A bat assessment the Mall Shopping Centre, High Street & Quay Street, Balbriggan, Co. Dublin.

For Rhonellen Developments Ltd. 63 Fitzwilliam Square, D2.

C/o McGill Planning Ltd.45 Herbert Lane Dublin D02 RR92
Email: trevor@mcgplanning.ie

By Donna Mullen M.P.P.M and Brian Keeley BSc Hons in Zool

Maio, Tierworker, Kells Co Meath

Date of survey 26/05/2021

www.wildlifesurveys.net

Summary

There were low levels of bat activity in this area. Two species of bat were seen feeding around the building. No bats were seen entering or leaving the building. No bats were found to be roosting within the buildings on this occasion. However, the main building roof / car park area is being used by birds to nest in and any demolition should take place outside the nesting season.

Bat species found feeding and commuting on the site.

Common pipistrelle -Pipistrellus pipistrellus

Leisler's bat – Nyctalus Leisleri

Birds found nesting.

BOCCI red list species herring gull- Larus argentatus nesting in the roof in four places.

Swallows – Hirundo rustica were found nesting in the roof shed.

Recommendations

(1)Four 1FF Schwegler bat boxes with built-in timber panel bat boxes must be put in place. These should be placed on the building, at least 3m high, with a clear drop below (as bats need to drop to start their flight). These can be purchased from www.nhbs.com They must be placed in a dark area.

(2)In addition, two swift boxes should be placed on the new building or outbuildings. These can be purchased from https://birdwatchireland.ie/shop/

(3)All bats are sensitive to light pollution. Dark skies areas (under 3 Lux) must be maintained to the north and south of the buildings.

Lighting design will be in accordance with

Bats and Lighting – Guidance Notes for Planners, Engineers, Architects, and Developers (Bat Conservation Ireland, 2010).

- Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2018).
- Guidance Notes for the Reduction of Obtrusive Light GN01 (Institute of Lighting Professionals, 2011).

(4)Very little bat feeding occurred within the site. Landscaping of the area and planting with native species will enhance the area for bats. Plant species should be chosen from the All-Ireland Pollinator Plan.
http://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-friendlyplanting-code-temporary-draft.pdf .

Bat species found feeding and commuting on the site.

Common pipistrelle -Pipistrellus pipistrellus

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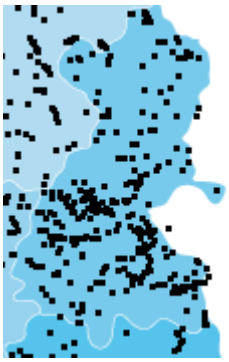
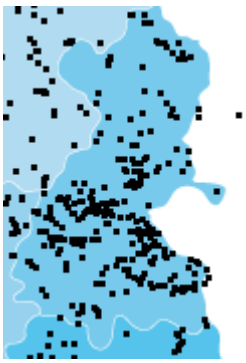
Desktop Survey of the existing environment

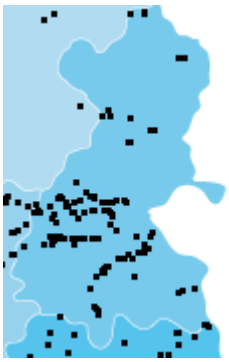
Thanks to Bat Conservation Ireland for their data.



Soprano pipistrelle distribution in Dublin

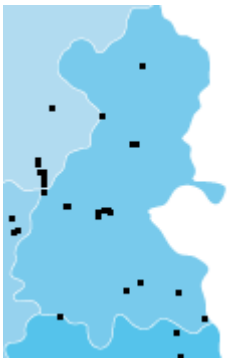


Leisler's bat distribution in Dublin

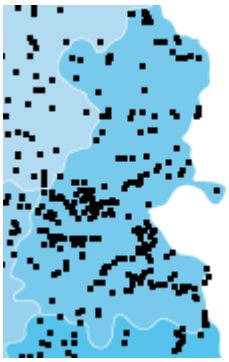


Daubenton's bat distribution in Dublin

Whiskered bat distribution in Dublin

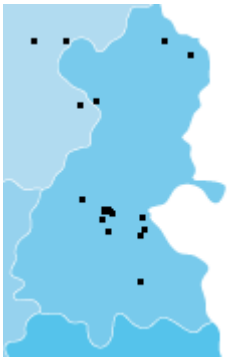


Natterers bat distribution in Dublin



Common pipistrelle distribution in Dublin

Brown long eared bat distribution in Dublin



Nathusius pipistrelle records for Dublin

Methodology for Bat Survey

Bat Survey – Equipment

Exide Lamp

Petzl Tikka Head torch

One mini time expansion detector and analysis software

Two EM3 time expansion detectors and kaleidoscope analysis software- two surveyors overnight

Two SM2 Mini detectors were left overnight on the windowsills of the outbuildings on the car park roof. One was by the pet shop, and one was on the window of the building to the west of the roof .The EM3's were handheld.

EM3 detector placed on a building on the roof.

Date 26 May 2021

Weather Conditions

18 -14C with heavy rain at dawn.

Habitat Classification (Fossitt 2000)

BL1 (Walls and stonework)

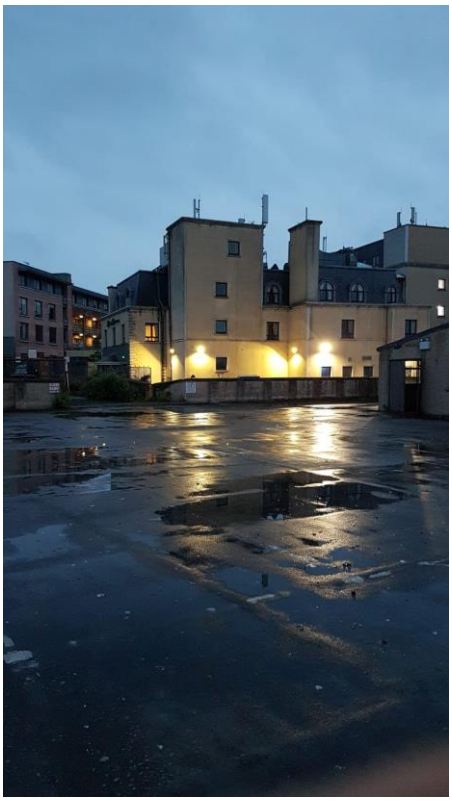
BL3 (Buildings)

ED3 (Recolonising bare ground)

Complexity of lands and ability to cover ground during surveys –All outdoor areas were accessible. All buildings and attics were accessible, with the exception of the bike/pet shop area. An overnight Mini song meter was placed in this area.

Sunset/sunrise – 21.38 5.07

Light pollution – Light levels are low throughout the site, with levels of 2 lux recorded on the roof at 22.17.



Light pollution from the adjacent area.

Planning proposal-The proposed development comprises a Build to Rent (BTR), Strategic Housing Development (SHD) as follows: Demolition of the existing buildings (former shopping centre and associated structures). Construction of 3 no. apartment blocks (Blocks A - C) ranging in height from 3 to 6 storeys (with Block B over 3 no. lower courtyard floors) providing a total of 101 units (19 no. studios, 41 no. 1-beds, 41 no. 2-beds). Provision of Resident Support Facilities/Resident Services and Amenities, 2 no. retail units, car parking (at ground floor), cycle parking, ESB substation/switch room, plant, bin stores, open space, landscaping, boundary treatments, all associated site works and services provision**.**

Constraints – Survey constraints

(1) Mobility of bats – Bat species are mobile and can move from roost to roost, depending on roost availability, feeding availability and weather conditions. They may move to roosts which have not been identified in this report in order to hibernate or create mating or feeding perches. A bat survey is a snapshot of bat activity over the survey time.

(2) Identification of bats- It can be difficult to differentiate myotis species. For this reason, the sound files are included within the report. Brown long eared bats are very quiet, and their presence can be overlooked in bat surveys as they may not register on bat detectors.

Report

The survey commenced at 20.00.The buildings were accessed and searched for signs of bats, droppings, staining, etc.

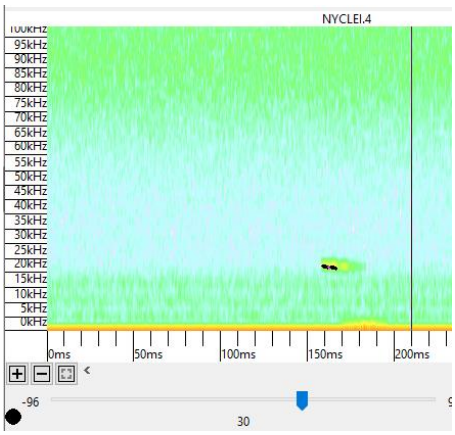
View of roofs and internal examiination of buildings

No signs of bats were found. The roof of the shopping centre is a car park, and much of the roof material is concrete and steel, which has low potential for bat usage. The roof of the pet shop and building beside it are tiles and torched felt, and have higher potential for usage, but are in very poor repair.

Four herring gull nests were found on the car park rpoof, and a swallows nest in a building on the car park roof. Swifts appear to be using a building close to the site.

Herring Gull Nesting

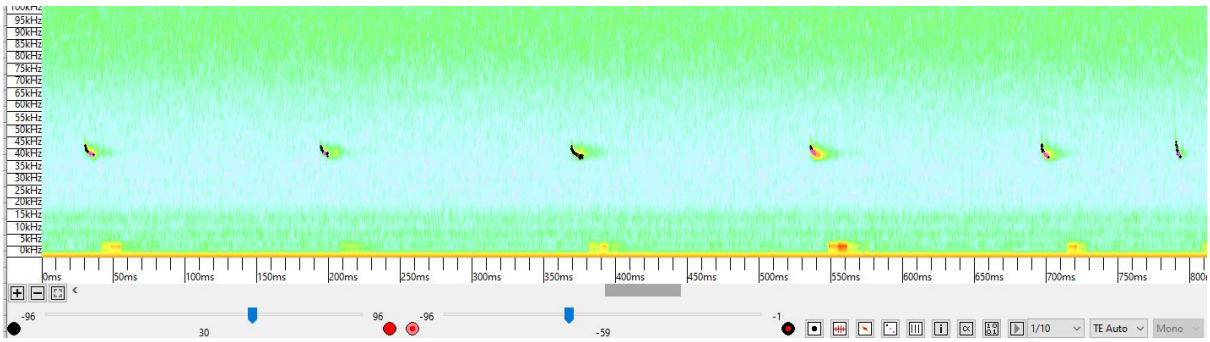
At 21.37, A Leisler's bat was recorded flying over the car park. At 2.56 and 3.37, it flew again over the roof near the pet shop.



Leisler's bat

A Leisler's bat was also recorded to the south of the site at 22.13.

At 21.54 a common pipistrelle flew over the car par roof.



Common pipistrelle 21.54

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Map of main bat activity over the site

Yellow Ovals – Static Mini song meter detectors

Blue triangle – Leisler's bat

Red triangle – Common pipistrelle

Bat transects covered by BK EM3 with Leisler's bats recorded off site.

Leisler's bat at 22.13 hours (yellow paddles)

Summary

There were low levels of bat activity in this area. Two species of bat were seen feeding and commuting around the building. No bats were seen entering or leaving the building. No bats were found to be roosting within the buildings on this occasion. However, the main building roof / car park area is being used by birds to nest in and any demolition should take place outside the nesting season.

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Swallows – Hirundo rustica were found nesting in the roof shed.

Potential impact on bat roosts, flight paths and feeding areas.

(1) Roost loss - Although no roosts were found on this occasion, there is low potential for roosts within the buildings. Provision of bat boxes will lead to a long-term positive effect on individual bats.

(2) Loss of feeding – Two species fed and commuted over the buildings overnight. However, there is very little vegetation present on the site. With planting from the All-Ireland pollinator plan, there will be a long-term neutral effect on individual bats.

(3) Light pollution – Lux levels on the site are 2 lux throughout the night. Even with mitigation, there is likely to be some light spillage on the site in the future. This will have a mild long-term negative effect on individual bats.

Recommendations

(1)Four 1FF Schwegler bat boxes with built-in timber panel bat boxes must be put in place. These should be placed on the building, at least 3m high, with a clear drop below (as bats need to drop to start their flight). These can be purchased from www.nhbs.com They must be placed in a dark area.

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Bat Biology

Female bats gather in groups known as maternity roosts in summer to have their young. They generally have one baby each year, so are slow to reproduce, and disturbance of a maternity roost can be catastrophic.

In winter bats move to old stonework, trees, and caves to hibernate. They are especially vulnerable here as they are slow to awaken, and if tree felling is carried out, they can easily be killed.

Legislation

Bats are protected under the 1996 Wildlife Act, the 2000 Wildlife (Amendment) Act, Stat Ist 94 of 1997, Stat Ist 378 of 2005, The Habitats Directive, The Bonn and Bern Convention, and the Euro bats agreement.

The European Community (Natural Habitats) Regulations S.I. No 94 of 1997 states:

23(1) The minister shall take the requisite measures to establish a system of strict protection for the fauna consisting of the animal species set out in Part 1 of the First Schedule prohibiting –

a) All forms of deliberate capture or killing of specimens of those species in the wild.

1. The deterioration or destruction of breeding sites or resting places of those species.

The EU Habitats Directive

Article 12(1) of the 'Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (Habitats Directive) states:

"Member States shall take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV(a) and their natural range, prohibiting:

a) all forms of deliberate capture or killing of specimens of these species in the wild.

b) deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation, and migration.

c) deliberate destruction or taking of eggs from the wild.

d. deterioration or destruction of breeding sites or resting places."

The EU Habitats Directive (92/43/EEC) lists all Irish bat species in Annex IV and one Irish species, the lesser horseshoe bat (Rhinolophus hipposideros), in Annex II. Annex II includes animal and plant species of community interest whose

conservation requires the designation of Special Areas of Conservation (SACs) because they are endangered, rare, vulnerable, or endemic. Annex IV includes various species that require strict protection. Article 11 of the Habitats Directive requires member states to monitor all species listed in the Habitats Directive and Article 17 requires States to report to the EU on the findings of monitoring schemes.

The Bern and Bonn Conventions

Ireland is also a signatory to a number of conservation agreements pertaining to bats such as the Bern and Bonn Conventions. The European Bats Agreement (EUROBATS) is an agreement under the Bonn Convention. Ireland and the UK are two of the 31 signatories. The Agreement has an Action Plan with priorities for implementation. Devising strategies for monitoring of populations of selected bat species in Europe is among the resolutions of EUROBATS.

1.3.1 The Berne Convention

Article 6 of the "Convention on the Conservation of European Wildlife and Natural Habitats' (Berne Convention) reads:

"Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species:

a) all forms of deliberate capture and keeping and deliberate killing.

b) the deliberate damage to or destruction of breeding or resting sites.

c) the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention; ...

Appendix II lists strictly protected fauna species and this list includes "Microchiroptera, all species except Pipistrellus pipistrelles".

The EUROBATS Agreement

The 'Agreement on the Conservation of Populations of European Bats' (EUROBATS) was negotiated under the 'Convention for the Conservation of Migratory Wild Species' (Bonn Convention) and came into force in January 1994. The legal protection of bats and their habitats are given in Article III as fundamental obligations:

"1. Each Party shall prohibit the deliberate capture, keeping or killing of bats except under permit from its competent authority.

2. Each Party shall identify those sites within its own area of jurisdiction which are important for the conservation status, including for the shelter and protection, of bats. It shall, taking into account as necessary economic and social considerations,

protect such sites from damage or disturbance. In addition, each Party shall endeavour to identify and protect important feeding areas for bats from damage or disturbance."

The Agreement covers all European bat species.

Contact Details: I can be contacted at 087 7454233. My email is donnamullen@wildlifesurveys.net and web site is www.wildlifesurveys.net

Appendix I

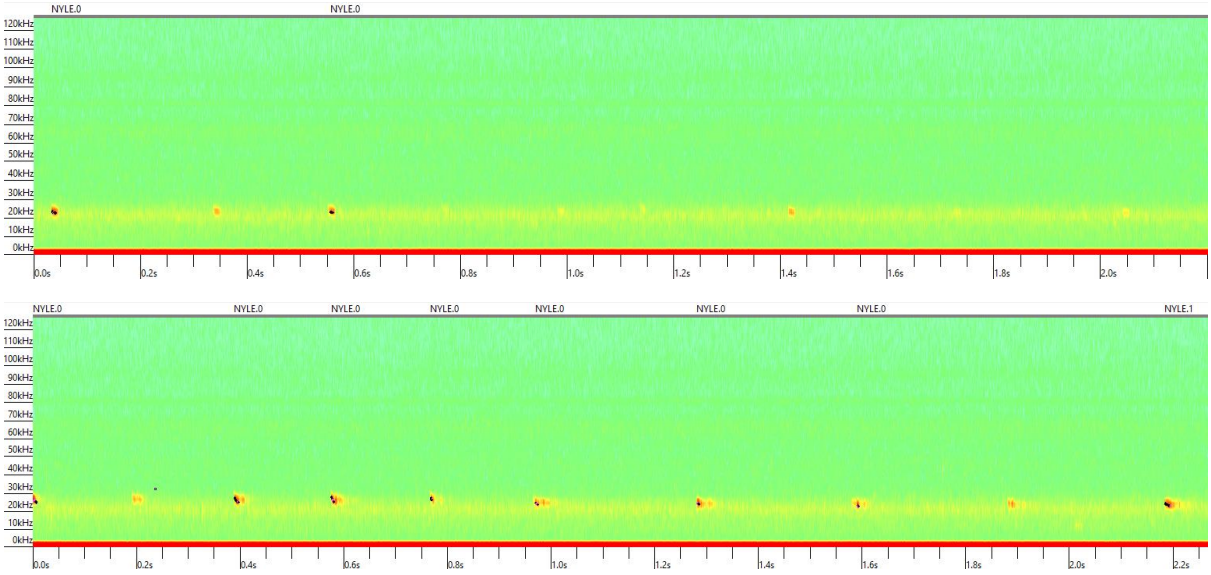
EM3 handheld detector results – Donna Mullen

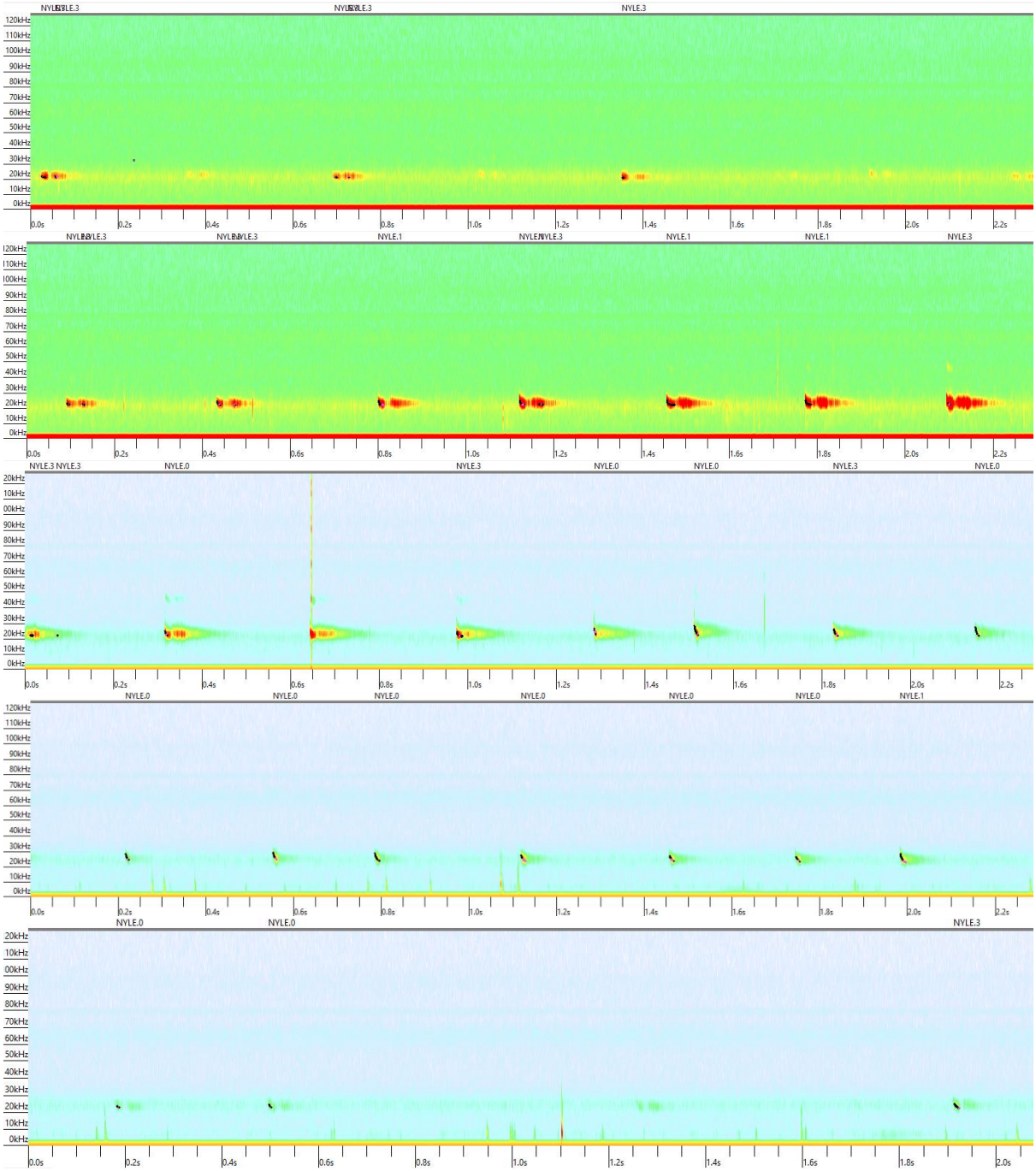
File Help

	FOLDER	IN FILE	OUT FILE FS	OUT FILE ZC	AUTO ID	PULSES	MATCHING	MATCH RATIO
1		EM3__20210527_213709.wav	EM3__20210527_213724_000.wav		NYCLEI	3	3	1.000000
2		EM3__20210527_205706.wav	EM3__20210527_205706_000.wav		Noise			
3		EM3__20210527_212107.wav	EM3__20210527_212107_000.wav		Noise			
4		EM3__20210527_212137.wav	EM3__20210527_212137_000.wav		Noise			
5		EM3__20210527_212207.wav	EM3__20210527_212207_000.wav		Noise			
6		EM3__20210527_212237.wav	EM3__20210527_212237_000.wav		Noise			
7		EM3__20210527_212307.wav	EM3__20210527_212307_000.wav		Noise			
8		EM3__20210527_212337.wav	EM3__20210527_212337_000.wav		Noise			
9		EM3__20210527_212407.wav	EM3__20210527_212407_000.wav		Noise			
10		EM3__20210527_212437.wav	EM3__20210527_212437_000.wav		Noise			
11		EM3__20210527_212507.wav	EM3__20210527_212507_000.wav		Noise			
12		EM3__20210527_212607.wav	EM3__20210527_212607_000.wav		Noise			
13		EM3__20210527_212537.wav	EM3__20210527_212537_000.wav		Noise			
14		EM3__20210527_212637.wav	EM3__20210527_212637_000.wav		Noise			
553		EM3__20210528_044455.wav	EM3__20210528_044455_000.wav		Noise			
554		EM3__20210528_044124.wav	EM3__20210528_044139_000.wav		Noise			
555		EM3__20210528_044525.wav	EM3__20210528_044525_000.wav		Noise			
556		EM3__20210528_044154.wav	EM3__20210528_044209_000.wav		Noise			
557		EM3__20210528_044225.wav	EM3__20210528_044239_000.wav		Noise			
558		EM3__20210528_044255.wav	EM3__20210528_044310_000.wav		Noise			
559		EM3__20210528_044325.wav	EM3__20210528_044340_000.wav		Noise			
560		EM3__20210528_044355.wav	EM3__20210528_044410_000.wav		Noise			
561		EM3__20210528_044425.wav	EM3__20210528_044440_000.wav		Noise			
562		EM3__20210528_044455.wav	EM3__20210528_044510_000.wav		Noise			
563		EM3__20210528_044525.wav	EM3__20210528_044540_000.wav		Noise			
564		EM3__20210527_215441.wav	EM3__20210527_215456_000.wav		PIPPIP	11	5	0.455000

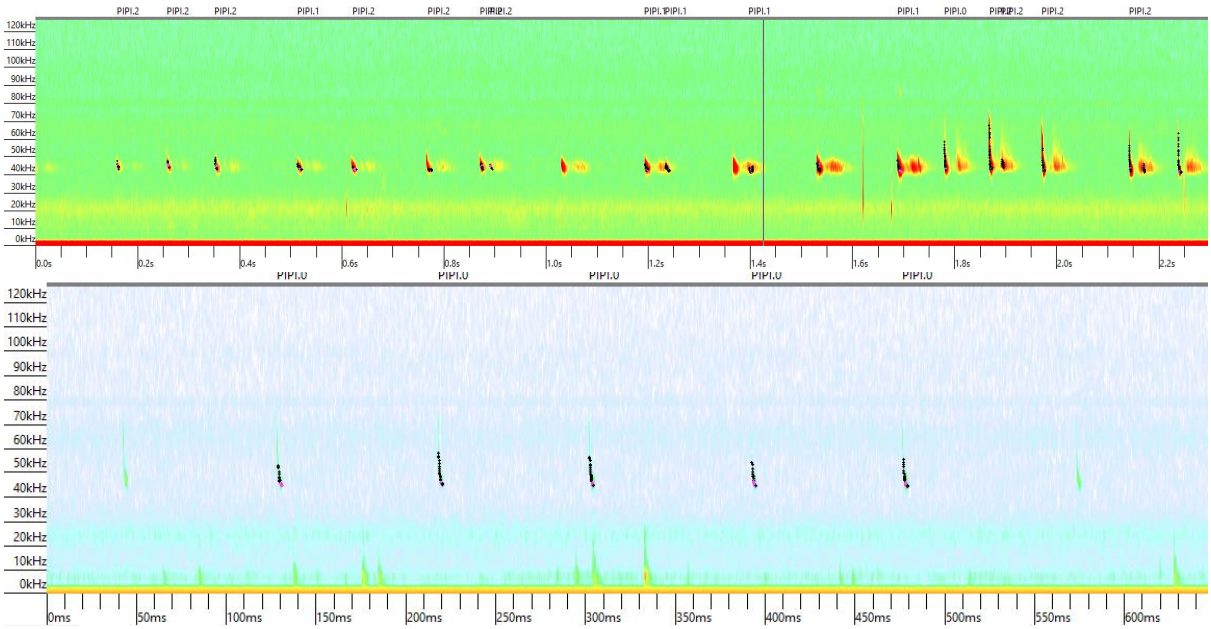
Appendix II

EM3 Results – Brian Keeley – handheld detector





Leisler's bat at 21.26, 21.37 (second and third signals), 22.37 (fourth and fifth signals) hours 27th May 2021, 02.56 (sixth and seventh signals) hours, 03.37 hours (eighth signal), 28th May 2021



Common pipistrelle 21.55 hours 27th May 2021 and 04.18 hours (final signal) 28th May 2021

Appendix III

Song meter mini recordings

All signals recorded by Song meter Mini near Pet Shop 27th to 28th May 2021.

DATE	TIME	AUTO ID	PULSES	MATCHING	MANUAL ID
27/05/2021	21:26:52	NYLE	2	2	NYLE
27/05/2021	21:37:33	NYLE	16	16	NYLE
27/05/2021	21:37:38	NYLE	5	5	NYLE
27/05/2021	21:55:11	PIPI	22	20	PIPI
27/05/2021	22:37:26	NYLE	16	16	NYLE
27/05/2021	22:37:31	NYLE	14	14	NYLE
28/05/2021	02:56:30	NYLE	12	12	NYLE
28/05/2021	02:56:35	NYLE	5	5	NYLE

28/05/2021	03:37:46	NYLE	6	6	NYLE
28/05/2021	04:18:38	PIPI	6	6	PIPI

Appendix IV

Song meter mini recordings, placed on windowsill at the building on the car park to the west of the site.

File Help

	FOLDER	IN FILE	OUT FILE FS	OUT FILE ZC	AUTO ID	PULSES	MATCHING	MATCH RATIO	MANUAL ID
1		DM1_20210527_213604.wav	DM1_20210527_213604_000.wav		NYCLEI	21	21	1.000000	NYCLEI
2		DM1_20210527_213747.wav	DM1_20210527_213747_000.wav		NYCLEI	20	20	1.000000	NYCLEI
3		DM1_20210528_025641.wav	DM1_20210528_025641_000.wav		NYCLEI	20	20	1.000000	NYCLEI
4		DM1_20210527_223749.wav	DM1_20210527_223749_000.wav		NYCLEI	14	14	1.000000	NYCLEI
5		DM1_20210527_221317.wav	DM1_20210527_221317_000.wav		NYCLEI	9	9	1.000000	Noise
6		DM1_20210527_223734.wav	DM1_20210527_223734_000.wav		NYCLEI	9	9	1.000000	Noise
7		DM1_20210528_033802.wav	DM1_20210528_033802_000.wav		NYCLEI	2	2	1.000000	Noise
8		DM1_20210527_215529.wav	DM1_20210527_215529_000.wav		NoID	21	0	0.000000	PIPPIP
9		DM1_20210528_040448.wav	DM1_20210528_040448_000.wav		NoID	2	0	0.000000	Noise
10		DM1_20210528_040504.wav	DM1_20210528_040504_000.wav		NoID	2	0	0.000000	Noise
11		DM1_20210528_044726.wav	DM1_20210528_044726_000.wav		NoID	2	0	0.000000	Noise
12		DM1_20210527_213302.wav	DM1_20210527_213302_000.wav		Noise				Noise
13		DM1_20210527_220833.wav	DM1_20210527_220833_000.wav		Noise				Noise

1466		DM1_20210528_044427.wav	DM1_20210528_044427_000.wav		Noise				
1467		DM1_20210528_052123.wav	DM1_20210528_052123_000.wav		Noise				
1468		DM1_20210528_044443.wav	DM1_20210528_044443_000.wav		Noise				
1469		DM1_20210528_052113.wav	DM1_20210528_052113_000.wav		Noise				
1470		DM1_20210528_044458.wav	DM1_20210528_044458_000.wav		Noise				
1471		DM1_20210528_044513.wav	DM1_20210528_044513_000.wav		Noise				
1472		DM1_20210528_044907.wav	DM1_20210528_044907_000.wav		Noise				
1473		DM1_20210528_044645.wav	DM1_20210528_044645_000.wav		Noise				
1474		DM1_20210527_235121.wav	DM1_20210527_235121_000.wav		PIPNAT	9	9	1.000000	PIPPIP
1475		DM1_20210527_232030.wav	DM1_20210527_232030_000.wav		PIPPIP	16	16	1.000000	PIPPIP
1476		DM1_20210528_030429.wav	DM1_20210528_030429_000.wav		PIPPIP	13	12	0.923000	PIPPIP
1477		DM1_20210527_225014.wav	DM1_20210527_225014_000.wav		PIPPIP	11	11	1.000000	PIPPIP
1478		DM1_20210527_232015.wav	DM1_20210527_232015_000.wav		PIPPIP	8	8	1.000000	PIPPIP
1479		DM1_20210528_003533.wav	DM1_20210528_003533_000.wav		PIPPIP	7	7	1.000000	PIPPIP