Kelland Homes

Clonburris Bat Report

Clonburris, Clondalkin, Dublin 22

604097- 03 (00)

NOVEMBER 2022

RSK GENERAL NOTES

Project No.: 604097-03 (00)

Title: Bat Report, Clonburris, Co. Dublin

Client: Kelland Homes Ltd.

Date: 15 November 2022

Office: Belfast

Status: ISSUED

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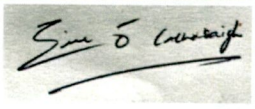
Signature		Signature	
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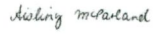
Signature		Signature	
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EXECUTIVE SUMMARY

1. This Ecological Impact Assessment has been prepared by RSK Ireland Ltd on behalf of Kelland Homes Ltd (the applicant), as part of a planning application for a residential development at Clonburris, on Fonthill Road North, Clondalkin, Dublin 22, Co. Dublin (*Irish Grid Reference*: O 06375 32505). The proposed development will involve the construction 283 dwellings and subsequent construction of supplementary buildings on a site that is 6.3 Ha in size. The aim of this report is to evaluate the impacts of the proposed development on any nearby bats which may be roost, commute, or forage on the site itself.
2. A series of bat surveys, including active bat transects, emergence and re-entry watches and aerial tree surveys were carried out to assess the suitability of the Site for roosting, foraging and commuting bats during the summer when bats are most active during the year. No bat roosts were recorded during the surveys, but bats from three separate species were recorded on site foraging for flying insects or commuting to neighbouring hunting territories. The Site is considered to be of low importance to commuting and foraging bats, which have been documented oversite both commuting to hunting grounds and foraging on site.
3. The Cappagh House ruin located at the south-eastern corner of the site is quite overgrown with thick matrices of ivy found along a couple of its walls and has many Potential Roosting Features (PRFs). Although granted permission under planning application (SDZ20A/0021) and the demolition will be the responsibility of the appointed contractor Emergence and Re-entry surveys were carried out given it's proximity and connection to the site. The Emergence and Re-entry surveys recorded 4 bats (n= 2 common pipistrelles, 2 unidentified visual observations) potentially emerging from previously highlighted roost feature during the Potential Roost Assessment. It is recommended that mitigation measures are implemented, a bat derogation licence be sought, and that a suitably qualified ecologist be present on site during the building's disassembly.
4. The use of bat-friendly lighting would also allow conditions post-construction to be favourable once again for bats. As a result of this, the erection of bat boxes and upon the construction itself, and the inclusion of sensible treelines and wildlife ponds across the developed site would allow for the development to have net positive biodiversity benefits for bats in the local area.
5. Subject to the successful implementation of these measures, it can be concluded that the proposed development will not cause any significant negative impacts on designated sites, habitats, legally protected species, or any other features of ecological importance. It is expected to have a significant positive effect on habitats.

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1 INTRODUCTION

1.1 Purpose of this report

The aim of this Bat Report is to identify, quantify and evaluate the impacts of the proposed development of 283 dwellings and complementary buildings at Clonburris, Dublin 22, Co. Dublin, on any bats that are living within the Ecological Zone of Influence (EZoI) of the 6.3 Ha area of land proposed for development; - which will henceforth be referred to as "The Site" within this document. The report has been prepared in accordance with the *Guidelines for ecological impact assessment in the UK and Ireland* (CIEEM 2016), which is the primary resource used by members of the Chartered Institute of Ecology and Environmental Management (CIEEM), and all bat surveying was conducted with guidance taken from (Collins 2016) and (Marnell 2022).

1.2 Ecological Context

Site Location and Surroundings

The Site is in a suburban / rural setting to the north of Clondalkin, adjacent to the Clondalkin / Fonthill train station. The Site comprises mostly improved grassland with an area of bare colonising earth towards the northeast side of the Site, with several treelines around the perimeter of the site and dividing the site in two. In two separate areas, freshwater forms in ponds on the surface of the Site, and there is also a derelict, unoccupied building Cappagh House in the southeast corner of the Site (granted permission for demolition under planning Ref: (SDZ20A/0021) and will be the responsibility of the appointed contractor and completed prior to works commencing on this Site. This building is heavily overgrown with ivy, and the stonework of the building and its chimney has been weathered, featuring many hollows and cracks.

Figure 1: Site location plan (Source: QGIS, basemap: Bing)

The site is encompassed by Whitton Avenue to the south-eastern corner and Cappaghmore to the southwest, Ninth Lock Road on its eastern flank, Iarnród Éireann's Dublin-Cork track to the north, and Clondalkin/Fonthill's train station and car park to the west. A narrow passage of land included within the proposed development extends southwards to within 20 m of the Grand Canal pNHA to the southwestern corner. The Site is not located within or adjacent to any designated sites. Potential indirect impacts were considered within a potential zone of influence of 5 km: three proposed Natural Heritage Areas (pNHAs) were identified within this zone. No Special Areas of Conservations (SACs) or Special Protection Areas are within 5km of the site.

1.3 Proposed Development

The Site of approximately 6.3 ha is located west of the Ninth Lock Road and east of Clondalkin and Fonthill train station at Irish Grid ref O 06442 32486. Kelland Homes Ltd seeks permission for development on a site area of 6.3Ha, on lands within the townland of Cappagh, Dublin 22. The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road). The proposed development is located within the Clonburris Strategic Development Zone (SDZ), within part of the development areas of Clonburris Urban Centre (i.e. CUC-S4) and Clonburris South East (i.e. CSE-S1 & CSE-S2), as identified in the Clonburris SDZ Planning Scheme 2019.

The proposed development consists of the construction of 283 no. dwellings, crèche and 3 no. retail / commercial unit, comprised of:

- 112 no. 2, 3 & 4 bed, 2 storey semi-detached and terraced houses;
- 110 no. 2 & 3 bed duplex units accommodated in 10 no. 3 storey buildings;
- 61 no. 1 & 2 bedroom apartments in 2 no. 4 & 6 storey buildings;
- 1 storey creche (c.599m²);
- 2 no. retail /commercial unit (c.152m²).
- 1 no. retail /commercial unit (c. 325m²)

1.4 Background to Survey

An Ecological Impact Assessment Report (RSK 2022) describes the results of a desk study and a Preliminary Roost Assessment (PRA) for bats on the site and the surrounding area. A number of potential roosting features (PRFs) of moderate suitability for bats were identified, discovered on a number of large trees and in the cracks of the stonework of a derelict building, all located within the site boundary. The summarised results of this PRA and the subsequent aerial surveys using endoscopes are included within this Bat Report to provide context to its findings and evaluation.

1.5 Statement of Authority

The active bat surveys on the site were undertaken by Éinne Ó Cathasaigh, an ecologist, and Declan Gill, an environmental scientist. The emergence / re-entry surveys on the site were undertaken by Éinne Ó Cathasaigh, Maeve MacKenna, Robyn Maby, Áine Fearon and Declan Gill, who are all work with RSK Ireland. The aerial bat survey using Endoscoping was conducted by Mick McGeough and assisted by Maeve MacKenna

Éinne has been working as an ecologist since graduating from his MSc in marine biology from UCC in 2020. He also has a BA in Zoology from Trinity College Dublin. He has worked extensively as a field ornithologist, bat surveyor, herpetologist, and marine mammal observer during this time.

Maeve has a BA in Zoology from Trinity College Dublin, and an MSc in Ecological Management and Conservation Biology from Queen's University Belfast. She has several years' experience in the ecology and wildlife conservation sectors and has undertaken numerous bat surveys (PRF, emergence, re-entry) in that time. She has also participated in the *CIEEM introduction to Bat Ecology and Bat Surveys*.

Áine has a BSc (Hons) Animal Behaviour and Biology, University of Chester. MSc Ecological Management and Conservation Biology, Queens University Belfast. She has completed the National Bat Monitoring Programme (NBMP), *"Using your Ears", the Introductory Bat Detector Workshop* NBMP level and an Introductory Bat Detector Workshop. She has also participated *In CIEEM Bats: Assessing The Impact Of Development On Bats, Mitigation And Enhancement & CIEEM Introduction To Bat Ecology And Bat Surveys.*

Robyn Maby has a MSc in Ecological Management and Conservation Biology. She is a graduate ecologist with RSK and has assisted on numerous bat surveys. *CIEEM Introduction To Bat Ecology And Bat Surveys.*

Declan joined RSK in October 2021 as part of the Geoscience team in Dublin. He graduated from the National University of Ireland Galway after completing a BA in Geography, Sociology & Political Studies and a MSc in Environmental Leadership. During his time in college Declan completed a thesis which looked at how Kylemore Abbey are able to conserve and protect the terrestrial mammals found on the site. Whilst working on his own thesis he helped his colleagues out by completing numerous bat surveys at Kylemore Abbey.

Mick McGeough is a specialist climber and tree surgeon, who works with Blackstaff Ecology Ltd. He has with over 30-years' experience carrying out Preliminary Bat Roost (PRB) inspection surveys on dozens of trees for numerous development projects.

This report has also been compiled by Éinne Ó Cathasaigh, who is a suitably qualified ecologist, with over 3 years' experience as a bat surveyor.

2 METHODS

2.1 Survey Methodology

A series of bat surveys were conducted to assess the importance of the site for roosting, foraging and commuting bats. Survey methods were developed using *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Bat Conservation Trust, 3rd edition, 2016), the latest NWPS guidelines for bat surveying (Marnell 2022) ,BCI Appropriate Assessment Guidelines (Bat Conservation Ireland, 2012), and (Collins 2016). All surveys were carried out using Echometer Bat Detectors (Echo Meter Touch 2 Pro) to record bat activity.

All surveying was carried during the bat breeding season. Weather conditions at all times during surveying was suitable for bat emergences and activity, with mild temperatures and light winds and bats were active, both before and after flying insects were abundant at dusk. All Bat Surveys conducted took place during the bat breeding season, when bat activity is at its annual peak. Weather conditions during surveying were always suitable for bats, with mild temperatures and light breezes, and abundant flying insect activity documented during each survey; — a comprehensive record of climatic and weather conditions during surveying is included within *Table 1* and *Table 3.*

Three types of surveys were conducted on site at Clonburris: activity surveys, emergence/re-entry surveys and Aerial bat surveying, outlined below. Each type of survey is designed to better inform decisions based on bat roosting features on site and bat activity over the habitats available on site.

2.1.1 Active bat surveys

A series of active bat surveys were conducted to determine whether bats were using the available habitat on site. Surveyors walked a series of transects beginning at sunset, walked at a slow and steady pace around the margins of the site, and along the treelines, recording the locations of any bats documented on site. The location and behaviours of bats observed were also documented to better understand how the bats were using the habitats available to them on site. Each survey was started at a different point to account for temporal variety of habitat use. The transect surveys commenced at sunset and continued until a minimum of 1.5 hours after sunset. The surveys were undertaken during optimal climatic conditions for bat activity (i.e., warm temperatures > 7°C, no more than light rain and no or only light winds).

The surveyors carried out two activities during the surveys:

1. Recorded audio-detections of bats using electronic equipment; and
2. Noted visual sightings of bats

Accurate numbers of bats can be difficult to determine during the survey, and therefore each bat pass was recorded to species level including the time it was identified, its location and behaviour. This information is used to help characterise any roosts that may be present within or immediately adjacent to the site.

2.1.2 Emergence / Re-entry Surveys

The Preliminary Roost Assessment (PRA) identified nine Potential Roost Features (PRFs) on the cracks of the stonework of the derelict house in the south-east corner of the site. The emergence / re-entry surveys aimed to establish if any roosts were present within or immediately adjacent to the site. This information was used to determine the type and extent of any mitigation or compensation measures that may be required to ensure – in line with current legislation – that there is no detrimental impact on the local status of the species.

In accordance with BCT guidelines, monitoring points were established around both buildings in order to ensure that suitable PRFs initially identified during the preliminary survey were monitored for emergence/ re-entry.

The surveyors carried out two activities during the surveys:

3. Recorded audio-detections of bats using electronic equipment; and
4. Noted visual sightings of bats

Accurate numbers of bats can be difficult to determine during the survey, and therefore each bat pass was recorded to species level including the time it was identified, its location and behaviour. This information is used to help characterise any roosts that may be present within or immediately adjacent to the site.

The emergence surveys commenced 15 minutes prior to sunset and continued until a minimum of 2 hours after sunset. The re-entry surveys began 2 hours prior to sunrise and continued until a minimum of 15 minutes after sunrise. The surveys were undertaken during optimal climatic conditions for bat activity (i.e., warm temperatures > 7°C, no more than light rain and no or only light winds).

2.1.3 Aerial bat surveying.

A number of trees located on site were highlighted as having moderate to low roost potential for bats. To assess whether these trees were supporting roosting bats, an aerial bat survey was conducted on trees that were highlighted within the Preliminary Roost Assessment (PRA) within the Ecological Impact Assessment (RSK, 2022) as having potential bat roost suitability. This survey was undertaken Mick McGeough and assisted by Maeve MacKenna.

2.2 Equipment

The following equipment was utilised during the surveys on the site:

- Echo Meter Touch 2 Pro - this utilises an FG Electret omnidirectional microphone which allows for full spectrum sampling and was connected to an iPhone/Smartphone which allows the surveyor to view live sonograms and record in real time: and
- High powered torch with infrared light and red-light head torch.

2.3 Survey Constraints

The bat surveys were carried out at appropriate times of the year, between May and July, and the data described in this report is representative of bat activity during the height of their activity, with many young bats fledging during this time, providing a relative increase in activity in comparison to other times of year. Climatic conditions and environmental factors, from air temperatures to windspeeds, were all favourable during surveying, and bats were encountered and documented by the surveyor during each survey.

Equipment used to record bat activity only malfunctioned once throughout surveying, with one bat recording (*P. pipistrellus* recorded 8th June 2022) not being able to also record its corresponding GPS location, but fortuitously, the following recording, also from the same location managed to fill this knowledge gap. As a result of the reasons above, it is thought that these surveys were not impaired and that these observations faithfully reflect bat activity on site during these surveys.

2.4 Survey Effort

Active bat surveys were conducted beginning at sunset on the 26th of May, the 22nd of June, and the 13th of July of 2022. Two surveyors were used on the first site visit, but survey effort was reduced to two as only one surveyor was required to cover the site.

Emergence surveys were conducted 8th of June, the 28th of June and the 27th of July of 2022. To fully cover all PRFs identified on the building in the Potential Roost Assessment (PRA), 4 surveyors were used, which were suitably placed around the structure to constantly monitor all PRFs. The locations of the surveyors are included within Figure 3.

The aerial survey was conducted on the 8th of June of 2022. It assessed whether bats were roosting in the 23 trees highlighted in the EcIA. Of the 23 trees, 14 of these were ruled out as having no potential for roosting bats on arrival to site. 7 of the remaining 8 trees were fully visible from ground level; — only Tree 12 required climbing to be fully ruled out.

3 RESULTS

3.1 Active Bat Survey Results

Bats were documented using the habitats available on during each active survey, commuting over site to foraging sites, or foraging for airborne insects on the site itself. Variability in habitat use between different on site was documented between active surveys; — Common (*Pipistrellus pipistrellus*) and Soprano pipistrelles (*Pipistrellus pygmaeus*) were the only bat species recorded on the first two nights of active surveying. In contrast, on the third night of surveying, the vast majority (n= 29/32 of bat passes recorded during surveying) were Leisler's bats (*Nyctalus leisleri*), the remaining calls comprising Common and Soprano pipistrelles passes.

The site itself currently presents favourable conditions for bat activity, as tree lines around the perimeter, and one through the heart of site, remain intact and levels of light pollution remains relatively low. The habitats present on site provide suitable conditions for aggregations of flying insects, with healthy populations of flies and moths observed during each survey, particularly around the ponds located on site. Despite much commuting and foraging activity on site, no potential bat roosting activity was documented during surveying.

Table 1 includes the details and dates of each of the surveys and the climatic conditions encountered. Weather conditions were considered optimal at all times for bat activity and would not have prevented emergences/ re-entries.

Table 1. Climatic and Environmental Conditions Encountered During Active Bat Surveying at Clonburris.

Dates	Survey Times		Sunset	Temperature (C)	Wind Speed & Direction (km/h)	Humidity (%)	Notes
	Start	End					
26/5/22	21:36	23:36	21:36	12	15km NE	60	No issues encountered during surveying.
22/6/22	21:58	23:58	21:58	19	9km SE	63	No issues encountered during surveying.
13/07/22	21:48	23:48	21:48	18	17km W	64	No issues encountered during surveying.

Table 2 describes the full results of both surveyors on site at Clonburris, Dublin 22. In total, 40 bat pass recordings were documented over the three nights of active surveying, comprising three species:

i. Common pipistrelle (*Pipistrellus pipistrellus)*;

ii. Soprano pipistrelle (*Pipistrellus pygmaeus)* and

iii. Leisler's bat (*Nyctalus leisleri)*;

Most of these calls were recorded from either commuting bats, using treelines on Site to navigate towards hunting sites, or bats foraging for insects on Site. As a result of this, it is thought that the Site is of low importance locally to bats navigating towards nearby hunting sites such as the Grand Canal or foraging over the development itself. No potential roosts were recorded during surveying on site at Clonburris.

Common pipistrelles (*Pipistrellus pipistrellus*) passes [n=6] were recorded on one survey, the 22nd of June 2022. The surveyor recorded these bats foraging for flying insects on site along two separate treelines on site, and their locations have been documented in *Figure 2.*

Soprano pipistrelles (*Pipistrellus pygmaeus*) passes [n=5] were recorded on two separate surveys, the 26th of May and 22nd of June 2022, foraging along the same treelines that *P. pipistrellus* were documented along. The locations of these encounters are also described in *Figure 2.*

Leisler's bat, or Lesser Noctule (*Nyctalus leisleri*) passes [n=29] were only recorded on the 22nd of June 2022; — however *N. leisleri* activity was recorded in such relative abundance, compared to the other surveys, during that survey that these records comprise almost ¾ of our observations. It is also highlighted that this survey occurred in the most optimal of conditions, taking place a day after the summer solstice. The locations of Leisler bat observations are also included in *Figure 2.*

Table 2. Records of Bat Passes Recorded During Active Surveys Conducted at Clonburris.

Record Number	Date	Time of Record	Species	Number of Passes	GPS location	Notes
1	26/05/22	22:45	Soprano pipistrelle	1	53.330410, -6.4060307	Circling, foraging
2	26/05/22	22:45	Soprano pipistrelle	2	53.331187, -6.4060181	Circling, foraging
3	26/05/22	22:45	Soprano pipistrelle	1	53.331112, -6.4036489	Circling, foraging
4	26/05/22	22:46	Soprano pipistrelle	1	53.331112, -6.4036489	Circling, foraging
5	22/06/22	22:26	Leisler's bat	1	53.331789, -6.4025366	Commuting over site from east
6	22/06/22	22:29	Leisler's bat	1	53.331789, -6.4025366	Foraging over site
7	22/06/22	22:29	Leisler's bat	1	53.331789, -6.4025366	Foraging over site
8	22/06/22	22:30	Leisler's bat	1	53.331789, -6.4025366	Foraging over site
9	22/06/22	22:31	Leisler's bat	1	53.331789, -6.4025366	Foraging over site
10	22/06/22	22:31	Leisler's bat	1	53.331789, -6.4025366	Foraging over site
11	22/06/22	22:33	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
12	22/06/22	22:33	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
13	22/06/22	22:33	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
14	22/06/22	22:34	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
15	22/06/22	22:34	Leisler's bat	1	53.330798, -6.4054120	Foraging over site

16	22/06/22	22:34	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
Record Number	**Date**	**Time of Record**	**Species**	**Number of Passes**	**GPS location**	**Notes**
17	22/06/22	22:36	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
18	22/06/22	22:36	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
19	22/06/22	22:37	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
20	22/06/22	22:37	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
21	22/06/22	22:37	Soprano pipistrelle	1	53.330798, -6.4054120	Commuting over site from the east.
22	22/06/22	22:38	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
23	22/06/22	22:39	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
24	22/06/22	22:40	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
25	22/06/22	22:40	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
26	22/06/22	22:41	Leisler's bat	1	53.330798, -6.4054120	Foraging over site
27	22/06/22	22:48	Leisler's bat	1	53.332767, -6.4032716	Foraging over site
28	22/06/22	22:49	Leisler's bat	1	53.332767, -6.4032716	Foraging over site
29	22/06/22	22:49	Leisler's bat	1	53.332767, -6.4032716	Foraging over site
30	22/06/22	22:50	Leisler's bat	1	53.332767, -6.4032716	Foraging over site
31	22/06/22	22:55	Leisler's bat	1	53.332767, -6.4032716	Foraging over site
32	22/06/22	22:53	Common pipistrelle	1	53.332767, -6.4032716	Foraging over site
33	22/06/22	22:55	Common pipistrelle	1	53.332767, -6.4032716	Foraging over site. Same individual as above.
34	22/06/22	22:59	Leisler's bat	1	53.332767, -6.4032716	Foraging over site
35	22/06/22	22:59	Leisler's bat	1	53.332767, -6.4032716	Foraging over site. Same individual as above.
36	22/06/22	23:00	Leisler's bat	1	53.332767, -6.4032716	Foraging over site

3.2 Emergence / Re-entry Survey Results.

Bats were recorded during each emergence and re-entry survey conducted on site. A total of 197 bat passes were documented over the emergence / re-entry surveys, from 2 species, Leisler's bat, also called the Lesser Noctule (*Nyctalus leisleri,* n = 140) and Common Pipistrelle (*Pipistrellus pipistrellus*, n = 57). The full list of bat recordings is included in Appendix 1

Over the three surveys, bats were recording flying close to the structure, these observations are described in depth on Table 4. On the 8th of June, a bat was observed visually at 22:51 circling near a wall covered in latticed ivy, considered suitable habitat for roosting bats. It is suspected that this bat emerged from this habitat, but it was not possible to confirm whether this was the case. Following this suspected emergence, the surveyors were repositioned during the following surveys to focus more directly on this area, while maintaining over all coverage (described in Figure 3 & Figure 4). The updated position was used on the remaining emergence survey (conducted on the 17th of July 2022.)

Table 3. Climatic Conditions and Times of Emergence and Re-Entry Surveys.

Dates	Survey Times		Sunset / Sunrise	Temperature (C)	Wind Speed & Direction (km/h)	Humidity (%)	Notes
	Start	End					
08/6/22	21:50	23:50	21:50	15	19km SW	70	No issues encountered during surveying.
28/6/22	21:42	23:57	21:57	16	16km SW	70	No issues encountered during surveying.
27/7/22	03:58	05:31	05:31	19	9km SE	63	No issues encountered during surveying.

On the 28th of June, three further suspected emergences were recorded, all again near PRF 3. Two of these recordings were Common pipistrelles, the last was not identified as a result of only being detected visually.

On the 27th of July, an incidental Soprano pipistrelle (*Pipistrellus pygmaeus)* was detected at 04:41, but are not thought to have been re-entering roosts in the building.

Table 4. Table of surveyor recordings during emergence and re-entry surveys.

Date	Time	Assessment	Species	Notes
08/6/22	22:10	Incidental bat	Common pipistrelle	S+H. Common pipistrelle recorded flying over building.
08/6/22	22:51	Suspected Emergence	No identification	SNH. Bat recorded circling in front of PRF 3.
08/6/22	22:34	Incidental bat	No identification	SNH. Bat flying through opening between building's stonework near PRF 3.
08/6/22	22:56	Incidental bat	No identification	SNH. Bat recorded visually flying West to East over building.
08/6/22	23:00	Incidental bat	No identification	SNH. Bat recorded visually flying North to South between surveyor and building.
28/6/22	22:25	Suspected Emergence	Common pipistrelle	S+H. C. pipistrelle detected flying from near latticed ivy (PRF: 3) away from building.
28/6/22	22:29	Incidental bat	Common pipistrelle	Incidental common pipistrelle flying south to north over the middle of building.
28/6/22	22:34	Incidental bat	Common Pipistrelle	Incidental common pipistrelle flying south to north over the middle of building.
28/6/22	22:43	Suspected Emergence	Common pipistrelle	S+H. C. pipistrelle detected flying from near latticed ivy (PRF: 3) away from building.
28/6/22	22:58	Suspected Emergence	No identification.	SNH. Bat detected visually flying from near latticed ivy (PRF: 3) away from building.
28/6/22	23:10	Incidental bat	Common pipistrelle	S+H. C. pipistrelle flying North to south near western wall of building.
28/6/22	23:16	Incidental bat	Leisler's bat	S+H. Leisler's bat foraging for flying insects W of surveyor.
27/7/22	04:41	Incidental bat	Soprano pipistrelle	S+H. Soprano pipistrelle flying in proximity to building, not thought to be a re-entry.

3.3 Aerial Survey Results

The aerial survey assessed the suitability of 23 trees on site. Trees 1-3 and 13-23 were deemed as having no potential on arrival at site, and subsequently removed from assessment. 7 of the remaining 8 trees were assessed from ground level, with only one tree (Tree 12) displaying enough potential to merit climbing. No bats were detected during the survey, though a wasp's nest was. The full results of the aerial survey are displayed in Table 5 below, and the locations of the trees assessed are included within *Figure 8.*

Table 5. Results of Aerial Bat Survey conducted 08/06/2022

Tree Number	PRA classification	Assessment type	Assessment	Notes
4	Low	Ground	Negative	Small willow tree that has recently been burnt. No bats.
5	Low	Ground	Negative	Thin tree with thick ivy. No obvious cracks. No bats.
6	Low	Ground	Negative	Thin tree with thick ivy. No obvious cracks. No bats.
7	Low	Ground	Negative	Thin tree with thick ivy. No obvious cracks. No bats.
8	Low	Ground	Negative	Thin tree with thick ivy. No obvious cracks. No bats.
9	Low	Ground	Negative	Ash tree. No bats.
10	Low	Ground	Negative	Ash tree. No bats.
11	Low	Ground	Negative	Ash tree with thick ivy. Some cracks. No bats.
12	Low	Aerial	Negative	Ash tree with a few holes and a large crack, likely caused by lighting. Wasp nest here. No bats

4 EVALUATION AND RECOMMEDATIONS

4.1 Evaluation of Survey Results

4.1.1 Active Bat Surveys.

Based on the results of these activity surveys, we conclude that the Site is of negligible importance for commuting and foraging bats. Of the three species recorded on site, Leisler's bat in particular was recorded frequently foraging along the southern treeline of the site. It is important to bear in mind when interpreting these results that individual bat passes are not indicative of separate individuals; — instead they are documentation of separate overhead flight paths by bats observed during surveying.

4.1.2 Emergence / Re-entry Surveys

The Emergence and Re-entry surveys detected 4 potential emergences from the derelict building on site at Clonburris. All 4 observations were of bats potentially emerging from PRF no. 3, highlighted in the EcIA (RSK 2022). On the 8th of June, a bat species was visually recorded circling near PRF 3, and on the 28th of June, two common pipistrelles were detected near PRF no. 3, along with a visual observation of an unidentified bat species. As a result of these observations, it is thought that bats are roosting within the derelict building at Clonburris.

4.1.3 Aerial Survey

The Aerial survey did not detect any bats roosting in the trees on site, and as a result of this, it is not thought that bats are roosting within the trees on site at Clonburris.

4.2 Potential Impact to Roosting Bats

4 bats (n = 2 common pipistrelles, 2 unidentified visual records) were observed potentially emerging from PRF no. 3, highlighted on the derelict building in the southeastern corner of the site. Although these are not confirmed emergences, it is thought that a small number of bats are roosting within the building, and it is likely that roosts are currently in use by bats.

The habitat present on site at Clonburris provides optimal conditions for hunting for bats. The remaining trees and present on site are not of the age required to have holes nor heavily latticed ivy matrices which could facilitate the roosting of bats.

4.3 Potential Impacts to Commuting and Foraging Bats

Suitable habitat currently exists on site for bats, which is considered quite favourable due to the low levels of light pollution found on site. Tree corridors currently are still intact on site, which bats appear to be using to commute to hunting grounds both on site and in its immediate vicinity. The surrounding areas surrounding the site does not share this luxury, and as a result this site may present some important treelines for bats commuting to and from hunting grounds, such as along the Grand Canal. As a result of this, the development will have an impact on commuting and foraging bats within the local area.

4.4 Recommendations

4 bats (2 Common pipistrelles, 2 visual records) were observed potentially emerging from the derelict building on site, and although these are not confirmed emergences, it is strongly recommended that a bat derogation licence be applied for, and a suitably qualified ecologist to be present on site while the building is slowly disassembled to handle any roosting bats uncovered during works.

Habitats on site are optimal for commuting and foraging bats, which were documented each night during surveying on site. The potential for habitat enhancement through the planned planting in suitable areas of native Irish trees. The development could also attract the roosting of bats using artificial roosts, such as permanent bat boxes, such as the Schwegler's box. The incorporation of these artificial roosts, an appropriate lighting plan, and suitable tree planting would help mitigate the impacts of the development on local bat populations.

If the construction phase occurs during peak bat activity seasons (late April to late October), night-working should be avoided to ensure that the area remains optimal for commuting and foraging bats. The construction should also follow the mitigation hierarchy, for example, avoid lighting first and if lighting is necessary then implement mitigation as per BCT lighting guidelines (BCT 2018). Any lighting such as security lighting during the period of works should be switched off when not in use and should not remain illuminated throughout the night.

5 REFERENCES

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Trust, Bat Conservation. 2018. *Bats and artificial lighting in the UK.* Accessed 9 1, 2022. https://cdn.bats.org.uk/uploads/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?v=1542109349.

6 FIGURES

Figure 2. Bat Activity Map during Transect Surveys Conducted at Clonburris, Co. Dublin

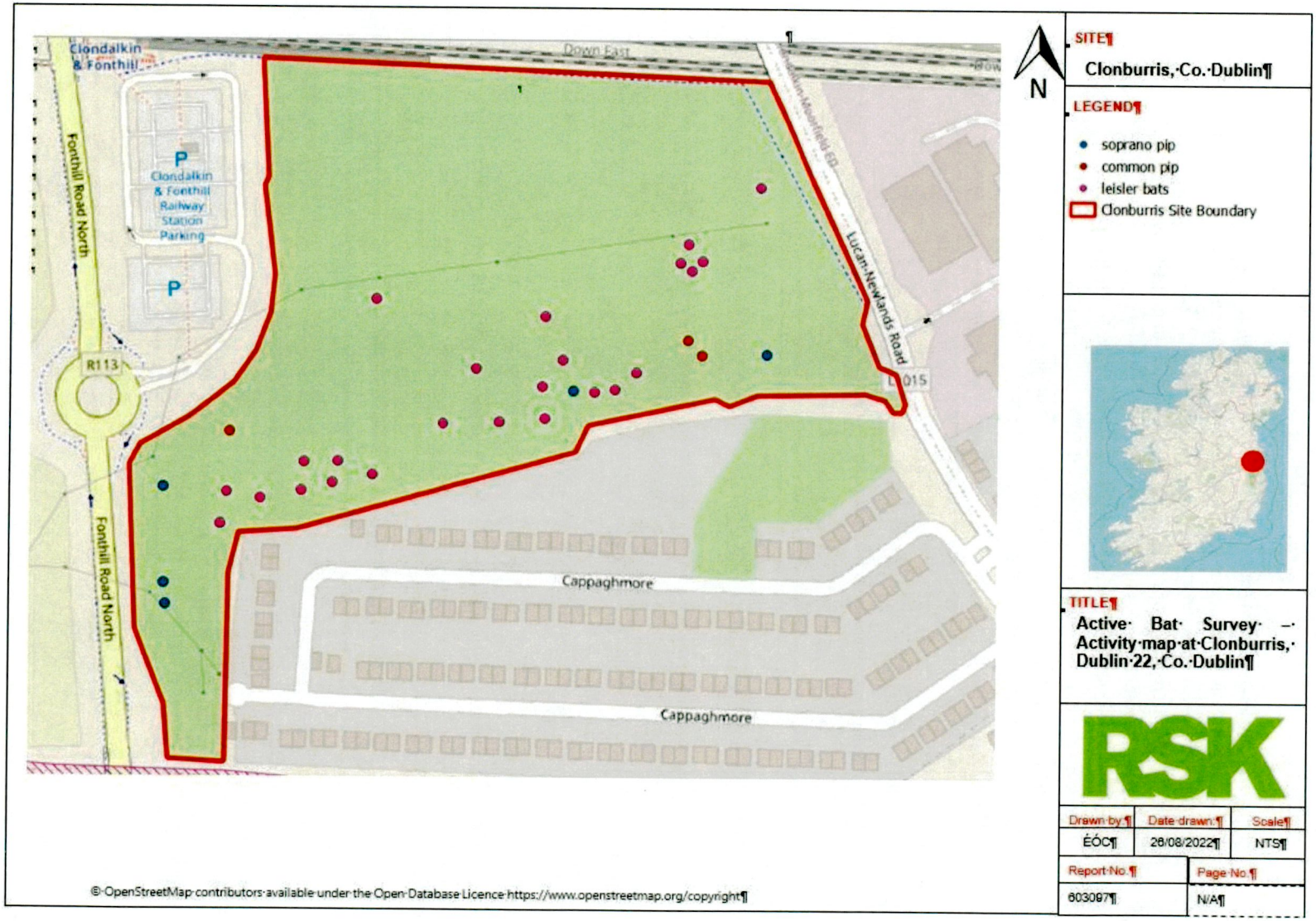
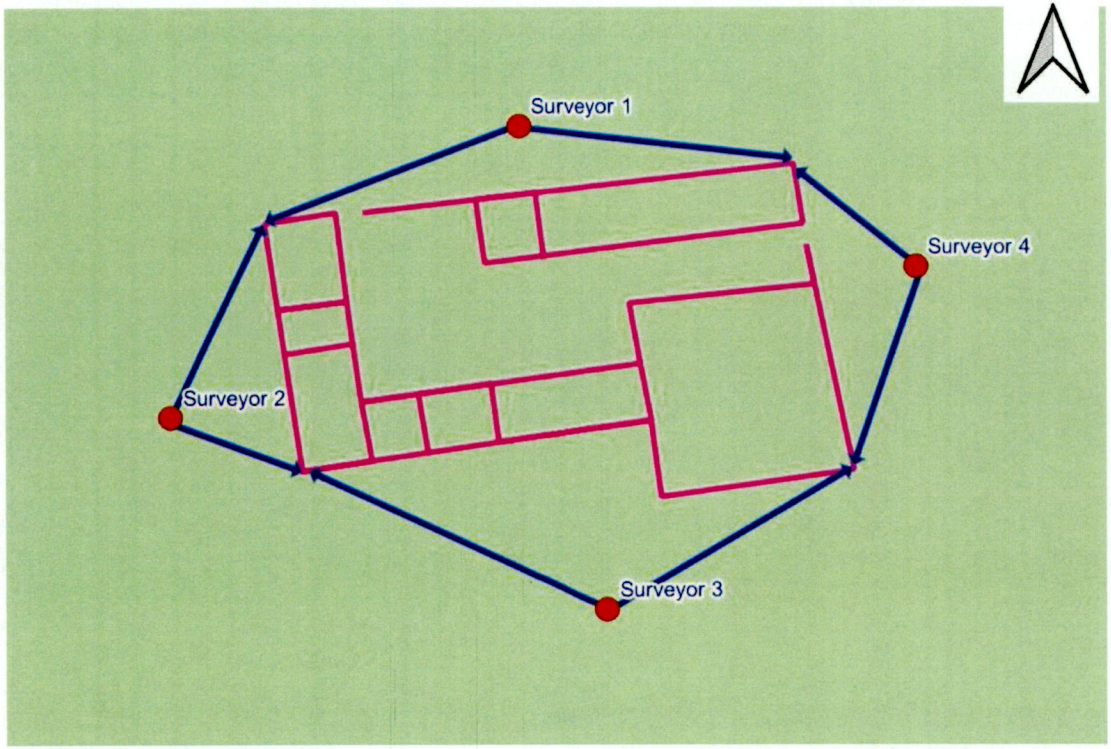


Figure 3. Surveyor Location and Survey Focus for 08/06/2022



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SITE

Clonburris, Co. Dublin

LEGEND

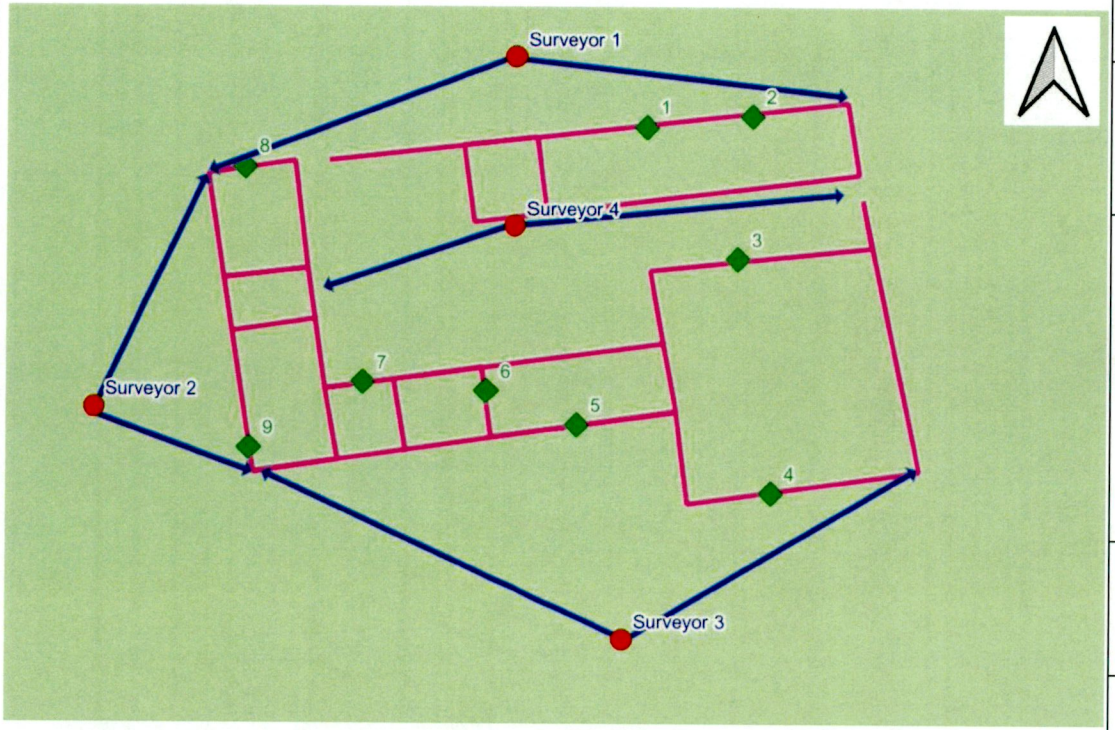
- Surveyor Location
- Survey Focus
- Potential Roost Features.
- Ruined Building

TITLE

Surveyor Locations and Survey focus for Emergence Survey 08/6/22

Drawn by:	Date drawn:	Scale:
ÉÓC	26/10/22	NTS
Report No. 603097	Page No.	RSK IRELAND

Figure 4. Updated Surveyor Location and Survey Focus during surveys on 28/6/22 and 27/7/22



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SITE

Clonburris, Co. Dublin

LEGEND

- Surveyor Location
- Survey Focus
- Potential Roost Features.
- Ruined Building

TITLE

Updated Surveyor Locations and Survey focus for Emergence and Re-Entry Surveys conducted 28/6/22 + 27/7/22.

Drawn by:	Date drawn:	Scale:
ÉÓC	26/10/22	NTS
Report No. 603097	Page No.	RSK IRELAND

Figure 5. Transect Line Used During Surveying at Clonburris

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SITE

Clonburris, Co. Dublin

LEGEND

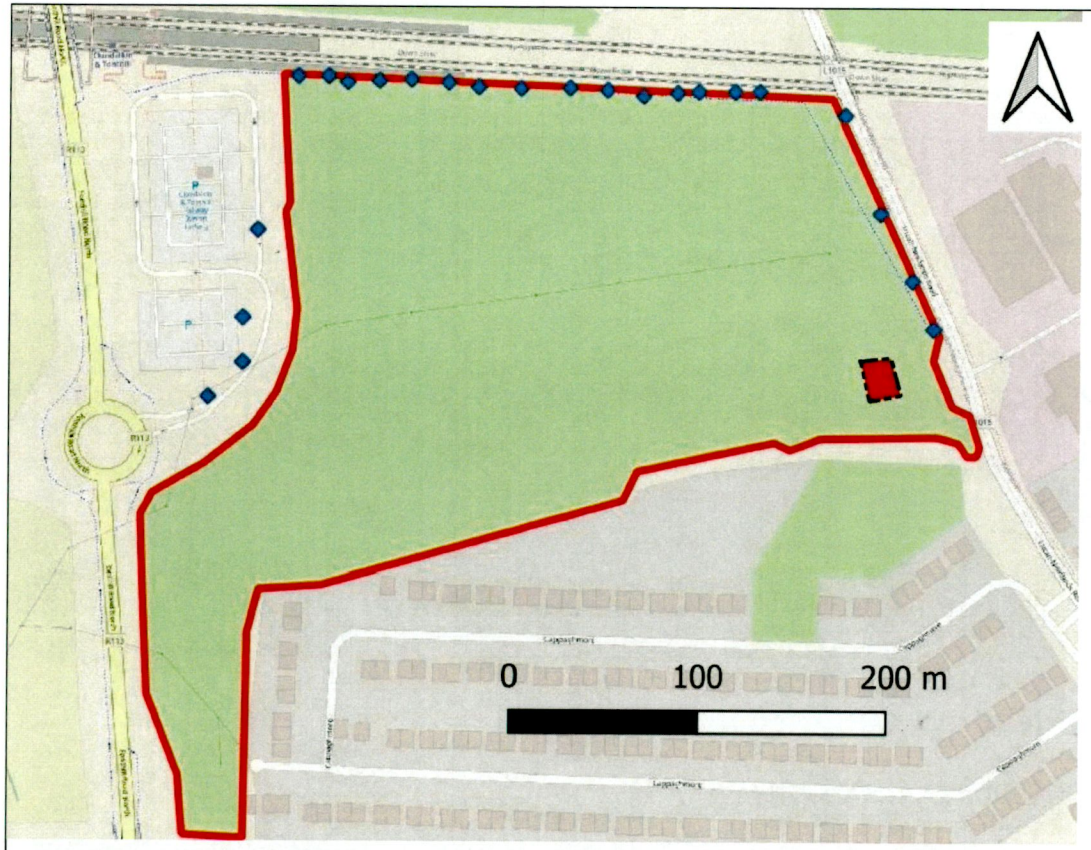
- Transect Line
- Ruined Building
- Site Boundary

TITLE

Transect Line Used During Active Bat Surveying at Clonburris.

Drawn by:	Date drawn:	Scale:
ÉÓC	26/10/22	NTS
Report No.	Page No.	
603097		

Figure 6. Map of Artificial Light Sources in relation to Derelict Building



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SITE

Clonburris, Co. Dublin

LEGEND

- Artificial Lights
- Derelict Building
- Site Boundary

TITLE

Map of Artificial Light Sources in relation to Derelict Building at Clonburris, Co. Dublin

Drawn by:	Date drawn:	Scale:
ÉÓC	09/09/22	NTS
Report No.	Page No.	
603097		

Figure 8. Map of Potential Roost Features (PRFs) at Clonburris

Figure 8. One of two ephemeral ponds recorded on site.

Figure 9. Derelict building to the south-east of site.

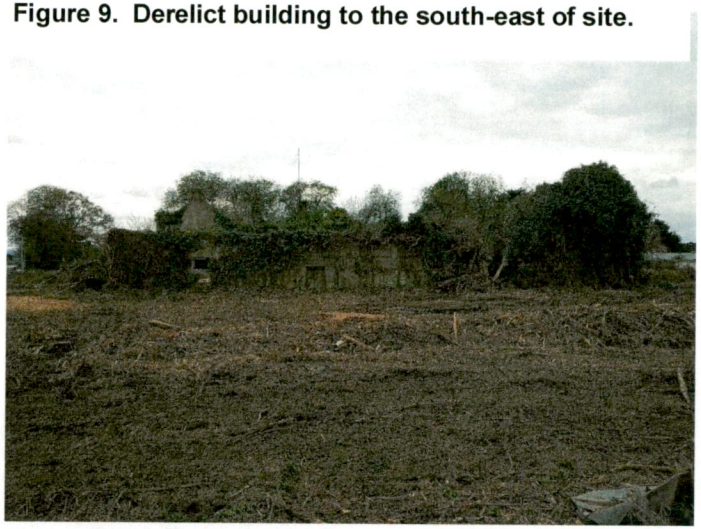

Figure 10. Surveying for roosting bats from ground

Figure 11. Surveying for roosting bats from ground.

Figure 12. Northern wall of Derelict building

Figure 13. Eastern wall of Derelict Building

APPENDIX 1

Table 6. Records of Bats Recorded During Emergence and Re-Entry Surveys at Clonburris, Co. Dublin.

Number	Date	Time	GPS Location	Species
1	08/06/2022	22:17	No GPS recorded*.	*Pipistrellus pipistrellus*
2	08/06/2022	22:17	53.330410, -6.4060307	*Pipistrellus pipistrellus*
3	08/06/2022	22:51	53.3321106, -6.40072	*Pipistrellus pipistrellus*
4	08/06/2022	23:42	53.331789, -6.4025366	*Pipistrellus pipistrellus*
5	28/06/2022	22:04	53.3318, -6.40092	*Nyctalus leisleri*
6	28/06/2022	22:04	53.3318, -6.40092	*Nyctalus leisleri*
7	28/06/2022	22:09	53.33179, -6.40094	*Nyctalus leisleri*
8	28/06/2022	22:15	53.33181, -6.40082	*Nyctalus leisleri*
9	28/06/2022	22:15	53.33181, -6.40082	*Nyctalus leisleri*
10	28/06/2022	22:16	53.3318, -6.40096	*Nyctalus leisleri*
11	28/06/2022	22:16	53.3318, -6.40096	*Nyctalus leisleri*
12	28/06/2022	22:16	53.3318, -6.40096	*Nyctalus leisleri*
13	28/06/2022	22:16	53.33172, -6.40073	*Nyctalus leisleri*
14	28/06/2022	22:16	53.33172, -6.40073	*Nyctalus leisleri*
15	28/06/2022	22:16	53.3318, -6.4009	*Nyctalus leisleri*
16	28/06/2022	22:19	53.3318, -6.40098	*Nyctalus leisleri*
17	28/06/2022	22:20	53.33181, -6.40109	*Nyctalus leisleri*
18	28/06/2022	22:21	53.3318, -6.40091	*Pipistrellus pipistrellus*
19	28/06/2022	22:21	53.3318, -6.40091	*Pipistrellus pipistrellus*
20	28/06/2022	22:21	53.33178, -6.4009	*Pipistrellus pipistrellus*
21	28/06/2022	22:22	53.33177, -6.40107	*Pipistrellus pipistrellus*
22	28/06/2022	22:23	53.33175, -6.40103	*Nyctalus leisleri*
23	28/06/2022	22:25	53.3318, -6.40089	*Pipistrellus pipistrellus*
24	28/06/2022	22:30	53.33177, -6.40093	*Nyctalus leisleri*
25	28/06/2022	22:30	53.33177, -6.40093	*Nyctalus leisleri*
26	28/06/2022	22:31	53.33177, -6.40093	*Nyctalus leisleri*
27	28/06/2022	22:32	53.33178, -6.40093	*Nyctalus leisleri*
28	28/06/2022	22:33	53.33179, -6.40105	*Nyctalus leisleri*
29	28/06/2022	22:33	53.33179, -6.40105	*Nyctalus leisleri*
30	28/06/2022	22:33	53.33179, -6.40105	*Nyctalus leisleri*
31	28/06/2022	22:52	53.33174, -6.40102	*Nyctalus leisleri*
32	28/06/2022	22:52	53.33174, -6.40102	*Nyctalus leisleri*
33	28/06/2022	22:52	53.33186, -6.40095	*Nyctalus leisleri*
34	28/06/2022	22:53	53.33186, -6.40095	*Nyctalus leisleri*
35	28/06/2022	22:53	53.33186, -6.40095	*Nyctalus leisleri*
36	28/06/2022	22:53	53.3318, -6.40093	*Nyctalus leisleri*
37	28/06/2022	22:56	53.33172, -6.40087	*Nyctalus leisleri*
38	28/06/2022	22:57	53.3318, -6.40089	*Nyctalus leisleri*
39	28/06/2022	22:57	53.33176, -6.40088	*Nyctalus leisleri*
40	28/06/2022	22:57	53.33176, -6.40088	*Nyctalus leisleri*

41	28/06/2022	22:58	53.33176, -6.40088	*Nyctalus leisleri*
42	28/06/2022	22:58	53.33175, -6.40082	*Nyctalus leisleri*
43	28/06/2022	22:58	53.33175, -6.40082	*Nyctalus leisleri*
44	28/06/2022	22:58	53.33175, -6.40082	*Nyctalus leisleri*
45	28/06/2022	22:58	53.33181, -6.40088	*Nyctalus leisleri*
46	28/06/2022	22:58	53.33181, -6.40088	*Nyctalus leisleri*
47	28/06/2022	22:58	53.33181, -6.40088	*Pipistrellus pipistrellus*
48	28/06/2022	22:58	53.33181, -6.40088	*Pipistrellus pipistrellus*
49	28/06/2022	23:05	53.33166, -6.40119	*Nyctalus leisleri*
50	28/06/2022	23:05	53.33166, -6.40119	*Nyctalus leisleri*
51	28/06/2022	23:05	53.33166, -6.40119	*Nyctalus leisleri*
52	28/06/2022	23:06	53.33178, -6.40093	*Nyctalus leisleri*
53	28/06/2022	23:06	53.33178, -6.40093	*Nyctalus leisleri*
54	28/06/2022	23:10	53.33189, -6.40079	*Pipistrellus pipistrellus*
55	28/06/2022	23:10	53.33189, -6.40079	*Pipistrellus pipistrellus*
56	28/06/2022	23:16	53.33156, -6.40117	*Nyctalus leisleri*
57	28/06/2022	23:16	53.33156, -6.40117	*Nyctalus leisleri*
58	28/06/2022	23:19	53.33175, -6.40092	*Nyctalus leisleri*
59	28/06/2022	23:19	53.33175, -6.40092	*Nyctalus leisleri*
60	28/06/2022	23:21	53.3318, -6.40089	*Pipistrellus pipistrellus*
61	28/06/2022	23:21	53.3318, -6.40089	*Pipistrellus pipistrellus*
62	28/06/2022	23:25	53.33178, -6.4009	*Nyctalus leisleri*
63	28/06/2022	23:26	53.33182, -6.40089	*Nyctalus leisleri*
64	28/06/2022	23:26	53.33181, -6.40095	*Nyctalus leisleri*
65	28/06/2022	23:29	53.33175, -6.40085	*Pipistrellus pipistrellus*
66	08/06/2022	22:04	53.33171, -6.4005	*Nyctalus leisleri*
67	08/06/2022	22:09	53.33171, -6.4005	*Nyctalus leisleri*
68	08/06/2022	22:15	53.33171, -6.4005	*Nyctalus leisleri*
69	08/06/2022	22:15	53.33171, -6.4005	*Nyctalus leisleri*
70	08/06/2022	22:16	53.33171, -6.4005	*Nyctalus leisleri*
71	08/06/2022	22:16	53.33171, -6.4005	*Nyctalus leisleri*
72	08/06/2022	22:16	53.33171, -6.4005	*Nyctalus leisleri*
73	08/06/2022	22:21	53.33171, -6.4005	*Pipistrellus pipistrellus*
74	08/06/2022	22:21	53.33171, -6.4005	*Pipistrellus pipistrellus*
75	08/06/2022	22:22	53.3317, -6.40048	*Pipistrellus pipistrellus*
76	08/06/2022	22:22	53.3317, -6.40048	*Pipistrellus pipistrellus*
77	08/06/2022	22:25	53.3317, -6.40047	*Pipistrellus pipistrellus*
78	08/06/2022	22:31	53.3317, -6.40044	*Nyctalus leisleri*
79	08/06/2022	22:32	53.33163, -6.40049	*Nyctalus leisleri*
80	08/06/2022	22:32	53.33163, -6.40049	*Nyctalus leisleri*
81	08/06/2022	22:33	53.33167, -6.40049	*Nyctalus leisleri*
82	08/06/2022	22:33	53.33167, -6.40049	*Nyctalus leisleri*
83	08/06/2022	22:33	53.33167, -6.40049	*Nyctalus leisleri*
84	08/06/2022	22:52	53.33173, -6.40048	*Nyctalus leisleri*
85	08/06/2022	22:52	53.33173, -6.40048	*Nyctalus leisleri*
86	08/06/2022	22:52	53.33173, -6.40048	*Nyctalus leisleri*
87	08/06/2022	22:52	53.33172, -6.40053	*Nyctalus leisleri*
88	08/06/2022	22:53	53.33172, -6.40048	*Nyctalus leisleri*
89	08/06/2022	22:53	53.33172, -6.40048	*Nyctalus leisleri*
90	08/06/2022	22:53	53.33172, -6.40048	*Nyctalus leisleri*

91	08/06/2022	22:53	53.33168, -6.40051	*Nyctalus leisleri*
92	08/06/2022	22:53	53.33168, -6.40051	*Nyctalus leisleri*
93	08/06/2022	22:53	53.33168, -6.40051	*Nyctalus leisleri*
94	08/06/2022	22:56	53.33167, -6.40049	*Nyctalus leisleri*
95	08/06/2022	22:56	53.33167, -6.40049	*Nyctalus leisleri*
96	08/06/2022	22:56	53.33158, -6.40042	*Nyctalus leisleri*
97	08/06/2022	22:56	53.33158, -6.40042	*Nyctalus leisleri*
98	08/06/2022	22:56	53.3317, -6.40043	*Nyctalus leisleri*
99	08/06/2022	22:56	53.3317, -6.40043	*Nyctalus leisleri*
100	08/06/2022	22:56	53.3317, -6.40043	*Nyctalus leisleri*
101	08/06/2022	22:56	53.33157, -6.40051	*Nyctalus leisleri*
102	08/06/2022	22:57	53.33157, -6.40051	*Nyctalus leisleri*
103	08/06/2022	22:57	53.33156, -6.40049	*Nyctalus leisleri*
104	08/06/2022	22:57	53.33156, -6.40049	*Nyctalus leisleri*
105	08/06/2022	22:57	53.33156, -6.40049	*Nyctalus leisleri*
106	08/06/2022	22:57	53.33156, -6.40049	*Nyctalus leisleri*
107	08/06/2022	22:57	53.33169, -6.4007	*Nyctalus leisleri*
108	08/06/2022	22:57	53.33169, -6.4007	*Nyctalus leisleri*
109	08/06/2022	22:58	53.33175, -6.40039	*Nyctalus leisleri*
110	08/06/2022	22:58	53.33175, -6.40039	*Nyctalus leisleri*
111	08/06/2022	22:58	53.33175, -6.40039	*Nyctalus leisleri*
112	08/06/2022	22:58	53.3314, -6.40076	*Nyctalus leisleri*
113	08/06/2022	22:58	53.3314, -6.40076	*Nyctalus leisleri*
114	08/06/2022	22:58	53.3314, -6.40076	*Nyctalus leisleri*
115	08/06/2022	22:58	53.33177, -6.40033	*Nyctalus leisleri*
116	08/06/2022	22:58	53.33177, -6.40033	*Pipistrellus pipistrellus*
117	08/06/2022	22:58	53.33177, -6.40033	*Pipistrellus pipistrellus*
118	08/06/2022	22:58	53.33177, -6.40033	*Nyctalus leisleri*
119	08/06/2022	22:58	53.33177, -6.40033	*Pipistrellus pipistrellus*
120	08/06/2022	22:58	53.33177, -6.40033	*Nyctalus leisleri*
121	08/06/2022	23:03	53.33167, -6.40046	*Pipistrellus pipistrellus*
122	08/06/2022	23:05	53.3317, -6.40038	*Nyctalus leisleri*
123	08/06/2022	23:05	53.3317, -6.40038	*Nyctalus leisleri*
124	08/06/2022	23:05	53.3317, -6.40038	*Nyctalus leisleri*
125	08/06/2022	23:06	53.33161, -6.4005	*Nyctalus leisleri*
126	08/06/2022	23:07	53.3316, -6.4006	*Pipistrellus pipistrellus*
127	08/06/2022	23:07	53.3316, -6.4006	*Pipistrellus pipistrellus*
128	08/06/2022	23:08	53.33181, -6.40075	*Pipistrellus pipistrellus*
129	08/06/2022	23:08	53.33181, -6.40075	*Pipistrellus pipistrellus*
130	08/06/2022	23:16	53.33159, -6.40048	*Nyctalus leisleri*
131	08/06/2022	23:16	53.33159, -6.40048	*Nyctalus leisleri*
132	08/06/2022	23:18	53.33168, -6.40047	*Pipistrellus pipistrellus*
133	08/06/2022	23:18	53.33168, -6.40047	*Pipistrellus pipistrellus*
134	08/06/2022	23:18	53.33168, -6.40047	*Pipistrellus pipistrellus*
135	08/06/2022	23:19	53.33157, -6.40051	*Nyctalus leisleri*
136	08/06/2022	23:19	53.33157, -6.40051	*Nyctalus leisleri*
137	08/06/2022	23:19	53.33157, -6.40051	*Nyctalus leisleri*
138	08/06/2022	23:21	53.3317, -6.40036	*Pipistrellus pipistrellus*
139	08/06/2022	23:21	53.3317, -6.40036	*Pipistrellus pipistrellus*
140	08/06/2022	23:25	53.33173, -6.40046	*Nyctalus leisleri*

141	08/06/2022	23:25	53.33173, -6.40046	*Nyctalus leisleri*
142	08/06/2022	23:26	53.3317, -6.40055	*Nyctalus leisleri*
143	08/06/2022	23:26	53.3317, -6.40055	*Nyctalus leisleri*
144	08/06/2022	23:29	53.33161, -6.40049	*Pipistrellus pipistrellus*
145	08/06/2022	23:29	53.33161, -6.40049	*Pipistrellus pipistrellus*
146	28/06/2022	22:15	53.33198, -6.40062	*Nyctalus leisleri*
147	28/06/2022	22:15	53.33198, -6.40062	*Nyctalus leisleri*
148	28/06/2022	22:16	53.33195, -6.4006	*Nyctalus leisleri*
149	28/06/2022	22:16	53.33195, -6.4006	*Nyctalus leisleri*
150	28/06/2022	22:16	53.33195, -6.4006	*Nyctalus leisleri*
151	28/06/2022	22:16	53.33195, -6.4006	*Nyctalus leisleri*
152	28/06/2022	22:16	53.33195, -6.4006	*Nyctalus leisleri*
153	28/06/2022	22:21	53.33195, -6.40058	*Pipistrellus pipistrellus*
154	28/06/2022	22:21	53.33196, -6.40055	*Pipistrellus pipistrellus*
155	28/06/2022	22:21	53.33196, -6.40055	*Nyctalus leisleri*
156	28/06/2022	22:22	53.33196, -6.40059	*Pipistrellus pipistrellus*
157	28/06/2022	22:22	53.33196, -6.40059	*Pipistrellus pipistrellus*
158	28/06/2022	22:24	53.33196, -6.40059	*Pipistrellus pipistrellus*
159	28/06/2022	22:25	53.33195, -6.40058	*Pipistrellus pipistrellus*
160	28/06/2022	22:31	53.33201, -6.40058	*Nyctalus leisleri*
161	28/06/2022	22:32	53.33199, -6.40056	*Nyctalus leisleri*
162	28/06/2022	22:32	53.33199, -6.40056	*Nyctalus leisleri*
163	28/06/2022	22:33	53.332, -6.40056	*Nyctalus leisleri*
164	28/06/2022	22:33	53.332, -6.40056	*Nyctalus leisleri*
165	28/06/2022	22:52	53.3319, -6.40069	*Nyctalus leisleri*
166	28/06/2022	22:58	53.33193, -6.40062	*Pipistrellus pipistrellus*
167	28/06/2022	22:58	53.33193, -6.40062	*Pipistrellus pipistrellus*
168	28/06/2022	22:58	53.33193, -6.40062	*Nyctalus leisleri*
169	28/06/2022	22:58	53.33193, -6.40062	*Nyctalus leisleri*
170	28/06/2022	22:58	53.33192, -6.40064	*Nyctalus leisleri*
171	28/06/2022	22:58	53.33191, -6.40062	*Nyctalus leisleri*
172	28/06/2022	22:58	53.33193, -6.40062	*Nyctalus leisleri*
173	28/06/2022	23:03	53.33194, -6.4006	*Pipistrellus pipistrellus*
174	28/06/2022	23:05	53.33194, -6.4006	*Nyctalus leisleri*
175	28/06/2022	23:05	53.33194, -6.4006	*Nyctalus leisleri*
176	28/06/2022	23:06	53.33191, -6.40059	*Nyctalus leisleri*
177	28/06/2022	23:07	53.33191, -6.40059	*Pipistrellus pipistrellus*
178	28/06/2022	23:16	53.33191, -6.40059	*Nyctalus leisleri*
179	28/06/2022	23:16	53.33191, -6.40059	*Nyctalus leisleri*
180	28/06/2022	23:18	53.33201, -6.40068	*Pipistrellus pipistrellus*
181	28/06/2022	23:18	53.33201, -6.40068	*Pipistrellus pipistrellus*
182	28/06/2022	23:18	53.33201, -6.40068	*Pipistrellus pipistrellus*
183	28/06/2022	23:21	53.33197, -6.40063	*Pipistrellus pipistrellus*
184	28/06/2022	23:29	53.3319, -6.40061	*Pipistrellus pipistrellus*
185	27/07/2022	04:02	53.33163 , -6.40049	*Pipistrellus pipistrellus*
186	27/07/2022	04:03	53.33163 , -6.40049	*Pipistrellus pipistrellus*
187	27/07/2022	04:05	53.33167 , -6.40051	*Pipistrellus pipistrellus*
188	27/07/2022	04:05	53.33165 , -6.40052	*Nyctalus leisleri*
189	27/07/2022	04:21	53.33166 , -6.4005	*Pipistrellus pipistrellus*
190	27/07/2022	04:29	53.33167 , -6.40052	*Nyctalus leisleri*

191	27/07/2022	04:34	53.33167 , -6.40057	*Pipistrellus pygmaeus*
192	27/07/2022	04:40	53.33162 , -6.40053	*Pipistrellus pipistrellus*
193	27/07/2022	04:41	53.33169 , -6.40057	*Pipistrellus pygmaeus*
194	27/07/2022	04:50	53.33165 , -6.40052	*Nyctalus leisleri*
195	27/07/2022	04:50	53.33165 , -6.40052	*Nyctalus leisleri*
196	27/07/2022	04:50	53.33165 , -6.40052	*Nyctalus leisleri*
197	27/07/2022	04:52	53.33163 , -6.40048	*Nyctalus leisleri*
198	27/07/2022	04:52	53.33163 , -6.40048	*Nyctalus leisleri*

APPENDIX 2 - PROTECTED SPECIES LEGISLATION

This section briefly describes the legal protection afforded to the protected species referred to in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice.

Bats

All species of bats (*Vespertilionidae*) in Ireland are listed on Annex IV of the Directive and are therefore classified as European Protected Species (EPS) and are considered to be of international conservation status and are subject to a regime of strict legal protection in Ireland under the provisions of the Habitats Regulations.

Part III of the Habitats Regulations establishes the protective regime which applies to EPS, wherever they occur, giving particular effect to the provisions of Article 12 of the Habitats Directive, making it an offence:

- deliberately to capture, injure or kill a wild animal of a European protected species;
- deliberately to disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;
- deliberately to disturb such an animal in such a way as to be likely to-
    - affect the local distribution or abundance of the species to which it belongs;
    - impair its ability to survive, breed or reproduce, or rear or care for its young; or
    - impair its ability to hibernate or migrate;
- deliberately to obstruct access to a breeding site or resting place of such an animal; or
- to damage or destroy a breeding site or resting place of such an animal.

Guidance on the consideration that Local Planning Authorities should give to nature conservation interests is contained in Directive 2001/42/EC of 27 June 2001, commonly known as the SEA Directive. The presence of a protected species is a material consideration when the authority is considering a developmental proposal. The protected status afforded to bats means planning authorities may require extra information (in the form of surveys, impact assessments and mitigation proposals), before determining planning applications for sites used by bats. Planning authorities may refuse planning permission solely on grounds of the predicted impact on protected species like bats. Designations of various kinds, both statutory and non-statutory, may further protect individual sites. Although the presence of bats does not in most instances preclude a land parcel from development, planning and licensing controls may limit the extent of disturbance, the timing of activities, and may well stipulate compensatory measures. Planning conditions are often used to this end. However, the grant of planning permission does not authorise the disturbance of bats or interference with their breeding or resting places. A separate derogation licence is required.