

Ballyfeeny Green Energy Limited

Ballyfeeny Green Energy Project

Appendix 6.6: Bats Technical Appendix

September 2025

This report considers the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

**INIS Environmental
Consultants Ltd.**

Suite 16,
Block A,
Clare Technology Park,
Gort Road,
Ennis,
County Clare
Ireland.



Notice

This report was produced by INIS Environmental Consultants Ltd. (INIS) on behalf of Ballyfeeny Green Energy Limited (hereafter known as the Developer) to accompany **EIAR Chapter 6 - Biodiversity** for the Ballyfeeny Green Energy Project. The purpose of this report is to assess the bats baseline for the Ballyfeeny Green Energy Project (hereafter referred to as the 'proposed Project'), with all reasonable skill, care and due diligence within the terms of the contract with the client, incorporating our terms and conditions and taking account of the resources devoted to it by agreement with the client.

This report may not be used by any person other than the client, without the client's express permission. In any event, INIS accepts no liability for any costs, liabilities or losses arising as a result of the use of or reliance upon the contents of this report by any person other than the client.

This report is confidential to the client and INIS accepts no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

© INIS Environmental Consultants Ltd., 2025.

CONTENTS

6. Bat Results	3
6.1 Bat Species Ecology and Zone of Influence	3
6.2 Survey Area	4
6.3 Field Survey Methods	5
6.3.1 Bat Preliminary Roost Assessment	5
6.3.2 Bat Activity Surveys- Emergence Surveys	6
6.3.3 Bat Activity Surveys - Static Detector Surveys	7
6.3.4 Calculation and comparison of Bat Activity Indices	8
6.3.5 Species Identification and interpretation of data	8
6.3.6 Use of a Frequency Scale for comparing bat activity	9
6.4 Field Survey Results	10
6.4.1 Bat Preliminary Roost Assessments	10
6.4.2 Bat Activity Surveys- Emergence Surveys	13
6.4.3 Bat Activity Surveys- Transect Surveys	15
6.4.4 Bat Activity Surveys – Static Detector Surveys	24
6.5 Species Assessments	46
6.5.1 Common Pipistrelle	46
6.5.2 Soprano Pipistrelle	46
6.5.3 Leisler's Bat	46
6.5.4 Nathusius' Pipistrelle	47
6.5.5 Myotis spp.	47
6.5.6 Brown Long-eared Bat	47
6.5.7 Lesser Horseshoe Bat	47
6.6 Importance of Bats & Sensitivity to Change	48
6.7 Summary of Key Ecological Receptors	49

List of Figures

Figure 6.1: PRA survey results 2023.....	11
Figure 6.2: PRA survey results 2024.....	12
Figure 6.3: Transect survey results- Transect 1.....	22
Figure 6.4: Transect survey results- Transect 2.....	23
Figure 6.5: Static detector locations- spring 2023.....	27
Figure 6.6: Static detector locations- summer 2023.....	28
Figure 6.7: Static detector locations- autumn 2023.....	29

List of Tables

Table 6.1: Bat receptors and relevant ZOIs.....	3
Table 6.2: Surveys and survey areas.....	4
Table 6.3: Bat PRA survey results 2023.....	10
Table 6.4: Bat PRA survey 2024.....	10
Table 6.5: Emergence survey efforts.....	14
Table 6.6: BL2 Emergence survey results.....	13

<i>Table 6.7: BL3 emergence survey results.</i>	13
<i>Table 6.8: Transect weather data.</i>	16
<i>Table 6.9: Bat activity recorded by static detectors during the spring 2023 deployment.</i>	30
<i>Table 6.10: Bat activity recorded by static detectors during the summer 2023 deployment.</i>	25
<i>Table 6.11: Bat activity recorded by static detectors during the Autumn 2023 deployment.</i>	26
<i>Table 6.12: Static detector raw data – spring 2023.</i>	37
<i>Table 6.13: Static detector raw data – summer 2023.</i>	41
<i>Table 6.14: Static detector raw data – autumn 2023.</i>	43
<i>Table 6.15: Static Detector weather data.</i>	30
<i>Table 6.16: Static detector weather data.</i>	33
<i>Table 6.17: Summary of species importance and identification of Key Ecological Receptors.</i>	49

6. BAT RESULTS

6.1 Bat Species Ecology and Zone of Influence

The Zone of Influence (Zoi) is defined as ‘the area over which ecological features may be affected by biophysical changes as a result of the proposed Project and associated activities’ (CIEEM, 2024). Zoi, and the study area, is therefore broadly considered as the geographical area over which the Project could affect the receiving environment in a way that could have significant effects on ecological receptors.

The Zoi for bat receptors varies per receptor. Therefore, the Zoi for each bat species is determined by the potential for bat activity within and surrounding landscape of the proposed Project. The sources of each Zoi for each ecological receptor are outlined in Error! Reference source not found.1.

Table 6.1: Bat receptors and relevant ZOIs.

Species	Roosting Preferences	Foraging Preferences	Reference
Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)	Roost sites include attics, chimneys, boiler rooms of buildings, rural houses and outbuildings in the summer, cellars and caves.	Broadleaved woodlands, hedges, woodland edge and riparian trees. Suitable commuting and foraging habitat within a radius of at least 2.5km is important for the success of a maternity colony.	Bontadina <i>et al.</i> , 2002; Schofield <i>et al.</i> , 2002; NPWS & VWT, 2022.
Whiskered Bat (<i>Myotis mystacinus</i>)	Roost sites include trees, a wide range of buildings in the summer. Mature broadleaved trees such as beech and sycamore can be used for roosting.	Mixed woodland, riparian vegetation, arable and rough grassland habitats.	Buckley <i>et al.</i> , 2013.
Daubenton’s Bat (<i>Myotis daubentonii</i>)	Roost sites include hollow trees, bridges, buildings close to water.	Over water and woodland.	Racey <i>et al.</i> , 1998; Rydell <i>et al.</i> , 1994.
Natterer’s Bat (<i>Myotis nattereri</i>)	Roost in tree holes, different building types and bridges. Timber-framed barns are also important roost sites.	Semi-natural broadleaved woodland, tree-lined river corridors, ponds, and grasslands.	Billington & Norman, 1997; Smith & Racey, 2002, 2008; Briggs, 1995, 2002.
Leisler’s Bat (<i>Nyctalus leisleri</i>)	Roost in tree holes, bat boxes, houses such as the gable end of lofts, under tiles, soffit boards and disused chimneys.	Woodland edges, scrub, woodland-lined roads and over pasture. Drainage canals, lakes and coniferous forests. Hedges, tree lines, woodland, grassland, streetlights and arable areas.	Waters <i>et al.</i> , 1999; Shiel <i>et al.</i> , 1999.
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Roost mainly in buildings or trees.	Generally, a wide range of habitats; deciduous woodland and shaded woodland, high quality riparian zones.	Lundberg & Gerell, 1986; Scott <i>et al.</i> , 2010.

Species	Roosting Preferences	Foraging Preferences	Reference
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	Roost mainly in buildings or trees.	Preference to riparian habitat, shaded woodland.	Lundberg & Gerell, 1986; Scott <i>et al.</i> , 2010.
Nathusius' Pipistrelle (<i>Pipistrellus nathusii</i>)	Roost sites include buildings, hollow trees, crevices in cliffs, walls and caves.	Riparian habitats, broadleaved, mixed woodland and parkland lakes and rivers.	Altringham, 2003; Harris & Yalden, 2008; Vaughan <i>et al.</i> , 1997.
Brown Long-Eared Bat (<i>Plecotus auritus</i>)	Roost on ridge beams in spaces between rafters.	Deciduous woodland, mixed woodland edge, among conifers, and hedgerows.	Razgour <i>et al.</i> , 2013; Murphy <i>et al.</i> , 2012.

6.2 Survey Area

The landscape surrounding the proposed Project is predominantly improved agricultural landscapes and forestry, with hedgerows and treelines along roadsides. Bat surveys were undertaken to provide a baseline and to gain an understanding of the bat activity across the proposed Site in the absence of turbines. The bat surveys undertaken to inform the impact assessment followed a multidisciplinary approach. The habitats and features present were assessed for bat commuting, foraging and roosting suitability (including bridges, buildings and mature trees that could be directly or indirectly affected). The GCR and TDR were also assessed as part of the multidisciplinary surveys. Study areas were based on best practice guidance and the relevant Zone of Influence for bat species (NatureScot, 2021 and NIEA NED, 2021). The survey area for each survey type is shown in **Table 6.2**.

Table 6.2: Surveys and survey areas.

Survey Type	Survey Area
Preliminary Roost Assessments	Within 500m of the current layout of the proposed turbines. All Watercourse crossings along the GCR. Any Trees set for felling along the TDR route (Note: No tree features set for this impact).
Bat Activity Surveys	Within the proposed wind farm Site boundary, covering the six turbine locations and suitable commuting/foraging habitats.
Transect Survey	Within the proposed wind farm Site boundary.
Emergence Survey	At sites identified with suitable roosting potential arising from the Preliminary Roost Assessment.
Ground-Level Roost Assessments	Trees with moderate or low bat suitability within 250m of the proposed wind turbines

6.3 Field Survey Methods

Bat surveys were conducted on the Project Site and survey area based upon recommended Best Practice guidance for bat surveys (Collins, 2016) and with recommendation on survey scope and extent in relation to onshore wind farms (NatureScot, 2021). Note that the Collins, 2016 guidance was updated in 2023. All surveys undertaken for this project followed the guidance available at the time (Collins, 2016), and it is noted that this approach is consistent with the revised guidance (Collins, 2023) now available. Desk study data from National Biodiversity Data Centre and Bat Conservation Ireland provided insight into likely species to be detected during the field survey efforts and were considered to inform conclusions regarding determination of KERs. Data sources, access dates and tables are provided in **Appendix 6.2**.

6.3.1 Bat Preliminary Roost Assessment

A bat Preliminary Roost Assessment (PRA) was undertaken in 2023 for the turbine locations and in 2024 for GCR watercourse crossings (**Figure 6.1, Figure 6.2**). PRAs were carried out at any structure that could support a bat roost within 500m of each proposed turbine location¹. PRAs are carried out during daylight hours to ascertain if there are any obvious signs of bat activity at the structure/potential roosting features (SNH, 2021). No PRA or Ground-Level Tree Assessment was required for the TDR. The PRAs were undertaken to:

- Determine if bats are currently present or have been present in the past (via signs of droppings, urine /urine / fur-oil staining);
- Define the roost category or categories, i.e., low, moderate, high; and
- Identify further survey requirements.

The structures identified within the 500m buffer area were searched systematically and consistently through all parts of the structure identified as suitable for bats and accessible by the surveyor. Structures were searched externally for bats and signs of bat presence. Surfaces of structural areas were examined for the presence of droppings and feeding remains (e.g. moth wings, etc.). Structures were also examined for access points and roosting, polishing or scratching, urine and oily residue stains and for cavities suitable for roosting bats.

Any potential tree roosts were subject to a ground-level roost assessment within 500m of the proposed turbines, using binoculars (model: Steiner SkyHawk 3.0 10x42). The aim of the ground-level inspection was to identify any Potential Roost Features (PRFs) (i.e., cavities or crevices on trunks or limbs) and evidence of bats (e.g., droppings, fur-oil stains at access points).

Coniferous trees within plantations were not inspected, because as they are rarely large enough to have any features suitable for bats, and because it is standard forestry practice to remove any trees that have obvious signs of damage and disease; as a result, trees within plantations typically have negligible suitability for bats.

¹ Note that 200m plus rotor radius from the boundary of the proposed development is recommended for roost surveys (SNH, 2021); the additional distance surveyed here is to allow for design changes (such as alterations to the proposed development boundary) and ensure a robust assessment was undertaken.

Roost activity surveys consisted of presence/absence surveys and included dusk visits (emergence) to watch, listen for and record bats exiting or entering bat roosts. If the presence of bats was confirmed, then roost characterisation surveys were required.

According to Collins (2023), which aligns with Collins 2023 guidance which was used for the surveys undertaken in 2024, presence/absence surveys are needed if:

- The PRA, (i.e. for structures and trees) has not ruled out the reasonable likelihood of a roost being present (because there are locations with potential for bats to roost undetected in concealed cracks, crevices or voids), but no definitive evidence of the presence of bat roosts has been recorded; the PRA inspection survey (trees) has identified moderate and high suitability PRFs for bats, but no definitive evidence of the presence of bat roosts has been recorded;
- A comprehensive inspection survey of a structure is not possible because of restricted access, but there are features with a reasonable likelihood of supporting bats;
- There is a risk that evidence of bat use may have been removed by weather or human activities; and

Trees and buildings within 500m of the wind farm identified as potential roost features were surveyed and assessed based on the Collins, 2016 which was the relevant best practice guidance at the time of surveys.

6.3.2 Bat Activity Surveys- Emergence Surveys

Emergence surveys were undertaken in line with best practice guidelines Collins (2016) and on review align with Collins 2023. Emergence surveys were conducted with handheld bat detectors (Elekon Batlogger and Anabat Walkabout). Surveying potential for roost features was determined using the relevant guidelines (Collins, 2016, aligns fully with Collins, 2023), shown in **Table 6.3**.

Table 6.3: *Description of best practice criteria for surveying potential roost features.*

Low Roost Suitability	Moderate roost Suitability	High Roost Suitability
May to August (Structures) No further surveys required (tress)	May to September, with at least one of surveys between May and August	May to September, with at least one of surveys between May and August
One Dusk Visit (Structures); None (Tress)	Two Dusk Visits	Three Dusk Visits

Surveyors were located at PRFs identified during the daytime roost inspection surveys with a focus on roosting features. The purpose was to identify any bat species, numbers, access points and roosting locations within the structure or tree. Surveys were carried out in favourable weather conditions.

The emergence surveys commenced at least 15 minutes before sunset and concluded 1 hour after sunset (see **Table 6.4**). Where possible, species identification was made in the field and any other relevant information was also noted. Surveyors were equipped with active full spectrum bat detectors. All bat echolocation was recorded for subsequent analysis to confirm species identifications using Kaleidoscope and Anabat Insight software. Each bat record was identified as “commuting”, “foraging” or “emerging” as per Collins, 2016, aligns fully with Collins, 2023).

Table 6.4: *Best practice times to conduct bat surveys (Bat Conservation Ireland, 2012; Collins, 2023).*

Survey Type	Time Start	Time Finish
Bat Activity (Dusk surveys, all species)	½ hour before sunset	2-3 hours after sunset

Activity levels for bat calls were based on the frequency of calls recorded within specific time windows based on the Bat Activity Indices (Hundt, 2012). This approach uses standardised terms (e.g. occasional, frequent) to categorise bat activity indices within certain ranges; the average time interval between passes is also provided to give a more intuitive interpretation of the terms (see **Section 6.3.4**). Calls recorded are saved onto SD cards for post-survey analysis and quality control of identified bat species and to determine any cryptic calls.

These manual surveys were carried out by multiple ecologists (at least two at each survey location/structure) to ensure optimal detection of species that may be difficult to detect using a handheld heterodyne detector (BCI, 2012).

In accordance with best practice, it is also important to survey bats at the appropriate time of year and time of night/day. The times of all surveys adhered to the timing indicated in **Table 6.4** and **Table 6.5**.

Table 6.5: Best practice time of year bat activity surveys.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hibernation roost survey			*	Summer roost emergence and activity surveys					*	Hibernation roost survey	
Potential roost and internal surveys. Tree roost Surveys are best conducted in Winter											

* Limited activity

Bat Activity Surveys - Transect Surveys

As per Best Practice guidelines, three seasons (Spring, Summer, and Autumn) of transect surveys were conducted in 2023. The aim of these surveys is to identify bat species using the proposed Site and to gather information on bat behaviour and important features used by bats. Two separate transect routes were chosen with reference to the proposed layout, desktop and walkover survey results as well as any health and safety considerations and access limitations. The location of transect surveys was designed to include habitats representative of the site and linear features which would be of particular interest to bat species within the proposed Site, such as buildings and linear habitats such as watercourses, hedgerows, treelines and forestry edge.

Transects were walked by two surveyors, recording bats in real time. Dusk surveys commenced 30 minutes before sunset and were completed for up to 3 hours after sunset. Surveyors were equipped with active full spectrum bat detectors (Elekon Batlogger and Anabat Walabout), and all bat activity was recorded for subsequent analysis to confirm species identifications.

6.3.3 Bat Activity Surveys - Static Detector Surveys

In accordance with NatureScot (2021), bat activity surveys at the proposed Site were undertaken in the Spring (April – May), Summer (June – mid August), and Autumn (mid-August – October) of 2023 using automated Anabat Express bat detectors (Titley Scientific).

Six locations were chosen for 2023 passive surveys, covering the six turbine locations and the habitats in the surrounding areas. Six static detectors were deployed for 14 nights for each season (Spring, Summer and Autumn). External microphones were mounted on poles at a height of 1m to obtain 'clean' recordings that were not affected by surrounding vegetation.

Based on professional judgement, and with reference to relevant guidance (NatureScot (2021) and NIEA NED, (2021)), this survey effort was sufficient to provide a good representation of bat activity during their most active periods.

Surveys were carried out during suitable weather conditions, i.e., minimum temperatures above 10°C, average winds of less than 17mph and little or no rainfall. There was wet weather or high winds on some survey nights, so the survey was extended until a suitable number of nights of suitable conditions were obtained.

6.3.4 Calculation and comparison of Bat Activity Indices

In order to standardise bat activity between the mid-Summer and Autumn survey periods, results are displayed as a 'Bat Activity Index', which is the total number of bat passes divided by the number of hours per night (Hundt, 2012). This was calculated from sunset to sunrise, using publicly available data from www.timeanddate.com.

At present there is not a standard system to categorise bat activity as low, moderate, or high, because the results vary depending on the species involved and the location of the Site. For the purposes of this report, professional judgment is used to discuss and compare levels of bat activity at the proposed Project Site, as outlined in **Table 6.6**. This approach uses standardised terms (e.g., occasional, frequent) to categorise bat activity indices within certain ranges; the average time interval between passes is also provided to give a more-intuitive interpretation of the terms.

Table 6.6: *Characterisation of Bat Activity Indices*

Bat Activity Index	Average interval between calls	Terms of characterisation
<2	> 30 minutes	Negligible
2 - 12	5 – 30 minutes	Occasional
12 – 60	1 – 5 minutes	Frequent
>60	< 1 minute	Near-constant

6.3.5 Species Identification and interpretation of data

Sonograms from Anabat Express detectors were obtained in the 'zero-crossing' format and viewed using Kaleidoscope and Anabat Insight software. Species were identified with reference to British Bat Calls: A Guide to Species Identification (Russ, 2012) based primarily on frequency and call shape, but also with reference to call slope for *Myotis* spp. Social calls were classified as unidentified bats unless they closely matched the examples provided in Russ (2012).

It is acknowledged that *Myotis* spp. can have very similar calls, and that the classification of sonograms can be imprecise, so all *Myotis* records in this document should be considered as conferred records, i.e., *Myotis c.f. daubentonii*. There can also be overlaps in call frequency between *Pipistrellus* spp. - calls with a constant frequency (CF) component at 50kHz may be either Soprano Pipistrelle (*Pipistrellus pygmaeus*) or Common Pipistrelle (*Pipistrellus pipistrellus*), while calls at 40kHz may be either

Common Pipistrelle or Nathusius' pipistrelles (*Pipistrellus nathusii*) – but in most cases, it is possible to determine the species based on call characteristics and other calls immediately before or after the recording. If a bat pass could not be confidently identified to species level it was recorded as an unidentified bat or identified only to genus level (e.g., *Myotis* spp.).

6.3.6 Use of a Frequency Scale for comparing bat activity

For the purposes of this report, we use a bespoke system to discuss and compare levels of bat activity at the proposed Site, as outlined in **Table 6.7**. This system is based on the professional judgement of the author, and the results of peer reviewed research (Mathews *et al.*, 2016). For ease of comparison, bat activity levels are classified into four categories based on a simple count of bat passes per night. For the purposes of this assessment, any species that regularly has more than 50 bat passes per night (i.e., moderate to high activity) is considered to have a significant level of activity. This corresponds with the threshold of 50 passes per night used in the Mathews *et al.*, 2016 report.

Table 6.7: Terminology used to categorise bat activity levels

Category	Number of bat passes per night
Negligible	≤9
Low	10 – 49
Moderate	50 – 99
High	≥100

6.4 Field Survey Results

6.4.1 Bat Preliminary Roost Assessments

Table 6.8 and Figure 6.1 shows the structures surveyed for the PRA at the proposed Project. A total of three structures were assessed, along with larger habitat areas on the proposed Site. Two of the structures assessed were considered to be of Low roosting potential. In addition, two structures along the proposed Grid Connection Route (GCR) were also assessed; both area watercourse crossings that are culverted and therefore have an existing crossing structure in place. These watercourse crossings were inspected in March 2024 and were assessed as having ‘Negligible’ roosting potential (see **Table 6.9** and **Figure 6.2**).

Table 6.8: Bat PRA survey results 2023.

Date	Observer	Structure type	Structure Code	Coordinates	Roosting Potential	Notes
27/02/2023	MOH	Building	BL1	53.7870235, -8.0341507	Negligible	One story building, currently under construction, even when construction and refurbishment finished still neg/low roosting potential, as it is a new build there will be minimal to no access points and there will have been no time for a roost to establish.
27/02/2023	MOH	Building	BL2	53.7851891, -8.0285255	Low	Active cattle shed, livestock present, metal roofing and support beams, water reservoir and cell tower adjacent
27/02/2023	MOH	Building	BL3	53.7828465, -8.0295930	Low	Large storage/sludge shed, base walls are concrete, upper walls and roofing are metal, with wooden roofing and support beams, large open doorways are main access points
27/02/2023	MOH	Area	A1	N/A		Coniferous plantation, many saplings, no roosting potential, but water source present, possible foraging habitat
27/02/2023	MOH	Area	A2	N/A		No suitable trees in hedgerows for roosting, but high connectivity, all young trees, which are heavily branched and Ivy clad.
27/02/2023	MOH	Area	A3	N/A		No suitable roosting structures, or habitat, young conifers, and hedgerows present.

Table 6.9: Bat PRA survey 2024 along the GCR

Date	Structure Type	Structure Code	Coordinates	Roosting Potential
26/03/2024	Water crossing	WC1	596974.62, -778275.49	Negligible
26/03/2024	Water crossing	WC2	596763.77, -780061.97	Negligible



Figure 6.1: PRA survey results 2023.

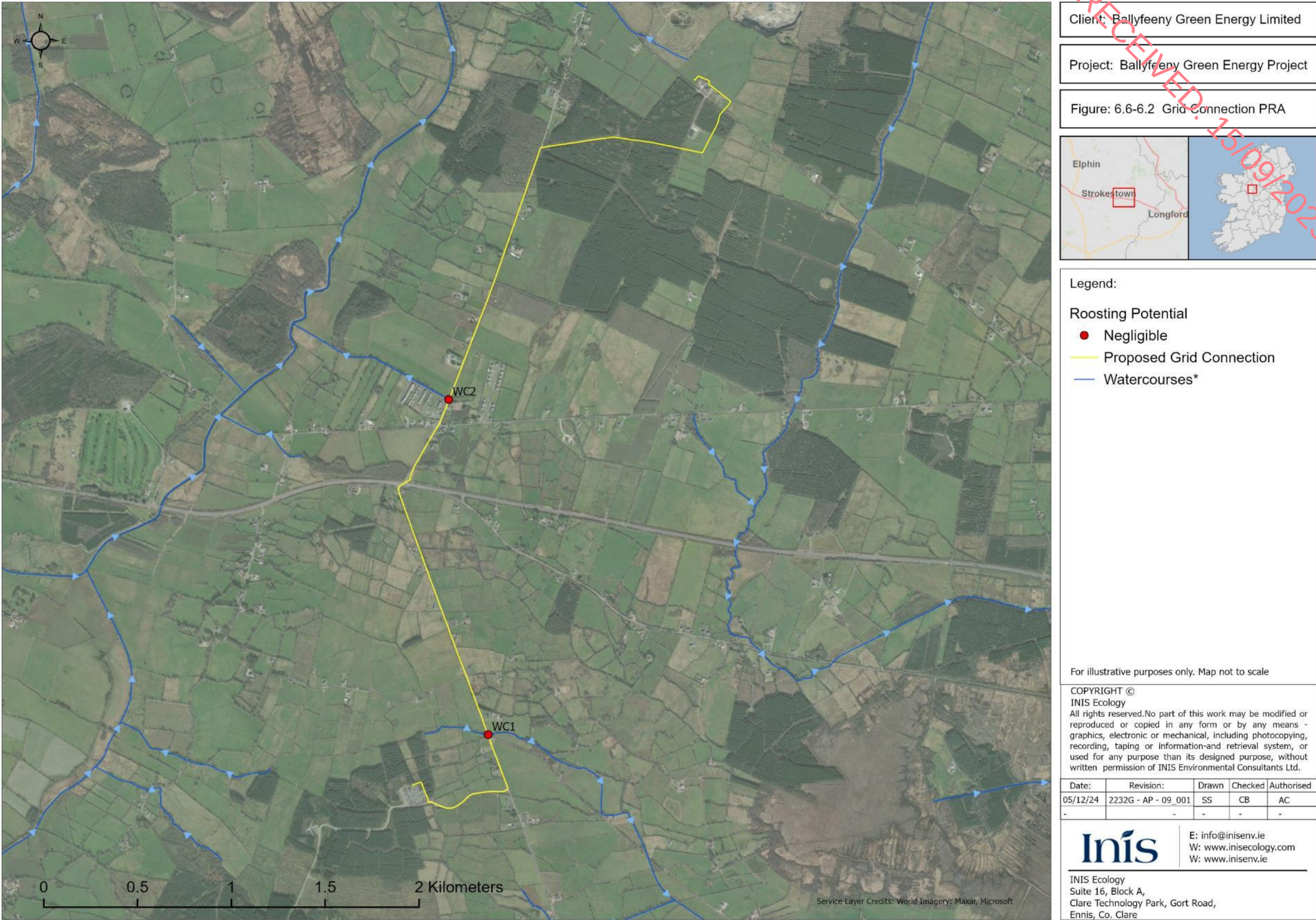


Figure 6.2: Grid Connection PRA survey results 2024.

6.4.2 Bat Activity Surveys- Emergence Surveys

The PRAs identified two structures in 2023 to be surveyed for bat roosting, namely 'BL2' and 'BL3' (Figure 6.1). 'BL2' is an operating cattle shed with metal support beams and roofing. 'BL2' was classified as having 'Low' roosting suitability and, therefore, one emergence survey was carried out on the 8th July 2023. The survey results for 'BL2' can be seen below in Table 6.10. **No roosts were identified at this location.** Through the detector, the survey identified both Soprano Pipistrelle and Common Pipistrelle foraging at 'BL2'.

Table 6.10: BL2 Emergence survey results.

Species	Behaviour	Occurrence (no. of flight passes)
Common Pipistrelle	Commuting	0
	Foraging	121
	Emerging	0
Soprano Pipistrelle	Commuting	0
	Foraging	87
	Emerging	0

'BL3' is a large concrete storage shed with metal upper walls and roofing, wooden support beams and large open doorways for access. 'BL3' was classified as having 'Low' roosting suitability and, therefore, one emergence survey was carried out on the 23rd August 2023. **No roost was identified at 'BL3'.** The survey identified Soprano Pipistrelle, Common Pipistrelle, Nathusius' Pipistrelle and Leisler's Bat through the detector. The results are displayed in Table 6.11.

Table 6.11: BL3 emergence survey results.

Species	Behaviour	Occurrence (no. of flight passes)
Common Pipistrelle	Commuting	11
	Foraging	15
	Emerging	0
Soprano Pipistrelle	Commuting	5
	Foraging	29
	Emerging	0
Leisler's Bat	Commuting	2
	Foraging	0
	Emerging	0
Nathusius' Pipistrelle	Commuting	1
	Foraging	0
	Emerging	0

Table 6.12 details the emergence survey visit data, including timing and weather.

Table 6.12: *Emergence survey efforts.*

Season	Building name	Date	Observer	Thermal Camera	Roost Found	Rain	Cloud	Wind Speed	Wind Direction	Start temp	End temp	Time of sunset	Start Time	End Time	Duration of survey (sec)
Summer	BL2	18/07/2023	CMS	N	N	Dry	1/8	F2	SE	15	13	21:51	21:36	23:21	6300
Summer	BL2	18/07/2023	NA	N	N	Dry	1/8	F2	SE	15	13	21:51	08:38	05:02	6300
Autumn	BL3	23/08/2023	LK	N	N	Dry	6/8	F1	WSW	15	14	20:44	20:15	22:30	8100
Autumn	BL3	23/08/2023	SID	N	N	Dry	8/8	F1	WSW	15	14	20:45	20:15	22:40	8700
Autumn	BL3	23/08/2023	ML	N	N	Dry	8/8	F1	WSW	15	14	20:45	20:15	22:40	8700

6.4.3 Bat Activity Surveys- Transect Surveys

The results of the transect survey are summarised in **Table 6.13**. The Spring effort for Transect 1 detected Soprano Pipistrelle and Common Pipistrelle, with all detections involving bats commuting. The Spring effort for Transect 2 detected Common Pipistrelle, displaying both foraging and commuting behaviour. The Summer effort for Transect 1 detected Soprano Pipistrelle and Common Pipistrelle, with commuting and foraging behaviours observed for both species. The Summer effort for Transect 2 detected Common Pipistrelle, displaying both foraging and commuting behaviour. The Autumn effort for Transect 1 detected Soprano Pipistrelle and Common Pipistrelle, with commuting and foraging behaviours observed for both species. The Autumn effort for Transect 2 detected Soprano pipistrelle, Common Pipistrelle, Nathusius' Pipistrelle, Leisler's Bat, and *Myotis spp.*

Table 6.13: Summary table of bat transect activity surveys 2023.

Date	Transect	Species	Behaviour Recorded	No. recorded
09/05/2023	1	Common Pipistrelle	Commuting	1
			Foraging	0
		Soprano Pipistrelle	Commuting	3
			Foraging	0
23/05/2023	2	Common Pipistrelle	Commuting	7
			Foraging	7
		Soprano Pipistrelle	Commuting	0
			Foraging	0
26/07/2023	1	Common Pipistrelle	Commuting	1
			Foraging	>50
		Soprano Pipistrelle	Commuting	6
			Foraging	>50
27/07/2023	2	Common Pipistrelle	Commuting	8
			Foraging	0
		Soprano Pipistrelle	Commuting	7
			Foraging	4
11/09/2023	1	Common Pipistrelle	Commuting	2
			Foraging	13
		Soprano Pipistrelle	Commuting	1
			Foraging	8
19/10/2023	2	Common Pipistrelle	Commuting	7
			Foraging	>70
		Leisler's Bat	Commuting	1
			Foraging	2
		Myotis sp.	Commuting	1
			Foraging	5
		Nathusius' Pipistrelle	Commuting	1
			Foraging	0
		Soprano Pipistrelle	Commuting	11
			Foraging	80

Details of weather and timing for all transect surveys is indicated in **Table 6.14**. Bat activity recorded for each transect is indicated in **Table 6.15** and in Error! Reference source not found. and Error! Reference source not found..

RECEIVED: 15/09/2025

Table 6.14: Bat Transect weather data.

Season	Date	Transect no.	Observer	Time of sunset	Start Time	End Time	Start temp	End temp	Rain	Cloud	Wind Speed	Wind Direction
Spring	09/05/2023	1	HM	21:16	21:16	22:20	11	11	Light	8/8	F1	S
Spring	23/05/2023	2	NL	21:41	21:41	22:51	12	8	Dry	7/8	F1	SE
Summer	26/07/2023	1	HM	21:40	21:53	22:50	17	17	Light	8/8	F1	S
Summer	27/07/2023	2	NL	21:39	21:39	22:39	15	14	Dry	4/8	F2	NW
Autumn	11/09/2023	1	HM	19:59	20:00	21:02	14	13	Dry	8/8	F1	W
Autumn	19/10/2023	2	CG & ML	18:30	18:30	21:00	13	13	Dry	8/8	F2	E

Table 6.15: Bat transect surveys 2023.

Date	Time of sunset/sunrise	Transect no.	Start Time	End Time	Species	Observation Point/map note	Number Seen/Heard	Time of observation	No. Flight passes	Behaviour/notes
09/05/2023	21:16	1	21:16	22:20	Common Pipistrelle	1	1	21.47	1	Commuting
09/05/2023	21:16	1	21:16	22:20	Soprano Pipistrelle	2	1	21.55	3	Commuting
23/05/2023	21:41	2	21:41	22:51	Common Pipistrelle	53.797113, - 8.010502	1	22:19	1	Commuting
23/05/2023	21:41	2	21:41	22:51	Common Pipistrelle	53.798623, - 8.009412	1	22:26	1	Commuting
23/05/2023	21:41	2	21:41	22:51	Common Pipistrelle	53.797681, - 8.009994	2	22:31	1	Commuting
23/05/2023	21:41	2	21:41	22:51	Common Pipistrelle	53.797681, - 8.009994	1	22:32	1	Commuting
23/05/2023	21:41	2	21:41	22:51	Common Pipistrelle	53.797238, - 8.010459	2	22:33	1	Commuting
23/05/2023	21:41	2	21:41	22:51	Common Pipistrelle	53.796318, - 8.011154	1	22:36	7	Foraging
26/07/2023	21:40	1	21:53	22:50	Common Pipistrelle	53.7820622, - 8.0231235	1 Heard	22:05	1	Commuting
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7831397, - 8.0253732	1 Heard	22:10	1	Commuting
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7841668, - 8.027322	1 Heard	22:10	2	Commuting

Date	Time of sunset/sunrise	Transect no.	Start Time	End Time	Species	Observation Point/map note	Number Seen/Heard	Time of observation	No. Flight passes	Behaviour/notes
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7848212, - 8.0281876	1 Heard	22:17	2	Commuting
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7855575, - 8.0299816	2 Heard	22:22	1	Commuting
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7855080, - 8.0303776	2 Heard	22:24	7	Foraging along transect route
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7865074, - 8.0320308	3 Heard	22:27	CF	Constant Foraging from bats overhead, passes too frequent to count accurately
26/07/2023	21:40	1	21:53	22:50	Soprano Pipistrelle	53.7866634, - 8.0324093	4 Heard	22:30	CF	Constant Foraging from bats overhead, passes too frequent to count accurately
26/07/2023	21:40	1	21:53	22:50	Common Pipistrelle	53.7848627, - 8.0289030	1 Heard	22:40	CF	Constant Foraging from bats overhead, passes too frequent to count accurately
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.797164, - 8.010464	1 Heard	22:10	1	Commuting
27/07/2023	21:39	2	21:39	22:39	Common Pipistrelle	53.797296, - 8.010425	1 Heard	22:11	1	Commuting
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.797478, - 8.010204	1 Heard	22:13	1	Commuting
27/07/2023	21:39	2	21:39	22:39	Common Pipistrelle	53.798629, - 8.009468	3 Heard	22:17	5	Foraging
27/07/2023	21:39	2	21:39	22:39	Common Pipistrelle	53.7978760, - 8.0098040	1 Heard	22:20	1	Commuting
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.7978760, - 8.0098040	1 Heard	22:21	1	Commuting
27/07/2023	21:39	2	21:39	22:39	Common Pipistrelle	53.7972395, - 8.0104580	1 Heard	22:22	1	Commuting
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.7951588, - 8.014819	1 Heard	22:27	2	Commuting
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.7947243, - 8.0130344	1 Heard	22:29	1	Commuting

Date	Time of sunset/sunrise	Transect no.	Start Time	End Time	Species	Observation Point/map note	Number Seen/Heard	Time of observation	No. Flight passes	Behaviour/notes
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.7944128, - 8.0134501	1 Heard	22:30	4	Foraging
27/07/2023	21:39	2	21:39	22:39	Soprano Pipistrelle	53.7907037, - 8.0165957	1 Heard	22:38	1	Commuting
11/09/2023	19:59	1	20:00	21:02	Soprano Pipistrelle	53.7861805, - 8.0315577	1	20:33	8	Foraging
11/09/2023	19:59	1	20:00	21:02	Common Pipistrelle	53.7868286, - 8.0329200	2	20:40	6	Foraging
11/09/2023	19:59	1	20:00	21:02	Common Pipistrelle	53.7884627, - 8.0353648	1	20:46	2	Commuting
11/09/2023	19:59	1	20:00	21:02	Soprano Pipistrelle	53.7884627, - 8.0353648	1	20:53	1	Commuting
11/09/2023	19:59	1	20:00	21:02	Common Pipistrelle	53.7871822, - 8.0335979	1	20:55	7	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.790636, - 8.016201	Seen (1)	18:55	8	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.790636, - 8.016201	Seen (1)	18:57	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.790636, - 8.016201	Seen (1)	19:02	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.790636, - 8.016201	Seen (1)	19:05	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.791768, - 8.015897	Seen (1)	19:12	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791768, - 8.015897	Seen (1)	19:12	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.791768, - 8.015897	Seen (1)	19:12	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791768, - 8.015897	Seen (1)	19:13	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.791768, - 8.015897	Heard	19:15	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791768, - 8.015897	Heard	19:17	1	Commuting

Date	Time of sunset/sunrise	Transect no.	Start Time	End Time	Species	Observation Point/map note	Number Seen/Heard	Time of observation	No. Flight passes	Behaviour/notes
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791768, - 8.015897	Heard	19:19	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.792305, - 8.015329	Heard	19:19	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.792305, - 8.015329	Heard	19:20	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Leisler's Bat	53.792305, - 8.015329	Heard	19:20	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.792305, - 8.015329	Heard	19:20	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Myotis spp.	53.792305, - 8.015329	Heard	19:21	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Leisler's Bat	53.792305, - 8.015329	Heard	19:22	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.792305, - 8.015329	Heard	19:22	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.792437, - 8.015282	Heard	19:23	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.792437, - 8.015282	Seen (1)	19:24	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.792977, - 8.014894	Heard	19:26	4	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.793711, - 8.014280	Heard	19:30	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.795159, - 8.012489	Heard	19:34	9	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.795601, - 8.011881	Heard	19:37	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.795937, - 8.011545	Heard	19:38	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.796462, - 8.011018	Heard	19:41	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.797675, - 8.010110	Heard	19:45	3	Foraging

Date	Time of sunset/sunrise	Transect no.	Start Time	End Time	Species	Observation Point/map note	Number Seen/Heard	Time of observation	No. Flight passes	Behaviour/notes
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.798229, - 8.009557	Heard	19:48	5	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.798229, - 8.009557	Heard	19:50	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.798665, - 8.009492	Heard	19:51	7	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.798665, - 8.009492	Heard	19:53	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.799183, - 8.009136	Heard	19:58	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.799066, - 8.009243	Heard	20:00	7	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.798985, - 8.009338	Seen (1)	20:02	12	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.798610, - 8.009459	Seen (1)	20:05	8	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.796967, - 8.010519	Heard	20:11	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Myotis spp.	53.795845, - 8.011725	Heard	20:15	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Myotis spp.	53.795873, - 8.011983	Seen (1)	20:18	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.794318, - 8.013515	Heard	20:23	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.794318, - 8.013515	Heard	20:23	4	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.794088, - 8.013909	Heard	20:25	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.793757, - 8.014268	Heard	20:27	5	Foraging
19/10/2023	18:30	2	18:30	21:00	Nathusius' Pipistrelle	53.793757, - 8.014268	Heard	20:28	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.793757, - 8.014268	Heard	20:28	2	Foraging

Date	Time of sunset/sunrise	Transect no.	Start Time	End Time	Species	Observation Point/map note	Number Seen/Heard	Time of observation	No. Flight passes	Behaviour/notes
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.792724, - 8.014995	Heard	20:31	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791041, - 8.016534	Heard	20:37	7	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.790501, - 8.015831	Heard	20:41	20+	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.790501, - 8.015831	Heard	20:43	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.790796, - 8.016588	Heard	20:46	6	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.791063, - 8.016363	Heard	20:48	2	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791063, - 8.016363	Heard	20:48	10	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.791668, - 8.015842	Heard	20:51	1	Commuting
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791668, - 8.015842	Heard	20:52	3	Foraging
19/10/2023	18:30	2	18:30	21:00	Common Pipistrelle	53.791668, - 8.015842	Heard	20:57	7	Foraging
19/10/2023	18:30	2	18:30	21:00	Soprano Pipistrelle	53.791668, - 8.015842	Heard	20:57	1	Commuting



Client: Ballyfeeny Green Energy Limited

Project: Ballyfeeny Green Energy Project

Figure: 6.6-6.3 Bat Transect 1 Results

Legend:

Species

- Common pipistrelle
- Soprano pipistrelle

Transects

- Transect 1

For illustrative purposes only. Map not to scale

COPYRIGHT ©
INIS Ecology
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphics, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose than its designed purpose, without written permission of INIS Environmental Consultants Ltd.

Date:	Revision:	Drawn	Checked	Authorised
05/12/24	2232B - AP - 09_005	SS	CB	AC
-	-	-	-	-

E: info@inisenv.ie
W: www.inisecology.com
W: www.inisenv.ie

INIS Ecology
Suite 16, Block A,
Clare Technology Park, Gort Road,
Ennis, Co. Clare

Figure 6.3: Transect survey results- Transect 1.



Client: Ballyfeeny Green Energy Limited

Project: Ballyfeeny Green Energy Project

Figure: 6.6-6.4 Bat Transect 2 Results

Legend:

Species

Common pipistrelle

Soprano pipistrelle

Transects

Transect 2

For illustrative purposes only. Map not to scale

COPYRIGHT ©

INIS Ecology

All rights reserved.No part of this work may be modified or reproduced or copied in any form or by any means - graphics, electronic or mechanical, including photocopying, recording, taping or information-and retrieval system, or used for any purpose than its designed purpose, without written permission of INIS Environmental Consultants Ltd.

Date:	Revision:	Drawn	Checked	Authorised
05/12/24	2232B - AP - 09_006	SS	CB	AC
-	-	-	-	-

Inis

INIS Ecology
Suite 16, Block A,
Clare Technology Park, Gort Road,
Ennis, Co. Clare

E: info@inisenv.ie
W: www.inisecology.com
W: www.inisenv.ie

Figure 6.4: Transect survey results- Transect 2.

6.4.4 Bat Activity Surveys – Static Detector Surveys

Six locations were chosen for 2023 static activity surveys, covering the six turbine locations (see **Figures 6.5 to Figure 6.7** for the seasonal locations of the static detectors). Six static detectors were deployed in for 14 nights in Spring, 14 nights in Summer and 14 nights in Autumn. See **Table 6.20** for details of co-ordinates, relevant habitats and distance to the relevant turbine location.

A summary of bat activity levels for the spring 2023 deployment is shown in **Table 6.16**. Activity levels for all bat species at all static detector locations were Low or Negligible, except for Common Pipistrelle at detector Ba006, where the average activity levels were classed as High.

Table 6.16: Bat activity recorded by static detectors during the spring 2023 deployment.

Detector Number	Nights Deployed	Bat Species	Average Bat activity levels
Ba006 (T1)	22	Brown Long-eared Bat	Negligible
		Common Pipistrelle	High
		Leisler's Bat	Low
		Myotis spp.	Low
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba010 (T2)	14	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Low
		Leisler's Bat	Low
		Myotis spp.	Low
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba008 (T3)	14	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Low
		Leisler's Bat	Low
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba009 (T4)	14	Common Pipistrelle	Low
		Leisler's Bat	Low
		Myotis spp.	Negligible
		Soprano Pipistrelle	Negligible
		Common Pipistrelle	Low
		Leisler's Bat	Low
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
Ba007 (T5)	15	Soprano Pipistrelle	Low
		Brown Long-eared Bat	Negligible
		Common Pipistrelle	Low
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
Ba062 (T6)	15	Common Pipistrelle	Negligible
		Myotis spp.	Negligible

Detector Number	Nights Deployed	Bat Species	Average Bat activity levels
		Soprano Pipistrelle	Negligible

A summary of bat activity levels for the summer 2023 deployment is shown in **Table 6.17**. Activity levels for all bat species were Low or Negligible, except for Soprano Pipistrelle at detector Ba074 which had an average activity level classed as Moderate.

Table 6.17: Bat activity recorded by static detectors during the summer 2023 deployment.

Static Detector Number	Nights Active	Bat Species	Average Bat activity levels
Ba075 (T1)	15	Common Pipistrelle	Low
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Soprano Pipistrelle	Low
Ba078 (T2)	15	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Negligible
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba074 (T3)	15	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Low
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Moderate
Ba076 (T4)	15	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Negligible
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba005 (T5)	SD Card Corrupted	-	-
Ba041 (T6)	15	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Negligible
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Soprano Pipistrelle	Negligible

A summary of bat activity levels for the autumn 2023 deployment is shown in **Table 6.18**. Activity levels for all bat species were Low or Negligible, except for Common Pipistrelle and Soprano Pipistrelle at detector Ba067, which had an average activity level classed as High, and Soprano Pipistrelle at detector Ba068, which had an average activity level classed as Moderate.

Table 6.19: Bat activity recorded by static detectors during the Autumn 2023 deployment.

Turbine Number	Nights Active	Bat Species	Average Bat activity levels
Ba067 (T1)	15	Brown Long-eared Bat	Negligible
		Common Pipistrelle	High
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	High
Ba060 (T2)	8	Nil sightings	-
Ba068 (T4)	15	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Low
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Moderate
Ba071 (T3)	14	Brown Long-eared Bat	Negligible
		Common Pipistrelle	Negligible
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba063 (T5)	15	Common Pipistrelle	Low
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low
Ba064 (T6)	14	Common Pipistrelle	Low
		Leisler's Bat	Negligible
		Myotis spp.	Negligible
		Nathusius' Pipistrelle	Negligible
		Soprano Pipistrelle	Low

Weather conditions for all static detector deployments are shown in **Table 6.21** and **Table 6.22**

The nightly data for number of bats recorded by each static detector is shown in **Table 6.23** (spring 2023 deployments), **Table 6.24** (summer 2023 deployments) and **Table 6.25** (autumn 2023 deployments).



Client: Ballyfeeny Green Energy Limited

Project: Ballyfeeny Green Energy Project

Figure: 6.6-6.5 Static Detector Locations Spring

Elphin

Strokestown

Mohill

Longford

Legend:

• Proposed Turbine Layout*

Study Area

For illustrative purposes only. Map not to scale

COPYRIGHT ©

INIS Ecology

All rights reserved.No part of this work may be modified or reproduced or copied in any form or by any means - graphics, electronic or mechanical, including photocopying, recording, taping or information-and retrieval system, or used for any purpose than its designed purpose, without written permission of INIS Environmental Consultants Ltd.

Date:	Revision:	Drawn	Checked	Authorised
05/12/24	2232B - AP - 09_008	SS	CB	AC
-	-	-	-	-

Inis

E: info@inisenv.ie
W: www.inisecology.com
W: www.inisenv.ie

INIS Ecology

Suite 16, Block A,
Clare Technology Park, Gort Road,
Ennis, Co. Clare

Figure 6.5: Static detector locations- spring 2023.

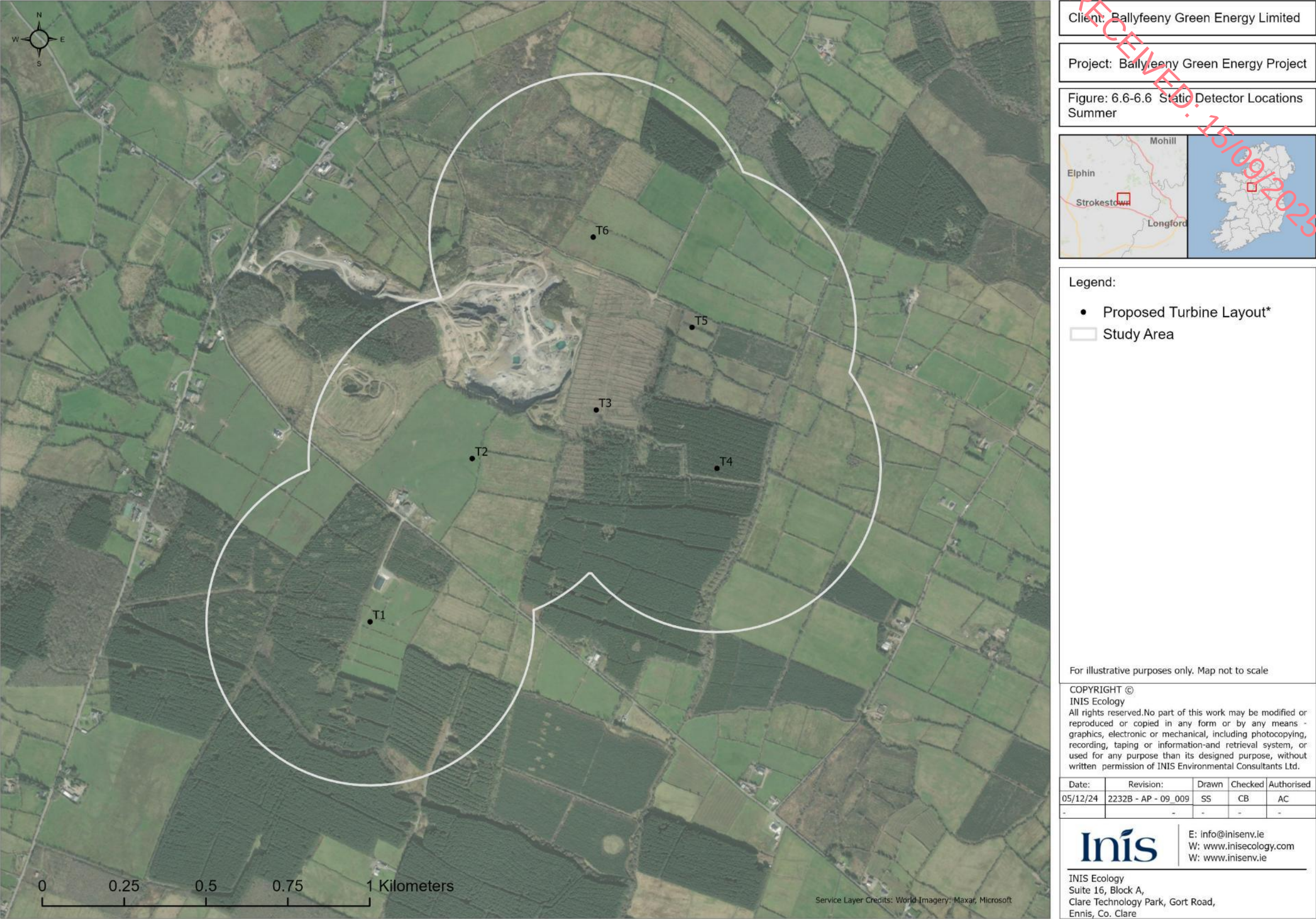


Figure 6.6: Static detector locations- summer 2023.



Client: Ballyfeeny Green Energy Limited

Project: Ballyfeeny Green Energy Project

Figure: 6.6-6.7 Static Detector Locations Autumn

Legend:

- Proposed Turbine Layout*
- Study Area

For illustrative purposes only. Map not to scale

COPYRIGHT ©
INIS Ecology
All rights reserved.No part of this work may be modified or reproduced or copied in any form or by any means - graphics, electronic or mechanical, including photocopying, recording, taping or information-and retrieval system, or used for any purpose than its designed purpose, without written permission of INIS Environmental Consultants Ltd.

Date:	Revision:	Drawn:	Checked:	Authorised:
05/12/24	2232B - AP - 09_010	SS	CB	AC
-	-	-	-	-

Inis

E: info@inisenv.ie
W: www.inisecology.com
W: www.inisenv.ie

INIS Ecology
Suite 16, Block A,
Clare Technology Park, Gort Road,
Ennis, Co. Clare

Figure 6.7: Static detector locations- autumn 2023.

Table 6.20: Static detector deployment data

Staff	Deployment Date	Deployment Duration	Inis Detector no.	Turbine no.	X_ITM	Y_ITM	Approx height of Mic (m)	Habitat	Linear feature	LF Distance (m)	Anthropogenic feature	Nearest Turbine	Distance(m)
HM	09/05/23	14 nights	Ba006	1	597981	781311	1	Grazing	Treeline	1	None	T1	72
HM	09/05/23	14 nights	Ba010	2	598388	781936	1	Deciduous Woodland	Treeline	1	None	T2	87
HM	09/05/23	14 nights	Ba008	3	598878	782056	1	Clear Fell	Woodland Edge	1	None	T3	163
HM	09/05/23	14 nights	Ba009	4	598986	781806	1	Deciduous Woodland	Woodland Edge	1	None	T4	108
HM	09/05/23	14 nights	Ba007	5	599080	782375	1	Rough Grazing	Hedgerow	1	Fenceline	T5	131
HM	09/05/23	14 nights	Ba062	6	598746	782568	1	Grazing	Hedgerow	1	None	T6	45
CMS	19/07/23	14 Nights	Ba075	1	598052	781507	1	Scrub	Hedgerow	1	Fenceline	T1	146
CMS	19/07/23	14 Nights	Ba078	2	598280	781649	1	Evergreen Woodland	Hedgerow	1	Fenceline	T2	221
CMS	19/07/23	14 Nights	Ba074	3	598872	782070	1	Evergreen Woodland	Hedgerow	1	None	T3	162
CMS	19/07/23	14 Nights	Ba076	4	598874	781820	1	Evergreen Woodland	Hedgerow	1	None	T4	217
CMS	19/07/23	14 Nights	Ba005	5	599023	782294	1	Rough Grazing	Hedgerow	1	Fenceline	T5	34
CMS	19/07/23	14 Nights	Ba041	6	598832	782516	1	Rough Grazing	Hedgerow	1	Fenceline	T6	121
LK	24/08/23	14 Nights	Ba067	1	596986	781324	1	Grazing	Hedgerow	1	None	T1	1046
LK	24/08/23	14 Nights	Ba060	2	598388	781937	1	Grazing	Hedgerow		Fenceline	T2	88
LK	24/08/23	14 Nights	Ba071	3	599114	781937	1	Evergreen Woodland	Treeline	1	None	T4	109

Staff	Deployment Date	Deployment Duration	Inis Detector no.	Turbine no.	X_ITM	Y_ITM	Approx height of Mic (m)	Habitat	Linear feature	LF Distance (m)	Anthropogenic feature	Nearest Turbine	Distance(m)
LK	24/08/23	14 Nights	Ba068	4	598923	782068	1	Grazing	Hedgerow	1	None	T3	210
LK	24/08/23	14 Nights	Ba063	5	599081	782376	1	Grazing	Hedgerow	1	None	T5	132
LK	24/08/23	14 Nights	Ba064	6	598740	782568	1	Grazing	Hedgerow	1	Fenceline	T6	41

Table 6.21 : Static Detector weather data.

Night # of Deployment	Date	Time of Sunset	Sunset Temp (°C)	Rainfall at Sunset	Wind Speed at Sunset (mph)	Meets requirements Y/N
Spring						
1	09/05/2023	21:15	11	Dry	6	Y
2	10/05/2023	21:16	10	Dry	5	Y
3	11/05/2023	21:18	9	Drizzle	3	N
4	12/05/2023	21:20	12	Dry	5	Y
5	13/05/2023	21:21	10	Dry	5	Y
6	14/05/2023	21:23	9	Drizzle	9	N
7	15/05/2023	21:25	8	Dry	6	Y
8	16/05/2023	21:27	10	Dry	5	Y
9	17/05/2023	21:28	10	Dry	7	Y
10	18/05/2023	21:30	11	Dry	5	Y
11	19/05/2023	21:31	13	Dry	3	Y
12	20/05/2023	21:33	13	Drizzle	5	N
13	21/05/2023	21:35	13	Dry	5	Y
14	22/05/2023	21:36	10	Dry	7	Y
Summer						
1	19/07/2023	21.50	13	Dry	0	Y

Night # of Deployment	Date	Time of Sunset	Sunset Temp (°C)	Rainfall at Sunset	Wind Speed at Sunset (mph)	Meets requirements Y/N
2	20/07/2023	21.48	12	Dry	3	Y
3	21/07/2023	21.47	13	Dry	5	Y
4	22/07/2023	21.46	15	Dry	4	Y
5	23/07/2023	21.44	13	Dry	1	Y
6	24/07/2023	21.43	12	Dry	1	Y
7	25/07/2023	21.41	14	Dry	8	Y
8	26/07/2023	21.39	16	Dry	2	Y
9	27/07/2023	21.38	15	Dry	3	Y
10	28/07/2023	21.36	13	Dry	4	Y
11	29/07/2023	21.35	13	Drizzle	3	N
12	30/07/2023	21.33	16	Drizzle	3	N
13	31/07/2023	21.31	14	Dry	4	Y
14	01/08/2023	21.29	15	Dry	4	Y
Autumn						
1	24/08/2023	20:42	12	Dry	0	Y
2	25/08/2023	20:39	16.6	Dry	1.1	Y
3	26/08/2023	20:37	14.6	Dry	0	Y
4	27/08/2023	20:35	14.4	Dry	0	Y
5	28/08/2023	20:32	15.8	Dry	0	Y
6	29/08/2023	20:30	14	Dry	0	Y
7	30/08/2023	20:28	14.6	Dry	0	Y
8	31/08/2023	20:25	16.1	Dry	0	Y
9	01/09/2023	20:23	16.9	Dry	0	Y
10	02/09/2023	20:20	17.5	Dry	0	Y
11	03/09/2023	20:18	18.1	Dry	2.5	Y
12	04/09/2023	20:16	23.4	Dry	2.5	Y
13	05/09/2023	20:13	19.2	Dry	3.6	Y

Night # of Deployment	Date	Time of Sunset	Sunset Temp (°C)	Rainfall at Sunset	Wind Speed at Sunset (mph)	Meets requirements Y/N
14	06/09/2023	20:11	22.7	Dry	2.5	Y

Table 6.22: Static detector weather data.

Date	Sunset	Time	Outdoor Temperature(°C)	Wind Speed(km/h) Spring	Gust(km/h)	Wind Direction	Hour Rainfall(mm)	Total Rainfall(mm)
08/05/2023	21:16	20:50	12.7	7.2	13.3	NW	0	7.8
08/05/2023	21:16	21:50	10.9	3.6	6.1	W	0	7.8
09/05/2023	21:18	20:50	11.7	5	9.7	WSW	0	9.9
09/05/2023	21:18	21:50	11	2.5	3.6	WSW	0	9.9
10/05/2023	21:20	20:51	11	9.7	13.3	W	0	14.7
10/05/2023	21:20	21:51	10.5	6.1	9.7	W	0	14.7
11/05/2023	21:21	20:51	12.5	0	2.5	E	0	24
11/05/2023	21:21	21:51	10.9	0	0	N	0	24
12/05/2023	21:23	20:51	16.3	0	0	ESE	0	24
12/05/2023	21:23	21:51	10.8	0	0	ESE	0	24
13/05/2023	21:25	20:52	13.4	5	7.2	W	0	24
13/05/2023	21:25	21:52	11.5	3.6	7.2	NW	0	24
14/05/2023	21:27	20:52	10	3.6	7.2	N	0	26.7
14/05/2023	21:27	21:52	6.9	1.1	2.5	N	0	26.7
15/05/2023	21:28	20:52	10.6	6.1	13.3	N	0	26.7
15/05/2023	21:28	21:52	7.7	0	0	N	0	26.7
16/05/2023	21:30	20:52	12.7	0	0	NE	0	26.7
16/05/2023	21:30	21:52	10.4	0	0	NNE	0	26.7
17/05/2023	21:32	20:53	11.7	2.5	6.1	W	0	26.7
17/05/2023	21:32	21:53	10.6	3.6	6.1	WSW	0	26.7
18/05/2023	21:33	20:53	13.6	2.5	3.6	WNW	0	27

Date	Sunset	Time	Outdoor Temperature(°C)	Wind Speed(km/h)	Gust(km/h)	Wind Direction	Hour Rainfall(mm)	Total Rainfall(mm)
18/05/2023	21:33	21:53	11.7	1.1	3.6	NW	0	27
19/05/2023	21:35	20:53	14.8	2.5	3.6	NNW	0	27
19/05/2023	21:36	21:53	13.3	0	2.5	N	0	27
20/05/2023	21:36	20:53	13.4	5	7.2	NNW	3	34.8
20/05/2023	21:36	21:53	13.1	1.1	3.6	N	2.1	36.9
21/05/2023	21:38	21:24	12.4	0	2.5	E	0	37.8
21/05/2023	21:38	22:24	12	1.1	2.5	ENE	0	37.8
22/05/2023	21:39	21:24	16.7	0	0	SSE	0	38.7
22/05/2023	21:39	22:24	13.7	0	0	S	0	38.7
23/05/2023	21:41	21:24	18.8	0	0	SE	0	38.7
23/05/2023	21:41	22:24	15.6	0	0	SE	0	38.7
Summer								
19/07/2023	21:43	20:56	14.7	0	0	W	0	0
19/07/2023	21:43	21:57	13.2	0	0	W	0	0
20/07/2023	21:42	20:57	13.3	0	2.5	WNW	0	0
20/07/2023	21:42	21:57	12.5	0	2.5	WSW	0	0
21/07/2023	21:40	20:57	12.9	3.6	7.2	WNW	0	0
21/07/2023	21:40	21:57	13.2	3.6	6.1	W	0	0
22/07/2023	21:39	20:57	15.9	0	0	SSW	0	0
22/07/2023	21:39	21:57	15.1	2.5	3.6	W	0	0
23/07/2023	21:38	20:58	14.1	0	0	WNW	0	0
23/07/2023	21:38	21:58	13.1	0	0	WNW	0	0
24/07/2023	21:36	20:58	12.9	0	0	W	0	0
24/07/2023	21:36	21:58	11.8	1.1	3.6	WNW	0	0
25/07/2023	21:35	20:58	15.8	1.1	3.6	W	0	0
25/07/2023	21:35	21:58	12.4	0	0	W	0	0
26/07/2023	21:33	20:58	16.5	3.6	6.1	S	0	0
26/07/2023	21:33	21:58	16.4	5	6.1	WSW	0	0

Date	Sunset	Time	Outdoor Temperature(°C)	Wind Speed(km/h)	Gust(km/h)	Wind Direction	Hour Rainfall(mm)	Total Rainfall(mm)
27/07/2023	21:32	20:59	15.8	6.1	9.7	W	0	194.4
27/07/2023	21:32	21:59	14.1	3.6	6.1	SW	0	194.4
28/07/2023	21:30	20:59	13.7	2.5	6.1	W	0	195.9
28/07/2023	21:30	21:59	12.6	3.6	7.2	W	0.6	196.5
29/07/2023	21:28	20:59	13.9	6.1	11.2	W	0	201.3
29/07/2023	21:28	21:59	13.1	6.1	11.2	W	0	201.3
30/07/2023	21:27	21:00	16.2	3.6	7.2	S	0.3	227.1
30/07/2023	21:27	22:00	15.7	6.1	9.7	W	0.3	227.4
31/07/2023	21:25	21:00	14.2	5	13.3	W	0	229.8
31/07/2023	21:25	22:00	13.3	3.6	9.7	W	0	229.8
01/08/2023	21:23	21:00	15.3	3.6	9.7	ESE	0	229.8
01/08/2023	21:23	22:00	14.9	6.1	9.7	SE	0	229.8
Autumn								
25/08/2023	20:34	19:47	15.8	0	0	NE	0	5.1
25/08/2023	20:34	20:47	14.1	0	0	W	0	5.1
26/08/2023	20:31	19:47	14	0	2.5	ESE	0	10.5
26/08/2023	20:31	20:47	13.5	0	0	SSE	0	10.5
27/08/2023	20:29	19:47	13.5	0	2.5	S	0	16.5
27/08/2023	20:29	20:47	12.8	0	0	SE	0	16.5
28/08/2023	20:27	19:47	15.2	0	0	E	0	16.5
28/08/2023	20:27	20:47	14.6	0	0	E	0	16.5
29/08/2023	20:24	19:47	13.4	0	0	ESE	0	16.5
29/08/2023	20:24	20:47	12	0	0	ESE	0	16.5
30/08/2023	20:22	19:47	14	0	0	NE	0	16.5
30/08/2023	20:22	20:47	12.8	0	0	NE	0	16.5
31/08/2023	20:20	19:47	16	0	0	N	0	30
31/08/2023	20:20	20:47	15.1	0	0	N	0	30
01/09/2023	20:17	19:47	15.9	0	0	NE	0	30

Date	Sunset	Time	Outdoor Temperature(°C)	Wind Speed(km/h)	Gust(km/h)	Wind Direction	Hour Rainfall(mm)	Total Rainfall(mm)
01/09/2023	20:17	20:47	15	0	0	NE	0	30
02/09/2023	20:15	19:47	16.2	0	0	NNE	0	30
02/09/2023	20:15	20:47	14.1	0	0	NNE	0	30
03/09/2023	20:12	19:47	16.3	0	0	NNE	0	30
03/09/2023	20:12	20:47	13.5	0	0	NNE	0	30
04/09/2023	20:10	19:48	21.7	2.5	3.6	NNW	0	30
04/09/2023	20:10	20:48	19.6	1.1	2.5	NNW	0	30
05/09/2023	20:08	19:48	19.2	1.1	3.6	NE	0	30
05/09/2023	20:08	20:48	17.4	0	2.5	NNW	0	30
06/09/2023	20:05	19:48	21.8	0	2.5	NNE	0	30
06/09/2023	20:05	20:48	19.8	0	2.5	NNW	0	30

Table 6.23: Static detector raw data – spring 2023.

May-23																							
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Turbine 1 (Ba 006)																							
Common Pipistrelle	3	-	106	193	204	53	47	203	103	9	43	74	184	200	215	115	25	141	192	350	438	203	3,101
Soprano Pipistrelle	10	-	85	130	163	7	13	83	40	3	21	6	42	62	62	35	33	55	12	19	56	31	968
Nathusius' Pipistrelle	-	-	-	2	5	-	-	-	5	-	-	-	1	4	-	7	-	6	39	33	29	17	148
Leisler's Bat	-	-	1	70	32	1	-	18	5	2	4	-	6	4	9	11	4	15	4		21	44	251
Brown long-eared Bat	-	-	-	-	1	-	-	1	1	-	1	-	-	-	-	-	-	-	-	1	-	-	5
Myotis species	-	-	3	93	14	9	8	34	-	-	1	-	5	2	13	13	8	25	11	4	6	9	258
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 2 (Ba010)																							
Common Pipistrelle	1	20	27	85	21	4	11	35	41	35	7	10	22	17	-	-	-	-	-	-	-	-	336
Soprano Pipistrelle	2	22	53	49	15	10	4	95	98	69	3	15	35	18	-	-	-	-	-	-	-	-	488
Nathusius' Pipistrelle	-	-	-	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Leisler's Bat	7	5	23	28	16	-	3	11	16	6	3	2	4	2	-	-	-	-	-	-	-	-	126

May-23																							
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Brown long-eared Bat	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Myotis</i> species	-	4	10	6	17	5	1	13	137	92	1	1	8	5	-	-	-	-	-	-	-	-	300
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 3 (Ba008)																							
Common Pipistrelle	-	2	3	13	7	48	26	28	7	-	1	-	9	30	-	-	-	-	-	-	-	-	174
Soprano Pipistrelle	1	3	4	7	-	15	5	14	5	-	2	-	4	11	-	-	-	-	-	-	-	-	71
Nathusius' Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Leisler's Bat	-	10	17	227	154	1	1	46	36	-	30	-	10	14	-	-	-	-	-	-	-	-	546
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	-	-	2	1	-	4	1	4	-	-	-	-	1	1	-	-	-	-	-	-	-	-	14
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 4 (Ba009)																							
Common Pipistrelle	7	-	82	91	57	15	21	60	50	30	17	2	63	40	-	-	-	-	-	-	-	-	535

May-23																							
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Soprano Pipistrelle	22	-	86	44	22	18	35	38	50	37	7	4	19	14	-	-	-	-	-	-	-	-	396
Nathusius' Pipistrelle	-	-	-	-	-	2	1	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	7
Leisler's Bat	1		58	84	61	27	10	31	16	1	9		4	12	-	-	-	-	-	-	-	-	314
Brown long-eared Bat	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Myotis</i> species	-	-	5	13	8	1	5	9	2	-	5	-	4	3	-	-	-	-	-	-	-	-	55
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 5 (Ba007)																							
Common Pipistrelle	-	4	14	84	63		2		72				38	2	86	-	-	-	-	-	-	-	365
Soprano Pipistrelle	-	2	20	135	66	3	-	-	26	-	5	-	24	5	29	-	-	-	-	-	-	-	315
Nathusius' Pipistrelle	-	1	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Leisler's Bat	-	2	9	4	-	-	-	-	3	-	2	-	2	2	3	-	-	-	-	-	-	-	27
Brown long-eared Bat	-		2		4	-	1	-	-	-	-	-	2	-		-	-	-	-	-	-	-	9

May-23																							
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
<i>Myotis</i> species	-	1	5	2	1	2	3		2				6		2	-	-	-	-	-	-	-	24
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 6 (Ba062)																							
Common Pipistrelle	1	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Soprano Pipistrelle	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Nathusius' Pipistrelle	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Leisler's Bat	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Brown long-eared Bat	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Table 6.24: Static detector raw data – summer 2023.

July- 23														August- 23		
	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	Total
Turbine 1 (Ba075)																
Common Pipistrelle	45	25	17	-	-	28	46	-	77	-	1	-	-	2	-	241
Soprano Pipistrelle	36	27	2	-	-	28	72	-	66	-	-	-	-	6	-	237
Nathusius' Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Leisler's Bat	8	-	-	-	-	-	-	-	4	-	-	-	-	-	-	12
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	14	2	1	-	-	10	6	-	11	-	-	-	1	-	-	45
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 2 (Ba078)																
Common Pipistrelle	1207	842	-	25	-	1	373	12	275	7	12	-	-	-	-	2754
Soprano Pipistrelle	89	187	-	14	1	-	178	4	108	-	14	1	-	-	-	596
Nathusius' Pipistrelle	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Leisler's Bat	1	1	-	-	-	-	3	-	3	-	-	-	-	-	-	8
Brown long-eared Bat	1	-	-	1	-	-	2	-	-	-	-	-	-	-	-	4
<i>Myotis</i> species	141	121	-	1	-	1	77	-	81	1	-	-	-	-	-	423
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 3 (Ba074)																
Common Pipistrelle	26	3	-	-	7	13	22	-	2	-	2	-	5	4	-	84
Soprano Pipistrelle	68	69	-	-	50	57	98	-	76	-	13	-	54	40	-	525
Nathusius' Pipistrelle	1	1	-	-	-	-	2	-	-	-	-	-	-	-	-	4
Leisler's Bat	1	-	-	-	-	-	5	-	1	-	-	-	2	-	-	9
Brown long-eared Bat	-	1	-	-	-	-	-	-	1	-	-	-	1	-	-	3

July- 23														August- 23		
	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	Total
<i>Myotis</i> species	1	-	-	-	-	3	3	-	1	-	-	-	2	-	-	10
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 4 (Ba076)																
Common Pipistrelle	45	36	-	-	52	20	28	-	37	-	3	-	38	-	-	259
Soprano Pipistrelle	101	154	-	-	94	128	99	-	98	-	34	-	56	5	-	769
Nathusius' Pipistrelle	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	2
Leisler's Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8
Brown long-eared Bat	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
<i>Myotis</i> species	3	2	-	-	3	4	3	-	2	-	-	-	2	-	-	19
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 5 (Ba005)																
Common Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Soprano Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Nathusius' Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Leisler's Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 6 (Ba041)																
Common Pipistrelle	5	2	-	2	7	-	8	-	5	-	-	-	3	2	-	34
Soprano Pipistrelle	4	1	-	-	29	7	11	-	8	3	2	-	1	5	-	71
Nathusius' Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Leisler's Bat	2	-	-	-	-	1	1	-	2	2	1	-	8	2	-	19

July- 23														August- 23		
	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	Total
Brown long-eared Bat	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Myotis</i> species	8	-	-	-	4	4	1	-	1	-	-	-	-	-	-	18
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Table 6.25: Static detector raw data – autumn 2023.

August- 23									September- 23							
	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	Total
Turbine 1 (Ba 067)																
Common Pipistrelle	2	38	2	29	101	-	256	53	643	53	82	465	1055	776	-	3555
Soprano Pipistrelle	12	48	1	25	135	-	237	104	116	29	448	236	463	684	-	2538
Nathusius' Pipistrelle	-	1	1	2	1	-	1	-	-	-	-	6	7	-	-	19
Leisler's Bat	-	2	4	1	3	-	3	1	-	-	-	2	5	1	-	22
Brown long-eared Bat	-	1	-	-	1	-	-	1	-	-	-	-	-	-	-	3
<i>Myotis</i> species	-	5	-	4	4	-	-	-	1	-	-	-	-	-	-	14
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 2 (Ba060) - no data																
Common Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Soprano Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Nathusius' Pipistrelle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Leisler's Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

	August- 23								September- 23							Total
	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 3 (Ba071)																
Common Pipistrelle	1	-	13	7	2	-	4	-	2	4	16	3	3	7	-	62
Soprano Pipistrelle	24	6	17	6	12	11	11	-	28	22	11	13	6	7	-	174
Nathusius' Pipistrelle	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Leisler's Bat	1	1	2	-	2	1	3	-	4	1	1	5	5	7	-	33
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	3
<i>Myotis</i> species	2	5	7	1	3	-	6	-	13	5	3	2	-	2	-	49
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 4 (Ba068)																
Common Pipistrelle	3	68	25	23	26	44	-	31	19	81	40	56	21	17	-	454
Soprano Pipistrelle	18	129	98	67	107	46	-	62	28	232	65	87	25	59	-	1023
Nathusius' Pipistrelle	-	1	1	-	3	-	-	-	-	-	-	-	1	-	-	6
Leisler's Bat	-	4	3	3	5	4	-	12	8	2	6	11	9	1	-	68
Brown long-eared Bat	-	9	1	7	-	1	-	3	2	1	-	-	4	4	-	32
<i>Myotis</i> species	-	5	2	13	6	6	-	9	7	5	15	1	6	9	-	84
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 5 (Ba063)																

	August- 23								September- 23							Total
	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	
Common Pipistrelle	4	13	6	5	13	2	5	6	14	14	12	90	1	11	-	196
Soprano Pipistrelle	5	15	7	9	12	5	3	20	23	12	15	93	16	27	-	262
Nathusius' Pipistrelle	-	-	-	-	-	-	-	-	-	-	2	-	21	-	-	23
Leisler's Bat	2	4	-	-	6	-	-	1	3	3	2	6	5	1	-	33
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	3	16	1	1	3	1	-	8	12	4	5	13	14	12	-	93
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Turbine 6 (Ba064)																
Common Pipistrelle	6	11	8	4	19	5	-	32	32	13	16	38	15	11	-	210
Soprano Pipistrelle	10	16	5	8	18	7	-	34	27	8	31	28	17	23	-	232
Nathusius' Pipistrelle	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Leisler's Bat	1	16	1	1	5	-	-	5	5	2	3	2	7	6	-	54
Brown long-eared Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
<i>Myotis</i> species	8	11	15	9	5	15	-	7	11	11	6	10	7	11	-	126
Lesser Horseshoe Bat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

6.5 Species Assessments

Detailed results for target species based on the results of the Bat surveys are discussed below. The conservation status described for each species is based Roche and Langston (2024) and the EU Habitats directive Annex IV criteria. The sensitivity of each bat species to the Project is evaluated following the guidance from CIEEM (2024) in consideration of NRA (2009a) and Collins (2023) combined.

6.5.1 Common Pipistrelle

Commuting and foraging activity by Common Pipistrelle was recorded at BL2 and BL3. Both structures are low suitability in terms of roosting potential. In 2023, foraging and commuting were recorded during transect surveys for Common Pipistrelle. These activities were recorded along hedgerow habitat adjoining existing roads within the Site boundary. The Spring, Summer and Autumn efforts recorded the presence of Common Pipistrelle during transect surveys. 'Negligible' to 'High' levels of Common Pipistrelle activity was recorded during static detector surveys.

Common Pipistrelle is the most common and widely distributed bat species in Ireland. Based on physical and behavioral characteristics, they are highly sensitive to collision (SNH, 2021). Due to commuting and foraging behaviours observed within the Site boundary, during emergence surveys, transect surveys, and high levels of activity recorded during static detector surveys, local populations of Common Pipistrelle are evaluated as being of **Local Importance (Higher Value)** and **is included** for further consideration as a KER.

6.5.2 Soprano Pipistrelle

Commuting and foraging activity for Soprano Pipistrelle was recorded at BL2 and BL3, both sites are located adjacent to proposed road works. Soprano Pipistrelle was recorded during transect surveys in 2023, with commuting and foraging activity recorded along hedgerow habitat adjoining existing roads within the Site boundary. The Spring, Summer and Autumn efforts recorded the presence of Soprano Pipistrelle during transect surveys. 'Negligible' to 'High' levels of Soprano Pipistrelle activity was recorded during static detector surveys.

Soprano Pipistrelle are common and widely distributed bat species in Ireland and based on physical and behavioural characteristics, they are highly sensitive to collision (SNH, 2021). Due to commuting and foraging behaviours observed within the Site boundary, during emergence surveys, transect surveys, and high levels of activity recorded during static detector surveys, local populations of Soprano Pipistrelle are evaluated as being of **Local Importance (Higher Value)** and **is included** for further consideration as a KER.

6.5.3 Leisler's Bat

Commuting and foraging activity for Leisler's Bat was recorded at BL3, located adjacent to proposed road works. Leisler's Bat was recorded during transect surveys in Autumn 2023. 'Negligible' to 'Low' levels of Leisler's Bat activity was recorded during static detector surveys.

Leisler's Bat are common and widely distributed bat species in Ireland and based on physical and behavioural characteristics, they have a high sensitivity to collision due to their relatively high-flying

behaviour on open habitats, potentially within rotor sweep zones (SNH, 2021). Due to commuting and foraging behaviours observed within the Site boundary, during emergence surveys, transect and static detector surveys, and their high sensitivity to collision, local populations of Leisler's Bat are evaluated as being of **Local Importance (Higher Value)** and **is included** for further consideration as a KER.

6.5.4 Nathusius' Pipistrelle

One Nathusius' Pipistrelle (*Pipistrellus nathusii*) was heard commuting during transect surveys in Autumn 2023. 'Negligible' levels of Nathusius' Pipistrelle activity were recorded during static detector surveys.

Nathusius' Pipistrelle are less common and a more localised bat species in Ireland and based on physical and behavioural characteristics, they have a high sensitivity to collision (SNH, 2021). Despite the general low activity of Nathusius' Pipistrelle recorded within the Project boundary for the entire survey period, local populations of Nathusius' Pipistrelle are included for further consideration as a KER of **Local Importance (Higher Value)** based on their sensitivity to wind farm collision and conservation status under the precautionary principle.

6.5.5 Myotis spp.

Myotis spp. was not recorded during the emergence surveys. During the Autumn transect surveys 2023, one was heard and one was seen foraging along a hedgerow, 533m north of proposed works. 'Negligible' to 'Low' levels of Myotis spp. activity was recorded during static detector surveys.

Myotis spp. are common and widely distributed bat species in Ireland and based on physical and behavioural characteristics, they have a low sensitivity to collision (SNH, 2021). Despite a low activity of Myotis spp. recorded within the Project boundary for the entire survey period, and low sensitivity to collision, local populations of Myotis spp. are **included** for further consideration as a KER of **Local Importance (Higher Value)** based on their sensitivity to wind farm collision and presence within the ecological baseline under the precautionary principle.

6.5.6 Brown Long-eared Bat

Brown Long-eared Bat (*Plecotus auratus*) was not recorded during emergence or transect surveys for the entire survey period. 'Negligible' levels of Brown Long-eared Bat activity were recorded during static detector surveys.

Brown Long-eared Bats are common and widely distributed bat species in Ireland and based on physical and behavioural characteristics, they have a low sensitivity to collision (SNH, 2021). Despite a low activity of Brown Long-eared Bat recorded within the Site boundary for the entire survey period, and low sensitivity to collision, local populations of Brown Long-eared Bat are **included** for further consideration as a KER of Local Importance (Higher Value) based on their sensitivity to wind farm collision and presence within the ecological baseline under the precautionary principle.

6.5.7 Lesser Horseshoe Bat

The lesser horseshoe Bat (*Rhinolophus hipposideros*), which is only known to occur in Ireland in Counties Cork, Kerry, Limerick, Clare, Mayo and Galway (NPWS, 2019), is listed in Annex II of the EU Habitats Directive 1992. Lesser Horseshoe Bats were not recorded throughout the entire survey

period within the wind farm Site boundary. Local populations of Lesser Horseshoe Bat are **not included** for further consideration as a KER.

6.6 Importance of Bats & Sensitivity to Change

All bat species **recorded** during surveys are designated as Annex IV species protected under the EU Habitat Directive, they are strictly protected under the Wildlife Acts and are all populations of 'Least Concern' (Marnell *et al.*, 2019).

To facilitate the evaluation of collision risk to the various bat species as a result of the Project, an overview of the typical flight behaviour of each of the bat species recorded is provided in **Table 6.26**. The abundance and sensitivity to collision of each bat species in Ireland is also provided. The sensitivity to collision of each species is categorised based on physical and behavioural characteristics (SNH, 2021).

Table 6.26: Abundance & Typical Flight Behaviour of Bat Species Recorded at the Project (SNH, 2021)

Bat Species	Abundance	Flight Behaviour	Sensitivity to collision
Common Pipistrelle	Most common and widely distributed	Rapid, twisting flight generally within 10 to 15m of foliage.	High
Soprano Pipistrelle	Common and widely distributed	Rapid, twisting flight generally within 10 to 15m of foliage.	High
Leisler's Bat	Common and widely distributed	Relatively high-flying species of open habitats. Potentially within rotor sweep zone.	High
Nathusius' Pipistrelle	Less common and more localised	Forages over water and along forest tracks.	High
Brown Long-eared Bat	Common and widely distributed	Forage in woodland flying amongst the foliage, picking moths and other insects off leaves	Low
Daubenton's Bat (<i>Myotis daubentonii</i>)	Common and widely distributed	Strongly associated within watercourses; low, level flight a few centimetres above the surface of the water	Low
Natterer's Bat (<i>Myotis nattereri</i>)	Less common and more localised	Low flying species within 10 to 15m of foliage forages along woodland, mature hedgerow and pastureland	Low
Whiskered Bat (<i>Myotis mystacinus</i>)	Uncommon species	Typically forages along forest tracks or near water. It has a rapid fluttering flight.	Low
Lesser Horseshoe Bat	Rarer species	Manoeuvre well, will travel in cluttered habitat, keeps close to vegetation, gaps may be avoided	Low

6.7 Summary of Key Ecological Receptors

Based on the assessments provided above, a summary of bat Key Ecological Receptors (KERs) for the Project are presented in Table 6.36. These species will be taken forward for further assessment within the main EIAR, **Chapter 6: Biodiversity**.

Table 6.36: Summary of species importance and identification of Key Ecological Receptors.

Species	Importance
Common Pipistrelle	Local Importance (Higher Value)
Soprano Pipistrelle	Local Importance (Higher Value)
Leisler's Bat	Local Importance (Higher Value)
Nathusius' Pipistrelle	Local Importance (Higher Value)
Brown Long-eared Bat	Local Importance (Higher Value)
Daubenton's Bat	Local Importance (Higher Value)
Natterer's Bat	Local Importance (Higher Value)
Whiskered Bat	Local Importance (Higher Value)
Lesser Horseshoe Bat	Not present.