



AEWC^{Ltd}

Animal Ecology & Wildlife Consultants

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Dear Alastair

Ref: Night Roost Monitoring – Northern United 2019

Thank you for contracting us to undertake this work as part of the suite of monitoring works that are being undertaken at Northern United.

The purpose of this monitoring was to identify the suitability, and use of the night roosts created to be used by bats, notably Lesser Horseshoe bats.

A SM4 logger was installed in each of the night roosts on the 14th July and removed on the 16th August, a total of 33 nights; and on the 19th September and removed on the 13th October, a total of 24 nights with the aim of recording any bats that will enter the roost while these are recording. It should however note that these are sensitive detectors, and as the night roosts are small and have an opening, louder bats that are not inside the night roost, but nearby outside can be easily recorded.

All recordings were run through kaleidoscope Pro to identify the species level. These were identified to species where suitable, for non-cryptic species, and to groups for cryptic species.

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The monitoring recorded a total of 12561 files over the two sites in, of which 7124 were identified by the Auto ID program to be bat passes in July/August; and 6359 files in September/October, of which 1680 were identified to be bat passes. (see table 1)

Lennetshill – this recorded from the 14th July to 29th July and identified LHB present on each night, with a low of 15 and high of 128 recordings in any one night making up 84% of recordings during this period.

The second survey period in September monitoring stopped after 4 days.

Hucksters Way – this recorded from the 15th July to 16th August. This logger had regular, but notably lower level of LHB activity, with a peak of 17 recordings in one night. During this time there was high number of pipistrelle recordings as would be expected for a more open location adjacent to a large track.

The second monitoring period from 19th September to 4th October recorded much higher activity with a peak of 151 LHB recordings in one night, accounting for 92% of all recordings during this time.

For both night roosts the number of Lesser Horseshoe bats was considered to be high, making up 19.9% of all recordings identified in July/August and 65.4% of all the recordings identified in September/October. As this species has a high attenuation of the calls it is notably less likely to be recorded when outside the roost than other species unless very near the entrance.

The percentage can also be compared to the monitoring that has been conducted locally with loggers where the percentage of Lesser Horseshoe bats makes up about 1.8% of static logger recordings from the 2013 surveys across the NU area, and only 0.11% of static loggers from monitoring conducted in 2015.

The monitoring from the night roosts is notably higher than would be expected when compared to normal loggers used in the area, while the results cannot be used to show how many individuals are using the roost either at any one time, or in total the recordings taken are regularly and consistent indicating regular use.

If you have any queries, please do not hesitate to contact me.

Best regards

Daniel Whitby

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Managing Director / Consultant Ecologist

Table 1 – results of Auto Id from the two night roosts

Species	West (Hicksters)		East (Lennetshill)	
	July	September	July	September
B. barb	18	1	0	0
Myotis sp.	17	37	3	0
Big bats (N.n, N.l, E.s)	92	11	1	2
P. nat	22	0	0	0
P. pip	4475	30	174	327
P. pyg	949	14	12	56
BLEB	27	13	3	3
GHB	2	0	1	0
LHB	136	1280	1035	63
Total	5738	1386	1229	451