

A Bat Assessment of Lands at Naas West Proposed For the Finlay Park Housing Development



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Introduction

Bats are a widespread element of the Irish fauna and make up one quarter of all terrestrial mammal species. They are known to occur from much of the rural landscape which predominates on the island of Ireland, but they are also present within the urban environment and here they occupy buildings and occasionally trees for short or long periods. Houses and other buildings are a vital element of the annual cycle of all Irish bat species and at no time more so than the period May to August, but many bats may also avail of buildings as hibernation sites often when the presence of bats may be impossible to determine. Trees are less commonly noted as roost sites, partly due to a younger tree population for the island than in the rest of Europe and partly due to under-reporting.

Habitat loss or modification is an issue for bats as well as many other species. Changes to a site such as tree-felling and hedgerow clearance and the introduction of new houses and entire estates may remove roost sites and reduce the lands available to bats as a feeding site or in some way prevent full utilisation of the area by bats by interfering with a bat's ability to commute through a site or roost within the site.

Bats are protected by Irish and EU law and to prevent unlawful injury or death, it is essential that a full understanding of the site is available in advance to protect the resident bats from unintentional disturbance and to create a pathway by which a legal derogation and exemption may be designed in consultation with the National Parks and Wildlife Service. This is a service of The Department of Housing, Local Government and Heritage if impacts are likely to be severe.

Prior to further significant changes to a site, it may be necessary to ensure that there will be no impact upon protected species, such as all of Ireland's bats. Bats of less common species may be present within a site unbeknownst to owners and residents and there is a requirement to undertake a survey by suitably qualified ecologists with the appropriate equipment to determine which species are present. Should bats be present, knowledge of the species concerned and the potential consequences of the modifications of the site can assist in identifying measures to alleviate the negative effects of these changes. This is a legal requirement given the protection level for these species to ensure that the nine species' conservation status are not reduced by major changes to an area.

The site is very close to the Grand Canal and there is an ecological richness to this area created by the presence of the Canal and the slower rate of change of this area of Naas up to the present.

Methodology

The initial survey was undertaken on June 24th 2020, with the aid of an Echometer 3 (EM3) handheld bat detector and a Songmeter Mini (Mini) ultrasonic all-weather recorder. The EM3 was fitted with a Garmin GPS attachment to plot the location of each signal recorded. Identifications in the field avail of a screen displaying a representation of the signals received, plotting the frequencies of each signal against time. This allows a quick and approximate identification in the field. All signals were later analysed with Kaleidoscope Pro sound analysis software on a PC and where there was no identification or a potentially uncommon species, the signals were checked manually. The Mini records all ultrasound from a set start time (in this case, 30 minutes before sunset up to sunrise). All of the Mini signals were analysed with the sound analysis software.

The EM3 was held for the entire active survey while the Mini was positioned at a small cottage to the southern end of the road passing the site. Prior to sunrise, it was moved to another former farm building along this road.

The Mini recorded from 30 minutes prior to sunrise and up to sunrise and gives a background to the activity across an entire night. An examination of available information from Bat Conservation Ireland, previous data from the site and survey results from other areas of Naas and its surrounds was undertaken to compile a list of most likely species in addition to the evaluation of the habitat and known distributions of Irish species.

The entire site was walked from prior to sunset up to midnight and then re-assessed for an hour leading to sunrise.

A second survey was carried out on 23rd to 24th August 2021 and was undertaken by two surveyors. Prior to sunset, one surveyor monitored activity from a derelict cottage on the perimeter of the site at Abbey Bridge and remained here for one hour. The second surveyor observed the trees in the southern section of the site which were noted to have suitability as roost sites and all other surrounding trees.

A third survey was undertaken on 5th to 6th July, 2022 by two surveyors; one concentrating on activity in the southern section and one observing bat activity within the northern section. Each surveyor was equipped with a bat detector (one Anabat Walkabout and one Echometer Touch 2 Pro). Surveying commenced prior to sunset and continued for 1.5 hours, recommencing one hour prior to sunrise.

A final survey of the area was undertaken in September 2022 to evaluate the bat activity close to existing houses where vegetation has been retained. This was undertaken at Finlay Park at a site of 4 new houses under construction to determine if bat activity has been retained where trees have been retained. This was carried out by a single surveyor surveying from immediately prior to sunset and for one and a half hours and again surveying for one hour prior to sunrise. The survey area near the site was examined on 19th and 20th September 2022 for roosting bats and for bat activity availing of an Echometer Touch 2 Pro and Kaleidoscope Pro sound analysis software.

Visual inspection of trees within the site were also carried out in daylight on August 24th 2021 and January 10th 2022. This allowed for a determination of the potential for roosting opportunities within the trees within the land take and adjacent to it. This survey was ground-based and did not involve height access.

Survey constraints

The survey was undertaken at a highly suitable period to identify feeding and commuting bats and the activity of breeding bats. Surveying for bats in June is a very suitable time to address the usage of a site during the breeding period and the foraging pregnant or lactating females have a very high food demand to provide growth and milk for the single young. All bat species are within their breeding roost and bat activity of pregnant or lactating females is very high overall. On 24th June 2020 sunset was at 21.58 hours and sunrise on the following morning was at 05.01 hours. Conditions were highly suited to a bat survey with a pre-dawn temperature of 13 degrees Celsius, 20% cloud, dry and still. The re-survey of the site in the August was in mild conditions with the temperature dropping to a low of 11 degrees Celsius at 05.30 hours. Conditions were mild and dry with mist prior to sunrise. Sunset was at 20.36 hours and sunrise was at 06.23 hours.

In July 2022, the survey was undertaken in very suitable conditions. Sunset was at 21.55 hours while sunrise was at 05.09 hours. Temperatures were suitable for bat activity throughout the night with a temperature of 14 degrees Celsius at 04.12 hours.

Weather conditions were slightly cooler in September but with suitable temperatures to allow for bat activity at sunset and prior to sunrise. At sunset, the temperature was 16 degrees Celsius while the temperature at sunrise had dropped to 12 degrees Celsius.

Existing Environment

Bat fauna of Naas West

Roosts of bats identified within the site:

None

Species of bat feeding and commuting within the site

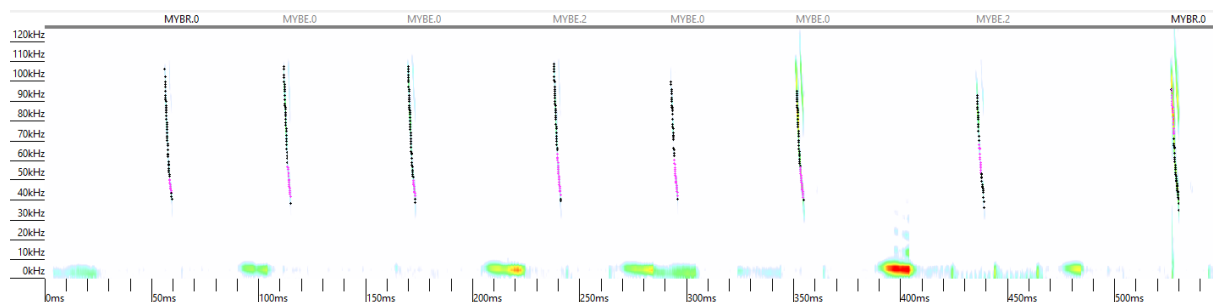
Common pipistrelle	-	<i>Pipistrellus pipistrellus</i>
Soprano pipistrelle	-	<i>Pipistrellus pygmaeus</i>
Leisler's bat	-	<i>Nyctalus leisleri</i>
Daubenton's bat		<i>Myotis daubentonii</i>
Myotis species		<i>Myotis</i> sp. probably Whiskered or Natterer's bat

The most frequently encountered bat species in the latest bat activity survey within the site was the common pipistrelle. Soprano pipistrelles were similar in activity levels but slightly less than common pipistrelles. This species has a strong association with water and wet areas and its presence would be expected. Common pipistrelles were widespread within the site and are roosting close to the site based on the late presence of the species prior to sunrise. While there were lesser signals of soprano pipistrelles at this time (prior to sunrise), the latest pipistrelle signals were of this species, and they are likely to be roosting in close proximity to the site also. Observations between 2020 and 2022 suggest the possibility for the presence of these species in the buildings adjoining the site.

In 2022, a Leisler's bat was noted heading north away from the site at 04.56 hours and in 2020, a Leisler's bat was noted heading north away from the site at 04.32 hours and these were the last bats noted in the active surveys in these two years. This species was roosting north of the site in both of these years and feeding and commuting through the site.

Daubenton's bats were noted along the Canal throughout the post-dusk survey period of the active survey but was only noted once by the static monitor away from the Canal. Thus, this species was clearly not roosting anywhere near the buildings adjoining the site.

In 2020, a *Myotis* bat was noted along the northeastern edge of the site at 23.05 to 23.06 hours. This was potentially a whiskered or Natterer's bat.



Myotis bat signal at 23.06 hours probable Whiskered or Natterer's bat, June 24th, 2020

Example of bat activity data from the active bat survey

Full summary of bat activity during July 2022 activity survey

The data from both surveyors is included

- 21.55 Leisler's south East of north field
- 22.01 Leisler's east edge of north field
- 22.09 Leisler's near join of canals
- 22.12 Leisler's near bridge
- 22.13 Leisler's western side of the field faint near stream
- 22.14 Leisler's western side of the field faint near stream
- 22.16 Leisler's along top trees on eastern perimeter
- 22.17 Leisler's along top trees on eastern perimeter
- 22.16 Common pipistrelle near cottage
- 22.17 Common pipistrelle very faint at cottage
- 22.18 Soprano pipistrelle and Leisler's bat along lane west of northern field and north of houses
- 22.19 Leisler's bat high over house
- 22.20 Leisler's flying high north on west lane and possibly back again
- 22.20 Soprano pipistrelle near cottage
- 22.23 Leisler's over bridge
- 22.23 Leisler's bat over west lane
- 22.25 Leisler's bat and soprano pipistrelle opposite end of lane
- 22.26 Leisler's bat centre of south field
- 22.27 Leisler's and brief pipistrelle call
- 22.28 Soprano pipistrelle and mostly Leisler's bat
- 22.28 Leisler's bat feeding to willow tree and back
- 22.29 Both pipistrelles near small northern bridge over stream
- 22.31 Leisler's bat and soprano pipistrelle feeding very low at bridge over stream
- 22.32 Leisler's at canal fork
- 22.35 *Myotis* (probably Daubenton's) and soprano pipistrelle at junction of canal stretches
- 22.42 *Myotis* and Leisler's bat
- 22.42 High Leisler's bat activity at northwestern edge of site near lighting as well as over pasture
- 22.44 *Myotis*, soprano pipistrelle and Leisler's bat where the sky is dark along canal
- 22.45 Soprano pipistrelle flying very low near line of poplars
- 22.46 Leisler's bat near line of poplars
- 22.47 Soprano pipistrelle near line of poplars
- 22.48 Common pipistrelle and Leisler's near dead willow
- 22.49 Common pipistrelle along trees at the canal
- 22.49 Soprano pipistrelle, common pipistrelle and Leisler's near dead willow
- 22.50 Leisler's bat throughout
- 22.51 Pipistrelles (both species) and Leisler's bats near trees at canal
- 22.53 Leisler's bat near big willow
- 22.58 Pipistrelles feeding within the field over long grass before flying east across it
- 23.01 Most activity along canal trees is soprano pipistrelle. Leisler's bats feeding in the open
- 23.06 High Leisler's bat activity in northwestern area
- 23.07 Common pipistrelle along western track of northern area
- 23.07 Common pipistrelle in south-eastern area near canal
- 23.08 Common pipistrelle in open area in northern section
- 23.09 Soprano pipistrelle and Leisler's bat in open area in northern section
- 23.12 Soprano pipistrelle and Leisler's bat in northwestern corner
- 23.13 Common pipistrelle near canal at wall

- 23.13 Soprano pipistrelle and Leisler's bat in northwestern corner
- 23.15 Common pipistrelle near bridge over canal
- 23.18 Common pipistrelle eastern edge of northern field
- 23.22 Soprano pipistrelle In front (north) of cottage
- 23.23 Pipistrelles in south-eastern corner of northern field
- 23.25 Common pipistrelle and Leisler's in front (north) of cottage
- 23.26 Common pipistrelle and Leisler's at field gates of northern field
- 23.27 Daubenton's and soprano pipistrelle under canal bridge
- 23.28 Common pipistrelle at ruined building

Prior to sunrise

- 03.57 Soprano pipistrelle at ruined building
- 03.58 Common pipistrelle on canal
- 04.02 Both pipistrelles at last house on the lane north
- 04.03 Leisler's bat at gate to northern field
- 04.04 Leisler's bat over southern field
- 04.05 Leisler's bat at gate to northern field
- 04.05 Soprano pipistrelle over canal
- 04.03 Common pipistrelle at gate to northern field
- 04.07 Common pipistrelle and Leisler's eastern area of southern field at canal
- 04.08 Common pipistrelle and Leisler's along lane past northern field
- 04.09 Soprano pipistrelle at small bridge over stream
- 04.10 Common pipistrelle at canal junction
- 04.11 Soprano then common pipistrelle at small bridge
- 04.14 Soprano pipistrelle, Common pipistrelle and Leisler's bat at small bridge
- 04.15 Soprano pipistrelle and Common pipistrelle southwestern section of site
- 04.17 Common pipistrelle and Leisler's near dead willow
- 04.22 Pipistrelles feeding and Leisler's bat flying towards houses
- 04.23 Common pipistrelle and Leisler's bat southwestern section of site
- 04.24 Three Leisler's bats at street lights in northwestern corner
- 04.31 Predominantly Leisler's bat activity at this stage in northern area
- 04.32 Three common pipistrelles at the wall at the canal
- 04.32 Soprano pipistrelle flew north off northern area of the site
- 04.34 Brief soprano pipistrelle and sustained Leisler's bat activity in northern field area
- 04.36 Common pipistrelle flying south from northern area of the site
- 04.37 Three Leisler's bats high over field
- 04.38 Common pipistrelle near end of lane in northern field
- 04.38 Common pipistrelle flew south from wall in southern section
- 04.39 Leisler's bat activity towards southern section of northern field
- 04.39 Brief Common pipistrelle at gate of northern field
- 04.41 Brief Common pipistrelle and Leisler's bat near gate of northern field
- 04.43 Lost Leisler's bat over houses near gate
- 04.48 Leisler's bat near gate
- 04.48 Leisler's bat near canal junctions
- 04.50 Leisler's bat in northern field near gate
- 04.53 Leisler's bat flying higher in southern area of northern field
- 04.56 of Leisler's bat flying north
- 04.57 Leisler's bat out of range of detector

Bat activity along trees on the edge of the Finlay Park estate recorded on an Echometer Touch 2 Pro detector identified with Kaleidoscope Pro software September 2022

DATE	TIME	AUTO ID*	PULSES	MATCHING	MANUAL ID
19/09/2022	19:44:04	Leisler's bat	37	32	Leisler's bat
19/09/2022	19:45:31	Leisler's bat	45	38	Leisler's bat
19/09/2022	19:45:41	Leisler's bat	7	6	Leisler's bat
19/09/2022	19:45:46	Leisler's bat	5	5	Leisler's bat
19/09/2022	19:54:01	soprano pipistrelle	10	10	soprano pipistrelle
19/09/2022	19:54:57	soprano pipistrelle	14	14	soprano pipistrelle
19/09/2022	19:55:13	soprano pipistrelle	36	36	soprano pipistrelle
19/09/2022	20:24:52	common pipistrelle	2	2	common pipistrelle
19/09/2022	20:25:06	common pipistrelle	72	71	common pipistrelle
19/09/2022	20:25:16	common pipistrelle	5	5	common pipistrelle
19/09/2022	20:25:35	common pipistrelle	34	34	common pipistrelle
19/09/2022	20:25:52	common pipistrelle	8	8	common pipistrelle
19/09/2022	20:26:12	common pipistrelle	12	12	common pipistrelle
19/09/2022	20:26:17	common pipistrelle	30	30	common pipistrelle
19/09/2022	20:28:10	NoID	2	0	soprano pipistrelle
19/09/2022	20:28:28	PLEAUR	6	4	soprano pipistrelle
19/09/2022	20:46:16	common pipistrelle	20	10	common pipistrelle
19/09/2022	20:49:28	NoID	4	0	soprano pipistrelle
19/09/2022	20:49:47	NoID	2	0	soprano pipistrelle
19/09/2022	20:51:20	common pipistrelle	29	28	common pipistrelle
19/09/2022	20:52:02	common pipistrelle	16	16	common pipistrelle
19/09/2022	20:54:40	common pipistrelle	5	5	common pipistrelle
19/09/2022	20:54:50	common pipistrelle	28	28	common pipistrelle
19/09/2022	20:54:59	common pipistrelle	59	59	common pipistrelle
19/09/2022	20:55:24	common pipistrelle	12	12	common pipistrelle
19/09/2022	20:56:14	common pipistrelle	22	22	common pipistrelle
19/09/2022	20:56:26	common pipistrelle	16	16	common pipistrelle
19/09/2022	20:56:40	common pipistrelle	26	26	common pipistrelle
19/09/2022	20:56:54	common pipistrelle	42	41	common pipistrelle
19/09/2022	20:57:04	common pipistrelle	29	27	common pipistrelle
19/09/2022	20:57:14	common pipistrelle	4	4	common pipistrelle
19/09/2022	20:57:27	common pipistrelle	30	30	common pipistrelle
19/09/2022	21:00:22	common pipistrelle	17	14	common pipistrelle
19/09/2022	21:00:35	common pipistrelle	62	60	common pipistrelle
19/09/2022	21:00:54	common pipistrelle	18	18	common pipistrelle
19/09/2022	21:01:08	common pipistrelle	32	32	common pipistrelle
19/09/2022	21:01:24	common pipistrelle	22	22	common pipistrelle
19/09/2022	21:04:49	common pipistrelle	39	37	common pipistrelle
19/09/2022	21:04:59	common pipistrelle	39	39	common pipistrelle
19/09/2022	21:05:10	common pipistrelle	21	21	common pipistrelle
19/09/2022	21:05:36	common pipistrelle	8	8	common pipistrelle
19/09/2022	21:05:48	common pipistrelle	37	37	common pipistrelle
19/09/2022	21:06:04	common pipistrelle	24	23	common pipistrelle
19/09/2022	21:06:19	common pipistrelle	19	18	common pipistrelle
19/09/2022	21:06:36	common pipistrelle	15	14	common pipistrelle
19/09/2022	21:06:49	common pipistrelle	27	26	common pipistrelle
19/09/2022	21:07:08	common pipistrelle	18	18	common pipistrelle
19/09/2022	21:07:24	common pipistrelle	19	18	common pipistrelle
19/09/2022	21:09:40	common pipistrelle	29	29	common pipistrelle
20/09/2022	06:32:41	common pipistrelle	5	4	common pipistrelle
20/09/2022	06:41:50	common pipistrelle	2	2	common pipistrelle
20/09/2022	06:41:56	common pipistrelle	9	9	common pipistrelle
20/09/2022	06:42:06	common pipistrelle	5	3	common pipistrelle
20/09/2022	06:49:53	NoID	2	0	Pipistrelle



Bat activity within the site at Naas West August 2021

Legend

Green paddle Common pipistrelle Blue paddle Soprano pipistrelle
 Yellow paddle Leisler's bat
 The starred paddles indicate activity prior to sunrise



Bat activity within the site at Naas West June 24th 2020

Legend

- | | | | |
|---------------|--|-------------|---------------------|
| Green paddle | Common pipistrelle | Blue paddle | Soprano pipistrelle |
| Yellow paddle | Leisler's bat | "D" | Daubenton's bat |
| "M" | <i>Myotis</i> species probable Whiskered or Natterer's bat | | |
- The starred yellow paddle indicates the last bat flying north / northeast prior to sunrise

Naas and the surrounding area have been noted to have most bat species found in Ireland to date with the exception of lesser horseshoe bat, greater horseshoe bat and Brandt's bat. No *Nathusius' pipistrelle* are noted on the Bat Conservation Ireland database but the species is known from sites such as Castletown House, Celbridge (Bat Group and *pers. obs.*).

BCIreland data: search results January 29 2022			
Search parameters: All observations of all bat species within 10000m of N8880619729.			
Roosts			
Name	Grid reference	Address	Species observed
12KECL1WC	N8796827079	Clane Tidy Towns Park;	
12KECL2WC	N8653627715	Nancy's Lane; Clane Tidy Towns;	
12KENS1T	N8939719690	Church of Our Lady and Saint David; Naas;	
Langton Park	N801105	Newbridge;	Pipistrellus spp. (45kHz/55kHz)
Blessington Rectory	N985144	Blessington;	Pipistrellus pygmaeus
Eldar Lodge	N871100	Brannockstown; Naas;	Pipistrellus pygmaeus
House Roost	N876098	Harristown House; Kilcullen;	Plecotus auritus
House; Naas Rd. Blessington	N9717214563	Greenogue;Naas Road;Blessington	Pipistrellus pipistrellus
Residence	N9814	Cragmore; Belssington;	Pipistrellus spp. (45kHz/55kHz)
Killashee House	N809109	Naas;	
Residence	N9721	Furry hill; Rathmore; Naas;	Unidentified bat
House	N802102	The Curragh;	Pipistrellus pygmaeus
Lodge	N877161	Newlands; Naas;	Unidentified bat
Liffey Bank House	N842098	Kilcullen;	Plecotus auritus
Millicent House	N883248	Sallins;	Pipistrellus spp. (45kHz/55kHz); Plecotus auritus
Newtown Great Quarry Buildings	N940153	CPI Sand and Gravel Pit; .	Unidentified bat
Northern storage shed;	N875216	Osberstown; Naas;	Pipistrellus pipistrellus ; Unidentified bat
Palmerstown House; Palmerstown Demesne; Naas;	N920226	Palmerstown House;	Pipistrellus spp. (45kHz/55kHz)
Robertstown Hotel	N792249	Robertstown;	Plecotus auritus
Robertstown Hotel Roost	N792249	Robertstown;	Plecotus auritus
Santry Hill	N9845115124	Blessington;	Pipistrellus pipistrellus
Science Building	N876297	Clongowes Wood College; Clane;	Pipistrellus pipistrellus
St Michaels and all Angels	N874258	Millicent; Clane;	Plecotus auritus
St Patrick Carnalway	N870108	Carnalway; Newbridge;	Nyctalus leisleri; Pipistrellus pygmaeus; Plecotus auritus
Stable buildings; Palmerstown Demesne; Naas;	N916226	Stable buildings; Palmerstown Demesne;	Plecotus auritus
	N974132	Blessington;	
Transects			
Name	Grid reference start	Species	
Ayimer Bridge	N9730029500	Myotis daubentonii;Nyctalus leisleri;Pipistrellus pipistrellusPipistrellus pygmaeus;Pipistrellus spp.Unidentified bat	
Ballymore Eustace Bridge	N9262009790	Myotis daubentonii;Pipistrellus pipistrellus ;Pipistrellus pygmaeus;Unidentified bat	
Connell Ford	N8135013680	Myotis daubentonii;Unidentified bat	
Henry Bridge	N9565028250	Myotis daubentonii;Unidentified bat	

Kilcullen	N8424009730	Myotis daubentonii;Unidentified bat	
Liffer Park Clane	N8790027050	Myotis daubentonii;Unidentified bat	
Liffey Linear Park Newbridge	N8070516005	Myotis daubentonii;Nyctalus leisleri;Pipistrellus pipistrellus ;Pipistrellus pygmaeus;Unidentified bat	
Limerick Bridge Transect	N8730018700	Myotis daubentonii;Unidentified bat	
New	N8704009850	Myotis daubentonii;Unidentified bat	
New Bridge Transect;	N8704009850	Myotis daubentonii;Unidentified bat	
Oberstown M7 Bridge Transect	N8862121718	Myotis daubentonii;Unidentified bat	
Ponsonby Bridge Transect	N9370026600	Myotis daubentonii;Unidentified bat	
Sallins Village Transect	N8940022800	Myotis daubentonii;Unidentified bat	
Ad-hoc observations			
Survey	Grid reference	Date	Species
Bat Survey - Scott Cawley	N888220	11/06/2008	Nyctalus leisleri; Pipistrellus pipistrellus (Pipistrellus pygmaeus
Bat Survey - Scott Cawley	N876297	30/07/2008	Myotis daubentonii; Nyctalus leisleri; Pipistrellus pygmaeus
Bat Survey - Scott Cawley	N842098	29/08/2007	Myotis daubentonii; Pipistrellus pipistrellus; Pipistrellus pygmaeus; Plecotus auritus
BATLAS 2010	N8634324123	26/07/2008	Myotis daubentonii; Nyctalus leisleri; Pipistrellus pipistrellus ; Pipistrellus pygmaeus
BATLAS 2020	N9369619699	19/07/2016	Myotis spp.; Pipistrellus pipistrellus; Pipistrellus pygmaeus
BATLAS 2020	N9306012098	20/07/2016	Myotis mystacinus; Pipistrellus pipistrellus ; Pipistrellus pygmaeus
BATLAS 2020	N8634324123	01/10/2015	
BATLAS 2020	N9211914399	20/07/2016	Pipistrellus pipistrellus
BATLAS 2020	N9361226656	03/07/2018	Myotis daubentonii; Pipistrellus pipistrellus
BATLAS 2020	N8649317415	27/08/2018	Pipistrellus pygmaeus
BATLAS 2020	N9553428178	19/07/2018	Pipistrellus pipistrellus ; Pipistrellus pygmaeus
BATLAS 2020	N9541618249	19/07/2016	Pipistrellus pipistrellus
BATLAS 2020	N7960911686	20/10/2015	
BATLAS 2020	N9714429512	19/07/2018	Myotis daubentonii; Nyctalus leisleri; Pipistrellus pipistrellus
BATLAS 2020	N9042222903	03/07/2018	
BATLAS 2020	N8211812174	27/08/2018	Pipistrellus pipistrellus; Pipistrellus pygmaeus
BATLAS 2020	N9210624785	03/07/2018	Myotis daubentonii; Pipistrellus pipistrellus ; Pipistrellus pygmaeus
BATLAS 2020	N9627115075	19/07/2016	
BATLAS 2020	N8765727499	01/10/2015	Nyctalus leisleri; Pipistrellus spp. (45kHz/55kHz)
BATLAS 2020	N9235317418	20/07/2016	Pipistrellus pygmaeus
BATLAS 2020	N8695309892	27/08/2018	Myotis daubentonii; Nyctalus leisleri; Pipistrellus pipistrellus ; Pipistrellus pygmaeus
BATLAS 2020	N9229429238	03/07/2018	Nyctalus leisleri; Pipistrellus pygmaeus
Conor Kelleher	N8800016000	19/09/2005	Myotis mystacinus/brandtii; Myotis nattereri; Nyctalus leisleri; Pipistrellus pipistrellus; Pipistrellus pygmaeus; Plecotus auritus
Conor Kelleher	N8900016000	19/09/2005	Myotis mystacinus/brandtii; Myotis nattereri; Nyctalus leisleri; Pipistrellus pipistrellus; Pipistrellus pygmaeus; Plecotus auritus
EIS surveys - Brian Keeley	N9380015500	16/11/2007	Pipistrellus spp.
EIS Surveys - Niamh Roche	N867185	02/06/2004	Pipistrellus pipistrellus
EIS Surveys - Niamh Roche	N869184	02/06/2004	Myotis spp.
EIS Surveys - Niamh Roche	N868186	02/06/2004	Nyctalus leisleri
EIS Surveys - Niamh Roche	N791248	05/10/2005	Myotis spp.; Pipistrellus pipistrellus ; Pipistrellus pygmaeus
Faith Wilson	N9122	2007-06-00	Myotis daubentonii; Myotis spp.; Nyctalus leisleri; Pipistrellus pipistrellus; Pipistrellus pygmaeus
NPWS Calls	N967121	29/04/2008	Plecotus auritus

Project Description

The proposed development will consist of the construction of 134 no. apartments (comprising a mixture of 70 no. 2 storey apartments and 64 no. apartments - 22 no. 1 bedroom apartments, 77 no. 2 bedroom apartments, and 35 no. 3 bedroom apartments) with private open space provided in the form of balconies/terraces as follows:

- A) Block A (4 storey apartment block) comprising 26 no. apartments (6 no. 1 bed units, 16 no. 2 bed units & 4 no. 3 bed units); Block B (part 4 part 5 storey apartment block) comprising 66 no. apartments (10 no. 1 bed units, 33 no. 2 bed units and 23 no. 3 bed units), with a commercial/ health/medical unit (c. 247.6 sq. m) at ground floor; Block C (part 4 part 5 storey apartment block) comprising 42 no. apartments (6 no. 1 bed, 28 no. 2 bed units and 8 no. 3 bed units);
- B) Vehicular/pedestrian and cyclist access from the Old Caragh Road (in new arrangement) along with the provision of 201 no. undercroft and surface car parking spaces as well as 388 no. undercroft and surface cycle parking spaces; internal road and shared surface networks including pedestrian and cycle paths;
- C) Public Open space including proposed plaza, as well as central communal (courtyard) open space including outdoor playground area at podium level;
- D) 1 no. temporary (for 3 no. years) 3-sided signage structure (c. 4.5m in height) at the entrance to the proposed development.
- E) Provision of foul and surface water drainage, including relocation of existing foul main in northern part of site as well as green roofs; linear greenway path, bin stores; plant rooms; public lighting and all associated landscaping and boundary treatment works, site development and infrastructural works, ESB substations, and all ancillary works necessary to facilitate the development.

Potential Impacts Upon Bats

Roost Loss

There is the potential for roost loss if any of the mature beech trees or poplar trees or willow are removed from the site. During felling, there is the risk to bats of injury or death if undertaken without proper measures to avoid bats. This would be a breach of the Wildlife Act and a potential long-term moderate negative impact upon bats.

Loss of feeding

There will be a loss of feeding for bats from the changes to the vegetation on site and potentially from increased illumination within the site. This would be a long-term moderate negative impact.

Mitigation Measures to protect bats and provide suitable habitat

1) *Timing of tree felling*

2) *Provision of bat boxes*

3) *Lighting control*

4) *Planting for insect diversity*

- 1) Trees must be felled or undergo surgery at a period when birds and bats are unlikely to be breeding or for bats, hibernating. The ideal time for felling is September to early November (or late October if weather conditions are set to be cold). If trees are to be felled at other times, intensive efforts to determine if bats and birds are present must be undertaken (e.g. fibrescope examinations from a height access e.g. MEWP).

All trees must be examined for the presence of bats prior to felling / surgery. This must be carried out by a bat specialist with appropriate experience of tree assessments. If bats are discovered, it will be necessary to acquire a licence to derogate from the Department of Housing, Local Government and Heritage through the National Parks and Wildlife Service. All work to exclude bats must be done according to the conditions of the licence and by a licensed bat specialist. (It is an offence to disturb or destroy a bat roost without written approval and under the guidance of a specialist). This may require further mitigation measures including all measures necessary to prevent injury to bats.

This would reduce the impact to a long-term slight negative impact.

- 2) It is proposed that 15 bat boxes will be attached to the mature trees within the site. The boxes proposed are 15 x 2F Schwegler woodcrete bat boxes with Double front panels or equivalent designs. These must be erected no less than 3 metres from the ground in an uncluttered area, away from lighting and not directly over a busy road.

Two boxes in each group of three should face south or southerly and the remaining one may be in any direction.

This reduces the impact to a medium to long-term slight negative impact.

3)

Lighting shall be controlled to avoid light pollution of green areas and should be targeted to areas of human activity and for priority security areas. Motion-activated sensor lighting is preferable to reduce light pollution. None of the remaining mature trees or trees proposed for planting shall be illuminated.

- Dark corridor for movement of bats along the Grand Canal. Lighting within the site shall be directed away from the treetops and waterways.
- All luminaires shall lack UV elements when manufactured and shall be LED
- A warm white spectrum (ideally <2700 Kelvin) shall be adopted to reduce blue light component
- Luminaires shall feature peak wavelengths higher than 550 nm
- Tree crowns shall remain unilluminated

The above measures have been taken into account during the development of the lighting for the site and the Grand Canal and greenway will be avoided by the proposed lighting.

This reduces the impact to a permanent slight negative impact.

4) *Planting for insect diversity*

A variety of insect supporting vegetation shall be planted within the site as well as all efforts to retain existing flora. Plants beneficial to night flying insects such as honeysuckle, *Nicotiana*, night-scented stock shall be sown. There is also the All-Ireland Pollinator Plan from which plants could be selected and an area pledged for pollinators (see <https://pollinators.ie/gardens/>). The following is a list of native and exotic plants beneficial to insects.

Allowing grass to grow long and cutting less frequently increases the suitability of such areas for greater insect abundance and benefits bats.

This will reduce the impact to a medium-term slight negative impact.

Native and non-native plants to attract and sustain insects and attract bat activity

(courtesy of the Royal Horticultural Society)

SPRING MAR - MAY		
<i>Acer campestre</i>	S	native plant - field maple
<i>Acer platanoides</i>	T	Norway maple
<i>Acer pseudoplatanus</i>	T	sycamore
<i>Acer saccharum</i>	T	sugar maple
<i>Aubrieta deltoidea</i>	H	aubrieta
<i>Aurinia saxatilis</i>	H	alyssum
<i>Caltha palustris</i>	H	native plant - marsh marigold
<i>Chaenomeles japonica</i>	S	Japanese quince
<i>Chaenomeles speciosa</i>	S	Japanese quince
<i>Chaenomeles x superba</i>	S	Japanese quince
<i>Cheiranthus cheiri</i>	Bi	wallflower
<i>Corylus avellana</i>	S	native plant - hazel
<i>Crataegus monogyna</i>	S	native plant - hawthorn
<i>Erica carnea</i>	S	heather
<i>Erica x darleyensis</i>	S	heather
<i>Euphorbia characias</i>	S	spurge
<i>Euphorbia polychroma</i>	H	spurge
<i>Hebe spp & cultivars</i>	S	hebe
<i>Iberis saxatilis</i>	H	perennial candytuft
<i>Iberis sempervirens</i>	S	perennial candytuft
<i>Lunaria annua</i>	Bi	honesty
<i>Malus baccata</i>	T	crab apple
<i>Malus domestica</i>	T	edible apples
<i>Malus floribunda</i>	T	crab apple
<i>Malus hupehensis</i>	T	crab apple
<i>Malus 'John Downie'</i>	T	crab apple
<i>Malus sargentii</i>	S	crab apple
<i>Mespilus germanica</i>	T	medlar
<i>Primula vulgaris</i>	H	native plant - primrose
<i>Prunus avium</i>	T	native plant - wild and edible cherries
<i>Prunus domestica</i>	T	edible plum
<i>Prunus incisa</i>	S	ornamental cherry
<i>Prunus laurocerasus</i>	S	cherry laurel
<i>Prunus mume</i>	T	ornamental cherry
<i>Prunus padus</i>	T	native plant - bird cherry
<i>Prunus spinosa</i>	S	native plant.- blackthorn/sloe
<i>Prunus tenella</i>	S	ornamental cherry
<i>Prunus x yedoensis</i>	T	ornamental cherry
<i>Pulmonaria angustifolia</i>	H	lungwort
<i>Pulmonaria saccharata</i>	H	lungwort
<i>Pyrus communis</i>	T	pear
<i>Ribes sanguineum</i>	S	flowering currant
<i>Romarinus officinalis</i>	S	rosemary
<i>Salix caprea</i>	S	male form, not female. Native plant.- goat/pussy willow
<i>Salix hastata 'Wehrhahnii'</i>	S	willow
<i>Salix lanata</i>	S	willow
<i>Silene dioica</i>	A	native plant - red campion
<i>Smyrniolus olusatrum</i>	A	alexanders
<i>Taraxacum officinale</i>	H	native plant - dandelion

SUMMER JUNE - AUGUST		
<i>Achillea filipendulina</i>	H	
<i>Actaea japonica</i>	H	bugbane
<i>Agastache foeniculum</i>	H	
<i>Ageratum houstonianum</i>	A	ageratum
<i>Alcea rosea</i>	Bi	hollyhock - single flowered forms
<i>Allium aflatunense</i>	B	ornamental onion
<i>Allium christophii</i>	B	ornamental onion
<i>Allium giganteum</i>	B	ornamental onion
<i>Allium nutans</i>	B	ornamental onion
<i>Amberoa moschata</i>	A	sweet sultan
<i>Angelica archangelica</i>	Bi	angelica
<i>Angelica gigas</i>	Bi	giant angelica
<i>Angelica sylvestris</i>	Bi	native plant - wild angelica
<i>Anthemis tinctoria</i>	H	
<i>Aruncus dioicus</i>	H	goatsbeard
<i>Asparagus officinalis</i>	H	vegetable asparagus
<i>Astrantia major</i>	H	astrantia
<i>Borago officinalis</i>	A	borage
<i>Buddleja davidii</i>	S	butterfly bush
<i>Buddleja globosa</i>	S	golden ball buddleia
<i>Calamintha nepeta ssp nepeta</i>	H	catmint
<i>Calendula officinalis</i>	A	English marigold - single flower types
<i>Callistephus chinensis</i>	A	China aster - single flower types
<i>Calluna vulgaris cultivars</i>	S	native plant - ling heather
<i>Caryopteris x clandonensis</i>	S	
<i>Centaurea atropurpurea</i>	H	
<i>Centaurea cyanus</i>	A	native plant - cornflower
<i>Centaurea dealbata</i>	H	
<i>Centaurea macrocephala</i>	H	giant cornflower
<i>Centaurea montana</i>	H	
<i>Centaurea nigra</i>	H	native plant - hard head knapweed
<i>Centaurea scabiosa</i>	H	native plant - great knapweed
<i>Centranthus ruber</i>	H	red valerian
<i>Cheiranthus allioni</i>	Bi	Siberian wallflower
<i>Chrysanthemum x superbum</i>	H	shasta daisy - open centred forms
<i>Coreopsis lanceolata</i>	H	
<i>Coreopsis tinctoria</i>	A	
<i>Coreopsis verticillata</i>	H	
<i>Cosmos bipinnatus</i>	A	cosmos/Mexican aster
<i>Cotoneaster horizontalis</i>	S	
<i>Cotoneaster microphyllus</i>	S	
<i>Crataegus monogyna</i>	S	native plant - hawthorn
<i>Cynara cardunculus</i>	H	cardoon
<i>Dahlia</i>	H	dahlia - open centred forms such as 'Amazone', 'Moonfire'
<i>Dianthus barbatus</i>	Bi	sweet William
<i>Echinacea purpurea</i>	H	coneflower
<i>Echinops bannaticus</i>	H	globe thistle
<i>Echinops ritro</i>	H	globe thistle
<i>Echinops setifer</i>	H	globe thistle
<i>Erica cinerea</i>	S	heather
<i>Erica erigena</i>	S	tree heather
<i>Erica vagans</i>	S	heather
<i>Erigeron spp and hybrids</i>	H	fleabane
<i>Eryngium alpina</i>	H	sea holly
<i>Eryngium giganteum</i>	Bi	sea holly

Eryngium planum	H	sea holly
Eryngium x tripartitum	H	sea holly
Eupatorium cannabinum	H	native plant - hemp agrimony
Eupatorium maculatum	H	
Ferula communis	H	giant fennel
Foeniculum vulgare	H	fennel
Gaillardia x grandiflora	H	blanket flower
Geranium pratense	H	native plant - meadow cranesbill
Hebe spp. and cultivars	S	hebe
Helenium cultivars	H	
Helianthus annua	A	sunflower - single flower forms, avoid pollen-free cultivars
Heliotropium arborescens	A	heliotrope/cherry pie
Heracleum sphondylium	H	native plant - hogweed
Hesperis matronalis	H	dame's violet
Hydrangea anomala ssp petiolaris	C	climbing hydrangea
Hyssopus officinalis	S	hyssop
Iberis amara	A	annual candytuft
Inula ensifolia	H	
Inula hookeri	H	
Inula magnifica	H	
Jasminum officinale	C	common jasmine
Kalmia latifolia	S	
Knautia arvensis	H	native plant - field scabious
Knautia macedonica	H	
Lavandula hybrids and cultivars	S	lavender
Lavatera olbia	S	shrubby mallow
Lavatera trimestris	A	annual mallow
Leucanthemum vulgare	H	native plant - ox-eye daisy
Ligustrum ovalifolium	S	privet
Limnanthes douglasii	A	poached egg plant
Linaria purpurea	H	purple toadflax
Lobularia maritima	A	alyssum
Lonicera periclymenum	C	common honeysuckle
Lysimachia vulgaris	H	native plant - yellow loosestrife
Lychnis coronaria	Bi	
Lythrum salicaria	H	native plant - purple loosestrife
Lythrum virgatum 'Dropmore Purple	H	
Malva moschata	H	native plant - musk mallow
Matthiola incana	Bi	Brompton stock
Matthiola longipetala	A	night-scented stock
Mentha aquatica	H	native plant - water mint
Mentha spicata	H	Garden mint
Monarda didyma	H	bee balm
Myosotis spp	A	forget-me-not
Nepeta x faassenii	H	catmint
Nicotiana glauca	A	ornamental tobacco
Oenothera biennis	Bi	evening primrose
Onopordum acanthium	Bi	giant thistle
Origanum vulgare	H	native plant - marjoram
Papaver rhoeas	A	native plant - field poppy
Phacelia tanacetifolia	A	
Pyracantha coccinea	S	firethorn
Reseda odorata	A	mignonette
Rosa canina	S	native plant - dog rose
Rosa rubiginosa	S	native plant - sweet briar rose
Rosa rugosa	S	

Rosmarinus officinalis	S	rosemary
Rubus fruticosus	S	native plant and edible blackberry
Rubus idaeus	S	raspberry
Rudbeckia fulgida	H	
Rudbeckia hirta	A	
Rudbeckia laciniata	H	Open centred forms
Scabiosa caucasica	H	scabious
Sedum spectabile	H	ice-plant
Sedum telephium	H	
Sidalcea malviflora	H	
Solidago spp and cultivars	H	golden rod
Sorbus aria	T	native plant - whitebeam
Sorbus aucuparia	T	native plant - mountain ash/rowan
Tagetes patula	A	French marigold
Tanacetum vulgare	H	native plant - tansy
Telekia speciosa	H	
Thymus spp	S	thyme
Verbascum olympicum	Bi	
Verbascum thapsus	Bi	native plant - common mullein
Verbena bonariensis	H	
Verbena rigida	A	
Verbena x hybrida	A	
Veronica longiflora	H	
Veronicastrum virginicum	H	
Viburnum lantana	S	native plant - wayfaring tree
Viburnum opulus	S	native plant - guelder rose
Zinnia elegans	A	zinnia

AUTUMN SEPT - OCTOBER		
Aconitum carmichaeli	H	
Actaea simplex	H	bugbane
Aster amellus	H	michaelmas daisy
Aster koraiensis	H	
Aster lactiflorus	H	
Aster novae-angliae	H	michaelmas daisy
Aster novae-belgii	H	michaelmas daisy
Aster oolentangiensis	H	
Aster turbinellus	H	
Aster x frikartii 'Mönch'	H	
Dahlia cultivars	H	single flower forms
Fatsia japonica	S	
Hedera colchica	C	
Hedera helix	C	native plant - ivy
Hedera helix 'Arborescens'	C	
Helianthus x lactiflorus	H	
Leucanthemella serotina	H	
Salvia 'Mystic Spires Blue'	H	

▪ **The following are suggested by Bat Conservation Trust**

- Wallflowers
- Sweet William
- Evening Primrose
- Honesty
- Sea Holly
- Michaelmas Daisy
- Cornflower
- Fennel
- Dog Rose
- Honeysuckle
- Buddleia
- Lavender

Impacts of the Proposal following Mitigation

There will be no appreciable impact on the local bat fauna following the implementation of all mitigation measures proposed. There will be no long-term loss to the conservation status of the bat species present. There will be a long-term to permanent slight negative impact from the introduction of housing and lighting while the waterways will provide access for bats and feeding once lighting can be controlled close to the Canal.

Appendices – Plates of site survey January 10th 2022



Wall and trees examined for bats

Summaries of bat activity recorded by handheld and static monitors

Bat activity after sunset within the site

Date	Time	Auto Id*	Pulses	Manual Id
24/06/2020	23:35:32	Daubenton's Bat	21	Daubenton's Bat
24/06/2020	23:31:06	Daubenton's Bat	17	Daubenton's Bat
24/06/2020	23:33:52	Daubenton's Bat	14	Daubenton's Bat
24/06/2020	23:23:03	Daubenton's Bat	16	Daubenton's Bat
24/06/2020	23:27:30	Daubenton's Bat	9	Daubenton's Bat
24/06/2020	23:35:07	Daubenton's Bat	7	Daubenton's Bat
24/06/2020	23:35:12	Daubenton's Bat	5	Daubenton's Bat
24/06/2020	23:33:07	Daubenton's Bat	4	Daubenton's Bat
24/06/2020	23:34:07	Daubenton's Bat	4	Daubenton's Bat
24/06/2020	23:05:58	Whiskered Bat	21	Whiskered Bat
24/06/2020	22:45:17	Leisler's Bat	51	Leisler's Bat
24/06/2020	22:44:57	Leisler's Bat	46	Leisler's Bat
24/06/2020	22:43:57	Leisler's Bat	24	Leisler's Bat
24/06/2020	22:45:32	Leisler's Bat	17	Leisler's Bat
24/06/2020	22:45:12	Leisler's Bat	24	Common Pipistrelle Leisler's Bat
24/06/2020	22:44:52	Leisler's Bat	11	Leisler's Bat
24/06/2020	23:19:48	Leisler's Bat	8	Leisler's Bat
24/06/2020	23:14:01	Leisler's Bat	3	Leisler's Bat
24/06/2020	23:40:14	Leisler's Bat	3	Leisler's Bat
24/06/2020	22:18:10	Noid	13	Common Pipistrelle
24/06/2020	22:42:37	Noid	4	Leisler's Bat
24/06/2020	22:43:12	Noid	40	Common Pipistrelle Soprano
24/06/2020	22:43:32	Noid	8	Pipistrelle
24/06/2020	22:45:37	Noid	2	Leisler's Bat
24/06/2020	22:46:33	Noid	2	Soprano Pipistrelle
24/06/2020	22:46:53	Noid	3	Common Pipistrelle
24/06/2020	22:48:58	Noid	27	Common Pipistrelle Soprano
24/06/2020	22:55:20	Noid	36	Common Pipistrelle Leisler's Bat
24/06/2020	22:59:41	Noid	2	Pipistrelle
24/06/2020	22:59:36	Noid	12	Common Pipistrelle
24/06/2020	23:05:43	Noid	21	Whiskered Bat
24/06/2020	23:29:10	Noid	51	Common Pipistrelle
24/06/2020	23:28:45	Noid	55	Common Pipistrelle
24/06/2020	23:41:49	Noid	2	Soprano Pipistrelle
24/06/2020	23:50:52	Noid	15	Common Pipistrelle
24/06/2020	23:51:17	Noid	6	Common Pipistrelle Soprano
24/06/2020	23:52:33	Noid	41	Common Pipistrelle Soprano
24/06/2020	23:53:58	Noid	48	Common Pipistrelle Soprano
24/06/2020	22:14:24	Pipnat	4	Common Pipistrelle
24/06/2020	23:44:50	Pipnat	4	Common Pipistrelle
24/06/2020	23:36:48	Pipnat	6	Common Pipistrelle
24/06/2020	23:28:50	Common Pipistrelle	291	Common Pipistrelle
24/06/2020	23:28:30	Common Pipistrelle	168	Common Pipistrelle Soprano
24/06/2020	23:29:31	Common Pipistrelle	101	Common Pipistrelle Daubenton's Bat
24/06/2020	23:36:53	Common Pipistrelle	104	Common Pipistrelle
24/06/2020	23:29:51	Common Pipistrelle	62	Common Pipistrelle
24/06/2020	23:29:46	Common Pipistrelle	67	Common Pipistrelle
24/06/2020	23:29:05	Common Pipistrelle	73	Common Pipistrelle
24/06/2020	23:52:18	Common Pipistrelle	102	Common Pipistrelle
24/06/2020	23:50:17	Common Pipistrelle	61	Common Pipistrelle
24/06/2020	23:35:53	Common Pipistrelle	53	Common Pipistrelle
24/06/2020	22:50:59	Common Pipistrelle	45	Common Pipistrelle
24/06/2020	23:33:12	Common Pipistrelle	52	Common Pipistrelle Daubenton's Bat
24/06/2020	23:33:32	Common Pipistrelle	53	Common Pipistrelle Daubenton's Bat
24/06/2020	23:16:47	Common Pipistrelle	41	Common Pipistrelle Leisler's Bat
24/06/2020	23:03:17	Common Pipistrelle	38	Common Pipistrelle
24/06/2020	23:30:06	Common Pipistrelle	34	Common Pipistrelle

24/06/2020	22:51:19	Common Pipistrelle	34	Common Pipistrelle
24/06/2020	23:30:11	Common Pipistrelle	29	Common Pipistrelle
24/06/2020	23:30:31	Common Pipistrelle	55	Common Pipistrelle
24/06/2020	22:37:15	Common Pipistrelle	27	Common Pipistrelle
24/06/2020	22:47:38	Common Pipistrelle	28	Common Pipistrelle
24/06/2020	23:52:58	Common Pipistrelle	51	Common Pipistrelle
24/06/2020	22:37:50	Common Pipistrelle	30	Common Pipistrelle
24/06/2020	23:32:52	Common Pipistrelle	24	Common Pipistrelle
24/06/2020	23:26:09	Common Pipistrelle	35	Common Pipistrelle
24/06/2020	23:34:12	Common Pipistrelle	23	Common Pipistrelle
24/06/2020	23:48:37	Common Pipistrelle	24	Common Pipistrelle
24/06/2020	23:36:33	Common Pipistrelle	25	Common Pipistrelle
24/06/2020	22:45:58	Common Pipistrelle	21	Common Pipistrelle
24/06/2020	23:48:31	Common Pipistrelle	20	Common Pipistrelle
24/06/2020	23:31:31	Common Pipistrelle	18	Common Pipistrelle
24/06/2020	23:29:25	Common Pipistrelle	17	Common Pipistrelle
24/06/2020	22:49:39	Common Pipistrelle	25	Common Pipistrelle
24/06/2020	23:27:10	Common Pipistrelle	36	Common Pipistrelle
24/06/2020	23:04:03	Common Pipistrelle	22	Common Pipistrelle
24/06/2020	22:36:55	Common Pipistrelle	14	Common Pipistrelle
24/06/2020	22:26:52	Common Pipistrelle	20	Common Pipistrelle
24/06/2020	22:22:31	Common Pipistrelle	13	Common Pipistrelle
24/06/2020	23:51:12	Common Pipistrelle	19	Common Pipistrelle
24/06/2020	22:29:13	Common Pipistrelle	11	Common Pipistrelle
24/06/2020	22:46:38	Common Pipistrelle	15	Common Pipistrelle
24/06/2020	23:30:51	Common Pipistrelle	19	Common Pipistrelle
24/06/2020	23:26:50	Common Pipistrelle	24	Common Pipistrelle
24/06/2020	22:50:54	Common Pipistrelle	10	Common Pipistrelle
24/06/2020	23:48:16	Common Pipistrelle	10	Common Pipistrelle
24/06/2020	22:48:33	Common Pipistrelle	9	Common Pipistrelle
24/06/2020	23:03:23	Common Pipistrelle	5	Common Pipistrelle
24/06/2020	23:25:04	Common Pipistrelle	5	Common Pipistrelle
24/06/2020	23:31:26	Common Pipistrelle	3	Common Pipistrelle
24/06/2020	22:19:10	Common Pipistrelle	2	Common Pipistrelle
24/06/2020	22:42:52	Common Pipistrelle	3	Common Pipistrelle
24/06/2020	23:28:10	Soprano Pipistrelle	116	Soprano Pipistrelle
24/06/2020	22:43:17	Soprano Pipistrelle	124	Soprano Pipistrelle
24/06/2020	22:42:57	Soprano Pipistrelle	88	Soprano Pipistrelle
24/06/2020	22:51:39	Soprano Pipistrelle	63	Soprano Pipistrelle
24/06/2020	23:51:38	Soprano Pipistrelle	93	Soprano Pipistrelle
24/06/2020	23:53:18	Soprano Pipistrelle	78	Soprano Pipistrelle
24/06/2020	23:53:53	Soprano Pipistrelle	67	Soprano Pipistrelle
24/06/2020	23:25:29	Soprano Pipistrelle	47	Soprano Pipistrelle
24/06/2020	23:53:33	Soprano Pipistrelle	44	Soprano Pipistrelle
24/06/2020	23:52:13	Soprano Pipistrelle	65	Soprano Pipistrelle
24/06/2020	23:51:58	Soprano Pipistrelle	65	Soprano Pipistrelle
24/06/2020	23:41:14	Soprano Pipistrelle	37	Soprano Pipistrelle
24/06/2020	23:27:25	Soprano Pipistrelle	49	Soprano Pipistrelle
24/06/2020	23:53:38	Soprano Pipistrelle	35	Soprano Pipistrelle
24/06/2020	22:51:54	Soprano Pipistrelle	33	Soprano Pipistrelle
24/06/2020	23:41:54	Soprano Pipistrelle	35	Soprano Pipistrelle
24/06/2020	22:38:50	Soprano Pipistrelle	33	Soprano Pipistrelle
24/06/2020	22:51:59	Soprano Pipistrelle	32	Soprano Pipistrelle
24/06/2020	23:25:44	Soprano Pipistrelle	30	Soprano Pipistrelle
24/06/2020	23:42:09	Soprano Pipistrelle	30	Soprano Pipistrelle
24/06/2020	23:28:05	Soprano Pipistrelle	32	Soprano Pipistrelle
24/06/2020	23:52:38	Soprano Pipistrelle	51	Soprano Pipistrelle
24/06/2020	23:26:04	Soprano Pipistrelle	34	Soprano Pipistrelle
24/06/2020	23:25:49	Soprano Pipistrelle	49	Soprano Pipistrelle
24/06/2020	22:49:13	Soprano Pipistrelle	24	Soprano Pipistrelle
24/06/2020	23:51:53	Soprano Pipistrelle	27	Soprano Pipistrelle

24/06/2020	23:49:57	Soprano Pipistrelle	23	Soprano Pipistrelle
24/06/2020	23:41:29	Soprano Pipistrelle	20	Soprano Pipistrelle
24/06/2020	23:25:09	Soprano Pipistrelle	30	Soprano Pipistrelle
24/06/2020	22:49:18	Soprano Pipistrelle	19	Soprano Pipistrelle
24/06/2020	23:41:34	Soprano Pipistrelle	19	Soprano Pipistrelle
24/06/2020	22:38:10	Soprano Pipistrelle	17	Soprano Pipistrelle
24/06/2020	23:26:24	Soprano Pipistrelle	26	Soprano Pipistrelle
24/06/2020	23:51:32	Soprano Pipistrelle	28	Soprano Pipistrelle
24/06/2020	23:26:30	Soprano Pipistrelle	14	Soprano Pipistrelle
24/06/2020	23:49:52	Soprano Pipistrelle	23	Soprano Pipistrelle
24/06/2020	23:30:46	Soprano Pipistrelle	12	Soprano Pipistrelle
24/06/2020	23:45:16	Soprano Pipistrelle	12	Soprano Pipistrelle
24/06/2020	23:28:25	Soprano Pipistrelle	16	Soprano Pipistrelle
24/06/2020	23:44:55	Soprano Pipistrelle	14	Soprano Pipistrelle
24/06/2020	23:27:50	Soprano Pipistrelle	15	Soprano Pipistrelle
24/06/2020	22:38:15	Soprano Pipistrelle	9	Soprano Pipistrelle
24/06/2020	23:42:15	Soprano Pipistrelle	9	Soprano Pipistrelle
24/06/2020	23:50:37	Soprano Pipistrelle	18	Soprano Pipistrelle
24/06/2020	22:26:32	Soprano Pipistrelle	8	Soprano Pipistrelle
24/06/2020	23:08:03	Soprano Pipistrelle	7	Soprano Pipistrelle
24/06/2020	22:17:30	Soprano Pipistrelle	6	Soprano Pipistrelle
24/06/2020	22:38:30	Soprano Pipistrelle	6	Soprano Pipistrelle
24/06/2020	23:49:32	Soprano Pipistrelle	6	Soprano Pipistrelle
24/06/2020	23:49:37	Soprano Pipistrelle	5	Soprano Pipistrelle
24/06/2020	22:18:50	Soprano Pipistrelle	3	Soprano Pipistrelle
24/06/2020	23:45:31	Soprano Pipistrelle	4	Soprano Pipistrelle
24/06/2020	23:54:13	Soprano Pipistrelle	4	Soprano Pipistrelle
24/06/2020	22:51:34	Soprano Pipistrelle	2	Soprano Pipistrelle
24/06/2020	23:08:18	Soprano Pipistrelle	2	Soprano Pipistrelle
24/06/2020	23:52:53	Soprano Pipistrelle	2	Soprano Pipistrelle

Bat signals recorded through the night by the static monitor

Date	Time	Auto Id	Pulses	Manual Id
24/06/2020	22:23:03	Common pipistrelle	12	Common pipistrelle
24/06/2020	22:29:18	Common pipistrelle	18	Common pipistrelle
24/06/2020	22:30:34	Common pipistrelle	27	Common pipistrelle
24/06/2020	22:31:23	Common pipistrelle	25	Common pipistrelle
24/06/2020	22:33:04	Common pipistrelle	46	Common pipistrelle
24/06/2020	22:33:09	Common pipistrelle	45	Common pipistrelle
24/06/2020	22:33:14	Soprano pipistrelle	14	Soprano pipistrelle
24/06/2020	22:33:34	Common pipistrelle	36	Common pipistrelle
24/06/2020	22:33:39	Common pipistrelle	14	Common pipistrelle
24/06/2020	22:33:52	Common pipistrelle	51	Common pipistrelle
24/06/2020	22:33:57	Common pipistrelle	50	Common pipistrelle
24/06/2020	22:34:02	Common pipistrelle	49	Common pipistrelle
24/06/2020	22:34:07	Common pipistrelle	41	Common pipistrelle
24/06/2020	22:34:32	Common pipistrelle	28	Common pipistrelle
24/06/2020	22:34:41	Common pipistrelle	40	Common pipistrelle
24/06/2020	22:34:46	Common pipistrelle	49	Common pipistrelle
24/06/2020	22:34:51	Common pipistrelle	24	Common pipistrelle
24/06/2020	22:35:19	Leisler's Bat	7	Leisler's Bat
24/06/2020	22:35:35	Common pipistrelle	3	Common pipistrelle
24/06/2020	22:35:39	Common pipistrelle	29	Common pipistrelle
24/06/2020	22:35:44	Common pipistrelle	8	Common pipistrelle
24/06/2020	22:35:48	Common pipistrelle	41	Common pipistrelle
24/06/2020	22:35:53	Common pipistrelle	32	Common pipistrelle
24/06/2020	22:36:51	Common pipistrelle	49	Common pipistrelle
24/06/2020	22:36:56	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:37:01	Common pipistrelle	59	Common pipistrelle
24/06/2020	22:37:06	Common pipistrelle	43	Common pipistrelle
24/06/2020	22:37:11	Common pipistrelle	49	Common pipistrelle
24/06/2020	22:37:16	Common pipistrelle	50	Common pipistrelle
24/06/2020	22:37:22	Common pipistrelle	59	Common pipistrelle
24/06/2020	22:37:27	Common pipistrelle	42	Common pipistrelle
24/06/2020	22:37:32	Common pipistrelle	24	Common pipistrelle
24/06/2020	22:37:37	Common pipistrelle	12	Common pipistrelle
24/06/2020	22:37:46	Common pipistrelle	28	Common pipistrelle
24/06/2020	22:37:51	Common pipistrelle	36	Common pipistrelle
24/06/2020	22:38:04	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:38:09	Soprano pipistrelle	29	Soprano pipistrelle
24/06/2020	22:38:14	Leisler's Bat	4	Leisler's Bat
24/06/2020	22:38:23	Common pipistrelle	40	Common pipistrelle
24/06/2020	22:38:28	Common pipistrelle	24	Common pipistrelle
24/06/2020	22:38:33	Common pipistrelle	45	Common pipistrelle
24/06/2020	22:38:39	Common pipistrelle	56	Common pipistrelle
24/06/2020	22:38:44	Soprano pipistrelle	60	Soprano pipistrelle
24/06/2020	22:38:49	Soprano pipistrelle	41	Soprano pipistrelle
24/06/2020	22:38:54	Common pipistrelle	58	Common pipistrelle
24/06/2020	22:38:59	Common pipistrelle	27	Common pipistrelle
24/06/2020	22:39:04	Common pipistrelle	2	Common pipistrelle
24/06/2020	22:39:18	Common pipistrelle	31	Common pipistrelle
24/06/2020	22:39:25	Common pipistrelle	48	Common pipistrelle
24/06/2020	22:39:30	Common pipistrelle	61	Common pipistrelle
24/06/2020	22:39:35	Common pipistrelle	51	Common pipistrelle
24/06/2020	22:39:40	Common pipistrelle	25	Common pipistrelle
24/06/2020	22:39:45	Common pipistrelle	41	Common pipistrelle
24/06/2020	22:39:50	Common pipistrelle	39	Common pipistrelle
24/06/2020	22:39:55	Common pipistrelle	47	Common pipistrelle
24/06/2020	22:40:00	Common pipistrelle	46	Common pipistrelle
24/06/2020	22:40:05	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:40:10	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:40:15	Common pipistrelle	37	Common pipistrelle

24/06/2020	22:45:32	Common pipistrelle	45	Common pipistrelle
24/06/2020	22:45:37	Common pipistrelle	40	Common pipistrelle
24/06/2020	22:45:42	Common pipistrelle	48	Common pipistrelle
24/06/2020	22:45:47	Common pipistrelle	41	Common pipistrelle
24/06/2020	22:45:52	Common pipistrelle	51	Common pipistrelle
24/06/2020	22:45:57	Common pipistrelle	35	Common pipistrelle
24/06/2020	22:46:03	Common pipistrelle	49	Common pipistrelle
24/06/2020	22:46:08	Common pipistrelle	43	Common pipistrelle
24/06/2020	22:46:13	Leisler's Bat	13	Leisler's Bat
24/06/2020	22:46:19	Common pipistrelle	38	Common pipistrelle
24/06/2020	22:46:24	Common pipistrelle	51	Common pipistrelle
24/06/2020	22:46:29	Common pipistrelle	46	Common pipistrelle
24/06/2020	22:46:34	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:46:39	Common pipistrelle	36	Common pipistrelle
24/06/2020	22:46:44	Common pipistrelle	38	Common pipistrelle
24/06/2020	22:46:50	Common pipistrelle	43	Common pipistrelle
24/06/2020	22:46:55	Common pipistrelle	46	Common pipistrelle
24/06/2020	22:47:00	Common pipistrelle	40	Common pipistrelle
24/06/2020	22:47:05	Common pipistrelle	41	Common pipistrelle
24/06/2020	22:47:10	Common pipistrelle	45	Common pipistrelle
24/06/2020	22:47:15	Common pipistrelle	51	Common pipistrelle
24/06/2020	22:47:20	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:47:25	Common pipistrelle	40	Common pipistrelle
24/06/2020	22:47:30	Common pipistrelle	46	Common pipistrelle
24/06/2020	22:47:35	Common pipistrelle	42	Common pipistrelle
24/06/2020	22:47:40	Common pipistrelle	42	Common pipistrelle
24/06/2020	22:47:45	Common pipistrelle	52	Common pipistrelle
24/06/2020	22:47:56	Leisler's Bat	8	Leisler's Bat
24/06/2020	22:48:04	Common pipistrelle	43	Common pipistrelle
24/06/2020	22:48:09	Common pipistrelle	29	Common pipistrelle
24/06/2020	22:48:14	Common pipistrelle	43	Common pipistrelle
24/06/2020	22:48:26	Common pipistrelle	31	Common pipistrelle
24/06/2020	22:48:31	Common pipistrelle	50	Common pipistrelle
24/06/2020	22:48:36	Common pipistrelle	27	Common pipistrelle
24/06/2020	22:48:42	Common pipistrelle	48	Common pipistrelle
24/06/2020	22:48:47	Common pipistrelle	43	Common pipistrelle
24/06/2020	22:48:52	Common pipistrelle	47	Common pipistrelle
24/06/2020	22:48:57	Common pipistrelle	41	Common pipistrelle
24/06/2020	22:49:07	Leisler's Bat	9	Leisler's Bat
24/06/2020	22:49:17	Leisler's Bat	3	Leisler's Bat
24/06/2020	22:49:32	Leisler's Bat	6	Leisler's Bat
24/06/2020	22:49:37	Common pipistrelle	25	Common pipistrelle
24/06/2020	22:49:42	Common pipistrelle	9	Common pipistrelle
24/06/2020	22:49:49	Leisler's Bat	20	Leisler's Bat
24/06/2020	22:49:54	Common pipistrelle	36	Common pipistrelle
24/06/2020	22:49:59	Common pipistrelle	30	Common pipistrelle
24/06/2020	22:50:05	Common pipistrelle	16	Common pipistrelle
24/06/2020	22:50:11	Common pipistrelle	51	Common pipistrelle
24/06/2020	22:50:16	Common pipistrelle	42	Common pipistrelle
24/06/2020	22:50:21	Common pipistrelle	31	Common pipistrelle
24/06/2020	22:51:38	Common pipistrelle	26	Common pipistrelle
24/06/2020	22:51:43	Common pipistrelle	44	Common pipistrelle
24/06/2020	22:51:48	Common pipistrelle	16	Common pipistrelle
24/06/2020	22:53:00	Common pipistrelle	22	Common pipistrelle
24/06/2020	22:54:03	Noid	25	Noid
24/06/2020	23:02:14	Common pipistrelle	19	Common pipistrelle
24/06/2020	23:03:51	Soprano pipistrelle	42	Soprano pipistrelle
24/06/2020	23:08:05	Noid	28	Noid
24/06/2020	23:12:42	Soprano pipistrelle	33	Soprano pipistrelle
24/06/2020	23:12:47	Soprano pipistrelle	8	Soprano pipistrelle
24/06/2020	23:13:18	Leisler's Bat	6	Leisler's Bat

24/06/2020	23:14:39	Leisler's Bat	4	Leisler's Bat
24/06/2020	23:14:53	Leisler's Bat	4	Leisler's Bat
24/06/2020	23:14:58	Leisler's Bat	5	Leisler's Bat
24/06/2020	23:15:22	Plaur	4	
24/06/2020	23:16:58	Common pipistrelle	33	Common pipistrelle
24/06/2020	23:17:25	Daubenton's bat	24	Daubenton's bat
24/06/2020	23:18:55	Leisler's Bat	14	Leisler's Bat
24/06/2020	23:19:00	Leisler's Bat	8	Leisler's Bat
24/06/2020	23:19:33	Common pipistrelle	42	Common pipistrelle
24/06/2020	23:19:42	Leisler's Bat	4	Leisler's Bat
24/06/2020	23:19:47	Leisler's Bat	21	Leisler's Bat
24/06/2020	23:19:52	Leisler's Bat	14	Leisler's Bat
24/06/2020	23:19:57	Leisler's Bat	13	Leisler's Bat
24/06/2020	23:20:02	Leisler's Bat	6	Leisler's Bat
24/06/2020	23:20:07	Leisler's Bat	5	Leisler's Bat
24/06/2020	23:22:48	Daubenton's bat	23	Daubenton's bat
24/06/2020	23:26:07	Daubenton's bat	25	Daubenton's bat
24/06/2020	23:37:22	Leisler's Bat	4	Leisler's Bat
24/06/2020	23:40:08	Leisler's Bat	8	Leisler's Bat
24/06/2020	23:40:13	Leisler's Bat	8	Leisler's Bat
24/06/2020	23:41:07	Soprano pipistrelle	28	Soprano pipistrelle
24/06/2020	23:41:12	Soprano pipistrelle	20	Soprano pipistrelle
24/06/2020	23:41:17	Soprano pipistrelle	19	Soprano pipistrelle
24/06/2020	23:41:23	Soprano pipistrelle	19	Soprano pipistrelle
24/06/2020	23:41:28	Soprano pipistrelle	23	Soprano pipistrelle
24/06/2020	23:41:41	Soprano pipistrelle	14	Soprano pipistrelle
24/06/2020	23:41:46	Soprano pipistrelle	21	Soprano pipistrelle
24/06/2020	23:41:51	Soprano pipistrelle	31	Soprano pipistrelle
24/06/2020	23:41:56	Soprano pipistrelle	31	Soprano pipistrelle
24/06/2020	23:42:01	Soprano pipistrelle	8	Soprano pipistrelle
24/06/2020	23:45:01	Leisler's Bat	10	Leisler's Bat
24/06/2020	23:45:06	Leisler's Bat	8	Leisler's Bat
24/06/2020	23:45:11	Leisler's Bat	4	Leisler's Bat
24/06/2020	23:45:47	Soprano pipistrelle	9	Soprano pipistrelle
24/06/2020	23:47:06	Common pipistrelle	6	Common pipistrelle
24/06/2020	23:47:14	Common pipistrelle	16	Common pipistrelle
24/06/2020	23:48:04	Soprano pipistrelle	6	Soprano pipistrelle
24/06/2020	23:48:09	Soprano pipistrelle	13	Soprano pipistrelle
24/06/2020	23:50:14	Common pipistrelle	6	Common pipistrelle
24/06/2020	23:50:53	Leisler's Bat	2	Leisler's Bat
24/06/2020	23:50:58	Leisler's Bat	4	Leisler's Bat
24/06/2020	23:54:07	Soprano pipistrelle	19	Soprano pipistrelle
25/06/2020	00:02:58	Soprano pipistrelle	16	Soprano pipistrelle
25/06/2020	00:03:07	Soprano pipistrelle	15	Soprano pipistrelle
25/06/2020	00:03:12	Soprano pipistrelle	19	Soprano pipistrelle
25/06/2020	00:03:17	Soprano pipistrelle	10	Soprano pipistrelle
25/06/2020	00:07:32	Noid	1	Noid
25/06/2020	00:10:21	Leisler's Bat	2	Leisler's Bat
25/06/2020	00:14:46	Soprano pipistrelle	16	Soprano pipistrelle
25/06/2020	00:14:51	Noid	22	Noid
25/06/2020	00:14:56	Soprano pipistrelle	17	Soprano pipistrelle
25/06/2020	00:15:19	Soprano pipistrelle	8	Soprano pipistrelle
25/06/2020	00:15:29	Soprano pipistrelle	19	Soprano pipistrelle
25/06/2020	00:15:34	Soprano pipistrelle	13	Soprano pipistrelle
25/06/2020	00:15:39	Soprano pipistrelle	13	Soprano pipistrelle
25/06/2020	00:16:14	Soprano pipistrelle	28	Soprano pipistrelle
25/06/2020	00:16:19	Soprano pipistrelle	17	Soprano pipistrelle
25/06/2020	00:16:35	Soprano pipistrelle	20	Soprano pipistrelle
25/06/2020	00:16:40	Noid	1	Noid
25/06/2020	00:17:20	Noid	10	Noid
25/06/2020	00:20:55	Soprano pipistrelle	19	Soprano pipistrelle

25/06/2020	00:21:00	Noid	1	Noid
25/06/2020	00:24:24	Leisler's Bat	7	Leisler's Bat
25/06/2020	00:27:45	Leisler's Bat	4	Leisler's Bat
25/06/2020	00:31:32	Soprano pipistrelle	34	Soprano pipistrelle
25/06/2020	00:32:02	Soprano pipistrelle	45	Soprano pipistrelle
25/06/2020	00:32:07	Soprano pipistrelle	35	Soprano pipistrelle
25/06/2020	00:32:57	Soprano pipistrelle	13	Soprano pipistrelle
25/06/2020	00:34:47	Noid	3	Noid
25/06/2020	00:35:29	Leisler's Bat	3	Leisler's Bat
25/06/2020	00:36:16	Noid	5	Noid
25/06/2020	00:47:45	Common pipistrelle	32	Common pipistrelle
25/06/2020	00:47:50	Pina	3	Pina
25/06/2020	00:55:53	Common pipistrelle	11	Common pipistrelle
25/06/2020	00:59:46	Common pipistrelle	8	Common pipistrelle
25/06/2020	01:00:10	Common pipistrelle	34	Common pipistrelle
25/06/2020	01:10:07	Leisler's Bat	9	Leisler's Bat
25/06/2020	01:10:12	Leisler's Bat	2	Leisler's Bat
25/06/2020	01:10:24	Leisler's Bat	3	Leisler's Bat
25/06/2020	01:10:31	Leisler's Bat	3	Leisler's Bat
25/06/2020	01:14:16	Common pipistrelle	35	Common pipistrelle
25/06/2020	01:17:05	Daubenton's bat	19	Daubenton's bat
25/06/2020	01:20:04	Soprano pipistrelle	31	Soprano pipistrelle
25/06/2020	01:20:09	Soprano pipistrelle	3	Soprano pipistrelle
25/06/2020	01:22:16	Common pipistrelle	21	Common pipistrelle
25/06/2020	01:24:44	Common pipistrelle	34	Common pipistrelle
25/06/2020	01:26:24	Soprano pipistrelle	46	Soprano pipistrelle
25/06/2020	01:26:29	Soprano pipistrelle	13	Soprano pipistrelle
25/06/2020	01:30:07	Leisler's Bat	3	Leisler's Bat
25/06/2020	01:30:21	Soprano pipistrelle	33	Soprano pipistrelle
25/06/2020	01:30:26	Common pipistrelle	30	Common pipistrelle
25/06/2020	01:31:19	Leisler's Bat	9	Leisler's Bat
25/06/2020	01:37:11	Common pipistrelle	32	Common pipistrelle
25/06/2020	01:39:23	Leisler's Bat	2	Leisler's Bat
25/06/2020	01:39:53	Leisler's Bat	5	Leisler's Bat
25/06/2020	01:39:58	Leisler's Bat	5	Leisler's Bat
25/06/2020	01:40:43	Leisler's Bat	9	Leisler's Bat
25/06/2020	01:42:49	Leisler's Bat	10	Leisler's Bat
25/06/2020	01:43:01	Common pipistrelle	30	Common pipistrelle
25/06/2020	01:44:15	Common pipistrelle	27	Common pipistrelle
25/06/2020	01:44:20	Common pipistrelle	6	Common pipistrelle
25/06/2020	01:49:16	Soprano pipistrelle	20	Soprano pipistrelle
25/06/2020	01:56:34	Leisler's Bat	6	Leisler's Bat
25/06/2020	01:56:39	Leisler's Bat	11	Leisler's Bat
25/06/2020	01:56:44	Leisler's Bat	3	Leisler's Bat
25/06/2020	01:59:16	Common pipistrelle	11	Common pipistrelle
25/06/2020	02:00:43	Leisler's Bat	4	Leisler's Bat
25/06/2020	02:00:48	Leisler's Bat	5	Leisler's Bat
25/06/2020	02:04:24	Leisler's Bat	11	Leisler's Bat
25/06/2020	02:04:29	Leisler's Bat	7	Leisler's Bat
25/06/2020	02:06:20	Common pipistrelle	33	Common pipistrelle
25/06/2020	02:06:52	Common pipistrelle	5	Common pipistrelle
25/06/2020	02:09:04	Leisler's Bat	3	Leisler's Bat
25/06/2020	02:09:09	Leisler's Bat	5	Leisler's Bat
25/06/2020	02:09:15	Leisler's Bat	5	Leisler's Bat
25/06/2020	02:10:16	Leisler's Bat	3	Leisler's Bat
25/06/2020	02:10:42	Leisler's Bat	4	Leisler's Bat
25/06/2020	02:10:59	Common pipistrelle	33	Common pipistrelle
25/06/2020	02:11:04	Leisler's Bat	6	Leisler's Bat
25/06/2020	02:11:09	Leisler's Bat	2	Leisler's Bat
25/06/2020	02:14:54	Leisler's Bat	4	Leisler's Bat
25/06/2020	02:18:12	Common pipistrelle	13	Common pipistrelle

25/06/2020	02:19:08	Common pipistrelle	15	Common pipistrelle
25/06/2020	02:26:54	Leisler's Bat	4	Leisler's Bat
25/06/2020	02:27:07	Leisler's Bat	2	Leisler's Bat
25/06/2020	02:36:18	Common pipistrelle	45	Common pipistrelle
25/06/2020	02:36:23	Common pipistrelle	10	Common pipistrelle
25/06/2020	02:42:29	Soprano pipistrelle	19	Soprano pipistrelle
25/06/2020	02:48:01	Common pipistrelle	6	Common pipistrelle
25/06/2020	02:53:11	Leisler's Bat	10	Leisler's Bat
25/06/2020	02:53:40	Leisler's Bat	4	Leisler's Bat
25/06/2020	02:58:45	Leisler's Bat	2	Leisler's Bat
25/06/2020	02:59:19	Leisler's Bat	6	Leisler's Bat
25/06/2020	03:07:12	Common pipistrelle	35	Common pipistrelle
25/06/2020	03:07:17	Common pipistrelle	12	Common pipistrelle
25/06/2020	03:08:42	Common pipistrelle	27	Common pipistrelle
25/06/2020	03:11:52	Soprano pipistrelle	43	Soprano pipistrelle
25/06/2020	03:12:37	Leisler's Bat	3	Leisler's Bat
25/06/2020	03:16:33	Leisler's Bat	4	Leisler's Bat
25/06/2020	03:20:39	Common pipistrelle	22	Common pipistrelle
25/06/2020	03:20:52	Common pipistrelle	37	Common pipistrelle
25/06/2020	03:24:10	Common pipistrelle	14	Common pipistrelle
25/06/2020	03:24:15	Common pipistrelle	40	Common pipistrelle
25/06/2020	03:24:20	Common pipistrelle	16	Common pipistrelle
25/06/2020	03:34:08	Common pipistrelle	36	Common pipistrelle
25/06/2020	03:34:13	Common pipistrelle	6	Common pipistrelle
25/06/2020	03:35:09	Common pipistrelle	20	Common pipistrelle
25/06/2020	03:35:14	Common pipistrelle	3	Common pipistrelle
25/06/2020	03:36:38	Common pipistrelle	12	Common pipistrelle
25/06/2020	03:37:52	Common pipistrelle	13	Common pipistrelle
25/06/2020	03:37:57	Noid	2	Noid
25/06/2020	03:39:29	Leisler's Bat	9	Leisler's Bat
25/06/2020	03:39:34	Leisler's Bat	9	Leisler's Bat
25/06/2020	03:48:33	Common pipistrelle	15	Common pipistrelle
25/06/2020	03:53:47	Common pipistrelle	5	Common pipistrelle
25/06/2020	03:54:05	Daubenton's bat	9	Daubenton's bat
25/06/2020	03:55:33	Common pipistrelle	41	Common pipistrelle
25/06/2020	04:07:33	Common pipistrelle	30	Common pipistrelle
25/06/2020	04:08:14	Soprano pipistrelle	32	Soprano pipistrelle
25/06/2020	04:12:39	Soprano pipistrelle	38	Soprano pipistrelle
25/06/2020	04:12:54	Soprano pipistrelle	8	Soprano pipistrelle
25/06/2020	04:13:05	Soprano pipistrelle	44	Soprano pipistrelle
25/06/2020	04:13:10	Soprano pipistrelle	43	Soprano pipistrelle
25/06/2020	04:13:15	Soprano pipistrelle	18	Soprano pipistrelle
25/06/2020	04:13:47	Common pipistrelle	40	Common pipistrelle
25/06/2020	04:13:52	Common pipistrelle	45	Common pipistrelle
25/06/2020	04:13:57	Common pipistrelle	38	Common pipistrelle
25/06/2020	04:14:03	Common pipistrelle	47	Common pipistrelle
25/06/2020	04:14:08	Common pipistrelle	46	Common pipistrelle
25/06/2020	04:14:13	Common pipistrelle	9	Common pipistrelle
25/06/2020	04:15:19	Soprano pipistrelle	58	Soprano pipistrelle
25/06/2020	04:15:24	Soprano pipistrelle	7	Soprano pipistrelle
25/06/2020	04:15:32	Soprano pipistrelle	30	Soprano pipistrelle
25/06/2020	04:15:57	Leisler's Bat	3	Leisler's Bat
25/06/2020	04:18:34	Common pipistrelle	33	Common pipistrelle
25/06/2020	04:18:58	Common pipistrelle	19	Common pipistrelle
25/06/2020	04:21:24	Common pipistrelle	8	Common pipistrelle
25/06/2020	04:21:42	Common pipistrelle	11	Common pipistrelle
25/06/2020	04:22:44	Common pipistrelle	19	Common pipistrelle
25/06/2020	04:24:50	Common pipistrelle	14	Common pipistrelle
25/06/2020	04:24:55	Leisler's Bat	15	Leisler's Bat
25/06/2020	04:25:00	Leisler's Bat	10	Leisler's Bat
25/06/2020	04:25:05	Leisler's Bat	6	Leisler's Bat

25/06/2020	04:25:10	Noid	6	Noid
25/06/2020	04:25:15	Leisler's Bat	8	Leisler's Bat
25/06/2020	04:25:21	Leisler's Bat	2	Leisler's Bat
25/06/2020	04:25:26	Leisler's Bat	14	Leisler's Bat
25/06/2020	04:25:31	Leisler's Bat	10	Leisler's Bat
25/06/2020	04:25:36	Leisler's Bat	9	Leisler's Bat
25/06/2020	04:25:46	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:26:12	Leisler's Bat	7	Leisler's Bat
25/06/2020	04:26:17	Common pipistrelle	20	Common pipistrelle
25/06/2020	04:26:28	Daubenton's bat	4	Daubenton's bat
25/06/2020	04:26:33	Soprano pipistrelle	9	Soprano pipistrelle
25/06/2020	04:26:56	Leisler's Bat	5	Leisler's Bat
25/06/2020	04:27:06	Leisler's Bat	12	Leisler's Bat
25/06/2020	04:27:11	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:27:22	Leisler's Bat	7	Leisler's Bat
25/06/2020	04:27:27	Leisler's Bat	10	Leisler's Bat
25/06/2020	04:27:32	Leisler's Bat	2	Leisler's Bat
25/06/2020	04:27:38	Common pipistrelle	4	Common pipistrelle
25/06/2020	04:27:59	Leisler's Bat	8	Leisler's Bat
25/06/2020	04:28:04	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:28:10	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:28:15	Leisler's Bat	19	Leisler's Bat
25/06/2020	04:28:20	Leisler's Bat	23	Leisler's Bat
25/06/2020	04:28:25	Leisler's Bat	20	Leisler's Bat
25/06/2020	04:28:30	Leisler's Bat	21	Leisler's Bat
25/06/2020	04:28:35	Leisler's Bat	28	Leisler's Bat
25/06/2020	04:28:40	Common pipistrelle	42	Common pipistrelle
25/06/2020	04:28:45	Leisler's Bat	22	Leisler's Bat
25/06/2020	04:28:50	Leisler's Bat	7	Leisler's Bat
25/06/2020	04:28:56	Leisler's Bat	12	Leisler's Bat
25/06/2020	04:29:01	Leisler's Bat	14	Leisler's Bat
25/06/2020	04:29:06	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:29:11	Leisler's Bat	28	Leisler's Bat
25/06/2020	04:29:16	Leisler's Bat	9	Leisler's Bat
25/06/2020	04:29:21	Leisler's Bat	20	Leisler's Bat
25/06/2020	04:29:27	Leisler's Bat	26	Leisler's Bat
25/06/2020	04:29:32	Common pipistrelle	44	Common pipistrelle
25/06/2020	04:29:37	Leisler's Bat	36	Leisler's Bat
25/06/2020	04:29:42	Common pipistrelle	28	Common pipistrelle
25/06/2020	04:29:47	Common pipistrelle	67	Common pipistrelle
25/06/2020	04:29:52	Common pipistrelle	74	Common pipistrelle
25/06/2020	04:29:57	Pina	49	Pina
25/06/2020	04:30:02	Leisler's Bat	26	Leisler's Bat
25/06/2020	04:30:07	Leisler's Bat	36	Leisler's Bat
25/06/2020	04:30:13	Leisler's Bat	40	Leisler's Bat
25/06/2020	04:30:18	Leisler's Bat	19	Leisler's Bat
25/06/2020	04:30:23	Common pipistrelle	44	Common pipistrelle
25/06/2020	04:30:28	Common pipistrelle	26	Common pipistrelle
25/06/2020	04:30:33	Common pipistrelle	30	Common pipistrelle
25/06/2020	04:30:38	Leisler's Bat	43	Leisler's Bat
25/06/2020	04:30:43	Common pipistrelle	26	Common pipistrelle
25/06/2020	04:30:53	Leisler's Bat	17	Leisler's Bat
25/06/2020	04:30:58	Leisler's Bat	26	Leisler's Bat
25/06/2020	04:31:03	Leisler's Bat	12	Leisler's Bat
25/06/2020	04:31:09	Leisler's Bat	30	Leisler's Bat
25/06/2020	04:31:14	Leisler's Bat	19	Leisler's Bat
25/06/2020	04:31:19	Leisler's Bat	14	Leisler's Bat
25/06/2020	04:31:24	Leisler's Bat	28	Leisler's Bat
25/06/2020	04:31:29	Leisler's Bat	22	Leisler's Bat
25/06/2020	04:31:34	Leisler's Bat	19	Leisler's Bat
25/06/2020	04:31:40	Leisler's Bat	11	Leisler's Bat

25/06/2020	04:31:45	Leisler's Bat	9	Leisler's Bat
25/06/2020	04:31:50	Leisler's Bat	10	Leisler's Bat
25/06/2020	04:31:55	Leisler's Bat	21	Leisler's Bat
25/06/2020	04:32:00	Leisler's Bat	17	Leisler's Bat
25/06/2020	04:32:05	Pina	4	Pina
25/06/2020	04:32:11	Leisler's Bat	18	Leisler's Bat
25/06/2020	04:32:16	Leisler's Bat	23	Leisler's Bat
25/06/2020	04:32:21	Leisler's Bat	6	Leisler's Bat
25/06/2020	04:32:26	Leisler's Bat	18	Leisler's Bat
25/06/2020	04:32:31	Leisler's Bat	6	Leisler's Bat
25/06/2020	04:32:36	Leisler's Bat	16	Leisler's Bat
25/06/2020	04:32:41	Leisler's Bat	11	Leisler's Bat
25/06/2020	04:32:53	Leisler's Bat	22	Leisler's Bat
25/06/2020	04:32:58	Leisler's Bat	31	Leisler's Bat
25/06/2020	04:33:03	Leisler's Bat	24	Leisler's Bat
25/06/2020	04:33:09	Leisler's Bat	17	Leisler's Bat
25/06/2020	04:33:14	Leisler's Bat	17	Leisler's Bat
25/06/2020	04:33:19	Leisler's Bat	13	Leisler's Bat
25/06/2020	04:33:24	Leisler's Bat	23	Leisler's Bat
25/06/2020	04:33:29	Leisler's Bat	24	Leisler's Bat
25/06/2020	04:33:34	Leisler's Bat	21	Leisler's Bat
25/06/2020	04:33:39	Leisler's Bat	16	Leisler's Bat
25/06/2020	04:33:44	Leisler's Bat	21	Leisler's Bat
25/06/2020	04:33:49	Leisler's Bat	38	Leisler's Bat
25/06/2020	04:33:54	Common pipistrelle	35	Common pipistrelle
25/06/2020	04:33:59	Leisler's Bat	20	Leisler's Bat
25/06/2020	04:34:04	Leisler's Bat	6	Leisler's Bat
25/06/2020	04:34:10	Leisler's Bat	2	Leisler's Bat
25/06/2020	04:34:15	Leisler's Bat	24	Leisler's Bat
25/06/2020	04:34:20	Leisler's Bat	23	Leisler's Bat
25/06/2020	04:34:25	Leisler's Bat	11	Leisler's Bat
25/06/2020	04:34:32	Leisler's Bat	9	Leisler's Bat
25/06/2020	04:34:37	Leisler's Bat	14	Leisler's Bat
25/06/2020	04:34:42	Leisler's Bat	15	Leisler's Bat
25/06/2020	04:34:48	Leisler's Bat	17	Leisler's Bat
25/06/2020	04:34:53	Leisler's Bat	13	Leisler's Bat
25/06/2020	04:34:58	Leisler's Bat	23	Leisler's Bat
25/06/2020	04:35:03	Leisler's Bat	18	Leisler's Bat
25/06/2020	04:35:08	Leisler's Bat	24	Leisler's Bat
25/06/2020	04:35:13	Leisler's Bat	26	Leisler's Bat
25/06/2020	04:35:19	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:35:24	Leisler's Bat	19	Leisler's Bat
25/06/2020	04:35:29	Leisler's Bat	16	Leisler's Bat
25/06/2020	04:35:34	Leisler's Bat	12	Leisler's Bat
25/06/2020	04:35:39	Leisler's Bat	18	Leisler's Bat
25/06/2020	04:35:44	Leisler's Bat	11	Leisler's Bat
25/06/2020	04:35:49	Leisler's Bat	13	Leisler's Bat
25/06/2020	04:35:54	Leisler's Bat	23	Leisler's Bat
25/06/2020	04:35:59	Leisler's Bat	10	Leisler's Bat
25/06/2020	04:36:04	Leisler's Bat	21	Leisler's Bat
25/06/2020	04:36:10	Leisler's Bat	17	Leisler's Bat
25/06/2020	04:36:15	Leisler's Bat	22	Leisler's Bat
25/06/2020	04:36:20	Leisler's Bat	16	Leisler's Bat
25/06/2020	04:36:25	Leisler's Bat	10	Leisler's Bat
25/06/2020	04:36:30	Leisler's Bat	18	Leisler's Bat
25/06/2020	04:36:35	Leisler's Bat	15	Leisler's Bat
25/06/2020	04:36:41	Leisler's Bat	22	Leisler's Bat
25/06/2020	04:36:46	Leisler's Bat	9	Leisler's Bat
25/06/2020	04:40:14	Leisler's Bat	4	Leisler's Bat

Bat activity prior to sunrise within the site

Date	Time	Auto Id*	Pulses	Manual Id
25/06/2020	04:31:54	Leisler's Bat	45	Leisler's Bat
25/06/2020	04:25:43	Leisler's Bat	28	Leisler's Bat
25/06/2020	04:25:01	Leisler's Bat	23	Common Pipistrelle Leisler's Bat
25/06/2020	04:28:28	Leisler's Bat	19	Leisler's Bat
25/06/2020	04:30:52	Leisler's Bat	11	Leisler's Bat
25/06/2020	04:28:48	Leisler's Bat	9	Leisler's Bat
25/06/2020	04:26:24	Leisler's Bat	6	Leisler's Bat
25/06/2020	04:28:07	Leisler's Bat	6	Leisler's Bat
25/06/2020	04:27:05	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:32:09	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:27:41	Leisler's Bat	3	Leisler's Bat
25/06/2020	04:16:20	Leisler's Bat	4	Leisler's Bat
25/06/2020	04:11:52	Leisler's Bat	2	Leisler's Bat
25/06/2020	04:18:50	Noid	24	Common Pipistrelle
25/06/2020	04:21:35	Noid	66	Common Pipistrelle
25/06/2020	04:22:10	Noid	8	Common Pipistrelle
25/06/2020	03:49:19	Noise		Common Pipistrelle
25/06/2020	04:23:18	Common Pipistrelle	118	Common Pipistrelle
25/06/2020	04:19:52	Common Pipistrelle	84	Common Pipistrelle
25/06/2020	04:20:12	Common Pipistrelle	67	Common Pipistrelle
25/06/2020	04:00:40	Common Pipistrelle	56	Common Pipistrelle
25/06/2020	04:15:03	Common Pipistrelle	52	Common Pipistrelle
25/06/2020	04:22:37	Common Pipistrelle	64	Common Pipistrelle
25/06/2020	03:49:39	Common Pipistrelle	39	Common Pipistrelle
25/06/2020	04:23:39	Common Pipistrelle	52	Common Pipistrelle
25/06/2020	04:20:33	Common Pipistrelle	37	Common Pipistrelle
25/06/2020	04:22:58	Common Pipistrelle	41	Common Pipistrelle
25/06/2020	04:21:55	Common Pipistrelle	48	Common Pipistrelle
25/06/2020	04:10:36	Common Pipistrelle	32	Common Pipistrelle
25/06/2020	04:22:52	Common Pipistrelle	27	Common Pipistrelle
25/06/2020	04:10:51	Common Pipistrelle	34	Common Pipistrelle
25/06/2020	04:14:58	Common Pipistrelle	23	Common Pipistrelle
25/06/2020	03:59:38	Common Pipistrelle	27	Common Pipistrelle
25/06/2020	04:12:34	Common Pipistrelle	22	Common Pipistrelle
25/06/2020	04:12:40	Common Pipistrelle	34	Common Pipistrelle
25/06/2020	04:00:55	Common Pipistrelle	19	Common Pipistrelle
25/06/2020	04:03:25	Common Pipistrelle	18	Common Pipistrelle
25/06/2020	03:51:21	Common Pipistrelle	17	Common Pipistrelle
25/06/2020	04:02:44	Common Pipistrelle	17	Common Pipistrelle
25/06/2020	04:23:54	Common Pipistrelle	26	Common Pipistrelle
25/06/2020	04:19:31	Common Pipistrelle	15	Common Pipistrelle
25/06/2020	04:20:54	Common Pipistrelle	20	Common Pipistrelle
25/06/2020	04:16:46	Common Pipistrelle	13	Common Pipistrelle
25/06/2020	04:29:24	Common Pipistrelle	14	Common Pipistrelle
25/06/2020	04:22:17	Common Pipistrelle	20	Common Pipistrelle
25/06/2020	04:23:33	Common Pipistrelle	12	Common Pipistrelle
25/06/2020	04:29:30	Common Pipistrelle	13	Common Pipistrelle
25/06/2020	04:23:13	Common Pipistrelle	18	Common Pipistrelle
25/06/2020	04:19:46	Common Pipistrelle	11	Common Pipistrelle
25/06/2020	03:49:45	Common Pipistrelle	8	Common Pipistrelle
25/06/2020	04:29:09	Common Pipistrelle	8	Common Pipistrelle
25/06/2020	04:24:56	Common Pipistrelle	9	Common Pipistrelle
25/06/2020	04:13:01	Common Pipistrelle	7	Common Pipistrelle
25/06/2020	04:18:03	Common Pipistrelle	7	Common Pipistrelle
25/06/2020	04:14:43	Common Pipistrelle	5	Common Pipistrelle
25/06/2020	04:26:19	Common Pipistrelle	5	Common Pipistrelle
25/06/2020	03:49:04	Common Pipistrelle	4	Common Pipistrelle
25/06/2020	04:15:18	Common Pipistrelle	4	Common Pipistrelle
25/06/2020	04:05:49	Common Pipistrelle	3	Common Pipistrelle
25/06/2020	03:53:50	Soprano Pipistrelle	31	Soprano Pipistrelle
25/06/2020	04:14:22	Soprano Pipistrelle	38	Soprano Pipistrelle
25/06/2020	03:55:32	Soprano Pipistrelle	19	Soprano Pipistrelle
25/06/2020	04:24:35	Soprano Pipistrelle	16	Soprano Pipistrelle
25/06/2020	04:32:30	Leisler's Bat		Leisler's Bat



Cottage on the edge of the site and low-lying land south of the cottage



Area where most bat species were encountered (top left) and brightly lit areas around the perimeter of the site (all other images)



Lighting along the Grand Canal and within Naas close to the Canal



Lighting at Finlay Park

BCIreland data: search results 12 Dec 2022 1km from site				
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all species within 1000m of N8903319639				
Roosts				
Name	Grid reference	Address		Species observed
12KENS1T	N8939719690	Church of Our Lady and Saint David		
Transects				
Name	Grid reference start			Species observed
Ad-hoc observations				
Survey	Grid reference	Date		Species observed

BCIreland data: search results 12 Dec 2022		
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all species within 10000m of N8903319639		
Roosts		
Name	Grid reference	Species observed
12KECL1WC	N8727	
12KECL2WC	N8627	
12KENS1T	N8919	
76 Langton Park	N8010	Pipistrellus spp. (45kHz/55kHz)
Blessington Rectory	N9814	Pipistrellus pygmaeus
Eldar Lodge	N8710	Pipistrellus pygmaeus
Gleeson Residence Kilteel	N9921	Pipistrellus spp. (45kHz/55kHz)
Harristown House Roost	N8709	Plecotus auritus
House, Naas Rd. Blessington	N9714	Pipistrellus pipistrellus (45kHz)
Joyce Residence	N9814	Pipistrellus spp. (45kHz/55kHz)
Killashee House	N8010	
King Residence	N9721	Unidentified bat
Kinneagh House	N8010	Pipistrellus pygmaeus
Leinster Lodge	N8716	Unidentified bat
Liffey Bank House	N8409	Plecotus auritus
Millicent House	N8824	Pipistrellus spp. (45kHz/55kHz),Plecotus auritus
Newtown Great Quarry Buildings	N9415	Unidentified bat
Northern storage shed, enclosed structure with a large sliding door on western side	N8721	Unidentified bat,Pipistrellus pipistrellus (45kHz)
Palmerstown House, Palmerstown Demesne, Naas, Co. Kildare	N9222	Pipistrellus spp. (45kHz/55kHz)
Robertstown Hotel	N7924	Plecotus auritus
Robertstown Hotel Roost	N7924	Plecotus auritus
Santry Hill	N9815	Pipistrellus pipistrellus (45kHz)
St Michaels and all Angels	N8725	Plecotus auritus
St Patrick Carnalway	N8710	Plecotus auritus,Nyctalus leisleri,Pipistrellus pygmaeus
Stable buildings, Palmerstown Demesne, Naas, Co. Kildare	N9122	Plecotus auritus
The Heathers	N9713	

Transects			
Name	Grid reference start	Species observed	
Ayimer Bridge Transect	N9729	Unidentified bat, Pipistrellus spp. (45kHz/55kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz), Myotis daubentonii	
Ballymore Eustace Bridge Transect	N9209	Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz), Unidentified bat, Myotis daubentonii	
Connell Ford Transect	N8113	Myotis daubentonii, Unidentified bat	
Henry Bridge Transect	N9528	Unidentified bat, Myotis daubentonii	
Kilcullen Transect	N8409	Myotis daubentonii, Unidentified bat	
Liffer Park Clane Transect	N8727	Unidentified bat, Myotis daubentonii	
Liffey Linear Park Newbridge Transect	N8016	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Unidentified bat, Pipistrellus pygmaeus, Myotis daubentonii	
Limerick Bridge Transect	N8718	Unidentified bat, Myotis daubentonii	
Naas Golf Club	N9023	Unidentified bat, Myotis daubentonii	
new	N8709	Unidentified bat, Myotis daubentonii	
New	N8709	Myotis daubentonii, Unidentified bat	
Oberstown M7 Bridge Transect	N8821	Unidentified bat, Myotis daubentonii	
Ponsonby Bridge Transect	N9326	Unidentified bat, Myotis daubentonii	
Sallins Village Transect	N8922	Myotis daubentonii, Unidentified bat	
Ad-hoc observations			
Survey	Grid reference	Date	Species observed
Bat Eco Services	N9221	26/09/2018	Myotis nattereri, Nyctalus leisleri, Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz), Plecotus auritus
Bat Eco Services	N9729	20/05/2019	Pipistrellus pipistrellus (45kHz)
Bat Eco Services	N9729	20/05/2019	Pipistrellus pipistrellus (45kHz)
Bat Eco Services	N9823	29/05/2020	Nyctalus leisleri, Myotis daubentonii, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Plecotus auritus
Bat Survey - Scott Cawley	N8822	11/06/2008	Pipistrellus pipistrellus (45kHz), Pipistrellus

			pygmaeus, Nyctalus leisleri
Bat Survey - Scott Cawley	N8409	29/08/2007	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis daubentonii, Plecotus auritus
BATLAS 2010	N8624	26/07/2008	Nyctalus leisleri, Myotis daubentonii, Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz)
BATLAS 2020	N9509	13/06/2018	Pipistrellus pygmaeus, Myotis daubentonii
BATLAS 2020	N9509	12/06/2018	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri
BATLAS 2020	N9209	13/06/2018	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis daubentonii
BATLAS 2020	N8609	27/08/2018	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Myotis daubentonii
BATLAS 2020	N7911	20/10/2015	
BATLAS 2020	N9312	20/07/2016	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis mystacinus
BATLAS 2020	N8212	27/08/2018	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
BATLAS 2020	N9214	20/07/2016	Pipistrellus pipistrellus (45kHz)
BATLAS 2020	N9814	19/07/2016	Pipistrellus pipistrellus (45kHz)
BATLAS 2020	N9615	19/07/2016	
BATLAS 2020	N8617	27/08/2018	Pipistrellus pygmaeus
BATLAS 2020	N9217	20/07/2016	Pipistrellus pygmaeus
BATLAS 2020	N9518	19/07/2016	Pipistrellus pipistrellus (45kHz)
BATLAS 2020	N9319	19/07/2016	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis spp.
BATLAS 2020	N9022	03/07/2018	

BATLAS 2020	N8624	01/10/2015	
BATLAS 2020	N9224	03/07/2018	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis daubentonii
BATLAS 2020	N9326	03/07/2018	Pipistrellus pipistrellus (45kHz), Myotis daubentonii
BATLAS 2020	N8727	01/10/2015	Nyctalus leisleri, Pipistrellus spp. (45kHz/55kHz)
BATLAS 2020	N9528	19/07/2018	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
BATLAS 2020	N9229	03/07/2018	Pipistrellus pygmaeus, Nyctalus leisleri
BATLAS 2020	N9729	19/07/2018	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Myotis daubentonii
EIS and Road Surveys - Conor Kelleher	N8816	19/09/2005	Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Plecotus auritus, Myotis nattereri, Myotis mystacinus/brandtii
EIS and Road Surveys - Conor Kelleher	N8916	19/09/2005	Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Plecotus auritus, Myotis nattereri, Myotis mystacinus/brandtii
EIS surveys - Brian Keeley	N9315	16/11/2007	Pipistrellus spp. (45kHz/55kHz)
EIS surveys - Brian Keeley	N8409	29/08/2007	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis daubentonii
EIS surveys - Brian Keeley	N8020	02/06/2022	Myotis nattereri, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
EIS Surveys - Niamh Roche	N8618	02/06/2004	Pipistrellus pipistrellus (45kHz)

EIS Surveys - Niamh Roche	N8618	02/06/2004	Nyctalus leisleri
EIS Surveys - Niamh Roche	N8618	02/06/2004	Myotis spp.
EIS Surveys - Niamh Roche	N7924	05/10/2005	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis spp.
Faith Wilson	N9122	2007-06-00	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Myotis daubentonii, Nyctalus leisleri, Myotis spp.
Neighbourhood Bats 2021	N8328	01/07/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus nathusii, Nyctalus leisleri, Pipistrellus pygmaeus
Neighbourhood Bats 2021	N8328	02/07/2021	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Plecotus auritus, Myotis daubentonii
Neighbourhood Bats 2021	N8328	03/07/2021	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Plecotus auritus, Myotis daubentonii
Neighbourhood Bats 2021	N8328	04/07/2021	Nyctalus leisleri, Pipistrellus pygmaeus, Pipistrellus pipistrellus (45kHz), Myotis daubentonii
Neighbourhood Bats 2021	N8328	05/07/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus
Neighbourhood Bats 2021	N8328	06/07/2021	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus
Neighbourhood Bats 2021	N8328	07/07/2021	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Plecotus

			auritus,Pipistrellus nathusii
Neighbourhood Bats 2021	N8328	08/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Plecotus auritus,Myotis daubentonii,Pipistrellus nathusii,Pipistrellus spp. (45kHz/55kHz)
Neighbourhood Bats 2021	N8328	09/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Pipistrellus nathusii,Plecotus auritus
Neighbourhood Bats 2021	N8328	10/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Plecotus auritus,Myotis daubentonii,Pipistrellus nathusii
Neighbourhood Bats 2021	N8328	11/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Myotis daubentonii,Plecotus auritus,Pipistrellus nathusii
Neighbourhood Bats 2021	N8328	12/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Plecotus auritus
Neighbourhood Bats 2021	N8328	13/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Plecotus auritus
Neighbourhood Bats 2021	N8328	14/07/2021	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Pipistrellus pygmaeus,Plecotus auritus
Neighbourhood Bats 2021	N8328	15/07/2021	Pipistrellus pipistrellus (45kHz),Pipistrellus nathusii,Nyctalus leisleri,Plecotus auritus,Pipistrellus

			pygmaeus, Myotis daubentonii
Neighbourhood Bats 2021	N8328	16/07/2021	Pipistrellus nathusii, Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Plecotus auritus, Myotis daubentonii
Neighbourhood Bats 2021	N8328	17/07/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus nathusii, Nyctalus leisleri, Pipistrellus pygmaeus, Myotis daubentonii, Plecotus auritus
Neighbourhood Bats 2021	N8328	18/07/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Myotis daubentonii
Neighbourhood Bats 2021	N8328	19/07/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Plecotus auritus, Pipistrellus nathusii
Neighbourhood Bats 2021	N8328	20/07/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Pipistrellus nathusii, Plecotus auritus, Myotis daubentonii
Neighbourhood Bats 2021	N8328	21/07/2021	Pipistrellus nathusii, Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Plecotus auritus
Neighbourhood Bats 2021	N8328	22/07/2021	Nyctalus leisleri, Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Pipistrellus nathusii, Plecotus auritus
Neighbourhood Bats 2021	N8328	23/07/2021	Pipistrellus pipistrellus (45kHz), Nyctalus

			leisleri, Pipistrellus pygmaeus, Plecotus auritus
Neighbourhood Bats 2021	N8328	24/07/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus nathusii, Nyctalus leisleri, Pipistrellus pygmaeus
Neighbourhood Bats 2021	N8328	25/07/2021	Nyctalus leisleri, Pipistrellus nathusii, Pipistrellus pipistrellus (45kHz), Myotis daubentonii, Pipistrellus pygmaeus, Plecotus auritus
Neighbourhood Bats 2021	N8328	26/07/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Myotis daubentonii, Pipistrellus nathusii, Plecotus auritus
Neighbourhood Bats 2021	N8328	27/07/2021	Pipistrellus spp. (45kHz/55kHz), Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Myotis daubentonii, Pipistrellus pygmaeus, Plecotus auritus
Neighbourhood Bats 2021	N8328	02/08/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus nathusii, Myotis spp., Plecotus auritus, Pipistrellus pygmaeus
Neighbourhood Bats 2021	N8328	03/08/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Pipistrellus spp. (45kHz/55kHz), Myotis daubentonii, Plecotus auritus, Pipistrellus nathusii, Myotis spp.
Neighbourhood Bats 2021	N8328	04/08/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus

			leisleri, Plecotus auritus
Neighbourhood Bats 2021	N8328	05/08/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus pygmaeus, Plecotus auritus, Pipistrellus spp. (45kHz/55kHz)
Neighbourhood Bats 2021	N8328	06/08/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri, Pipistrellus spp. (45kHz/55kHz), Plecotus auritus
Neighbourhood Bats 2021	N8328	07/08/2021	Pipistrellus pipistrellus (45kHz), Pipistrellus pygmaeus, Nyctalus leisleri
Neighbourhood Bats 2021	N8328	08/08/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Plecotus auritus, Pipistrellus pygmaeus, Pipistrellus spp. (45kHz/55kHz)
Neighbourhood Bats 2021	N8328	09/08/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Pipistrellus spp. (45kHz/55kHz), Pipistrellus pygmaeus, Plecotus auritus
Neighbourhood Bats 2021	N8328	10/08/2021	Pipistrellus pipistrellus (45kHz), Nyctalus leisleri, Plecotus auritus, Pipistrellus pygmaeus
NPWS Calls	N9612	29/04/2008	Plecotus auritus