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Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020 Report

Prepared for: SSE Renewables

SSE Renewables

Date: April 2020

NOTE: THIS REPORT CONTAINS SENSITIVE INFORMATION ON LOCATIONS OF BAT ROOSTS

Core House, Pouladuff Road, Cork
T12 D773, Ireland

T: +353 21 496 4133 E: info@ftco.ie

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www.fehilytimoney.ie

Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020 Report

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Abstract: The following report details the results of the 2019/2020 bat surveys undertaken within the proposed Inchamore and Gortyrahilly Wind Farms, Co. Cork. This bat report is required to assess the impacts of the proposed development on bat species within and surrounding the sites. This development is to consist of 30 no. wind turbines split across the townlands of Gortyrahilly and Inchamore.

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EXECUTIVE SUMMARY

The landscape that the proposed wind farm sites are a part of is of low to moderate suitability for common pipistrelle, soprano pipistrelle, brown long-eared bat, Leisler's bat, Daubenton's bat, Natterer's bat, whiskered bat and lesser horseshoe bat. The landscape is of low suitability for Nathusius' bat.

The methodology for the 2019/2020 bat survey at Gortyrahilly and Inchamore wind farms adhered to SNH (2019) guidance for assessing the impact of proposed wind farm developments on local bat species. Monthly activity surveys were undertaken between May to September. Three rounds of static detectors were also deployed during this time period, for at least ten nights per round per detector. Roost surveys were also conducted including preliminary ecological appraisal, bat roost inspection and emergence surveys. The latter were conducted in August 2019 and February 2020.

During activity surveys, a total of four species of bats were recorded: common pipistrelle, soprano pipistrelle, Leisler's bat and Natterer's bat. Across all activity surveys common pipistrelle was recorded the most frequently across both sites and Natterer's bat the least.

During static detector surveys, a total of nine species of bat were recorded. The same four species already recorded during activity surveys were present. In addition, Nathusius' bat, Daubenton's bat, whiskered bat, brown long-eared bat and lesser horseshoe bat were also recorded. During static detector surveys, common pipistrelle was recorded the most frequently across both sites and lesser horseshoe bat the least.

The Ecobat analysis showed six out of 14 detectors recorded at least one night of high bat activity in round one (spring), ten out of 18 detectors recorded at least one night of high bat activity in round two (summer) and eleven out of 17 detectors recorded at least one night of high bat activity in round three (autumn) at Gortyrahilly. Similarly, for Inchamore, it showed five out of 10 detectors recorded at least one night of high bat activity in round one (spring), seven out of 10 detectors recorded at least one night of high bat activity in round two (summer) and five out of 11 detectors recorded at least one night of high bat activity in round three (autumn).

All bats recorded during surveys are classified as 'Least Concern' on the Irish Red List and protected under the EU Habitats Directive Annex IV and Wildlife Acts. Only one species was listed as Annex II under the EU Habitats Directive: lesser horseshoe bat.

During August roost surveys, a total of seven potential roosts were identified. Of these, there were only three confirmed roosts. Three species were recorded during emergence surveys: common pipistrelle, soprano pipistrelle and Natterer's bat.

No confirmed bat roosts were identified at the Inchamore site following inspection of trees and buildings (only one low potential outbuilding was present in the south east of the site).

At Gortyrahilly, of the six potential roosts, three were confirmed via emergence surveys. These included a disused house and derelict house present in the north east of the site. The disused house was classified as being of high suitability for bats and was confirmed as a minor summer roost site for male common pipistrelle, soprano pipistrelle and Natterer's bat. The derelict house was classified as being of moderate suitability for bats and was confirmed as a minor summer roost site for male common and soprano pipistrelle bats. The final confirmed summer roost was in the south west of the Gortyrahilly site and was a high suitability dwelling that acted as a maternity roost for common and soprano pipistrelles. A low potential oak tree, moderate potential ash tree and moderate potential double-arched stone culvert were discounted as roosts at Gortyrahilly following surveys.

During winter roost surveys, no evidence of winter roosting bats was recorded either at Gortyrahilly or Inchamore. While the buildings recorded during the summer roost surveys (disused house and derelict house) at Gortyrahilly are unlikely to provide the consistent cool conditions required by hibernating bats, the presence of low numbers of bats within these structures cannot be excluded.

No trees or structures of potential use as winter roosts were recorded at Inchamore.

There is potential for low-level cumulative impacts to a minor roost of common pipistrelle located 0.7 km south of the Gortyrahilly recorded during surveys for Derragh wind farm. Damage and disturbance to these roosts should be avoided. Mitigation measures such as providing a 50 m buffering distance from turbine blade to key habitat features should be implemented during construction and operation of the proposed wind farm sites.

1. INTRODUCTION

This report details the results of the bat surveys carried out at the proposed Gortyrahilly and Inchamore winds farm during 2019 and 2020. In addition to desktop study, the following surveys were undertaken within and near to the boundary of the proposed wind farm:

- bat activity (walked and driven transects);
- roost surveys (summer and winter); and
- static detector (three survey periods).

All surveys adhered to SNH (2019) guidelines.

Monthly activity surveys were conducted from May to September 2019 along predetermined walked and driven transects. Static detector surveys were carried out between May to September 2019 in three rounds. These two surveys were used to determine the species assemblage and spatial and temporal distribution of bat activity.

Roost surveys were carried out in summer 2019 and February 2020, with preliminary ecological appraisal and bat roost inspection conducted first. The aim was to identify key features that could support maternity roosts and significant hibernation and/or swarming sites within 200 m plus rotor radius of the boundary of the proposed development. Subsequent emergence surveys were then conducted in August 2019 outside of structures considered to have high bat roosting potential. Further roost surveys were also conducted in February 2020.

1.1 Site Location

The proposed Inchamore – Gortyrahilly wind farms are within and surrounds the townlands of Inchamore and Gortyrahilly. The first wind farm is to be located within Inchamore along the Cork-Kerry border, an estimated 18 km south-east of the town of Killarney and 5 km west of the town of Ballyvourney. The second wind farm is to be located further to the south within Gortyrahilly, located approximately 3.2 km north of Ballingeary.

Surrounding Corine 2012 habitats and land uses are: 'Forest' and 'semi-natural areas with transitional woodland scrub and Conifer Plantation' (324 & 314), 'Wetlands' (412) and 'Agricultural Areas' (243). Figure 1-1 displays the site location.

During site surveys, habitats such as heath (HH), peatlands (PB), conifer plantation (WD4) and agricultural lands (GA/GS) were recorded (Fossitt, 2000).

Areas of heath (HH), dominant in Heather (Ling *Calluna vulgaris* and Bell Heather *Erica cinerea*) were identified throughout the site, particularly around turbine number 1. Areas of degraded heath were also present.

Areas of conifer plantation (WD4) are widespread throughout the site, with crops largely consisting non-native pine species (*Pinus* sp.). This habitat appears to be largely planted upon areas of degraded bog (PB) and heath (HH).

Upland blanket bog (PB2) along with degraded areas of cutover bog (PB4) habitat were also present throughout the site. Areas of bog and flush (PB/PF) habitat were present to the west of turbine number 4.

Cultivated (BC) and built land (BL3) is present throughout the site with dwellings and agricultural sheds being most prominent. Areas of agricultural grassland (GA1) are particularly dominant throughout the lowland areas within and surrounding the site. Wet grassland areas (GS4) were also identified at the edges of such agricultural areas.

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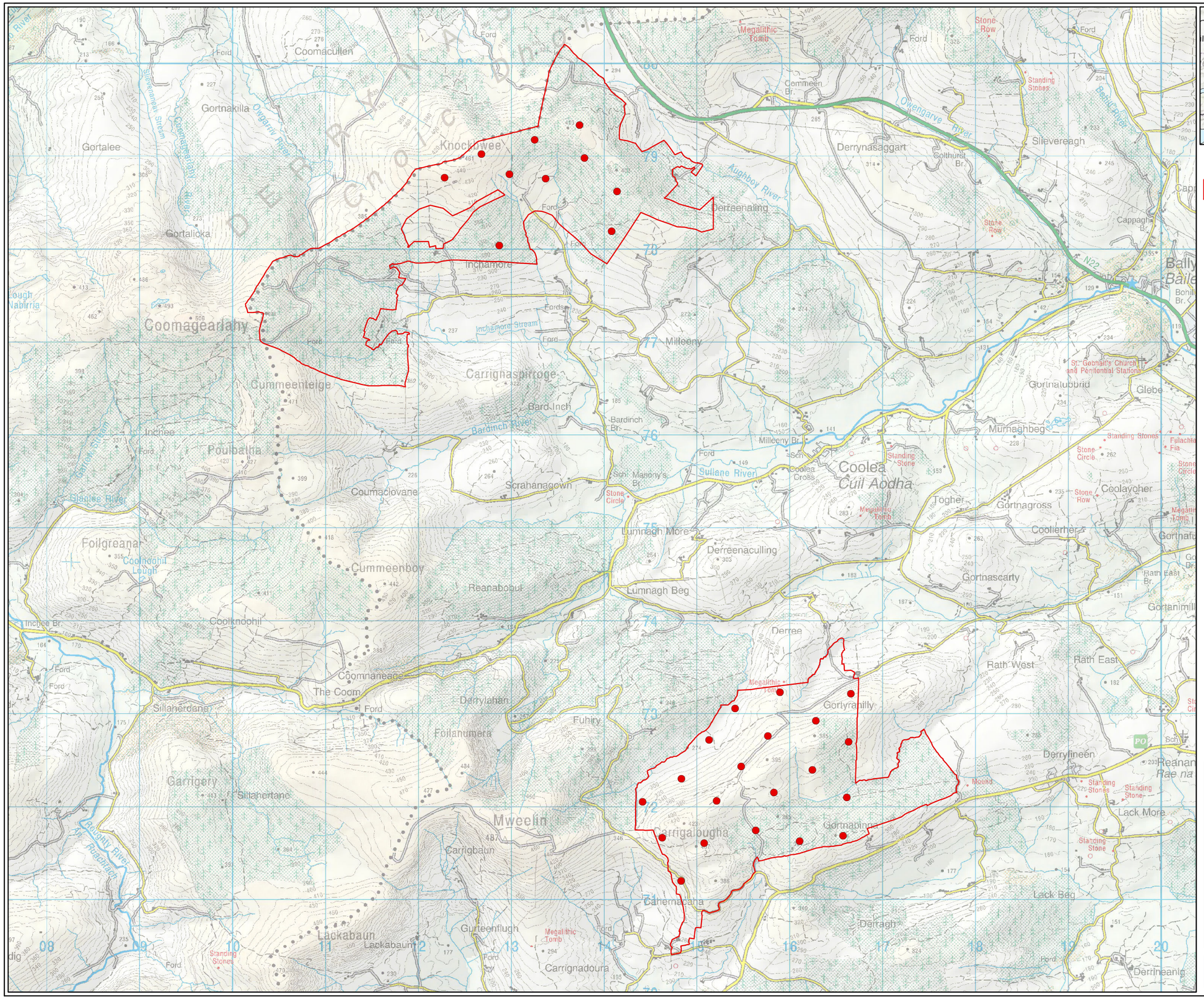

TITLE:	Site Location
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020
FIGURE NO:	1.1
CLIENT:	SSE Renewables
SCALE:	1:40000
REVISION:	0
DATE:	31/03/2020
PAGE SIZE:	A3

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1.2 Bat Species

Bats belong to the Order Chiroptera and to date, nine species are recorded as resident in Ireland. These nine species are divided into two families:

1. Vespertilionidae, which contains nine Irish species (Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri*, whiskered bat *Myotis mystacinus*, Leisler's bat *Nyctalus leisleri*, brown long-eared bat *Plecotus auritus*, soprano Pipistrelle *Pipistrellus pygmaeus*, common pipistrelle *Pipistrellus pipistrellus* and Nathusius's pipistrelle *Pipistrellus nathusii*); and
2. Rhinolophidae, which contain one Irish species, the lesser horseshoe bat *Rhinolophus hipposideros*.

Brandt's bat *Myotis brandii* has only been recorded once in Ireland from a site in Co. Wicklow and is classified as a vagrant. In 2013, a single male greater horseshoe bat *Rhinolophus ferrumequinum* was recorded in Co. Wexford. This bat was also considered to be a vagrant. Gortyrahilly and Inchamore wind farms are within the distribution range for lesser horseshoe bat (NPWS, 2019).

1.3 Legislation

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

Bats' dependency on insects has left them vulnerable to habitat destruction, land drainage, agricultural intensification and increased pesticide use. Their reliance on buildings has also made them vulnerable to building repairs and the use of chemicals for timber treatment.

Roosting or hibernation sites in trees and disused buildings are also often lost to development.

Irish Legislation

In the Republic of Ireland, under Schedule 5 of the Wildlife Acts 1976 to 2019, all bats and their roosts are protected by law. It is an offence to disturb either without the appropriate licence. This Act was further strengthened by the Wildlife Amendment Act 2000.

E.U. Legislation

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

In Ireland, all bat species are classified as Annex IV species under the Habitats Directive. Annex IV species are species in need of strict protection. Lesser horseshoe bat is also classified as an Annex II species (Priority Species). Annex II species require the designation of Special Areas of Conservation specifically for their protection.

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

International Legislation

Ireland has ratified two international wildlife laws pertaining to bats:

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

1.4 Relevant Guidance Documents

This report will draw on guidelines already available in Europe and will use the following documents:

- National Roads Authority (2006) Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes
- Collins, J. (Editor) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). Bat Conservation Trust, London
- McAney, K. (2006) A conservation plan for Irish vesper bats, Irish Wildlife Manual No. 20 National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.
- Kelleher, C. & Marnell, F. (2006) Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.
- The status of EU protected habitats and species in Ireland: Conservation status in Ireland of habitats and species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government

1.4.1 Relevant Wind Farm Guidance Documents

A large array of publications has been produced to date on the potential impact of wind turbines on bats. As a consequence, there are a number of guidelines that this report draws from in order to provide recommendations and mitigation measures. It is important to be aware of these publications in order to understand the survey protocol, the large degree of bat surveying completed and to address potential impacts of wind turbines on local bat populations. This literature review also provides evidence for accepted bat mitigation measures implemented across Europe.

The following wind farm specific guidance documents were consulted:

- Bats and onshore wind turbines: Survey, Assessment and Mitigations. Scottish Natural Heritage January, 2019.
- UNEP/EUROBATS: Guideline for consideration of bats in wind farm projects, Publication Series No. 3.
- Natural England Technical Information Note TIN051: Bats and onshore wind turbines – Interim Report
- Guide to Turbines and Wind Farms. Bat Conservation Ireland 2012.

1.5 Bat Survey Aims

This bat survey report is a stand-alone document and aims to provide the following information on bat activity in 2019/20 within the survey area:

- Bat species list for the proposed development area;
- Location of bat presence within the proposed development area;
- Bat activity levels within the proposed development area;
- Recommendations and mitigation measures to reduce the potential impact of the proposed development on local bat fauna.

The 2019/20 bat surveys were undertaken according to the survey recommendations of the Bats and onshore wind turbines: Survey, Assessment and Mitigations (January 2019) Scottish Natural Heritage, Natural England, Natural Resources Wales, RenewableUK, Scottish Power Renewables, Ecotricity Ltd, the University of Exeter.

Surveys are comprised of many different types. The following is a brief description of main types of surveys completed in 2019/20 for this report.

- Emergence (dusk) surveys: surveying of buildings or structures to determine whether each building/structure is a bat roost. Undertaken from 10 minutes prior to sunset to 90 minutes after sunset.
- Walking transect bat surveys completed on-foot where the surveyor(s) walk the survey site from 10 minutes prior to sunset to at least 110 minutes after sunset. Often this survey is completed post an emergence survey and therefore may be undertaken for a longer period of time after sunset.
- Driving transect bat survey completed in a car and undertaken according to a strict survey protocol. Surveying is completed from 40 minutes after sunset till the end of the planned survey route. This is only undertaken for large survey area with a well-defined public road structure. Routes are planned and mapped prior to surveying.

Static surveys: placement of automated recording devices within the survey area. The units are set up during the daylight hours, commence recording 30 minutes before sunset and stop recording 30 minutes after sunrise.

2. METHODOLOGY

2.1 Desktop Study

A pre-roost survey data search was conducted on 21/10/2019 in order to collate existing information from the footprint of the proposed development sites and the surrounding area at each site on bat activity, roosts and landscape features that may be used by bats. The data search comprised the following information sources:

- Collation of known bat records within a 4 km radius of the proposed sites from the National Bat Database held by the National Biodiversity Data Centre (www.biodiversityireland.ie)[1];
- 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[2]);
- Records of designated sites within a 15 km radius of the proposed sites where bats form part or all of the reason for designation (https://www.npws.ie/protected-sites);
- Collation of lesser horseshoe bat records within a 15 km radius of the proposed sites from the National Parks and Wildlife Service lesser horseshoe bat database (https://www.npws.ie);
- 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 (http://www.ubss.org.uk/search_irishcaves.php); and
- Review of bat survey data from Ecological Impact Assessments from proposed and permitted developments within the wider environs of the site.

2.1.1 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 BCIreland 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.

2.1.2 Designated Sites

A search was made for designated sites within 15 km of the proposed wind farm site 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 1.3.

[1] A specific data request was not made to Bat Conservation Ireland because they regularly update NBDC with their records and it is only judged to provide an additional useful source of data if a location is deigned of high potential for bat roosts.
[2] As per SNH (2019) guidance.

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. These sites are of significance for wildlife and habitats. All pNHAs are subject to limited protection in the form of agri-environmental farm planning schemes, NPWS approval prior to afforestation grants on pNHA lands and recognition of ecological value of pNHAs by Planning and Licencing authorities.

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

2.2 2019 / 2020 Surveys

A total of five no. bat activity and static detector surveys were carried out during 2019 and 2020 (refer to Table 2-1 for details). These surveys followed the specific guidelines set out by the Bat Conservation Trust in Bat Surveys: Good Practice Guidelines (Hundt, 2012 and Collins, 2016).

Table 2-1: Bat Surveys 2019/2020

Survey Type	Survey Date	Surveyor
Bat Activity Survey 1 - Dusk	20/05/2019	Karen Banks (BSc, MCIEEM)
Bat Activity Survey 2 – Dusk	27/06/2019	Karen Banks (BSc, MCIEEM)
Bat Activity Survey 3 – Dusk	26/07/2019	Karen Banks (BSc, MCIEEM)
Bat Activity Survey 4 – Dusk	15/08/2019	Karen Banks (BSc, MCIEEM)
Bat Activity Survey 5 - Dusk	22/09/2019	Karen Banks (BSc, MCIEEM)
Static Detector Survey	09/05/2019 – 01/10/2019 (full details are given in Table 2-3)	Jonathon Dunn (BSc, MSc, PhD) and Sinead Clifford (BSc, CIEEM graduate)
Roost Survey	Preliminary appraisal and summer inspection = throughout August 2019; emergence = 16/08/2019, 17/08/2019. Winter inspection = 27/02/2020.	Karen Banks (BSc, MCIEEM) and Cathál MacPartholan (general operative)

2.2.1 Surveyor Information

The activity and roost surveys were undertaken by Karen Banks, MCIEEM.

Karen is an ecologist with 13 years' experience in the field of ecological assessment. She holds a BSc in Environment and Development from Durham University, and is a full member of the Chartered Institute of Ecology and Environmental Management. Karen is an experienced and skilled bat surveyor, first gaining a scientific licence to disturb bats from Natural England, UK in 2008. Karen is trained in bat handling and capture methods and currently holds a bat disturbance licence granted by the NPWS. Karen has undertaken bat survey and assessment for numerous projects, including bridge repair and replacement works, domestic dwelling repair and demolition works, wind farm developments and large-scale infrastructure projects such as flood relief schemes, road developments and pipeline schemes. Karen has also represented Cork County Council as an expert witness for bats at an Oral Hearing.

The static detector surveys were carried out by Dr Jonathon Dunn and the recordings analysed by Sinead Clifford (CIEEM graduate).

Jonathon is an ecologist with over seven years' experience in the environmental sector and holds a BA (Hons) in Natural Sciences (Zoology) from the University of Cambridge, an MSc in Ecology, Evolution and Conservation from Imperial College London and a PhD in Avian Ecology from Newcastle University. Sinead Clifford is an ecologist with 1.5 years' experience in the environmental sector and holds a BA (Hons) from Institute of Technology Tralee and a Certificate in Ecological Consultancy from Acorn Ecology and is fully trained in sound analysis of bat calls.

2.2.2 Bat activity surveys

Transects through bat favourable habitats within the proposed Gortyrahilly and Inchamore wind farms were either walked (transect 4S) or surveyed from a vehicle driven at 15 kph with a detector mounted on the hedge-side of the vehicle (transects 2N, 3N, 4N and 1S). Bat activity was recorded using an Anabat Walkabout detector. The order in which transects were surveyed was randomised to ensure transect number was not confounded with time of day. Transects were undertaken once a month between May to September 2019 (Table 2-1).

Surveys targeted a range of foraging and commuting habitats present within the study area, those associated with linear features such as roadside margins, woodland plantation edges, hedgerows, treelines and waterbodies. A sample of stream corridors within study areas was sampled for Daubenton's bats (streams were near the start/end of transect 4S and to the north of transect 2N). Full details of transects are shown in Figure 2-1 and Table 2-2 below.

The Anabat Walkabout detectors record bat ultrasonic calls on a continuous basis and stores the information onto an internal SD memory card. The detectors offer the choice between heterodyne, time expansion, frequency division or pitch shift outputs. The detector can convert the inaudible bat echolocation calls to audible sounds.

The bat detectors used a Full Spectrum Analysis to make the real-time recorded calls visible for display purposes. It is these sonograms (2-d sound pictures) that are digitally stored on an SD card and downloaded for analysis. Each time a bat is detected, an individual time and GPS stamped (date and time to the second) file is recorded.

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 6°C or during periods of strong winds or heavy rainfall so survey 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).

Nocturnal bat activity is mainly bi-modal taking advantage of increased insect numbers on the wing in the periods after dusk and before dawn, with a lull in activity in the middle of the night. This is particularly true of 'hawking' species – i.e. bats which capture prey in the open air. However, 'gleaning' species remain active throughout the night as prey is available on foliage for longer periods. Gleaning is the term for taking prey from foliage or the ground.

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 (Anabat Insight spectrogram sound analysis software Version 1.9).

Table 2-2: Transect Details[3]

Transect Name	Mode of survey	Transect length (m)	Fossitt habitats along transect
2N	Driven	1,309	Conifer plantation (WD4), drainage ditches (FW4), recently-felled woodland (WS5), scrub (WS1), buildings and artificial surfaces (BL3)
3N	Driven	729	Conifer plantation (WD4), drainage ditches (FW4), recently-felled woodland (WS5), scrub (WS1), buildings and artificial surfaces (BL3)
4N	Driven	623	Buildings and artificial surfaces (BL3), scrub (WS1), conifer plantation (WD4), Treelines (WL2)
1S	Driven	1,538	Conifer plantation (WD4), drainage ditches (FW4), buildings and artificial surfaces (BL3)
4S	Walked	1,240	Conifer plantation (WD4), buildings and artificial surfaces (BL3), drainage ditches (FW4), eroding/upland rivers (FW1), heath (HH), bog (PB)

[3] Note that the naming of transects comes from those used for separate bird surveys. Not all transects used in the bird surveys were included in the bat surveys, owing to changes in site layout and boundaries. However, the names were retained to ensure comparability.

2.2.3 Static Detector Surveys

A Passive Static Bat Surveys involves leaving a static bat detector unit (with ultrasonic microphone) in a specific location and set to record for a specified period of time (i.e. a bat detector is left in the field, there is no observer present and bats which pass near enough to the monitoring unit are recorded and their calls are stored for analysis post surveying). The bat detector is effectively used as a bat activity data logger. This results in a far greater sampling effort over a shorter period of time. Bat detectors with ultrasonic microphones are used as the ultrasonic calls produced by bats cannot be heard by human hearing.

Song Meter SM4BAT Full spectrum bat recorders use Real Time recording as a technique to record bat echolocation calls and using specific software, the recorded calls are identified. It is these sonograms (2-d sound pictures) that are digitally stored on the SD card (or micro SD cards depending on the model) and downloaded for analysis. These results are depicted on a graph showing the number of bat passes per species per hour/night. 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.

As per SNH (2019) guidance, static units (Song Meter SM4BAT) 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. Detectors were left out for a minimum of 10 consecutive nights across three survey periods in 2019: spring (April to May), summer (June-mid to August) and autumn (mid-August to October). At Gortyrahilly, this corresponded to 14 detectors for round one, 18 for round two and 16 for round three. At Inchamore, this corresponded to 10 detectors for rounds one and two and 11 for round three. Across all rounds, detectors were left out for a mean of 33 days per turbine for Gortyrahilly and 46 days per turbine for Inchamore. See Table 2-3 for further details.

Static units were located in vicinity of the proposed locations of the turbines. Where possible, units were deployed in the exact turbine locations (SNH, 2019). The location of units differed from those of the indicative turbine locations in the following scenarios:

- Where livestock were present, units were sited back from the indicative turbine location in nearby safe areas to prevent damage to units.
- Where indicative turbine locations were adjacent to public footpaths or roads, units were moved to a more discrete location nearby to reduce the risk of theft.
- Where the densely closed nature of the habitat (e.g. mature conifer plantation) immediately surrounding the indicative turbine location prevented access for surveyors or bats, units were moved to the edge of the closed habitat nearest to the turbine location.

SNH (2019) 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*".

Thus, for the Inchamore subsite, detectors were placed at or close to the locations of all ten indicative turbine locations, with one additional detector placed to the north of the site near to a stream. For the Gortyrahilly subsite, 20 indicative turbine locations are present. Thirteen detectors were placed around the site, with an additional six placed in different locations, thus *exceeding* the survey effort required by SNH (2019). The selection of locations for these additional turbines were distributed to represent different habitats and topographical features at the proposed wind farm site.

The data was analysed with Kaleidoscope 5.1.9g software (Bats of Europe 5.1.0 S/A: 0). The location of the static detectors is presented in Figure 2-2 below

Table 2-3: Details of Static Detector Deployment

Site	Box location	Habitat types	Notes	First recording (Spring)		Second recording (Summer)		Third recording (Autumn)	
				Date deployed	Number of nights deployed[4]	Date deployed	Number of nights deployed	Date deployed	Number of nights deployed
Gortyrahilly	G1	Heath/Bog		09/05/2019	11	28/06/2019	10	17/09/2019	13
Gortyrahilly	G2	Heath/Bog		09/05/2019	11	01/07/2019	10	17/09/2019	13
Gortyrahilly	G3	Heath/Bog		09/05/2019	12	28/06/2019	10	21/08/2019	26
Gortyrahilly	G4	Heath/Bog		09/05/2019	12	28/06/2019	10	21/08/2019	26
Gortyrahilly	G5	Margin of conifer plantation		09/05/2019	12	01/07/2019	10	21/08/2019	26
Gortyrahilly	G6	Heath/Bog		21/05/2019	14	01/07/2019	10	NA	NA
Gortyrahilly	G7	Heath/Bog		21/05/2019	14	01/07/2019	10	17/09/2019	13
Gortyrahilly	G8	Heath/Bog		21/05/2019	14	01/07/2019	10	NA	NA
Gortyrahilly	G9	Margin of conifer plantation	G9 location inside of inaccessible conifer plantation, so placed detector as close to turbine location as possible.	21/05/2019	14	01/07/2019	10	17/09/2019	13
Gortyrahilly	G10	Heath/Bog		21/05/2019	14	01/07/2019	10	17/09/2019	13
Gortyrahilly	G11	Heath/Bog		05/06/2019	12	01/07/2019	10	17/09/2019	13
Gortyrahilly	G12	Margin of conifer plantation		20/05/2019	15	28/06/2019	10	17/09/2019	13
Gortyrahilly	G13	Margin of conifer plantation		20/05/2019	15	01/07/2019	10	17/09/2019	13
Gortyrahilly	G14	Heath/Bog		21/05/2019	14	28/06/2019	10	17/09/2019	13

[4] Note that data will be recorded for the morning on the date of collection. Thus, if a detector was left out on 09/05/2019 and collected on 20/05/2019, the detector will have been left out for a total of 11 complete nights. However, there will be 12 unique dates where data was (potentially) recorded. Ecobat automatically includes every distinct date as a night and so reports one more night than is actually recorded.

Site	Box location	Habitat types	Notes	First recording (Spring)		Second recording (Summer)		Third recording (Autumn)	
				Date deployed	Number of nights deployed[4]	Date deployed	Number of nights deployed	Date deployed	Number of nights deployed
Gortyrahilly	G15	Margin of conifer plantation		NA	NA	11/07/2019	19	17/09/2019	13
Gortyrahilly	G16	Heath/Bog		NA	NA	11/07/2019	19	NA	NA
Gortyrahilly	G17	Heath/Bog		NA	NA	11/07/2019	19	17/09/2019	13
Gortyrahilly	G18	Margin of conifer plantation	G18 location inside of inaccessible conifer plantation, so placed detector as close to turbine location as possible.	NA	NA	11/07/2019	19	17/09/2019	13
Gortyrahilly	G19		Extra detector	NA	NA	NA	NA	30/07/2019[5]	30
Inchamore	I1	Heath/Bog among very small immature conifer plantation		09/05/2019	11	28/06/2019	10	21/08/2019	26
Inchamore	I2	Heath/Bog		09/05/2019	11	28/06/2019	10	21/08/2019	26
Inchamore	I3	Heath/Bog		09/05/2019	11	28/06/2019	10	21/08/2019	26
Inchamore	I4	Margin of conifer plantation		09/05/2019	11	28/06/2019	10	21/08/2019	26
Inchamore	I5			09/05/2019	11	28/06/2019	10	21/08/2019	26
Inchamore	I6	Margin of conifer plantation	Coillte machines operating in I6 location, so moved detector to edge of road away from works.	05/06/2019	12	28/06/2019	10	21/08/2019	26

[5] Note that the dates this detector was deployed covered both summer and autumn survey periods. Here it is included in the autumn survey period.

Site	Box location	Habitat types	Notes	First recording (Spring)		Second recording (Summer)		Third recording (Autumn)	
				Date deployed	Number of nights deployed[4]	Date deployed	Number of nights deployed	Date deployed	Number of nights deployed
Inchamore	I7	Margin of conifer plantation	I7 location inside of inaccessible conifer plantation, so placed detector as close to turbine location as possible.	20/05/2019	15	28/06/2019	10	21/08/2019	26
Inchamore	I8	Margin of conifer plantation		20/05/2019	15	28/06/2019	10	21/08/2019	26
Inchamore	I9	Margin of conifer plantation		20/05/2019	15	28/06/2019	10	21/08/2019	26
Inchamore	I10	Margin of conifer plantation	I10 location inside of inaccessible conifer plantation, so placed detector as close to turbine location as possible.	20/05/2019	15	28/06/2019	10	21/08/2019	26
Inchamore	I11		Extra detector	NA	NA	NA	NA	30/07/2019[6]	24

[6] Note that the dates this detector was deployed covered both summer and autumn survey periods. Here it is included in the autumn survey period.

2.2.4 Bat Roost Surveys

Habitats within the facility were assessed for their favourability for bats. All structures were surveyed for bat presence either externally via bat detector, or internally by visual inspection or by a combination of both. All structures / suitable trees were inspected for bats and/or their signs using powerful torches.

The presence of bats is often shown by grease staining, droppings, urine marks, corpses, feeding signs such as invertebrate prey remains and/or the presence of bat fly *Nycteribiidae* pupae, although direct observations are also occasionally made. Bat droppings are often identifiable to species-level based on their size, shape and content and those of certain species, for example brown long-eared *Plecotus auritus* and lesser horseshoe *rhinolophus hipposideros* bats, are very distinctive and unmistakable.

2.2.4.1 Preliminary Ecological Appraisal

Walkover surveys of areas identified as potential roosting habitats during the desk top study were undertaken in August 2019 and February 2020. The proposed site was walked and habitats of potential value to bats were noted and marked on a map. The value of each feature was noted according to its potential for use by bats for roosting. The value of habitat features for bats was defined in accordance with Bat Surveys: Good Practice Guidelines publication (Collins, 2016), as shown in Table 2-4.

Table 2-4: Potential Suitability of Habitats for Bats (Collins, 2016)

Suitability	Description of Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only- the assessments in this table are made	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for

Suitability	Description of Roosting Habitats	Commuting and Foraging Habitats
	irrespective of species conservation status, which is established after presence is confirmed).	foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

2.2.4.2 Bat Roost Inspection Survey

Trees

Detailed inspection of the exterior of trees was undertaken in August 2019 and February 2020 to look for features that bats could use for roosting (Potential Roost Features, or PRFs) from ground level. The aim of the surveys was to determine the actual or potential presence of bats and the need for further survey and/or mitigation.

A detailed inspection of each potential tree roost within the site was undertaken. The inspection was carried out in daylight hours from ground level, and information was compiled on the tree, PRFs and evidence of bats. All trees surveyed were numbered and marked on a map and a description of each PRF observed was recorded. PRFs that may be used by bats include:

- Rot holes;
- Hazard beams;
- Other horizontal or vertical cracks or splits (e.g. frost cracks) in stems or branches;
- Lifting bark;
- Knotholes arising from naturally shed branches or branches previously pruned back to the branch collar;
- Man-made holes (e.g. flush cuts) or cavities created by branches tearing out from parent stems;
- Cankers in which cavities have developed;
- Other hollows or cavities;
- Double leaders forming compression forks with included bark and potential cavities;
- Gaps between overlapping stems or branches;
- Partially detached ivy with stem diameters in excess of 50mm; and
- Bat or bird boxes.

Signs of a bat roost (excluding the actual presence of bats), include:

- Bat droppings in, around or below a PRF;
- Odour emanating from a PRF;
- Audible squeaking at dusk or in warm weather; and
- Staining below the PRF.

It should be noted that bats or bat droppings are the only conclusive evidence of a roost and many roosts have no external signs. Therefore, this survey and evaluation was relatively basic as only those PRFs at ground level could be inspected closely to ascertain their true potential to support roosting bats. Trees were categorised according to the highest suitability PRF present.

Structures

Derelict/disused buildings and bridges within the proposed wind farm site boundaries were subject to a visual inspection for evidence of, and potential for, bats in August 2019 and February 2020. The exterior of the structures were visually assessed for potential bat access points and evidence of bat activity using binoculars, a high-powered torch and an endoscope (Explorer Premium 8803 with 9 mm camera). Features such as crevices and small gaps in the bridge or building structure, such as between the brick or stonework, beneath roofing material, at eaves and around window frames which had potential as bat access points into the buildings were inspected. Evidence that these features/ access points were actively being used by bats includes staining within the gaps, urine staining and bat droppings. Indicators that potential access points are not actively used by bats include general detritus and cobwebs within the access point. A note of potential features used by bats was made where present.

Where possible, internal inspections of these structures was undertaken. Internal inspections involved looking for features that may be suitable for roosting bats, such as joints and crevices in wood, holes or crevices between stonework in the walls and searching for bat droppings, urine stains and feeding signs on the floor.

2.2.4.3 Emergence Roost Survey

Dusk surveys were undertaken in August 2019 for structures identified as being of moderate to high potential for bats during the roost inspection surveys. The purpose of the surveys was to watch and listen for bats exiting from bat roosts to determine the presence or absence of bats at the time of survey. The dusk emergence surveys commenced approximately 15 minutes before sunset and ended approximately 90 minutes after sunset. The surveys were undertaken in suitable weather conditions (avoiding periods of very heavy rain, strong winds (> Beaufort Force 5), mists and dusk temperatures below 12°C). A pair of ecologists surveyed the structures.

An Anabat Walkabout detector was utilised for the survey, which records bat echolocation calls directly on to an internal SD memory card. Each time a bat is detected, an individual time-stamped (date and time to the second) file is recorded. Data were then downloaded and all recordings were analysed using the Anabat Insight spectrogram sound analysis software Version 1.9. A Batbox Duet detector was also utilised for the survey.

In order to supplement the information gathered from the emergence survey undertaken at the cluster of buildings present within the site boundary in the townland of Gortyrahilly, a passive monitoring system of bat detection was also deployed (i.e. a bat detector is left in the field; there is no observer present and bats which pass near enough to the monitoring unit are recorded and their calls are stored for later analysis). Passive monitoring was completed using the Anabat Swift bat monitor, which records bat ultrasonic calls on a continuous basis and stores the information onto an internal SD card. Each time a bat is detected, an individual time-stamped (date and time to the second) file is recorded. Data were then downloaded and bat echolocation calls were later analysed by Anabat Insight spectrogram sound analysis software. One bat monitor was positioned on a fence post to the south of the disused house.

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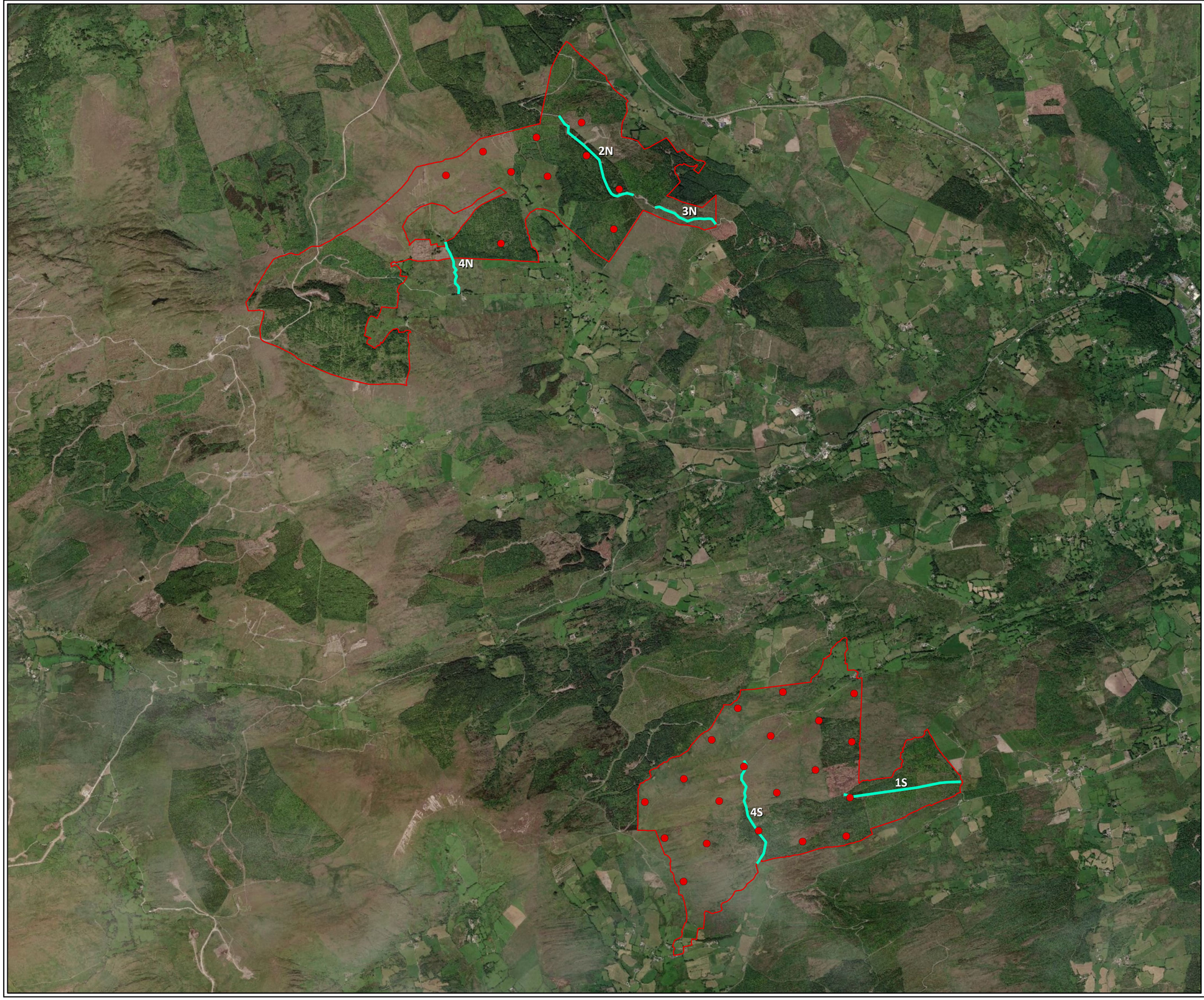

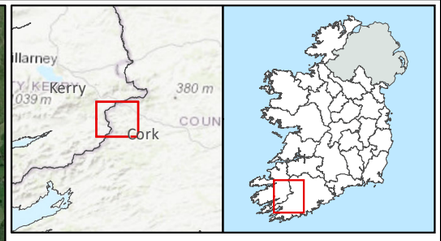

Indicative Turbine Locations

Transect Routes

Site Boundary

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TITLE:	Bat Activity Survey Transect Routes		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
FIGURE NO:	2.1		
CLIENT:	SSE Renewables		
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DATE:	31/03/2020	**PAGE SIZE:**	A3

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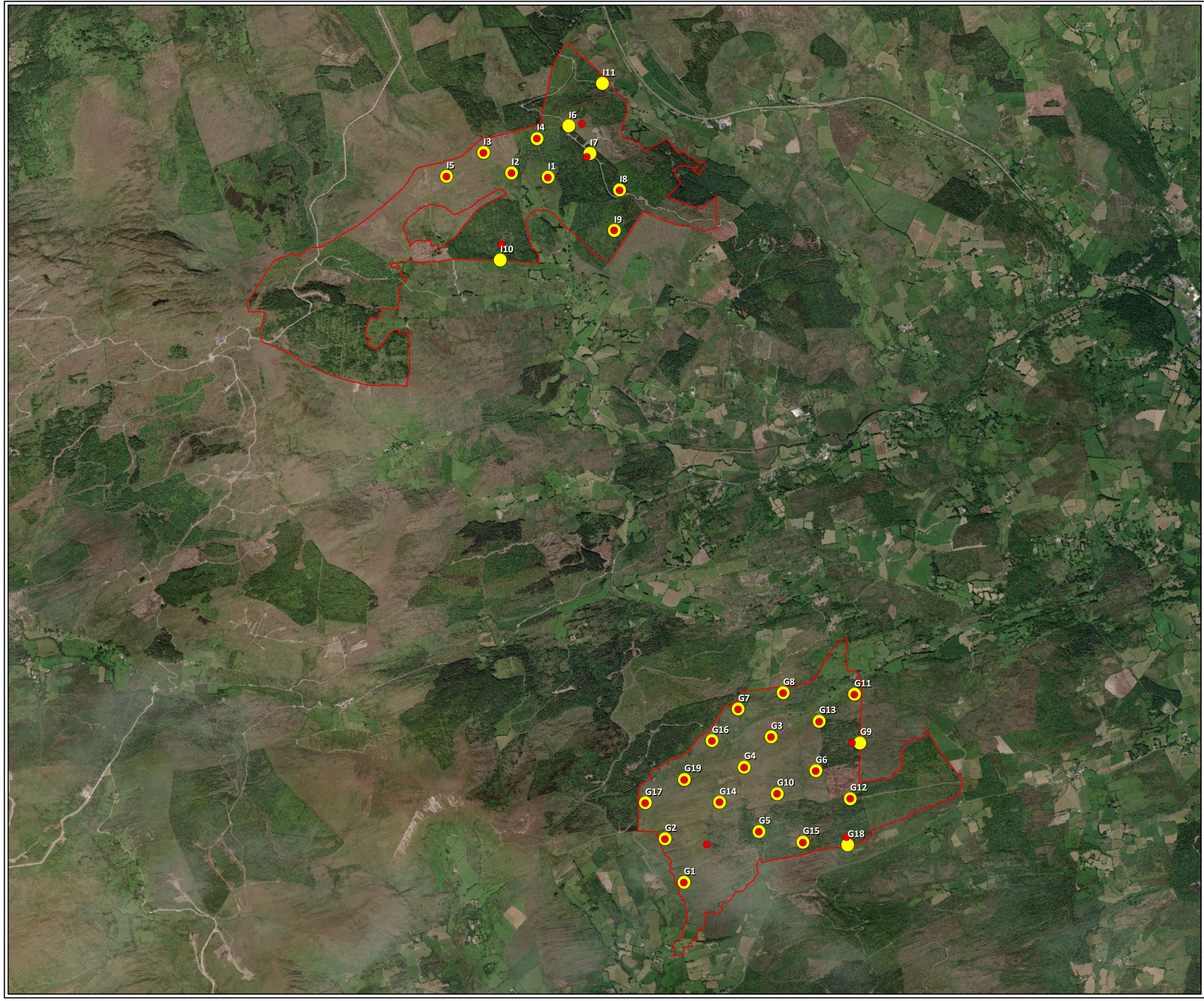

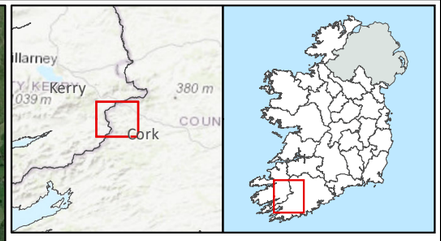

Indicative Turbine Locations

Static Detector Locations

Site Boundary

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TITLE:	Static Detector Locations		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
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3. RESULTS

3.1 Desktop Survey

The review of existing records of bat species in the area of the sites indicates that seven of the ten known Irish species of bat have been recorded within a 4 km radius of the proposed site. These bats include pipistrelle species (*Pipistrellus pipistrellus sensu lato*), soprano pipistrelle (*P. pygmaeus*) and Nathusius' pipistrelle (*Pipistrellus nathusii*), Leisler's bat (*Nyctalus leisleri*), brown long-eared bat (*Plecotus auritus*), Daubenton's bat (*Myotis daubentonii*) and lesser horseshoe bat (*Rhinolophus hipposideros*) as shown in Table 3-1. Two species have been recorded as roosting within a 4 km radius of the proposed sites: brown long-eared bat, which has been recorded roosting in the summer at Gortnascarty, c2.1 km north-east of the proposed site at Gortyrahilly; and lesser horseshoe bat, which has been recorded roosting in Cummeenavrick, c.2.3 km north of the proposed site at Inchamore.

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

Table 3-1: Desktop Results of NBDC and NPWS Bat Records within the 4km radius of the Proposed Sites

Bat Species	Legal Protection	Conservation Status (Marnell *et al*. 2019)	Date of Last Record	Known Roost
Brown long-eared bat (*Plecotus auritus)*	EU Habitats Directive Annex IV, Wildlife Acts	Least Concern	25/07/2013	Yes
Common pipistrelle (*Pipistrellus Pipistrellus sensu lato*)	EU Habitats Directive Annex IV, Wildlife Acts	Least Concern	28/07/2014	No
Daubenton's bat (*Myotis daubentonii*)	EU Habitats Directive Annex IV, Wildlife Acts	Least Concern	13/07/2009	No
Leisler's bat (*Nyctalus leisleri*)	EU Habitats Directive Annex IV, Wildlife Acts	Least Concern	28/07/2014	No
Lesser horseshoe bat (*Rhinolophus hipposideros*)	EU Habitats Directive Annex II and Annex IV, Wildlife Acts	Least Concern	14/07/2003	Yes
Nathusius's pipistrelle (*Pipistrellus nathusii*)	EU Habitats Directive Annex IV, Wildlife Acts	Least Concern	27/07/2010	No
Soprano pipistrelle (*Pipistrellus pygmaeus*)	EU Habitats Directive Annex IV, Wildlife Acts	Least Concern	28/07/2014	No

3.1.1 Bat Landscapes

The bat landscape association model (Lundy *et al,* 2011) suggests that the proposed wind farm sites are part of a landscape that is of low to moderate suitability for bats including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle, brown long-eared, Leisler's, Daubenton's, Natterer's (*Myotis nattereri*), whiskered bat (*M. mystacinus*) and lesser horseshoe bat. The proposed site and its environs are of low suitability for Nathusius' Pipistrelle.

Bat activity surveys undertaken for the permitted Cleanrath Wind Farm (Ref: PL04.246742), located c.6 km to the east of the proposed wind farm at Gortyrahilly recorded five species of bat, namely common pipistrelle, soprano pipistrelle, Leisler's and brown long-eared bat and one potential lesser horseshoe bat (unconfirmed due to poor quality of call recorded). No bat roosts were recorded in the study area for this development[7].

Bat activity surveys undertaken for the permitted Derragh Wind Farm (Planning ref: 125270) recorded common pipistrelle, soprano pipistrelle and Leisler's bat[8] foraging within the study area. Pre-construction survey undertaken for Derragh Wind Farm confirmed that an abandoned dwelling (c.0.7 km to the south of the proposed wind farm at Gortyrahilly at Grid ref: W 15698 70859) supported a minor roost for common pipistrelle.

3.1.2 Designated Sites

The following European sites and nationally designated sites located within a 15 km radius of the proposed wind farms include bats as a Qualifying Interest (QI):

- Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC and pNHA (Site Code: 000365) is located c.3.1 km north-west of the proposed wind farm at Inchamore. Lesser horseshoe bat is a Qualifying Interest (QI) of this SAC. The lesser horseshoe bat roost included as a QI for this SAC that is closest to the proposed wind farm is located c.24.8 km to the north-west[9].
- Kilgarvan Ice House SAC and pNHA (Site Code: 000364) is designated for the presence of three lesser horseshoe bat roosts. This SAC is located c.12.3 km to the south-west of the proposed wind farm at Inchamore at its closest point.
- Old Domestic Building, Curraglass Wood SAC and pNHA (Site Code: 002041), designated for the presence of lesser horseshoe bats, is located c.9.9 km to the north-west of the proposed wind farm at Inchamore.

In 2016, the Bat Conservation Trust (BCT) carried out a review of literature pertaining to mean and maximum bat foraging distances[10]. 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. The weighted average maximum foraging distance for lesser horseshoe bats was 2.02 km. However, as noted in the National Parks and Wildlife Service (NPWS) document *Conservation objectives supporting document – lesser horseshoe bat* (*Rhinolophus hipposideros*)[11], some researchers have found that lesser horseshoe bats normally forage in woodlands/scrub within 2.5 km of their roosts, therefore, as specified for the purpose of current site specific conservation objective (SSCO) targets for this species, a 2.5 km zone is considered an appropriate distance to foraging areas for each roost. The proposed wind farm sites do not overlap with the CSZ of the lesser horseshoe bat populations of any SAC.

[7] MKOS (2015) Environmental Impact Statement: Proposed Wind Farm Development at Cleanrath North and Adjacent Townlands, Co. Cork. McCarthy Keville O'Sullivan.
[8] Fehily Timoney & Co. (2015) Revised Environmental Impact Statement for Derragh Wind Farm Development, Co. Cork.
[9] NPWS (2017) Conservation Objectives: Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC 000365. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.
[10] Collins, J. (ed.) (2016). *Bat Surveys for Professional ecologists: Good Practice Guidelines* (3rd ed.). The Bat Conservation Trust, London
[11] NPWS (2018) Conservation objectives supporting document – lesser horseshoe bat (*Rhinolophus hipposideros*) Version 1. Conservation Objectives Supporting Document Series. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Dublin, Ireland.

3.2 Bat Activity Surveys 2019

The results of the five no. bat activity surveys carried out at the proposed Gortyrahilly and Inchamore wind farms in 2019 are presented below.

3.2.1 Survey Visit 1 (20/05/2019)

Dusk survey conditions were as follows:

- Sunset: 21:30
- Cloud cover: 70%
- Wind: Beaufort F2
- Rain: None
- Temperature at sunset: 12 °C

Table 3-2: Analysis Anabat Walkabout Data – Survey 1 Results 20/05/2019

Species	No. of Recordings	% Total Recordings
Common pipistrelle	29	74.3
Soprano pipistrelle	6	15.4
Leisler's bat	3	7.7
Natterer's bat	1	2.6
Total	**39**	**100**

3.2.2 Survey Visit 2 (27/06/2019)

Dusk survey conditions were as follows:

- Sunset: 21:57
- Cloud cover: 15%
- Wind: Beaufort F5
- Rain: None
- Temperature at sunset: 19 °C

Table 3-3: Analysis Anabat Walkabout Data – Survey 2 Results 27/06/2019

Species	No. of Recordings	% Total Recordings
Common pipistrelle	13	92.9
Soprano pipistrelle	1	7.1
Leisler's bat	0	0
Natterer's bat	0	0
Total	**14**	**100**

3.2.3 Survey Visit 3 (26/07/2019)

Dusk survey conditions were as follows:

- Sunset: 21:33
- Cloud cover: 40%
- Wind: Beaufort F3
- Rain: None
- Temperature at sunset: 15 °C

Table 3-4: Analysis Anabat Walkabout Data – Survey 3 Results 26/07/2019

Species	No. of Recordings	% Total Recordings
Common pipistrelle	17	50
Soprano pipistrelle	9	26.5
Leisler's bat	8	23.5
Natterer's bat	0	0
Total	**34**	**100**

3.2.4 Survey Visit 4 (15/08/2019)

Dusk survey conditions were as follows:

- Sunset: 21:01
- Cloud cover: 80%
- Wind: Beaufort F4
- Rain: Light shower
- Temperature at sunset: 15 °C

Table 3-5: Analysis Anabat Walkabout Data – Survey 4 Results 15/08/2019

Species	No. of Recordings	% Total Recordings
Common pipistrelle	10	100
Soprano pipistrelle	0	0
Leisler's bat	0	0
Natterer's bat	0	0
Total	**10**	**100**

3.2.5 Survey Visit 5 (22/09/2019)

Dusk survey conditions were as follows:

- Sunset: 19:36
- Cloud cover: 70%
- Wind: Beaufort F3
- Rain: None
- Temperature at sunset: 13 °C

Table 3-6: Analysis Anabat Walkabout Data – Survey 5 Results 22/09/2019

Species	No. of Recordings	% Total Recordings
Common pipistrelle	29	87.9
Soprano pipistrelle	2	6.1
Leisler's bat	1	3
Natterer's bat	1	3
Total	**33**	**100**

Bat activity during the 2019 surveys is presented in Figure 3-1 to 3-5 for the months of May to September.

Figure 3-1: Bat Activity May 2019

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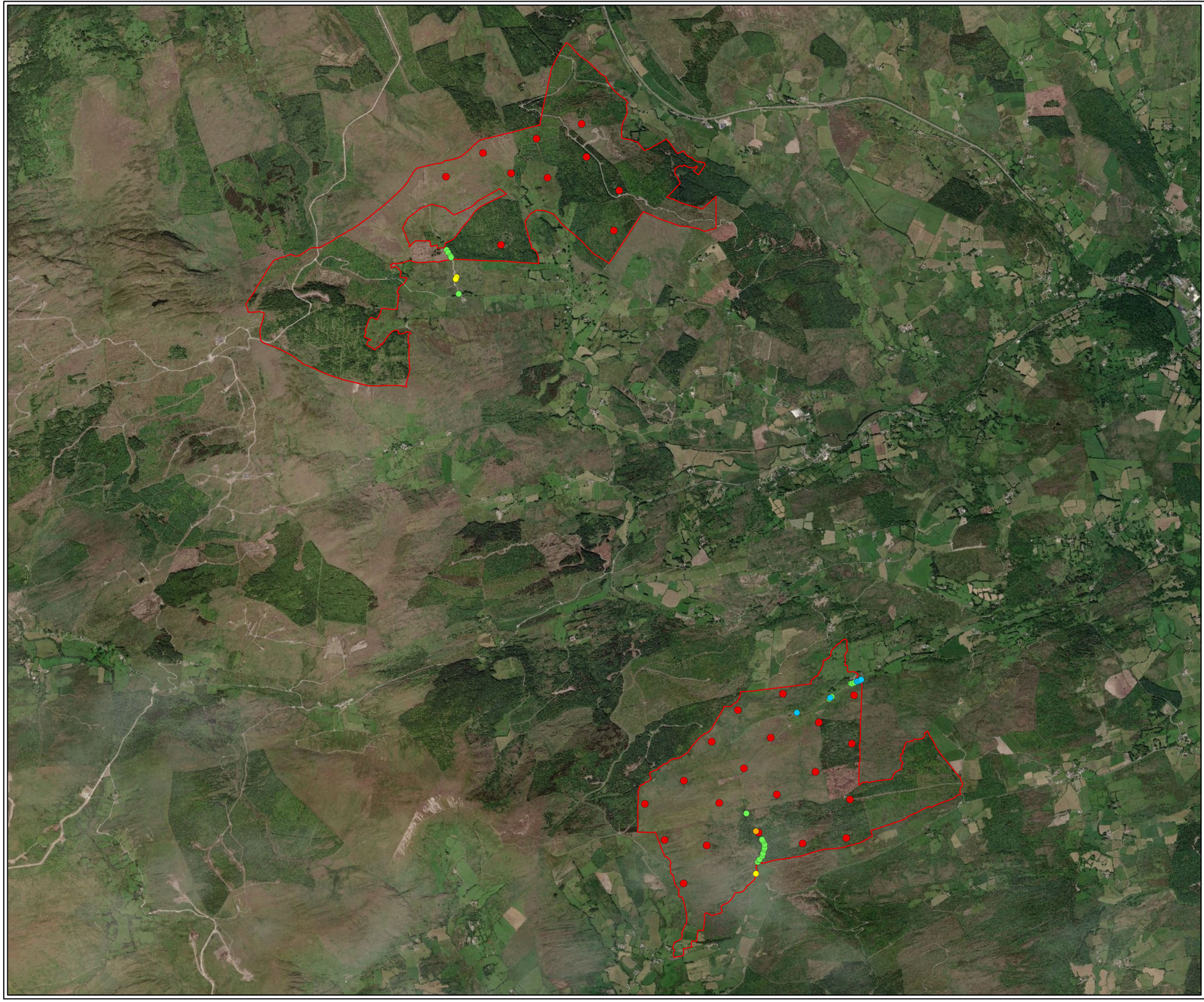

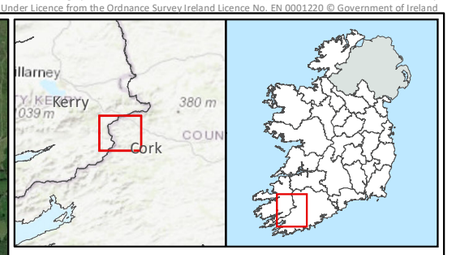

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PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
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Figure 3-2: Bat Activity June 2019

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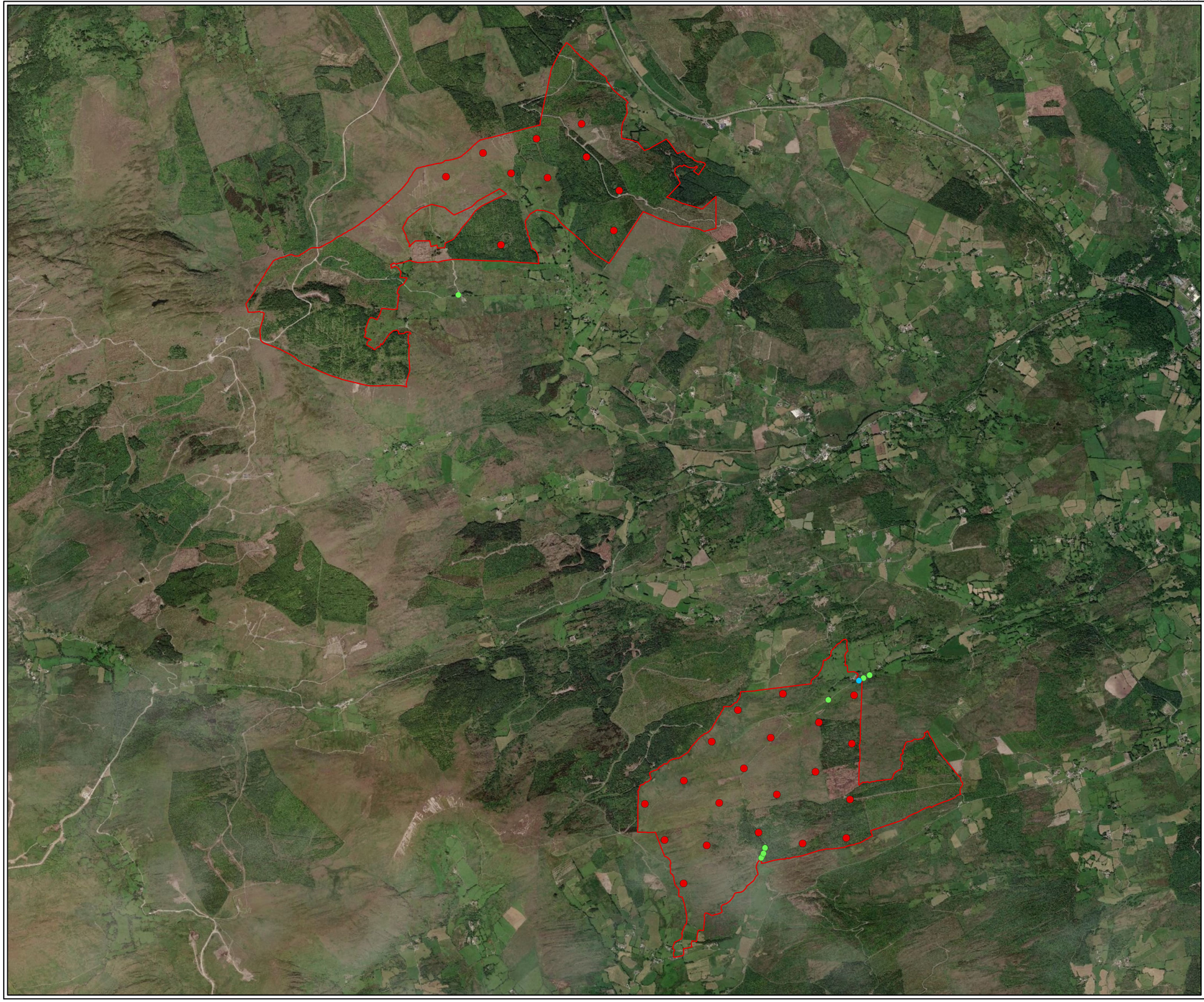

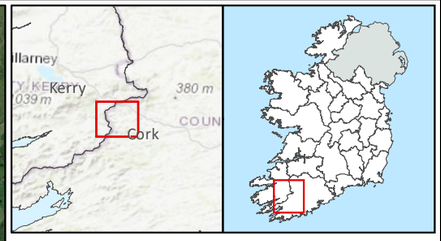

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TITLE:	Bat Activity: June 2019		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
FIGURE NO:	3.2		
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Figure 3-3: Bat Activity July 2019

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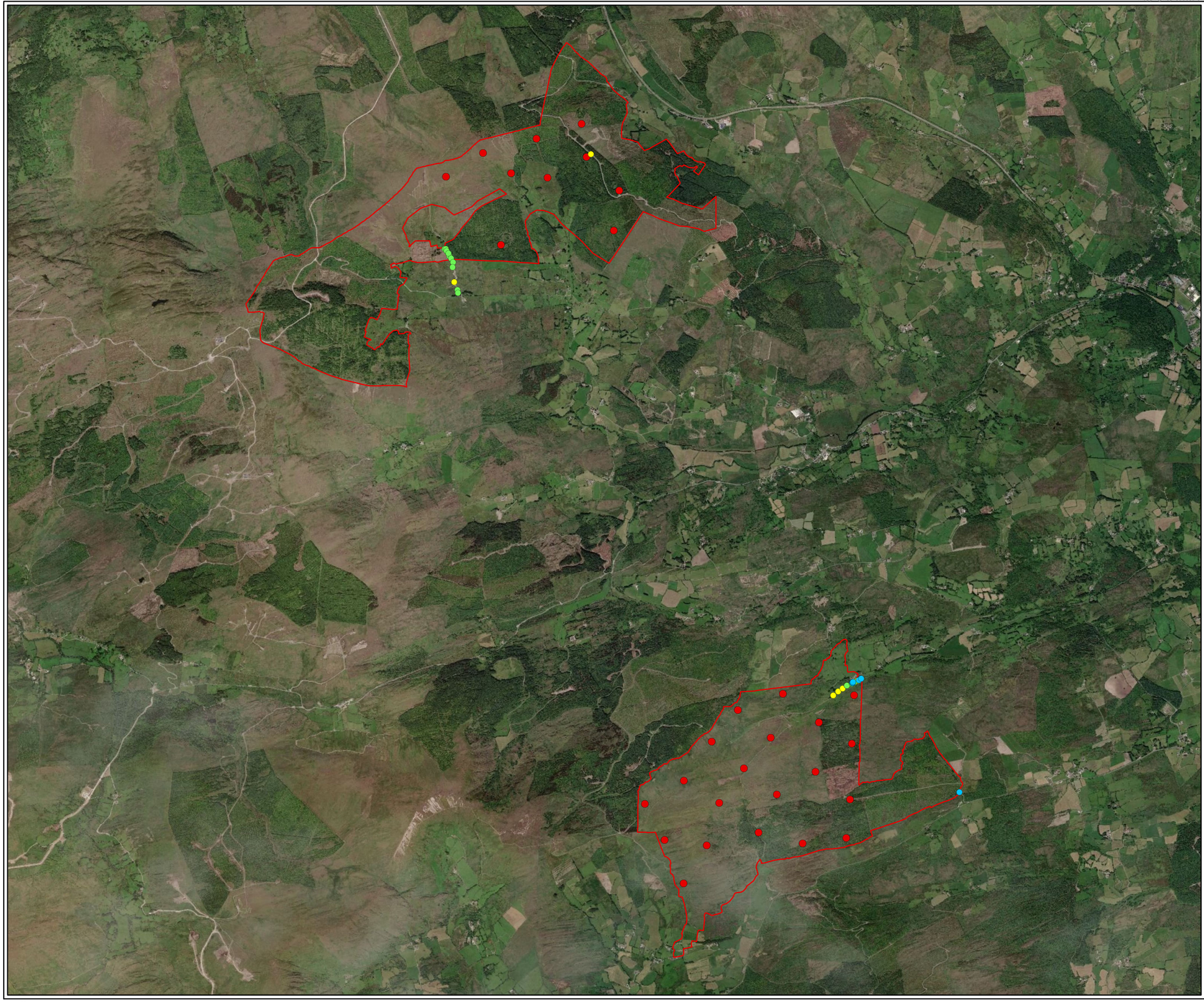

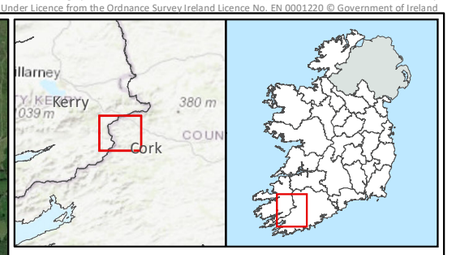

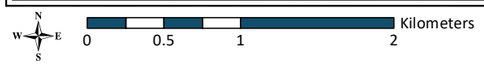

TITLE:	Bat Activity: July 2019		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
FIGURE NO:	3.3		
CLIENT:	SSE Renewables		
SCALE:	1:40000	**REVISION:**	0
DATE:	31/03/2020	**PAGE SIZE:**	A3

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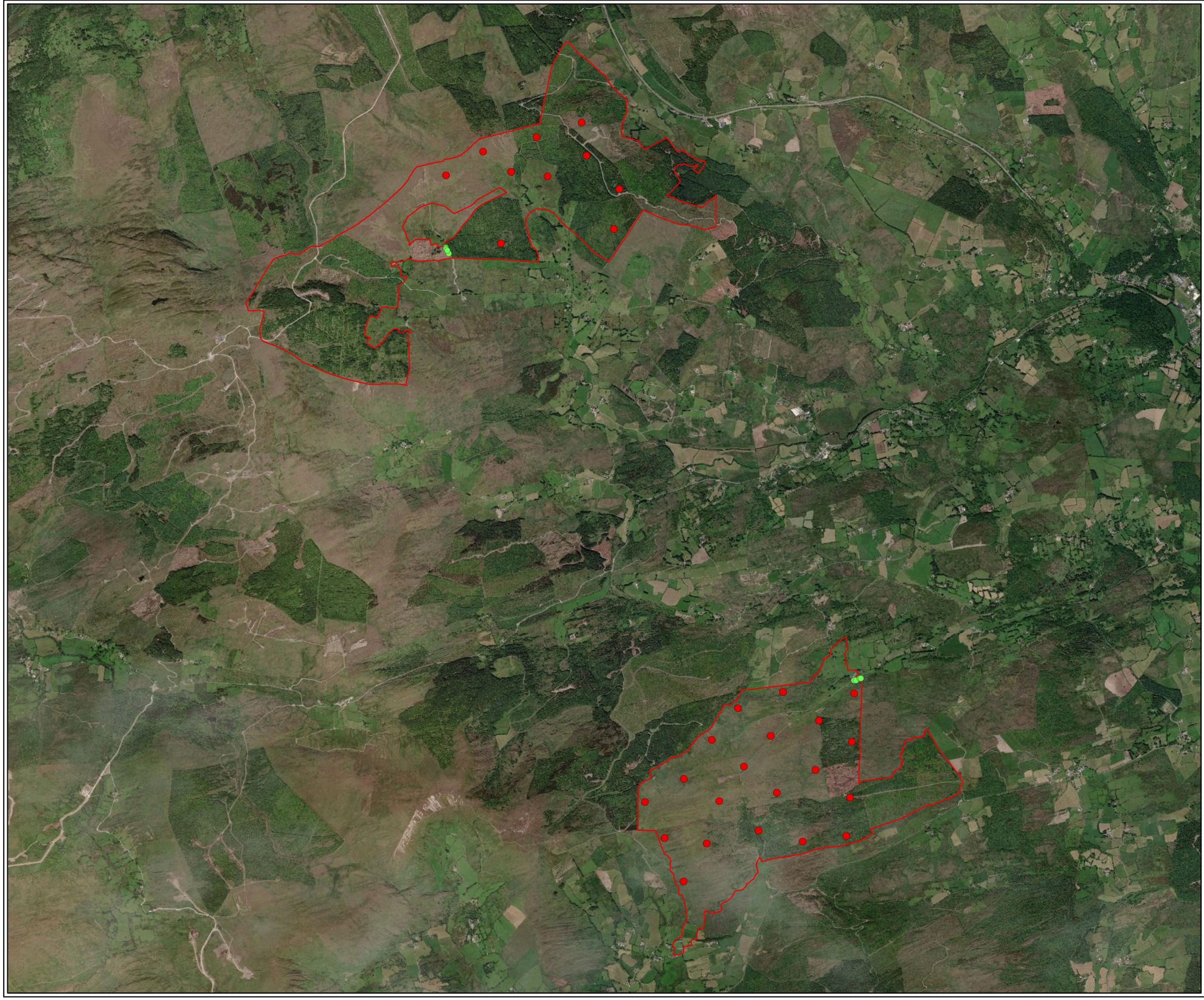
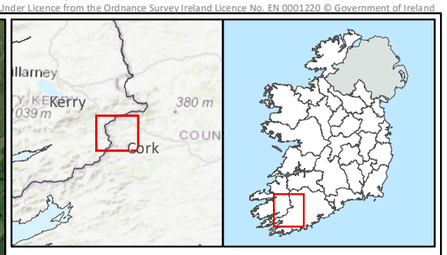
Figure 3-4: Bat Activity August 2019

Path: R:\Map Production\2019\P2014\Workspace\Bat Survey 2019 Report\P2014_GIS_Fig3_BatActivity2019_A3.mxd

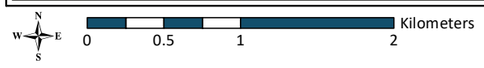




Site Boundary

Indicative Turbine Locations

Common pipistrelle



TITLE:	Bat Activity: August 2019		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
FIGURE NO:	3.4		
CLIENT:	SSE Renewables		
SCALE:	1:40000	**REVISION:**	0
DATE:	31/03/2020	**PAGE SIZE:**	A3

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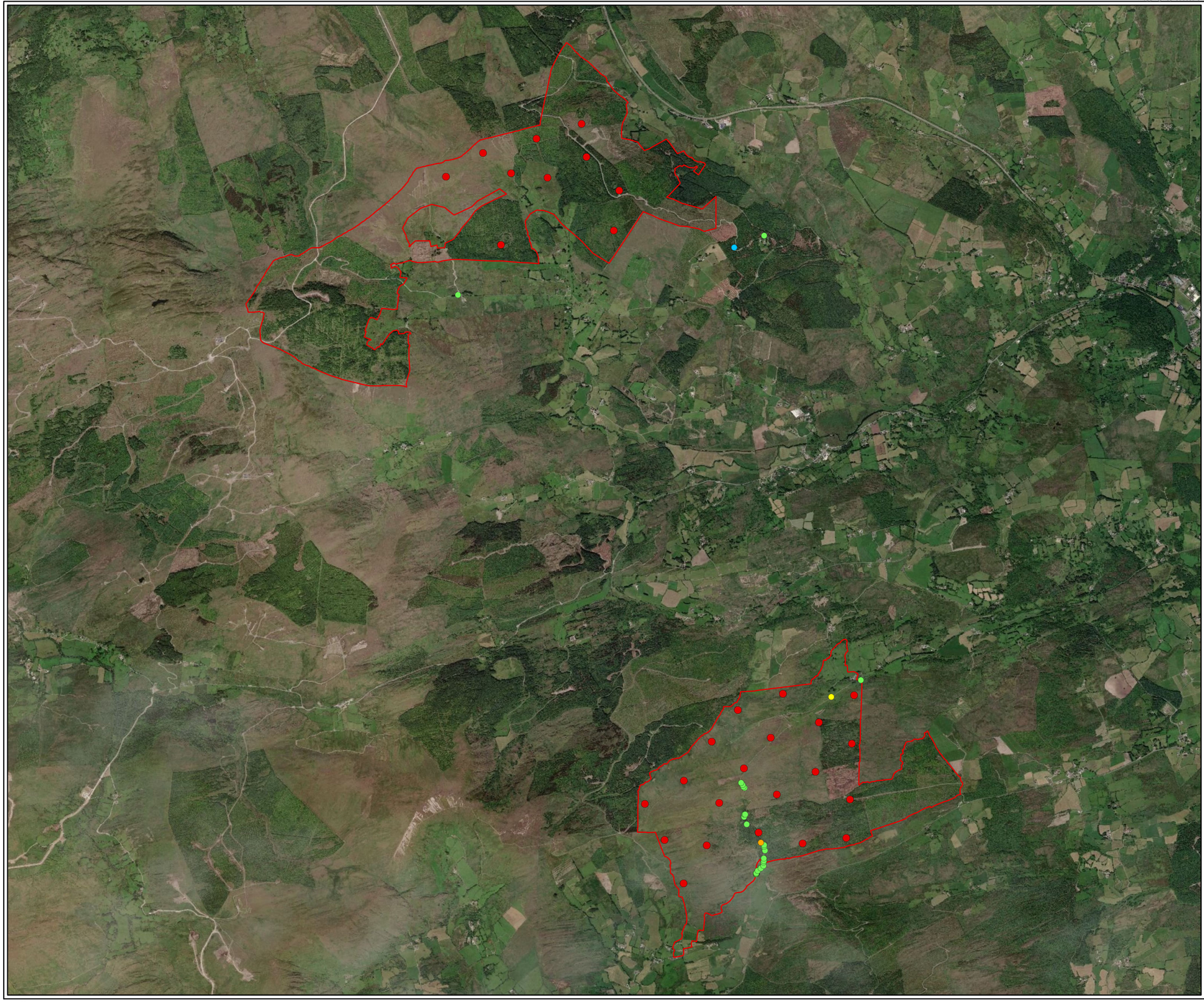
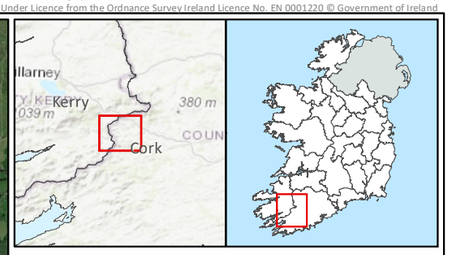
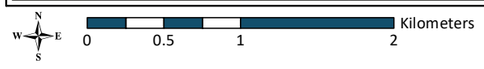
Figure 3-5: Bat Activity September 2019

Path: R:\Map Production\2019\P2014\Workspace\Bat Survey 2019 Report\P2014_GIS_Fig3_BatActivity2019_A3.mxd







TITLE:	Bat Activity: September 2019		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
FIGURE NO:	3.5		
CLIENT:	SSE Renewables		
SCALE:	1:40000	**REVISION:**	0
DATE:	31/03/2020	**PAGE SIZE:**	A3

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3.3 Bat Static Detector Surveys 2019

The results of the static detector surveys deployed over three rounds (spring, summer and autumn) in 2019 are shown below.

Nine species of bats were recorded on both SM4 Songmeters.

Nine species were recorded at Gortyrahilly with a total of 28,953 recordings over the 33 nights of surveys[12]. The most commonly recorded species was common pipistrelle, followed by soprano pipistrelle, and Nathusius' pipistrelle.

Nine species were recorded at Inchamore, with a total of 22,877 recordings over the 46 nights of surveys. The most commonly recorded species was common pipistrelle, followed by soprano pipistrelle, and Nathusius' pipistrelle.

Much lower levels of activity of lesser horseshoe bat, brown long-eared bat, Natterer's bat, and Whiskered Bat were detected on both songmeters. Brown long-eared bat is present on-site, but this species is very quiet and sometimes hunts without echolocating, so it may be under-recorded by the static detectors.

Table 3-7: Results from 2019 Static Detector Recordings

Common Name	Species	No. of recordings (Gortyrahilly)	No. of recordings (Inchamore)
Brown long-eared bat	*Plecotus auritus*	269	419
Common pipistrelle	*Pipistrellus pipistrellus*	20,331	16,180
Daubenton's bat	*Myotis daubentonii*	737	563
Leisler's bat	*Nyctalus leisleri*	1,661	872
Lesser horseshoe bat	*Rhinolophus hipposideros*	51	39
Nathusius' pipistrelle	*Pipistrellus nathusii*	2,176	1,001
Natterer's bat	*Myotis nattereri*	174	203
Soprano pipistrelle	*Pipistrellus pygmaeus*	3,364	3,219
Whiskered bat	*Myotis mystacinus*	190	381
Total		28,953	22,877

Brown Long-Eared Bat

The total number of recordings for brown long-eared bat at Gortyrahilly was 269 no. recordings; 0.93% of total recordings. These were recorded over 33 no. nights which gives an average of 8.15 no. recordings per night.

[12] Calculated as the mean number of nights deployed per turbine per total survey season. i.e. the total number of nights each detector was deployed for spring, summer and autumn was summed. Then this figure was divided by the maximum number of detectors (or turbine locations) in total across the whole survey season. E.g. for the entire season (spring, summer and autumn), detectors were left out for a total of 629 nights at Gortyrahilly. The maximum number of detector locations was 19 (although 19 detectors were not always deployed simultaneously). The mean number of nights deployed per detector at Gortyrahilly was calculated as 629 / 19 = 33 nights. For Inchamore it was 514 nights / 11 = 46 nights.

The total number of recordings for brown long-eared bat at Inchamore was 419 no. recordings; 1.84% of total recordings. These were recorded over 46 no. nights which gives an average of 9.11 no. recordings per night.

Common Pipistrelle

The total number of recordings for common pipistrelle at Gortyrahilly was 20,331 no. recordings; 70.29% of total recordings. These were recorded over 33 no. nights which gives an average of 616.09 no. recordings per night.

The total number of recordings for common pipistrelle at Inchamore was 16,180 no. recordings; 71.23% of total recordings. These were recorded over 46 no. nights which gives an average of 351.74 no. recordings per night.

Daubenton's Bat

The total number of recordings for Daubenton's bat at Gortyrahilly was 737 no. recordings; 2.55% of total recordings. These were recorded over 33 no. nights which gives an average of 22.33 no. recordings per night.

The total number of recordings for Daubenton's bat at Inchamore was 563 no. recordings; 2.48% of total recordings. These were recorded over 46 no. nights which gives an average of 12.24 no. recordings per night. Moderate levels of Daubenton's bat were recorded on both Songmeters.

Leisler's Bat

The total number of recordings for Leisler's bat at Gortyrahilly was 1,661 no. recordings; 5.74% of total recordings. These were recorded over 33 no. nights which gives an average of 50.33 no. recordings per night.

The total number of recordings for Leisler's bat at Inchamore was 872 no. recordings; 3.84% of total recordings. These were recorded over 46 no. nights which gives an average of 18.96 no. recordings per night.

Lesser Horseshoe Bat

The total number of recordings for lesser horseshoe bat at Gortyrahilly was 51 no. recordings; 0.18% of total recordings. These were recorded over 33 no. nights which gives an average of 1.55 no. recordings per night.

The total number of recordings for lesser horseshoe bat at Inchamore was 39 no. recordings; 0.17% of total recordings. These were recorded over 46 no. nights which gives an average of 0.85 no. recordings per night.

Nathusius' Bat

The total number of recordings for Nathusius' bat at Gortyrahilly was 2,176 no. recordings; 7.52% of total recordings. These were recorded over 33 no. nights which gives an average of 65.94 no. recordings per night.

The total number of recordings for Nathusius' Bat at Inchamore was 1,001 no. recordings; 4.41% of total recordings. These were recorded over 46 no. nights which gives an average of 21.76 no. recordings per night.

Nathusius's bat has been previously recorded within the 10 km Biodiversity Ireland grid square (W17) that contains the proposed Gortyrahilly and Inchamore wind farm sites (record from 2010).

Natterer's Bat

The total number of recordings for Natterer's bat at Gortyrahilly was 174 no. recordings; 0.60% of total recordings. These were recorded over 33 no. nights which gives an average of 5.27 no. recordings per night.

The total number of recordings for Natterer's bat at Inchamore was 203 no. recordings; 0.89% of total recordings. These were recorded over 46 no. nights which gives an average of 4.41 no. recordings per night.

Soprano Pipistrelle

The total number of recordings of soprano pipistrelle recorded at Gortyrahilly was 3,364 no. recordings; 11.63% of total recordings. These were recorded over 33 no. nights. This gives an average of 101.94 no. recordings per night. This is a very low level of recordings. On a good site for soprano pipistrelles over 1,000 no. recordings per night would be typical (Caroline Shiel, Bat Conservation Ireland pers comm, 2019).

The total number of recordings for soprano pipistrelle at Inchamore was 3,219 no. recordings; 14.17% of total recordings. These were recorded over 46 no. nights which gives an average of 69.98 no. recordings per night, which again is extremely low.

Whiskered Bat

The total number of recordings for whiskered bat at Gortyrahilly was 190 no. recordings; 0.66% of total recordings. These were recorded over 33 no. nights which gives an average of 5.76 no. recordings per night.

The total number of recordings for whiskered bat at Inchamore was 381 no. recordings; 1.68% of total recordings. These were recorded over 46 no. nights which gives an average of 8.28 no. recordings per night.

3.4 Ecobat

The static data, as per tables listed in Appendices, was uploaded and analysed using the Ecobat tool. This analysis was undertaken for each survey period separately. Where groups of detectors were deployed for different dates within a survey period, those that were deployed for the same dates were analysed together (details are provided for each survey period below). The reference range datasets were stratified to include:

- Only records from within 30 days of the survey date.
- Only records from within 100 km^2 of the survey location.
- Records using any make of bat detector.

The Ecobat tool provides are series of summary tables to enable analysis of the bat activity level at each static location. These are presented below, and categorisation of activity level is based on the following table:

Table 3-8: Percentile Score and Categorised Level of Bat Activity

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

Raw data upon which the Ecobat analyses were based is presented in Appendix C.

3.4.1 Survey Period 1

3.4.1.1 Gortyrahilly

A summary table showing the number of nights recorded bat activity fell into each activity band for each species is presented below. Recordings were split into five groups depending on the dates deployed: group 1 (turbines 1, 2 and 4), group 2 (turbines 3 and 5), group 3 (turbines 6, 7, 8, 9, 10 and 14), group 4 (turbine 11) and group 5 (turbines 12 and 13). Each group was analysed in Ecobat separately but is presented collectively in this report.

The maximum number of recordings for a single night across all detectors combined was 1,470 recordings on 23/05/2019 where eight species were recorded.

Six of the fourteen static locations had at least one night of High Activity during the survey period. No bats were recorded at T8 during this survey.

The following Turbine locations are deemed to have a High Bat Activity (for specific bat species) level based on the Percentile Median value: T5 (Leisler's bat), T6 (common pipistrelle), T7 (Daubenton's bat and common pipistrelle), T8 (Nathusius' bat and common pipistrelle), T12 (common pipistrelle) and T13 (Leisler's bat, Nathusius' bat and common pipistrelle).

Table 3-9: Summary of Ecobat Analysis Tool for Static Detectors Deployed at Gortyrahilly during Survey Period 1. G = Gortyrahilly and number = Turbine Location, so G1 = Turbine 1 at Gortyrahilly

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	Median Percentile	Bat Activity
G1	*Myotis daubentonii*	0	1	0	0	11	0	Low
G1	*Myotis mystacinus*	0	0	0	0	12	0	Low
G1	*Myotis nattereri*	0	0	0	0	12	0	Low
G1	*Nyctalus leisleri*	3	4	0	0	5	70	Moderate to High
G1	*Pipistrellus nathusii*	0	1	0	0	11	0	Low
G1	*Pipistrellus pipistrellus*	3	3	0	0	6	35	Low to Moderate
G1	*Pipistrellus pygmaeus*	0	1	0	0	11	0	Low
G1	*Plecotus auritus*	0	1	0	0	11	0	Low
G1	*Rhinolophus hipposideros*	0	0	0	0	12	0	Low
G2	*Myotis daubentonii*	0	1	0	0	11	0	Low
G2	*Myotis mystacinus*	0	2	0	0	10	0	Low
G2	*Myotis nattereri*	0	1	0	0	11	0	Low
G2	*Nyctalus leisleri*	6	3	0	0	3	78	Moderate to High
G2	*Pipistrellus nathusii*	0	1	0	0	11	0	Low
G2	*Pipistrellus pipistrellus*	2	5	0	0	5	70	Moderate to High
G2	*Pipistrellus pygmaeus*	1	3	0	0	8	0	Low
G2	*Plecotus auritus*	0	2	0	0	10	0	Low
G2	*Rhinolophus hipposideros*	0	0	0	0	12	0	Low
G3	*Myotis daubentonii*	0	1	0	0	12	0	Low
G3	*Myotis mystacinus*	0	1	0	0	12	0	Low
G3	*Myotis nattereri*	0	0	0	0	13	0	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	Median Percentile	Bat Activity
G3	*Nyctalus leisleri*	6	6	0	0	1	79	Moderate to High
G3	*Pipistrellus nathusii*	2	1	0	0	10	0	Low
G3	*Pipistrellus pipistrellus*	5	3	0	0	5	79	Moderate to High
G3	*Pipistrellus pygmaeus*	3	1	0	0	9	0	Low
G3	*Plecotus auritus*	0	0	0	0	13	0	Low
G3	*Rhinolophus hipposideros*	0	0	0	0	13	0	Low
G4	*Myotis daubentonii*	0	1	0	0	12	0	Low
G4	*Myotis mystacinus*	0	0	0	0	13	0	Low
G4	*Myotis nattereri*	0	0	0	0	13	0	Low
G4	*Nyctalus leisleri*	4	0	0	0	9	0	Low
G4	*Pipistrellus nathusii*	0	1	0	0	12	0	Low
G4	*Pipistrellus pipistrellus*	1	4	0	0	8	0	Low
G4	*Pipistrellus pygmaeus*	1	2	0	0	10	0	Low
G4	*Plecotus auritus*	0	0	0	0	13	0	Low
G4	*Rhinolophus hipposideros*	0	0	0	0	13	0	Low
G5	*Myotis daubentonii*	0	0	0	0	13	0	Low
G5	*Myotis mystacinus*	0	0	0	0	13	0	Low
G5	*Myotis nattereri*	0	0	0	0	13	0	Low
G5	*Nyctalus leisleri*	9	2	0	0	2	90	High
G5	*Pipistrellus nathusii*	0	0	0	0	13	0	Low
G5	*Pipistrellus pipistrellus*	6	3	0	0	4	79	Moderate to High
G5	*Pipistrellus pygmaeus*	0	2	0	0	11	0	Low
G5	*Plecotus auritus*	0	0	0	0	13	0	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	Median Percentile	Bat Activity
G5	*Rhinolophus hipposideros*	0	0	0	0	13	0	Low
G6	*Myotis daubentonii*	0	1	0	0	14	0	Low
G6	*Myotis mystacinus*	0	0	0	0	15	0	Low
G6	*Myotis nattereri*	0	0	0	0	15	0	Low
G6	*Nyctalus leisleri*	2	5	0	0	8	0	Low
G6	*Pipistrellus nathusii*	3	4	0	0	8	0	Low
G6	*Pipistrellus pipistrellus*	8	5	0	0	2	89	High
G6	*Pipistrellus pygmaeus*	1	3	0	0	11	0	Low
G6	*Plecotus auritus*	0	0	0	0	15	0	Low
G6	*Rhinolophus hipposideros*	0	4	0	0	11	0	Low
G7	*Myotis daubentonii*	8	2	0	0	5	85	High
G7	*Myotis mystacinus*	0	1	0	0	14	0	Low
G7	*Myotis nattereri*	0	1	0	0	14	0	Low
G7	*Nyctalus leisleri*	7	2	0	0	6	77	Moderate to High
G7	*Pipistrellus nathusii*	4	5	0	0	6	68	Moderate to High
G7	*Pipistrellus pipistrellus*	11	1	0	0	3	89	High
G7	*Pipistrellus pygmaeus*	5	4	0	0	6	68	Moderate to High
G7	*Plecotus auritus*	0	3	0	0	12	0	Low
G7	*Rhinolophus hipposideros*	0	0	0	0	15	0	Low
G8	*Myotis daubentonii*	0	1	0	0	14	0	Low
G8	*Myotis mystacinus*	0	0	0	0	15	0	Low
G8	*Myotis nattereri*	0	0	0	0	15	0	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	Median Percentile	Bat Activity
G8	*Nyctalus leisleri*	6	3	0	0	6	68	Moderate to High
G8	*Pipistrellus nathusii*	9	1	0	0	5	89	High
G8	*Pipistrellus pipistrellus*	11	0	0	0	4	94	High
G8	*Pipistrellus pygmaeus*	6	3	0	0	6	77	Moderate to High
G8	*Plecotus auritus*	0	3	0	0	12	0	Low
G8	*Rhinolophus hipposideros*	0	0	0	0	15	0	Low
G9	*Myotis daubentonii*	0	1	0	0	14	0	Low
G9	*Myotis mystacinus*	0	0	0	0	15	0	Low
G9	*Myotis nattereri*	0	0	0	0	15	0	Low
G9	*Nyctalus leisleri*	4	4	0	0	7	68	Moderate to High
G9	*Pipistrellus nathusii*	0	3	0	0	12	0	Low
G9	*Pipistrellus pipistrellus*	5	5	0	0	5	68	Moderate to High
G9	*Pipistrellus pygmaeus*	0	1	0	0	14	0	Low
G9	*Plecotus auritus*	0	0	0	0	15	0	Low
G9	*Rhinolophus hipposideros*	0	0	0	0	15	0	Low
G10	*Myotis daubentonii*	0	1	0	0	14	0	Low
G10	*Myotis mystacinus*	0	0	0	0	15	0	Low
G10	*Myotis nattereri*	0	0	0	0	15	0	Low
G10	*Nyctalus leisleri*	5	3	0	0	7	68	Moderate to High
G10	*Pipistrellus nathusii*	0	3	0	0	12	0	Low
G10	*Pipistrellus pipistrellus*	5	5	0	0	5	68	Moderate to High
G10	*Pipistrellus pygmaeus*	0	1	0	0	14	0	Low
G10	*Plecotus auritus*	0	0	0	0	15	0	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	Median Percentile	Bat Activity
G10	*Rhinolophus hipposideros*	0	0	0	0	15	0	Low
G11	*Myotis daubentonii*	1	0	0	0	12	0	Low
G11	*Myotis mystacinus*	0	0	0	0	13	0	Low
G11	*Myotis nattereri*	0	0	0	0	13	0	Low
G11	*Nyctalus leisleri*	1	0	0	0	12	0	Low
G11	*Pipistrellus nathusii*	1	0	0	0	12	0	Low
G11	*Pipistrellus pipistrellus*	1	1	0	0	11	0	Low
G11	*Pipistrellus pygmaeus*	0	1	0	0	12	0	Low
G11	*Plecotus auritus*	0	3	0	0	10	0	Low
G11	*Rhinolophus hipposideros*	0	0	0	0	13	0	Low
G12	*Myotis daubentonii*	0	4	0	0	12	0	Low
G12	*Myotis mystacinus*	0	2	0	0	14	0	Low
G12	*Myotis nattereri*	0	1	0	0	15	0	Low
G12	*Nyctalus leisleri*	6	6	0	0	4	77	Moderate to High
G12	*Pipistrellus nathusii*	4	4	0	0	8	34	Low to Moderate
G12	*Pipistrellus pipistrellus*	15	0	0	0	1	97	High
G12	*Pipistrellus pygmaeus*	6	5	0	0	5	68	Moderate to High
G12	*Plecotus auritus*	4	5	0	0	7	68	Moderate to High
G12	*Rhinolophus hipposideros*	0	4	0	0	12	0	Low
G13	*Myotis daubentonii*	1	3	0	0	12	0	Low
G13	*Myotis mystacinus*	1	2	0	0	13	0	Low
G13	*Myotis nattereri*	0	0	0	0	16	0	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	Median Percentile	Bat Activity
G13	*Nyctalus leisleri*	10	2	0	0	4	84	High
G13	*Pipistrellus nathusii*	11	3	0	0	2	90	High
G13	*Pipistrellus pipistrellus*	13	0	0	0	3	97	High
G13	*Pipistrellus pygmaeus*	7	3	0	0	6	77	Moderate to High
G13	*Plecotus auritus*	0	1	0	0	15	0	Low
G13	*Rhinolophus hipposideros*	1	3	0	0	12	0	Low
G14	*Myotis daubentonii*	0	0	0	0	15	0	Low
G14	*Myotis mystacinus*	0	0	0	0	15	0	Low
G14	*Myotis nattereri*	0	0	0	0	15	0	Low
G14	*Nyctalus leisleri*	4	0	0	0	11	0	Low
G14	*Pipistrellus nathusii*	1	2	0	0	12	0	Low
G14	*Pipistrellus pipistrellus*	4	0	0	0	11	0	Low
G14	*Pipistrellus pygmaeus*	0	0	0	0	15	0	Low
G14	*Plecotus auritus*	0	1	0	0	14	0	Low
G14	*Rhinolophus hipposideros*	0	0	0	0	15	0	Low

Differences in activity between static detector locations split by species and location is presented in Figure 3-6 below. The centre line indicates the median activity level whereas the box represents the interquartile range (therefore the spread of the middle 50% of nights of activity). The plot for common pipistrelle shows that the activity level for both T12 and T13 was consistently high.

The centre line indicates the median activity level whereas the box represents the interquartile range (the spread of the middle 50% of nights of activity). The dots indicate outlier values. Note: *Myotis daubentonii* = Daubenton's bat, *Myotis mystacinus* = whiskered bat, *Myotis nattereri* = Natterer's bat, *Nyctalus leisleri* = Leisler's bat, *Pipistrellus nathusii* = Nathusius' bat, *Pipistrellus pipistrellus* = common pipistrelle, *Pipistrellus pygmaeus* = soprano pipistrelle, *Plecotus auritus* = brown long-eared bat and *Rhinolophus hipposideros* = lesser horseshoe bat. G = gortyrahilly and number = turbine location, so G1 = turbine 1 at Gortyrahilly.

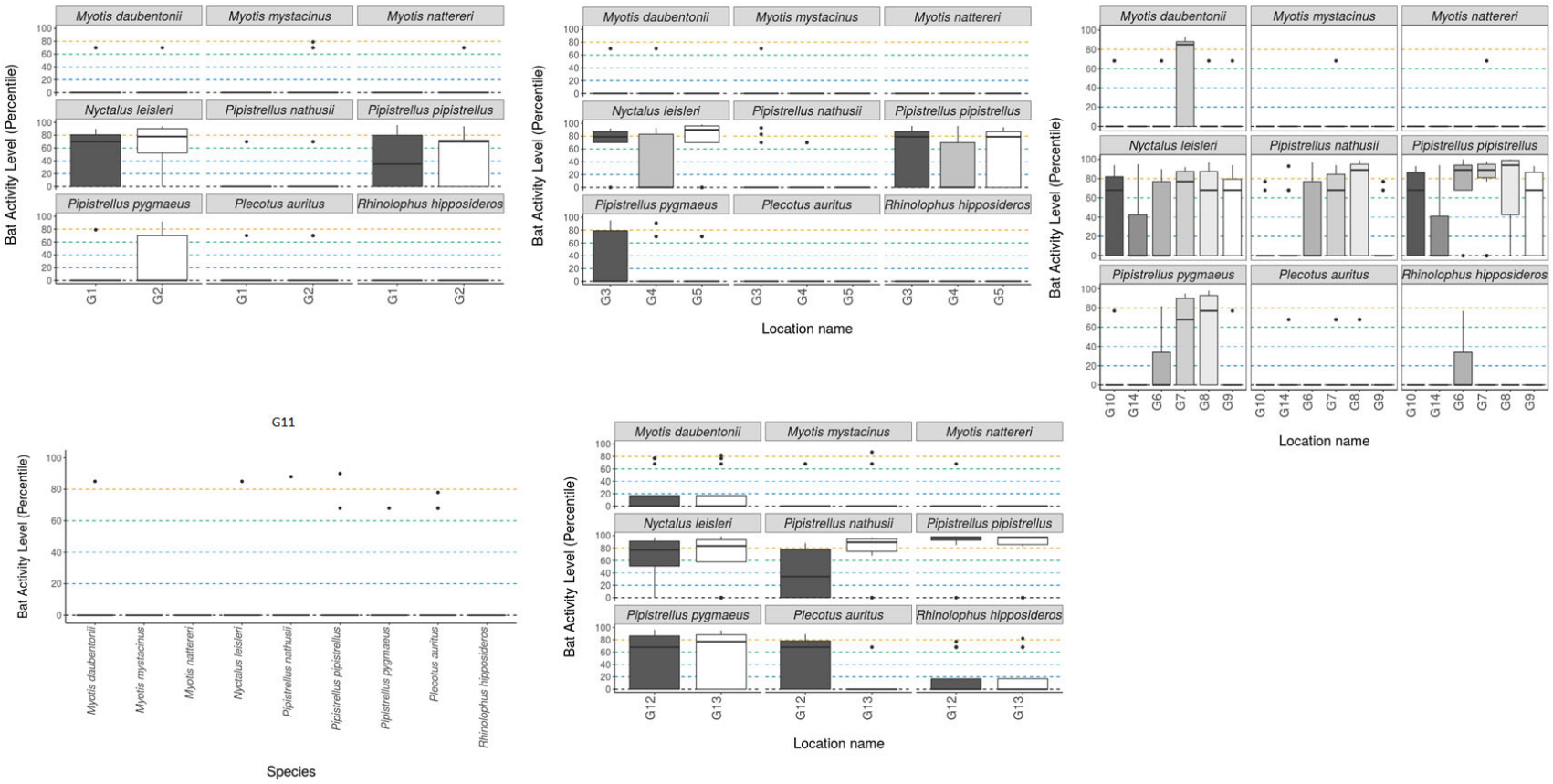


Figure 3-6: Differences in Activity between Static Detector Locations, split by Species and Locations during Survey Period 1 at Gortyrahilly

3.4.1.2 Inchamore

A summary table showing the number of nights recorded bat activity fell into each activity band for each species is presented below. Recordings were split into three groups depending on the dates deployed: group 1 (turbines 1, 2, 3, 4 and 5), group 2 (turbines 7, 8, 9 and 10) and group 3 (turbine 6). Each group was analysed in Ecobat separately but is presented collectively in this report.

The maximum of recordings for a single night across all detectors combined on 21/05/2019 was 606 recordings where eight species were recorded.

Five of the ten static locations had at least one night of High Activity during the survey period.

The following Turbine locations are deemed to have a High Bat Activity (for specific bat species) level based on the Percentile Median value: T2 (Leisler's bat), T4 (Leisler's bat), T8 (common pipistrelle), T9 (Nathusius' bat, common pipistrelle and soprano pipistrelle) and T10 (common pipistrelle and soprano pipistrelle).

Table 3-10: Summary of Ecobat Analysis Tool for Static Detectors deployed at Incahmore during Survey Period 1. I = Inchamore and number = Turbine Location so I1 = Turbine 1 at Inchamore

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	Median Percentile	Bat Activity
I1	*Myotis daubentonii*	2	4	0	0	6	33	Low to Moderate
I1	*Myotis mystacinus*	0	0	0	0	12	0	Low
I1	*Myotis nattereri*	0	1	0	0	11	0	Low
I1	*Nyctalus leisleri*	4	4	0	0	4	72	Moderate to High
I1	*Pipistrellus nathusii*	0	2	0	0	10	0	Low
I1	*Pipistrellus pipistrellus*	4	2	0	0	6	33	Low to Moderate
I1	*Pipistrellus pygmaeus*	3	4	0	0	5	66	Moderate to High
I1	*Plecotus auritus*	0	3	0	0	9	0	Low
I1	*Rhinolophus hipposideros*	0	0	0	0	12	0	Low
I2	*Myotis daubentonii*	0	0	0	0	12	0	Low
I2	*Myotis mystacinus*	0	0	0	0	12	0	Low
I2	*Myotis nattereri*	0	0	0	0	12	0	Low
I2	*Nyctalus leisleri*	7	3	0	0	2	82	High
I2	*Pipistrellus nathusii*	2	1	0	0	9	0	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	Median Percentile	Bat Activity
I2	*Pipistrellus pipistrellus*	6	1	0	0	5	77	Moderate to High
I2	*Pipistrellus pygmaeus*	0	1	0	0	11	0	Low
I2	*Plecotus auritus*	0	0	0	0	12	0	Low
I2	*Rhinolophus hipposideros*	0	0	0	0	12	0	Low
I3	*Myotis daubentonii*	0	0	0	0	12	0	Low
I3	*Myotis mystacinus*	0	0	0	0	12	0	Low
I3	*Myotis nattereri*	0	1	0	0	11	0	Low
I3	*Nyctalus leisleri*	4	0	0	0	8	0	Low
I3	*Pipistrellus nathusii*	0	0	0	0	12	0	Low
I3	*Pipistrellus pipistrellus*	0	1	0	0	11	0	Low
I3	*Pipistrellus pygmaeus*	0	1	0	0	11	0	Low
I3	*Plecotus auritus*	0	0	0	0	12	0	Low
I3	*Rhinolophus hipposideros*	0	0	0	0	12	0	Low
I4	*Myotis daubentonii*	1	5	0	0	6	33	Low to Moderate
I4	*Myotis mystacinus*	0	1	0	0	11	0	Low
I4	*Myotis nattereri*	0	0	0	0	12	0	Low
I4	*Nyctalus leisleri*	8	2	0	0	2	90	High
I4	*Pipistrellus nathusii*	2	3	0	0	7	0	Low
I4	*Pipistrellus pipistrellus*	6	1	0	0	5	74	Moderate to High
I4	*Pipistrellus pygmaeus*	2	2	0	0	8	0	Low
I4	*Plecotus auritus*	3	6	0	0	3	66	Moderate to High
I4	*Rhinolophus hipposideros*	0	0	0	0	12	0	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	Median Percentile	Bat Activity
I5	*Myotis daubentonii*	0	0	0	0	12	0	Low
I5	*Myotis mystacinus*	0	0	0	0	12	0	Low
I5	*Myotis nattereri*	0	0	0	0	12	0	Low
I5	*Nyctalus leisleri*	1	4	0	0	7	0	Low
I5	*Pipistrellus nathusii*	0	0	0	0	12	0	Low
I5	*Pipistrellus pipistrellus*	0	4	0	0	8	0	Low
I5	*Pipistrellus pygmaeus*	0	0	0	0	12	0	Low
I5	*Plecotus auritus*	0	0	0	0	12	0	Low
I5	*Rhinolophus hipposideros*	0	0	0	0	12	0	Low
I6	*Myotis daubentonii*	0	4	0	0	9	0	Low
I6	*Myotis mystacinus*	0	0	0	0	13	0	Low
I6	*Myotis nattereri*	0	0	0	0	13	0	Low
I6	*Nyctalus leisleri*	2	3	0	0	8	0	Low
I6	*Pipistrellus nathusii*	1	2	0	0	10	0	Low
I6	*Pipistrellus pipistrellus*	4	2	0	0	7	0	Low
I6	*Pipistrellus pygmaeus*	1	3	0	0	9	0	Low
I6	*Plecotus auritus*	0	1	0	0	12	0	Low
I6	*Rhinolophus hipposideros*	0	0	0	0	13	0	Low
I7	*Myotis daubentonii*	0	2	0	0	14	0	Low
I7	*Myotis mystacinus*	0	0	0	0	16	0	Low
I7	*Myotis nattereri*	0	0	0	0	16	0	Low
I7	*Nyctalus leisleri*	0	1	0	0	15	0	Low
I7	*Pipistrellus nathusii*	1	2	0	0	13	0	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	Median Percentile	Bat Activity
I7	*Pipistrellus pipistrellus*	7	2	0	0	7	68	Moderate to High
I7	*Pipistrellus pygmaeus*	2	3	0	0	11	0	Low
I7	*Plecotus auritus*	0	0	0	0	16	0	Low
I7	*Rhinolophus hipposideros*	0	0	0	0	16	0	Low
I8	*Myotis daubentonii*	0	2	0	0	14	0	Low
I8	*Myotis mystacinus*	3	4	0	0	9	0	Low
I8	*Myotis nattereri*	0	0	0	0	16	0	Low
I8	*Nyctalus leisleri*	7	3	0	0	6	73	Moderate to High
I8	*Pipistrellus nathusii*	3	9	0	0	4	73	Moderate to High
I8	*Pipistrellus pipistrellus*	12	3	0	0	1	92	High
I8	*Pipistrellus pygmaeus*	6	4	0	0	6	68	Moderate to High
I8	*Plecotus auritus*	0	8	0	0	8	34	Low to Moderate
I8	*Rhinolophus hipposideros*	0	1	0	0	15	0	Low
I9	*Myotis daubentonii*	1	2	0	0	13	0	Low
I9	*Myotis mystacinus*	0	2	0	0	14	0	Low
I9	*Myotis nattereri*	0	0	0	0	16	0	Low
I9	*Nyctalus leisleri*	5	5	0	0	6	73	Moderate to High
I9	*Pipistrellus nathusii*	14	2	0	0	0	93	High
I9	*Pipistrellus pipistrellus*	15	0	0	0	1	98	High
I9	*Pipistrellus pygmaeus*	13	1	0	0	2	91	High
I9	*Plecotus auritus*	0	3	0	0	13	0	Low
I9	*Rhinolophus hipposideros*	0	5	0	0	11	0	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	Median Percentile	Bat Activity
I10	*Myotis daubentonii*	1	7	0	0	8	34	Low to Moderate
I10	*Myotis mystacinus*	0	0	0	0	16	0	Low
I10	*Myotis nattereri*	0	0	0	0	16	0	Low
I10	*Nyctalus leisleri*	0	7	0	0	9	0	Low
I10	*Pipistrellus nathusii*	3	6	0	0	7	68	Moderate to High
I10	*Pipistrellus pipistrellus*	15	0	0	0	1	95	High
I10	*Pipistrellus pygmaeus*	9	3	0	0	4	82	High
I10	*Plecotus auritus*	0	1	0	0	15	0	Low
I10	*Rhinolophus hipposideros*	0	6	0	0	10	0	Low

Differences in activity between static detector locations split by species and location is presented in the figure below. The centre line indicates the median activity level whereas the box represents the interquartile range (therefore the spread of the middle 50% of nights of activity). The plot for common pipistrelle shows that the activity level for both T10, T18 and T19 was consistently high. Similarly, the plot for soprano pipistrelle shows that the activity level for T19 was consistently high. Finally, the plot for Nathusius' bat shows that the activity level for T19 was consistently high.

The centre line indicates the median activity level whereas the box represents the interquartile range (the spread of the middle 50% of nights of activity). The dots indicate outlier values. Note: *Myotis daubentonii* = Daubenton's bat, *Myotis mystacinus* = whiskered bat, *Myotis nattereri* = Natterer's bat, *Nyctalus leisleri* = Leisler's bat, *Pipistrellus nathusii* = Nathusius' bat, *Pipistrellus pipistrellus* = common pipistrelle, *Pipistrellus pygmaeus* = soprano pipistrelle, *Plecotus auritus* = brown long-eared bat and *Rhinolophus hipposideros* = lesser horseshoe bat. I = Inchamore and number = turbine location, so I1 = turbine 1 at Inchamore.

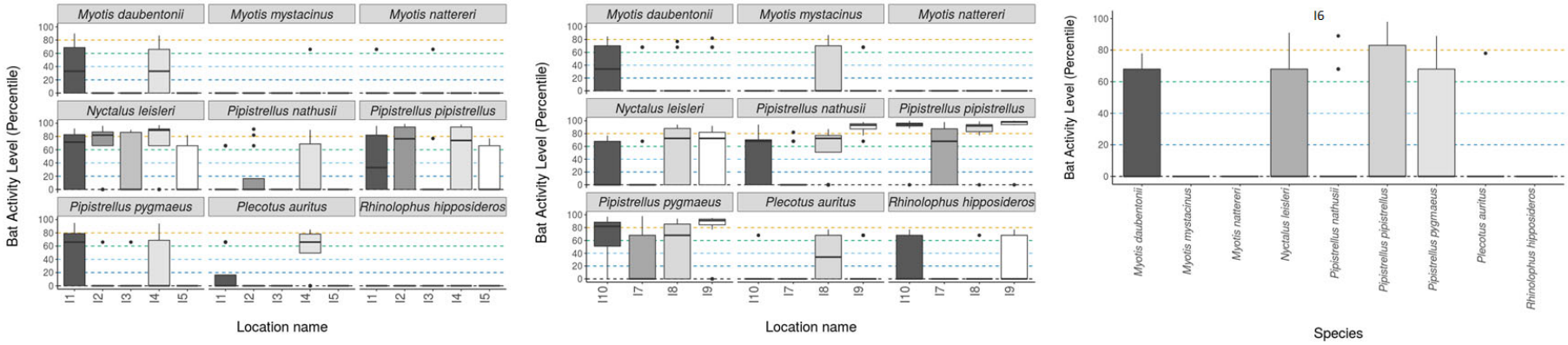


Figure 3-7: Differences in Activity between Static Detector Locations, split by Species and Locations during Survey Period 1 at Inchamore

3.4.2 Survey Period 2

3.4.2.1 Gortyrahilly

A summary table showing the number of nights recorded bat activity fell into each activity band for each species is presented below. Recordings were split into three groups depending on the dates deployed: group 1 (turbines 1, 3, 4, 12 and 14), group 2 (turbines 2, 5, 6, 7, 8, 9, 10, 11 and 13) and group 3 (turbines 15, 16, 17 and 18). Each group was analysed in Ecobat separately but is presented collectively in this report.

The maximum of recordings for a single night across all detectors combined on 03/07/2019 was 1,984 recordings where nine species were recorded.

Ten of the eighteen static locations had at least one night of High Activity during the survey period.

The following Turbine locations are deemed to have a High Bat Activity (for specific bat species) level based on the Percentile Median value: T1 (common pipistrelle), T5 (common pipistrelle), T7 (Daubenton's bat, whiskered bat, Nathusius' bat, common pipistrelle and soprano pipistrelle), T9 (Nathusius' bat, common pipistrelle and soprano pipistrelle), T10 (common pipistrelle), T11 (common pipistrelle), T12 (common pipistrelle and soprano pipistrelle), T13 (Nathiusius' bat, common pipistrelle and soprano pipistrelle), T16 (common pipistrelle) and T17 (common pipistrelle).

Table 3-11: Summary of Ecobat Analysis Tool for static detectors deployed at Gorthrahilly during survey period 2. G = gortyrahilly and number = turbine location, so G1 = turbine 1 at Gortyrahilly.

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	Median Percentile	Bat Activity
G1	*Myotis daubentonii*	0	2	0	0	9	0	Low
G1	*Myotis mystacinus*	0	2	0	0	9	0	Low
G1	*Myotis nattereri*	0	2	0	0	9	0	Low
G1	*Nyctalus leisleri*	1	1	0	0	9	0	Low
G1	*Pipistrellus nathusii*	4	3	0	0	4	68	Moderate to High
G1	*Pipistrellus pipistrellus*	8	2	0	0	1	90	High
G1	*Pipistrellus pygmaeus*	1	1	0	0	9	0	Low
G1	*Plecotus auritus*	0	1	0	0	10	0	Low
G1	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G2	*Myotis daubentonii*	0	1	0	0	10	0	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	Median Percentile	Bat Activity
G2	*Myotis mystacinus*	0	0	0	0	11	0	Low
G2	*Myotis nattereri*	0	0	0	0	11	0	Low
G2	*Nyctalus leisleri*	0	1	0	0	10	0	Low
G2	*Pipistrellus nathusii*	1	1	0	0	9	0	Low
G2	*Pipistrellus pipistrellus*	4	2	0	0	5	78	Moderate to High
G2	*Pipistrellus pygmaeus*	1	2	0	0	8	0	Low
G2	*Plecotus auritus*	0	0	0	0	11	0	Low
G2	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G3	*Myotis daubentonii*	0	3	0	0	8	0	Low
G3	*Myotis mystacinus*	0	0	0	0	11	0	Low
G3	*Myotis nattereri*	0	2	0	0	9	0	Low
G3	*Nyctalus leisleri*	2	5	0	0	4	68	Moderate to High
G3	*Pipistrellus nathusii*	0	4	0	0	7	0	Low
G3	*Pipistrellus pipistrellus*	2	3	0	0	6	0	Low
G3	*Pipistrellus pygmaeus*	0	3	0	0	8	0	Low
G3	*Plecotus auritus*	0	0	0	0	11	0	Low
G3	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G4	*Myotis daubentonii*	1	3	0	0	7	0	Low
G4	*Myotis mystacinus*	0	3	0	0	8	0	Low
G4	*Myotis nattereri*	0	3	0	0	8	0	Low
G4	*Nyctalus leisleri*	3	5	0	0	3	68	Moderate to High
G4	*Pipistrellus nathusii*	0	3	0	0	8	0	Low
G4	*Pipistrellus pipistrellus*	5	2	0	0	4	68	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	Median Percentile	Bat Activity
G4	*Pipistrellus pygmaeus*	1	1	0	0	9	0	Low
G4	*Plecotus auritus*	0	2	0	0	9	0	Low
G4	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G5	*Myotis daubentonii*	0	4	0	0	7	0	Low
G5	*Myotis mystacinus*	0	1	0	0	10	0	Low
G5	*Myotis nattereri*	0	1	0	0	10	0	Low
G5	*Nyctalus leisleri*	1	2	0	0	8	0	Low
G5	*Pipistrellus nathusii*	1	4	0	0	6	0	Low
G5	*Pipistrellus pipistrellus*	10	0	0	0	1	96	High
G5	*Pipistrellus pygmaeus*	5	2	0	0	4	68	Moderate to High
G5	*Plecotus auritus*	0	1	0	0	10	0	Low
G5	*Rhinolophus hipposideros*	0	2	0	0	9	0	Low
G6	*Myotis daubentonii*	0	4	0	0	7	0	Low
G6	*Myotis mystacinus*	0	1	0	0	10	0	Low
G6	*Myotis nattereri*	0	0	0	0	11	0	Low
G6	*Nyctalus leisleri*	1	2	0	0	8	0	Low
G6	*Pipistrellus nathusii*	2	2	0	0	7	0	Low
G6	*Pipistrellus pipistrellus*	4	5	0	0	2	78	Moderate to High
G6	*Pipistrellus pygmaeus*	2	2	0	0	7	0	Low
G6	*Plecotus auritus*	0	0	0	0	11	0	Low
G6	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G7	*Myotis daubentonii*	10	0	0	0	1	96	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	Median Percentile	Bat Activity
G7	*Myotis mystacinus*	6	2	0	0	3	83	High
G7	*Myotis nattereri*	7	2	0	0	2	83	High
G7	*Nyctalus leisleri*	1	4	0	0	6	0	Low
G7	*Pipistrellus nathusii*	4	2	0	0	5	68	Moderate to High
G7	*Pipistrellus pipistrellus*	9	1	0	0	1	94	High
G7	*Pipistrellus pygmaeus*	8	1	0	0	2	91	High
G7	*Plecotus auritus*	3	4	0	0	4	68	Moderate to High
G7	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G8	*Myotis daubentonii*	0	3	0	0	8	0	Low
G8	*Myotis mystacinus*	0	1	0	0	10	0	Low
G8	*Myotis nattereri*	0	1	0	0	10	0	Low
G8	*Nyctalus leisleri*	3	2	0	0	6	0	Low
G8	*Pipistrellus nathusii*	3	1	0	0	7	0	Low
G8	*Pipistrellus pipistrellus*	5	1	0	0	5	68	Moderate to High
G8	*Pipistrellus pygmaeus*	4	0	0	0	7	0	Low
G8	*Plecotus auritus*	0	3	0	0	8	0	Low
G8	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G9	*Myotis daubentonii*	0	4	0	0	7	0	Low
G9	*Myotis mystacinus*	0	2	0	0	9	0	Low
G9	*Myotis nattereri*	0	0	0	0	11	0	Low
G9	*Nyctalus leisleri*	3	2	0	0	6	0	Low
G9	*Pipistrellus nathusii*	7	1	0	0	3	86	High
G9	*Pipistrellus pipistrellus*	9	0	0	0	2	95	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	Median Percentile	Bat Activity
G9	*Pipistrellus pygmaeus*	6	2	0	0	3	86	High
G9	*Plecotus auritus*	0	2	0	0	9	0	Low
G9	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G10	*Myotis daubentonii*	1	3	0	0	7	0	Low
G10	*Myotis mystacinus*	0	0	0	0	11	0	Low
G10	*Myotis nattereri*	0	2	0	0	9	0	Low
G10	*Nyctalus leisleri*	1	1	0	0	9	0	Low
G10	*Pipistrellus nathusii*	0	3	0	0	8	0	Low
G10	*Pipistrellus pipistrellus*	6	1	0	0	4	86	High
G10	*Pipistrellus pygmaeus*	1	4	0	0	6	0	Low
G10	*Plecotus auritus*	0	3	0	0	8	0	Low
G10	*Rhinolophus hipposideros*	0	1	0	0	10	0	Low
G11	*Myotis daubentonii*	0	4	0	0	7	0	Low
G11	*Myotis mystacinus*	0	2	0	0	9	0	Low
G11	*Myotis nattereri*	0	1	0	0	10	0	Low
G11	*Nyctalus leisleri*	2	2	0	0	7	0	Low
G11	*Pipistrellus nathusii*	3	3	0	0	5	68	Moderate to High
G11	*Pipistrellus pipistrellus*	9	1	0	0	1	88	High
G11	*Pipistrellus pygmaeus*	2	7	0	0	2	68	Moderate to High
G11	*Plecotus auritus*	0	6	0	0	5	68	Moderate to High
G11	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G12	*Myotis daubentonii*	0	1	0	0	10	0	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	Median Percentile	Bat Activity
G12	*Myotis mystacinus*	0	4	0	0	7	0	Low
G12	*Myotis nattereri*	1	3	0	0	7	0	Low
G12	*Nyctalus leisleri*	2	0	0	0	9	0	Low
G12	*Pipistrellus nathusii*	2	4	0	0	5	68	Moderate to High
G12	*Pipistrellus pipistrellus*	11	0	0	0	0	97	High
G12	*Pipistrellus pygmaeus*	10	1	0	0	0	88	High
G12	*Plecotus auritus*	0	2	0	0	9	0	Low
G12	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G13	*Myotis daubentonii*	4	5	0	0	2	78	Moderate to High
G13	*Myotis mystacinus*	0	3	0	0	8	0	Low
G13	*Myotis nattereri*	0	6	0	0	5	68	Moderate to High
G13	*Nyctalus leisleri*	3	4	0	0	4	68	Moderate to High
G13	*Pipistrellus nathusii*	6	2	0	0	3	83	High
G13	*Pipistrellus pipistrellus*	10	0	0	0	1	96	High
G13	*Pipistrellus pygmaeus*	8	2	0	0	1	90	High
G13	*Plecotus auritus*	3	5	0	0	3	68	Moderate to High
G13	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G14	*Myotis daubentonii*	0	1	0	0	10	0	Low
G14	*Myotis mystacinus*	0	0	0	0	11	0	Low
G14	*Myotis nattereri*	0	1	0	0	10	0	Low
G14	*Nyctalus leisleri*	3	2	0	0	6	0	Low
G14	*Pipistrellus nathusii*	3	1	0	0	7	0	Low
G14	*Pipistrellus pipistrellus*	5	2	0	0	4	78	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	Median Percentile	Bat Activity
G14	*Pipistrellus pygmaeus*	1	1	0	0	9	0	Low
G14	*Plecotus auritus*	0	2	0	0	9	0	Low
G14	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
G15	*Myotis daubentonii*	0	2	0	0	18	0	Low
G15	*Myotis mystacinus*	0	1	0	0	19	0	Low
G15	*Myotis nattereri*	0	1	0	0	19	0	Low
G15	*Nyctalus leisleri*	6	2	0	0	12	0	Low
G15	*Pipistrellus nathusii*	1	3	0	0	16	0	Low
G15	*Pipistrellus pipistrellus*	10	2	0	0	8	75	Moderate to High
G15	*Pipistrellus pygmaeus*	1	3	0	0	16	0	Low
G15	*Plecotus auritus*	0	1	0	0	19	0	Low
G15	*Rhinolophus hipposideros*	0	0	0	0	20	0	Low
G16	*Myotis daubentonii*	1	6	0	0	13	0	Low
G16	*Myotis mystacinus*	0	2	0	0	18	0	Low
G16	*Myotis nattereri*	0	4	0	0	16	0	Low
G16	*Nyctalus leisleri*	2	6	0	0	12	0	Low
G16	*Pipistrellus nathusii*	3	1	0	0	16	0	Low
G16	*Pipistrellus pipistrellus*	13	3	0	0	4	86	High
G16	*Pipistrellus pygmaeus*	6	9	0	0	5	65	Moderate to High
G16	*Plecotus auritus*	0	4	0	0	16	0	Low
G16	*Rhinolophus hipposideros*	0	0	0	0	20	0	Low
G17	*Myotis daubentonii*	1	4	0	0	15	0	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	Median Percentile	Bat Activity
G17	*Myotis mystacinus*	2	6	0	0	12	0	Low
G17	*Myotis nattereri*	0	4	0	0	16	0	Low
G17	*Nyctalus leisleri*	3	9	0	0	8	65	Moderate to High
G17	*Pipistrellus nathusii*	5	6	0	0	9	65	Moderate to High
G17	*Pipistrellus pipistrellus*	18	1	0	0	1	97	High
G17	*Pipistrellus pygmaeus*	9	6	0	0	5	76	Moderate to High
G17	*Plecotus auritus*	0	5	0	0	15	0	Low
G17	*Rhinolophus hipposideros*	0	1	0	0	19	0	Low
G18	*Myotis daubentonii*	0	3	0	0	17	0	Low
G18	*Myotis mystacinus*	0	0	0	0	20	0	Low
G18	*Myotis nattereri*	0	0	0	0	20	0	Low
G18	*Nyctalus leisleri*	0	0	0	0	20	0	Low
G18	*Pipistrellus nathusii*	0	2	0	0	18	0	Low
G18	*Pipistrellus pipistrellus*	3	3	0	0	14	0	Low
G18	*Pipistrellus pygmaeus*	0	0	0	0	20	0	Low
G18	*Plecotus auritus*	0	0	0	0	20	0	Low
G18	*Rhinolophus hipposideros*	0	0	0	0	20	0	Low

Differences in activity between static detector locations split by species and location is presented in the figure below. The centre line indicates the median activity level whereas the box represents the interquartile range (therefore the spread of the middle 50% of nights of activity). The plot for common pipistrelle shows that the activity level for both T5, T7, T9, T11, T12, T13 and T17 was consistently high. Similarly, the plot for soprano pipistrelle shows that the activity level for both T7, T12 and T13 was consistently high. Finally, the plot for Daubenton's bat shows that the activity level for T7 was consistently high.

The centre line indicates the median activity level whereas the box represents the interquartile range (the spread of the middle 50% of nights of activity). The dots indicate outlier values. Note: *Myotis daubentonii* = Daubenton's bat, *Myotis mystacinus* = whiskered bat, *Myotis nattereri* = Natterer's bat, *Nyctalus leisleri* = Leisler's bat, *Pipistrellus nathusii* = Nathusius' bat, *Pipistrellus pipistrellus* = common pipistrelle, *Pipistrellus pygmaeus* = soprano pipistrelle, *Plecotus auritus* = brown long-eared bat and *Rhinolophus hipposideros* = lesser horseshoe bat. G = gortyrahilly and number = turbine location, so G1 = turbine 1 at Gortyrahilly.

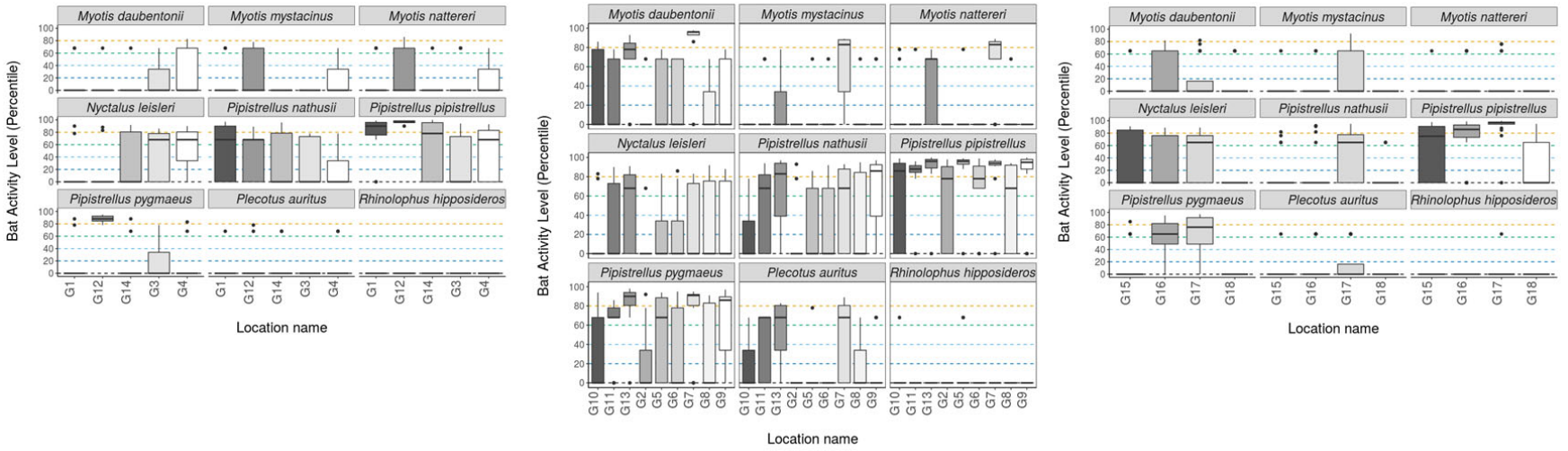


Figure 3-8: Differences in activity between Static Detector Locations, split by Species and Location during Survey Period 2 at Gortyrahilly

3.4.2.2 Inchamore

A summary table showing the number of nights recorded bat activity fell into each activity band for each species is presented below. Recordings were analysed in one single group as all detectors were deployed simultaneously.

The maximum of recordings for a single night across all detectors combined on 03/07/2019 was 2,077 recordings where eight species were recorded.

Seven of the ten static locations had at least one night of High Activity during the survey period.

The following Turbine locations are deemed to have a High Bat Activity (for specific bat species) level based on the Percentile Median value: T1 (Daubenton's bat and common pipistrelle), T2 (common pipistrelle), T4 (common pipistrelle and soprano pipistrelle), T6 (common pipistrelle), T7 (common pipistrelle), T9 (Nathusius' bat, common pipistrelle and soprano pipistrelle) and T10 (common pipistrelle and soprano pipistrelle).

Table 3-12: Summary of Ecobat Analysis Tool for Static Detectors deployed at Inchamore during survey period 2. I = Inchamore and number = turbine location, so I1 = turbine 1 at Inchamore.

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	Median Percentile	Bat Activity
I1	*Myotis daubentonii*	8	2	0	0	1	88	High
I1	*Myotis mystacinus*	1	5	0	0	5	68	Moderate to High
I1	*Myotis nattereri*	2	6	0	0	3	78	Moderate to High
I1	*Nyctalus leisleri*	2	5	0	0	4	68	Moderate to High
I1	*Pipistrellus nathusii*	1	2	0	0	8	0	Low
I1	*Pipistrellus pipistrellus*	11	0	0	0	0	96	High
I1	*Pipistrellus pygmaeus*	2	4	0	0	5	68	Moderate to High
I1	*Plecotus auritus*	0	1	0	0	10	0	Low
I1	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I2	*Myotis daubentonii*	2	6	0	0	3	68	Moderate to High
I2	*Myotis mystacinus*	1	1	0	0	9	0	Low
I2	*Myotis nattereri*	1	3	0	0	7	0	Low
I2	*Nyctalus leisleri*	0	1	0	0	10	0	Low
I2	*Pipistrellus nathusii*	0	0	0	0	11	0	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	Median Percentile	Bat Activity
I2	*Pipistrellus pipistrellus*	6	3	0	0	2	83	High
I2	*Pipistrellus pygmaeus*	2	1	0	0	8	0	Low
I2	*Plecotus auritus*	0	1	0	0	10	0	Low
I2	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I3	*Myotis daubentonii*	0	5	0	0	6	0	Low
I3	*Myotis mystacinus*	0	0	0	0	11	0	Low
I3	*Myotis nattereri*	0	0	0	0	11	0	Low
I3	*Nyctalus leisleri*	0	4	0	0	7	0	Low
I3	*Pipistrellus nathusii*	0	0	0	0	11	0	Low
I3	*Pipistrellus pipistrellus*	1	2	0	0	8	0	Low
I3	*Pipistrellus pygmaeus*	0	0	0	0	11	0	Low
I3	*Plecotus auritus*	0	0	0	0	11	0	Low
I3	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I4	*Myotis daubentonii*	3	5	0	0	3	68	Moderate to High
I4	*Myotis mystacinus*	0	4	0	0	7	0	Low
I4	*Myotis nattereri*	0	6	0	0	5	68	Moderate to High
I4	*Nyctalus leisleri*	2	3	0	0	6	0	Low
I4	*Pipistrellus nathusii*	3	0	0	0	8	0	Low
I4	*Pipistrellus pipistrellus*	11	0	0	0	0	95	High
I4	*Pipistrellus pygmaeus*	8	3	0	0	0	89	High
I4	*Plecotus auritus*	0	3	0	0	8	0	Low
I4	*Rhinolophus hipposideros*	0	0	0	0	11	0	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	Median Percentile	Bat Activity
I5	*Myotis daubentonii*	0	1	0	0	10	0	Low
I5	*Myotis mystacinus*	0	0	0	0	11	0	Low
I5	*Myotis nattereri*	0	1	0	0	10	0	Low
I5	*Nyctalus leisleri*	0	0	0	0	11	0	Low
I5	*Pipistrellus nathusii*	0	0	0	0	11	0	Low
I5	*Pipistrellus pipistrellus*	0	3	0	0	8	0	Low
I5	*Pipistrellus pygmaeus*	0	1	0	0	10	0	Low
I5	*Plecotus auritus*	0	0	0	0	11	0	Low
I5	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I6	*Myotis daubentonii*	1	3	0	0	7	0	Low
I6	*Myotis mystacinus*	0	3	0	0	8	0	Low
I6	*Myotis nattereri*	0	0	0	0	11	0	Low
I6	*Nyctalus leisleri*	0	1	0	0	10	0	Low
I6	*Pipistrellus nathusii*	1	0	0	0	10	0	Low
I6	*Pipistrellus pipistrellus*	8	1	0	0	2	86	High
I6	*Pipistrellus pygmaeus*	4	4	0	0	3	68	Moderate to High
I6	*Plecotus auritus*	0	0	0	0	11	0	Low
I6	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I7	*Myotis daubentonii*	0	1	0	0	10	0	Low
I7	*Myotis mystacinus*	0	2	0	0	9	0	Low
I7	*Myotis nattereri*	0	0	0	0	11	0	Low
I7	*Nyctalus leisleri*	0	1	0	0	10	0	Low
I7	*Pipistrellus nathusii*	1	2	0	0	8	0	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	Median Percentile	Bat Activity
I7	*Pipistrellus pipistrellus*	7	3	0	0	1	86	High
I7	*Pipistrellus pygmaeus*	4	3	0	0	4	68	Moderate to High
I7	*Plecotus auritus*	0	0	0	0	11	0	Low
I7	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I8	*Myotis daubentonii*	0	0	0	0	11	0	Low
I8	*Myotis mystacinus*	0	0	0	0	11	0	Low
I8	*Myotis nattereri*	0	0	0	0	11	0	Low
I8	*Nyctalus leisleri*	0	0	0	0	11	0	Low
I8	*Pipistrellus nathusii*	0	0	0	0	11	0	Low
I8	*Pipistrellus pipistrellus*	0	0	0	0	11	0	Low
I8	*Pipistrellus pygmaeus*	0	0	0	0	11	0	Low
I8	*Plecotus auritus*	0	0	0	0	11	0	Low
I8	*Rhinolophus hipposideros*	0	0	0	0	11	0	Low
I9	*Myotis daubentonii*	0	4	0	0	7	0	Low
I9	*Myotis mystacinus*	0	1	0	0	10	0	Low
I9	*Myotis nattereri*	0	0	0	0	11	0	Low
I9	*Nyctalus leisleri*	2	4	0	0	5	68	Moderate to High
I9	*Pipistrellus nathusii*	7	4	0	0	0	90	High
I9	*Pipistrellus pipistrellus*	11	0	0	0	0	98	High
I9	*Pipistrellus pygmaeus*	10	0	0	0	1	93	High
I9	*Plecotus auritus*	0	1	0	0	10	0	Low
I9	*Rhinolophus hipposideros*	0	0	0	0	11	0	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	Median Percentile	Bat Activity
I10	*Myotis daubentonii*	0	2	0	0	9	0	Low
I10	*Myotis mystacinus*	2	2	0	0	7	0	Low
I10	*Myotis nattereri*	3	5	0	0	3	68	Moderate to High
I10	*Nyctalus leisleri*	3	3	0	0	5	68	Moderate to High
I10	*Pipistrellus nathusii*	3	4	0	0	4	68	Moderate to High
I10	*Pipistrellus pipistrellus*	11	0	0	0	0	98	High
I10	*Pipistrellus pygmaeus*	11	0	0	0	0	93	High
I10	*Plecotus auritus*	0	4	0	0	7	0	Low
I10	*Rhinolophus hipposideros*	0	1	0	0	10	0	Low

Differences in activity between static detector locations split by species and location is presented in the figure below. The centre line indicates the median activity level whereas the box represents the interquartile range (therefore the spread of the middle 50% of nights of activity). The plot for common pipistrelle shows that the activity level for both T1, T4, T6, T9 and T10 was consistently high. Similarly, the plot for soprano pipistrelle shows that the activity level for both T4, T9 and T10 was consistently high.

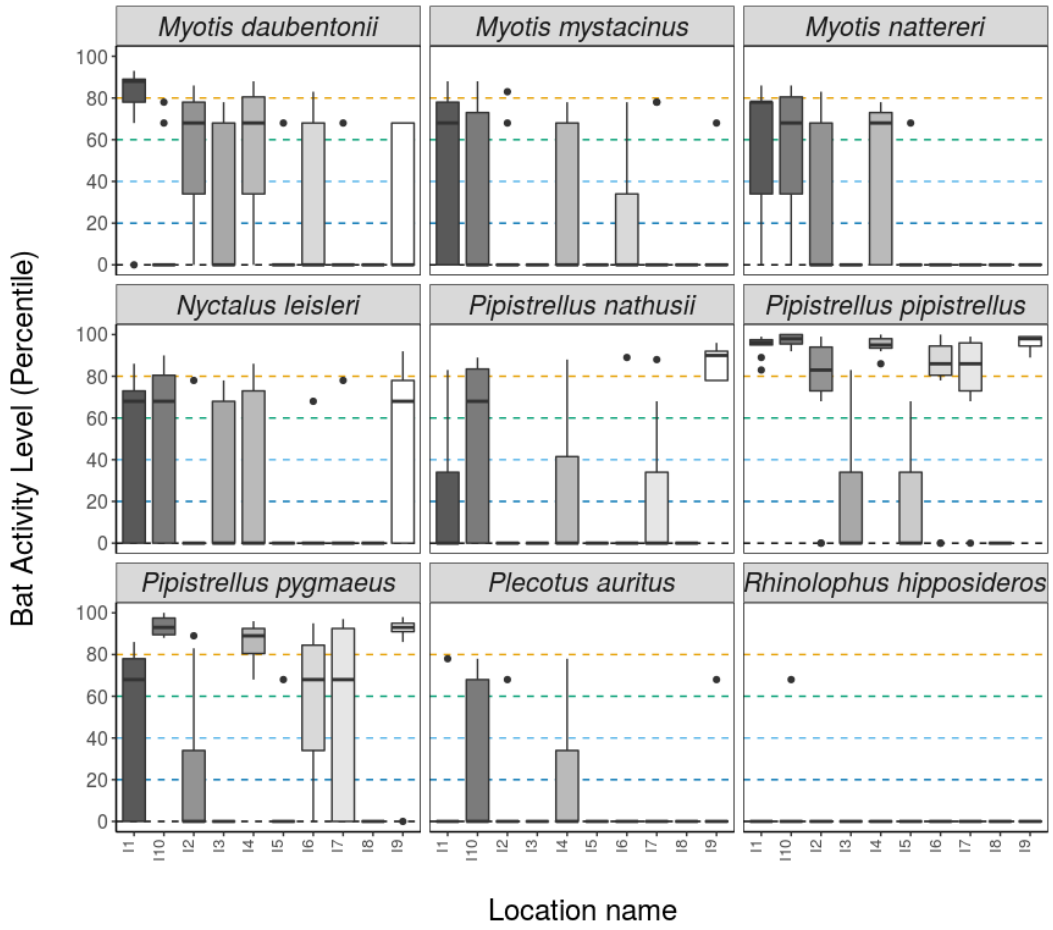


Figure 3-9: Differences in activity between static detector locations, split by species and location during survey period 2 at Inchamore.

The centre line indicates the median activity level whereas the box represents the interquartile range (the spread of the middle 50% of nights of activity). The dots indicate outlier values. Note: *Myotis daubentonii* = Daubenton's bat, *Myotis mystacinus* = whiskered bat, *Myotis nattereri* = Natterer's bat, *Nyctalus leisleri* = Leisler's bat, *Pipistrellus nathusii* = Nathusius' bat, *Pipistrellus pipistrellus* = common pipistrelle, *Pipistrellus pygmaeus* = soprano pipistrelle, *Plecotus auritus* = brown long-eared bat and *Rhinolophus hipposideros* = lesser horseshoe bat. I = Inchamore and number = turbine location, so I1 = turbine 1 at Inchamore.

3.4.3 Survey Period 3

3.4.3.1 Gortyrahilly

A summary table showing the number of nights recorded bat activity fell into each activity band for each species is presented below. Recordings were split into three groups depending on the dates deployed: group 1 (turbines 1, 2, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17 and 18), group 2 (turbines 3, 4 and 5) and group 3 (turbine 19). Each group was analysed in Ecobat separately but is presented collectively in this report.

The maximum of recordings for a single night across all detectors combined on 21/09/2019 was 1,643 recordings where six species were recorded.

Five of the eleven static locations had at least one night of High Activity during the survey period.

The following Turbine locations are deemed to have a High Bat Activity (for specific bat species) level based on the Percentile Median value: T1 (common pipistrelle), T2 (common pipistrelle), T9 (common pipistrelle), T10 (common pipistrelle, soprano pipistrelle and brown long-eared bat) and T11 (common pipistrelle and soprano pipistrelle).

Table 3-13: Summary of Ecobat Analysis Tool for static detectors deployed at Gorthrahilly during survey period 3. G = gortyrahilly and number = turbine location, so G1 = turbine 1 at Gortyrahilly.

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	Median Percentile	Bat Activity
G1	*Myotis daubentonii*	0	3	0	0	11	0	Low
G1	*Myotis mystacinus*	0	1	0	0	13	0	Low
G1	*Myotis nattereri*	0	1	0	0	13	0	Low
G1	*Nyctalus leisleri*	2	1	0	0	11	0	Low
G1	*Pipistrellus nathusii*	4	1	0	0	9	0	Low
G1	*Pipistrellus pipistrellus*	8	0	0	0	6	88	High
G1	*Pipistrellus pygmaeus*	3	5	0	0	6	63	Moderate to High
G1	*Plecotus auritus*	2	3	0	0	9	0	Low
G1	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G2	*Myotis daubentonii*	0	6	0	0	8	0	Low
G2	*Myotis mystacinus*	0	4	0	0	10	0	Low
G2	*Myotis nattereri*	0	6	0	0	8	0	Low
G2	*Nyctalus leisleri*	4	2	0	0	8	0	Low
G2	*Pipistrellus nathusii*	3	3	0	0	8	0	Low
G2	*Pipistrellus pipistrellus*	10	1	0	0	3	94	High
G2	*Pipistrellus pygmaeus*	8	2	0	0	4	90	High
G2	*Plecotus auritus*	0	2	0	0	12	0	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	Median Percentile	Bat Activity
G2	*Rhinolophus hipposideros*	0	4	0	0	10	0	Low
G3	*Myotis daubentonii*	4	6	0	0	17	0	Low
G3	*Myotis mystacinus*	0	4	0	0	23	0	Low
G3	*Myotis nattereri*	0	6	0	0	21	0	Low
G3	*Nyctalus leisleri*	13	5	0	0	9	63	Moderate to High
G3	*Pipistrellus nathusii*	3	5	0	0	19	0	Low
G3	*Pipistrellus pipistrellus*	11	10	0	0	6	75	Moderate to High
G3	*Pipistrellus pygmaeus*	6	10	0	0	11	63	Moderate to High
G3	*Plecotus auritus*	1	12	0	0	14	0	Low
G3	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
G4	*Myotis daubentonii*	0	0	0	0	27	0	Low
G4	*Myotis mystacinus*	0	0	0	0	27	0	Low
G4	*Myotis nattereri*	0	0	0	0	27	0	Low
G4	*Nyctalus leisleri*	0	0	0	0	27	0	Low
G4	*Pipistrellus nathusii*	0	0	0	0	27	0	Low
G4	*Pipistrellus pipistrellus*	0	4	0	0	23	0	Low
G4	*Pipistrellus pygmaeus*	0	1	0	0	26	0	Low
G4	*Plecotus auritus*	0	0	0	0	27	0	Low
G4	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
G5	*Myotis daubentonii*	0	8	0	0	19	0	Low
G5	*Myotis mystacinus*	0	10	0	0	17	0	Low
G5	*Myotis nattereri*	0	1	0	0	26	0	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	Median Percentile	Bat Activity
G5	*Nyctalus leisleri*	4	9	0	0	14	0	Low
G5	*Pipistrellus nathusii*	1	5	0	0	21	0	Low
G5	*Pipistrellus pipistrellus*	26	1	0	0	0	96	High
G5	*Pipistrellus pygmaeus*	19	6	0	0	2	85	High
G5	*Plecotus auritus*	1	9	0	0	17	0	Low
G5	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
G7	*Myotis daubentonii*	1	3	0	0	10	0	Low
G7	*Myotis mystacinus*	1	0	0	0	13	0	Low
G7	*Myotis nattereri*	0	2	0	0	12	0	Low
G7	*Nyctalus leisleri*	2	6	0	0	6	63	Moderate to High
G7	*Pipistrellus nathusii*	0	0	0	0	14	0	Low
G7	*Pipistrellus pipistrellus*	9	1	0	0	4	97	High
G7	*Pipistrellus pygmaeus*	9	1	0	0	4	89	High
G7	*Plecotus auritus*	1	4	0	0	9	0	Low
G7	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G9	*Myotis daubentonii*	1	6	0	0	7	32	Low to Moderate
G9	*Myotis mystacinus*	0	1	0	0	13	0	Low
G9	*Myotis nattereri*	1	4	0	0	9	0	Low
G9	*Nyctalus leisleri*	1	1	0	0	12	0	Low
G9	*Pipistrellus nathusii*	3	1	0	0	10	0	Low
G9	*Pipistrellus pipistrellus*	6	1	0	0	7	32	Low to Moderate
G9	*Pipistrellus pygmaeus*	9	0	0	0	5	85	High
G9	*Plecotus auritus*	1	3	0	0	10	0	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	Median Percentile	Bat Activity
G9	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G10	*Myotis daubentonii*	0	2	0	0	12	0	Low
G10	*Myotis mystacinus*	0	1	0	0	13	0	Low
G10	*Myotis nattereri*	0	3	0	0	11	0	Low
G10	*Nyctalus leisleri*	0	2	0	0	12	0	Low
G10	*Pipistrellus nathusii*	1	1	0	0	12	0	Low
G10	*Pipistrellus pipistrellus*	6	3	0	0	5	70	Moderate to High
G10	*Pipistrellus pygmaeus*	4	3	0	0	7	32	Low to Moderate
G10	*Plecotus auritus*	1	3	0	0	10	0	Low
G10	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G11	*Myotis daubentonii*	0	5	0	0	9	0	Low
G11	*Myotis mystacinus*	0	0	0	0	14	0	Low
G11	*Myotis nattereri*	0	1	0	0	13	0	Low
G11	*Nyctalus leisleri*	5	3	0	0	6	63	Moderate to High
G11	*Pipistrellus nathusii*	4	3	0	0	7	32	Low to Moderate
G11	*Pipistrellus pipistrellus*	9	2	0	0	3	93	High
G11	*Pipistrellus pygmaeus*	9	1	0	0	4	87	High
G11	*Plecotus auritus*	0	4	0	0	10	0	Low
G11	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G12	*Myotis daubentonii*	0	5	0	0	9	0	Low
G12	*Myotis mystacinus*	0	1	0	0	13	0	Low
G12	*Myotis nattereri*	0	6	0	0	8	0	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	Median Percentile	Bat Activity
G12	*Nyctalus leisleri*	0	4	0	0	10	0	Low
G12	*Pipistrellus nathusii*	0	2	0	0	12	0	Low
G12	*Pipistrellus pipistrellus*	8	3	0	0	3	86	High
G12	*Pipistrellus pygmaeus*	8	2	0	0	4	82	High
G12	*Plecotus auritus*	1	4	0	0	9	0	Low
G12	*Rhinolophus hipposideros*	0	1	0	0	13	0	Low
G13	*Myotis daubentonii*	4	2	0	0	8	0	Low
G13	*Myotis mystacinus*	1	3	0	0	10	0	Low
G13	*Myotis nattereri*	0	2	0	0	12	0	Low
G13	*Nyctalus leisleri*	3	2	0	0	9	0	Low
G13	*Pipistrellus nathusii*	5	1	0	0	8	0	Low
G13	*Pipistrellus pipistrellus*	9	0	0	0	5	90	High
G13	*Pipistrellus pygmaeus*	3	2	0	0	9	0	Low
G13	*Plecotus auritus*	0	0	0	0	14	0	Low
G13	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G14	*Myotis daubentonii*	3	4	0	0	7	32	Low to Moderate
G14	*Myotis mystacinus*	0	2	0	0	12	0	Low
G14	*Myotis nattereri*	0	2	0	0	12	0	Low
G14	*Nyctalus leisleri*	2	4	0	0	8	0	Low
G14	*Pipistrellus nathusii*	5	1	0	0	8	0	Low
G14	*Pipistrellus pipistrellus*	8	3	0	0	3	84	High
G14	*Pipistrellus pygmaeus*	5	3	0	0	6	63	Moderate to High
G14	*Plecotus auritus*	1	2	0	0	11	0	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	Median Percentile	Bat Activity
G14	*Rhinolophus hipposideros*	0	0	0	0	14	0	Low
G15	*Myotis daubentonii*	0	0	0	0	14	0	Low
G15	*Myotis mystacinus*	0	0	0	0	14	0	Low
G15	*Myotis nattereri*	0	0	0	0	14	0	Low
G15	*Nyctalus leisleri*	0	0	0	0	14	0	Low
G15	*Pipistrellus nathusii*	0	1	0	0	13	0	Low
G15	*Pipistrellus pipistrellus*	3	5	0	0	6	63	Moderate to High
G15	*Pipistrellus pygmaeus*	4	1	0	0	9	0	Low
G15	*Plecotus auritus*	0	3	0	0	11	0	Low
G15	*Rhinolophus hipposideros*	0	4	0	0	10	0	Low
G17	*Myotis daubentonii*	4	4	0	0	6	63	Moderate to High
G17	*Myotis mystacinus*	3	5	0	0	6	63	Moderate to High
G17	*Myotis nattereri*	4	6	0	0	4	63	Moderate to High
G17	*Nyctalus leisleri*	2	4	0	0	8	0	Low
G17	*Pipistrellus nathusii*	5	4	0	0	5	63	Moderate to High
G17	*Pipistrellus pipistrellus*	12	2	0	0	0	97	High
G17	*Pipistrellus pygmaeus*	10	3	0	0	1	97	High
G17	*Plecotus auritus*	4	3	0	0	7	32	Low to Moderate
G17	*Rhinolophus hipposideros*	3	3	0	0	8	0	Low
G18	*Myotis daubentonii*	0	5	0	0	9	0	Low
G18	*Myotis mystacinus*	0	2	0	0	12	0	Low
G18	*Myotis nattereri*	0	0	0	0	14	0	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	Median Percentile	Bat Activity
G18	*Nyctalus leisleri*	0	0	0	0	14	0	Low
G18	*Pipistrellus nathusii*	0	2	0	0	12	0	Low
G18	*Pipistrellus pipistrellus*	5	1	0	0	8	0	Low
G18	*Pipistrellus pygmaeus*	4	4	0	0	6	63	Moderate to High
G18	*Plecotus auritus*	2	3	0	0	9	0	Low
G18	*Rhinolophus hipposideros*	0	1	0	0	13	0	Low
G19	*Myotis daubentonii*	4	7	0	0	20	0	Low
G19	*Myotis mystacinus*	5	9	0	0	17	0	Low
G19	*Myotis nattereri*	3	8	0	0	20	0	Low
G19	*Nyctalus leisleri*	5	9	0	0	17	0	Low
G19	*Pipistrellus nathusii*	2	9	0	0	20	0	Low
G19	*Pipistrellus pipistrellus*	21	0	0	0	10	94	High
G19	*Pipistrellus pygmaeus*	10	6	0	0	15	64	Moderate to High
G19	*Plecotus auritus*	5	5	0	0	21	0	Low
G19	*Rhinolophus hipposideros*	0	2	0	0	29	0	Low

Differences in activity between static detector locations split by species and location is presented in the figure below. The centre line indicates the median activity level whereas the box represents the interquartile range (therefore the spread of the middle 50% of nights of activity). The plot for common pipistrelle shows that the activity level for T17 was consistently high.

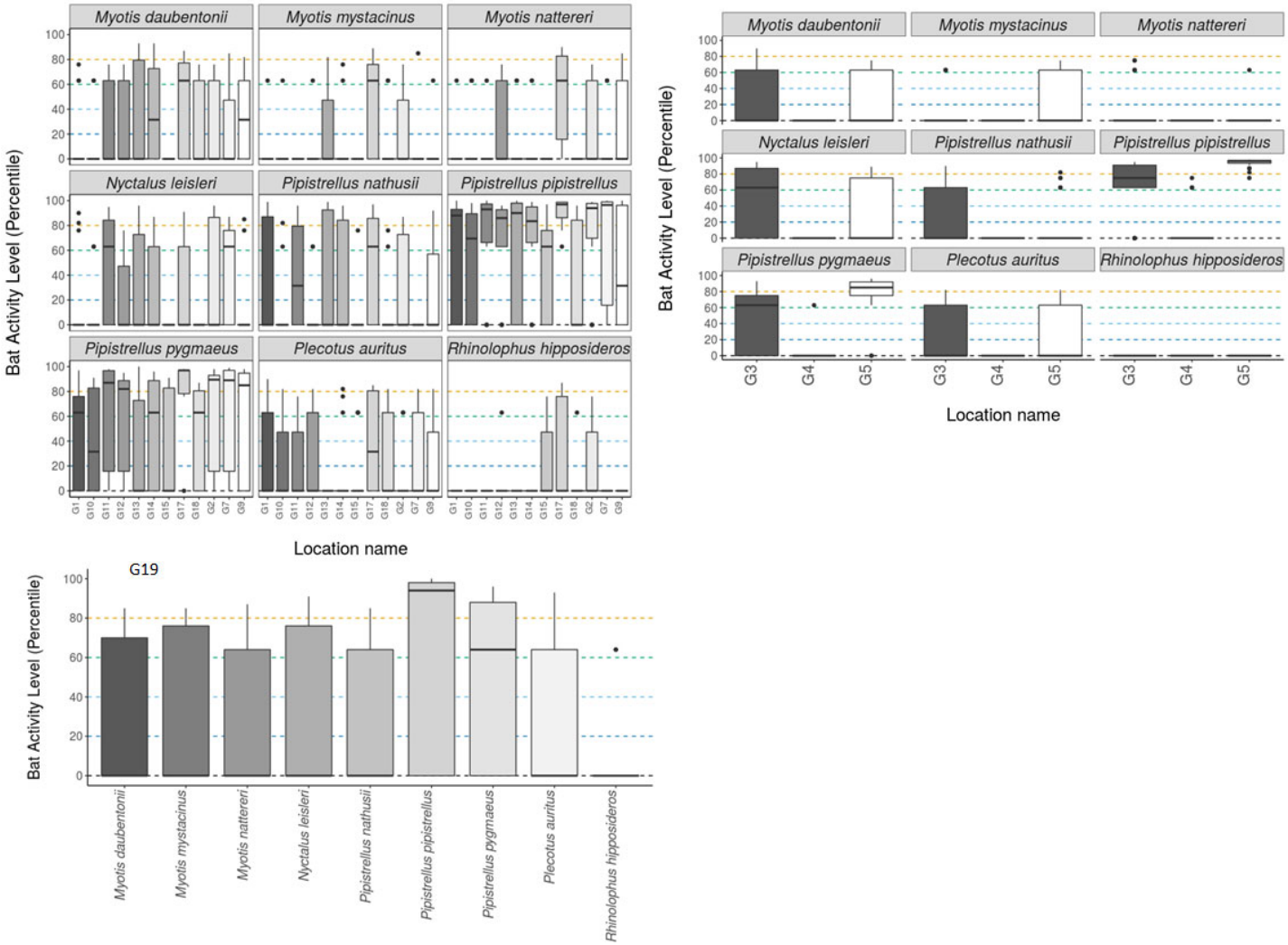


Figure 3-10: Differences in activity between static detector locations, split by species and location during survey period 3 at Gortyrahilly.

The centre line indicates the median activity level whereas the box represents the interquartile range (the spread of the middle 50% of nights of activity). The dots indicate outlier values. Note: *Myotis daubentonii* = Daubenton's bat, *Myotis mystacinus* = whiskered bat, *Myotis nattereri* = Natterer's bat, *Nyctalus leisleri* = Leisler's bat, *Pipistrellus nathusii* = Nathusius' bat, *Pipistrellus pipistrellus* = common pipistrelle, *Pipistrellus pygmaeus* = soprano pipistrelle, *Plecotus auritus* = brown long-eared bat and *Rhinolophus hipposideros* = lesser horseshoe bat. G = gortyrahilly and number = turbine location, so G1 = turbine 1 at Gortyrahilly.

3.4.3.2 Inchamore

A summary table showing the number of nights recorded bat activity fell into each activity band for each species is presented below. Recordings were split into two groups depending on the dates deployed: group 1 (turbines 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10) and group 2 (turbine 11). Each group was analysed in Ecobat separately but is presented collectively in this report.

The maximum of recordings for a single night across all detectors combined on 13/09/2019 was 1,578 recordings where eight species were recorded.

Twelve of the thirteen static locations had at least one night of High Activity during the survey period. No bats were recorded at T8 during this survey period and so information for this table is not included in the results below.

The following Turbine locations are deemed to have a High Bat Activity (for specific bat species) level based on the Percentile Median value: T2 (Leisler's bat), T3 (Leisler's bat), T5 (Leisler's bat), T6, (common pipistrelle), T7, (Daubenton's bat, Leisler's bat and common pipistrelle), T12 (Leisler's bat and common pipistrelle) and T13 (Leisler's bat, Nathusius' bat, common pipistrelle and soprano pipistrelle).

Table 3-14: Summary of Ecobat Analysis Tool for static detectors deployed at Inchamore during survey period 3. I = Inchamore and number = turbine location, so I1 = turbine 1 at Inchamore.

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	Median Percentile	Bat Activity
I1	*Myotis daubentonii*	10	8	0	0	9	63	Moderate to High
I1	*Myotis mystacinus*	2	13	0	0	12	63	Moderate to High
I1	*Myotis nattereri*	3	9	0	0	15	0	Low
I1	*Nyctalus leisleri*	4	9	0	0	14	0	Low
I1	*Pipistrellus nathusii*	0	2	0	0	25	0	Low
I1	*Pipistrellus pipistrellus*	15	4	0	0	8	85	High
I1	*Pipistrellus pygmaeus*	5	10	0	0	12	63	Moderate to High
I1	*Plecotus auritus*	7	10	0	0	10	63	Moderate to High
I1	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I2	*Myotis daubentonii*	4	13	0	0	10	63	Moderate to High
I2	*Myotis mystacinus*	7	14	0	0	6	63	Moderate to High
I2	*Myotis nattereri*	3	9	0	0	15	0	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	Median Percentile	Bat Activity
I2	*Nyctalus leisleri*	5	6	0	0	16	0	Low
I2	*Pipistrellus nathusii*	1	7	0	0	19	0	Low
I2	*Pipistrellus pipistrellus*	22	3	0	0	2	96	High
I2	*Pipistrellus pygmaeus*	13	9	0	0	5	75	Moderate to High
I2	*Plecotus auritus*	11	10	0	0	6	75	Moderate to High
I2	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I3	*Myotis daubentonii*	0	6	0	0	21	0	Low
I3	*Myotis mystacinus*	0	3	0	0	24	0	Low
I3	*Myotis nattereri*	0	3	0	0	24	0	Low
I3	*Nyctalus leisleri*	2	6	0	0	19	0	Low
I3	*Pipistrellus nathusii*	2	3	0	0	22	0	Low
I3	*Pipistrellus pipistrellus*	6	3	0	0	18	0	Low
I3	*Pipistrellus pygmaeus*	3	3	0	0	21	0	Low
I3	*Plecotus auritus*	0	3	0	0	24	0	Low
I3	*Rhinolophus hipposideros*	1	1	0	0	25	0	Low
I4	*Myotis daubentonii*	6	12	0	0	9	63	Moderate to High
I4	*Myotis mystacinus*	0	13	0	0	14	0	Low
I4	*Myotis nattereri*	4	11	0	0	12	63	Moderate to High
I4	*Nyctalus leisleri*	6	5	0	0	16	0	Low
I4	*Pipistrellus nathusii*	1	3	0	0	23	0	Low
I4	*Pipistrellus pipistrellus*	11	6	0	0	10	63	Moderate to High
I4	*Pipistrellus pygmaeus*	13	5	0	0	9	75	Moderate to High
I4	*Plecotus auritus*	4	11	0	0	12	63	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	Median Percentile	Bat Activity
I4	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I5	*Myotis daubentonii*	0	2	0	0	25	0	Low
I5	*Myotis mystacinus*	0	1	0	0	26	0	Low
I5	*Myotis nattereri*	0	2	0	0	25	0	Low
I5	*Nyctalus leisleri*	2	9	0	0	16	0	Low
I5	*Pipistrellus nathusii*	0	1	0	0	26	0	Low
I5	*Pipistrellus pipistrellus*	5	5	0	0	17	0	Low
I5	*Pipistrellus pygmaeus*	3	4	0	0	20	0	Low
I5	*Plecotus auritus*	0	9	0	0	18	0	Low
I5	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I6	*Myotis daubentonii*	1	10	0	0	16	0	Low
I6	*Myotis mystacinus*	0	6	0	0	21	0	Low
I6	*Myotis nattereri*	0	6	0	0	21	0	Low
I6	*Nyctalus leisleri*	6	4	0	0	17	0	Low
I6	*Pipistrellus nathusii*	4	4	0	0	19	0	Low
I6	*Pipistrellus pipistrellus*	10	5	0	0	12	63	Moderate to High
I6	*Pipistrellus pygmaeus*	9	4	0	0	14	0	Low
I6	*Plecotus auritus*	0	6	0	0	21	0	Low
I6	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I7	*Myotis daubentonii*	2	8	0	0	17	0	Low
I7	*Myotis mystacinus*	1	11	0	0	15	0	Low
I7	*Myotis nattereri*	0	10	0	0	17	0	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	Median Percentile	Bat Activity
I7	*Nyctalus leisleri*	6	7	0	0	14	0	Low
I7	*Pipistrellus nathusii*	1	5	0	0	21	0	Low
I7	*Pipistrellus pipistrellus*	12	8	0	0	7	75	Moderate to High
I7	*Pipistrellus pygmaeus*	6	10	0	0	11	63	Moderate to High
I7	*Plecotus auritus*	2	5	0	0	20	0	Low
I7	*Rhinolophus hipposideros*	0	1	0	0	26	0	Low
I8	*Myotis daubentonii*	0	3	0	0	24	0	Low
I8	*Myotis mystacinus*	0	4	0	0	23	0	Low
I8	*Myotis nattereri*	0	3	0	0	24	0	Low
I8	*Nyctalus leisleri*	3	7	0	0	17	0	Low
I8	*Pipistrellus nathusii*	2	3	0	0	22	0	Low
I8	*Pipistrellus pipistrellus*	11	7	0	0	9	63	Moderate to High
I8	*Pipistrellus pygmaeus*	3	8	0	0	16	0	Low
I8	*Plecotus auritus*	0	6	0	0	21	0	Low
I8	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I9	*Myotis daubentonii*	1	5	0	0	21	0	Low
I9	*Myotis mystacinus*	1	7	0	0	19	0	Low
I9	*Myotis nattereri*	0	10	0	0	17	0	Low
I9	*Nyctalus leisleri*	7	9	0	0	11	63	Moderate to High
I9	*Pipistrellus nathusii*	6	3	0	0	18	0	Low
I9	*Pipistrellus pipistrellus*	18	6	0	0	3	85	High
I9	*Pipistrellus pygmaeus*	10	6	0	0	11	63	Moderate to High
I9	*Plecotus auritus*	0	7	0	0	20	0	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	Median Percentile	Bat Activity
I9	*Rhinolophus hipposideros*	0	0	0	0	27	0	Low
I10	*Myotis daubentonii*	13	7	0	0	7	75	Moderate to High
I10	*Myotis mystacinus*	13	10	0	0	4	75	Moderate to High
I10	*Myotis nattereri*	1	13	0	0	13	63	Moderate to High
I10	*Nyctalus leisleri*	9	8	0	0	10	63	Moderate to High
I10	*Pipistrellus nathusii*	8	12	0	0	7	63	Moderate to High
I10	*Pipistrellus pipistrellus*	25	1	0	0	1	98	High
I10	*Pipistrellus pygmaeus*	19	4	0	0	4	91	High
I10	*Plecotus auritus*	17	4	0	0	6	85	High
I10	*Rhinolophus hipposideros*	1	5	0	0	21	0	Low
I11	*Myotis daubentonii*	10	9	0	0	6	75	Moderate to High
I11	*Myotis mystacinus*	8	11	0	0	6	75	Moderate to High
I11	*Myotis nattereri*	0	3	0	0	22	0	Low
I11	*Nyctalus leisleri*	12	9	0	0	4	75	Moderate to High
I11	*Pipistrellus nathusii*	0	9	0	0	16	0	Low
I11	*Pipistrellus pipistrellus*	22	0	0	0	3	97	High
I11	*Pipistrellus pygmaeus*	13	6	0	0	6	81	High
I11	*Plecotus auritus*	3	9	0	0	13	0	Low
I11	*Rhinolophus hipposideros*	0	2	0	0	23	0	Low

Differences in activity between static detector locations split by species and location is presented in the figure below. The centre line indicates the median activity level whereas the box represents the interquartile range (therefore the spread of the middle 50% of nights of activity). The plot for common pipistrelle shows that the activity level for both T2, T10 and T11 was consistently high.

The centre line indicates the median activity level whereas the box represents the interquartile range (the spread of the middle 50% of nights of activity). The dots indicate outlier values. Note: *Myotis daubentonii* = Daubenton's bat, *Myotis mystacinus* = whiskered bat, *Myotis nattereri* = Natterer's bat, *Nyctalus leisleri* = Leisler's bat, *Pipistrellus nathusii* = Nathusius' bat, *Pipistrellus pipistrellus* = common pipistrelle, *Pipistrellus pygmaeus* = soprano pipistrelle, *Plecotus auritus* = brown long-eared bat and *Rhinolophus hipposideros* = lesser horseshoe bat. I = Inchamore and number = turbine location, so I1 = turbine 1 at Inchamore.

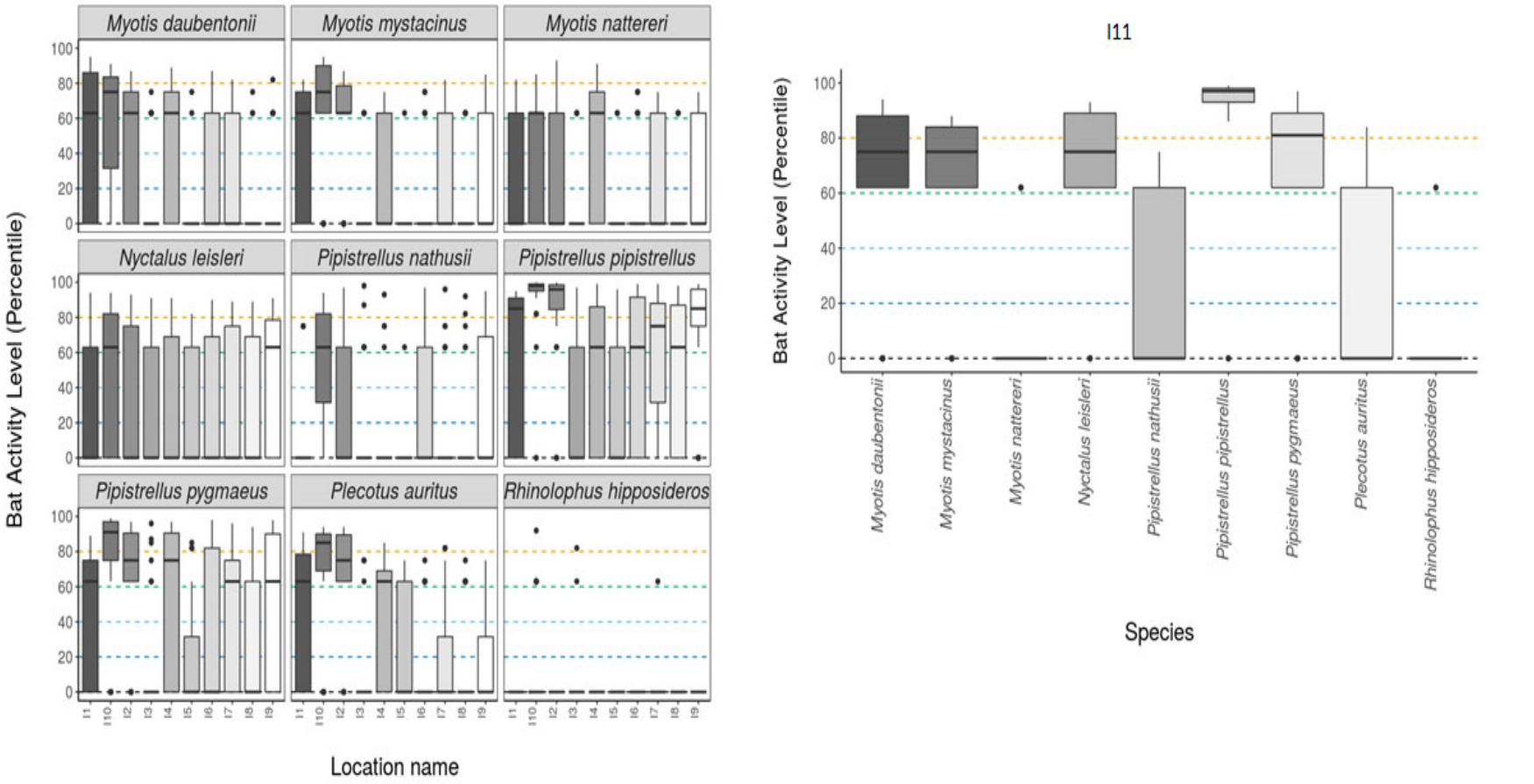


Figure 3-11: Differences in activity between static detector locations, split by species and location during survey period 3 at Inchamore.

3.5 Bat Roost Surveys

3.5.1 Preliminary Ecological Appraisal

Review of aerial photography for the proposed wind farm sites at Inchamore and Gortyrahilly indicates that both sites are predominantly comprised of conifer plantation and open upland vegetation, with small parcels of pasture in lower lying areas of the sites. Watercourses are limited to small 1st order streams that are generally open or run adjacent to forest blocks. These watercourses and hedgerows/ treelines bounding pasture do provide some connectivity to the wider landscape, but overall the sites support relatively poor connectivity. In accordance with the criteria outlined in Table 2-4, the commuting and foraging habitats over most of the sites are of low suitability for bats, with the low lying, more sheltered areas of pasture supporting moderate suitability. A summary of foraging and roosting habitats for Irish bats is included in Appendix B.

3.5.2 Bat Roost Inspection Survey

3.5.2.1 Trees

Inchamore

The cover of broadleaved trees at the proposed site at Inchamore is low, with very few mature trees present. No trees of suitability as roosting or resting places for bats were recorded at this site.

Gortyrahilly

The cover of broadleaved trees at the proposed site at Gortyrahilly is limited to lower lying areas of pasture at the northern and southern extremes of the site. Two trees supporting suitability as roosting habitat for bats were recorded at Gortyrahilly: one Ash (*Fraxinus excelsior*) tree of moderate suitability due to features including broken limbs, a cracked limb and wounds caused by a limb drop; and one Oak (*Quercus robur*) of low suitability for bats in heavy ivy growth were both recorded at the northern-most tip of the site. The location of these trees is indicated in Figure 3-13.

3.5.2.2 Structures

Inchamore

Four structures were identified within the proposed site at Inchamore during the preliminary ecological appraisal. Three of these structures were completely derelict, with no roof, windows or doors (as per example in Plate 3-1). These buildings were of negligible suitability for bats and as such, are not assessed further in this report.

Plate 3-1: Example of derelict buildings present at Inchamore

A structure located on the eastern boundary of the site (Figure 3-12) was a single storey outbuilding constructed of stone with cement rendering to the walls and a corrugated roof. The door to the building was missing. Internally, the building supported limited potential for individual bats in joints of roof beams. No evidence of bats was observed during the external or internal inspection of the structure. This structure does not provide appropriate conditions to be used by bats on a regular basis or by larger numbers of bats and is considered to be of low suitability as a roosting habitat.

Plate 3-2: Outbuilding located at the eastern boundary of the site at Inchamore

No bridges with potential to support bats were identified within the proposed wind farm boundary at Inchamore.

Gortyrahilly

Two clusters of buildings were identified within the proposed site at Gortyrahilly during the preliminary ecological appraisal; one in the townland of Gortyrahilly at the north of the site and one in the townland of Cahernacaha at the south of the site.

The buildings at Gortyrahilly to the north of the site comprised two disused dwellings and two farm outbuildings.

Disused dwelling (Dwelling G1)

This building is a two-storey house with rendered walls and a slate roof. Two stone outbuildings with a corrugated roof are attached to the house (see Photos 1 and 2, Plate 3-3). Potential access points for bats include slipped roof tiles, raised flashing to the chimney and an open downstairs window. There are also gaps in the soffit and ridge tiles at the rear of the house. The attached outbuildings contain gaps around the window shutter and door and there are also small gaps between the stonework of the walls. Neither the dwelling nor outbuildings were accessible for internal inspection. No evidence of bats was observed during the external inspection. This building is considered to be of high suitability as a roosting habitat due to the size, shelter and conditions provided by the structure. The surrounding habitat provides suitable foraging and commuting areas at a treelined local road to the south and pasture bounded by hedgerows/treelines and scrub to the north.

Derelict Dwelling (Dwelling G2)

A derelict two-storey stone cottage with slate roof (Photo 3 and 4, Plate 3-3). There are potential entry points for bats via broken and open windows, gaps in the roof tiles and soffits. There are also gaps between exposed stonework at the southern end of the building (Photo 5, Plate 3-3). This building was not accessible for internal inspection. No evidence of bats was observed during the external inspection. This building is considered to be of moderate suitability for bats due to the size, shelter and conditions provided by the structure. The building is falling into disrepair, which makes it more subject to draughts and as such less likely to provide conditions required by a roost of high conservation status.

Outbuilding 1

A single storey rendered outbuilding with a corrugated roof (Photo 5, Plate 3-3). There were potential access points via gaps around the door and under the roof. This building was not accessible for internal inspection. No evidence of bats was observed during the external inspection. This building is considered to be of moderate suitability for bats due to the size, shelter and conditions provided by the structure.

Outbuilding 2

A single storey outbuilding constructed of stone with a corrugated roof (Photo 6, Plate 3-3). There are potential access points for bats via gaps between the stonework and around the doors. Internally, there are potential roosting features within the joints of timber beams. No evidence of bats was recorded during the internal or external inspections. This building is considered to be of moderate suitability for bats due to the size, shelter and conditions provided by the structure.

1. Disused dwelling and attached stone outbuilding

2. Rear view of dwelling indicating potential access points in raised ridge tiles and soffit

3. Derelict dwelling indicating potential access points via soffit, ridge tiles and gaps in roof tiles and open window.

4. Rear and side view of disused dwelling showing exposed stonework

5. Single storey outbuilding

6. Stone barn

Plate 3-3: Photographs of disused farmhouses and associated outbuildings at the north of the proposed site at Gortyrahilly

There were two dwellings at Cahernacaha, at the south of the proposed Gortyrahilly Wind Farm. Dwelling C1 was a modern two-storey building with a slate roof. A single storey outbuilding was also present to the west of the house (Plate 3-4). These buildings were not accessed for an internal inspection. The house and outbuilding were in good repair and no obvious entry points for bats were recorded.

Plate 3-4: Dwelling C1 at Cahernacaha

Dwelling C2 was a two-storey dwelling with a slate roof (Plate 3-5). There was a potential access point for bats via a raised ridge tile. This building is considered to be of high suitability as a roosting habitat due to the size, shelter and conditions provided by the structure. The surrounding habitat provides suitable foraging and commuting areas within pasture bounded by hedgerows/treelines and scrub located around the house.

Plate 3-5: Dwelling C2 at Cahernacaha

Bridges

A double arched stone culvert under a local road at Gortnabinna to the south of the proposed site (W 15638 71322) (Plate 3-6) supports moderate suitability for roosting bats in several deep crevices present between the stone slabs forming the arches. No evidence of roosting bats was recorded at the bridge during the inspection surveys undertaken on 17th August 2019 and 27th February 2020; this culvert is classified as Grade 2[13].

[13] *0 = no potential (no suitable crevices); 1 = crevices present may be of use to bats; 2 = crevices ideal for bats but no evidence of usage; and 3 = evidence of bats (e.g. bats present, droppings, grease marks, urine staining, claw marks or the presence of bat fly pupae) (Billington and Norman, 1997).

The watercourse below the culvert is not the type favoured for foraging by Daubenton's bat, but according to Roche *et al.* (2014), maternity colonies show a preference for being situated in the vicinity of bog, marsh and heath. This is reinforced by the results of the static detector survey, which suggests the general wind farm area is still used by this species even if no roosts are present.

Plate 3-6: Double arch stone culvert with moderate suitability for roosting bats

3.5.3 Emergence Roost Survey

3.5.3.1 Inchamore

The outbuilding at Inchamore was sufficiently accessible to enable a thorough and complete internal inspection of the building. Sufficient information was obtained during the inspection to establish the absence of bats at this structure at the time of survey. As such a further emergence survey was not considered necessary.

3.5.3.2 Gortyrahilly

Gortyrahilly Townland

An emergence survey of the buildings in the townland of Gortyrahilly was undertaken by two surveyors on 16th August 2019. One Natterer's bat and seven pipistrelle bats, comprising both common and soprano pipistrelle bats were recorded emerging from the soffit at the rear of the disused house (Dwelling G1; location illustrated in Figure 3-13). The bats foraged around the building and also along the treeline to the south of the building. The passive monitor recording adjacent to this building recorded common and soprano pipistrelle, Leisler's bat, Natterer's bat and one brown long-eared bat. Summary data from the passive monitor is included in Appendix A.

Four pipistrelle bats, comprising both common and soprano pipistrelle bats were recorded emerging from the derelict house (Dwelling G2; location illustrated in Figure 3-13). Three bats emerged from the soffit at the front of the house and one bat emerged from the roof at the rear of the house (exact exit point not observed). The bats foraged around the house for the duration of the survey.

Leisler's bat was also recorded commuting overhead at 21:34 (35 minutes after sunset). No emergent bats or bat roosts were identified at the outbuildings present at the site.

Cahernacaha Townland

An emergence survey of the buildings at Cahernacaha was undertaken by two surveyors on 17th August 2019. Approximately 40 common pipistrelle and ten soprano pipistrelle bats emerged from the roof of Dwelling C2 (location illustrated in Figure 3-13). No other species were recorded during the course of the emergence survey.

No bats were recorded emerging from Dwelling C1 at Cahernacaha (Plate 3-4).

3.5.4 Interpretation and Evaluation of Roost Survey Results

3.5.4.1 Inchamore

Presence/ absence: There was no evidence of bats within the outbuilding at Inchamore during the external/ internal inspection.

Population size class assessment: N/A

Site status assessment: The outbuilding is of low suitability for roosting bats due to the lack of suitable roosting features to support larger numbers of bats. No evidence of bats was recorded during the internal inspection of the building.

No potential or actual tree roosts were recorded at the proposed site at Inchamore.

No caves or other underground features are known to exist at the proposed site and its environs.

The location of the potential bat roost at Inchamore is illustrated in Figure 3-12.

3.5.4.2 Gortyrahilly

Gortyrahilly and Gortnabinna Townland

Presence/ absence: Seven pipistrelle (soprano and common pipistrelle) and one natterer's bat were observed emerging from the disused house Dwelling G1 at Gortyrahilly (W 16685 73416).

Four pipistrelles (soprano and common pipistrelle) were observed emerging from the derelict house Dwelling G2 at Gortyrahilly (W 16715 73463).

No evidence of bats was observed within the outbuildings at Gortyrahilly during the external/internal inspections or emergence survey.

Population size class assessment: The disused house and derelict house at Goryrahilly both support minor summer roosts, likely a small group of males.

Site status assessment: The disused house Dwelling G1 at Gortyrahilly was considered to be of high suitability for bats due to the size, shelter and conditions provided by the structure. The surrounding habitat provides suitable foraging and commuting areas at a treelined local road to the south and pasture bounded by hedgerows/treelines and scrub to the north. The emergence survey confirmed that the disused house supports a minor summer roost for pipistrelle and natterer's bat that is likely to be a small group of male bats.

The derelict house Dwelling G2 at Gortyrahilly was considered to be of moderate suitability for bats; although the building was in a bad state of repair it did contain features that were suitable to provide shelter and protection for bats. The emergence survey confirmed that the abandoned house supports a minor common and soprano pipistrelle roost that is likely to be a small group of male bats.

The outbuildings on site were of moderate suitability for bats. However, no evidence of roosting bats was observed during the inspection or emergence survey.

The bridge located to the south of the site at Gortnabinna was of moderate suitability for bats. However, no evidence of roosting bats was observed during the inspection survey.

In winter bats may roost in parts of buildings such as cavity walls or around window frames in cooler areas with stable temperatures. The potential for bats to hibernate in the buildings to the north of the site at Gortyrahilly or deep within cavities in the bridge at Gortnabinna cannot be excluded. No caves or other underground features are known to exist at the proposed site and its environs.

Two potential tree roosts were recorded at Gortyrahilly.

The location of the actual and potential roosts at Gortyrahilly is illustrated in Figure 3-13.

Cahernacaha Townland

Approximately 50 pipistrelles (40 common pipistrelle and ten soprano pipistrelle) were observed emerging from Dwelling C2 at Cahernacaha (W 14770 70582).

No bats were recorded emerging from Dwelling C1 at Cahernacaha (W 14821 70509).

Population size class assessment: Dwelling C2 at Cahernacaha supports a common and soprano pipistrelle maternity roost.

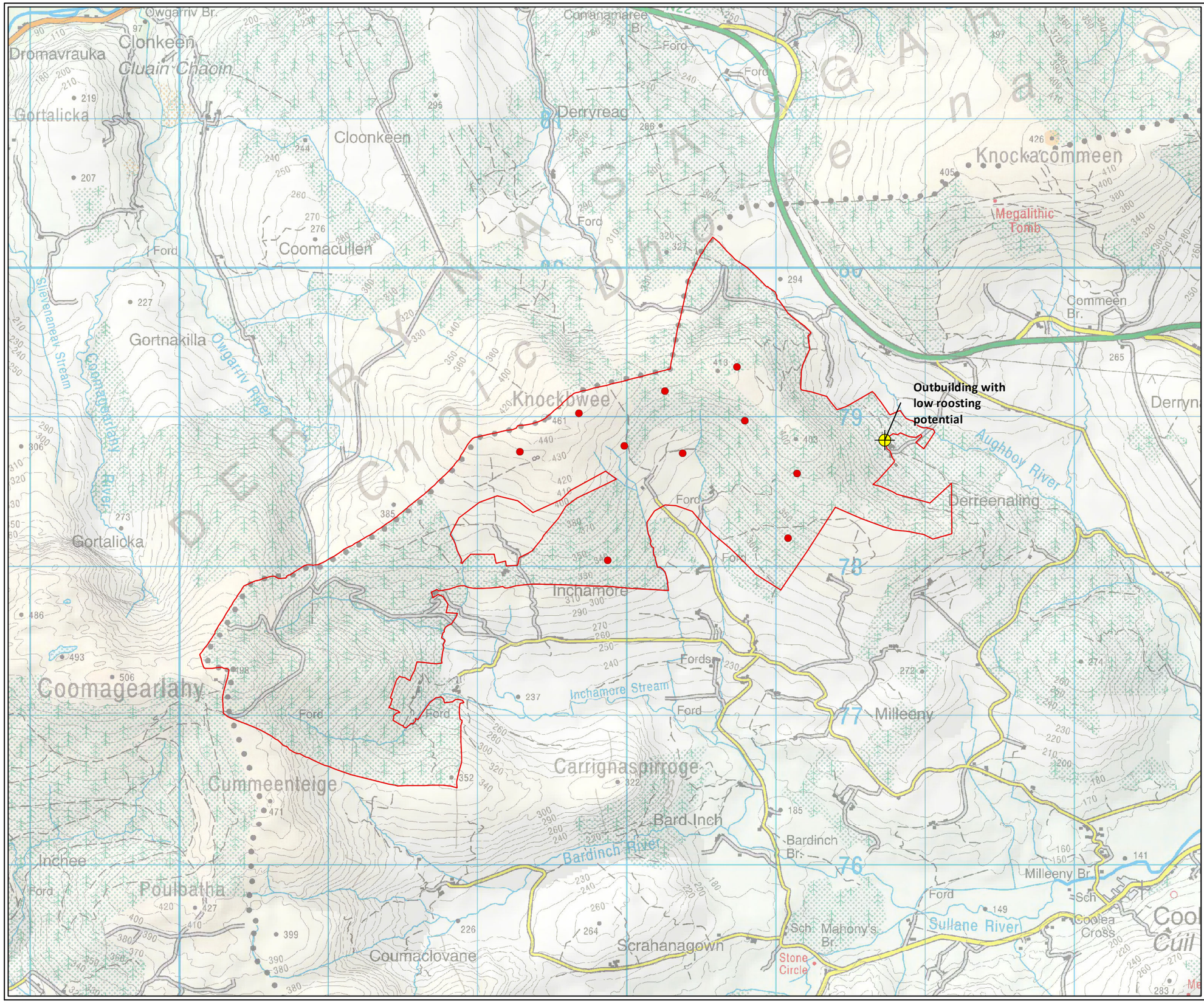
Site status assessment: Dwelling C1 at Cahernacaha did not support any obvious entry and exit points for bats and no bats were recorded during the emergence survey.

Dwelling C2 at Cahernacaha was considered to be of high suitability as a roosting habitat due to the size, shelter and conditions provided by the structure. The surrounding habitat provides suitable foraging and commuting areas within pasture bounded by hedgerows/treelines and scrub located around the house. The emergence survey confirmed that the dwelling supports a common and soprano pipistrelle maternity roost.

The potential for bats to hibernate in the buildings at Cahernacaha cannot be excluded. No caves or other underground features are known to exist at Cahernacaha and its environs.

The location of the roost at Cahernacaha is illustrated in Figure 3-13.

Path: R:\Map Production\2019\P2014\Workspace\Bat Survey 2019 Report\P2014_GIS_Fig3-6_BatRoosts_Inchamore_A3.mxd



TITLE: Location of Potential Bat Roosts at the Proposed Wind Farm Site at Inchamore

PROJECT: Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020

FIGURE NO:	3.6		
CLIENT:	SSE Renewables		
SCALE:	1:25000	**REVISION:**	0
DATE:	31/03/2020	**PAGE SIZE:**	A3

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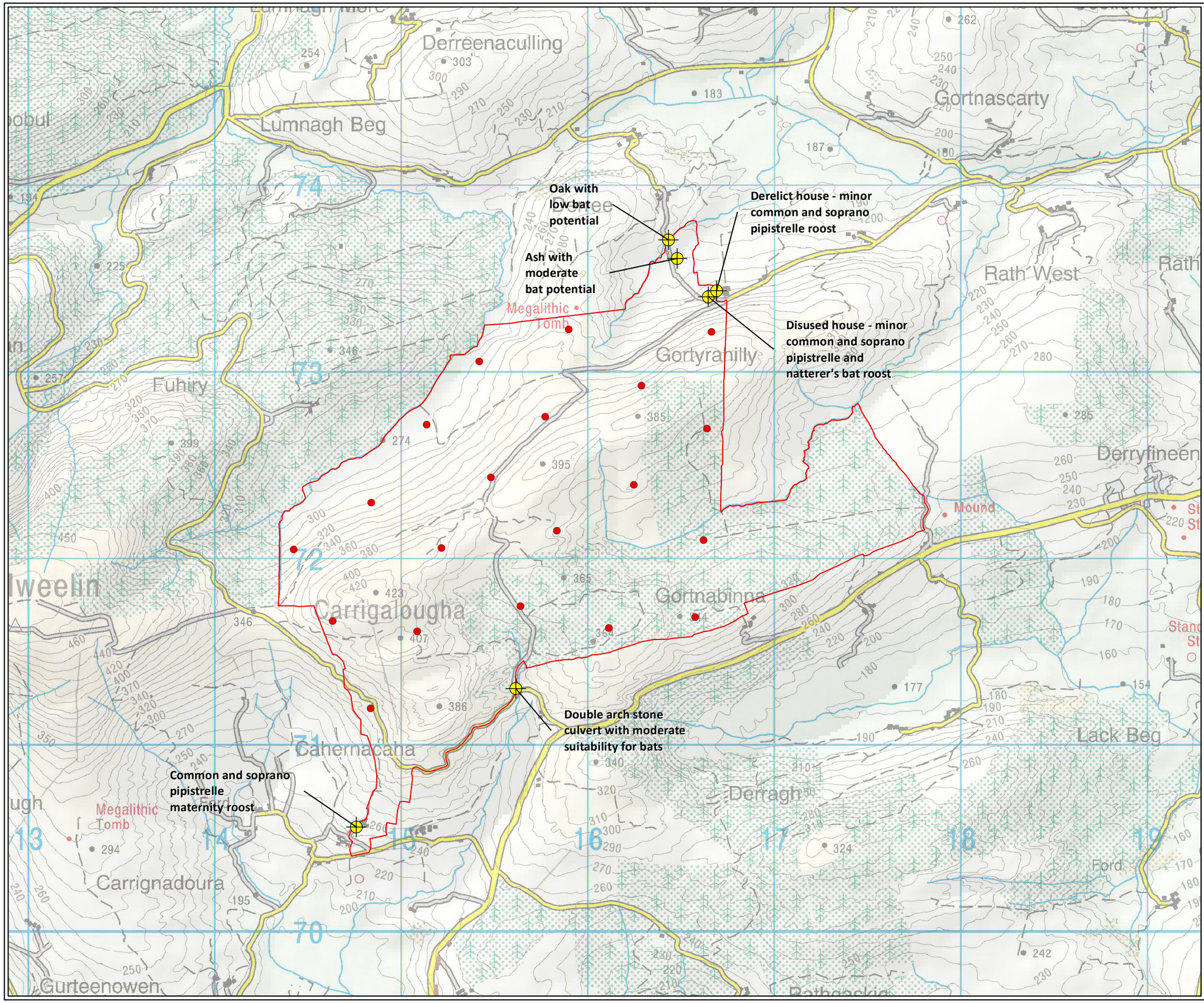
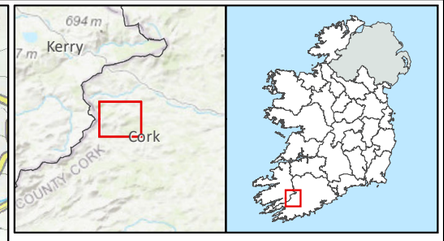
Path: R:\Map Production\2019\P2014\Workspace\Bat Survey 2019 Report\P2014_GIS_Fig3-7_BatRoosts_Gortyrahilly_A3.mxd





Potential Bat Roost

Indicative Turbine Locations

Site Boundary

TITLE:	Location of Bat Roosts at the Proposed Wind Farm Site at Gortyrahilly		
PROJECT:	Gortyrahilly and Inchamore Wind Farms Bat Survey 2019/2020		
FIGURE NO:	3.7		
CLIENT:	SSE Renewables		
SCALE:	1:20000	**REVISION:**	0
DATE:	31/03/2020	**PAGE SIZE:**	A3

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3.6 Summary of the results of 2019/2020 bat surveys

Table 3-15 provides a summary of the bat assessment. It outlines whether a bat species identified for the desktop study was subsequently recorded within the proposed wind farm during the bat surveys that took place in 2019 and 2020.

Table 3-15: Bat Survey Summary Results

Bat Species	Desktop Study (NBDC & NPWS)	2019 Activity Surveys	2019 Static Detector Surveys	2019/20 Roost Surveys
Brown long-eared bat	✓	X	✓	X
Common pipistrelle	✓	✓	✓	✓
Daubenton's bat	✓	X	✓	X
Leisler's bat	✓	✓	✓	X
Lesser horseshoe bat	✓	X	✓	X
Nathusius' bat	✓	X	✓	X
Natterer's bat	X	✓	✓	✓
Soprano pipistrelle	✓	✓	✓	✓
Whiskered bat	X	X	✓	X

4. DISCUSSION

The methodology for the 2019 and 2020 bat surveys at Gortyrahilly and Inchamore wind farms adhered to SNH (2019) guidance for assessing the impact of proposed wind farm developments on local bat species. Monthly activity surveys were undertaken between May to October 2019. Three rounds of static detectors were also deployed during this time period, for a minimum of 10 nights per round per detector. Roost surveys were also conducted including preliminary ecological appraisal, bat roost inspection and emergence surveys. The latter were conducted in August 2019 and February 2020.

During activity surveys during the summer of 2019, a total of four species of bats were recorded: common pipistrelle, soprano pipistrelle, Leisler's bat and Natterer's bat. Common pipistrelle was recorded most frequently across both sites and Natterer's bat the least.

During static detector surveys, a total of nine species of bat were recorded. In addition to the four species already recorded during activity surveys, Nathusius' bat, Daubenton's bat, whiskered bat, brown long-eared bat and lesser horseshoe bat were also recorded.

The Ecobat analysis showed six out of 14 detectors recorded at least one night of high bat activity in round one (spring), ten out of 18 detectors recorded at least one night of high bat activity in round two (summer) and eleven out of 17 detectors recorded at least one night of high bat activity in round three (autumn) at Gortyrahilly. Similarly, for Inchamore, it showed five out of 10 detectors recorded at least one night of high bat activity in round one (spring), seven out of 10 detectors recorded at least one night of high bat activity in round two (summer) and five out of 11 detectors recorded at least one night of high bat activity in round three (autumn).

All bats recorded are classified as 'Least Concern' on the Irish Red List and protected under the EU Habitats Directive Annex IV and Wildlife Acts. Only one species was also listed as Annex II under the EU Habitats Directive: lesser horseshoe bat.

During August roost surveys, a total of seven potential roosts were identified. Of these, there were only three confirmed roosts. Three species were recorded during emergence surveys (common pipistrelle, soprano pipistrelle and Natterer's bat).

No actual bat roosts were identified at the Inchamore site following inspection of trees and buildings (only one low potential outbuilding was present in the south east of the site).

At Gortyrahilly, of the six potential roosts, three were confirmed via emergence surveys. These included a disused house Dwelling G1 and derelict house Dwelling G2 were present in the north east of the site. The disused house Dwelling G1 was classified as high suitability for bats and was confirmed as a minor summer roost site for male common pipistrelle, soprano pipistrelle and Natterer's bat. The derelict house Dwelling G2 was classified as moderate suitability for bats and was confirmed as a minor summer roost site for male common and soprano pipistrelle bats. The final confirmed summer roost was in the south west of the Gortyrahilly site and was a high suitability dwelling (Dwelling C2) that acted as a maternity roost for common and soprano pipistrelles. A low potential oak tree, moderate potential ash tree and moderate potential double-arched stone culvert were discounted as roosts at Gortyrahilly.

During winter roost surveys, no evidence of winter roosting bats was recorded either at Gortyrahilly or Inchamore. While the buildings recorded during the summer roost surveys (disused house and derelict house) at Gortyrahilly are unlikely to provide the consistent cool conditions required by hibernating bats, the presence of low numbers of bats within these structures cannot be excluded.

No trees or structures of potential use as winter roosts were recorded at Inchamore.

There is potential for low-level cumulative impacts to a minor roost of common pipistrelle located 0.7 km south of the Gortyrahilly recorded during surveys for Derragh wind farm.

4.1 Constraints

As detailed earlier, all Irish bats are protected under the Wildlife Act (Revised). Destruction, alteration or evacuation of a known bat roost is a notifiable action under current legislation and a derogation licence must be obtained from the National Parks and Wildlife Service (NPWS) before works can commence.

In addition, it should be noted that any works interfering with bats and especially their roosts, may only be carried out under a licence to derogate from Regulation 23 of the Habitats Regulations 1997, (which transposed the EU Habitats Directive into Irish law) issued by the NPWS.

4.2 Potential Impacts

As outlined by Scottish Natural Heritage (2019), wind farms can affect bats in the following ways:

- Collision mortality, barotrauma and other injuries
- Loss or damage to commuting and foraging habitat
- Loss of, or damage to roosts
- Displacement of individuals or populations

4.3 Recommendations

No demolition or construction works are proposed to the structures that are the subject of this report. As such, loss of, or damage to roosts will be avoided.

Disturbance of occupied roosts should be prevented by restricting construction activities in their vicinity.

There should be no direct illumination of known bat roosts as identified in this report. Lighting shall be directed away from the roosts by the use of directional lighting (i.e. lighting which only shines on the proposed works and not nearby countryside) to prevent overspill. This shall be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.

Should the stone culvert (at W 15638 71322) require any strengthening works, this should be done under the supervision of a licensed bat specialist who will identify any deep crevices which will be retained for use by bats or alternative roosts provided.

If, for unforeseen reasons, works to a structure identified as bat roost become unavoidable it will be necessary to apply for a derogation licence from NPWS wildlife licencing section before works are allowed. The destruction of known roosts cannot proceed without a derogation licence (Section 23 & 34 licence prescribed under the Wildlife Act 1976 (as amended); and Section 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) being in place and specific mitigation measures being approved in advance with NPWS.

A 50 m buffer distance from turbine blade tip to any key habitat feature (e.g. woodland, wetlands) should be applied. This is especially relevant for turbines located within or near to forestry towards the east of the Gortyrahilly site and for much of the Inchamore site. This should be achieved either by turbine micro-siting or trimming of key habitat features both during construction and operation of the proposed wind farm.

5. CONCLUSION

In general, the landscape in which the proposed wind farm sites are situated is of low to moderate suitability for common pipistrelle, soprano pipistrelle, brown long-eared bat, Leisler's bat, Daubenton's bat, whiskered bat, Natterer's bat and lesser horseshoe. It is classed as of low suitability for Nathusius' pipistrelle. Nine species of bats have been recorded as present at the proposed Gortyrahilly and Inchamore wind farm sites during 2019 bat surveys. All are listed as 'Least Concern' on the Irish Red List and one is listed as 'Annex II' under the EU Habitats Directive: lesser horseshoe bat. No confirmed roosts were present at Inchamore site and three confirmed summer roosts (two minor and one maternity roost for common pipistrelle, soprano pipistrelle and Natterer's bat) were present at Gortyrahilly site. Although no confirmed winter roosts were present, it cannot be discounted that the summer roosts at Gortyrahilly do not provide suitable hibernation roosts for low numbers of bats. Damage and disturbance to these roosts should be avoided. Mitigation measures such as providing a 50 m buffering distance from turbine blade to key habitat features should be implemented during construction and operation of the proposed wind farm sites.

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FEHILY TIMONEY
30 YEARS

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APPENDIX A

Summary of Bat Calls
Recorded on Passive Monitor
During Roost Surveys

Summary table of bat calls recorded on the passive monitor at Gortyrahilly on 17th August, 2019

Common Pipistrelle	Soprano Pipistrelle	Leisler's Bat	Natterer's Bat	*Myotis* Species	Brown Long-eared Bat
1185	228	25	9	6	1

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30 YEARS

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APPENDIX B

Description of Irish Bat Species

Ireland has ten known bat species from two distinct families. Each is briefly described below. For a more comprehensive overview see Roche *et al* (2014). The conservation status of each species is derived from NPWS (2013).

Vespertilionidae:

Common pipistrelle (*Pipistrellus pipistrellus*)
This species was only recently separated from its sibling, the soprano or brown pipistrelle *P. pygmaeus*, which is detailed below (Barratt et al, 1997). The common pipistrelle's echolocation calls peak at 45 kHz. The species forages along linear landscape features such as hedgerows and treelines as well as within woodland. The conservation status of this species is Favourable.

Soprano pipistrelle (*Pipistrellus pygmaeus*)
The soprano pipistrelle's echolocation calls peak at 55 kHz, which distinguishes it readily from the common pipistrelle on detector. The pipistrelles are the smallest and most often seen of our bats, flying at head height and taking small prey such as midges and small moths. Summer roost sites are usually in buildings but tree holes and heavy ivy are also used. Roost numbers can exceed 1,500 animals in mid-summer. The conservation status of this species is Favourable.

Nathusius' pipistrelle (*Pipistrellus nathusii*)
Nathusius' pipistrelle is a recent addition to the Irish fauna and has mainly been recorded from the north-east of the island in Counties Antrim and Down (Richardson, 2000) and also in Fermanagh, Longford and Cavan. It has also been recorded in Counties Cork and Kerry (Kelleher, 2005). However, the known resident population is enhanced in the autumn months by an influx of animals from Scandinavian countries. The conservation status of this species is Favourable.

Leisler's bat (*Nyctalus leisleri*)
This species is Ireland's largest bat, with a wingspan of up to 320mm; it is also the third most common bat, preferring to roost in buildings, although it is sometimes found in trees and bat boxes. It is the earliest bat to emerge in the evening, flying fast and high with occasional steep dives to ground level, feeding on moths, caddis-flies and beetles. The echolocation calls are sometimes audible to the human ear being around 15 kHz at their lowest. The audible chatter from their roost on hot summer days is sometimes an aid to location. The conservation status of this species is Favourable.

Brown long-eared bat (*Plecotus auritus*)
This species of bat is a 'gleaner', hunting amongst the foliage of trees and shrubs, and hovering briefly to pick a moth or spider off a leaf, which it then takes to a sheltered perch to consume. They often land on the ground to capture their prey. Using its nose to emit its echolocation, the long-eared bat 'whispers' its calls so that the insects, upon which it preys, cannot hear its approach (and hence, it needs oversize ears to hear the returning echoes). As this is a whispering species, it is extremely difficult to monitor in the field as it is seldom heard on a bat detector. Furthermore, keeping within the foliage, as it does, it is easily overlooked. It prefers to roost in old buildings. The conservation status of this species is Favourable.

Natterer's bat (*Myotis nattereri*)
This species has a slow to medium flight, usually over trees but sometimes over water. It usually follows hedges and treelines to its feeding sites, consuming flies, moths, caddis-flies and spiders. Known roosts are usually in old stone buildings but they have been found in trees and bat boxes. The Natterer's bat is one of our least studied species and further work is required to establish its status in Ireland. The conservation status of this species is Favourable.

Daubenton's bat (*Myotis daubentonii*)
This bat species prefers feeding close to the surface of smooth water, either over rivers, canals, ponds, lakes or reservoirs but it can also be found foraging in woodlands. Flying at 15 kilometres per hour, it gaffs insects with its over-sized feet as they emerge from the surface of the water - feeding on caddis flies, moths, mosquitoes, midges etc. It is often found roosting beneath bridges or in tunnels and also makes use of hollows in trees. The conservation status of this species is Favourable.

Whiskered bat (*Myotis mystacinus*)
This species, although widely distributed, has been rarely recorded in Ireland. It is often found in woodland, frequently near water. Flying high, near the canopy, it maintains a steady beat and sometimes glides as it hunts. It also gleans spiders from the foliage of trees. Whiskered bats prefer to roost in buildings, under slates, lead flashing or exposed beneath the ridge beam within attics. However, they also use cracks and holes in trees and sometimes bat boxes. The whiskered bat is one of our least studied species and further work is required to establish its status in Ireland.

Brandt's bat (*Myotis brandtii*)
According to NPWS (2013), whiskered and Brandt's bats are cryptic species and can only be told apart using DNA techniques. Brand't bat has been confirmed only once from Ireland; a single specimen found in 2003 in Wicklow (Mullen, 2006). Following this discovery, an intensive re-survey, involving DNA testing, was undertaken of all known whiskered bat roosts in Ireland, by the Centre for Irish Bat Research. Woodland mist-netting was also conducted for the species. Despite the extensive survey-work, no further Brandt's bats were identified. The most recent Red Data List for Irish Mammals (Marnell *et al*. 2009) lists Brandt's bat as data deficient. There is no evidence of any roosts for this species in the country and at present the single record for the species is considered an anomaly. Boston et al (2010) concluded that "*M. brandtii* …. cannot currently be considered a resident species. This species is now considered a vagrant to the country and consequently, a detailed assessment has not been carried out.

<u>Rhinolophidae:</u>
Lesser horseshoe bat (*Rhinolophus hipposideros*)
This species is the only representative of the Rhinolophidae or horseshoe bat family in Ireland. It differs from our other species in both habits and looks, having a unique nose leaf with which it projects its echolocation calls. It is also quite small and, at rest, wraps its wings around its body. Lesser horseshoe bats feed close to the ground, gleaning their prey from branches and stones. It often carries its prey to a perch to consume, leaving the remains beneath as an indication of its presence. The echolocation call of this species is of constant frequency and, on a heterodyne bat detector, sounds like a melodious warble. The species is confined to six counties along the Atlantic seaboard: Mayo, Galway, Clare, Limerick, Kerry and Cork. The current Irish national population is estimated at 12,500 animals. This species is listed on Annex II of the EC Habitats Directive and 41 Special Areas of Conservation have been designated in Ireland for its protection. Where it occurs, it is often found roosting within farm buildings. The conservation status of this species is Favourable.

FEHILY TIMONEY
30 YEARS

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APPENDIX C

Raw Data used for Ecobat Tool

Table 1: Raw data Gortyrahilly round 1

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G1	09/05/2019	0	0	0	0	0	0	0	0	0
G1	10/05/2019	0	0	0	0	0	0	0	0	0
G1	11/05/2019	1	2	1	0	0	0	0	0	0
G1	12/05/2019	0	1	0	2	0	0	0	0	0
G1	13/05/2019	0	7	0	1	0	0	0	0	0
G1	14/05/2019	0	0	0	1	0	0	0	0	0
G1	15/05/2019	0	6	0	26	2	0	0	0	0
G1	16/05/2019	0	4	0	3	0	1	0	0	0
G1	17/05/2019	0	2	0	6	0	0	0	0	0
G1	18/05/2019	0	1	0	0	0	0	0	0	0
G1	19/05/2019	0	0	0	0	0	0	0	0	0
G1	20/05/2019	0	0	0	0	0	0	0	0	0
G2	09/05/2019	0	0	0	0	0	0	0	0	0
G2	10/05/2019	0	1	0	1	0	0	0	0	0
G2	11/05/2019	0	5	0	1	0	0	0	1	0
G2	12/05/2019	0	8	0	0	1	0	0	0	0
G2	13/05/2019	0	7	0	1	0	0	0	0	0
G2	14/05/2019	0	1	0	0	1	0	0	0	0
G2	15/05/2019	0	11	0	7	2	1	1	0	0
G2	16/05/2019	0	14	0	2	0	0	0	0	0
G2	17/05/2019	1	4	0	14	11	0	2	0	0
G2	18/05/2019	0	1	1	1	0	1	0	0	0
G2	19/05/2019	0	0	0	0	0	0	0	0	0
G2	20/05/2019	0	0	0	0	0	0	0	0	0
G3	09/05/2019	0	1	0	0	0	0	0	0	0
G3	10/05/2019	0	2	0	0	0	0	1	0	0
G3	11/05/2019	0	2	0	1	0	0	0	0	0
G3	12/05/2019	0	5	0	2	0	0	0	0	0
G3	13/05/2019	0	4	0	2	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G3	14/05/2019	0	3	0	0	0	0	0	0	0
G3	15/05/2019	0	11	0	8	4	0	0	0	0
G3	16/05/2019	0	11	3	23	6	0	0	0	0
G3	17/05/2019	0	2	12	9	2	0	0	0	0
G3	18/05/2019	0	5	0	5	0	0	0	0	0
G3	19/05/2019	0	1	0	0	0	0	0	0	0
G3	20/05/2019	0	1	1	0	0	0	0	0	0
G3	21/05/2019	1	0	0	3	20	0	0	0	0
G4	09/05/2019	0	0	0	0	0	0	0	0	0
G4	10/05/2019	1	0	0	0	0	0	0	0	0
G4	11/05/2019	0	7	0	2	1	0	0	0	0
G4	12/05/2019	0	3	0	1	0	0	0	0	0
G4	13/05/2019	0	0	0	0	0	0	0	0	0
G4	14/05/2019	0	11	0	1	1	0	0	0	0
G4	15/05/2019	0	12	0	29	8	0	0	0	0
G4	16/05/2019	0	0	0	0	0	0	0	0	0
G4	17/05/2019	0	0	0	0	0	0	0	0	0
G4	18/05/2019	0	0	0	0	0	0	0	0	0
G4	19/05/2019	0	0	0	0	0	0	0	0	0
G4	20/05/2019	0	0	1	1	0	0	0	0	0
G4	21/05/2019	0	0	0	0	0	0	0	0	0
G5	09/05/2019	0	0	0	0	0	0	0	0	0
G5	10/05/2019	0	1	0	1	0	0	0	0	0
G5	11/05/2019	0	29	0	1	0	0	0	0	0
G5	12/05/2019	0	42	0	0	0	0	0	0	0
G5	13/05/2019	0	11	0	0	0	0	0	0	0
G5	14/05/2019	0	7	0	4	0	0	0	0	0
G5	15/05/2019	0	27	0	16	0	0	0	0	0
G5	16/05/2019	0	32	0	2	1	0	0	0	0
G5	17/05/2019	0	7	0	5	1	0	0	0	0
G5	18/05/2019	0	1	0	5	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G5	19/05/2019	0	0	0	0	0	0	0	0	0
G5	20/05/2019	0	3	0	4	0	0	0	0	0
G5	21/05/2019	0	12	0	9	0	0	0	0	0
G6	21/05/2019	0	2	0	1	0	0	0	0	0
G6	22/05/2019	0	0	2	11	0	0	0	0	1
G6	23/05/2019	0	8	5	70	2	0	0	0	0
G6	24/05/2019	1	3	0	7	3	0	0	0	0
G6	25/05/2019	0	0	2	23	0	0	0	0	1
G6	26/05/2019	0	0	0	14	0	0	0	0	0
G6	27/05/2019	0	1	1	1	0	0	0	0	0
G6	28/05/2019	0	0	0	2	0	0	0	0	0
G6	29/05/2019	0	0	0	2	0	0	0	0	0
G6	30/05/2019	0	0	0	0	0	0	0	0	0
G6	31/05/2019	0	2	2	15	0	0	0	0	0
G6	01/06/2019	0	0	53	372	2	0	0	0	0
G6	02/06/2019	0	0	0	0	0	0	0	0	2
G6	03/06/2019	0	1	8	84	1	0	0	0	0
G6	04/06/2019	0	2	0	1	0	0	0	0	1
G7	21/05/2019	12	2	0	4	0	0	0	0	0
G7	22/05/2019	12	2	0	12	7	0	0	0	0
G7	23/05/2019	15	12	20	68	21	0	0	0	0
G7	24/05/2019	6	8	15	47	9	0	0	0	0
G7	25/05/2019	5	12	11	86	11	1	1	0	0
G7	26/05/2019	6	0	2	5	1	0	0	0	0
G7	27/05/2019	4	0	1	0	0	0	0	0	0
G7	28/05/2019	0	0	0	7	0	0	0	0	0
G7	29/05/2019	0	5	2	17	0	0	0	0	0
G7	30/05/2019	0	0	0	0	0	0	0	0	0
G7	31/05/2019	6	6	1	2	1	1	0	0	0
G7	01/06/2019	2	3	2	23	2	1	0	0	0
G7	02/06/2019	2	0	0	4	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G7	03/06/2019	0	3	11	24	9	0	0	1	0
G7	04/06/2019	0	0	0	0	1	0	0	0	0
G8	21/05/2019	0	4	0	4	1	0	0	0	0
G8	22/05/2019	0	1	22	29	2	0	0	0	0
G8	23/05/2019	0	12	199	414	55	0	0	0	0
G8	24/05/2019	0	2	21	127	40	0	0	0	0
G8	25/05/2019	0	8	31	181	20	0	0	0	0
G8	26/05/2019	0	0	7	16	8	1	0	0	0
G8	27/05/2019	1	0	4	7	0	1	0	0	0
G8	28/05/2019	0	0	0	0	0	0	0	0	0
G8	29/05/2019	0	1	7	24	2	0	0	0	0
G8	30/05/2019	0	0	0	0	0	0	0	0	0
G8	31/05/2019	0	14	2	7	0	0	0	0	0
G8	01/06/2019	0	46	88	214	11	0	0	0	0
G8	02/06/2019	0	0	0	0	0	0	0	0	0
G8	03/06/2019	0	3	24	200	98	1	0	0	0
G8	04/06/2019	0	0	0	0	0	0	0	0	0
G9	21/05/2019	0	2	0	1	0	0	0	0	0
G9	22/05/2019	0	1	0	4	0	0	0	0	0
G9	23/05/2019	1	20	2	13	0	0	0	0	0
G9	24/05/2019	0	0	1	7	0	0	0	0	0
G9	25/05/2019	0	2	0	6	0	0	0	0	0
G9	26/05/2019	0	0	0	0	0	0	0	0	0
G9	27/05/2019	0	0	0	1	0	0	0	0	0
G9	28/05/2019	0	3	0	0	0	0	0	0	0
G9	29/05/2019	0	0	0	0	0	0	0	0	0
G9	30/05/2019	0	0	0	1	0	0	0	0	0
G9	31/05/2019	0	3	0	1	0	0	0	0	0
G9	01/06/2019	0	3	2	9	2	0	0	0	0
G9	02/06/2019	0	0	0	0	0	0	0	0	0
G9	03/06/2019	0	2	0	2	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G9	04/06/2019	0	0	0	0	0	0	0	0	0
G10	21/05/2019	0	3	0	1	0	0	0	0	0
G10	22/05/2019	0	1	0	4	0	0	0	0	0
G10	23/05/2019	1	20	2	13	0	0	0	0	0
G10	24/05/2019	0	0	1	7	0	0	0	0	0
G10	25/05/2019	0	2	0	6	0	0	0	0	0
G10	26/05/2019	0	0	0	0	0	0	0	0	0
G10	27/05/2019	0	0	0	1	0	0	0	0	0
G10	28/05/2019	0	3	0	0	0	0	0	0	0
G10	29/05/2019	0	0	0	0	0	0	0	0	0
G10	30/05/2019	0	0	0	1	0	0	0	0	0
G10	31/05/2019	0	3	0	1	0	0	0	0	0
G10	01/06/2019	0	3	2	9	2	0	0	0	0
G10	02/06/2019	0	0	0	0	0	0	0	0	0
G10	03/06/2019	0	2	0	2	0	0	0	0	0
G10	04/06/2019	0	0	0	0	0	0	0	0	0
G11	05/06/2019	0	0	0	0	0	2	0	0	0
G11	06/06/2019	4	4	6	8	1	1	0	0	0
G11	07/06/2019	0	0	0	0	0	0	0	0	0
G11	08/06/2019	0	0	0	1	0	1	0	0	0
G11	09/06/2019	0	0	0	0	0	0	0	0	0
G11	10/06/2019	0	0	0	0	0	0	0	0	0
G11	11/06/2019	0	0	0	0	0	0	0	0	0
G11	12/06/2019	0	0	0	0	0	0	0	0	0
G11	13/06/2019	0	0	0	0	0	0	0	0	0
G11	14/06/2019	0	0	0	0	0	0	0	0	0
G11	15/06/2019	0	0	0	0	0	0	0	0	0
G11	16/06/2019	0	0	0	0	0	0	0	0	0
G11	17/06/2019	0	0	0	0	0	0	0	0	0
G12	20/05/2019	0	2	2	12	0	0	1	0	0
G12	21/05/2019	2	1	1	92	1	0	0	0	2

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G12	22/05/2019	0	9	3	21	0	0	0	0	0
G12	23/05/2019	0	41	1	228	1	6	0	0	0
G12	24/05/2019	0	14	0	136	4	6	0	0	0
G12	25/05/2019	2	16	1	210	10	7	0	0	1
G12	26/05/2019	0	2	0	43	0	3	1	0	0
G12	27/05/2019	0	2	0	36	11	2	0	0	0
G12	28/05/2019	0	0	0	153	30	1	0	0	0
G12	29/05/2019	2	1	0	14	1	0	0	0	0
G12	30/05/2019	0	0	0	4	0	0	0	0	0
G12	31/05/2019	1	0	6	44	8	1	0	0	0
G12	01/06/2019	0	11	3	35	4	2	0	1	1
G12	02/06/2019	0	0	0	11	2	0	0	0	0
G12	03/06/2019	0	7	3	55	1	2	0	0	1
G12	04/06/2019	0	1	0	0	0	0	0	0	0
G13	20/05/2019	0	4	20	68	23	0	0	0	0
G13	21/05/2019	3	5	24	93	18	0	0	0	3
G13	22/05/2019	2	15	1	39	5	0	1	0	1
G13	23/05/2019	2	58	48	94	4	0	5	0	1
G13	24/05/2019	0	3	23	69	10	0	1	0	0
G13	25/05/2019	0	13	36	63	2	0	0	0	0
G13	26/05/2019	0	0	6	9	0	0	0	0	0
G13	27/05/2019	0	2	9	35	1	0	0	0	0
G13	28/05/2019	0	0	2	3	0	0	0	0	0
G13	29/05/2019	0	3	4	0	0	0	0	0	0
G13	30/05/2019	0	0	0	0	0	0	0	0	0
G13	31/05/2019	1	26	15	58	13	0	0	0	0
G13	01/06/2019	0	117	21	38	2	0	0	0	1
G13	02/06/2019	0	0	1	5	0	0	0	0	0
G13	03/06/2019	0	36	6	29	5	1	0	0	0
G13	04/06/2019	0	2	0	0	0	0	0	0	0
G14	21/05/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Myotis mystacinus*	*Myotis nattereri*	*Rhinolophus hipposideros*
G14	22/05/2019	0	4	0	0	0	0	0	0	0
G14	23/05/2019	0	5	0	3	0	0	0	0	0
G14	24/05/2019	0	0	13	16	0	0	0	0	0
G14	25/05/2019	0	0	1	8	0	1	0	0	0
G14	26/05/2019	0	0	0	0	0	0	0	0	0
G14	27/05/2019	0	0	1	0	0	0	0	0	0
G14	28/05/2019	0	0	0	0	0	0	0	0	0
G14	29/05/2019	0	0	0	0	0	0	0	0	0
G14	30/05/2019	0	0	0	0	0	0	0	0	0
G14	31/05/2019	0	5	0	0	0	0	0	0	0
G14	01/06/2019	0	27	0	4	0	0	0	0	0
G14	02/06/2019	0	0	0	0	0	0	0	0	0
G14	03/06/2019	0	0	0	0	0	0	0	0	0
G14	04/06/2019	0	0	0	0	0	0	0	0	0

Table 2: Raw data Inchamore round 1.

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*	*Myotis mystacinus*
I1	09/05/2019	0	0	1	0	0	0	0	0	0
I1	10/05/2019	1	0	0	0	0	0	0	0	0
I1	11/05/2019	0	0	2	0	0	0	0	0	0
I1	12/05/2019	1	0	3	1	1	1	1	0	0
I1	13/05/2019	7	0	5	0	0	6	0	0	0
I1	14/05/2019	0	0	2	0	1	4	0	0	0
I1	15/05/2019	3	1	10	0	9	22	0	0	0
I1	16/05/2019	2	0	4	1	24	2	1	0	0
I1	17/05/2019	0	0	0	0	3	1	0	0	0
I1	18/05/2019	1	0	0	0	3	1	0	0	0
I1	19/05/2019	0	0	0	0	0	0	1	0	0
I1	20/05/2019	0	0	1	0	0	0	0	0	0
I2	09/05/2019	0	0	3	0	0	0	0	0	0
I2	10/05/2019	0	0	1	0	0	0	0	0	0
I2	11/05/2019	0	0	3	0	0	0	0	0	0
I2	12/05/2019	0	0	4	0	50	1	0	0	0
I2	13/05/2019	0	0	27	0	1	0	0	0	0
I2	14/05/2019	0	0	3	0	5	0	0	0	0
I2	15/05/2019	0	0	10	1	5	0	0	0	0
I2	16/05/2019	0	0	17	8	105	0	0	0	0
I2	17/05/2019	0	0	2	3	133	0	0	0	0
I2	18/05/2019	0	0	1	0	12	0	0	0	0
I2	19/05/2019	0	0	0	0	0	0	0	0	0
I2	20/05/2019	0	0	0	0	0	0	0	0	0
I3	09/05/2019	0	0	0	0	0	0	0	0	0
I3	10/05/2019	0	0	0	0	0	0	0	0	0
I3	11/05/2019	0	1	7	0	0	1	0	0	0
I3	12/05/2019	0	0	7	0	0	0	0	0	0
I3	13/05/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*	*Myotis mystacinus*
I3	14/05/2019	0	0	0	0	0	0	0	0	0
I3	15/05/2019	0	0	4	0	0	0	0	0	0
I3	16/05/2019	0	0	7	0	2	0	0	0	0
I3	17/05/2019	0	0	0	0	0	0	0	0	0
I3	18/05/2019	0	0	0	0	0	0	0	0	0
I3	19/05/2019	0	0	0	0	0	0	0	0	0
I3	20/05/2019	0	0	0	0	0	0	0	0	0
I4	09/05/2019	0	0	5	0	0	0	3	0	0
I4	10/05/2019	1	0	1	0	0	0	4	0	0
I4	11/05/2019	0	0	6	0	0	0	0	0	0
I4	12/05/2019	0	0	7	1	3	2	2	0	0
I4	13/05/2019	0	0	17	4	5	0	1	0	1
I4	14/05/2019	1	0	7	7	0	0	1	0	0
I4	15/05/2019	5	0	10	0	19	16	0	0	0
I4	16/05/2019	2	0	32	1	69	10	0	0	0
I4	17/05/2019	0	0	9	2	51	1	3	0	0
I4	18/05/2019	1	0	1	0	16	0	1	0	0
I4	19/05/2019	0	0	0	0	1	0	1	0	0
I4	20/05/2019	1	0	0	0	0	0	1	0	0
I5	09/05/2019	0	0	0	0	0	0	0	0	0
I5	10/05/2019	0	0	1	0	0	0	0	0	0
I5	11/05/2019	0	0	0	0	0	0	0	0	0
I5	12/05/2019	0	0	3	0	0	0	0	0	0
I5	13/05/2019	0	0	0	0	0	0	0	0	0
I5	14/05/2019	0	0	0	0	0	0	0	0	0
I5	15/05/2019	0	0	1	0	1	0	0	0	0
I5	16/05/2019	0	0	2	0	1	0	0	0	0
I5	17/05/2019	0	0	0	0	2	0	0	0	0
I5	18/05/2019	0	0	1	0	1	0	0	0	0
I5	19/05/2019	0	0	0	0	0	0	0	0	0
I5	20/05/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*	*Myotis mystacinus*
I6	05/06/2019	0	0	0	0	0	0	0	0	0
I6	06/06/2019	0	0	0	0	1	1	2	0	0
I6	07/06/2019	1	0	0	0	0	0	0	0	0
I6	08/06/2019	0	0	0	0	0	0	0	0	0
I6	09/06/2019	1	0	1	0	1	1	0	0	0
I6	10/06/2019	0	0	1	0	3	0	0	0	0
I6	11/06/2019	0	0	1	0	0	0	0	0	0
I6	12/06/2019	0	0	0	0	0	0	0	0	0
I6	13/06/2019	0	0	0	0	0	0	0	0	0
I6	14/06/2019	0	0	0	0	0	0	0	0	0
I6	15/06/2019	0	0	0	1	3	0	0	0	0
I6	16/06/2019	1	0	10	1	23	1	0	0	0
I6	17/06/2019	2	0	5	7	87	7	0	0	0
I7	20/05/2019	1	0	0	0	3	0	0	0	0
I7	21/05/2019	0	0	0	1	31	3	0	0	0
I7	22/05/2019	0	0	0	3	23	1	0	0	0
I7	23/05/2019	0	0	0	0	4	0	0	0	0
I7	24/05/2019	0	0	1	1	4	1	0	0	0
I7	25/05/2019	0	0	0	0	1	1	0	0	0
I7	26/05/2019	1	0	0	0	60	60	0	0	0
I7	27/05/2019	0	0	0	0	39	0	0	0	0
I7	28/05/2019	0	0	0	0	0	0	0	0	0
I7	29/05/2019	0	0	0	0	0	0	0	0	0
I7	30/05/2019	0	0	0	0	1	0	0	0	0
I7	31/05/2019	0	0	0	0	0	0	0	0	0
I7	01/06/2019	0	0	0	0	0	0	0	0	0
I7	02/06/2019	0	0	0	0	0	0	0	0	0
I7	03/06/2019	0	0	0	0	0	0	0	0	0
I7	04/06/2019	0	0	0	0	0	0	0	0	0
I8	20/05/2019	0	0	1	1	43	2	0	0	4
I8	21/05/2019	0	0	0	2	131	17	0	0	5

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*	*Myotis mystacinus*
I8	22/05/2019	0	0	6	2	101	6	2	0	4
I8	23/05/2019	0	0	18	4	4	0	1	1	1
I8	24/05/2019	2	0	2	2	12	0	2	0	0
I8	25/05/2019	0	0	9	0	17	5	0	0	0
I8	26/05/2019	0	0	1	0	7	0	0	0	0
I8	27/05/2019	0	0	19	0	12	7	1	0	0
I8	28/05/2019	0	0	3	2	2	0	0	0	0
I8	29/05/2019	0	0	0	1	2	1	0	0	0
I8	30/05/2019	0	0	0	1	2	0	0	0	0
I8	31/05/2019	0	0	0	3	13	4	2	0	1
I8	01/06/2019	1	0	3	5	18	4	1	0	2
I8	02/06/2019	0	0	0	1	8	1	0	0	0
I8	03/06/2019	0	0	6	2	20	1	1	0	1
I8	04/06/2019	0	0	0	0	0	0	1	0	0
I9	20/05/2019	0	0	0	1	24	4	0	1	0
I9	21/05/2019	0	0	0	15	75	12	0	2	1
I9	22/05/2019	0	0	4	11	206	18	0	0	0
I9	23/05/2019	1	0	2	24	239	22	0	1	0
I9	24/05/2019	0	0	1	14	133	14	1	0	0
I9	25/05/2019	0	0	11	48	158	9	0	1	0
I9	26/05/2019	0	0	2	9	40	13	0	0	0
I9	27/05/2019	1	0	4	2	18	8	1	0	0
I9	28/05/2019	0	0	1	26	87	2	0	0	0
I9	29/05/2019	0	0	3	18	16	0	0	0	0
I9	30/05/2019	0	0	3	4	14	9	0	0	0
I9	31/05/2019	0	0	2	36	78	10	0	0	0
I9	01/06/2019	0	0	0	80	300	24	0	1	0
I9	02/06/2019	0	0	0	6	20	3	0	0	0
I9	03/06/2019	3	0	0	54	178	16	1	0	1
I9	04/06/2019	0	0	0	3	0	0	0	0	0
I10	20/05/2019	2	0	0	1	62	8	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*	*Myotis mystacinus*
I10	21/05/2019	4	0	1	17	245	41	1	2	0
I10	22/05/2019	2	0	2	5	55	19	0	0	0
I10	23/05/2019	1	0	2	6	31	1	0	2	0
I10	24/05/2019	0	0	1	1	25	6	0	1	0
I10	25/05/2019	1	0	0	1	13	4	0	1	0
I10	26/05/2019	0	0	1	0	17	4	0	0	0
I10	27/05/2019	2	0	0	1	28	3	0	0	0
I10	28/05/2019	1	0	0	0	12	0	0	0	0
I10	29/05/2019	0	0	0	0	6	0	0	0	0
I10	30/05/2019	0	0	1	0	8	0	0	0	0
I10	31/05/2019	0	0	1	1	27	3	0	1	0
I10	01/06/2019	1	0	0	0	87	20	0	2	0
I10	02/06/2019	0	0	0	0	9	1	0	0	0
I10	03/06/2019	0	0	0	2	28	1	0	0	0
I10	04/06/2019	0	0	0	0	0	0	0	0	0

Table 3: Raw data for Gortyrahilly round 2.

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G1	28/06/2019	1	1	0	0	34	117	5	0	0
G1	29/06/2019	1	0	0	7	56	160	0	0	0
G1	30/06/2019	0	1	1	2	19	122	0	0	0
G1	01/07/2019	0	0	0	0	0	1	0	0	0
G1	02/07/2019	0	0	0	0	4	1	0	1	0
G1	03/07/2019	0	0	0	0	1	12	0	0	0
G1	04/07/2019	0	0	0	0	0	6	2	0	0
G1	05/07/2019	0	0	0	0	2	0	0	0	0
G1	06/07/2019	0	0	1	0	1	3	0	0	0
G1	07/07/2019	0	0	0	0	0	7	0	0	0
G1	08/07/2019	0	0	0	0	0	13	0	0	0
G2	01/07/2019	0	0	0	0	0	0	0	0	0
G2	02/07/2019	0	0	0	0	0	12	0	0	0
G2	03/07/2019	0	0	0	0	2	14	2	0	0
G2	04/07/2019	0	0	0	0	0	0	0	0	0
G2	05/07/2019	0	0	0	0	0	2	0	0	0
G2	06/07/2019	0	0	0	0	0	2	0	0	0
G2	07/07/2019	0	0	0	0	0	0	0	0	0
G2	08/07/2019	0	0	0	0	0	5	0	0	0
G2	09/07/2019	1	0	0	1	13	110	10	0	0
G2	10/07/2019	0	0	0	0	0	0	1	0	0
G2	11/07/2019	0	0	0	0	0	0	0	0	0
G3	28/06/2019	0	0	0	1	0	1	0	0	0
G3	29/06/2019	0	0	0	2	2	2	1	0	0
G3	30/06/2019	0	0	0	0	0	0	0	0	0
G3	01/07/2019	0	0	0	4	0	0	0	0	0
G3	02/07/2019	1	0	0	1	0	1	0	0	0
G3	03/07/2019	0	0	0	4	2	16	2	0	0
G3	04/07/2019	1	0	1	2	0	5	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G3	05/07/2019	0	0	1	0	0	0	1	0	0
G3	06/07/2019	1	0	0	1	2	0	0	0	0
G3	07/07/2019	0	0	0	0	1	0	0	0	0
G3	08/07/2019	0	0	0	0	0	0	0	0	0
G4	28/06/2019	0	0	0	0	2	5	0	0	0
G4	29/06/2019	1	0	0	1	1	3	1	0	0
G4	30/06/2019	0	0	0	2	0	0	0	0	0
G4	01/07/2019	0	0	0	7	0	0	0	0	0
G4	02/07/2019	0	0	0	0	0	1	0	1	0
G4	03/07/2019	1	1	1	3	0	14	3	0	0
G4	04/07/2019	3	1	1	3	1	3	0	1	0
G4	05/07/2019	1	0	1	1	0	3	0	0	0
G4	06/07/2019	0	1	0	1	0	1	0	0	0
G4	07/07/2019	0	0	0	1	0	0	0	0	0
G4	08/07/2019	0	0	0	0	0	0	0	0	0
G5	01/07/2019	0	0	0	0	0	12	0	0	0
G5	02/07/2019	1	0	0	0	1	64	1	0	0
G5	03/07/2019	0	0	0	0	4	145	20	0	1
G5	04/07/2019	0	1	2	3	1	101	16	0	0
G5	05/07/2019	1	0	0	0	0	43	1	0	0
G5	06/07/2019	0	0	0	0	0	28	4	2	0
G5	07/07/2019	1	0	0	0	0	13	0	0	1
G5	08/07/2019	0	0	0	0	0	5	0	0	0
G5	09/07/2019	2	0	0	2	2	46	6	0	0
G5	10/07/2019	0	0	0	1	1	90	5	0	0
G5	11/07/2019	0	0	0	0	0	0	0	0	0
G6	01/07/2019	0	0	0	0	0	0	0	0	0
G6	02/07/2019	0	0	0	0	0	2	0	0	0
G6	03/07/2019	0	0	0	4	1	37	5	0	0
G6	04/07/2019	1	1	0	0	1	2	0	0	0
G6	05/07/2019	1	0	0	0	0	1	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G6	06/07/2019	0	0	0	0	0	1	0	0	0
G6	07/07/2019	0	0	0	1	0	1	0	0	0
G6	08/07/2019	0	0	0	0	0	4	2	0	0
G6	09/07/2019	1	0	0	0	10	168	26	0	0
G6	10/07/2019	1	0	0	2	5	108	2	0	0
G6	11/07/2019	0	0	0	0	0	0	0	0	0
G7	01/07/2019	13	0	3	0	0	2	0	0	0
G7	02/07/2019	47	6	4	0	0	16	11	1	0
G7	03/07/2019	44	5	4	1	0	13	2	1	0
G7	04/07/2019	39	5	1	0	1	17	9	5	0
G7	05/07/2019	38	6	6	2	0	9	3	6	0
G7	06/07/2019	71	5	6	1	5	36	10	3	0
G7	07/07/2019	21	0	3	2	2	45	27	2	0
G7	08/07/2019	4	1	0	0	5	27	8	0	0
G7	09/07/2019	50	3	3	3	6	32	9	1	0
G7	10/07/2019	12	2	1	0	12	72	11	0	0
G7	11/07/2019	0	0	0	0	0	0	0	0	0
G8	01/07/2019	0	0	0	3	0	1	0	0	0
G8	02/07/2019	0	0	0	10	2	18	3	1	0
G8	03/07/2019	1	0	0	4	30	17	8	1	0
G8	04/07/2019	1	1	1	1	0	10	3	1	0
G8	05/07/2019	1	0	0	0	16	10	0	0	0
G8	06/07/2019	0	0	0	1	8	4	3	0	0
G8	07/07/2019	0	0	0	0	0	0	0	0	0
G8	08/07/2019	0	0	0	0	0	0	0	0	0
G8	09/07/2019	0	0	0	0	0	0	0	0	0
G8	10/07/2019	0	0	0	0	0	0	0	0	0
G8	11/07/2019	0	0	0	0	0	0	0	0	0
G9	01/07/2019	0	0	0	0	0	3	0	0	0
G9	02/07/2019	2	1	0	0	2	44	2	0	0
G9	03/07/2019	1	0	0	3	21	619	63	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G9	04/07/2019	0	0	0	0	8	271	11	1	0
G9	05/07/2019	0	0	0	1	4	14	5	1	0
G9	06/07/2019	1	0	0	0	4	16	0	0	0
G9	07/07/2019	0	0	0	1	0	0	1	0	0
G9	08/07/2019	0	0	0	5	23	29	5	0	0
G9	09/07/2019	1	1	0	5	45	317	9	0	0
G9	10/07/2019	0	0	0	0	5	29	4	0	0
G9	11/07/2019	0	0	0	0	0	0	0	0	0
G10	01/07/2019	0	0	0	0	0	0	0	0	0
G10	02/07/2019	2	0	1	0	0	4	0	0	0
G10	03/07/2019	2	0	2	2	1	16	1	0	1
G10	04/07/2019	2	0	0	0	0	4	1	1	0
G10	05/07/2019	0	0	0	0	0	0	0	1	0
G10	06/07/2019	0	0	0	0	0	2	1	1	0
G10	07/07/2019	0	0	0	0	0	0	0	0	0
G10	08/07/2019	0	0	0	0	0	19	0	0	0
G10	09/07/2019	4	0	0	3	2	135	21	0	0
G10	10/07/2019	0	0	0	0	1	30	1	0	0
G10	11/07/2019	0	0	0	0	0	0	0	0	0
G11	01/07/2019	0	0	0	0	0	2	0	0	0
G11	02/07/2019	0	0	0	0	0	7	1	1	0
G11	03/07/2019	1	0	0	6	7	32	4	0	0
G11	04/07/2019	2	1	0	2	0	11	2	1	0
G11	05/07/2019	0	0	0	0	1	4	1	1	0
G11	06/07/2019	1	0	0	1	2	4	1	1	0
G11	07/07/2019	0	0	0	0	1	3	1	0	0
G11	08/07/2019	0	0	0	0	4	5	1	0	0
G11	09/07/2019	1	1	0	7	18	28	3	1	0
G11	10/07/2019	0	0	2	0	0	8	2	1	0
G11	11/07/2019	0	0	0	0	0	0	0	0	0
G12	28/06/2019	0	0	0	0	3	28	5	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G12	29/06/2019	0	0	0	0	6	202	6	1	0
G12	30/06/2019	0	0	0	0	0	7	2	0	0
G12	01/07/2019	0	0	0	0	0	30	3	0	0
G12	02/07/2019	0	0	0	0	0	84	18	0	0
G12	03/07/2019	1	1	1	5	1	194	26	2	0
G12	04/07/2019	0	2	1	0	1	144	11	0	0
G12	05/07/2019	0	1	1	0	1	49	4	0	0
G12	06/07/2019	0	1	4	0	0	79	14	0	0
G12	07/07/2019	0	0	0	0	0	61	4	0	0
G12	08/07/2019	0	0	0	3	1	25	3	0	0
G13	01/07/2019	5	0	0	0	0	3	4	1	0
G13	02/07/2019	14	0	1	0	3	44	28	3	0
G13	03/07/2019	4	0	0	4	49	388	81	3	0
G13	04/07/2019	2	2	2	6	24	107	17	3	0
G13	05/07/2019	1	2	0	1	19	79	15	1	0
G13	06/07/2019	3	0	1	1	5	27	7	2	0
G13	07/07/2019	0	0	2	0	0	4	2	0	0
G13	08/07/2019	1	0	0	1	2	70	3	0	0
G13	09/07/2019	2	1	1	8	17	87	20	2	0
G13	10/07/2019	1	0	1	2	2	11	1	1	0
G13	11/07/2019	0	0	0	0	0	0	0	0	0
G14	28/06/2019	0	0	0	0	1	13	0	0	0
G14	29/06/2019	0	0	0	10	7	108	5	0	0
G14	30/06/2019	0	0	1	3	40	477	1	0	0
G14	01/07/2019	0	0	0	0	6	363	0	0	0
G14	02/07/2019	0	0	0	0	0	0	0	0	0
G14	03/07/2019	1	0	0	8	0	6	0	1	0
G14	04/07/2019	0	0	0	1	0	2	0	0	0
G14	05/07/2019	0	0	0	0	0	0	0	0	0
G14	06/07/2019	0	0	0	2	0	1	0	0	0
G14	07/07/2019	0	0	0	0	0	0	0	1	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G14	08/07/2019	0	0	0	0	0	0	0	0	0
G15	11/07/2019	0	0	0	0	0	1	0	0	0
G15	12/07/2019	0	0	0	0	0	15	0	0	0
G15	13/07/2019	0	0	0	0	0	6	1	0	0
G15	14/07/2019	0	1	0	7	1	24	1	0	0
G15	15/07/2019	0	0	0	8	3	79	4	1	0
G15	16/07/2019	0	0	0	8	1	20	0	0	0
G15	17/07/2019	0	0	0	4	0	5	1	0	0
G15	18/07/2019	0	0	0	0	0	4	0	0	0
G15	19/07/2019	0	0	0	0	0	0	0	0	0
G15	20/07/2019	0	0	0	2	2	5	0	0	0
G15	21/07/2019	0	0	1	1	0	9	0	0	0
G15	22/07/2019	0	0	0	0	0	0	0	0	0
G15	23/07/2019	0	0	0	0	0	0	0	0	0
G15	24/07/2019	1	0	0	7	0	1	0	0	0
G15	25/07/2019	0	0	0	0	0	0	0	0	0
G15	26/07/2019	0	0	0	0	0	0	0	0	0
G15	27/07/2019	1	0	0	4	0	8	0	0	0
G15	28/07/2019	0	0	0	0	0	0	0	0	0
G15	29/07/2019	0	0	0	0	0	0	0	0	0
G15	30/07/2019	0	0	0	0	0	0	0	0	0
G16	11/07/2019	0	0	0	0	0	16	3	0	0
G16	12/07/2019	0	0	1	1	0	12	5	0	0
G16	13/07/2019	1	1	0	0	0	7	1	0	0
G16	14/07/2019	2	0	0	7	0	15	3	0	0
G16	15/07/2019	2	1	0	2	3	87	20	1	0
G16	16/07/2019	0	0	0	1	10	106	14	1	0
G16	17/07/2019	3	0	0	2	0	5	1	0	0
G16	18/07/2019	1	0	0	0	0	4	1	0	0
G16	19/07/2019	0	0	0	0	0	10	0	0	0
G16	20/07/2019	2	0	0	3	9	32	2	1	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G16	21/07/2019	0	0	1	2	1	2	2	0	0
G16	22/07/2019	0	0	0	0	0	0	0	0	0
G16	23/07/2019	0	0	0	0	0	0	0	0	0
G16	24/07/2019	0	0	1	0	0	1	1	0	0
G16	25/07/2019	0	0	0	0	0	0	0	0	0
G16	26/07/2019	0	0	0	0	0	4	1	0	0
G16	27/07/2019	0	0	1	0	0	3	0	0	0
G16	28/07/2019	0	0	0	0	0	2	4	0	0
G16	29/07/2019	1	0	0	2	0	5	1	1	0
G16	30/07/2019	0	0	0	0	0	0	1	0	0
G17	11/07/2019	0	0	1	0	3	24	2	0	0
G17	12/07/2019	0	0	0	0	1	45	0	0	0
G17	13/07/2019	0	1	0	1	1	64	5	0	0
G17	14/07/2019	2	1	0	1	3	75	14	0	0
G17	15/07/2019	1	2	1	7	23	233	48	1	1
G17	16/07/2019	0	0	2	4	17	203	58	1	0
G17	17/07/2019	3	12	2	2	11	215	14	0	0
G17	18/07/2019	1	1	0	2	2	38	1	0	0
G17	19/07/2019	0	0	0	0	0	2	0	0	0
G17	20/07/2019	0	1	0	1	1	85	8	0	0
G17	21/07/2019	1	0	0	1	0	116	38	1	0
G17	22/07/2019	0	0	0	0	0	21	1	0	0
G17	23/07/2019	0	0	0	0	0	4	0	0	0
G17	24/07/2019	0	0	0	0	0	12	3	0	0
G17	25/07/2019	0	0	0	0	0	6	0	0	0
G17	26/07/2019	0	1	0	1	0	27	1	0	0
G17	27/07/2019	0	3	0	5	2	48	2	1	0
G17	28/07/2019	0	0	0	2	1	49	3	1	0
G17	29/07/2019	0	0	0	1	0	49	2	0	0
G17	30/07/2019	0	0	0	0	0	0	0	0	0
G18	11/07/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G18	12/07/2019	0	0	0	0	0	0	0	0	0
G18	13/07/2019	0	0	0	0	0	0	0	0	0
G18	14/07/2019	1	0	0	0	0	15	0	0	0
G18	15/07/2019	1	0	0	0	1	23	0	0	0
G18	16/07/2019	0	0	0	0	0	8	0	0	0
G18	17/07/2019	1	0	0	0	0	0	0	0	0
G18	18/07/2019	0	0	0	0	0	1	0	0	0
G18	19/07/2019	0	0	0	0	0	0	0	0	0
G18	20/07/2019	0	0	0	0	1	2	0	0	0
G18	21/07/2019	0	0	0	0	0	1	0	0	0
G18	22/07/2019	0	0	0	0	0	0	0	0	0
G18	23/07/2019	0	0	0	0	0	0	0	0	0
G18	24/07/2019	0	0	0	0	0	0	0	0	0
G18	25/07/2019	0	0	0	0	0	0	0	0	0
G18	26/07/2019	0	0	0	0	0	0	0	0	0
G18	27/07/2019	0	0	0	0	0	0	0	0	0
G18	28/07/2019	0	0	0	0	0	0	0	0	0
G18	29/07/2019	0	0	0	0	0	0	0	0	0
G18	30/07/2019	0	0	0	0	0	0	0	0	0

Table 4: Raw data for Inchamore round 2.

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I1	28/06/2019	0	0	0	1	3	94	1	0	0
I1	29/06/2019	5	2	4	1	2	149	4	2	0
I1	30/06/2019	5	0	2	4	0	34	4	0	0
I1	01/07/2019	14	0	1	0	0	32	2	0	0
I1	02/07/2019	5	2	2	0	0	69	1	0	0
I1	03/07/2019	6	2	0	2	0	45	0	0	0
I1	04/07/2019	6	5	2	0	0	6	0	0	0
I1	05/07/2019	6	1	2	0	0	26	0	0	0
I1	06/07/2019	9	2	3	3	0	43	0	0	0
I1	07/07/2019	1	0	1	1	1	25	2	0	0
I1	08/07/2019	1	0	0	1	0	3	0	0	0
I2	28/06/2019	1	0	0	2	0	30	0	0	0
I2	29/06/2019	1	3	0	0	0	29	3	0	0
I2	30/06/2019	0	1	0	0	0	9	1	0	0
I2	01/07/2019	4	0	0	0	0	3	0	0	0
I2	02/07/2019	2	0	1	0	0	2	0	0	0
I2	03/07/2019	2	0	3	0	0	150	6	0	0
I2	04/07/2019	1	0	1	0	0	3	0	0	0
I2	05/07/2019	0	0	0	0	0	2	0	0	0
I2	06/07/2019	3	0	0	0	0	1	0	0	0
I2	07/07/2019	1	0	1	0	0	0	0	1	0
I2	08/07/2019	0	0	0	0	0	0	0	0	0
I3	28/06/2019	0	0	0	0	0	0	0	0	0
I3	29/06/2019	1	0	0	2	0	1	0	0	0
I3	30/06/2019	1	0	0	0	0	0	0	0	0
I3	01/07/2019	1	0	0	0	0	0	0	0	0
I3	02/07/2019	0	0	0	0	0	1	0	0	0
I3	03/07/2019	1	0	0	1	0	3	0	0	0
I3	04/07/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I3	05/07/2019	0	0	0	1	0	0	0	0	0
I3	06/07/2019	2	0	0	2	0	0	0	0	0
I3	07/07/2019	0	0	0	0	0	0	0	0	0
I3	08/07/2019	0	0	0	0	0	0	0	0	0
I4	28/06/2019	1	0	0	4	0	25	6	1	0
I4	29/06/2019	0	1	1	3	3	180	43	0	0
I4	30/06/2019	1	0	0	0	0	15	6	0	0
I4	01/07/2019	1	0	1	1	0	153	8	0	0
I4	02/07/2019	4	1	2	1	3	46	16	0	0
I4	03/07/2019	2	0	2	0	5	410	22	1	0
I4	04/07/2019	5	2	2	0	0	41	1	2	0
I4	05/07/2019	3	1	1	0	0	9	4	0	0
I4	06/07/2019	1	0	0	2	0	22	2	0	0
I4	07/07/2019	0	0	0	0	0	20	1	0	0
I4	08/07/2019	0	0	0	0	0	4	3	0	0
I5	28/06/2019	0	0	0	0	0	1	0	0	0
I5	29/06/2019	1	0	1	0	0	0	0	0	0
I5	30/06/2019	0	0	0	0	0	0	0	0	0
I5	01/07/2019	0	0	0	0	0	0	0	0	0
I5	02/07/2019	0	0	0	0	0	1	0	0	0
I5	03/07/2019	0	0	0	0	0	0	0	0	0
I5	04/07/2019	0	0	0	0	0	1	1	0	0
I5	05/07/2019	0	0	0	0	0	0	0	0	0
I5	06/07/2019	0	0	0	0	0	0	0	0	0
I5	07/07/2019	0	0	0	0	0	0	0	0	0
I5	08/07/2019	0	0	0	0	0	0	0	0	0
I6	28/06/2019	0	0	0	0	0	11	1	0	0
I6	29/06/2019	0	1	0	1	0	29	1	0	0
I6	30/06/2019	0	0	0	0	0	2	1	0	0
I6	01/07/2019	1	0	0	0	0	63	22	0	0
I6	02/07/2019	1	0	0	0	0	3	1	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I6	03/07/2019	3	2	0	0	6	265	11	0	0
I6	04/07/2019	0	0	0	0	0	14	4	0	0
I6	05/07/2019	1	0	0	0	0	4	3	0	0
I6	06/07/2019	0	1	0	0	0	3	0	0	0
I6	07/07/2019	0	0	0	0	0	0	0	0	0
I6	08/07/2019	0	0	0	0	0	0	0	0	0
I7	28/06/2019	0	0	0	0	0	4	2	0	0
I7	29/06/2019	0	0	0	0	0	26	13	0	0
I7	30/06/2019	0	0	0	0	1	140	60	0	0
I7	01/07/2019	1	2	0	0	0	65	38	0	0
I7	02/07/2019	0	0	0	0	0	3	0	0	0
I7	03/07/2019	0	2	0	2	5	44	9	0	0
I7	04/07/2019	0	0	0	0	1	18	0	0	0
I7	05/07/2019	0	0	0	0	0	2	1	0	0
I7	06/07/2019	0	0	0	0	0	1	1	0	0
I7	07/07/2019	0	0	0	0	0	0	0	0	0
I7	08/07/2019	0	0	0	0	0	1	0	0	0
I8	28/06/2019	0	0	0	0	0	0	0	0	0
I8	29/06/2019	0	0	0	0	0	0	0	0	0
I8	30/06/2019	0	0	0	0	0	0	0	0	0
I8	01/07/2019	0	0	0	0	0	0	0	0	0
I8	02/07/2019	0	0	0	0	0	0	0	0	0
I8	03/07/2019	0	0	0	0	0	0	0	0	0
I8	04/07/2019	0	0	0	0	0	0	0	0	0
I8	05/07/2019	0	0	0	0	0	0	0	0	0
I8	06/07/2019	0	0	0	0	0	0	0	0	0
I8	07/07/2019	0	0	0	0	0	0	0	0	0
I8	08/07/2019	0	0	0	0	0	0	0	0	0
I9	28/06/2019	0	0	0	0	29	195	11	0	0
I9	29/06/2019	1	0	0	6	14	169	15	0	0
I9	30/06/2019	0	0	0	0	2	61	13	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I9	01/07/2019	1	0	0	2	2	25	9	0	0
I9	02/07/2019	1	0	0	1	9	17	4	0	0
I9	03/07/2019	0	1	0	2	9	148	36	0	0
I9	04/07/2019	0	0	0	1	7	73	17	0	0
I9	05/07/2019	1	0	0	9	8	192	62	0	0
I9	06/07/2019	0	0	0	0	2	227	102	1	0
I9	07/07/2019	0	0	0	0	6	19	7	0	0
I9	08/07/2019	0	0	0	0	2	6	0	0	0
I10	28/06/2019	0	0	0	3	0	11	5	0	0
I10	29/06/2019	2	0	1	2	0	83	26	0	0
I10	30/06/2019	0	0	1	0	0	64	11	0	0
I10	01/07/2019	0	0	1	0	6	106	12	1	1
I10	02/07/2019	1	0	3	1	2	536	8	0	0
I10	03/07/2019	0	5	1	7	6	566	282	2	0
I10	04/07/2019	0	2	2	3	6	432	169	1	0
I10	05/07/2019	0	1	3	0	1	287	44	1	0
I10	06/07/2019	0	4	4	1	1	181	102	0	0
I10	07/07/2019	0	0	0	0	2	17	5	0	0
I10	08/07/2019	0	0	0	0	0	17	5	0	0

Table 5: Raw data for Gortyrahilly round 3

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G1	17/09/2019	0	0	0	7	0	10	2	2	0
G1	18/09/2019	2	1	1	2	0	13	1	7	0
G1	19/09/2019	0	0	0	0	1	4	1	0	0
G1	20/09/2019	0	0	0	0	0	0	1	3	0
G1	21/09/2019	0	0	0	0	23	12	4	0	0
G1	22/09/2019	0	0	0	3	135	425	5	1	0
G1	23/09/2019	1	0	0	0	44	11	2	1	0
G1	24/09/2019	0	0	0	0	19	90	35	0	0
G1	25/09/2019	1	0	0	0	0	8	0	0	0
G1	26/09/2019	0	0	0	0	0	0	0	0	0
G1	27/09/2019	0	0	0	0	0	0	0	0	0
G1	28/09/2019	0	0	0	0	0	0	0	0	0
G1	29/09/2019	0	0	0	0	0	0	0	0	0
G1	30/09/2019	0	0	0	0	0	0	0	0	0
G2	17/09/2019	1	0	2	20	0	45	11	0	2
G2	18/09/2019	0	0	1	19	1	57	16	1	1
G2	19/09/2019	1	1	1	7	2	37	12	0	0
G2	20/09/2019	1	1	0	2	0	11	7	1	1
G2	21/09/2019	0	0	0	1	5	30	6	0	0
G2	22/09/2019	2	2	2	9	5	159	46	0	0
G2	23/09/2019	0	1	1	0	0	7	12	0	0
G2	24/09/2019	0	0	0	0	1	18	2	0	0
G2	25/09/2019	0	0	0	0	0	11	0	0	0
G2	26/09/2019	1	0	0	0	0	1	1	0	0
G2	27/09/2019	0	0	0	0	0	0	0	0	0
G2	28/09/2019	0	0	0	0	0	0	0	0	0
G2	29/09/2019	2	0	1	0	3	42	9	0	2
G2	30/09/2019	0	0	0	0	0	0	0	0	0
G2	NA	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G3	21/08/2019	0	0	0	0	0	0	0	0	0
G3	22/08/2019	0	0	0	0	1	1	0	0	0
G3	23/08/2019	0	0	0	4	0	8	2	0	0
G3	24/08/2019	1	1	0	1	1	2	0	1	0
G3	25/08/2019	6	0	0	19	7	13	1	3	0
G3	26/08/2019	0	1	2	3	0	2	6	2	0
G3	27/08/2019	0	0	0	0	0	0	0	0	0
G3	28/08/2019	0	0	0	0	0	5	0	0	0
G3	29/08/2019	0	0	0	1	0	0	0	2	0
G3	30/08/2019	0	0	0	0	0	0	0	0	0
G3	31/08/2019	2	1	1	11	0	9	1	0	0
G3	01/09/2019	1	0	0	5	0	2	1	1	0
G3	02/09/2019	1	0	1	3	0	1	1	1	0
G3	03/09/2019	0	0	0	1	0	0	0	1	0
G3	04/09/2019	0	0	0	11	0	1	0	0	0
G3	05/09/2019	0	0	0	9	0	0	0	1	0
G3	06/09/2019	0	0	0	0	0	2	7	0	0
G3	07/09/2019	7	0	2	6	0	19	6	1	0
G3	08/09/2019	3	1	0	3	1	19	6	1	0
G3	09/09/2019	0	0	0	10	0	1	1	0	0
G3	10/09/2019	4	0	1	0	0	1	2	0	0
G3	11/09/2019	0	0	0	0	1	3	1	0	0
G3	12/09/2019	1	0	1	3	0	9	5	1	0
G3	13/09/2019	0	0	0	5	3	8	12	1	0
G3	14/09/2019	1	0	0	1	4	5	2	2	0
G3	15/09/2019	0	0	0	1	2	18	2	0	0
G3	16/09/2019	0	0	0	0	0	1	0	0	0
G4	21/08/2019	0	0	0	0	0	0	0	0	0
G4	22/08/2019	0	0	0	0	0	0	0	0	0
G4	23/08/2019	0	0	0	0	0	1	0	0	0
G4	24/08/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G4	25/08/2019	0	0	0	0	0	2	1	0	0
G4	26/08/2019	0	0	0	0	0	1	0	0	0
G4	27/08/2019	0	0	0	0	0	0	0	0	0
G4	28/08/2019	0	0	0	0	0	1	0	0	0
G4	29/08/2019	0	0	0	0	0	0	0	0	0
G4	30/08/2019	0	0	0	0	0	0	0	0	0
G4	31/08/2019	0	0	0	0	0	0	0	0	0
G4	01/09/2019	0	0	0	0	0	0	0	0	0
G4	02/09/2019	0	0	0	0	0	0	0	0	0
G4	03/09/2019	0	0	0	0	0	0	0	0	0
G4	04/09/2019	0	0	0	0	0	0	0	0	0
G4	05/09/2019	0	0	0	0	0	0	0	0	0
G4	06/09/2019	0	0	0	0	0	0	0	0	0
G4	07/09/2019	0	0	0	0	0	0	0	0	0
G4	08/09/2019	0	0	0	0	0	0	0	0	0
G4	09/09/2019	0	0	0	0	0	0	0	0	0
G4	10/09/2019	0	0	0	0	0	0	0	0	0
G4	11/09/2019	0	0	0	0	0	0	0	0	0
G4	12/09/2019	0	0	0	0	0	0	0	0	0
G4	13/09/2019	0	0	0	0	0	0	0	0	0
G4	14/09/2019	0	0	0	0	0	0	0	0	0
G4	15/09/2019	0	0	0	0	0	0	0	0	0
G4	16/09/2019	0	0	0	0	0	0	0	0	0
G5	21/08/2019	0	0	0	0	0	13	0	0	0
G5	22/08/2019	0	0	0	2	2	23	3	0	0
G5	23/08/2019	1	2	0	6	3	18	6	2	0
G5	24/08/2019	2	2	0	0	0	5	8	1	0
G5	25/08/2019	0	1	1	2	0	12	25	3	0
G5	26/08/2019	0	1	0	1	0	52	13	0	0
G5	27/08/2019	0	1	0	0	0	2	2	0	0
G5	28/08/2019	0	0	0	1	0	70	3	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G5	29/08/2019	2	0	0	1	0	30	3	1	0
G5	30/08/2019	0	0	0	0	0	12	1	0	0
G5	31/08/2019	0	0	0	2	0	34	5	1	0
G5	01/09/2019	1	0	0	0	0	21	4	1	0
G5	02/09/2019	0	1	0	4	0	44	4	1	0
G5	03/09/2019	0	0	0	0	0	26	1	1	0
G5	04/09/2019	0	0	0	0	0	3	2	0	0
G5	05/09/2019	1	1	0	3	1	20	3	0	0
G5	06/09/2019	1	0	0	0	0	9	12	0	0
G5	07/09/2019	1	0	0	1	0	18	11	1	0
G5	08/09/2019	0	0	0	0	2	68	8	0	0
G5	09/09/2019	0	0	0	0	0	5	1	1	0
G5	10/09/2019	0	0	0	0	0	24	0	0	0
G5	11/09/2019	0	1	0	2	1	40	11	0	0
G5	12/09/2019	0	1	0	0	0	20	5	0	0
G5	13/09/2019	0	0	0	1	1	36	15	0	0
G5	14/09/2019	1	1	0	0	0	28	5	0	0
G5	15/09/2019	0	0	0	3	0	31	16	0	0
G5	16/09/2019	0	0	0	0	0	16	1	0	0
G7	17/09/2019	0	0	0	2	0	140	26	2	0
G7	18/09/2019	4	4	0	1	0	90	33	3	0
G7	19/09/2019	0	0	0	2	0	76	84	2	0
G7	20/09/2019	2	0	0	2	0	310	5	1	0
G7	21/09/2019	0	0	0	0	0	65	28	0	0
G7	22/09/2019	1	0	0	5	0	132	45	0	0
G7	23/09/2019	0	0	0	0	0	9	11	0	0
G7	24/09/2019	0	0	0	0	0	1	0	0	0
G7	25/09/2019	0	0	0	1	0	0	0	0	0
G7	26/09/2019	0	0	0	0	0	0	1	0	0
G7	27/09/2019	0	0	0	0	0	0	0	0	0
G7	28/09/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G7	29/09/2019	0	0	1	3	0	36	8	0	0
G7	30/09/2019	1	0	1	1	0	21	4	1	0
G9	17/09/2019	2	0	2	0	7	44	17	1	0
G9	18/09/2019	1	0	1	2	5	31	11	0	0
G9	19/09/2019	1	0	4	0	0	14	18	1	0
G9	20/09/2019	0	0	1	0	0	0	3	1	0
G9	21/09/2019	2	0	0	0	0	10	13	0	0
G9	22/09/2019	1	1	0	4	2	143	25	0	0
G9	23/09/2019	3	0	0	0	0	1	4	0	0
G9	24/09/2019	0	0	0	0	0	0	0	0	0
G9	25/09/2019	0	0	0	0	0	0	0	0	0
G9	26/09/2019	0	0	0	0	0	0	0	0	0
G9	27/09/2019	0	0	0	0	0	0	0	0	0
G9	28/09/2019	0	0	0	0	0	0	0	0	0
G9	29/09/2019	1	0	0	0	10	235	64	3	0
G9	30/09/2019	0	0	1	0	0	0	4	0	0
G10	17/09/2019	0	0	0	1	0	14	4	2	0
G10	18/09/2019	1	0	1	0	3	9	5	3	0
G10	19/09/2019	0	0	0	0	0	4	2	1	0
G10	20/09/2019	1	0	1	0	0	0	1	0	0
G10	21/09/2019	0	0	0	0	0	3	0	0	0
G10	22/09/2019	0	0	0	1	0	13	7	2	0
G10	23/09/2019	0	0	0	0	0	2	2	0	0
G10	24/09/2019	0	0	0	0	0	0	0	0	0
G10	25/09/2019	0	0	0	0	0	0	0	0	0
G10	26/09/2019	0	0	0	0	0	0	0	0	0
G10	27/09/2019	0	0	0	0	0	0	0	0	0
G10	28/09/2019	0	0	0	0	0	1	0	0	0
G10	29/09/2019	0	1	1	0	1	47	9	0	0
G10	30/09/2019	0	0	0	0	0	1	0	0	0
G11	17/09/2019	2	0	0	4	1	11	12	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G11	18/09/2019	2	0	0	9	1	10	5	2	0
G11	19/09/2019	1	0	0	3	4	442	23	1	0
G11	20/09/2019	0	0	0	10	7	221	40	0	0
G11	21/09/2019	0	0	1	19	22	208	28	0	0
G11	22/09/2019	0	0	0	1	0	13	5	0	0
G11	23/09/2019	2	0	0	0	0	72	31	1	0
G11	24/09/2019	0	0	0	0	0	0	0	0	0
G11	25/09/2019	0	0	0	0	0	0	0	0	0
G11	26/09/2019	0	0	0	0	0	1	1	0	0
G11	27/09/2019	0	0	0	0	1	2	0	0	0
G11	28/09/2019	0	0	0	0	0	0	0	0	0
G11	29/09/2019	0	0	0	1	10	18	29	0	0
G11	30/09/2019	1	0	0	1	0	12	4	2	0
G12	17/09/2019	2	0	0	2	0	13	9	3	0
G12	18/09/2019	1	0	2	1	0	7	16	2	0
G12	19/09/2019	0	0	0	1	1	10	3	0	1
G12	20/09/2019	0	0	0	0	0	3	3	1	0
G12	21/09/2019	0	0	0	0	0	9	7	0	0
G12	22/09/2019	0	1	2	0	1	21	4	0	0
G12	23/09/2019	1	0	0	0	0	11	4	0	0
G12	24/09/2019	1	0	1	0	0	1	1	1	0
G12	25/09/2019	0	0	0	0	0	1	0	0	0
G12	26/09/2019	0	0	0	0	0	0	0	0	0
G12	27/09/2019	0	0	1	0	0	0	1	0	0
G12	28/09/2019	0	0	0	0	0	0	0	0	0
G12	29/09/2019	2	0	1	1	0	11	13	1	0
G12	30/09/2019	0	0	1	0	0	2	0	0	0
G13	17/09/2019	6	3	0	1	16	50	0	0	0
G13	18/09/2019	11	1	0	2	4	65	1	0	0
G13	19/09/2019	9	2	1	14	25	213	4	0	0
G13	20/09/2019	1	0	1	25	35	420	100	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G13	21/09/2019	0	0	0	11	109	758	195	0	0
G13	22/09/2019	1	1	0	0	0	19	0	0	0
G13	23/09/2019	4	0	0	0	1	24	2	0	0
G13	24/09/2019	0	0	0	0	0	3	0	0	0
G13	25/09/2019	0	0	0	0	0	0	0	0	0
G13	26/09/2019	0	0	0	0	0	0	0	0	0
G13	27/09/2019	0	0	0	0	0	0	0	0	0
G13	28/09/2019	0	0	0	0	0	0	0	0	0
G13	29/09/2019	0	0	0	0	0	4	0	0	0
G13	30/09/2019	0	0	0	0	0	0	0	0	0
G14	17/09/2019	1	0	0	5	4	16	8	0	0
G14	18/09/2019	4	2	0	0	5	19	1	3	0
G14	19/09/2019	0	0	0	1	5	39	20	1	0
G14	20/09/2019	1	0	1	0	2	6	1	0	0
G14	21/09/2019	0	0	0	0	0	2	1	0	0
G14	22/09/2019	2	0	0	4	22	52	9	0	0
G14	23/09/2019	1	0	0	0	0	2	3	2	0
G14	24/09/2019	0	0	0	0	0	1	0	0	0
G14	25/09/2019	0	0	0	0	0	0	0	0	0
G14	26/09/2019	0	0	0	0	0	0	0	0	0
G14	27/09/2019	0	0	0	1	0	4	0	0	0
G14	28/09/2019	0	0	0	0	0	0	0	0	0
G14	29/09/2019	9	1	1	2	3	110	10	0	0
G14	30/09/2019	12	0	0	1	0	3	0	0	0
G15	17/09/2019	0	0	0	0	2	26	6	0	0
G15	18/09/2019	0	0	0	0	0	20	2	1	1
G15	19/09/2019	0	0	0	0	0	14	9	1	1
G15	20/09/2019	0	0	0	0	0	2	0	1	0
G15	21/09/2019	0	0	0	0	0	2	0	0	0
G15	22/09/2019	0	0	0	0	0	2	8	0	0
G15	23/09/2019	0	0	0	0	0	1	4	0	2

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G15	24/09/2019	0	0	0	0	0	0	0	0	0
G15	25/09/2019	0	0	0	0	0	1	0	0	0
G15	26/09/2019	0	0	0	0	0	0	0	0	1
G15	27/09/2019	0	0	0	0	0	0	0	0	0
G15	28/09/2019	0	0	0	0	0	0	0	0	0
G15	29/09/2019	0	0	0	0	0	0	0	0	0
G15	30/09/2019	0	0	0	0	0	0	0	0	0
G17	17/09/2019	1	2	1	1	28	117	38	3	2
G17	18/09/2019	5	2	6	8	5	110	62	3	5
G17	19/09/2019	0	5	7	1	3	66	37	4	0
G17	20/09/2019	1	1	1	1	1	27	47	2	0
G17	21/09/2019	1	0	1	0	1	37	28	0	0
G17	22/09/2019	0	4	4	5	6	104	34	1	3
G17	23/09/2019	3	6	4	0	0	29	32	3	1
G17	24/09/2019	0	1	1	0	1	2	4	0	0
G17	25/09/2019	0	0	0	0	0	4	2	0	0
G17	26/09/2019	0	0	0	0	0	3	2	0	0
G17	27/09/2019	1	0	0	0	1	7	2	0	0
G17	28/09/2019	0	0	0	0	0	1	0	0	0
G17	29/09/2019	5	0	2	2	10	118	29	0	3
G17	30/09/2019	3	1	1	0	0	7	18	1	2
G18	17/09/2019	1	1	0	0	2	22	5	3	0
G18	18/09/2019	1	0	0	0	0	14	5	2	0
G18	19/09/2019	2	0	0	0	1	11	3	3	0
G18	20/09/2019	1	0	0	0	0	0	1	0	1
G18	21/09/2019	0	0	0	0	0	0	1	0	0
G18	22/09/2019	1	0	0	0	0	3	4	0	0
G18	23/09/2019	0	0	0	0	0	1	1	0	0
G18	24/09/2019	0	0	0	0	0	0	0	0	0
G18	25/09/2019	0	0	0	0	0	0	0	0	0
G18	26/09/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G18	27/09/2019	0	0	0	0	0	0	0	0	0
G18	28/09/2019	0	0	0	0	0	0	0	0	0
G18	29/09/2019	0	1	0	0	0	4	2	1	0
G18	30/09/2019	0	0	0	0	0	0	0	1	0
G19	30/07/2019	0	0	0	1	2	70	0	0	0
G19	31/07/2019	1	2	5	0	0	123	11	3	0
G19	01/08/2019	3	0	5	4	0	56	5	2	1
G19	02/08/2019	2	2	0	3	2	68	15	0	0
G19	03/08/2019	0	0	0	2	2	196	17	1	0
G19	04/08/2019	1	4	2	1	0	240	1	0	0
G19	05/08/2019	1	0	0	0	0	5	0	0	0
G19	06/08/2019	0	2	0	0	2	54	2	0	0
G19	07/08/2019	0	3	0	5	0	25	7	4	0
G19	08/08/2019	2	4	1	1	0	57	2	0	0
G19	09/08/2019	0	1	0	0	0	0	0	0	0
G19	10/08/2019	0	0	0	0	0	0	0	0	0
G19	11/08/2019	0	1	1	0	1	21	0	0	0
G19	12/08/2019	4	4	4	1	4	61	6	3	0
G19	13/08/2019	2	3	2	2	0	15	1	2	0
G19	14/08/2019	0	0	0	0	0	3	0	0	0
G19	15/08/2019	0	0	1	2	0	17	3	1	0
G19	16/08/2019	0	0	0	0	1	6	0	0	0
G19	17/08/2019	0	0	0	2	1	13	1	0	0
G19	18/08/2019	0	1	0	0	0	6	2	0	0
G19	19/08/2019	2	1	1	1	1	17	7	1	0
G19	20/08/2019	3	2	2	4	3	122	24	11	1
G19	21/08/2019	3	2	2	8	1	37	8	7	0
G19	22/08/2019	0	0	0	0	0	0	0	0	0
G19	23/08/2019	0	0	0	0	0	0	0	0	0
G19	24/08/2019	0	0	0	0	0	0	0	0	0
G19	25/08/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
G19	26/08/2019	0	0	0	0	0	0	0	0	0
G19	27/08/2019	0	0	0	0	0	0	0	0	0
G19	28/08/2019	0	0	0	0	0	0	0	0	0
G19	29/08/2019	0	0	0	0	0	0	0	0	0

Table 6: Raw data for Inchamore round 3.

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I1	21/08/2019	0	0	0	0	0	0	0	0	0
I1	22/08/2019	0	0	0	4	2	13	3	0	0
I1	23/08/2019	6	1	0	4	0	6	1	1	0
I1	24/08/2019	1	2	0	2	0	2	0	0	0
I1	25/08/2019	0	1	0	7	0	4	6	1	0
I1	26/08/2019	1	2	0	15	0	6	5	8	0
I1	27/08/2019	0	0	0	0	0	4	0	0	0
I1	28/08/2019	0	0	0	0	0	0	0	0	0
I1	29/08/2019	0	0	1	1	0	8	2	4	0
I1	30/08/2019	0	0	0	0	0	0	1	1	0
I1	31/08/2019	0	1	0	0	0	0	1	0	0
I1	01/09/2019	1	2	0	0	0	16	1	1	0
I1	02/09/2019	1	0	1	0	0	2	0	1	0
I1	03/09/2019	0	0	0	1	0	0	0	0	0
I1	04/09/2019	1	2	1	1	0	11	2	3	0
I1	05/09/2019	1	0	3	0	0	9	0	3	0
I1	06/09/2019	4	0	0	0	0	4	0	0	0
I1	07/09/2019	9	3	0	2	0	10	1	2	0
I1	08/09/2019	2	0	1	1	0	1	0	5	0
I1	09/09/2019	4	0	3	0	0	9	0	0	0
I1	10/09/2019	15	3	1	1	0	0	0	0	0
I1	11/09/2019	5	1	0	0	0	14	3	2	0
I1	12/09/2019	4	2	3	0	0	8	3	1	0
I1	13/09/2019	19	2	2	1	0	8	2	1	0
I1	14/09/2019	13	2	2	0	2	2	2	6	0
I1	15/09/2019	8	1	1	0	0	0	1	4	0
I1	16/09/2019	1	1	1	1	0	0	0	1	0
I2	21/08/2019	0	0	0	0	0	2	0	0	0
I2	22/08/2019	1	0	0	5	1	121	8	1	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I2	23/08/2019	4	5	1	10	38	93	12	8	0
I2	24/08/2019	0	1	0	1	0	3	1	5	0
I2	25/08/2019	1	3	1	2	1	19	12	1	0
I2	26/08/2019	2	2	2	2	2	39	7	7	0
I2	27/08/2019	0	0	0	0	0	17	1	0	0
I2	28/08/2019	0	0	0	0	0	26	2	0	0
I2	29/08/2019	1	1	0	11	0	85	16	1	0
I2	30/08/2019	0	0	0	0	0	1	0	1	0
I2	31/08/2019	0	1	0	3	0	15	0	0	0
I2	01/09/2019	2	1	0	0	0	30	2	2	0
I2	02/09/2019	2	1	2	0	0	1	4	6	0
I2	03/09/2019	0	3	0	0	0	5	1	2	0
I2	04/09/2019	0	2	0	0	1	40	1	2	0
I2	05/09/2019	2	3	0	0	0	60	2	9	0
I2	06/09/2019	1	2	0	0	0	10	3	0	0
I2	07/09/2019	3	5	0	2	0	39	3	5	0
I2	08/09/2019	2	2	3	0	0	95	3	9	0
I2	09/09/2019	0	0	1	0	0	21	0	0	0
I2	10/09/2019	1	3	1	0	0	0	1	11	0
I2	11/09/2019	1	2	0	1	2	294	27	1	0
I2	12/09/2019	1	3	2	0	0	37	7	2	0
I2	13/09/2019	5	1	3	3	1	172	25	13	0
I2	14/09/2019	4	1	12	2	1	86	30	10	0
I2	15/09/2019	0	1	1	0	0	3	1	4	0
I2	16/09/2019	1	1	1	0	0	0	0	1	0
I3	21/08/2019	0	0	0	0	0	0	0	0	0
I3	22/08/2019	0	1	0	0	0	1	0	0	0
I3	23/08/2019	0	0	0	9	0	28	0	0	0
I3	24/08/2019	0	0	0	0	0	0	0	0	0
I3	25/08/2019	0	0	0	2	0	7	2	0	0
I3	26/08/2019	2	0	0	3	1	5	1	2	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I3	27/08/2019	0	0	0	0	0	0	0	0	0
I3	28/08/2019	0	0	0	0	0	0	0	0	0
I3	29/08/2019	0	0	0	0	0	0	0	0	3
I3	30/08/2019	0	0	0	0	0	0	0	0	0
I3	31/08/2019	0	0	0	1	0	0	0	0	0
I3	01/09/2019	1	0	0	1	0	1	0	0	0
I3	02/09/2019	0	0	0	0	0	0	0	0	0
I3	03/09/2019	0	0	0	0	0	0	0	0	0
I3	04/09/2019	0	0	0	0	0	0	0	0	0
I3	05/09/2019	1	1	0	1	0	0	0	0	0
I3	06/09/2019	0	0	0	0	0	0	0	0	0
I3	07/09/2019	0	1	1	1	1	0	4	2	0
I3	08/09/2019	0	0	0	1	1	4	1	0	0
I3	09/09/2019	0	0	1	0	0	0	0	0	0
I3	10/09/2019	1	0	0	0	0	0	0	0	0
I3	11/09/2019	0	0	0	0	46	29	23	0	0
I3	12/09/2019	0	0	0	0	0	0	0	0	0
I3	13/09/2019	1	0	1	0	5	10	5	1	0
I3	14/09/2019	1	0	0	0	0	1	0	0	0
I3	15/09/2019	0	0	0	0	0	0	0	0	1
I3	16/09/2019	0	0	0	0	0	0	0	0	0
I4	21/08/2019	0	0	0	0	0	0	0	0	0
I4	22/08/2019	1	1	1	1	2	5	5	0	0
I4	23/08/2019	0	0	0	5	0	8	9	1	0
I4	24/08/2019	0	0	2	1	0	0	3	0	0
I4	25/08/2019	1	0	0	8	0	9	12	1	0
I4	26/08/2019	4	0	3	3	0	4	4	3	0
I4	27/08/2019	0	0	0	0	0	0	0	0	0
I4	28/08/2019	1	0	0	0	0	3	1	1	0
I4	29/08/2019	3	1	1	0	0	3	3	3	0
I4	30/08/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I4	31/08/2019	0	0	0	0	0	0	0	0	0
I4	01/09/2019	1	0	0	1	0	1	0	2	0
I4	02/09/2019	1	1	2	1	0	0	1	0	0
I4	03/09/2019	0	0	0	0	0	0	0	0	0
I4	04/09/2019	2	2	1	0	0	1	0	2	0
I4	05/09/2019	0	1	2	0	0	0	2	0	0
I4	06/09/2019	3	0	1	0	0	1	2	1	0
I4	07/09/2019	2	2	5	2	1	29	8	2	0
I4	08/09/2019	6	1	0	3	0	0	0	4	0
I4	09/09/2019	1	0	1	0	0	1	2	0	0
I4	10/09/2019	2	0	1	0	0	0	7	1	0
I4	11/09/2019	3	1	0	3	0	27	13	0	0
I4	12/09/2019	2	2	9	0	0	3	10	1	0
I4	13/09/2019	3	1	2	6	11	164	18	4	0
I4	14/09/2019	1	1	3	0	2	43	38	1	0
I4	15/09/2019	2	1	0	0	0	2	5	1	0
I4	16/09/2019	0	1	2	0	0	1	0	0	0
I5	21/08/2019	0	0	0	0	0	0	0	0	0
I5	22/08/2019	0	0	0	1	0	1	0	0	0
I5	23/08/2019	0	0	0	1	0	23	0	1	0
I5	24/08/2019	0	0	0	2	0	0	0	0	0
I5	25/08/2019	0	0	0	3	0	0	0	1	0
I5	26/08/2019	0	0	0	0	0	6	0	1	0
I5	27/08/2019	0	0	0	0	0	0	0	0	0
I5	28/08/2019	0	0	0	3	0	0	0	0	0
I5	29/08/2019	0	1	0	2	0	2	1	0	0
I5	30/08/2019	0	0	0	0	0	0	0	0	0
I5	31/08/2019	0	0	0	1	0	1	1	0	0
I5	01/09/2019	0	0	0	1	0	1	0	1	0
I5	02/09/2019	0	0	0	0	0	0	0	0	0
I5	03/09/2019	0	0	0	0	0	0	0	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I5	04/09/2019	0	0	0	0	0	0	1	0	0
I5	05/09/2019	0	0	0	0	0	0	0	0	0
I5	06/09/2019	0	0	0	0	0	0	0	0	0
I5	07/09/2019	0	0	1	0	0	0	0	2	0
I5	08/09/2019	2	0	1	2	0	0	0	0	0
I5	09/09/2019	0	0	0	0	0	0	0	0	0
I5	10/09/2019	0	0	0	0	0	0	0	1	0
I5	11/09/2019	0	0	0	1	0	6	3	1	0
I5	12/09/2019	1	0	0	0	0	1	1	0	0
I5	13/09/2019	0	0	0	0	1	6	3	1	0
I5	14/09/2019	0	0	0	1	0	3	4	0	0
I5	15/09/2019	0	0	0	0	0	0	0	1	0
I5	16/09/2019	0	0	0	0	0	0	0	0	0
I6	21/08/2019	0	0	0	0	0	0	0	0	0
I6	22/08/2019	0	0	0	3	3	19	5	0	0
I6	23/08/2019	0	1	0	3	0	2	3	1	0
I6	24/08/2019	2	0	0	0	2	0	0	0	0
I6	25/08/2019	0	0	1	7	0	18	3	0	0
I6	26/08/2019	0	1	0	3	0	2	2	1	0
I6	27/08/2019	0	0	0	0	0	0	0	0	0
I6	28/08/2019	0	0	0	1	0	0	0	0	0
I6	29/08/2019	0	0	0	2	0	9	4	0	0
I6	30/08/2019	0	0	0	0	0	0	0	0	0
I6	31/08/2019	0	0	0	0	0	0	0	0	0
I6	01/09/2019	1	0	2	1	0	9	2	0	0
I6	02/09/2019	2	0	0	0	0	1	0	0	0
I6	03/09/2019	0	0	0	0	0	0	0	0	0
I6	04/09/2019	0	0	0	0	0	0	0	0	0
I6	05/09/2019	1	0	0	0	0	0	0	0	0
I6	06/09/2019	1	2	1	0	0	0	2	0	0
I6	07/09/2019	5	0	2	1	1	14	3	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I6	08/09/2019	0	2	0	3	1	10	0	0	0
I6	09/09/2019	0	0	0	0	0	1	0	0	0
I6	10/09/2019	2	1	1	0	0	0	0	0	0
I6	11/09/2019	0	0	0	0	10	108	43	1	0
I6	12/09/2019	1	0	0	0	1	9	6	2	0
I6	13/09/2019	1	0	1	4	32	159	29	1	0
I6	14/09/2019	1	1	0	0	9	17	5	1	0
I6	15/09/2019	0	0	0	0	0	1	1	0	0
I6	16/09/2019	1	0	0	0	0	0	0	0	0
I7	21/08/2019	0	0	0	0	0	0	0	0	0
I7	22/08/2019	0	1	0	1	1	2	2	0	0
I7	23/08/2019	1	0	0	4	0	3	2	0	0
I7	24/08/2019	0	1	0	2	0	0	0	0	0
I7	25/08/2019	0	0	1	4	0	8	10	0	0
I7	26/08/2019	1	1	1	6	0	3	8	3	0
I7	27/08/2019	0	0	0	0	0	0	0	0	0
I7	28/08/2019	0	0	0	2	0	1	0	0	0
I7	29/08/2019	0	1	0	3	0	7	0	0	0
I7	30/08/2019	0	1	0	0	0	0	0	0	0
I7	31/08/2019	0	0	0	0	0	0	0	0	0
I7	01/09/2019	2	2	0	0	1	5	1	0	0
I7	02/09/2019	3	2	1	0	0	3	0	0	0
I7	03/09/2019	0	0	1	0	0	0	0	0	0
I7	04/09/2019	0	0	0	1	0	0	0	0	0
I7	05/09/2019	1	0	1	0	0	2	2	1	0
I7	06/09/2019	0	1	0	0	0	1	2	0	0
I7	07/09/2019	3	1	1	6	2	13	4	1	0
I7	08/09/2019	0	1	0	1	2	6	2	2	0
I7	09/09/2019	0	0	0	0	0	2	1	0	0
I7	10/09/2019	2	0	0	0	0	1	0	1	0
I7	11/09/2019	0	3	2	1	1	17	13	0	1

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I7	12/09/2019	0	0	0	0	0	5	8	0	0
I7	13/09/2019	1	0	1	6	23	121	27	3	0
I7	14/09/2019	2	0	2	1	0	8	2	2	0
I7	15/09/2019	1	0	0	0	0	2	2	0	0
I7	16/09/2019	0	2	1	0	0	1	1	0	0
I8	21/08/2019	0	0	0	0	0	0	0	0	0
I8	22/08/2019	0	0	0	2	0	1	1	0	0
I8	23/08/2019	0	0	0	6	0	9	1	0	0
I8	24/08/2019	0	1	0	0	0	0	0	0	0
I8	25/08/2019	0	1	0	0	0	8	1	0	0
I8	26/08/2019	0	0	0	3	1	1	0	1	0
I8	27/08/2019	0	0	0	0	0	0	0	0	0
I8	28/08/2019	0	0	0	0	1	0	0	0	0
I8	29/08/2019	0	0	0	2	0	2	0	0	0
I8	30/08/2019	0	0	0	0	0	0	0	0	0
I8	31/08/2019	0	0	0	0	0	0	0	0	0
I8	01/09/2019	0	0	0	2	0	1	2	1	0
I8	02/09/2019	0	0	0	0	0	2	0	0	0
I8	03/09/2019	0	0	0	0	0	0	0	0	0
I8	04/09/2019	0	0	0	0	0	1	1	0	0
I8	05/09/2019	0	0	0	0	0	5	0	0	0
I8	06/09/2019	1	1	0	0	0	4	1	0	0
I8	07/09/2019	0	0	1	1	2	12	8	1	0
I8	08/09/2019	0	0	1	2	0	0	0	0	0
I8	09/09/2019	0	0	0	0	0	4	0	0	0
I8	10/09/2019	2	0	0	0	0	0	0	0	0
I8	11/09/2019	0	0	0	1	0	8	2	2	0
I8	12/09/2019	0	0	0	1	3	5	3	1	0
I8	13/09/2019	0	1	1	4	10	69	14	1	0
I8	14/09/2019	1	0	0	0	0	4	0	0	0
I8	15/09/2019	0	0	0	0	0	6	2	0	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I8	16/09/2019	0	0	0	0	0	1	0	0	0
I9	21/08/2019	0	0	0	0	0	0	0	0	0
I9	22/08/2019	1	0	0	3	3	11	1	0	0
I9	23/08/2019	1	1	0	9	2	17	6	1	0
I9	24/08/2019	0	0	0	1	0	2	0	0	0
I9	25/08/2019	0	0	0	4	0	4	3	0	0
I9	26/08/2019	0	1	1	7	1	19	14	2	0
I9	27/08/2019	0	0	0	0	0	1	0	0	0
I9	28/08/2019	0	0	0	1	0	4	0	0	0
I9	29/08/2019	0	1	1	0	0	35	1	0	0
I9	30/08/2019	0	0	0	0	0	0	0	0	0
I9	31/08/2019	0	0	0	0	0	5	0	0	0
I9	01/09/2019	0	0	2	1	0	14	1	0	0
I9	02/09/2019	1	4	0	1	0	3	0	1	0
I9	03/09/2019	0	0	0	0	0	3	0	0	0
I9	04/09/2019	0	0	0	1	0	2	0	0	0
I9	05/09/2019	0	0	2	0	0	3	1	0	0
I9	06/09/2019	0	0	0	0	0	2	0	0	0
I9	07/09/2019	0	0	1	3	1	8	4	2	0
I9	08/09/2019	3	2	1	3	0	31	10	1	0
I9	09/09/2019	0	1	0	0	0	2	1	0	0
I9	10/09/2019	1	0	2	0	0	1	0	0	0
I9	11/09/2019	0	0	0	1	14	173	48	0	0
I9	12/09/2019	0	1	2	1	19	167	13	0	0
I9	13/09/2019	1	0	1	1	20	123	17	2	0
I9	14/09/2019	0	0	0	2	10	48	8	0	0
I9	15/09/2019	0	1	1	4	12	62	10	1	0
I9	16/09/2019	0	0	0	0	0	0	1	0	0
I10	21/08/2019	0	0	0	0	0	3	1	0	0
I10	22/08/2019	0	2	0	1	0	147	74	2	1
I10	23/08/2019	3	7	2	15	1	68	32	11	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I10	24/08/2019	0	3	1	5	1	17	0	3	0
I10	25/08/2019	1	2	0	4	5	266	11	3	0
I10	26/08/2019	8	13	1	11	2	160	31	10	1
I10	27/08/2019	0	0	0	0	0	35	0	0	0
I10	28/08/2019	1	0	0	3	14	93	9	0	0
I10	29/08/2019	3	6	1	1	9	143	20	8	0
I10	30/08/2019	0	0	0	0	0	3	0	0	0
I10	31/08/2019	1	5	0	1	10	89	7	4	0
I10	01/09/2019	3	7	0	2	3	76	9	4	0
I10	02/09/2019	5	5	2	0	2	20	8	7	0
I10	03/09/2019	0	1	1	0	1	0	2	0	0
I10	04/09/2019	1	2	1	1	1	162	7	3	0
I10	05/09/2019	3	2	1	0	1	80	2	5	0
I10	06/09/2019	4	2	4	1	2	225	15	0	0
I10	07/09/2019	4	19	2	3	8	157	47	13	0
I10	08/09/2019	3	9	0	1	2	71	24	5	10
I10	09/09/2019	3	1	0	6	2	67	6	2	0
I10	10/09/2019	0	1	0	0	0	8	2	7	1
I10	11/09/2019	2	1	0	0	3	73	30	1	0
I10	12/09/2019	5	7	1	3	1	105	29	4	1
I10	13/09/2019	6	20	1	1	10	232	120	13	0
I10	14/09/2019	7	13	0	0	0	39	66	10	1
I10	15/09/2019	2	3	1	5	1	12	17	2	0
I10	16/09/2019	2	1	2	0	0	1	0	5	0
I11	30/07/2019	0	2	0	1	1	34	7	0	0
I11	31/07/2019	1	4	0	1	1	29	6	0	0
I11	01/08/2019	2	3	0	2	2	143	39	0	0
I11	02/08/2019	3	5	0	9	2	189	44	0	0
I11	03/08/2019	1	1	0	3	2	57	4	1	0
I11	04/08/2019	10	2	0	0	1	38	11	1	0
I11	05/08/2019	1	1	0	0	0	28	0	1	0

TURBINE_NO	Date	*Myotis daubentonii*	*Myotis mystacinus*	*Myotis nattereri*	*Nyctalus leisleri*	*Pipistrellus nathusii*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Plecotus auritus*	*Rhinolophus hipposideros*
I11	06/08/2019	0	2	0	3	0	14	2	0	0
I11	07/08/2019	2	5	0	11	0	87	3	2	0
I11	08/08/2019	6	5	0	8	1	12	4	3	0
I11	09/08/2019	2	1	1	3	0	11	1	0	0
I11	10/08/2019	0	0	0	0	0	0	0	1	0
I11	11/08/2019	1	0	0	1	0	5	4	0	0
I11	12/08/2019	6	1	0	3	0	37	2	2	0
I11	13/08/2019	11	4	0	2	0	82	0	0	0
I11	14/08/2019	1	0	0	2	0	136	1	0	0
I11	15/08/2019	3	1	1	8	2	59	8	0	0
I11	16/08/2019	0	0	0	2	0	41	0	1	0
I11	17/08/2019	2	6	0	3	0	29	2	4	1
I11	18/08/2019	15	5	0	2	1	39	1	3	0
I11	19/08/2019	8	1	0	7	0	65	5	0	0
I11	20/08/2019	18	2	1	8	0	46	16	1	1
I11	21/08/2019	10	2	0	12	0	26	7	1	0
I11	22/08/2019	0	0	0	1	0	0	0	0	0
I11	23/08/2019	0	0	0	0	0	0	0	0	0

FEHILY TIMONEY

30 YEARS

**CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE & PLANNING**

www.fehilytimoney.ie

CORK OFFICE
Core House
Pouladuff Road,
Cork, T12 D773,
Ireland
+353 21 496 4133

Dublin Office
J5 Plaza,
North Park Business Park,
North Road, Dublin 11, D11 PXT0,
Ireland
+353 1 658 3500

Carlow Office
The Grain Store
Singleton's Lane, Bagenalstown
Co. Carlow, R21 XA66,
Ireland
+353 59 972 3800