectors 3, 5 and 4 with 2.2, 2.2 and 2.7 BP/Hr. Interestingly, the next lowest level of activity was recorded from D16 the southernmost location, positioned in similar habitats to D15.

D15 shows highest overall activity for Leisler's bat. This data is somewhat skewed from 4 nights in June 2022 each with over 1000 recordings (totalling 5572 registrations). One explanation for these elevated results is if a single bat circled the detector feeding throughout the night.

3.4 ECOBAT

The results of the static detector surveys are usually analysed and input into Ecobat (University of Exeter). Ecobat is a software package, developed by the University of Exeter, that standardizes and performs interpretation of bat activity data. However, this software has been out of service since November 2022 and as a result could not be used for Scart Mountain. In the absence of Ecobat an approach has been developed using previous ECOBAT data from several sites with similar habitat types to derive a risk level. The reference range datasets can be found in Appendix 5, tables 5-5 and 5-6.

An assessment was conducted only for those species identified as being art high risk of turbine collision; Leisler's bat, Common, Soprano and Nathusius Pipistrelle (following the precautionary approach all 40kHz Pipistrelle recordings were added to Nathusius Pipistrelle data).

October's data was not added to the assessment as activity was very low during this month and thus adding this data would skew overall median results lower. The October data does demonstrate that activity significantly drops off and mitigation such as curtailment is not required at this time.

The data was then interpreted through ECOBAT type analysis. Ecobat is an online tool which makes assessments of bat activity levels by comparing data entered by the user with bat survey information from similar areas. Specifically, a median bat activity level is calculated which corresponds to a bat activity category (Table 3-7).



Percentile	Bat Activity
81-100	High
61-80	Moderate to High
41-60	Moderate
21-40	Low to Moderate
0-20	Low

Table 3-7: Median percentile range and corresponding bat activity

Results for individual detectors can be found in Appendix 5, tables 5-7 and 5-8. Analysis was conducted for all seasons baring October (i.e. April to September inclusive) and again from the peak active period; July to September. Results show overall moderate median activity levels over the entire site for Leisler's bat and Common Pipistrelle while Soprano Pipistrelle showed moderate low, and Nathusius Pipistrelle showed low activity. For the periods July to September, the site showed moderate to high activity levels for Leisler's bat, moderate levels of activity for Common and Soprano Pipistrelle and low activity for Nathusius Pipistrelle.

4 DISCUSSION & CONCLUSION

The methodology for the 2022 bat surveys at Scartmountain proposed wind farm adhered to SNH (2019) and (SNH, 2021) guidance for assessing the impact of proposed wind farm developments on local bat species Five rounds of static monitoring was conducted based on an initial risk assessment. Roost assessment (structures and initial tree surveys), emergence surveys and activity surveys were also undertaken during 2022 and 2023.

No bat roosts were found within 200m of any proposed turbines. The closest roost found during surveys is a derelict farmstead containing Common and Soprano Pipistrelle and Brown Long-eared bats. Surveys show a lack of linear features between this roost and the subject site lower the potential for the subject site being a part of this roosts core sustenance zone. A second roost was found to contain a single Soprano Pipistrelle utilising a bridge to the south of the site.

During static surveys, a total of seven species of bats were recorded: Common Pipistrelle, Soprano Pipistrelle, Leisler's bat, Nathusius's Pipistrelle, Brown Long-eared bat, Natterer's bat, and Daubenton's bat. Where the call could not be identified to species, the identification was determined to the highest possible level. The most commonly recorded species was Common Pipistrelle, followed by Leisler's, Soprano Pipistrelle, with lower levels from other species.

All bats recorded are classified as 'Least Concern' on the Irish Red List (2019) and protected under the EU Habitats Directive Annex IV and Wildlife Acts.

The significance and Ecological evaluation of the Scart Mountain bat population was considered follows the methodology set out in Chapter three of the 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (NRA, 2009).

Bats as an Ecological Receptor have been assigned Local Importance (Higher value) given that the habitats within the study area are utilised by a regularly occurring bat population of Local Importance. The Scart Mountain wind farm development site does not support a roosting site of ecological significance.







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6 MAPS

Figure 6-1: Bat Roosts Surrounding Proposed Development



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Figure 6-2: Scart Mountain Turbine Locations with Static Detector Locations



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Figure 6-3: Scartmountain Tree PRF Locations



Page Size: 297 x 210 mm Made with: QGIS 3.16 in Windows

Scale 1:48,828 @ A4 paper size

1. Google Street View

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Figure 6-4: Bat Emergence Survey Locations



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Figure 6-6: Emergence Survey 14th June 2023





7 Рнотоз



Plate 7-1: Pipistrelle flying above ruins.



Plate 7-2: Soprano Pipistrelle flying across road.



APPENDICES



1 HABITATS SURROUNDING PROPOSED TURBINES WITH COMMENTS ON STATIC LOCATIONS AND LANDSCAPE FEATURES SUITABLE FOR BATS

Table 1-1: Landscape features surrounding proposed turbines alongside details of bat detectors used in turbine risk assessment.

Turbine No	Detectors used for assessing impact	Approx. Distance between detector and turbine	Within 200m of proposed turbine									
			Habitat 1	%	Habitat 2	%	Habitat 3	%	Habitat 4	%	Comments on static locations and landscape features suitable for bats	Number of nights static deployed
1	D1	30m	PB ²	99	FW	1	-	-	-	-	Detector set within upland blanket bog. EPA maps show stream; Glenafalla_010 starts to the south-east of the turbine. At this point it is drain like and low in features suitable as an ecological corridor suitable for bats.	61 nights ³
2	D1 and D5	487m and 1080m respectively	PB4	100	-	-	-	-	-	-	Both detectors were situated within upland peatland with minimal bat landscape features (baring upper portion of stream by D1)	61 and 74 nights
3	D3	At turbine	PB4	75	WD4	25	-	-	-	-	Detector set within upland blanket bog. Conifer located 90m downhill proposed turbine.	57 nights ⁴
4	D4	At turbine	PB4	75	WD4	25	-	-	-	-	Detector set within upland blanket bog. Conifer located 113m downhill from proposed turbine.	74 nights
5	D5	At turbine	PB4	100	-	-	-	-	-	-	Detector set within upland blanket bog	74 nights
6	D6	213m	WD4	95	РВ	5	-	-	-	-	Turbine is located within dense conifer plantation. The detector was placed as close to the turbine as possible where access was achievable (NW of turbine). The detector	74 nights

² Habitat codes correspond to (Fossitt, 2000).

³ October deployment failed to record

⁴ May 2023 deployment failed to record



Turbine No	Detectors used for assessing impact	Approx. Distance between detector and turbine	Within 200m of proposed turbine									
			Habitat 1	%	Habitat 2	%	Habitat 3	%	Habitat 4	%	Comments on static locations and landscape features suitable for bats	Number of nights static deployed
7	D6 & D8	694m and 322m respectively	WD4	90	РВ	10	-	_	-	_	Proposed turbine is located uphill from both detectors and is set within conifers planted on peatland. Detector 8 was situated attached to mature conifer located close to track and at the edge of blanket bog. Given the track provides a landscape feature alongside lower altitude, the detector is likely to be located in a marginally more favourable bat habitat than turbine thus acceptable to interpret data from here. Similarly, D6 is located lower and along conifer edge thus will have marginally higher favourability.	74 nights each
8	D9	43m	WD4	65	WS5	35	BL3	+	-	-	Detector set at conifer edge while proposed turbine is set within dense plantation. Activity at detector is likely to be higher as set at edge habitat thus acceptable to interpret data from here.	74 nights
9	D10	30m	WD4	99	BL3 track	1	-	-	-	-	Detector set at conifer edge while proposed turbine is set within dense plantation. Activity at detector is likely to be higher as set at edge habitat thus acceptable to interpret data from here.	74 nights
10	D11	210m	WD4	99	BL3 track	1	-	-	-	-	Detector set at conifer edge along narrow track while proposed turbine is set within dense plantation. Activity at detector is likely to be higher as set at edge habitat thus acceptable to interpret data from here.	74 nights
11	D12	135m	WD4	100	-	-	-	-	-	-	Detector set in small track as close to turbine location as accessible. Given homogeneity of habitats, activity is likely very similar	79 nights⁵
12	D12 and D14	D12 - 445m to N D14 - 900m W	WD4	90	WS5	10	-	-	-	-	T13 is set within conifer plantation with a small section of recently cut conifer at the outer edge of a 200m buffer. Habitats are similar to detectors 14 and 12. Given the heterogeneity of habitats at these locations,	79 and 74 nights

⁵ 10th of July's deployment failed to record so the detector was reset recording from the 20th of July

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	Dotoctors	Approx.	Within 20	0m of p	roposed tur	bine						
Turbine No	used for assessing impact	Distance between detector and turbine	Habitat 1	%	Habitat 2	%	Habitat 3	%	Habitat 4	%	Comments on static locations and landscape features suitable for bats	Number of nights static deployed
											activity from these recorders should provide adequate data to interpret bat activity here.	
13	D14	175m	WD4	99	BL3 track	1	-	-	-	-	Detector set at conifer edge while proposed turbine is set within dense plantation. Activity at detector is likely to be higher as set at edge habitat thus acceptable to interpret data from here.	74 nights
14	D15	85m	WD4	85	WS5	15	-	-	-	-	Detector set at conifer edge adjacent to recently cut conifers while proposed turbine is set within dense plantation. Activity at detector is likely to be slightly higher as set at edge habitat thus acceptable to interpret data from here.	74 nights
15	D16	55m	WD4	85	WS5	15	BL3 track	1	-	-	Detector set at conifer edge at end of fire break to recently cut conifers while proposed turbine is set within dense plantation. Activity at detector is likely to be slightly higher as set at edge habitat thus acceptable to interpret data from here.	74 nights

2 HISTORICAL REVIEW OF BAT RECORDS FROM THE LOCALITY

Table 2-1: Irish bat species recorded in the S10km grid and bat roosts recorded within 10km of the site

Type of Record	Species	Distance from site	Date of last record	Details	Potential connectivity with subject site (for roost records)
Poost	Myotis daubentonii	9 Jkm	2012	1 recorded on bat detector. 2 previously observed emerging	Proposed windfarm lies outside the CSZ for these species according to
ROOSE	Pipistrellus pygmaeus	0.2811		2 recorded on detector. 15 previously observed emerging	(BCT, 2020)



Type of Record	Species	Distance from site	Date of last record	Details	Potential connectivity with subject site (for roost records)		
	Plecotus auritus			9 emerging			
Ad hoc	Pipistrellus pygmaeus	within	2009	Batlas 2010	Within site.		
	Pipistrellus pipistrellus sensu lato)	ellus pipistrellus lato) 2.9km 2.9km 2009 Batlas 2010 Batlas 2010 South-west of the site by wooded valley of Glen tributary of the Blackwater River.			South-west of the site by wooded valley of Glennafallia stream, a		
Ad hoc	Pipistrellus pygmaeus		tributary of the Blackwater River.				
	Nyctalus leisleri						
Ad hoc	Myotis daubentonii	3.8km	2016	Daubenton's Bat Waterways Survey	South-west of the site by wooded valley		
Ad hoc	Plecotus auritus	4.3kkm	2012	NBDC Record	South of site along Magaha River		
	Nyctalus leisleri						
Ad hoc	Pipistrellus pipistrellus sensu lato)	4.7km	2009	Batlas 2010	East of the site within lowlands by a church.		
	Pipistrellus pygmaeus						

Table 2-2: Bat roosts recorded from surveys undertaken for proposed Dyrick Hill WF (East of site)

Species	Distance from closest turbine	Date of last record	Details	Potential connectivity with subject site (for roost records)
Plecotus auritus	1.16km to T9	2022	Derelict house with small brown long-eared bat minor day roost and night roost	This roost is situated in a lowland pasture with bordering conifer plantation further to the east. Scartmountain proposed turbine is located uphill to the west with a region of open heath buffering the site from the roost. This roost is a night and day roost for low numbers of a bat species of low vulnerability to collision. The proposed development is unlikely to materially impact the bats occupying this roost
Plecotus auritus	1.5km to T9	2022		



Species	Distance from closest turbine	Date of last record	Details	Potential connectivity with subject site (for roost records)		
Pipistrellus pipistrellus	_			This roost is situated in a lowland pasture with bordering conifer plantation		
Pipistrellus pygmaeus Myotis mystacinus			Ruin of old stone house with multi-species bat roost. Brown long-eared bat summer maternity roost and night roost. Whiskered small regular day roost and night roost. Soprano pipistrelle regular minor day roost. Common pipistrelle occasional minor day roost	further to the east. Scartmountain proposed turbine is located uphill to the west with a region of open heath buffering the site from the roost. While it is possible for bats from this roost to enter the subject site, bats typically favour using landscape features such as woodland edge and treelines to aid navigation. Of the species listed as roosting here, Pipistrelle bats are most capable of travelling across open habitats. Common and Soprano Pipistrelle have CSZ of 2 and 3km respectively thus a max of 8 turbines lie within the CSZ of these species. It should be noted the record only mentions a Brown Long-eared maternity roost suggesting the Pipistrelle roost is of lower numbers; potentially a satellite roost.		
Plecotus auritus	1.48km to		Derelict 2-storey house beside modern farm	BCT 2020 states Common Pipistrelle have a CSZ of 2km thus 4 proposed turbines lie within this zone: T9, 10, 12 and 13. The report states this is a minor roost thus		
Pipistrellus pipistrellus	T12	2021	sheds. Probable minor day roosts of brown long- eared bat and common pipistrelle.	impacts from the proposed development should have little impact on the bats utilising this roost.		
Plecotus auritus	685m to T12	Unknown	Ruin of small old stone house near upland transect. Brown long-eared bat night roost	Roost is located in improved grassland with a stream separating the sites. This roost is a night roost for low numbers of a bat species of low vulnerability to collision. The proposed development is unlikely to materially impact the bats occupying this roost.		
Plecotus auritus	2.63km to	2022	Ruin of old stone house and sheds with courtyard. Whiskered bat summer roost &	Roost is located in pasture habitats with conifer plantation to the west and lies a considerable distance from the site. BCT 2020 states whiskered have a CSZ of 1km thus the site lies well outside this range. Brown Long -eared bats have a CSZ of 3km thus only turbines 12 and 13 lie in this region. Nevertheless, it is the		
Myotis mystacinus	T12	2022	brown long-eared bat important night roost and probably day roost.	authors opinion that the proposed development will have little impact on the Brown Long-eared bats utilising this roost given the low collision risk. Brown Long- eared bats activity utilise edge as well as woodland habitats thus the creation of buffers surrounding the turbines should have little impact to the species.		



3 INITIAL TREE ROOST INSPECTION

Table 3-1 Categorise each tree according to Bat Conservation Trust 2 ed. (Hundt *et al*, 2012):

Tree Category	Description
1	Trees with multiple, highly suitable features capable of supporting larger roosts
2	Trees with definite bat potential but supporting features suitable for use by singleton bats;
3	Trees have no obvious potential although the tree is of a size and age that elevated surveys may result in cracks or crevices being found or the tree supports some features which may have limited potential to support bats;
4	Trees have no potential.

Table 3-2: Trees recorded along supply route.

No.	Lat	Lon	Area	category	Species	roost
1	52.21133	-7.80826		4	Spruce and Sally	No potential
2	52.21128	-7.80883		4	Scrub	No potential
3	52.2113	-7.80942		4	Mountain ash	No potential
4	52.21125	-7.80944		4	Small spruce	No potential
5	52.2109	-7.8098		4	Spruce/Hazel	No potential
6	52.21101	-7.8099	1	4	2 large spruce	No potential
7	52.21054	-7.81046	T	4	Spruce/larch mix	No potential
8	52.21031	-7.81092		4	Sally	No potential
9	52.20987	-7.8111		4	Sally	No potential
10	52.2095	-7.81131		4	Sally	No potential
11	52.20912	-7.81173		4	Sally	No potential
12	52.20962	-7.81144		4	spruce	No potential
13	52.2077	-7.81307	2	4	Spruce	No potential
14	52.20788	-7.81285		4	Scrub	No potential
15	52.20818	-7.81251		4	Spruce	No potential
16	52.20857	-7.81213		4	Spruce	No potential
17	52.16773	-7.81412		4	Sally	No potential
18	52.1675	-7.81355		4	Sally	No potential
19	52.16772	-7.81326	2	4	Spruce	No potential
20	52.16753	-7.81305	3	4	Small spruce	No potential
21	52.16729	-7.81405		4	Mix of spruce and birch	No potential
22	52.16692	-7.81406		4	Mix of spruce and birch	No potential
57	52.17008	-7.78375	4	4	Young spruce	No potential
23	52.13844	-7.8225	5	1	Sycamore	Good potential because of cavity and lifting bark
24	52.13822	-7.82258		4	Ash	No potential
38	52.12442	-7.66586		4	Sally/birch	No potential
39	52.1241	-7.66633	6	4	Mix of fir, birch, Holly and small oak	No potential
40	52.12355	-7.66704		4	Mix of oak and fir	No potential
41	52.12338	-7.66821		4	Mix of small oak and fir	No potential



	E E C	e cology	Scartmount	ain Windfarm Bat Survey Report, July 2023		
No.	Lat	Lon	Area	category	Species	roost
42	52.12358	-7.66937		4	Group of oak	No potential
43	52.12322	-7.67008		4	Group of beech and sycamore	No potential
44	52.12332	-7.67144		4	Group of oak	No potential
45	52.12312	-7.67245		2	Oak	Possible potential due to broken limbs
46	52.12281	-7.67406		4	Mix of birch, leyland and oak	No potential
47	52.12259	-7.67601		4	Mix of oak, beech and holly	No potential
48	52.12258	-7.67597		4	Mix of beech and sycamore	No potential
49	52.12223	-7.67848		4	Ash/beech	No potential
50	52.12218	-7.6784		1	Beech	Good potential due to cavity
51	52.12218	-7.68014		4	Mix of trees	No potential
52	52.12216	-7.68126		4	Leyland and larch	No potential
53	52.12247	-7.68232		4	Mix of small trees	No potential
54	52.12285	-7.68325		4	Oak and birch	No potential
55	52.12306	-7.68429		4	Spruce and oak	No potential
56	52.12289	-7.68556		4	Mix of small oak, birch and spruce	No potential
25	52.10976	-7.65675		2	Macracarpa	Possible potential due to peeling bark and fissures
26	52.10981	-7.65651		4	Laurel	No potential
27	52.10975	-7.65647		4	Ash and sycamore	No potential
28	52.10984	-7.65634		2	Elm	Possible potential due to flaking bark
29	52.10976	-7.65629		4	Ash	No potential
30	52.10961	-7.65578		4	Group of ash	No potential
31	52.10948	-7.65569	7	2	Elm	Possible potential due to flaking bark
32	52.10896	-7.65455		3	Mix of sycamore and pine	Possible potential due to fallen limbs
33	52.10901	-7.65456		4	Sycamore	No potential
34	52.10891	-7.65416		4	Sally	No potential
35	52.10986	-7.65642		4	Whitethorn/ash	No potential
36	52.10991	-7.65684		4	Ash	No potential
37	52.1098	-7.65684		4	Mix of trees	No potential



4 NIGHTTIME BAT DETECTOR DATA

Table 4-1: Weather data for walked surveys

Date	Sunset / sunrise	Start / finish	Temp	Wind speed m/s	Wind direction	Rain
21/07/2022	Sunset	21:09	18	1.4	SSW	Overcast but dry, light drizzle for ~10 minutes from 22:03
		00:00	14	0.8	N	Dry
22/07/2022	Suprico	03:35	12	0.6	Ν	Dry
22/07/2022	Sunnse	05:35	13	0.2	N	Dry Misty rain Dry Raining Raining Dry Dry
22/07/2022	Supcot	21:08	19	1.1	S	Misty rain
22/07/2022	Sunset	00:00	16	1.6	SSE	Dry
23/07/2022 26/07/2022	Sunrise	03:38	17	1.7	SSW	Raining
		05:38	17	1.1	SSW	Raining
26/07/2022	Supcot	21:02	17	0.8	WNW	Dry
20/07/2022	Sunset	00:04	13	0.4	NNW	Misty rain Dry Raining Raining Dry Dry Dry Dry Dry Dry Dry Dry Dry
27/07/2022	Suprico	03:42	9	0.5	ENE	Dry
27/07/2022	Sumse	05:42	10	0.6	N	Dry
12/00/2022	Supcot	19:50	14	0	-	Dry
12/09/2022	Sunset	22:00	12	0	-	Dry
12/00/2022	Suprico	05:05	12	1.6	W	Dry
13/09/2022	Sumse	07:05	11	0.9	W	Dry
14/06/2022	Supcot	21:44	16	0.6	E	Dry
14/00/2023	Sunset	01:32	14	0.8	E	Dry
15/06/2022	Suprico	03:09	15	0.4	S	Dry
15/00/2023	Sumise	05:09	15	0	-	Dry



4.1 SURVEY SUMMARY

Table 4-2: Summary of nighttime results

Survey	Date	Survey type	Start Time	End Time	Location	Details	Grid ref (ITM) Start / Finish		Sunset / sunrise	Surveyor
Dusk	21/07/2022	Emergence count	21:09	22:35	7	Stone bridge on small stream leading from woodland to south of site. Only access to bridge on road and narrow so recording from adjacent field. Bats noted moving from direction of woodland north in general direction of site. Access underneath not possible. No roost found.	52.15868172, -7.78269913		21:39	RO'C
		Car transect	22:35	00:00	T1	Drove from stone bridge through site over hill top and to access point for dawn survey. Areas where bats visibly observed recorded and high levels of activity on recorded noted.	52.1591908, -7.7800345	52.2118605, - 7.8079826		
Dawn	22/07/2022	Roost count	03:35	05:35	8	Stone bridge to north of site. Daytime inspection suggested numerous fissures for roosting. Although bridge has high potential fissures, no roosting bats were found.	52.21317685, -7.81272279		05:35	RO'C
Dusk	22/07/2022	Emergence count	21:08	22:55	9	Stone bridge to north of site. Daytime inspection shows numerous fissures suitable for roosting. Although bridge has high potential fissures, no roosting bats were found.	52.21241433, -7.80813094		21.28	PO'C
Dusk	22/07/2022	Car transect	22:59	00:00	Т2	Driven transect from north entrance of site through western part of site to entrance. Low activity.	52.2118605, -7.8079826	52.1624557, - 7.7947325	21.36	KU C
Dawn	23/07/2022	Roost count	03:38	05:38	7	Returned to location 7 to check again for bats roosting. No bats observed roosting at bridge.	52.15882009, -7.78294355		05:38	RO'C
Dusk	26/07/2022	Walked transect	21:02	23:17: 00	Т3	Walked Knocknask hill (T1 to 5). Bracken and heather on hillside either side of path, above tree line of conifer plantation. Very little bat activity detected.	52.20794, - 52.221806, - 7.834015 7.830150		21:32	RO'C



Survey	Date	Survey type	Start Time	End Time	Location	Details	Grid ref (ITM) Start / Finish		Sunset / sunrise	Surveyor
		Driven transect	23:24	00:04	T4	Driven transect on road from end point of walked transect until approaching area with housing to southwest of site. Significant bat activity detected in patches outside the site boundary in lower altitudes.	52.20794, - 7.83401	52.20794, - 52.17404376, 7.83401 -7.81255403		
Dawn	27/07/2022	Roost count	03:44	05:42	6	Bat activity detected on road, bats feeding in field adjacent to house but no bats observed entering building .	52.19815667, -7.82559186		05:42	RO'C
Dusk	12/09/2022	Roost count	19:20	22:00	_	Dusk and dawn survey was carried out at same building given its high potential. Derelict dwelling and sheds with treelines and		19:55	LP	
Dawn	13/09/2022	Roost count	05:05	07:05	1	stream. One building was deemed of high bat potential due to an intact roof and a bitumen liner under the slates. This building also had ceilings and therefore, may give more of a screen for a roost. 15 - 20 mainly Common and occasional Soprano Pipistrelle bats recorded re-entering towards dawn. Brown Long eared bats and whiskered / Daubenton's also noted flying around site.	52.169363, -7.	07:05	LP	
Dusk	12/09/2022	Roost count	19:25	21:25	2, 3, 4 and 5	Walked along path between occupied dwelling to the south and derelict sheds to the north-west. No sign of roosting bats although Pipistrelles emerged early. Potentially a roost close but private property restrictions created a difficulty for access. After examining buildings, surveyor examined bridge. No roosts found.	52.202500, -7.835422 52.205223, -7.839364 52.213168, -7.8125430		19:55	JC
		Transect	05:05	06:00	T5	Driven transect along western road traveling south than east.	52.2119472, -7.8080356,	52.169513, - 7.770457		
Dawn	13/09/2022	Roost count	06:00	07:05	11	Examined bridge towards dawn re-entry using thermal scope. Single Soprano Pipistrelle roosting under bridge	52.169513, -7.770457		07:05 JC	JC
Dusk	14/06/2023	Roost count	21:44	01:32	5	Dusk emergence survey at building 5. Timed emergence. No bat roost found.	52.169363, -7.	770107	21:52	KI



Survey	Date	Survey type	Start Time	End Time	Location	Details	Grid ref (ITM) Start / Finish	Sunset / sunrise	Surveyor
Dawn	15/06/2023	Roost count	03:09	05:09	13	Re-entry survey conducted at Eucalyptus trees. Used Canon XA10 night vision and detector. No evidence of roosting .	52.1793239, -7.7996167	05:09	кі
Dusk	14/06/2023	Roost count	21:44	01:32	S of 12	Surveyor 2 positioned between roost building 1 and most likely commuting route to subject site. Located in open territory so low bat potential. Low activity with no evidence of commuting. Leisler's first recorded 29 minutes after sunset, Common Pipistrelle recorded 42 minutes after typical emergence and Soprano Pipistrelle recorded 39 minutes after typical emergence. 11.58 BP/Hr over peak active part of night	52.218522, -7.804158	21:52	JC
Dawn	15/06/2023	Roost count	03:09	05:09	13	Re-entry survey conducted at Eucalyptus trees. Used Guidetrack thermal, infra-red camera and detectors. This survey was conducted within an area of c.14ha of Eucalyptus plantation. A daylight survey previously conducted here showed some pealing bark that could theoretically be used as a roost for bats, although a search of the BTHK database (Andrews H., 2016) shows no records of UK bats using this species. No evidence of roosting.	52.1763922, -7.8009934	05:09	JC
Dusk	14/06/2023	Roost count	21:44	01:32		Static set at secondary potential location where bats from roost could enter site. Located within site at edge of conifers. Leisler's first recorded 13 minutes after sunset, Common Pipistrelle recorded 43 minutes after typical emergence and Soprano Pipistrelle recorded 1hr and 46 minutes after typical emergence. 24.31 BP/Hr over peak active part of night	52.208839, -7.796654	21:52	static



4.2 EMERGENCE / RE-ENTRY ROOST SURVEYS

Table 4-3 Emergence results

Location	Contact number	Date	Time	Species	Details	Lat	Long
7	1	21/07/2022	21:38:34	Soprano Pip	Bat on detector not observed	52.158689	-7.782691
7	2	21/07/2022	21:40:53	Soprano Pip	Bat flying up stream towards site	52.158697	-7.782689
7	3	21/07/2022	21:41:17	Soprano Pip	Bat flying overhead towards site	52.158746	-7.782741
7	4	21/07/2022	21:41:54	Soprano Pip	Bat flying around overhead on road	52.158687	-7.782741
7	5	21/07/2022	21:43:33	Leislers	possibly on detector	52.158769	-7.782697
7	6	21/07/2022	21:43:53	Soprano Pip	Bat flying up stream towards site	52.158711	-7.782778
7	7	21/07/2022	21:44:26	Soprano Pip	bat flying up stream towards site	52.158718	-7.782688
7	8	21/07/2022	21:44:56	Soprano Pip	bat flying up stream towards site	52.158716	-7.782754
7	9	21/07/2022	21:45:41	Soprano Pip	bat flying up stream towards site	52.158733	-7.782738
7	10	21/07/2022	21:46:06	Soprano Pip	bat flying up stream towards site	52.158657	-7.782787
7	11	21/07/2022	21:49:32	Soprano Pip	bat flying up stream towards site	52.158697	-7.782591
7	12	21/07/2022	21:51:25	Soprano Pip	bat flying overhead towards site	52.15874	-7.782845
7	13	21/07/2022	21:51:43	Soprano Pip	bat flying overhead towards site	52.158707	-7.782756
7	14	21/07/2022	21:57:07	Soprano Pip	bat flying up stream towards site	52.158688	-7.782838
7	15	21/07/2022	21:57:25	Soprano Pip		52.15871	-7.782744
7	16	21/07/2022	22:07:28	Common Pip	Flying overhead	52.15872	-7.782671
7	17	21/07/2022	22:08:00	Soprano Pip	flying overhead towards site	52.158645	-7.782869
7	18	21/07/2022	22:08:21	Soprano Pip	Feeding on insects on adjacent tree	52.158684	-7.782631
7	19	21/07/2022	22:09:06	Soprano Pip	flying overhead towards site	52.158739	-7.782784
7	20	21/07/2022	22:11:18	Soprano Pip	Flying overhead away from site	52.158682	-7.782824
7	21	21/07/2022	22:12:00	Leislers		52.158701	-7.782752
7	22	21/07/2022	22:13:05	Soprano Pip	Flying overhead towards site	52.158712	-7.782614
7	23	21/07/2022	22:13:18	Myotis		52.158682	-7.782812
7	24	21/07/2022	22:13:32	Unidentified Pip	Passing overhead away from site	52.158682	-7.782812
7	25	21/07/2022	22:15:14	Soprano Pip	flying overhead	52.158683	-7.782769
7	26	21/07/2022	22:16:48	Leislers		52.158742	-7.782717
7	27	21/07/2022	22:19:26	Soprano Pip	Feeding	52.158768	-7.782814
7	28	21/07/2022	22:21:06	Soprano Pip		52.158714	-7.782773



Location	Contact number	Date	Time	Species	Details	Lat	Long
8	1	22/07/2022	21:48:19	Leislers	Possible Leisler's on detector	52.212439	-7.808031
8	2	22/07/2022	22:22:58	Leislers	Detector not observed	52.212378	-7.808134
8	3	22/07/2022	22:37:34	Myotis		52.212423	-7.808128
8	4	22/07/2022	22:39:01	Myotis		52.212414	-7.808131
8	5	22/07/2022	22:39:20	Myotis		52.212458	-7.808152
8	6	22/07/2022	22:40:18	Myotis		52.212458	-7.808152
8	7	22/07/2022	22:40:34	Myotis		52.212458	-7.808152
8	8	22/07/2022	22:41:07	Myotis		52.212368	-7.808207
8	9	22/07/2022	22:41:22	Myotis		52.212368	-7.808207
8	10	22/07/2022	22:41:44	Myotis		52.212368	-7.808207
8	11	22/07/2022	22:43:19	Myotis		52.212391	-7.808186
8	12	22/07/2022	22:43:44	Myotis		52.212391	-7.808186
8	13	22/07/2022	22:48:19	Myotis		52.212406	-7.808133
8	14	22/07/2022	22:49:43	Myotis	feeding at bridge	52.212418	-7.808189
8	15	22/07/2022	22:50:29	Leisler's		52.212362	-7.808217
8	16	22/07/2022	22:54:21	Leisler's		52.212448	-7.808127
8	17	23/07/2022	03:47:18	Common Pip	feedings on tree line above bridge	52.15887	-7.782723
8	18	23/07/2022	05:07:00	Unknown	Bat flying overhead difficult to identify from detector screen due to rain	52.15882	-7.782944
6	15	27/07/2022	03:55:21	Nathusius	Feeding	52.20849	-7.814102
6	16	27/07/2022	04:14:59	Common Pip		52.198184	-7.825496
6	17	27/07/2022	04:15:38	Soprano Pip	Flying along road	52.198273	-7.825266
6	18	27/07/2022	04:20:53	Soprano Pip	Flying along road	52.200263	-7.82443
6	19	27/07/2022	04:51:46	Soprano Pip	Feeding	52.198004	-7.82505
6	20	27/07/2022	04:57:39	Common Pip		52.198375	-7.82509
6	21	27/07/2022	04:59:58	Unidentified Pip	Two bats near trees at road verge	52.198203	-7.824951
6	22	27/07/2022	05:04:12	Common Pip		52.198457	-7.825125
1	1	12/09/2022	19:59	Soprano Pip		52.221027	-7.79092
1	2	12/09/2022	20:35	Leislers		52.221017	-7.791086
1	3	12/09/2022	20:37	Daubentons	Not seen, possibly associating with river where flow slows down	52.221032	-7.791038
1	4	12/09/2022	20:38	Whiskered	Not seen	52.221091	-7.791069
1	5	12/09/2022	20:40	Whiskered	Not seen	52.221112	-7.79115



Location	Contact number	Date	Time	Species	Lat	Long	
1	6	12/09/2022	20:39	Soprano Pip		52.221074	-7.791107
1	7	12/09/2022	20:41	Soprano Pip	Multiple flying around	52.221074	-7.791107
1	8	12/09/2022	20:42	Whiskered	Not seen	52.221099	-7.791078
1	9	12/09/2022	20:44	Whiskered	Not seen	52.220995	-7.791128
1	10	12/09/2022	20:45	Common Pip	Not seen	52.221003	-7.791027
1	11	12/09/2022	20:13	Common Pip		52.221043	-7.791063
1	12	12/09/2022	20:15	Common Pip		52.221045	-7.791125
1	13	12/09/2022	20:17	Common Pip		52.221142	-7.791051
1	14	12/09/2022	20:20	Common Pip	Flew past the middle of the buildings	52.221005	-7.79111
1	15	12/09/2022	20:29	Unknown	Not seen, long call on the graph, possible Myotis	52.221001	-7.791135
1	16	12/09/2022	20:32	Soprano Pip		52.221186	-7.791084
1	17	12/09/2022	20:33	Common Pip		52.2211	-7.791021
1	18	12/09/2022	20:35	Brown long-eared	Flying close to one another	52.221119	-7.791095
1	19	12/09/2022	20:36	Brown long-eared	Not seen, only one call	52.221248	-7.791068
1	20	12/09/2022	20:38	Soprano Pip	Feeding	52.22115	-7.791091
1	21	12/09/2022	20:38	Leislers	Not seen, only one call	52.221066	-7.791075
1	22	12/09/2022	20:39	Leislers	Not seen, only one call	52.221032	-7.79108
1	23	12/09/2022	20:41	Leislers	Not seen, only one call	52.221083	-7.791046
1	24	12/09/2022	20:46	Whiskered	Not seen, only one call	52.221002	-7.791058
1	25	12/09/2022	20:47	Common Pip	2 flybys	52.221088	-7.791065
1	26	12/09/2022	20:54	Whiskered	Not seen, only one call	52.221018	-7.791057
1	27	12/09/2022	20:56	Common Pip	4 flybys	52.221086	-7.790943
1	28	12/09/2022	21:00	Common Pip	Multiple feeding in middle of buildings	52.221042	-7.790926
1	29	12/09/2022	21:36	Soprano Pip	Multiple flybys	52.221106	-7.790984
1	30	12/09/2022	21:35	Leislers		52.2211	-7.790986
1	31	12/09/2022	21:40	Brown long-eared	2 flybys	52.221128	-7.79084
1	32	12/09/2022	21:41	Soprano Pip	Multiple flybys	52.221104	-7.790799
1	33	12/09/2022	21:40	Leislers	Lesser Noctule not seen	52.22108	-7.790884
1	34	12/09/2022	21:42	Common Pip	Multiple flybys	52.221122	-7.790913
1	35	12/09/2022	21:41	Leislers		52.220975	-7.790966
1	36	12/09/2022	21:43	Soprano Pip	Multiple flybys	52.221069	-7.791065
1	37	12/09/2022	21:13	Common Pip	Multiple flybys	52.221062	-7.7911



Location	Contact number	Date	Time	Species	Details	Lat	Long
1	38	12/09/2022	21:14	Soprano Pip	Lots of soprano activity	52.221062	-7.791051
1	39	12/09/2022	21:16	Common Pip Soprano Pip	High activity for both species	52.221026	-7.790943
1	40	12/09/2022	21:17	Common Pip	High activity for several minutes	52.221068	-7.790961
1	41	12/09/2022	21:22	Soprano Pip	One flyby	52.221016	-7.79106
1	42	12/09/2022	21:27	Common Pip Soprano Pip	Multiple feeding amongst buildings	52.221031	-7.791047
1	43	12/09/2022	21:30	Common Pip Soprano Pip	Large amounts of activity from both species	52.220973	-7.790939
1	44	12/09/2022	21:36	Common Pip	inbetween the buildings	52.221045	-7.791107
1	45	12/09/2022	21:40	Daubentons	Near River, only one call	52.221042	-7.791016
1	46	12/09/2022	21:41	Common Pip	Multiple Flybys	52.221107	-7.791079
1	47	12/09/2022	21:43	Common Pip Soprano Pip	Multiple flybys, High activity	52.221045	-7.791043
1	48	12/09/2022	21:43	Unknown	Lesser Noctule	52.22095	-7.790898
1	49	12/09/2022	21:45	Common Pip Soprano Pip	High activity	52.220974	-7.790922
1	50	12/09/2022	21:50	Common Pip Soprano Pip	Large volume of activity	52.221067	-7.791102
1	51	12/09/2022	21:54	Common Pip	Multiple flybys	52.220921	-7.790917
1	52	12/09/2022	21:57	Whiskered		52.220774	-7.790761
1	53	12/09/2022	21:58	Common Pip	Multiple flybys	52.220982	-7.790986
1	1	13/09/2022	05:22	Whiskered	Fly in front of me seen on infrared cam	52.220991	-7.791114
1	2	13/09/2022	05:23	Common Pip	Seen on infrared cam	52.220844	-7.791089
1	3	13/09/2022	05:25	Common Pip	2 flybys	52.221142	-7.790976
1	4	13/09/2022	05:25	Whiskered	2 flybys	52.221097	-7.791033
1	5	13/09/2022	05:26	Soprano Pip		52.22116	-7.790991
1	6	13/09/2022	05:27	Soprano Pip		52.22112	-7.791036
1	7	13/09/2022	05:29	Soprano Pip	Not seen only one sound pick up	52.221123	-7.791036
1	8	13/09/2022	05:34	Common Pip	High Common p activity	52.221062	-7.791029
1	9	13/09/2022	05:35	Whiskered	Flew over me Inbetween buildings	52.221062	-7.791029
1	10	13/09/2022	05:36	Unknown		52.22108	-7.791067
1	11	13/09/2022	05:38	Unknown		52.221099	-7.79111
1	12	13/09/2022	05:38	Common Pip	1 call	52.22104	-7.791124
1	13	13/09/2022	05:38	Whiskered		52.221006	-7.791178



Location	Contact number	Date	Time	Species	Details	Lat	Long
1	14	13/09/2022	05:41	Unknown		52.221104	-7.791037
1	15	13/09/2022	05:41	Common Pip Soprano Pip	High pip activity	52.221104	-7.791037
1	16	13/09/2022	05:42	Common Pip	multiple flybys	52.221061	-7.791064
1	17	13/09/2022	05:50	Whiskered	1 flyby	52.221032	-7.791132
1	18	13/09/2022	05:50	Brown long-eared	1 flyby	52.221015	-7.791135
1	19	13/09/2022	05:52	Common Pip Soprano Pip	Flying around centre of buildings	52.221096	-7.79102
1	20	13/09/2022	05:54	Whiskered	Flew In between buildings	52.221057	-7.791094
1	21	13/09/2022	05:56	Common Pip	Feeding around buildings	52.220993	-7.791145
1	22	13/09/2022	05:58	Unknown		52.221094	-7.791092
1	23	13/09/2022	05:59	Common Pip	Flying around buildings	52.22105	-7.79103
1	24	13/09/2022	06:05	Common Pip	Possibly associating with the building of Hugh suitability. Looks like it went into the building on infrared cam	52.221126	-7.791109
1	25	13/09/2022	06:09	Daubentons	Possibly associating with the river behind the buildings	52.220991	-7.791071
1	26	13/09/2022	06:13	Common Pip	3 flying into building	52.221136	-7.791157
1	27	13/09/2022	06:15	Brown long-eared		52.221039	-7.791025
1	28	13/09/2022	06:15	Common Pip	Likely re entering roost	52.221104	-7.790998
1	29	13/09/2022	06:21	Common Pip	Flying into roost site	52.221075	-7.791028
1	30	13/09/2022	06:23	Common Pip	Feeding in between the buildings	52.221076	-7.791093
1	31	13/09/2022	06:27	Soprano Pip	In between buildings	52.220999	-7.79113
1	32	13/09/2022	06:36	Soprano Pip	Flypast twice-in between buildings	52.221024	-7.791136
1	33	13/09/2022	06:38	Soprano Pip	Flying in and out of treeline	52.221079	-7.791036
3	1	12/09/2022	20:20	Soprano Pip	Distant. Nothing by buildings to north by this point.	52.20468	-7.83757
2	2	12/09/2022	20:20	Common Pip	Feeding by treeline	52.20432	-7.83728
2	3	12/09/2022	20:25	Common Pip	By building with high potential. Some Common Pipi activity.	52.2025	-7.83526
2	4	12/09/2022	20:42	Common Pip Nathusius		52.20477	-7.81733
5	5	12/09/2022	20:56	Soprano Pip	Under bridge very nice but no bats. One SP called from top of bridge.	52.21317	-7.81254
5	6	12/09/2022	21:27	Natterers	Brief. Unseen under bridge	52.21315	-7.81256



Location	Contact number	Date	Time	Species	Details	Lat	Long
5	_				Check 00:38 of recording. Bat flying far side of		
	7	12/09/2022	21:34	Unknown	bridge 21:33	52.21317	-7.81261
12	8	12/09/2022	22:34	Common Pip Soprano Pip	Sheltered. Sustained activity. Be shed with low potential	52.22034	-7.80127
11					By bridge for dawn. SP hunting and social calls		
11	1	12/00/2022	05.51	Soprano Pin	There are some cavities either side	52 160/2	7 77025
11	1	13/03/2022	05.51			52.10545	-7.77035
11	2	13/09/2022	06:37	Soprano Pip	SP entered roost under bridge. 1 bat	52.16941	-7.77032
1	1	14/06/2023	22:03	Common Pip	First common pipistrelle emerges at 22:03	52.221104	-7.790998
1	2	14/06/2023	22:03	Soprano Pip	Soprano follows very soon after.	52.221104	-7.790998
1	3	14/06/2023	22:04	Common Pip	Common Pipistrelle now feeding along treelines	52.221104	-7.790998
					Common Pipistrelle feeding activity continuing		
1	4	14/06/2023	22:10	Common Pip	alongside occasional Soprano Pipistrelle.	52.221104	-7.790998
		14/06/2023		Common Pipi Soprano	Four bats noted emerging however more may		
1	5		22:16	Pip	have emerged from other side of building.	52.221104	-7.790998
1	6	14/06/2023	22:20	Leisler's	First Leisler's call noted. Unseen bat.	52.221104	-7.790998
					Brown Long-eared bat emerged from roost		
1	7	14/06/2023	22:36	Brown Long-eared	building.	52.221104	-7.790998
1	8	14/06/2023	22:52	Leisler's Soprano Pip	Leisler calls with soprano pip	52.221104	-7.790998
1	9	14/06/2023	22:56	Myotis	Myotis call, Unknown species	52.221104	-7.790998
					Non-echolocating bat emerges from doorway		
1	10	14/06/2023	23:13	Brown Long-eared	leaving house	52.221104	-7.790998
1	11	14/06/2023	23:30		Activity continues until survey ends at 23:30	52.221104	-7.790998
13	1	15/06/2023	04:16	Leislers	passing	52.17714	-7.80137
13	1	15/06/2023	04:25	Leislers	Leislers bat call recorded (location 2)	52.1793239	-7.7996167
13	1	15/06/2023	04:26	Leislers	Another Leislers Call, no sightings (location 2)	52.1793239	-7.7996167

4.3 TRANSECT RESULTS

Table 4-4: Transect Results



ocation	Contact number	Date	Time	Species	Details	Lat	
T1	29	21/07/2022	22:47:16	Unidentified Pip		52.170252	-7.784057
T1	30	21/07/2022	22:50:19	Common Pip Soprano Pip	Along tree line feeding	52.171199	-7.785688
T1	31	21/07/2022	22:54:57	Common Pip		52.176115	-7.792608
T1	32	21/07/2022	22:59:50	Common Pip	52.182909	-7.792408	
T1	33	21/07/2022	23:04:20	Unidentified Pip	52.183905	-7.78814	
T1	34	21/07/2022	23:06:45	Unidentified Pip	52.184457	-7.783626	
T1	35	21/07/2022	23:14:22	Common Pip	52.191989	-7.78872	
T1	36	21/07/2022	23:16:25	Unidentified Pip		52.192909	-7.789449
T1	37	21/07/2022	23:18:54	Common Pip	52.196108	-7.789802	
T1	38	21/07/2022	23:24:32	Common Pip	52.199539	-7.795232	
T1	39	21/07/2022	23:26:11	Common Pip	52.199085	-7.798094	
T1	40	21/07/2022	23:27:39	Common Pip Leislers	52.199441	-7.798762	
T1	41	21/07/2022	23:28:19	Soprano Pip		52.199717	-7.797614
T1	42	21/07/2022	23:29:55	Common Pip Soprano Pip		52.200738	-7.796314
T1	43	21/07/2022	23:32:33	Common Pip Soprano Pip		52.203297	-7.795452
T1	44	21/07/2022	23:33:57	Soprano Pip Leislers		52.205023	-7.795332
T1	45	21/07/2022	23:35:13	Common Pip		52.205999	-7.795379
T1	46	21/07/2022	23:35:21	Common Pip Soprano Pip	numerous bats feeding overhead	52.20593	-7.795424
T1	47	21/07/2022	23:38:00	Common Pip Leislers		52.207914	-7.796393
T1	48	21/07/2022	23:39:56	Common Pip		52.210128	-7.798177
T1	49	21/07/2022	23:42:28	Common Pip		52.209862	-7.803027
T1	50	21/07/2022	23:44:08	Common Pip		52.208708	-7.804818
T1	51	21/07/2022	23:48:17	Common Pip	52.209175	-7.805428	
T1	52	21/07/2022	23:50:13	Common Pip Soprano Pip	52.210578	-7.806054	
T1	53	21/07/2022	23:52:01	Common Pip Soprano Pip	52.211826	-7.807041	
T1	54	21/07/2022	23:56:21	Common Pip Soprano Pip	52.211971	-7.807943	



Location	Contact number	Date	Time	Species		Details	Lat
T1	55	22/07/2022	03:35:15	Soprano pip		52.213177	-7.812723
Т3	1	25/07/2022	22:32:19	Leislers	Passing	52.220134	-7.825332
Т3	2	25/07/2022	22:35:04	Leislers	Passing	52.219595	-7.824423
Т3	3	25/07/2022	22:41:40	Common Pip	Feeding	52.21699	-7.821879
Т3	4	25/07/2022	22:44:43	Common Pip	Feeding	52.216496	-7.821521
Т3	5	25/07/2022	22:46:16	Common Pip Leislers	Passing	52.215954	-7.820932
Т3	6	25/07/2022	22:49:46	Leislers	Passing	52.214767	-7.819698
Т3	7	25/07/2022	22:52:21	Leislers	Passing	52.214154	-7.81934
Т3	8	25/07/2022	22:57:00	Leislers	Passing	52.21074	-7.819186
Т3	9	25/07/2022	23:03:46	Leislers	Passing	52.207554	-7.821497
Т3	10	25/07/2022	23:07:00	Common Pip	Feeding	52.206413	-7.823612
T4	13	25/07/2022	23:31:06	Common Pip	Passing	52.204898	-7.833149
T4	14	25/07/2022	23:36:41	Soprano Pip	Feeding	52.203784	-7.833023
T5	1	13/09/2022	04:58	Soprano Pip	brief unseen	52.20343	-7.80981
T5	2	13/09/2022	05:00	Common Pip	One bat hunting. by house and sheds	52.19813	-7.81005
T5	3	13/09/2022	05:36	Common Pip Soprano Pip	brief contacts	52.18946	-7.80804
T5	4	13/09/2022	05:41	Soprano Pip	brief. ignore break sound at 28khz	52.18165	-7.80917
T5	5	13/09/2022	05:13	Common Pip Soprano Pip	hunting bats. sheltered Oms	52.16711	-7.79846
T5	6	13/09/2022	05:18	Soprano Pip	brief contact	52.15939	-7.79488
T5	7	13/09/2022	05:19	Soprano Pip		52.15672	-7.79437
T5	8	13/09/2022	05:22	Soprano Pip	2 bats	52.15907	-7.78165
T5	9	13/09/2022	05:25	Common Pip	brief contact by farms	52.16644	-7.77235
T5	10	13/09/2022	05:43	Common Pip Soprano Pip Whiskered	feeding	52.17028	-7.76803

5 STATIC DETECTOR RESULTS

Table 5-1: Static Results per Season



	Spring Survey 2022; 17th to the 30th of June ⁶													
Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour		
1	82	74	39	0	0	1	0	0	11	207	6789	1.8		
3	54	1	0	0	0	1	0	0	3	59	6789	0.5		
4	46	13	1	0	2	8	0	0	0	70	6789	0.6		
5	39	4	1	0	0	2	0	0	1	47	6789	0.4		
6	75	19	2	0	3	3	0	0	1	103	6789	0.9		
8	57	1606	305	0	34	10	0	0	6	2018	6789	17.8		
9	118	239	50	0	7	6	0	0	7	427	6789	3.8		
10	106	179	44	0	60	3	0	0	10	402	6789	3.6		
11	139	384	261	0	5	7	1	0	42	839	6789	7.4		
12	243	105	37	1	5	14	0	0	14	419	6789	3.7		
14	105	232	20	0	74	2	0	0	0	433	6789	3.8		
15	5682	47	60	0	6	7	0	0	6	5808	6789	51.3		
16	82	74	39	0	0	1	0	0	11	207	6789	1.8		
Total	6828	2977	859	1	196	65	1	0	112					
Bat passes per hour	4.6	2.0	0.6	0.0	0.1	0.0	0.0	0.0	0.1	11039	88257	7.5		
				S	ummer Survey	2022; 10th	to the 19th of J	uly						

⁶ Data from an initial survey conducted in May 2022 was lost so the survey was repeated in June.

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Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour
1	1347	50	16	0	4	37	0	0	0	1454	5146	17.0
3	476	39	14	0	2	20	3	0	40	594	5146	6.9
4	579	33	5	0	2	52	1	0	7	679	5146	7.9
5	703	17	12	0	2	14	2	0	2	752	5146	8.8
6	806	1597	143	0	3	24	5	0	25	2603	5146	30.3
8	751	3103	3171	1	14	16	0	0	74	7130	5146	16.2
9	620	287	370	0	15	38	3	0	54	1387	5146	29.3
10	503	1452	430	0	79	15	0	0	37	2516	5146	34.7
11	464	1568	865	0	6	16	0	0	57	2976	5146	34.7
12	546	155	90	0	6	23	2	0	44	866	8240	6.3
14	255	1883	87	0	101	0	0	0	8	2334	5146	27.2
15	520	567	709	19	0	28	0	0	50	1893	5146	22.1
16	349	472	315	2	19	13	0	0	25	1195	5146	13.9
Total	7919	11223	6227	22	253	296	16	0	423			
Bat passes per hour	6.8	9.6	5.3	0.0	0.2	0.3	0.0	0.0	0.4	26379	69992	22.6

August Survey 2022; 4th to the 13th of August



Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour
1	292	13	12	1	0	54	11	0	23	406	6535	3.7
3	698	29	24	0	0	56	8	0	27	842	6535	7.7
4	426	17	32	0	0	62	11	0	25	573	6535	5.3
5	394	6	15	0	0	88	10	1	20	534	6535	4.9
6	257	193	72	0	3	22	8	0	52	607	6535	5.6
8	0	77	21	0	3	0	0	0	2	103	6535	0.9
9	156	443	381	0	2	26	10	0	47	1065	6535	9.8
10	144	990	268	0	55	17	10	0	42	1526	6535	14.0
11	106	2339	1530	0	10	23	0	0	161	4169	6535	38.3
12	134	345	340	0	4	48	9	0	88	968	6535	8.9
14	102	4176	1203	0	23	10	0	0	23	5537	6535	50.8
15	168	695	679	0	5	45	23	0	79	1694	6535	15.6
16	78	407	181	0	0	12	0	0	6	684	6535	6.3
Total	2955	9730	4758	1	105	463	100	1	595			
Bat passes per hour	2.1	6.9	3.4	0.0	0.1	0.3	0.1	0.0	0.4	18708	84955	13.2

September Survey 2022; 12th to the 21st of September



Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour
1	293	16	2	0	1	253	8	2	43	618	-	0.0
3	59	3	2	0	1	30	0	0	4	99	7478	0.8
4	39	2	1	0	0	181	4	0	20	247	7478	2.0
5	66	2	0	0	0	92	2	0	14	176	7478	1.4
6	26	3	2	0	0	10	1	0	7	49	7478	0.4
8	29	380	216	0	6	41	0	0	7	679	7478	5.4
9	69	65	59	0	0	60	7	0	30	290	7478	2.3
10	86	64	55	0	9	42	5	0	23	284	7478	2.3
11	80	169	154	0	6	60	0	0	76	545	7478	4.4
12	138	27	32	0	0	54	1	0	31	283	7478	2.3
14	63	140	86	0	3	51	0	0	56	399	7478	3.2
15	105	44	150	0	0	91	3	0	59	452	7478	3.6
16	61	33	41	0	2	39	0	0	5	181	7478	1.5
Total	1114	948	800	0	28	1004	31	2	375			
Bat passes per hour	0.7	0.6	0.5	0.0	0.0	0.7	0.0	0.0	0.3	4302	89736	2.9

October Survey 2022; 21st October to the 2nd of November



Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour
1	-	-	-	-	-	-	-	-	-	-	-	0.0
3	0	0	0	0	0	0	0	0	0	0	9023	0.0
4	0	0	0	0	0	0	0	0	5	5	9023	0.0
5	0	0	0	0	0	0	0	0	0	0	9023	0.0
6	0	0	0	0	0	0	0	0	1	1	9023	0.0
8	0	6	0	0	0	0	0	0	1	7	9023	0.0
9	8	2	15	0	1	1	0	0	15	42	9023	0.3
10	13	7	6	0	0	4	0	0	3	33	9023	0.2
11	5	1	17	0	0	0	0	0	0	23	9023	0.2
12	43	1	1	0	0	4	0	0	17	66	9023	0.4
14	8	4	8	0	0	0	0	0	3	23	9023	0.2
15	0	0	0	0	0	0	0	0	0	0	9023	0.0
16	1	0	0	0	0	0	0	0	0	1	9023	0.0
Total	78	21	47	0	1	9	0	0	45			
Bat passes per hour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	201	108276	0.1

Spring Survey 2023; 15th to the 31st of May



Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour
1	37	9	0	0	2	5	0	0	2	55	8948	0.4
3	-	-	-	-	-	-	-	-	-	-	-	0.0
4	1	4	1	0	6	0	0	0	1	13	8948	0.1
5	92	13	0	0	6	2	0	0	1	114	8948	0.8
6	78	726	36	0	70	4	0	0	1	915	8948	6.1
8	151	803	111	0	50	29	0	0	35	1179	8948	7.9
9	475	1417	137	4	125	5	0	0	28	2191	8948	14.7
10	536	602	38	169	4	0	0	0	26	1375	8948	9.2
11	1133	2909	434	0	43	4	0	0	39	4562	8948	30.6
12	234	612	104	22	0	10	0	0	70	1052	8948	7.1
14	4290	356	14	0	48	1	0	0	1	4710	8948	31.6
15	1174	1160	399	1	37	26	1	0	17	2815	8948	18.9
16	73	7	6	0	0	0	0	0	1	87	8948	0.6
Total	8274	8618	1280	196	391	86	1	0	222			
Bat passes per hour	4.6	4.8	0.7	0.1	0.2	0.0	0.0	0.0	0.1	19068	107376	10.7

Table 5-2: Static Results combined

Detector	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total	Minutes recorded	Bat passes per hour
1	2051	162	69	1	7	350	19	2	79	2740	34896	4.7



3	1287	72	40	0	3	107	11	0	74	1594	43919	2.2
4	1091	69	40	0	10	303	16	0	58	1587	34971	2.7
5	1294	42	28	0	8	198	14	1	38	1623	43919	2.2
6	1242	2538	255	0	79	63	14	0	87	4278	43919	5.8
8	988	5975	3824	1	107	96	0	0	125	11116	43919	15.2
9	1446	2453	1012	4	150	136	20	0	181	5402	43919	7.4
10	1388	3294	841	169	207	81	15	0	141	6136	43919	8.4
11	1927	7370	3261	0	70	110	1	0	375	13114	43919	17.9
12	1338	1245	604	23	15	153	12	0	264	3654	38065	5.8
14	4823	6791	1418	0	249	64	0	0	91	13436	43919	18.4
15	7649	2513	1997	20	48	197	27	0	211	12662	43919	17.3
16	644	993	582	2	21	65	0	0	48	2355	43919	3.2
Total	27168	33517	13971	220	974	1923	149	3	1772	79697	547122	8.7

Table 5-3: Comparison of average bat passes per hour broken per species over the entire site.

Month	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
May	4.6	4.8	0.7	0.1	0.2	0	0	0	0.1	10.7
June	4.6	2	0.6	0	0.1	0	0	0	0.1	7.5
July	6.8	9.6	5.3	0	0.2	0.3	0	0	0.4	22.6
August	2.1	6.9	3.4	0	0.1	0.3	0.1	0	0.4	13.2
Sept	0.7	0.6	0.5	0	0	0.7	0	0	0.3	2.9
Oct	0	0	0	0	0	0	0	0	0	0.1



Table 5-4: All static results combined

Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
1	1	1	17th June 2022	5	3	2	0	0	0	0	0	3	13
1	2	2	18th June 2022	5	2	0	0	0	0	0	0	1	8
1	3	3	19th June 2022	0	2	2	0	0	0	0	0	1	5
1	4	4	20th June 2022	8	10	5	0	0	0	0	0	2	25
1	5	5	21st June 2022	10	11	2	0	0	0	0	0	2	25
1	6	6	22nd June 2022	23	37	9	0	0	0	0	0	1	70
1	7	7	23rd June 2022	23	8	19	0	0	0	0	0	1	51
1	8	8	24th June 2022	8	1	0	0	0	1	0	0	0	10
1	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
1	10	10	26th June 2022	0	0	0	0	0	0	0	0	0	0
1	11	11	27th June 2022	0	0	0	0	0	0	0	0	0	0
1	12	12	28th June 2022	0	0	0	0	0	0	0	0	0	0
1	13	13	29th June 2022	0	0	0	0	0	0	0	0	0	0
1	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
1	15	1	10th July 2022	192	5	0	0	0	8	0	0	0	205
1	16	2	11th July 2022	197	9	3	0	3	6	0	0	0	218
1	17	3	12th July 2022	0	0	0	0	0	0	0	0	0	0
1	18	4	13th July 2022	28	1	0	0	0	4	0	0	0	33
1	19	5	14th July 2022	283	23	3	0	0	4	0	0	0	313
1	20	6	15th July 2022	189	4	2	0	0	4	0	0	0	199
1	21	7	16th July 2022	102	1	2	0	1	5	0	0	0	111
1	22	8	17th July 2022	213	5	6	0	0	4	0	0	0	228
1	23	9	18th July 2022	143	2	0	0	0	2	0	0	0	147
1	24	10	19th July 2022	0	0	0	0	0	0	0	0	0	0
1	25	1	4th August 2022	0	1	0	0	0	0	1	0	1	3



	re colog	б У		Sc	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
1	26	2	5th August 2022	2	0	0	0	0	2	0	0	0	4
1	27	3	6th August 2022	11	1	1	1	0	1	1	0	5	21
1	28	4	7th August 2022	4	0	1	0	0	3	1	0	2	11
1	29	5	8th August 2022	15	0	0	0	0	4	1	0	0	20
1	30	6	9th August 2022	6	0	0	0	0	2	1	0	1	10
1	31	7	10th August 2022	47	3	0	0	0	11	1	0	1	63
1	32	8	11th August 2022	77	2	2	0	0	3	1	0	2	87
1	33	9	12th August 2022	34	4	5	0	0	11	1	0	5	60
1	34	10	13th August 2022	96	2	3	0	0	17	3	0	6	127
1	35	1	12th September 2022	0	0	1	0	0	1	0	0	0	2
1	36	2	13th September 2022	0	0	0	0	0	2	0	0	1	3
1	37	3	14th September 2022	1	0	0	0	0	3	0	0	2	6
1	38	4	15th September 2022	27	0	1	0	0	62	4	1	16	111
1	39	5	16th September 2022	10	0	0	0	0	2	0	0	1	13
1	40	6	17th September 2022	20	0	0	0	0	21	0	0	4	45
1	41	7	18th September 2022	34	0	0	0	1	19	0	0	3	57
1	42	8	19th September 2022	91	5	0	0	0	74	3	1	5	179
1	43	9	20th September 2022	108	10	0	0	0	69	1	0	11	199
1	44	10	21st September 2022	2	1	0	0	0	0	0	0	0	3
1	58	1	15th May 2023	1	0	0	0	0	0	0	0	0	1
1	59	2	16th May 2023	4	0	0	0	0	0	0	0	0	4
1	60	3	17th May 2023	6	1	0	0	0	2	0	0	0	9
1	61	4	18th May 2023	0	0	0	0	0	0	0	0	0	0
1	62	1	19th May 2023	0	0	0	0	0	0	0	0	0	0
1	63	2	20th May 2023	5	1	0	0	0	0	0	0	1	7
1	64	3	21st May 2023	0	0	0	0	0	0	0	0	0	0



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
1	65	4	22nd May 2023	0	0	0	0	0	0	0	0	0	0
1	66	5	23rd May 2023	0	0	0	0	0	0	0	0	0	0
1	67	6	24th May 2023	1	0	0	0	0	0	0	0	0	1
1	68	7	25th May 2023	0	0	0	0	0	0	0	0	0	0
1	69	8	26th May 2023	4	3	0	0	0	1	0	0	0	8
1	70	9	27th May 2023	14	4	0	0	2	0	0	0	1	21
1	71	10	28th May 2023	0	0	0	0	0	0	0	0	0	0
1	72	11	29th May 2023	0	0	0	0	0	0	0	0	0	0
1	73	12	30th May 2023	0	0	0	0	0	0	0	0	0	0
1	74	13	31st May 2023	2	0	0	0	0	2	0	0	0	4
3	1	1	17th June 2022	0	0	0	0	0	0	0	0	0	0
3	2	2	18th June 2022	0	0	0	0	0	0	0	0	0	0
3	3	3	19th June 2022	0	0	0	0	0	0	0	0	0	0
3	4	4	20th June 2022	6	1	0	0	0	0	0	0	3	10
3	5	5	21st June 2022	6	0	0	0	0	0	0	0	0	6
3	6	6	22nd June 2022	41	0	0	0	0	0	0	0	0	41
3	7	7	23rd June 2022	0	0	0	0	0	1	0	0	0	1
3	8	8	24th June 2022	0	0	0	0	0	0	0	0	0	0
3	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
3	10	10	26th June 2022	0	0	0	0	0	0	0	0	0	0
3	11	11	27th June 2022	0	0	0	0	0	0	0	0	0	0
3	12	12	28th June 2022	0	0	0	0	0	0	0	0	0	0
3	13	13	29th June 2022	1	0	0	0	0	0	0	0	0	1
3	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
3	15	1	10th July 2022	13	0	0	0	0	1	0	0	9	23
3	16	2	11th July 2022	72	6	2	0	1	2	0	0	3	86



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
3	17	3	12th July 2022	10	0	0	0	0	0	1	0	0	11
3	18	4	13th July 2022	6	0	0	0	0	1	1	0	5	13
3	19	5	14th July 2022	164	16	5	0	1	2	0	0	7	195
3	20	6	15th July 2022	203	14	5	0	0	4	1	0	8	235
3	21	7	16th July 2022	3	0	0	0	0	0	0	0	1	4
3	22	8	17th July 2022	2	3	2	0	0	8	0	0	4	19
3	23	9	18th July 2022	2	0	0	0	0	2	0	0	3	7
3	24	10	19th July 2022	1	0	0	0	0	0	0	0	0	1
3	25	1	4th August 2022	0	0	0	0	0	0	0	0	0	0
3	26	2	5th August 2022	6	1	0	0	0	1	1	0	2	11
3	27	3	6th August 2022	28	0	1	0	0	6	1	0	0	36
3	28	4	7th August 2022	40	0	1	0	0	4	0	0	3	48
3	29	5	8th August 2022	48	0	0	0	0	9	0	0	3	60
3	30	6	9th August 2022	31	3	1	0	0	3	0	0	4	42
3	31	7	10th August 2022	88	2	5	0	0	12	1	0	6	114
3	32	8	11th August 2022	224	12	6	0	0	9	0	0	4	255
3	33	9	12th August 2022	124	3	5	0	0	3	1	0	2	138
3	34	10	13th August 2022	109	8	5	0	0	9	4	0	3	138
3	35	1	12th September 2022	5	1	1	0	1	2	0	0	0	10
3	36	2	13th September 2022	0	0	0	0	0	0	0	0	0	0
3	37	3	14th September 2022	0	0	0	0	0	0	0	0	0	0
3	38	4	15th September 2022	1	0	0	0	0	2	0	0	1	4
3	39	5	16th September 2022	0	0	0	0	0	9	0	0	0	9
3	40	6	17th September 2022	17	0	0	0	0	3	0	0	0	20
3	41	7	18th September 2022	34	1	0	0	0	8	0	0	2	45
3	42	8	19th September 2022	2	0	0	0	0	2	0	0	1	5



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
3	43	9	20th September 2022	0	1	1	0	0	4	0	0	0	6
3	44	10	21st September 2022	0	0	0	0	0	0	0	0	0	0
3	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
3	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
3	47	3	23rd October 2022	0	0	0	0	0	0	0	0	0	0
3	48	4	24th October 2022	0	0	0	0	0	0	0	0	0	0
3	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
3	50	6	26th October 2022	0	0	0	0	0	0	0	0	0	0
3	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
3	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
3	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
3	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
3	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
3	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
3	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
4	1	1	17th June 2022	0	0	0	0	0	0	0	0	0	0
4	2	2	18th June 2022	0	0	0	0	0	0	0	0	0	0
4	3	3	19th June 2022	0	0	0	0	0	0	0	0	0	0
4	4	4	20th June 2022	12	5	1	0	0	2	0	0	0	20
4	5	5	21st June 2022	2	1	0	0	0	1	0	0	0	4
4	6	6	22nd June 2022	24	7	0	0	1	3	0	0	0	35
4	7	7	23rd June 2022	4	0	0	0	0	1	0	0	0	5
4	8	8	24th June 2022	0	0	0	0	0	0	0	0	0	0
4	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
4	10	10	26th June 2022	0	0	0	0	0	0	0	0	0	0
4	11	11	27th June 2022	0	0	0	0	0	0	0	0	0	0



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
4	12	12	28th June 2022	3	0	0	0	1	0	0	0	0	4
4	13	13	29th June 2022	1	0	0	0	0	1	0	0	0	2
4	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
4	15	1	10th July 2022	48	1	0	0	0	3	0	0	1	53
4	16	2	11th July 2022	76	16	0	0	0	4	0	0	1	97
4	17	3	12th July 2022	2	0	0	0	0	0	0	0	0	2
4	18	4	13th July 2022	32	0	0	0	0	3	0	0	0	35
4	19	5	14th July 2022	171	5	5	0	1	9	0	0	0	191
4	20	6	15th July 2022	175	10	0	0	0	11	1	0	2	199
4	21	7	16th July 2022	31	0	0	0	0	4	0	0	1	36
4	22	8	17th July 2022	16	1	0	0	0	8	0	0	0	25
4	23	9	18th July 2022	28	0	0	0	1	10	0	0	2	41
4	24	10	19th July 2022	0	0	0	0	0	0	0	0	0	0
4	25	1	4th August 2022	2	0	0	0	0	0	0	0	0	2
4	26	2	5th August 2022	4	1	0	0	0	0	0	0	0	5
4	27	3	6th August 2022	22	1	1	0	0	6	0	0	0	30
4	28	4	7th August 2022	26	1	4	0	0	1	1	0	0	33
4	29	5	8th August 2022	28	2	0	0	0	5	0	0	4	39
4	30	6	9th August 2022	14	1	5	0	0	0	3	0	5	28
4	31	7	10th August 2022	57	1	4	0	0	5	2	0	3	72
4	32	8	11th August 2022	107	6	6	0	0	17	2	0	4	142
4	33	9	12th August 2022	70	3	7	0	0	8	2	0	3	93
4	34	10	13th August 2022	96	1	5	0	0	20	1	0	6	129
4	35	1	12th September 2022	0	0	0	0	0	2	0	0	0	2
4	36	2	13th September 2022	1	0	0	0	0	1	0	0	0	2
4	37	3	14th September 2022	0	0	0	0	0	2	0	0	0	2



	re colog	У		S	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	ly 2023					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
4	38	4	15th September 2022	1	0	0	0	0	4	0	0	2	7
4	39	5	16th September 2022	2	0	0	0	0	26	0	0	4	32
4	40	6	17th September 2022	11	0	0	0	0	37	1	0	2	51
4	41	7	18th September 2022	6	1	0	0	0	61	3	0	5	76
4	42	8	19th September 2022	13	0	0	0	0	26	0	0	1	40
4	43	9	20th September 2022	5	1	1	0	0	21	0	0	6	34
4	44	10	21st September 2022	0	0	0	0	0	1	0	0	0	1
4	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
4	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
4	47	3	23rd October 2022	0	0	0	0	0	0	0	0	1	1
4	48	4	24th October 2022	0	0	0	0	0	0	0	0	0	0
4	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
4	50	6	26th October 2022	0	0	0	0	0	0	0	0	2	2
4	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
4	52	8	28th October 2022	0	0	0	0	0	0	0	0	1	1
4	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
4	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
4	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
4	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
4	57	13	2nd November 2022	0	0	0	0	0	0	0	0	1	1
4	58	1	15th May 2023	0	0	0	0	0	0	0	0	0	0
4	59	2	16th May 2023	1	0	0	0	0	0	0	0	0	1
4	60	3	17th May 2023	0	0	0	0	0	0	0	0	0	0
4	61	4	18th May 2023	0	1	0	0	0	0	0	0	0	1
4	62	1	19th May 2023	0	0	0	0	0	0	0	0	0	0
4	63	2	20th May 2023	0	0	0	0	1	0	0	0	0	1



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
4	64	3	21st May 2023	0	0	0	0	0	0	0	0	0	0
4	65	4	22nd May 2023	0	0	0	0	0	0	0	0	0	0
4	66	5	23rd May 2023	0	0	0	0	0	0	0	0	0	0
4	67	6	24th May 2023	0	0	0	0	0	0	0	0	0	0
4	68	7	25th May 2023	0	0	0	0	0	0	0	0	0	0
4	69	8	26th May 2023	0	3	1	0	0	0	0	0	0	4
4	70	9	27th May 2023	0	0	0	0	3	0	0	0	0	3
4	71	10	28th May 2023	0	0	0	0	0	0	0	0	1	1
4	72	11	29th May 2023	0	0	0	0	0	0	0	0	0	0
4	73	12	30th May 2023	0	0	0	0	1	0	0	0	0	1
4	74	13	31st May 2023	0	0	0	0	1	0	0	0	0	1
5	1	1	17th June 2022	0	0	0	0	0	0	0	0	0	0
5	2	2	18th June 2022	0	0	0	0	0	0	0	0	0	0
5	3	3	19th June 2022	0	0	0	0	0	0	0	0	0	0
5	4	4	20th June 2022	18	3	0	0	0	0	0	0	0	21
5	5	5	21st June 2022	0	0	1	0	0	0	0	0	0	1
5	6	6	22nd June 2022	17	1	0	0	0	0	0	0	0	18
5	7	7	23rd June 2022	3	0	0	0	0	1	0	0	0	4
5	8	8	24th June 2022	0	0	0	0	0	0	0	0	0	0
5	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
5	10	10	26th June 2022	0	0	0	0	0	1	0	0	0	1
5	11	11	27th June 2022	1	0	0	0	0	0	0	0	0	1
5	12	12	28th June 2022	0	0	0	0	0	0	0	0	0	0
5	13	13	29th June 2022	0	0	0	0	0	0	0	0	1	1
5	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
5	15	1	10th July 2022	101	4	0	0	0	1	0	0	0	106



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
5	16	2	11th July 2022	82	3	2	0	0	1	0	0	1	89
5	17	3	12th July 2022	2	0	0	0	0	0	0	0	0	2
5	18	4	13th July 2022	8	0	0	0	0	0	0	0	0	8
5	19	5	14th July 2022	223	1	0	0	1	4	0	0	0	229
5	20	6	15th July 2022	159	3	3	0	0	5	0	0	0	170
5	21	7	16th July 2022	29	1	3	0	0	1	0	0	0	34
5	22	8	17th July 2022	38	3	3	0	0	1	2	0	1	48
5	23	9	18th July 2022	61	2	1	0	1	1	0	0	0	66
5	24	10	19th July 2022	0	0	0	0	0	0	0	0	0	0
5	25	1	4th August 2022	0	0	0	0	0	0	0	0	1	1
5	26	2	5th August 2022	4	0	0	0	0	0	1	0	0	5
5	27	3	6th August 2022	17	0	1	0	0	25	0	0	0	43
5	28	4	7th August 2022	17	0	1	0	0	4	0	0	0	22
5	29	5	8th August 2022	27	1	1	0	0	9	2	0	2	42
5	30	6	9th August 2022	8	0	1	0	0	2	0	0	1	12
5	31	7	10th August 2022	69	1	1	0	0	14	2	0	1	88
5	32	8	11th August 2022	95	2	3	0	0	12	4	0	5	121
5	33	9	12th August 2022	57	2	2	0	0	11	0	0	4	76
5	34	10	13th August 2022	100	0	5	0	0	11	1	1	6	124
5	35	1	12th September 2022	0	0	0	0	0	2	0	0	1	3
5	36	2	13th September 2022	0	1	0	0	0	0	0	0	1	2
5	37	3	14th September 2022	0	0	0	0	0	2	0	0	1	3
5	38	4	15th September 2022	0	0	0	0	0	23	0	0	3	26
5	39	5	16th September 2022	0	0	0	0	0	8	1	0	3	12
5	40	6	17th September 2022	6	0	0	0	0	3	0	0	2	11
5	41	7	18th September 2022	28	1	0	0	0	20	0	0	3	52



	Scartmountain Windfarm Bat Survey Report, July 2023												
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
5	42	8	19th September 2022	20	0	0	0	0	29	0	0	0	49
5	43	9	20th September 2022	12	0	0	0	0	5	1	0	0	18
5	44	10	21st September 2022	0	0	0	0	0	0	0	0	0	0
5	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
5	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
5	47	3	23rd October 2022	0	0	0	0	0	0	0	0	0	0
5	48	4	24th October 2022	0	0	0	0	0	0	0	0	0	0
5	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
5	50	6	26th October 2022	0	0	0	0	0	0	0	0	0	0
5	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
5	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
5	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
5	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
5	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
5	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
5	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
5	58	1	15th May 2023	0	0	0	0	0	0	0	0	0	0
5	59	2	16th May 2023	3	0	0	0	0	0	0	0	0	3
5	60	3	17th May 2023	3	0	0	0	0	0	0	0	0	3
5	61	4	18th May 2023	0	0	0	0	0	0	0	0	0	0
5	62	1	19th May 2023	0	0	0	0	0	0	0	0	0	0
5	63	2	20th May 2023	8	0	0	0	0	0	0	0	1	9
5	64	3	21st May 2023	0	0	0	0	0	0	0	0	0	0
5	65	4	22nd May 2023	0	0	0	0	0	0	0	0	0	0
5	66	5	23rd May 2023	0	0	0	0	0	1	0	0	0	1
5	67	6	24th May 2023	2	0	0	0	0	0	0	0	0	2



E	Scartmountain Windfarm Bat Survey Report, July 2023												
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
5	68	7	25th May 2023	0	0	0	0	0	0	0	0	0	0
5	69	8	26th May 2023	16	9	0	0	1	1	0	0	0	27
5	70	9	27th May 2023	58	3	0	0	5	0	0	0	0	66
5	71	10	28th May 2023	0	0	0	0	0	0	0	0	0	0
5	72	11	29th May 2023	0	1	0	0	0	0	0	0	0	1
5	73	12	30th May 2023	0	0	0	0	0	0	0	0	0	0
5	74	13	31st May 2023	2	0	0	0	0	0	0	0	0	2
6	1	1	17th June 2022	0	2	0	0	0	0	0	0	0	2
6	2	2	18th June 2022	0	0	0	0	0	0	0	0	0	0
6	3	3	19th June 2022	0	0	0	0	0	0	0	0	0	0
6	4	4	20th June 2022	3	8	1	0	0	0	0	0	0	12
6	5	5	21st June 2022	1	3	0	0	1	1	0	0	0	6
6	6	6	22nd June 2022	30	5	0	0	1	0	0	0	0	36
6	7	7	23rd June 2022	22	0	0	0	1	0	0	0	0	23
6	8	8	24th June 2022	0	0	0	0	0	0	0	0	0	0
6	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
6	10	10	26th June 2022	0	0	0	0	0	0	0	0	0	0
6	11	11	27th June 2022	0	0	0	0	0	0	0	0	0	0
6	12	12	28th June 2022	10	1	0	0	0	0	0	0	0	11
6	13	13	29th June 2022	9	0	1	0	0	2	0	0	1	13
6	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
6	15	1	10th July 2022	73	393	9	0	0	5	0	0	7	487
6	16	2	11th July 2022	127	246	4	0	0	1	0	0	2	380
6	17	3	12th July 2022	36	0	0	0	0	2	0	0	0	38
6	18	4	13th July 2022	63	10	0	0	0	3	0	0	0	76
6	19	5	14th July 2022	137	359	14	0	1	4	0	0	4	519



	Scartmountain Windfarm Bat Survey Report, July 2023												
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
6	20	6	15th July 2022	132	196	75	0	1	2	3	0	1	410
6	21	7	16th July 2022	70	197	9	0	1	1	0	0	1	279
6	22	8	17th July 2022	58	51	7	0	0	2	0	0	5	123
6	23	9	18th July 2022	98	145	25	0	0	4	2	0	5	279
6	24	10	19th July 2022	12	0	0	0	0	0	0	0	0	12
6	25	1	4th August 2022	6	0	0	0	0	0	0	0	0	6
6	26	2	5th August 2022	5	1	1	0	0	1	0	0	1	9
6	27	3	6th August 2022	44	10	1	0	0	1	1	0	0	57
6	28	4	7th August 2022	22	15	2	0	0	1	1	0	0	41
6	29	5	8th August 2022	24	20	12	0	0	2	1	0	2	61
6	30	6	9th August 2022	4	15	17	0	0	0	1	0	0	37
6	31	7	10th August 2022	24	29	10	0	2	3	0	0	10	78
6	32	8	11th August 2022	68	40	14	0	1	5	3	0	22	153
6	33	9	12th August 2022	30	39	10	0	0	4	1	0	5	89
6	34	10	13th August 2022	30	24	5	0	0	5	0	0	12	76
6	41	1	12th September 2022	3	1	0	0	0	2	1	0	0	7
6	42	2	13th September 2022	1	0	0	0	0	1	0	0	0	2
6	43	3	14th September 2022	0	0	1	0	0	1	0	0	1	3
6	42	4	15th September 2022	3	1	0	0	0	1	0	0	1	6
6	43	5	16th September 2022	4	0	0	0	0	3	0	0	0	7
6	42	6	17th September 2022	2	0	1	0	0	1	0	0	3	7
6	43	7	18th September 2022	5	0	0	0	0	0	0	0	0	5
6	42	8	19th September 2022	8	1	0	0	0	1	0	0	2	12
6	43	9	20th September 2022	0	0	0	0	0	0	0	0	0	0
6	44	10	21st September 2022	0	0	0	0	0	0	0	0	0	0
6	41	1	21st October 2022	0	0	0	0	0	0	0	0	0	0


	re colog	У		S	cartmountain W	/indfarm Bat Su	rvey Report, Ju	ıly 2023					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
6	42	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
6	43	3	23rd October 2022	0	0	0	0	0	0	0	0	1	1
6	42	4	24th October 2022	0	0	0	0	0	0	0	0	0	0
6	43	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
6	42	6	26th October 2022	0	0	0	0	0	0	0	0	0	0
6	43	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
6	42	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
6	43	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
6	43	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
6	42	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
6	43	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
6	44	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
6	58	1	15th May 2023	1	1	0	0	0	0	0	0	0	2
6	59	2	16th May 2023	3	7	1	0	2	0	0	0	0	13
6	60	3	17th May 2023	12	31	2	0	1	1	0	0	0	47
6	61	4	18th May 2023	3	6	0	0	7	0	0	0	0	16
6	62	1	19th May 2023	5	31	1	0	1	0	0	0	0	38
6	63	2	20th May 2023	9	18	2	0	1	0	0	0	0	30
6	64	3	21st May 2023	1	3	0	0	0	0	0	0	0	4
6	65	4	22nd May 2023	0	2	0	0	1	0	0	0	0	3
6	66	5	23rd May 2023	2	0	0	0	0	0	0	0	0	2
6	67	6	24th May 2023	10	2	2	0	1	0	0	0	0	15
6	68	7	25th May 2023	3	1	1	0	0	0	0	0	0	5
6	69	8	26th May 2023	10	393	26	0	22	1	0	0	1	453
6	70	9	27th May 2023	13	14	0	0	4	0	0	0	0	31
6	71	10	28th May 2023	1	3	0	0	0	0	0	0	0	4



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
6	72	11	29th May 2023	2	110	1	0	11	0	0	0	0	124
6	73	12	30th May 2023	0	17	0	0	5	0	0	0	0	22
6	74	13	31st May 2023	3	87	0	0	14	2	0	0	0	106
8	1	1	17th June 2022	0	3	0	0	0	1	0	0	0	4
8	2	2	18th June 2022	1	0	0	0	0	0	0	0	0	1
8	3	3	19th June 2022	0	0	0	0	0	4	0	0	0	4
8	4	4	20th June 2022	14	695	177	0	13	1	0	0	4	904
8	5	5	21st June 2022	0	62	28	0	0	2	0	0	0	92
8	6	6	22nd June 2022	21	492	81	0	20	0	0	0	1	615
8	7	7	23rd June 2022	12	156	1	0	1	0	0	0	0	170
8	8	8	24th June 2022	0	0	0	0	0	0	0	0	0	0
8	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
8	10	10	26th June 2022	0	13	5	0	0	0	0	0	0	18
8	11	11	27th June 2022	1	1	1	0	0	1	0	0	0	4
8	12	12	28th June 2022	5	111	8	0	0	0	0	0	1	125
8	13	13	29th June 2022	3	73	4	0	0	1	0	0	0	81
8	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
8	15	1	10th July 2022	53	683	410	0	1	1	0	0	9	1157
8	16	2	11th July 2022	94	447	146	0	3	2	0	0	8	700
8	17	3	12th July 2022	23	14	8	0	0	1	0	0	15	61
8	18	4	13th July 2022	243	376	157	0	0	0	0	0	26	802
8	19	5	14th July 2022	158	310	713	0	2	4	0	0	5	1192
8	20	6	15th July 2022	51	357	1006	1	1	0	0	0	3	1419
8	21	7	16th July 2022	53	301	263	0	3	2	0	0	5	627
8	22	8	17th July 2022	48	481	429	0	2	5	0	0	2	967
8	23	9	18th July 2022	28	134	39	0	2	1	0	0	1	205



	re colog	б У		S	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
8	24	10	19th July 2022	0	0	0	0	0	0	0	0	0	0
8	25	1	4th August 2022	0	0	0	0	0	0	0	0	0	0
8	26	2	5th August 2022	0	0	0	0	0	0	0	0	0	0
8	27	3	6th August 2022	0	0	0	0	0	0	0	0	0	0
8	28	4	7th August 2022	0	0	0	0	0	0	0	0	0	0
8	29	5	8th August 2022	0	17	0	0	0	0	0	0	0	17
8	30	6	9th August 2022	0	4	0	0	0	0	0	0	0	4
8	31	7	10th August 2022	0	9	2	0	0	0	0	0	0	11
8	32	8	11th August 2022	0	25	9	0	0	0	0	0	0	34
8	33	9	12th August 2022	0	11	7	0	0	0	0	0	1	19
8	34	10	13th August 2022	0	11	3	0	3	0	0	0	1	18
8	35	1	12th September 2022	2	0	2	0	1	8	0	0	0	13
8	36	2	13th September 2022	1	2	2	0	0	6	0	0	0	11
8	37	3	14th September 2022	3	79	77	0	3	2	0	0	1	165
8	38	4	15th September 2022	1	106	31	0	1	7	0	0	3	149
8	39	5	16th September 2022	1	54	20	0	0	2	0	0	1	78
8	40	6	17th September 2022	6	20	12	0	0	2	0	0	1	41
8	41	7	18th September 2022	12	93	52	0	1	8	0	0	0	166
8	42	8	19th September 2022	2	16	11	0	0	3	0	0	1	33
8	43	9	20th September 2022	1	10	9	0	0	3	0	0	0	23
8	44	10	21st September 2022	0	0	0	0	0	0	0	0	0	0
8	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
8	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
8	47	3	23rd October 2022	0	0	0	0	0	0	0	0	0	0
8	48	4	24th October 2022	0	6	0	0	0	0	0	0	1	7
8	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0



	re colog	У		Sc	cartmountain V	Vindfarm Bat Su	rvey Report, Ju	ily 2023					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
8	50	6	26th October 2022	0	0	0	0	0	0	0	0	0	0
8	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
8	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
8	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
8	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
8	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
8	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
8	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
8	58	1	15th May 2023	0	3	0	0	0	0	0	0	0	3
8	59	2	16th May 2023	20	21	2	0	1	2	0	0	7	53
8	60	3	17th May 2023	10	25	6	0	4	0	0	0	1	46
8	61	4	18th May 2023	2	10	3	0	1	0	0	0	2	18
8	62	1	19th May 2023	17	24	5	0	6	0	0	0	2	54
8	63	2	20th May 2023	30	54	10	0	1	1	0	0	3	99
8	64	3	21st May 2023	0	0	0	0	0	0	0	0	0	0
8	65	4	22nd May 2023	0	0	1	0	0	2	0	0	1	4
8	66	5	23rd May 2023	0	4	1	0	0	1	0	0	2	8
8	67	6	24th May 2023	2	28	2	0	4	2	0	0	1	39
8	68	7	25th May 2023	0	4	0	0	2	2	0	0	1	9
8	69	8	26th May 2023	55	387	68	0	21	1	0	0	8	540
8	70	9	27th May 2023	12	29	8	0	5	3	0	0	5	62
8	71	10	28th May 2023	0	4	1	0	0	3	0	0	1	9
8	72	11	29th May 2023	0	38	0	0	3	4	0	0	0	45
8	73	12	30th May 2023	2	3	0	0	1	4	0	0	1	11
8	74	13	31st May 2023	1	169	4	0	1	4	0	0	0	179
9	1	1	17th June 2022	0	1	0	0	0	0	0	0	0	1



	re colog	У		Sc	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
9	2	2	18th June 2022	0	0	0	0	0	0	0	0	0	0
9	3	3	19th June 2022	0	1	0	0	0	0	0	0	0	1
9	4	4	20th June 2022	17	22	3	0	0	2	0	0	1	45
9	5	5	21st June 2022	2	3	0	0	0	0	0	0	1	6
9	6	6	22nd June 2022	54	148	40	0	5	2	0	0	3	252
9	7	7	23rd June 2022	28	26	5	0	0	1	0	0	1	61
9	8	8	24th June 2022	2	0	0	0	0	0	0	0	0	2
9	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
9	10	10	26th June 2022	1	0	0	0	0	0	0	0	0	1
9	11	11	27th June 2022	1	4	0	0	0	0	0	0	0	5
9	12	12	28th June 2022	6	30	1	0	2	1	0	0	1	41
9	13	13	29th June 2022	7	4	1	0	0	0	0	0	0	12
9	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
9	15	1	10th July 2022	73	23	22	0	0	5	0	0	3	126
9	16	2	11th July 2022	59	55	32	0	0	3	1	0	9	159
9	17	3	12th July 2022	35	0	2	0	0	0	0	0	2	39
9	18	4	13th July 2022	56	7	18	0	0	3	0	0	2	86
9	19	5	14th July 2022	58	27	21	0	0	7	0	0	9	122
9	20	6	15th July 2022	134	62	97	0	10	8	0	0	4	315
9	21	7	16th July 2022	55	53	73	0	1	3	1	0	7	193
9	22	8	17th July 2022	66	38	62	0	2	3	1	0	11	183
9	23	9	18th July 2022	83	22	43	0	2	6	0	0	7	163
9	24	10	19th July 2022	1	0	0	0	0	0	0	0	0	1
9	25	1	4th August 2022	3	0	2	0	0	1	0	0	3	9
9	26	2	5th August 2022	5	0	2	0	0	2	0	0	1	10
9	27	3	6th August 2022	26	24	11	0	0	3	1	0	4	69



	re colog	б У		Sc	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
9	28	4	7th August 2022	8	12	10	0	0	0	0	0	0	30
9	29	5	8th August 2022	6	49	23	0	0	0	1	0	6	85
9	30	6	9th August 2022	7	18	32	0	0	7	3	0	4	71
9	31	7	10th August 2022	36	119	92	0	0	4	0	0	8	259
9	32	8	11th August 2022	17	98	61	0	1	1	1	0	8	187
9	33	9	12th August 2022	25	69	86	0	1	4	3	0	4	192
9	34	10	13th August 2022	23	54	62	0	0	4	1	0	9	153
9	35	1	12th September 2022	10	0	1	0	0	9	0	0	2	22
9	36	2	13th September 2022	1	1	0	0	0	3	0	0	1	6
9	37	3	14th September 2022	5	8	0	0	0	10	0	0	4	27
9	38	4	15th September 2022	5	14	19	0	0	5	0	0	3	46
9	39	5	16th September 2022	1	2	0	0	0	4	0	0	1	8
9	40	6	17th September 2022	8	5	1	0	0	6	3	0	4	27
9	41	7	18th September 2022	19	22	10	0	0	5	1	0	4	61
9	42	8	19th September 2022	10	6	11	0	0	10	2	0	6	45
9	43	9	20th September 2022	7	6	12	0	0	5	1	0	2	33
9	44	10	21st September 2022	3	1	5	0	0	3	0	0	3	15
9	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
9	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
9	47	3	23rd October 2022	8	1	4	0	1	0	0	0	3	17
9	48	4	24th October 2022	0	1	5	0	0	1	0	0	1	8
9	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
9	50	6	26th October 2022	0	0	3	0	0	0	0	0	4	7
9	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
9	52	8	28th October 2022	0	0	0	0	0	0	0	0	3	3
9	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0



	re colog	У		S	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
9	54	10	30th October 2022	0	0	2	0	0	0	0	0	1	3
9	55	11	31st October 2022	0	0	1	0	0	0	0	0	3	4
9	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
9	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
9	1	1	15th May 2023	0	14	2	0	14	0	0	0	0	30
9	2	2	16th May 2023	28	72	2	4	17	0	0	0	5	128
9	3	3	17th May 2023	24	95	13	0	8	0	0	0	7	147
9	4	4	18th May 2023	1	95	0	0	9	0	0	0	0	105
9	45	1	19th May 2023	234	55	12	0	10	0	0	0	2	313
9	46	2	20th May 2023	61	127	30	0	11	0	0	0	1	230
9	47	3	21st May 2023	3	1	0	0	0	0	0	0	1	5
9	48	4	22nd May 2023	0	151	0	0	0	0	0	0	0	151
9	49	5	23rd May 2023	0	31	1	0	0	0	0	0	0	32
9	50	6	24th May 2023	6	99	7	0	2	2	0	0	1	117
9	51	7	25th May 2023	0	24	4	0	2	1	0	0	0	31
9	52	8	26th May 2023	103	85	12	0	30	0	0	0	2	232
9	53	9	27th May 2023	8	113	10	0	10	1	0	0	2	144
9	54	10	28th May 2023	0	20	2	0	4	1	0	0	1	28
9	55	11	29th May 2023	2	285	9	0	3	0	0	0	3	302
9	56	12	30th May 2023	2	85	19	0	2	0	0	0	0	108
9	57	13	31st May 2023	3	65	14	0	3	0	0	0	3	88
10	1	1	17th June 2022	1	0	0	0	0	0	0	0	1	2
10	2	2	18th June 2022	0	0	0	0	0	0	0	0	2	2
10	3	3	19th June 2022	1	1	0	0	0	0	0	0	2	4
10	4	4	20th June 2022	9	14	2	0	1	1	0	0	1	28
10	5	5	21st June 2022	2	8	2	0	0	0	0	0	0	12



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
10	6	6	22nd June 2022	32	47	18	0	15	1	0	0	3	116
10	7	7	23rd June 2022	32	33	15	0	2	0	0	0	0	82
10	8	8	24th June 2022	5	0	0	0	0	0	0	0	0	5
10	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
10	10	10	26th June 2022	2	1	0	0	0	0	0	0	0	3
10	11	11	27th June 2022	4	0	0	0	0	0	0	0	0	4
10	12	12	28th June 2022	8	74	7	0	42	1	0	0	1	133
10	13	13	29th June 2022	10	1	0	0	0	0	0	0	0	11
10	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
10	15	1	10th July 2022	39	188	22	0	10	0	0	0	5	264
10	16	2	11th July 2022	45	139	46	0	9	0	0	0	6	245
10	17	3	12th July 2022	100	118	4	0	2	0	0	0	3	227
10	18	4	13th July 2022	49	84	5	0	1	2	0	0	4	145
10	19	5	14th July 2022	59	164	71	0	10	1	0	0	2	307
10	20	6	15th July 2022	61	234	77	0	11	5	0	0	2	390
10	21	7	16th July 2022	39	133	63	0	7	0	0	0	5	247
10	22	8	17th July 2022	56	190	83	0	20	2	0	0	3	354
10	23	9	18th July 2022	41	202	59	0	9	5	0	0	7	323
10	24	10	19th July 2022	14	0	0	0	0	0	0	0	0	14
10	25	1	4th August 2022	0	2	1	0	0	0	1	0	2	6
10	26	2	5th August 2022	6	10	4	0	0	0	3	0	2	25
10	27	3	6th August 2022	17	43	9	0	0	0	1	0	7	77
10	28	4	7th August 2022	10	26	18	0	0	3	1	0	9	67
10	29	5	8th August 2022	10	70	28	0	2	3	4	0	5	122
10	30	6	9th August 2022	16	109	42	0	0	1	0	0	6	174
10	31	7	10th August 2022	23	164	42	0	9	2	0	0	1	241



	re colog	У		Sc	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
10	32	8	11th August 2022	25	172	40	0	17	5	0	0	1	260
10	33	9	12th August 2022	19	228	49	0	13	0	0	0	5	314
10	34	10	13th August 2022	18	166	35	0	14	3	0	0	4	240
10	35	1	12th September 2022	19	5	3	0	0	11	1	0	2	41
10	36	2	13th September 2022	2	2	5	0	0	2	2	0	4	17
10	37	3	14th September 2022	9	5	9	0	1	7	0	0	4	35
10	38	4	15th September 2022	3	2	4	0	0	3	0	0	3	15
10	39	5	16th September 2022	5	1	1	0	0	3	1	0	1	12
10	40	6	17th September 2022	8	6	5	0	0	3	0	0	0	22
10	41	7	18th September 2022	12	19	13	0	4	4	0	0	4	56
10	42	8	19th September 2022	11	7	6	0	2	2	0	0	4	32
10	43	9	20th September 2022	2	13	7	0	2	6	1	0	1	32
10	44	10	21st September 2022	15	4	2	0	0	1	0	0	0	22
10	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
10	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
10	47	3	23rd October 2022	11	5	4	0	0	2	0	0	0	22
10	48	4	24th October 2022	2	2	1	0	0	0	0	0	2	7
10	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
10	50	6	26th October 2022	0	0	0	0	0	2	0	0	1	3
10	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
10	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
10	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
10	54	10	30th October 2022	0	0	1	0	0	0	0	0	0	1
10	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
10	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
10	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
10	1	1	15th May 2023	0	2	1	0	0	0	0	0	1	4
10	2	2	16th May 2023	45	20	2	18	0	0	0	0	2	87
10	3	3	17th May 2023	28	18	1	15	0	0	0	0	2	64
10	4	4	18th May 2023	2	5	0	4	1	0	0	0	3	15
10	45	1	19th May 2023	208	49	3	8	0	0	0	0	2	270
10	46	2	20th May 2023	99	143	5	35	2	0	0	0	0	284
10	47	3	21st May 2023	6	3	0	2	0	0	0	0	1	12
10	48	4	22nd May 2023	3	0	0	0	0	0	0	0	2	5
10	49	5	23rd May 2023	2	20	0	0	0	0	0	0	2	24
10	50	6	24th May 2023	32	18	0	4	0	0	0	0	2	56
10	51	7	25th May 2023	4	9	2	7	0	0	0	0	1	23
10	52	8	26th May 2023	76	101	4	15	0	0	0	0	3	199
10	53	9	27th May 2023	19	83	2	39	1	0	0	0	3	147
10	54	10	28th May 2023	1	6	0	1	0	0	0	0	0	8
10	55	11	29th May 2023	3	57	3	10	0	0	0	0	0	73
10	56	12	30th May 2023	4	11	0	0	0	0	0	0	1	16
10	57	13	31st May 2023	4	57	15	11	0	0	0	0	1	88
11	1	1	17th June 2022	0	14	9	0	0	0	0	0	3	26
11	2	2	18th June 2022	4	9	7	0	0	0	0	0	1	21
11	3	3	19th June 2022	1	6	2	0	0	0	0	0	5	14
11	4	4	20th June 2022	9	22	3	0	1	3	0	0	3	41
11	5	5	21st June 2022	22	22	12	0	0	0	0	0	8	64
11	6	6	22nd June 2022	31	113	136	0	1	2	0	0	0	283
11	7	7	23rd June 2022	14	44	41	0	0	2	0	0	13	114
11	8	8	24th June 2022	7	3	3	0	0	0	0	0	1	14
11	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
11	10	10	26th June 2022	14	15	10	0	2	0	0	0	2	43
11	11	11	27th June 2022	8	4	3	0	0	0	0	0	0	15
11	12	12	28th June 2022	20	92	25	0	0	0	1	0	3	141
11	13	13	29th June 2022	9	40	10	0	1	0	0	0	3	63
11	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
11	15	1	10th July 2022	19	65	35	0	0	0	0	0	6	125
11	16	2	11th July 2022	33	94	76	0	0	3	0	0	10	216
11	17	3	12th July 2022	77	50	23	0	0	1	0	0	6	157
11	18	4	13th July 2022	41	292	77	0	0	1	0	0	7	418
11	19	5	14th July 2022	49	168	116	0	1	3	0	0	7	344
11	20	6	15th July 2022	29	194	88	0	1	4	0	0	4	320
11	21	7	16th July 2022	44	200	123	0	1	2	0	0	2	372
11	22	8	17th July 2022	36	261	92	0	1	1	0	0	5	396
11	23	9	18th July 2022	11	224	214	0	2	1	0	0	8	460
11	24	10	19th July 2022	125	20	21	0	0	0	0	0	2	168
11	25	1	4th August 2022	1	18	19	0	0	1	0	0	4	43
11	26	2	5th August 2022	15	199	169	0	0	4	0	0	18	405
11	27	3	6th August 2022	17	194	110	0	0	2	0	0	7	330
11	28	4	7th August 2022	13	338	161	0	1	2	0	0	11	526
11	29	5	8th August 2022	7	343	267	0	0	2	0	0	10	629
11	30	6	9th August 2022	9	271	207	0	0	1	0	0	25	513
11	31	7	10th August 2022	12	233	139	0	8	5	0	0	26	423
11	32	8	11th August 2022	9	259	131	0	1	2	0	0	9	411
11	33	9	12th August 2022	10	289	192	0	0	0	0	0	27	518
11	34	10	13th August 2022	13	195	135	0	0	4	0	0	24	371
11	35	1	12th September 2022	20	3	12	0	0	4	0	0	13	52



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
11	36	2	13th September 2022	8	10	10	0	0	4	0	0	17	49
11	37	3	14th September 2022	8	11	13	0	0	4	0	0	12	48
11	38	4	15th September 2022	6	5	12	0	0	7	0	0	9	39
11	39	5	16th September 2022	2	5	12	0	0	5	0	0	3	27
11	40	6	17th September 2022	5	4	7	0	1	2	0	0	3	22
11	41	7	18th September 2022	6	14	24	0	2	10	0	0	5	61
11	42	8	19th September 2022	12	17	17	0	2	11	0	0	7	66
11	43	9	20th September 2022	6	79	30	0	1	5	0	0	4	125
11	44	10	21st September 2022	7	21	17	0	0	8	0	0	3	56
11	45	1	21st October 2022	3	0	3	0	0	0	0	0	0	6
11	46	2	22nd October 2022	1	0	1	0	0	0	0	0	0	2
11	47	3	23rd October 2022	0	0	0	0	0	0	0	0	0	0
11	48	4	24th October 2022	1	0	10	0	0	0	0	0	0	11
11	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
11	50	6	26th October 2022	0	0	3	0	0	0	0	0	0	3
11	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
11	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
11	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
11	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
11	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
11	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
11	57	13	2nd November 2022	0	1	0	0	0	0	0	0	0	1
11	1	1	15th May 2023	3	10	1	0	0	0	0	0	0	14
11	2	2	16th May 2023	78	125	14	0	3	0	0	0	3	223
11	3	3	17th May 2023	55	147	12	0	0	1	0	0	0	215
11	4	4	18th May 2023	6	587	24	0	11	0	0	0	3	631



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
11	45	1	19th May 2023	434	274	131	0	15	0	0	0	5	859
11	46	2	20th May 2023	333	235	96	0	3	1	0	0	4	672
11	47	3	21st May 2023	35	284	17	0	1	0	0	0	0	337
11	48	4	22nd May 2023	10	222	25	0	0	0	0	0	6	263
11	49	5	23rd May 2023	4	197	8	0	1	0	0	0	7	217
11	50	6	24th May 2023	81	390	49	0	4	0	0	0	4	528
11	51	7	25th May 2023	90	431	50	0	4	2	0	0	6	583
11	52	8	26th May 2023	4	7	7	0	1	0	0	0	1	20
11	53	9	27th May 2023	0	0	0	0	0	0	0	0	0	0
11	54	10	28th May 2023	0	0	0	0	0	0	0	0	0	0
11	55	11	29th May 2023	0	0	0	0	0	0	0	0	0	0
11	56	12	30th May 2023	0	0	0	0	0	0	0	0	0	0
11	57	13	31st May 2023	0	0	0	0	0	0	0	0	0	0
12	1	1	17th June 2022	3	4	1	0	0	0	0	0	2	10
12	2	2	18th June 2022	3	1	0	0	0	1	0	0	2	7
12	3	3	19th June 2022	0	3	0	0	0	0	0	0	0	3
12	4	4	20th June 2022	8	4	3	0	1	1	0	0	2	19
12	5	5	21st June 2022	20	20	6	0	1	4	0	0	0	51
12	6	6	22nd June 2022	33	23	15	0	2	4	0	0	1	78
12	7	7	23rd June 2022	74	15	3	0	0	2	0	0	2	96
12	8	8	24th June 2022	21	0	0	0	0	0	0	0	0	21
12	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
12	10	10	26th June 2022	18	1	1	0	0	0	0	0	2	22
12	11	11	27th June 2022	9	0	0	0	0	0	0	0	0	9
12	12	12	28th June 2022	30	32	8	1	1	0	0	0	3	75
12	13	13	29th June 2022	24	2	0	0	0	2	0	0	0	28



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
12	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
12	15	1	10th July 2022	122	21	7	0	0	1	0	0	3	154
12	16	2	11th July 2022	41	11	6	0	1	1	0	0	3	63
12	17	3	12th July 2022	37	1	11	0	0	0	0	0	1	50
12	18	4	13th July 2022	25	1	0	0	0	0	0	0	0	26
12	19	5	14th July 2022	53	6	4	0	0	0	0	0	0	63
12	20	6	15th July 2022	49	12	7	0	2	0	0	0	4	74
12	21	7	16th July 2022	31	16	3	0	0	2	0	0	5	57
12	22	8	17th July 2022	17	21	5	0	0	4	1	0	3	51
12	23	9	18th July 2022	20	12	2	0	1	4	0	0	1	40
12	24	10	19th July 2022	27	10	11	0	0	1	0	0	3	52
12	25	11	30th July 2022	26	6	7	0	0	0	0	0	5	44
12	26	12	31st July 2022	41	14	14	0	0	0	0	0	6	75
12	27	13	1st August 2022	30	0	0	0	1	0	0	0	1	32
12	28	14	2nd August 2022	20	8	3	0	0	5	0	0	4	40
12	29	15	3rd August 2022	7	16	10	0	1	5	1	0	5	45
12	30	1	4th August 2022	5	0	0	0	0	2	0	0	1	8
12	31	2	5th August 2022	11	12	8	0	0	4	0	0	2	37
12	32	3	6th August 2022	21	18	8	0	0	1	1	0	5	54
12	33	4	7th August 2022	23	22	29	0	0	7	0	0	8	89
12	34	5	8th August 2022	13	30	31	0	1	3	1	0	8	87
12	35	6	9th August 2022	12	36	40	0	0	4	3	0	12	107
12	36	7	10th August 2022	13	41	29	0	1	8	0	0	8	100
12	37	8	11th August 2022	15	42	31	0	1	9	1	0	16	115
12	38	9	12th August 2022	17	34	61	0	1	5	2	0	15	135
12	39	10	13th August 2022	4	110	103	0	0	5	1	0	13	236



E	re colog	У		Sc	cartmountain V	Vindfarm Bat Su	irvey Report, Ju	l <u>y 2023</u>					
Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
12	40	1	12th September 2022	10	0	4	0	0	8	0	0	5	27
12	41	2	13th September 2022	10	0	2	0	0	4	0	0	2	18
12	42	3	14th September 2022	6	14	3	0	0	4	0	0	8	35
12	43	4	15th September 2022	16	0	3	0	0	2	0	0	1	22
12	44	5	16th September 2022	5	0	3	0	0	1	0	0	7	16
12	45	6	17th September 2022	10	2	2	0	0	9	1	0	0	24
12	46	7	18th September 2022	17	7	4	0	0	8	0	0	3	39
12	47	8	19th September 2022	10	3	1	0	0	8	0	0	2	24
12	48	9	20th September 2022	24	1	5	0	0	9	0	0	3	42
12	49	10	21st September 2022	30	0	5	0	0	1	0	0	0	36
12	50	1	21st October 2022	1	0	0	0	0	0	0	0	0	1
12	51	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
12	52	3	23rd October 2022	16	0	1	0	0	0	0	0	9	26
12	53	4	24th October 2022	8	0	0	0	0	0	0	0	3	11
12	54	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
12	55	6	26th October 2022	2	1	0	0	0	1	0	0	2	6
12	56	7	27th October 2022	0	0	0	0	0	1	0	0	0	1
12	57	8	28th October 2022	14	0	0	0	0	0	0	0	0	14
12	43	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
12	43	10	30th October 2022	2	0	0	0	0	2	0	0	0	4
12	42	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
12	43	12	1st November 2022	0	0	0	0	0	0	0	0	2	2
12	44	13	2nd November 2022	0	0	0	0	0	0	0	0	1	1
12	1	1	15th May 2023	2	0	1	0	0	0	0	0	1	4
12	2	2	16th May 2023	8	18	4	1	0	1	0	0	10	42
12	3	3	17th May 2023	12	5	8	2	0	1	0	0	3	31



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
12	4	4	18th May 2023	8	24	0	1	0	0	0	0	2	35
12	45	1	19th May 2023	18	64	3	7	0	0	0	0	8	100
12	46	2	20th May 2023	66	53	12	0	0	2	0	0	3	136
12	47	3	21st May 2023	12	29	9	2	0	1	0	0	14	67
12	48	4	22nd May 2023	6	17	0	1	0	0	0	0	0	24
12	49	5	23rd May 2023	3	48	32	1	0	0	0	0	2	86
12	50	6	24th May 2023	0	8	5	0	0	0	0	0	0	13
12	51	7	25th May 2023	64	16	0	0	0	0	0	0	0	80
12	52	8	26th May 2023	13	14	1	4	0	3	0	0	3	38
12	53	9	27th May 2023	10	31	6	2	0	1	0	0	3	53
12	54	10	28th May 2023	5	30	1	0	0	0	0	0	2	38
12	55	11	29th May 2023	4	60	9	0	0	0	0	0	5	78
12	56	12	30th May 2023	1	155	13	1	0	0	0	0	8	178
12	57	13	31st May 2023	2	40	0	0	0	1	0	0	6	49
14	1	1	17th June 2022	3	7	1	0	0	1	0	0	0	12
14	2	2	18th June 2022	1	2	0	0	0	0	0	0	0	3
14	3	3	19th June 2022	7	0	0	0	0	0	0	0	0	7
14	4	4	20th June 2022	7	82	1	0	0	0	0	0	0	90
14	5	5	21st June 2022	19	16	3	0	0	0	0	0	0	38
14	6	6	22nd June 2022	25	57	7	0	13	1	0	0	0	103
14	7	7	23rd June 2022	14	13	4	0	41	0	0	0	0	72
14	8	8	24th June 2022	3	0	0	0	0	0	0	0	0	3
14	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
14	10	10	26th June 2022	2	7	0	0	0	0	0	0	0	9
14	11	11	27th June 2022	6	3	1	0	0	0	0	0	0	10
14	12	12	28th June 2022	8	22	1	0	3	0	0	0	0	34



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
14	13	13	29th June 2022	10	23	2	0	17	0	0	0	0	52
14	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
14	15	1	10th July 2022	16	262	25	0	6	0	0	0	0	309
14	16	2	11th July 2022	19	42	2	0	1	0	0	0	0	64
14	17	3	12th July 2022	41	35	0	0	0	0	0	0	0	76
14	18	4	13th July 2022	26	75	7	0	0	0	0	0	1	109
14	19	5	14th July 2022	19	172	4	0	8	0	0	0	0	203
14	20	6	15th July 2022	17	258	8	0	9	0	0	0	0	292
14	21	7	16th July 2022	25	134	13	0	2	0	0	0	4	178
14	22	8	17th July 2022	20	350	1	0	10	0	0	0	2	383
14	23	9	18th July 2022	20	554	27	0	65	0	0	0	1	667
14	24	10	19th July 2022	52	1	0	0	0	0	0	0	0	53
14	25	1	4th August 2022	10	36	12	0	0	0	0	0	2	60
14	26	2	5th August 2022	3	216	75	0	1	0	0	0	3	298
14	27	3	6th August 2022	18	343	115	0	2	0	0	0	5	483
14	28	4	7th August 2022	19	318	166	0	0	1	0	0	0	504
14	29	5	8th August 2022	8	647	236	0	1	0	0	0	0	892
14	30	6	9th August 2022	7	555	142	0	0	0	0	0	2	706
14	31	7	10th August 2022	12	638	222	0	8	0	0	0	1	881
14	32	8	11th August 2022	14	478	131	0	1	2	0	0	0	626
14	33	9	12th August 2022	4	673	70	0	6	3	0	0	3	759
14	34	10	13th August 2022	7	272	34	0	4	4	0	0	7	328
14	35	1	12th September 2022	14	7	9	0	0	12	0	0	7	49
14	36	2	13th September 2022	1	5	5	0	0	7	0	0	11	29
14	37	3	14th September 2022	5	2	10	0	1	3	0	0	12	33
14	38	4	15th September 2022	6	3	8	0	0	5	0	0	2	24



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
14	39	5	16th September 2022	1	4	4	0	0	4	0	0	3	16
14	40	6	17th September 2022	9	31	4	0	0	4	0	0	4	52
14	41	7	18th September 2022	11	22	15	0	2	2	0	0	9	61
14	42	8	19th September 2022	7	31	10	0	0	5	0	0	1	54
14	43	9	20th September 2022	4	26	16	0	0	5	0	0	4	55
14	44	10	21st September 2022	5	9	5	0	0	4	0	0	3	26
14	45	1	21st October 2022	0	0	2	0	0	0	0	0	1	3
14	46	2	22nd October 2022	1	0	1	0	0	0	0	0	0	2
14	47	3	23rd October 2022	4	2	1	0	0	0	0	0	0	7
14	48	4	24th October 2022	3	0	2	0	0	0	0	0	1	6
14	49	5	25th October 2022	0	0	2	0	0	0	0	0	0	2
14	50	6	26th October 2022	0	2	0	0	0	0	0	0	0	2
14	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
14	52	8	28th October 2022	0	0	0	0	0	0	0	0	1	1
14	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
14	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
14	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
14	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
14	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
14	1	1	15th May 2023	41	2	1	0	0	0	0	0	0	44
14	2	2	16th May 2023	489	21	4	0	5	0	0	0	1	520
14	3	3	17th May 2023	575	32	0	0	2	0	0	0	0	609
14	4	4	18th May 2023	47	11	0	0	3	0	0	0	0	61
14	45	1	19th May 2023	738	32	3	0	6	0	0	0	0	779
14	46	2	20th May 2023	770	30	2	0	3	0	0	0	0	805
14	47	3	21st May 2023	314	5	0	0	0	0	0	0	0	319



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
14	48	4	22nd May 2023	8	9	0	0	0	0	0	0	0	17
14	49	5	23rd May 2023	14	4	0	0	1	0	0	0	0	19
14	50	6	24th May 2023	402	25	1	0	2	0	0	0	0	430
14	51	7	25th May 2023	353	20	1	0	5	1	0	0	0	380
14	52	8	26th May 2023	274	29	1	0	5	0	0	0	0	309
14	53	9	27th May 2023	202	41	1	0	7	0	0	0	0	251
14	54	10	28th May 2023	14	8	0	0	0	0	0	0	0	22
14	55	11	29th May 2023	14	37	0	0	2	0	0	0	0	53
14	56	12	30th May 2023	6	30	0	0	5	0	0	0	0	41
14	57	13	31st May 2023	29	20	0	0	2	0	0	0	0	51
15	1	1	17th June 2022	6	1	0	0	0	1	0	0	1	9
15	2	2	18th June 2022	2	1	0	0	0	0	0	0	1	4
15	3	3	19th June 2022	2	0	0	0	0	0	0	0	0	2
15	4	4	20th June 2022	10	10	26	0	1	4	0	0	2	53
15	5	5	21st June 2022	17	4	8	0	0	1	0	0	1	31
15	6	6	22nd June 2022	10	16	20	0	5	0	0	0	1	52
15	7	7	23rd June 2022	19	9	2	0	0	0	0	0	0	30
15	8	8	24th June 2022	1767	0	0	0	0	0	0	0	0	1767
15	9	9	25th June 2022	1216	0	0	0	0	0	0	0	0	1216
15	10	10	26th June 2022	36	0	0	0	0	0	0	0	0	36
15	11	11	27th June 2022	1158	0	0	0	0	0	0	0	0	1158
15	12	12	28th June 2022	8	6	4	0	0	1	0	0	0	19
15	13	13	29th June 2022	1431	0	0	0	0	0	0	0	0	1431
15	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
15	15	1	10th July 2022	32	32	81	0	0	3	0	0	12	160
15	16	2	11th July 2022	46	43	73	3	0	1	0	0	4	170



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
15	17	3	12th July 2022	114	15	29	0	0	1	0	0	4	163
15	18	4	13th July 2022	77	23	44	0	0	3	0	0	8	155
15	19	5	14th July 2022	43	50	86	1	0	4	0	0	5	189
15	20	6	15th July 2022	24	99	92	9	0	6	0	0	2	232
15	21	7	16th July 2022	13	47	73	1	0	0	0	0	3	137
15	22	8	17th July 2022	13	186	89	1	0	2	0	0	8	299
15	23	9	18th July 2022	15	64	135	3	0	5	0	0	2	224
15	24	10	19th July 2022	143	8	7	1	0	3	0	0	2	164
15	25	1	4th August 2022	2	1	0	0	0	1	0	0	3	7
15	26	2	5th August 2022	12	23	17	0	0	5	2	0	7	66
15	27	3	6th August 2022	34	24	24	0	1	3	2	0	5	93
15	28	4	7th August 2022	26	50	61	0	1	5	3	0	10	156
15	29	5	8th August 2022	18	46	64	0	0	4	1	0	12	145
15	30	6	9th August 2022	16	107	199	0	0	6	3	0	13	344
15	31	7	10th August 2022	18	160	77	0	0	3	1	0	4	263
15	32	8	11th August 2022	14	102	82	0	2	5	3	0	7	215
15	33	9	12th August 2022	16	82	89	0	1	7	7	0	6	208
15	34	10	13th August 2022	12	100	66	0	0	6	1	0	12	197
15	35	1	12th September 2022	18	14	17	0	0	15	2	0	11	77
15	36	2	13th September 2022	1	3	35	0	0	12	0	0	5	56
15	37	3	14th September 2022	5	9	31	0	0	10	0	0	8	63
15	38	4	15th September 2022	6	1	5	0	0	12	0	0	9	33
15	39	5	16th September 2022	10	0	4	0	0	7	0	0	6	27
15	40	6	17th September 2022	15	0	1	0	0	3	0	0	3	22
15	41	7	18th September 2022	15	8	21	0	0	11	0	0	12	67
15	42	8	19th September 2022	5	4	5	0	0	10	0	0	0	24



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
15	43	9	20th September 2022	13	3	24	0	0	10	0	0	4	54
15	44	10	21st September 2022	17	2	7	0	0	1	1	0	1	29
15	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
15	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0
15	47	3	23rd October 2022	0	0	0	0	0	0	0	0	0	0
15	48	4	24th October 2022	0	0	0	0	0	0	0	0	0	0
15	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
15	50	6	26th October 2022	0	0	0	0	0	0	0	0	0	0
15	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
15	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
15	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
15	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
15	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
15	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
15	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
15	1	1	15th May 2023	26	46	9	0	0	0	0	0	1	82
15	2	2	16th May 2023	140	262	66	0	13	1	0	0	0	482
15	3	3	17th May 2023	163	148	31	0	1	0	0	0	1	344
15	4	4	18th May 2023	38	24	11	0	3	2	1	0	0	79
15	45	1	19th May 2023	93	104	24	0	1	1	0	0	3	226
15	46	2	20th May 2023	212	83	29	0	1	1	0	0	0	326
15	47	3	21st May 2023	15	1	0	0	0	0	0	0	0	16
15	48	4	22nd May 2023	9	61	16	0	0	2	0	0	1	89
15	49	5	23rd May 2023	12	45	32	0	0	0	0	0	0	89
15	50	6	24th May 2023	75	78	20	0	1	0	0	0	1	175
15	51	7	25th May 2023	78	38	16	0	2	2	0	0	2	138



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
15	52	8	26th May 2023	136	87	11	1	6	4	0	0	1	246
15	53	9	27th May 2023	98	21	22	0	1	2	0	0	1	145
15	54	10	28th May 2023	14	38	16	0	1	1	0	0	1	71
15	55	11	29th May 2023	6	30	21	0	2	2	0	0	0	61
15	56	12	30th May 2023	11	52	51	0	1	6	0	0	4	125
15	57	13	31st May 2023	48	42	24	0	4	2	0	0	1	121
16	1	1	17th June 2022	5	3	2	0	0	0	0	0	3	13
16	2	2	18th June 2022	5	2	0	0	0	0	0	0	1	8
16	3	3	19th June 2022	0	2	2	0	0	0	0	0	1	5
16	4	4	20th June 2022	8	10	5	0	0	0	0	0	2	25
16	5	5	21st June 2022	10	11	2	0	0	0	0	0	2	25
16	6	6	22nd June 2022	23	37	9	0	0	0	0	0	1	70
16	7	7	23rd June 2022	23	8	19	0	0	0	0	0	1	51
16	8	8	24th June 2022	8	1	0	0	0	1	0	0	0	10
16	9	9	25th June 2022	0	0	0	0	0	0	0	0	0	0
16	10	10	26th June 2022	0	0	0	0	0	0	0	0	0	0
16	11	11	27th June 2022	0	0	0	0	0	0	0	0	0	0
16	12	12	28th June 2022	0	0	0	0	0	0	0	0	0	0
16	13	13	29th June 2022	0	0	0	0	0	0	0	0	0	0
16	14	14	30th June 2022	0	0	0	0	0	0	0	0	0	0
16	15	1	10th July 2022	25	13	10	0	0	3	0	0	2	53
16	16	2	11th July 2022	23	108	64	0	10	0	0	0	1	206
16	17	3	12th July 2022	66	20	10	0	0	0	0	0	1	97
16	18	4	13th July 2022	39	10	6	0	0	0	0	0	0	55
16	19	5	14th July 2022	23	108	61	0	1	0	0	0	6	199
16	20	6	15th July 2022	31	54	19	0	1	2	0	0	1	108



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
16	21	7	16th July 2022	28	88	91	0	3	2	0	0	3	215
16	22	8	17th July 2022	29	34	23	2	2	2	0	0	5	97
16	23	9	18th July 2022	16	33	29	0	2	3	0	0	4	87
16	24	10	19th July 2022	69	4	2	0	0	1	0	0	2	78
16	25	1	4th August 2022	2	0	0	0	0	0	0	0	0	2
16	26	2	5th August 2022	1	21	6	0	0	1	0	0	1	30
16	27	3	6th August 2022	5	18	5	0	0	3	0	0	0	31
16	28	4	7th August 2022	15	38	8	0	0	1	0	0	0	62
16	29	5	8th August 2022	10	18	24	0	0	1	0	0	0	53
16	30	6	9th August 2022	12	51	22	0	0	1	0	0	0	86
16	31	7	10th August 2022	4	35	28	0	0	1	0	0	2	70
16	32	8	11th August 2022	6	69	22	0	0	2	0	0	1	100
16	33	9	12th August 2022	13	66	24	0	0	2	0	0	2	107
16	34	10	13th August 2022	10	91	42	0	0	0	0	0	0	143
16	35	1	12th September 2022	23	1	2	0	0	8	0	0	0	34
16	36	2	13th September 2022	2	1	3	0	0	5	0	0	1	12
16	37	3	14th September 2022	3	2	5	0	0	3	0	0	2	15
16	38	4	15th September 2022	4	2	4	0	0	5	0	0	0	15
16	39	5	16th September 2022	29	27	27	0	2	18	0	0	2	105
16	40	6	17th September 2022	0	0	0	0	0	0	0	0	0	0
16	41	7	18th September 2022	0	0	0	0	0	0	0	0	0	0
16	42	8	19th September 2022	0	0	0	0	0	0	0	0	0	0
16	43	9	20th September 2022	0	0	0	0	0	0	0	0	0	0
16	44	10	21st September 2022	0	0	0	0	0	0	0	0	0	0
16	45	1	21st October 2022	0	0	0	0	0	0	0	0	0	0
16	46	2	22nd October 2022	0	0	0	0	0	0	0	0	0	0



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
16	47	3	23rd October 2022	1	0	0	0	0	0	0	0	0	1
16	48	4	24th October 2022	0	0	0	0	0	0	0	0	0	0
16	49	5	25th October 2022	0	0	0	0	0	0	0	0	0	0
16	50	6	26th October 2022	0	0	0	0	0	0	0	0	0	0
16	51	7	27th October 2022	0	0	0	0	0	0	0	0	0	0
16	52	8	28th October 2022	0	0	0	0	0	0	0	0	0	0
16	53	9	29th October 2022	0	0	0	0	0	0	0	0	0	0
16	54	10	30th October 2022	0	0	0	0	0	0	0	0	0	0
16	55	11	31st October 2022	0	0	0	0	0	0	0	0	0	0
16	56	12	1st November 2022	0	0	0	0	0	0	0	0	0	0
16	57	13	2nd November 2022	0	0	0	0	0	0	0	0	0	0
16	1	1	15th May 2023	0	0	0	0	0	0	0	0	0	0
16	2	2	16th May 2023	0	0	0	0	0	0	0	0	0	0
16	3	3	17th May 2023	9	1	0	0	0	0	0	0	0	10
16	4	4	18th May 2023	2	2	1	0	0	0	0	0	0	5
16	45	1	19th May 2023	2	0	1	0	0	0	0	0	0	3
16	46	2	20th May 2023	29	1	0	0	0	0	0	0	1	31
16	47	3	21st May 2023	15	1	2	0	0	0	0	0	0	18
16	48	4	22nd May 2023	1	0	1	0	0	0	0	0	0	2
16	49	5	23rd May 2023	5	2	1	0	0	0	0	0	0	8
16	50	6	24th May 2023	0	0	0	0	0	0	0	0	0	0
16	51	7	25th May 2023	2	0	0	0	0	0	0	0	0	2
16	52	8	26th May 2023	3	0	0	0	0	0	0	0	0	3
16	53	9	27th May 2023	5	0	0	0	0	0	0	0	0	5
16	54	10	28th May 2023	0	0	0	0	0	0	0	0	0	0
16	55	11	29th May 2023	0	0	0	0	0	0	0	0	0	0



Detector	Total days per turbine	Days per season	Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Nathusius Pipistrelle	Pipistrelle 40 kHz	Brown Long- eared	Natterer's Bat	Daubenton's Bat	Unidentified Myotis	Total
16	56	12	30th May 2023	0	0	0	0	0	0	0	0	0	0
16	57	13	31st May 2023	0	0	0	0	0	0	0	0	0	0



5.1 ECOBAT TYPE ANALYSIS

5.1.1 Comparative datasets

Table 5-5: Activity for turbines 1 to 5 based on data from a site set within peatland with conifer in periphery

Percentile	80-100	60-79	40 - 59	20 - 39	0 - 19	Range	
Activity level	High	Moderate High	Moderate	Moderate Low	Low	(nights with min of 1 bat call)	
Pipistrellus pipistrellus	15 plus	6 to 14	3 to 5	2	0 to 1	266	
Pipistrellus pygmaeus	15 plus	6 to 14	3 to 5	2	0 to 1	279	
Nyctalus leisleri	15 plus	6 to 14	3 to 5	2	0 to 1	388	
Pipistrellus nathusii	15 plus	6 to 14	3 to 5	2	0 to 1	104	

Table 5-6: Activity for turbines 6 to 16 based on data from sites in Cork and Clare

Percentile	80-100	60-79	60-79 40 - 59		0 - 19	Range	
Activity level	High	Moderate High	Moderate	Moderate Low	Low	(nights with min of 1 bat call)	
Pipistrellus pipistrellus	25 plus	8 to 24	3 to 7	2	0 to 1	537	
Pipistrellus pygmaeus	25 plus	8 to 24	3 to 7	2	0 to 1	588	
Nyctalus leisleri	25 plus	8 to 24	3 to 7	2	0 to 1	526	
Pipistrellus nathusii	25 plus	8 to 24	3 to 7	2	0 to 1	222	

5.1.2 Scart Mountain Activity Results

Table 5-7:

Bat activity within each activity band for each species – all seasons combined (baring October)

Location	Species/ Species Group	Nights of High Activity	Nights of Moderate/ High Activity	Nights of Moderate Activity	Nights of Low/ Moderate Activity	Nights of Low Activity	Bat Activity Category Median	Bat Activity Category
1	Leislers	20	8	6	3	24	47	Moderate
3	Leislers	14	6	2	3	19	44	Moderate
4	Leislers	16	5	4	4	32	36	Low to Moderate
5	Leislers	20	5	4	3	29	40	Low to Moderate
6	Leislers	14	13	13	3	18	48	Moderate
8	Leislers	10	9	4	5	33	32	Low to Moderate
9	Leislers	18	10	13	4	16	52	Moderate
10	Leislers	18	18	11	6	8	59	Moderate
11	Leislers	16	22	12	1	10	60	Moderate
12	Leislers	17	31	11	2	5	65	Moderate to High
14	Leislers	17	23	15	1	5	66	Moderate to High



Location	Species/ Species Group	Nights of High Activity	Nights of Moderate/ High Activity	Nights of Moderate Activity	Nights of Low/ Moderate Activity	Nights of Low Activity	Bat Activity Category Median	Bat Activity Category
15	Leislers	24	27	5	3	2	74	Moderate to High
16	Leislers	9	16	10	5	21	42	Moderate
1	Common Pip	2	5	9	5	40	21	Low
3	Common Pip	1	4	3	1	35	13	Low
4	Common Pip	1	3	4	1	52	11	Low
5	Common Pip	0	1	6	3	51	9	Low
6	Common Pip	15	10	6	3	27	42	Moderate
8	Common Pip	26	12	7	1	15	59	Moderate
9	Common Pip	26	12	7	1	15	60	Moderate
10	Common Pip	26	11	8	4	12	62	Moderate to High
11	Common Pip	33	13	8	0	7	73	Moderate to High
12	Common Pip	16	23	8	2	17	54	Moderate
14	Common Pip	32	12	9	3	5	71	Moderate to High
15	Common Pip	28	13	5	1	14	62	Moderate to High
16	Common Pip	14	9	2	6	30	36	Low to Moderate
1	Soprano Pip	1	2	5	6	47	12	Low
3	Soprano Pip	0	1	5	2	36	11	Low
4	Soprano Pip	0	2	5	0	54	7	Low
5	Soprano Pip	0	0	5	2	54	6	Low
6	Soprano Pip	3	8	3	4	43	20	Low
8	Soprano Pip	15	9	8	5	24	43	Moderate
9	Soprano Pip	12	17	5	6	21	45	Moderate
10	Soprano Pip	12	8	14	6	21	42	Moderate
11	Soprano Pip	26	20	6	1	8	68	Moderate to High
12	Soprano Pip	8	13	22	3	20	42	Moderate
14	Soprano Pip	11	9	11	3	27	39	Low to Moderate
15	Soprano Pip	24	18	6	1	12	63	Moderate to High
16	Soprano Pip	7	11	7	6	30	33	Low to Moderate
1	Nathusius	0	0	1	1	59	2	Low
3	Nathusius	0	0	0	0	44	1	Low
4	Nathusius	0	0	1	0	60	2	Low
5	Nathusius	0	0	1	0	60	1	Low
6	Nathusius	0	3	3	2	53	10	Low
8	Nathusius	0	3	9	5	44	15	Low
9	Nathusius	1	8	4	6	42	17	Low



Location	Species/ Species Group	Nights of High Activity	Nights of Moderate/ High Activity	Nights of Moderate Activity	Nights of Low/ Moderate Activity	Nights of Low Activity	Bat Activity Category Median	Bat Activity Category
10	Nathusius	3	17	5	6	30	32	Low to Moderate
11	Nathusius	0	3	4	4	50	11	Low
12	Nathusius	0	0	2	6	58	7	Low
14	Nathusius	2	6	12	7	34	24	Low to Moderate
15	Nathusius	0	2	6	3	50	12	Low
16	Nathusius	0	1	2	2	56	4	Low

Table 5-8:

Bat activity within each activity band for each species – July to September

Location	Species/ Species Group	Nights of High Activity	Nights of Moderate/ High Activity	Nights of Moderate Activity	Nights of Low/ Moderate Activity	Nights of Low Activity	Bat Activity Category Median	Bat Activity Category
1	Leislers	18	3	1	2	6	67	Moderate to High
3	Leislers	13	4	2	3	8	56	Moderate
4	Leislers	15	4	2	3	6	63	Moderate to High
5	Leislers	16	4	1	1	8	60	Moderate
6	Leislers	13	5	7	1	4	64	Moderate to High
8	Leislers	8	2	2	2	16	36	Low to Moderate
9	Leislers	12	7	8	0	3	66	Moderate to High
10	Leislers	10	14	3	2	1	69	Moderate to High
11	Leislers	8	14	6	1	1	68	Moderate to High
12	Leislers	12	18	5	0	0	74	Moderate to High
14	Leislers	4	15	9	0	2	64	Moderate to High
15	Leislers	8	17	3	1	1	71	Moderate to High
16	Leislers	8	9	5	2	6	55	Moderate
1	Common Pip	1	2	6	3	18	24	Low to Moderate
3	Common Pip	1	4	3	1	21	19	Low
4	Common Pip	1	2	2	1	24	15	Low
5	Common Pip	0	0	4	3	23	12	Low
6	Common Pip	10	6	0	0	14	47	Moderate
8	Common Pip	13	8	1	1	7	62	Moderate to High
9	Common Pip	10	8	4	1	7	59	Moderate
10	Common Pip	17	3	5	3	2	73	Moderate to High
11	Common Pip	19	7	4	0	0	84	High
12	Common Pip	6	14	4	1	10	51	Moderate
14	Common Pip	22	2	4	1	1	82	High



Location	Species/ Species Group	Nights of High Activity	Nights of Moderate/ High Activity	Nights of Moderate Activity	Nights of Low/ Moderate Activity	Nights of Low Activity	Bat Activity Category Median	Bat Activity Category
15	Common Pip	14	8	3	1	4	67	Moderate to High
16	Common Pip	13	6	1	2	8	57	Moderate
1	Soprano Pip	0	1	4	3	22	13	Low
3	Soprano Pip	0	1	5	2	22	16	Low
4	Soprano Pip	0	2	5	0	23	14	Low
5	Soprano Pip	0	0	5	2	23	12	Low
6	Soprano Pip	2	8	3	1	16	32	Low to Moderate
8	Soprano Pip	11	6	2	3	8	54	Moderate
9	Soprano Pip	10	10	1	3	6	59	Moderate
10	Soprano Pip	12	5	9	1	3	64	Moderate to High
11	Soprano Pip	18	11	1			85	High
12	Soprano Pip	7	6	15	3	4	53	Moderate
14	Soprano Pip	11	9	6	1	3	65	Moderate to High
15	Soprano Pip	18	5	5		2	76	Moderate to High
16	Soprano Pip	7	9	6	2	6	54	Moderate
1	Nathusius	0	0	1		29	3	Low
3	Nathusius	0	0	0	0	30	1	Low
4	Nathusius	0	0	0	0	30	1	Low
5	Nathusius	0	0	0	0	30	1	Low
6	Nathusius	0	0	0	1	29	3	Low
8	Nathusius	0	0	4	4	22	11	Low
9	Nathusius	0	1	0	2	27	6	Low
10	Nathusius	0	10	2	4	14	31	Low to Moderate
11	Nathusius	0	1	0	3	26	9	Low
12	Nathusius	0	0	0	1	34	4	Low
14	Nathusius	1	4	3	3	19	22	Low to Moderate
15	Nathusius	0	1	2	1	26	9	Low
16	Nathusius	0	1	2	2	25	8	Low

Table 5-9: Whole site summary



Species	Nights of High Activity	Nights of Moderate/ High Activity	Nights of Moderate Activity	Nights of Low/ Moderate Activity	Nights of Low Activity	Median	Median Bat Activity Category					
All periods												
Leisler's	16	15	8	3	17	48	Moderate					
Common Pip	17	10	6	2	25	54	Moderate					
Soprano Pip	9	9	8	3	31	39	Low to Moderate					
Nathusius	0	3	4	3	49	10	Low					
July to September												
Leisler's	11	9	4	2	5	64	Moderate to High					
Common Pip	11	6	3	2	12	57	Moderate					
Soprano Pip	11	6	5	2	12	54	Moderate					
Nathusius	1	3	2	2	26	6	Low					