Arklow Bank Wind Park 2

Environmental Impact Assessment Report

Volume III, Appendix 13.4: Offshore Bats – 2024 Survey Report
(RFI March 2026)

sse Renewables

Sure Partners Ltd

Arklow Bank Wind Park 2

Bat Monitoring 2024

Results Report

Jason Guile

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Glossary

Term	Meaning
Arklow Bank Wind Park 2 – Offshore Infrastructure	"The Proposed Development", Arklow Bank Wind Park 2 Offshore Infrastructure: This includes all elements under the existing Maritime Area Consent (MAC).
Arklow Bank Wind Park 2 (ABWP2) (the Project)	Arklow Bank Wind Park 2 (ABWP2) (The Project) is the onshore and offshore infrastructure. This EIAR is being prepared for the Offshore Infrastructure. Consents for the Onshore Grid Infrastructure (Planning Reference 310090) and Operations Maintenance Facility (Planning Reference 211316) has been granted on 26th May 2022 and 20th July 2022, respectively. • Arklow Bank Wind Park 2 Offshore Infrastructure: This includes all elements to be consented in accordance with the MAC. This is the subject of this EIAR and will be referred to as 'the Proposed Development' in the EIAR.

	• Arklow Bank Wind Park 2 Onshore Grid Infrastructure: This relates to the onshore grid infrastructure for which planning permission has been granted. • Arklow Bank Wind Park 2 Operations and Maintenance Facility (OMF): This includes the onshore and nearshore infrastructure at the OMF, for which planning permission has been granted. • Arklow Bank Wind Park 2 EirGrid Upgrade Works: any non-contestable grid upgrade works, consent to be sought and works to be completed by EirGrid.
Array Area	The Array Area is the area within which the Wind Turbine Generators (WTGs), the Offshore Substation Platforms (OSPs), and associated cables (export, inter- array and interconnector cabling) and foundations will be installed.
Cable Corridor and Working Area	The Cable Corridor and Working Area is the area within which export, inter-array and interconnector cabling will be installed. This area will also facilitate vessel jacking operations associated with installation of WTG structures and associated foundations within the Array Area.
Onshore locations	Brittas Bay (Brittas) A coastal dune system north of the ABWP2 landfall. Seabank A headland/small cliff adjacent to improved grassland, south of Brittas Bay. Clone Strand A small grass paddock located beside the sea. Behind the Caravan Site A location positioned at the bottom of a grass bank behind a caravan park.
Monopile	A marine platform structure located approximately 8 km offshore of Arklow, Co. Wicklow, used as the primary offshore acoustic monitoring station in all baseline survey years.

Experience

Oisín O Sullivan – Senior Ecologist; Technical Lead on bat surveys (OOS)

Oisín O'Sullivan was a Senior Ecologist with Woodrow at the time of the survey. Oisín has completed a B.Sc. in Ecology and Environmental Biology at University College Cork. His final year thesis involved bat surveys of urban habitats in Cork City. His work as a graduate ecologist with Woodrow was focused on bat data analysis including bat call identification and bat roost/habitat suitability surveys. Oisín has developed a high level of proficiency with Kaleidoscope, Ecobat and BatExplorer, all of which are analysis software used to assess bat calls and activity Since joining Woodrow, Oisín's work involves coordinating, surveying, analysing data, and writing bat technical reports for onshore wind developments. This also involved the use of R (statistical analysis) to provide data on bat activity relative to weather conditions with the goal of informing curtailment strategies as a mitigation measure. During 2022 Woodrow began undertaking offshore bat surveys, Oisín was a technical lead on these projects. Oisín is a Qualifying member of CIEEM and holds a licence from the Department of Housing, Local Government and Heritage.

Qualifications:

BSc (Hons) Ecology and Environmental Biology. University College Cork 2020

Kevin O'Reilly – Ecologist (KOR)

Kevin O'Reilly is an Ecologist with Woodrow. He obtained First Class Honours degree in Business and Law at University College Dublin. He is currently completing a master's research project in environmental management and GIS with Ulster University with a focus on bats and street lighting. Kevin has also undertaken several volunteer projects to gain valuable experience in habitat surveying techniques and knowledge of environmental management and the flora and fauna of protected species in Ireland and abroad. Since joining Woodrow, Kevin has undertaken numerous bat surveys including static detector deployment and roost surveys and worked on several large-scale developments. He has also authored multiple bat technical reports and coordinated bat surveys. Kevin is a qualifying member of CIEEM and holds a full bat derogation licence from the Department of Housing, Local Government and Heritage.

Qualifications:

BBL Bachelor of Business and Law – University College Dublin, 2016

Professional Practice Courses I & II – The Law Society of Ireland, 2019

PgDip Environmental Management with GIS – Ulster University, 2023

Patrick Power – Ecologist (PP)

Patrick Power is an Ecologist with Woodrow. Patrick has completed a BSc in Forestry, BSc (Hons) in land management in Forestry with South East Technological University and a PGCert in Wildlife Biology and Conservation with Edinburgh Napier University.

His work with Woodrow is focused on bat data analysis including bat call identification and bat roost/habitat suitability surveys. Patrick has developed a high level of proficiency with Kaleidoscope and BatExplorer, the analysis software used to assess bat calls and activity. Patrick also possess Reptile,

mammal, and woodland tree surveying Skills. Patrick currently has a bat licence from the Department of Housing, Local Government and Heritage.

Qualifications:

BSc in Forestry. South East Technological University. 2014

BSc (Hons) in Land Management in Forestry. South East Technological University 2016.

PG Certificate in Wildlife Biology and Conservation. Edinburgh Napier University. 2023

Jason Guile – Associate Director

Jason Guile is an Associate Director with Woodrow and has written this report. Jason has over 15 years' experience in ecological assessment and holds a BSc in Marine Biology/Oceanography from the University of Wales, Bangor and a HND in Coastal Conservation with Marine Biology from Blackpool and Fylde College. Jason has a wide range of experience in the preparation of Environmental Impact Assessment Reports, Appropriate Assessment Screening reports and Natura Impact Statements. Jason was the lead ecologist on a range of projects in the UK, including large scale infrastructural schemes. Since moving to Ireland, he has been lead ecologist / author (EIAR, EcIA, AA Screening reports and NIS's) for a number of projects including historic landfill remediation works, urban planning applications and commercial regeneration sites.

1. INTRODUCTION

Offshore bat surveys have been carried out to inform the impact assessment of bats from offshore wind infrastructure as part of Arklow Bank Wind Park 2 (ABWP2).

The information contained within this report is intended to summarise the results of bat monitoring that was undertaken in 2024, consisting of two main survey components-

- Monitoring at offshore monopile within the ABWP2 Array Area;
- Monitoring on headlands inland from the ABWP2 Array Area.

The 2024 surveys are a continuation of the monitoring that was conducted during 2021, 2022 and 2023.

Deployments and maintenance were carried out by Oisín O Sullivan, Kevin O'Reilly and Patrick Power (Woodrow). The report was compiled by Jason Guile (Woodrow).

2. METHODOLOGY

2.1. Monopile static detector surveys

Static detector surveys were undertaken using Wildlife Acoustics Song Meter 4 Bat Full Spectrum (SM4BAT-FS) detectors. Two detectors were deployed offshore on the monopile, a marine platform approximately 8 km offshore of Arklow, Co. Wicklow at the following coordinates: 52.88544136, -5.923436330 within the Array Area. The monopile location is displayed in Figure 1. The detectors were powered by external Lithium-ion batteries. The detectors were housed in peli-cases modified to allow for power and microphone cables, to prevent excessive fouling from seabirds directly onto detectors and to protect them from the marine environment. These two static detectors were deployed offshore and monitored continuously from 14 August to 03 December 2024 with no lapse in recording. One detector was positioned on the northern side of the monopile while the other was positioned on the southern side.

The detectors were fitted with two memory cards of between 128 GB and 256 GB each, in anticipation of high levels of noise being recorded due to the marine environment and seabirds using the monopile. The detectors were set with 16 kHz as the minimum frequency trigger for recording (NatureScot 2021). This threshold was selected to reduce the amount of interfering noise files produced by the seabirds and the marine environment in general, while still recording within the normal echolocation frequencies of relevant species. The detectors were set to a sample rate of 256 kHz (equivalent to a maximum detectable frequency of 128 kHz). Detector units and batteries were strapped to the floor of the platform, while microphones were mounted on the handrails surrounding the platform, approximately 12 m above lowest astronomical tide (LAT). There was no lapse in offshore recording. Respective pictures for context are shown in Appendix A. All detectors were tested and settings checked prior to deployment. The sensitivity of all microphones was tested prior to and after each deployment, and all microphone checks were logged in an excel spreadsheet.

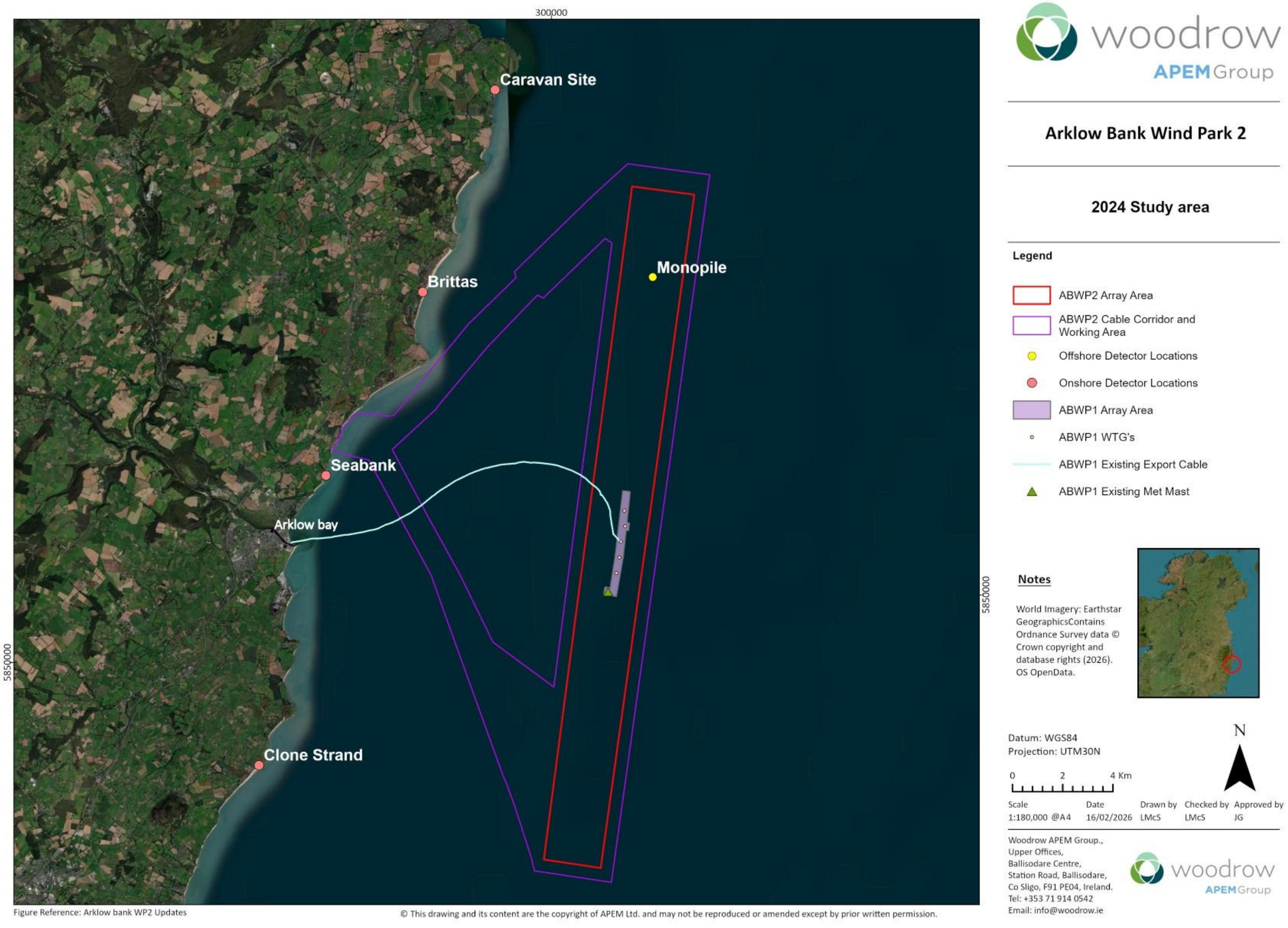


Figure Reference: Arklow bank WP2 Updates

Figure 1: Survey locations

2.2. Headland static detector surveys

Four Elekon Bat Logger C models (which allow for daily mobile updates via SIM card and solar powered batteries for targeted and reactionary maintenance should it be required) were deployed onshore along the coast to obtain onshore baseline data and assess if bat activity events at the offshore location coincided with activity changes on the mainland. These detectors were deployed between 16 August and 15 October 2024. One detector was placed on a pine tree in the dunes of Brittas Bay (Brittas), one at the tip of a headland/small cliff adjacent to improved grassland (Seabank), one in a small grass field/paddock adjacent to the sea (Clone Strand) and one at the bottom of a grass bank on the coast behind a caravan park (behind the caravan site). The locations of these detectors relative to each other and the offshore monopile can be seen in Figure 1. Photos of these locations are presented in Appendix B. Table 1 shows the deployment schedule for each location.

Table 1: Headland deployment schedule

	Deployment	Collection	Number of days surveyed
Brittas	16 August	14 October	60
Seabank	16 August	15 October	61
Clone Strand	16 August 22 August	22 August 7 October	7 47
Behind caravan site	19 September	15 October	27

2.3. Calibration and testing of recording equipment

All detectors were tested and settings checked prior to deployment. The sensitivity of all microphones was tested prior to and after each deployment, and all microphone checks were logged in an excel spreadsheet.

2.4. Data Analysis

Sound files recorded using SM4 detectors were analysed using Kaleidoscope Pro with automatic European classifiers filtered to Irish and UK species. Sound files recorded using Batloggers and Elekon Bat Logger C detectors were analysed using BatExplorer software. All files were manually verified by a suitably experienced member of the Woodrow bat ecology team, with the aid of guidance material for identifying calls, Russ 2012, Barataud 2015 and Middleton *et al*. 2022.

Weather data for the monopile was gathered from the M2 weather buoy in the Irish Sea accessed via the Marine Institute website ((Irish Weather Buoy Data) [1]. This buoy is located offshore, which is a

[1] Available at: Irish Weather Buoy Network Observations | Marine Institute [Accessed July 2025]

limitation in that there may be localised differences at the monopile unaccounted for, i.e., there may be higher wind and lower temperature effects from the mainland. However, it provides an insight into the weather conditions in a marine context for the Irish Sea rather than using a land-based weather station. The weather data for the headland sites was obtained from Johnstown Castle weather station located in Wexford (Met Éireann Historical Weather Data)[2] which provided land-based weather data.

2.5. Limitations

The Elekon Bat Logger C at Clone Strand failed from deployment on 16 August (notification received next day) and was replaced with a Wildlife Acoustics Song Meter 4 Bat Full Spectrum (SM4BAT-FS) detector on 22 August. Due to the nominal number of days (six days) that the unit failed, this has no impact on the data collected for the location.

Offshore monitoring extended beyond onshore due to weather delays in relation to the collection of the offshore equipment. This limits direct onshore comparison after 15 October for offshore detections but does not compromise data integrity. Refer to Table 1 showing full onshore coverage for the season.

[2] Available at: Met Éireann Historical Weather Data [Accessed July 2025]

3. RESULTS

3.1. Monopile static detector surveys

Three species were recorded at the monopile location during the 2024 survey period; Leisler's bat (*Nyctalus leisleri*) (NYCLEI), soprano pipistrelle (*Pipistrellus pygmaeus*) (PIPPYG) and common pipistrelle (*Pipistrellus pipistrellus*) (PIPPIP). With a total of 67 recordings. Table 2 shows the split of these recordings between the different species per month. Leisler activity accounts for 83% of all activity recorded at the monopile.

The wind speed and direction at the time of passes recorded at the monopile during the 2024 survey period are shown in Table 3. This shows that NW and SSE account for 61% (28% and 33% respectively) of the direct of wind, however, the wind speed vary dramatically between the two directions with NW wind directions below wind speeds of 7 m/s and those at SSE at speeds greater than 10 m/s. wind speeds during the recorded passes ranged from 2.3 m/s (W) to 13.9 m/s (SSW).

Table 2: Offshore static detector results

Prospective species	Number in August	Number in September	Number in October	Number in November	Number in December	Total number of detections	Number of days detected
Leisler's bat	12	22	17	5	0	56	10
Soprano pipistrelle	0	2	2	0	0	4	4
Common pipistrelle	1	0	5	1	0	7	7

Table 3: Wind direction and speed at the time of passes recorded at the monopile during the 2024 survey period (M2 weather buoy)

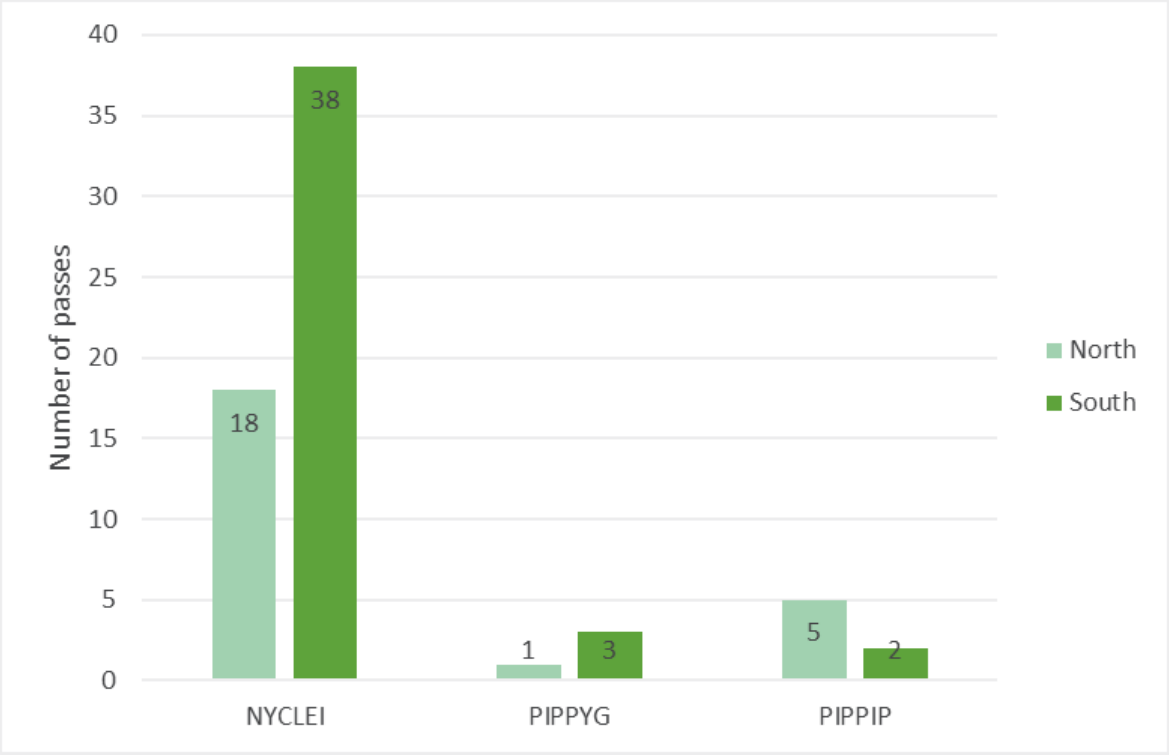
Wind speed (m/s)	ENE	N	NNE	NW	S	SSE	SSW	SW	W	WNW	WSW	Grand Total
<4	0%	1%	0%	3%	0%	0%	0%	0%	6%	1%	6%	18%
4.1-7	0%	0%	1%	16%	3%	0%	1%	0%	0%	7%	0%	30%
7.1-10	1%	0%	0%	7%	0%	0%	0%	6%	0%	0%	0%	15%
10.1-14	0%	0%	0%	1%	0%	33%	3%	0%	0%	0%	0%	37%
Total	1%	1%	1%	28%	3%	33%	4%	6%	6%	9%	6%	100%

Wind speed in m/s converted to Marine Beaufort Scale (Met Éireann accessed June 2025)

- <1 m/s – 0 /Calm

- 1-4 m/s – 0 to 3 / Calm to Gentle breeze
- 4-7 m/s – 3 to 4 / Gentle breeze to Moderate breeze
- 7-10 m/s – 4 to 5 / Moderate breeze to Fresh breeze
- 10-13 m/s – 5 to 6 / Fresh breeze to Strong breeze

An overview of where bat activity was recorded is presented below in Figure 2. The figure shows that more passes were recorded on the southern detector than the northern detector due to the Leisler activity, with Leisler passes being more than the pipistrelle species. The species-specific bat data for all species are discussed in further detail in the following sections.



Note: NYCLEI = Leisler's bat, PIPPYG = Soprano Pipistrelle, PIPPIP = Common Pipistrelle

Figure 2: Comparison of species passes on the north and south deployment locations

3.1.1. Leisler's bat activity

The overall activity for Leisler' bat offshore is shown in

Figure 3. Leisler's bat was the most abundant of all species recorded offshore.

Leisler's bat activity is low throughout the survey period with a total of 56 passes, and a maximum of four passes recorded during any one day, other than the peaks observed on 29 September and 29 October. The timing of activity for each of the peaks is around sunrise for each day. Sunrise on the 29 September was 07:23 and all activity (17 passes) for that day was recorded between 07:03 and 07:53, sunrise on 29 October was at 08:16 (not adjusted for daylight saving time) and all activity (16 passes)

for that day was recorded between 08:03 and 08:40. Although the timing and clustering of detections indicate dawn-swarming behaviour, such activity can occur for non-foraging reasons and is not indicative of feeding. No feeding buzzes were identified in 2024, indicating no evidence of active foraging behaviour at the monopile. The activity in 2024 is significantly different to that of 2023 and more in line with 2022 and 2021. All passes for Leisler recorded in 2023 were in June (4 passes), while all passes in 2022 were recorded in August (2 passes) and two (of three) passes in 2021 were also recorded in August.

As shown in Table 4, Leisler's activity primarily coincided with SSE winds; a trend heavily driven by the activity peaks on the 29 September (39%) and 29 October (20%). The remainder of the activity (41%) occurred in westerly winds (NW to SW), with no correlation to a particular wind speed.

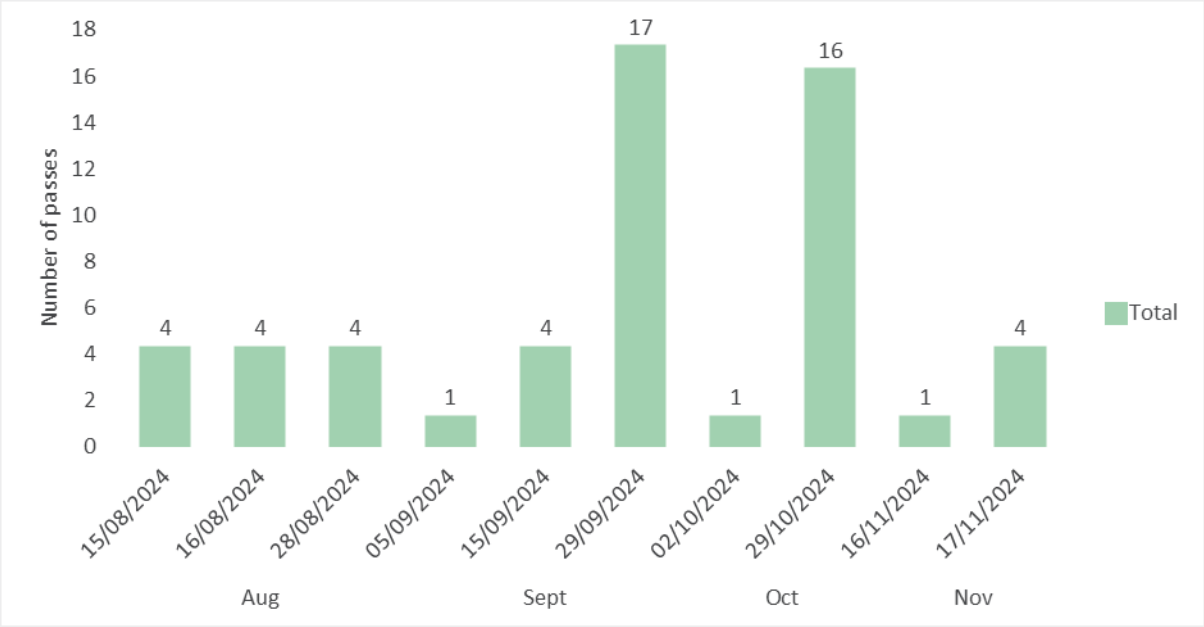


Figure 3: Number of Leisler's bat passes recorded across the length of the deployment

Table 4: Wind direction and speed for Leisler's bat passes recorded at the monopile during the 2024 survey period (M2 weather buoy)

	ENE	NNE	NW	SSE	SW	W	WNW	WSW	Total
<4	0%	0%	4%	0%	0%	7%	2%	7%	20%
4.1-7	0%	2%	20%	0%	0%	0%	7%	0%	29%
7.1-10	2%	0%	7%	0%	2%	0%	0%	0%	11%
10.1-14	0%	0%	2%	39%	0%	0%	0%	0%	41%
Total	2%	2%	32%	39%	2%	7%	9%	7%	100%

3.1.2. Pipistrelle activity

The overall pipistrelle activity recorded offshore during the 2024 monitoring period is presented in Table 5. There were no Nathusius' pipistrelle passes recorded at the monopile location and a total of 11 passes for common and soprano pipistrelle.

There were seven common pipistrelle passes and four soprano pipistrelle passes recorded during the deployment. There are no more than an individual pass recorded for each species on any of the days recoded. The level of activity is comparative to that recorded in 2021, 2022 and 2023 (albeit different months for the records). Based on the timing and distribution of detections, activity reflects occasional movement past the structure rather than any sustained use. Although these brief movements past or around the monopile were detected, no feeding buzzes were identified in 2024, and there was no evidence of active foraging behaviour at the monopile.

Given that there are only a total of 11 pipistrelle species passes, both pipistrelle species were grouped together while assessing wind speed and direction associated with passes, refer to Table 6. Wind conditions fall into three categories, having one pass (9%), two passes (18%) and three passes (27%). Due to the low sample size, these results cannot be used to show a significant influence from wind speed or direction on pipistrelle bat offshore activity, however, the majority of passes recorded (73%) were during south-westerly to southerly winds, with wind speed ranging between 5.1 to 13.9 m/s.

Table 5: Number of Pipistrelle species passes recorded across the length of the deployment

	27/08/2024	11/09/2024	25/09/2024	11/10/2024	14/10/2024	18/10/2024	19/10/2024	28/10/2024	30/10/2024	11/11/2024	Total
Soprano pipistrelle		1	1		1				1		4
Common pipistrelle	1			1	1	1	1	1		1	7
Total	**1**	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1**	**11**

Table 6: Wind direction and speed for Pipistrelle species passes recorded at the monopile during the 2024 survey period (M2 weather buoy)

	N	NW	S	SSW	SW	WNW	Total
<4	9%	0%	0%	0%	0%	0%	9%
4.1-7	0%	0%	18%	9%	0%	9%	36%
7.1-10	0%	9%	0%	0%	27%	0%	36%
10.1-14	0%	0%	0%	18%	0%	0%	18%
Total	9%	9%	18%	27%	27%	9%	100%

3.2. Headland static detector surveys

Initial analysis of headland detector data focused on potential activity for Nathusius' pipistrelle and Leisler's bat onshore. However, due to offshore results at the monopile, the analysis was expanded to include all pipistrelle species to assess potential correlations between the monopile and headland sites. In total 43,562 calls (bat passes) were recorded at the headland locations during the 2024 survey period. There is a marked difference in the magnitude of calls recorded (offshore is a 0.16% comparison to onshore passes recorded), indicating that bats are far more concentrated nearshore, likely using headlands as key commuting corridors or foraging locations.

3.2.1. Leisler's bat activity

Leisler's bat passes were recorded at all headland detector locations, with a total of 8 passes at the location behind the caravan site, 8913 passes at the Brittas site, 5898 passes at the Seabank site and 2309 passes at the Clone strand site. All the sites (except behind the caravan site) demonstrate significantly more activity than recorded offshore at the monopile. There is a marked difference in the magnitude of calls recorded (offshore is a 0.3% comparison to onshore passes recorded), indicating that Leisler's bats are far more concentrated nearshore, likely using headlands as key commuting corridors or foraging locations.

Figure 4 shows the level of activity for Leisler's bat at each of the headland locations during the 2024 deployment. The figure shows a similar trend in activity between Brittas and Seabank between the 16 and 20 August and between Brittas, Seabank and Clone strand for the rest of the deployment until 25 September, after which all locations show different trends in recorded passes. While the numbers are significantly different between the locations, comparison between daily peaks and troughs in activity can be made. The headland (onshore) peaks and troughs do not correspond to those of the monopile.

Brittas shows the highest level of activity of all the four headland locations with peaks in August (17) and September (10 and 26), however, these do not correspond to peak activity offshore at the monopile location.

As displayed in Figure 5 and Table 7, Leisler's activity primarily coincided with westerly winds. The most frequently observed wind directions while Leisler's bat activity was recorded on the headlands were WSW (25%) and SW and W (13% each) winds. While these wind directions account for the higher number of passes, wind direction for the passes at the headland locations were quite evenly spread between north, south, and west, with activity during easterly winds accounting for only 9% of all Leisler's bat activity at the headlands.

Wind speeds were much lower at the headland locations that offshore, with most activity (92%) at wind speeds ≤10 m/s (of which 48% is for wind between 4-7 m/s).

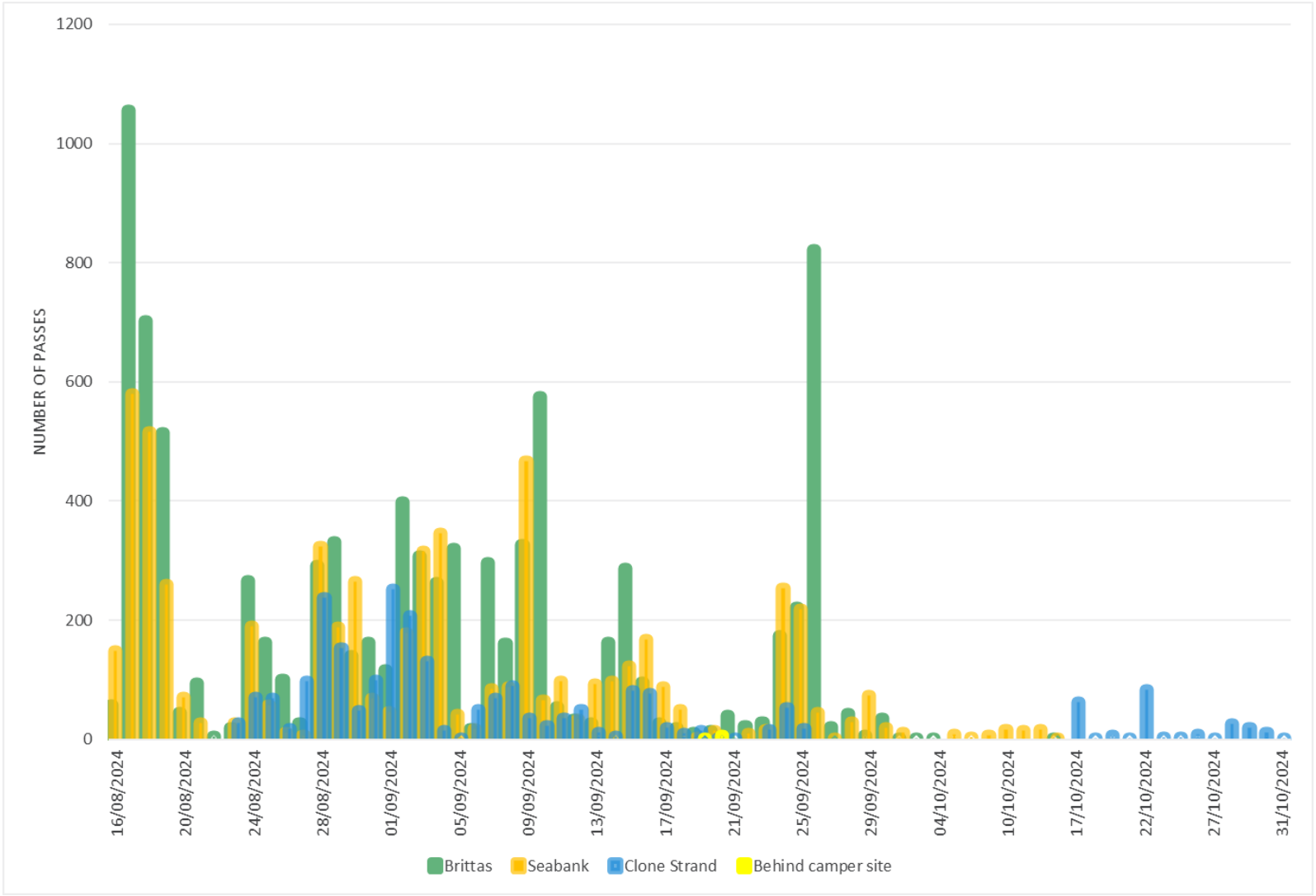


Figure 4: Leisler's bat activity for each of the headland locations during the 2024 deployment

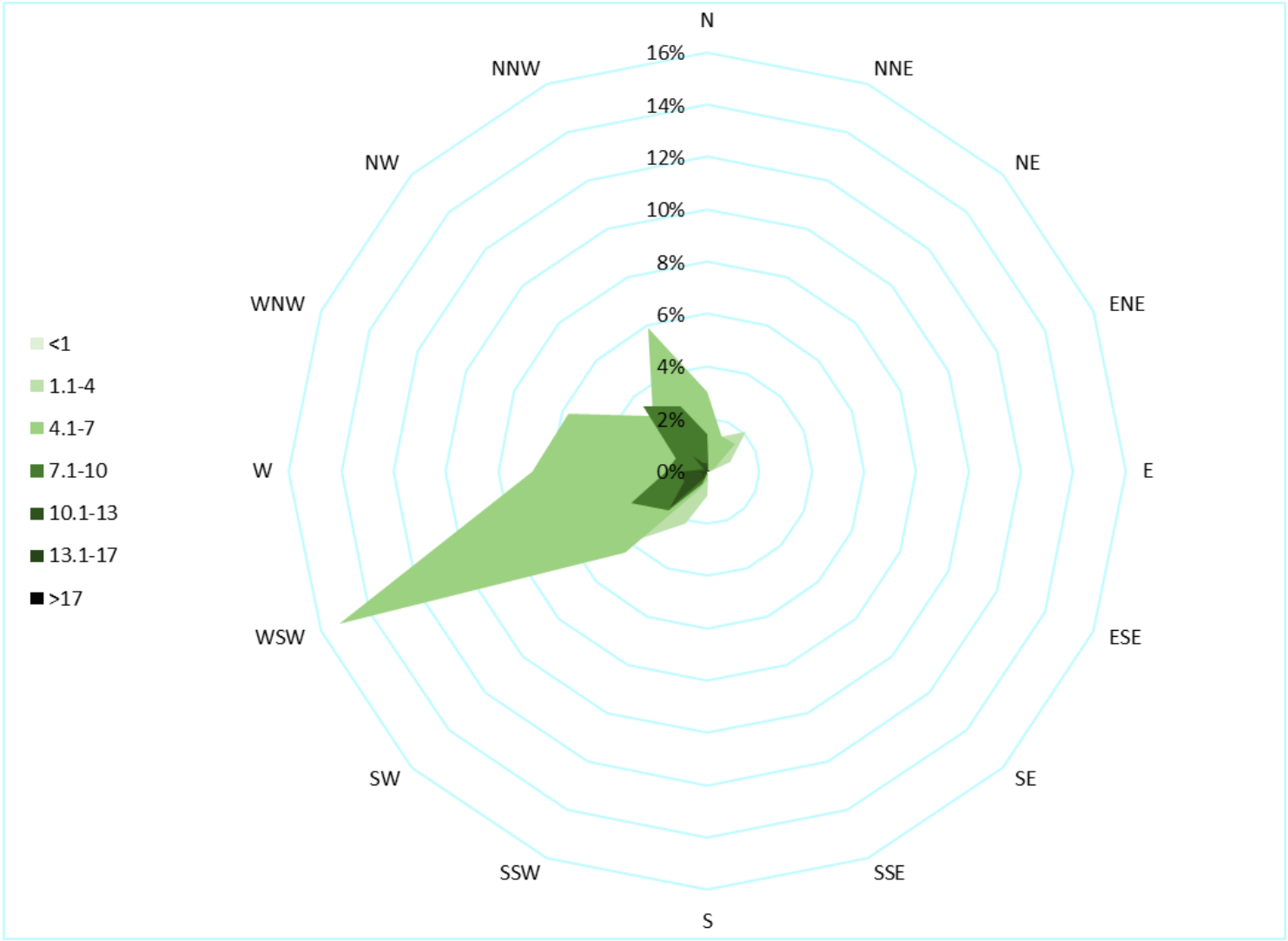


Figure 5: Wind speed (m/s) and direction onshore during Leisler's bat passes (Johnstown Castle weather station)

Table 7: Wind conditions onshore during Leisler's bat passes (Johnstown Castle weather station)

Wind speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Grand Total
<1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
1.1-4	2%	1%	2%	1%	0%	0%	0%	0%	1%	2%	4%	6%	3%	1%	1%	2%	27%
4.1-7	3%	1%	1%	0%	0%	0%	0%	0%	0%	1%	4%	15%	7%	6%	3%	6%	48%
7.1-10	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	3%	2%	1%	3%	3%	17%
10.1-13	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	1%	0%	1%	0%	6%
13.1-17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
>17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	7%	3%	4%	2%	0%	0%	0%	0%	1%	4%	13%	25%	13%	9%	9%	11%	100%

3.2.2. Nathusius' pipistrelle activity

Nathusius' pipistrelle was the least abundant of all species recorded onshore. There was one Nathusius' pipistrelle pass recorded on the detector behind the caravan site, 48 passes recorded at Brittas and 41 passes recorded at Seabank, with none recorded at Clone Strand. Figure 6 shows the activity for the species onshore during the 2024 deployment. There is no clear correlation between passes and the different headland locations. As there were no passes recorded offshore at the monopile, there is no data for comparison between headland and monopile locations.

As displayed in Figure 7 and Table 8 below, Nathusius' activity primarily coincided with westerly and north westerly winds. The most frequently observed wind directions while Nathusius' pipistrelle activity was recorded on the headlands were WSW (24%) and NNW (23%) winds. Wind speeds with most activity (89%) are ≤10 m/s (of which 52% is for wind between 4-7 m/s).

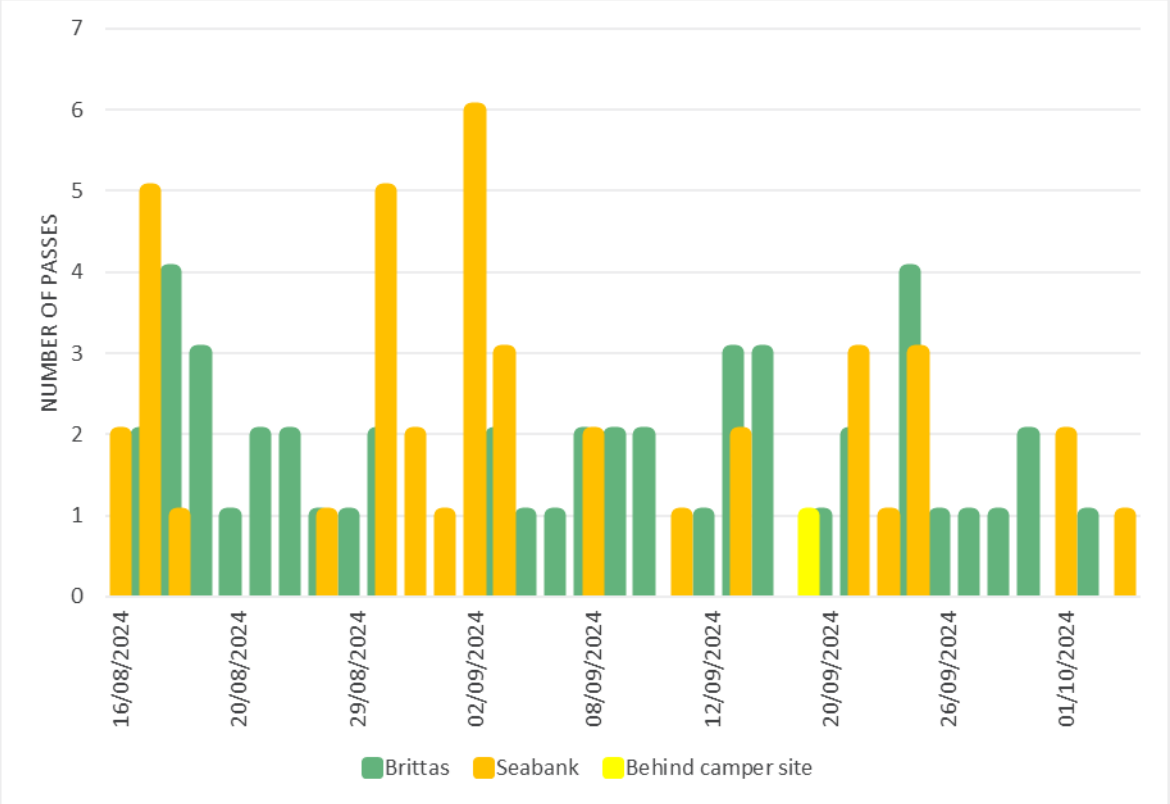


Figure 6: Nathusius pipistrelle activity for each of the headland locations during the 2024 deployment

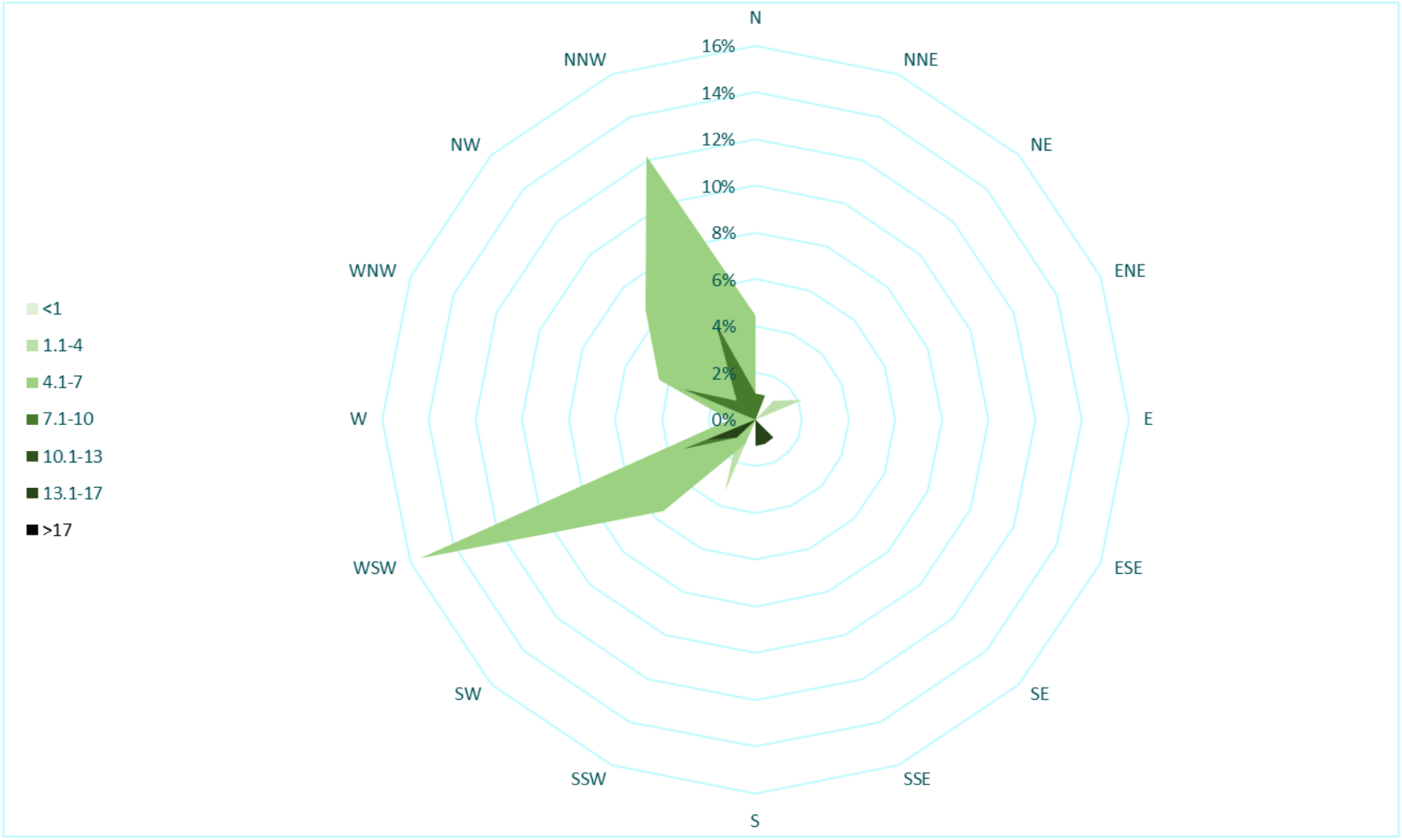


Figure 7: Wind speed (m/s) and direction onshore during Nathusius' pipistrelle bat passes (Johnstown Castle weather station)

Table 8: Wind conditions onshore during Nathusius' pipistrelle bat passes (Johnstown Castle weather station)

Wind speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Grand Total
<1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1.1-4	1%	0%	1%	2%	0%	0%	0%	0%	0%	3%	1%	3%	0%	1%	1%	7%	21%
4.1-7	4%	0%	1%	0%	0%	0%	0%	0%	0%	1%	6%	16%	1%	4%	7%	12%	52%
7.1-10	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	3%	0%	3%	1%	4%	16%
10.1-13	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%	0%	4%
13.1-17	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%	1%	2%	0%	0%	0%	0%	7%
>17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	7%	1%	3%	2%	0%	0%	1%	1%	1%	4%	11%	24%	1%	10%	9%	23%	100%

3.2.3. Common pipistrelle

Common pipistrelle was the most abundant of all species recorded onshore. There were 48 common pipistrelle passes recorded on the detector behind the caravan site, 2049 passes recorded at Brittas, 10,351 passes recorded at Seabank and 732 passes recorded at Clone Strand giving a total of 13,180 passes for all headland locations. Seabank comprises 78% of all the headland activity for common pipistrelles. Figure 8 shows the activity for the species during the 2024 deployment. There is no clear correlation between passes and the different headland locations. However, there is significantly more activity at the headland locations than at the monopile for this species.

As displayed in Figure 9 and Table 9 below, common pipistrelle activity primarily coincided with westerly and north westerly winds. The most frequently observed wind directions while common pipistrelle activity was recorded on the headlands were WSW (25%) and NNW (15%) winds. Wind speeds with most activity (94%) are ≤10 m/s (of which 52% is for wind between 4-7 m/s). This is different to the wind conditions for passes recorded at the monopile location for pipistrelle species.

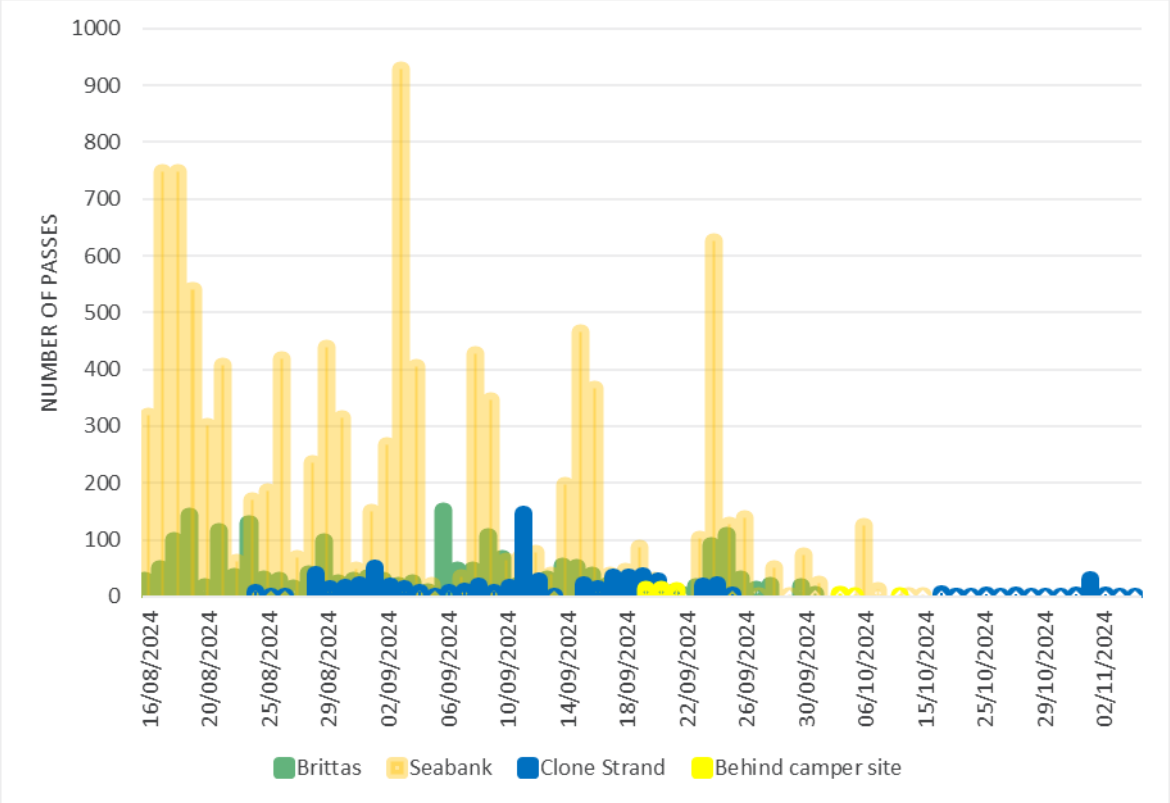


Figure 8: Common pipistrelle activity for each of the headland locations during the 2024 deployment

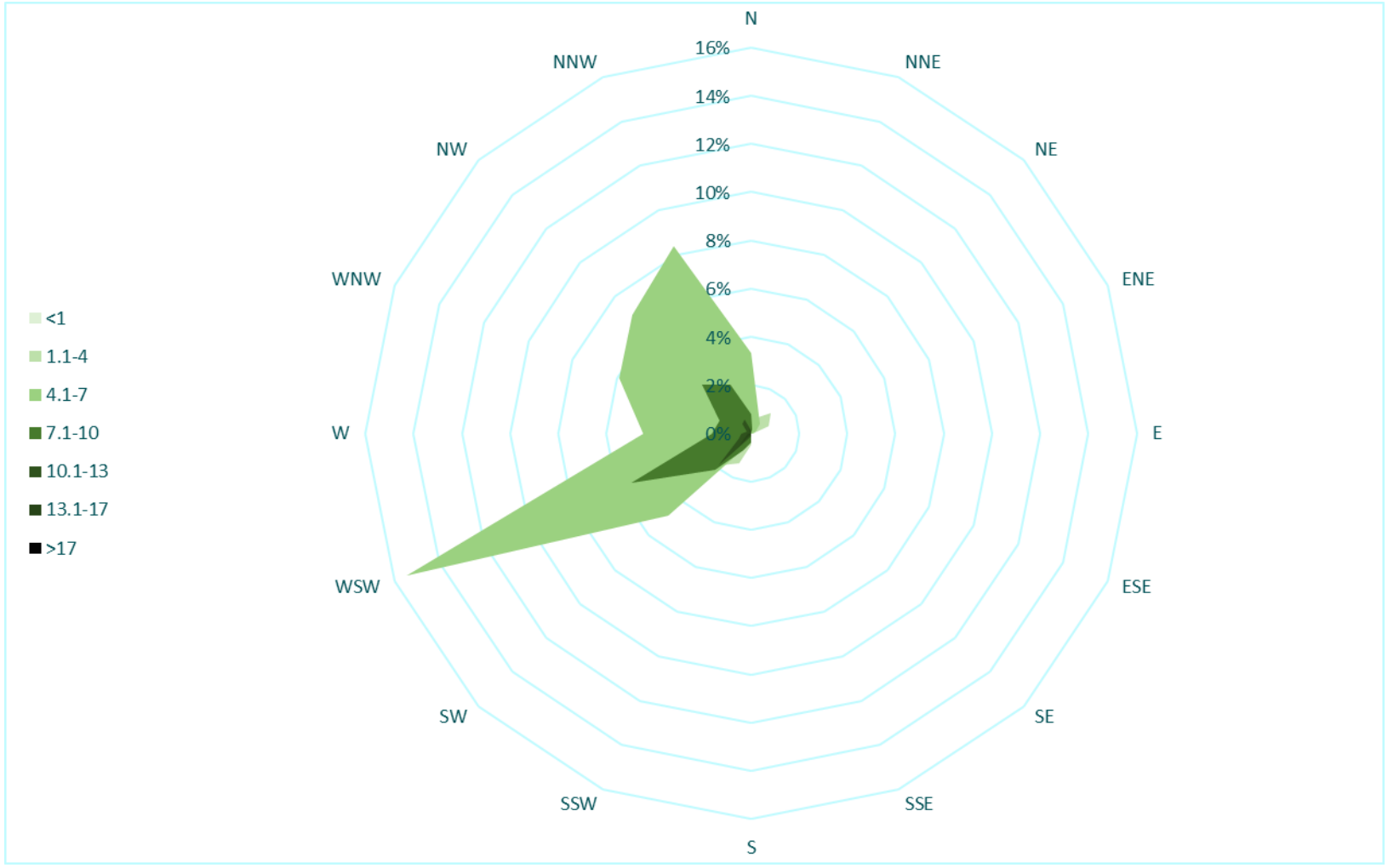


Figure 9: Wind speed (m/s) and direction onshore during common pipistrelle passes (Johnstown Castle weather station)

Table 9: Wind conditions onshore during common pipistrelle passes (Johnstown Castle weather station)

Wind speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Grand Total
<1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1.1-4	1%	1%	1%	1%	0%	0%	0%	0%	0%	1%	2%	5%	2%	3%	4%	3%	24%
4.1-7	3%	1%	1%	0%	0%	0%	0%	0%	0%	1%	5%	15%	4%	6%	7%	8%	52%
7.1-10	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	5%	2%	1%	3%	2%	18%
10.1-13	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	0%	0%	1%	1%	5%
13.1-17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%
>17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	5%	2%	2%	1%	0%	0%	0%	0%	1%	3%	11%	26%	8%	11%	14%	15%	100%

3.2.4. Soprano pipistrelle

There were two soprano pipistrelle passes recorded on the detector behind the caravan site, 2569 passes recorded at Brittas, 9276 passes recorded at Seabank and 260 passes recorded at Clone Strand giving a total of 12,101 passes for all headland locations. Seabank comprises 77% of all the headland activity for soprano pipistrelles. Figure 10 shows the activity for the species during the 2024 deployment. There is no clear correlation between passes and the different headland locations. However, there is significantly more activity onshore at the headland locations than recorded offshore at the monopile for this species.

As displayed in Figure 11 and Table 10, soprano pipistrelle activity primarily coincided with westerly and north westerly winds, with the most frequently observed wind directions while soprano pipistrelle activity was recorded on the headlands were WSW (22%). Wind speeds with most activity (95%) are ≤10 m/s (of which 49% is for wind between 4-7 m/s). This is different to the wind conditions for passes recorded at the monopile location for pipistrelle species.

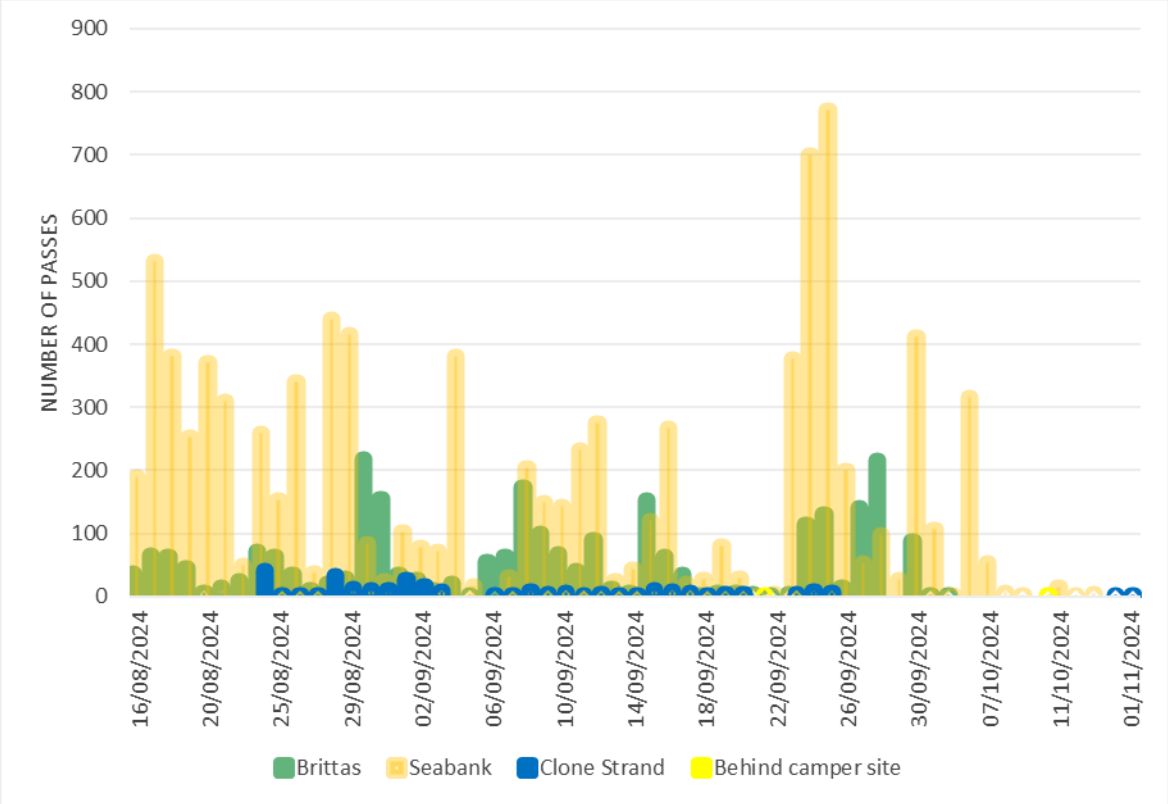


Figure 10: Soprano pipistrelle activity for each of the headland locations during the 2024 deployment

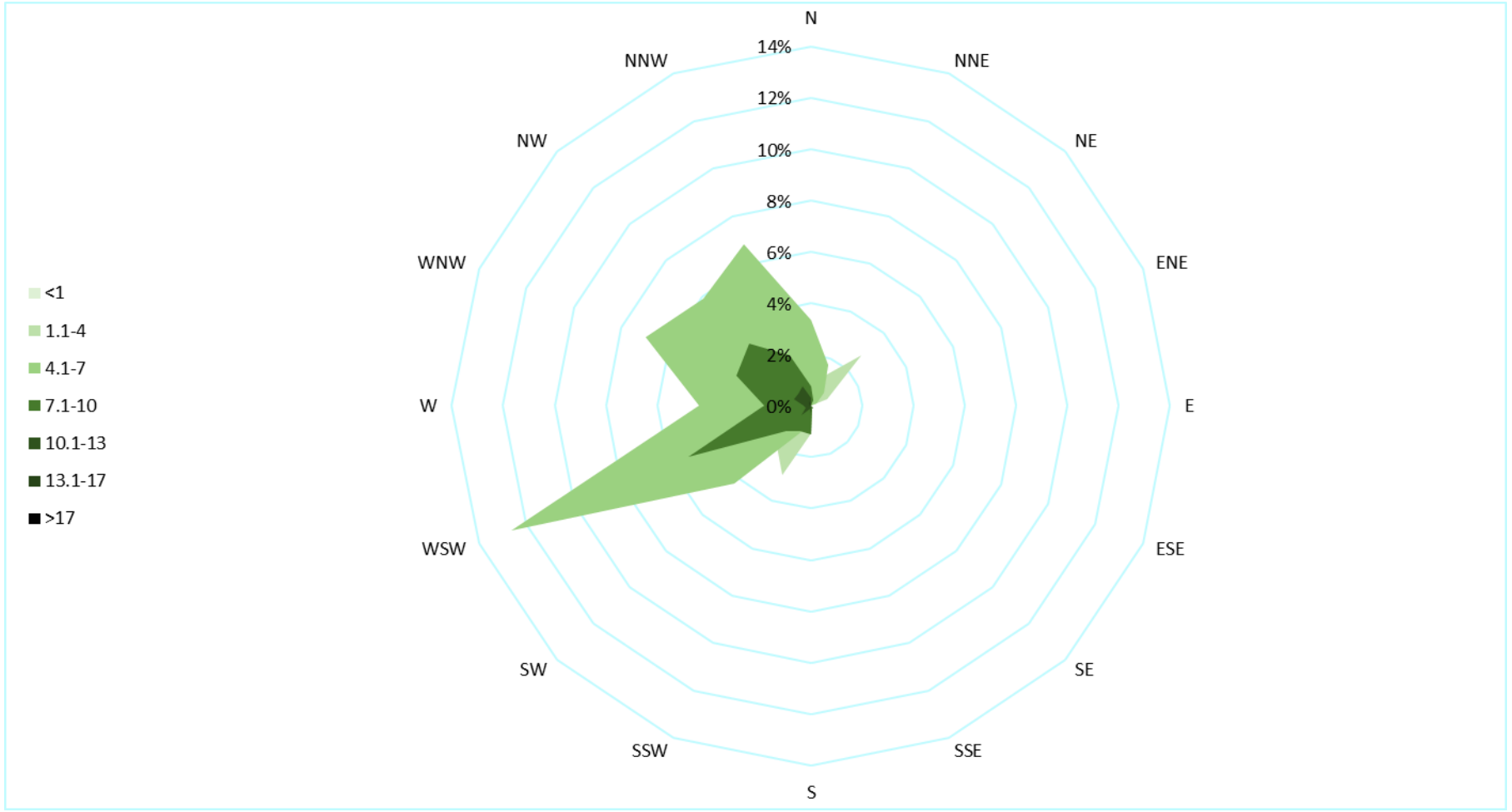


Figure 11: Wind speed (m/s) and direction onshore during soprano pipistrelle passes (Johnstown Castle weather station)

Table 10: Wind conditions for onshore during soprano pipistrelle passes (Johnstown Castle weather station)

Wind speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Grand Total
<1	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1.1-4	2%	1%	3%	1%	0%		0%	0%	1%	3%	2%	4%	1%	1%	2%	4%	26%
4.1-7	3%	2%	1%	0%	0%		0%	0%	1%	1%	4%	13%	4%	7%	6%	7%	49%
7.1-10	1%	0%	0%	0%	0%		0%	0%	1%	1%	1%	5%	2%	3%	3%	2%	20%
10.1-13	0%	0%	0%	0%	0%		0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	4%
13.1-17	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
>17	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	6%	3%	4%	1%	0%		0%	0%	3%	5%	8%	22%	8%	12%	12%	14%	100%

4. DISCUSSION

4.1. 2024

The 2024 survey recorded the highest number of offshore bat passes to date at the monopile location, with three species detected: Leisler's bat, soprano pipistrelle, and common pipistrelle. Leisler's bat accounted for the majority of detections (83%), with activity observed on 10 days during the deployment period. Two notable peaks occurred on 29 September and 29 October, when all passes were recorded within one hour of sunrise. These patterns may indicate dawn-related behaviour, but given the small sample size, this interpretation remains tentative.

Pipistrelle species were detected infrequently offshore, with no more than one pass per night. This suggests occasional offshore presence rather than regular or sustained activity. Offshore detections of pipistrelles are consistent with previous years, where activity has been low and sporadic.

Onshore monitoring recorded significantly higher levels of bat activity, with over 43,000 passes compared to 67 passes offshore. Leisler's bat alone contributed nearly 17,000 calls onshore. This disparity indicates that headlands and coastal habitats are far more important for bats than offshore departures.

4.2. Comparison to previous years

Offshore detections remain low across all years surveyed (2021–2024), with Leisler's bat consistently the most recorded species. While the 2024 data show more detections than previous years, the overall numbers are still very small compared to onshore activity.

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Appendix A: Monopile Detector Locations

Plate 1: Monopile structure

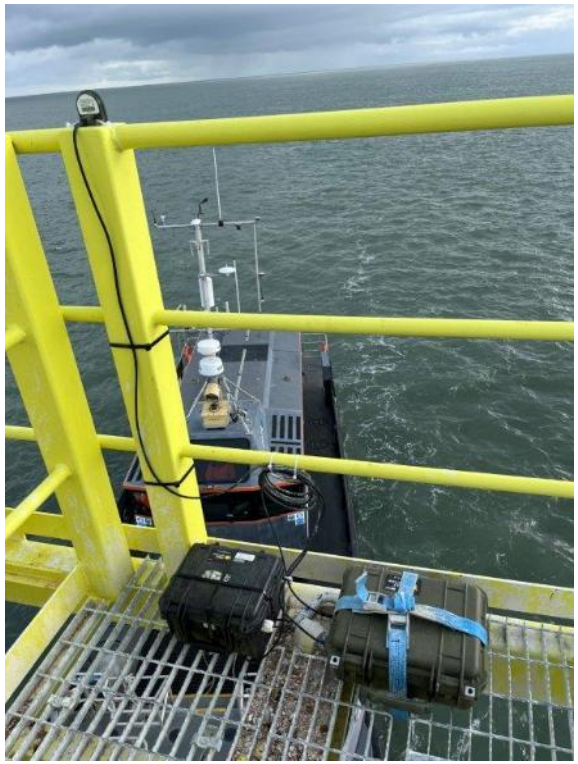

Plate 2: Northern detector location

Plate 3: Northern detector microphone placement

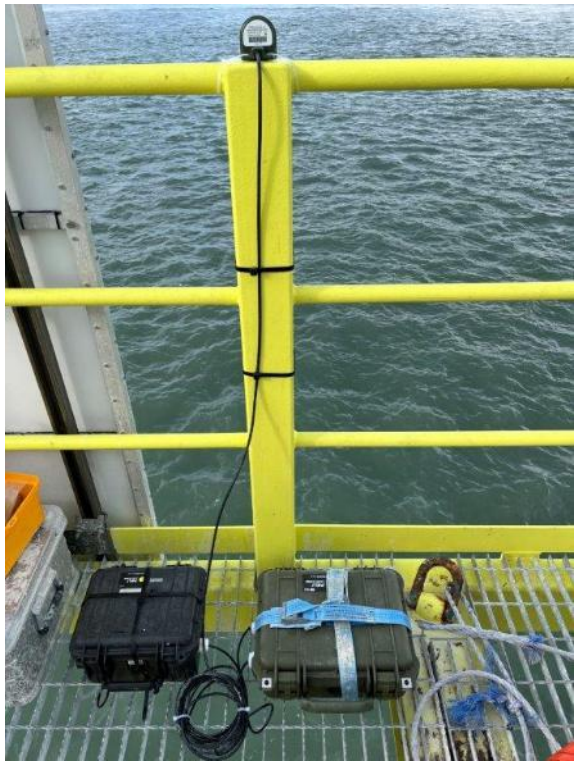

Plate 4: Southern detector location

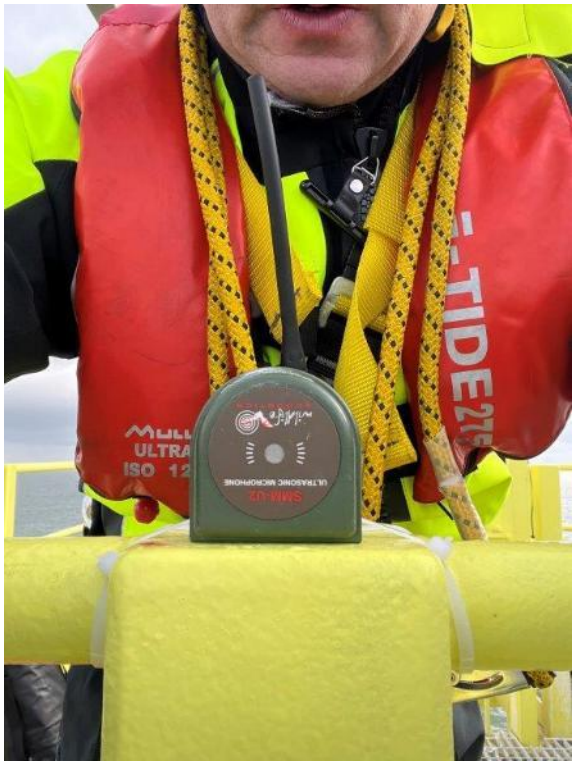

Plate 5: Southern microphone placement

Appendix B: Headland locations

Plate 6: Brittas Bay headland location, Elekon Bat Logger C set-up

Plate 7: Brittas Bay headland location alternate view showing connected solar panel

Plate 8: Seabank headland location