



Mr Christopher Wright
Morris Homes Northern Ltd
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Altrincham Road
Wilmslow
Cheshire
SK9 5NW

DATE: 19th August 2024
SITE: East Lancs Paper Mill (Cricket Relocation Area)
REFERENCE: UES03854/12

Dear Mr Wright,

BAT ACTIVITY SURVEY – INTERIM REPORT

I am writing to provide a summary of the bat activity survey results to date at the East Lancs Paper Mill (Cricket Relocation Area), Radcliffe. The bat activity surveys have been undertaken to discharge condition 15 of planning permission 67597 issued by Bury Council:

Any application for reserved matters approval relating to the area for the proposed relocation of the cricket club facility (as defined in the informatives) shall include Bat Activity Surveys of this area. The survey shall include appropriate mitigation measures and the approved scheme shall be implemented in accordance with the programme approved as part of the Bat Activity Survey.

Reason. In order to ensure that no harm is caused to a Protected Species pursuant to policies EN6 – Conservation of the Natural Environment and EN6/3 – Features of Ecological Value of the Bury Unitary Development Plan and Section 11 of the National Planning Policy Framework.

Site details & proposed development

The proposed development is for the creation of a cricket pitch, clubhouse and associated facilities.

The land parcel has an area of approximately 7.5ha and predominantly comprises a large area of marshy grassland with encroaching / scattered stands of grey willow *Salix cinerea* and osier *Salix viminalis* scrub. On the western boundary (bordering the main development) there is a strip of broadleaved woodland, on the northwest side of which is a large pond (located outside of the cricket relocation site). The habitats on site offer a range of roosting and foraging opportunities for a variety of bat species.

Methodology

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This letter provides an interim report on the static bat detector surveys undertaken April to July inclusive, and the transect surveys undertaken on 22nd April 2024 and 24th July 2024. These surveys were conducted by:

- Bethan Beeston BA, UES Field Ecologist. Bethan is licensed by Natural England to survey all species of bats by observation using an artificial light under licence number 2024-12098-CL17-BAT (level 1).
- Robert Mooney MSc, UES Ecologist
- Bethany Dineley BSc, UES Graduate Ecologist
- Toby Leverett BSc MSc, UES Trainee Ecologist

All surveys were carried out to recognised guidelines, timings and weather conditions, with particular reference to Natural England and BCT publications (see references for further information).

Transect surveys

A transect route was determined during previous walkover surveys of the site. Care was taken to cover the entire site, especially any habitats considered to be of particular suitability for roosting, foraging or commuting bats. The transect route is provided at Appendix 1 – Site plan.

The site is considered to present low to moderate suitability habitat for bats, therefore one walkover survey was undertaken per season (spring April/May, summer June/July/August and autumn September/October) as per the Bat Conservation Trust (BCT) survey guidelines.

During each survey visit, two surveyors walked slowly along the transect route, equipped with Elekon Batlogger M bat detectors and recorders. This device records bat echolocation calls across the full spectrum, with a sensitivity range of 10 – 150 kHz. The integrated heterodyne live monitoring also allows the observer to hear the echolocation calls in real time, with automatic tuning. The recordings are individually time/date, GPS and temperature stamped, and are of high enough quality to produce time expansion quality sonograms. Any observations of bats were recorded, including time, species, location, number of bats, flight direction, flight height and behaviour, where possible.

The starting point and direction of the transect route was varied throughout the surveys, to reduce survey bias.

The survey dates, timings and weather conditions are provided in the table below.

SITE VISIT N ^o	DATE	Temp (°C)	CLOUD COVER (%)	RAIN	WIND (0-12)	VISIBILITY
1	22/04/24	10	90	Rained before survey.	1	Good
2	24/07/24	18	90	None	2	Good

Static detector surveys

In addition to the transect surveys, static detectors were deployed across the site, fixed to mature trees in discrete locations that were anticipated to record bat activity. Static detectors were deployed in two locations across the site (see Appendix 1).

The static detectors were set to record for a minimum of five consecutive nights per month in their respective locations, from April to October inclusive, as per the BCT survey guidelines. Following each recording cycle, each detector's batteries were changed, the data was retrieved, and detectors re-set to record. The following static detectors were used during the survey:

- Two Anabat Swift static bat detectors were used in April. This device uses frequency division technology with a frequency range of 5 – 150kHz and records echolocation calls in zero crossing format. It has an integrated GPS receiver which automatically sets the internal clock, calculates sunset and sunrise times and records the location. All registrations are automatically recorded onto an SD card and time, date and temperature stamped.
- Two Anabat Express static bat detector were used May to July. This device uses frequency division technology with a frequency range of 5 – 150kHz and records echolocation calls in zero crossing format. It has an integrated GPS receiver which automatically sets the internal clock, calculates sunset and sunrise times and records the location. All registrations are automatically recorded onto an SD card and time, date and temperature stamped.

The transect survey data was analysed manually using Bat Explorer by a suitably trained ecologist.

All static detector data was analysed using the British Trust for Ornithology (BTO) acoustic pipeline software and a random sample of the full dataset was subject to quality assurance (manual sound analysis) to ensure bat calls are being correctly classified.

Survey limitations

One of static detectors deployed in June and July failed to record bat activity due to technical / file corruption issues, this led to data only being collected from the southern static during these months. However, previously both statics had recorded similar species and quantities of calls, and so it can be surmised that similar data would have been recorded by both detectors in June and July also. Therefore, this is not considered to be a significant limitation. Additionally, due to the same equipment malfunction the same five consecutive days could not be selected from each month for analysis. However, the five selected days were always more than three weeks apart and in fair weather conditions; therefore, this is not considered to be a significant survey limitation.

This interim report contains only part of the full seasons survey data and any inferences drawn from this partial dataset may change upon analysis of the full dataset at the end of the season. Furthermore, only data showing high levels of confidence / accuracy in their classification have been included, data with lower confidence will need to be subjected to further analysis.

Results

Transect surveys

A minimum of four species were recorded during the transect surveys conducted on 22nd April 2024 and 24th July 2024 including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared (BLE) *Plecotus auritus* and a *Myotis* species.

Moderate levels of bat activity were recorded during the surveys with the majority of bats recorded being common pipistrelles (approximately 92 % of all transect recordings). Soprano pipistrelles accounted for 6% of all transect recordings; all other species were recorded to a lesser extent.

Across all species, significantly more activity was recorded in April (approximately 62% of all transect recordings) than July (approximately 38% of all transect recordings). In general bat activity was concentrated to the west of site, along the edges of the woodland and willow scrub. Further information will be provided within the bat activity report to be compiled at the end of the survey season.

Static detector surveys

A minimum of five species were recorded during the static detector surveys conducted between April and July 2024: common pipistrelle, soprano pipistrelle, BLE, noctule *Nyctalus noctula* and a *Myotis* species.

Moderate levels of bat activity were recorded by the static detectors with common pipistrelle being by far the most recorded species at 98.64%. Other species were recorded to a lesser extent.

Based on the average number of recordings per month, across all species, the majority of activity was recorded in April (approximately 47.17% of all static detector recordings), May (approximately 27.65% of all static detector recordings), June (approximately 12.65% of all static detector recordings) and July (approximately 12.53% of all static detector recordings). Although it should be noted that the data for June and July may be skewed due to the failure of Static 1 for those months.

Static detectors 1 and 2 did not differ greatly in the quantity of recorded data, gathering approximately 43.98% and 56.02% of all recordings respectively. This is unsurprising as both are located in good foraging and commuting habitats, within areas of woodland bordering marshy grassland, a small pond (Static 1) and willow scrub (Static 2).

Evaluation and recommendations

Common pipistrelles accounted for 91.92% of the transect survey data and 98.64% of the static detector data. Common pipistrelles were frequently recorded by both static detectors. Similar numbers of recordings were collected from Static 1 and 2 with common pipistrelles recorded utilising the areas of woodland and scrub and the borders of the wet grassland. Common pipistrelles accounted for the majority of data, this is likely because they are a common and widespread species and fair better in the urban environments that surround the site i.e. more tolerant of light pollution.

Soprano pipistrelles accounted for 5.68% of the transect survey data and 0.25% of the static detector data. Soprano pipistrelle activity was higher during the transect surveys, which may be due to the transect route capturing areas favoured by soprano pipistrelles, or it may simply be as a result of the smaller sample size when compared to the larger dataset collected by the static detectors. Similar levels of activity were recorded between Statics 1 and 2. As with common pipistrelles, it is likely they utilise the higher quality habitats onsite, such as woodland, scrub and grassland borders, for foraging and commuting.

Myotis sp. accounted for 2.02% of the transect survey data and 0.95% of the static detector data. *Myotis* sp. activity was uniform across the site for both statics and activity surveys, with slightly higher recordings in the northwest corner of site during activity surveys. A number of bat passes were recorded near a large waterbody just beyond the northwest site boundary, which are most likely Daubenton's *Myotis daubentonii*.

Noctule were not recorded during the transect surveys and accounted 0.02 % of the static detector data. As such a small number of Noctule recordings were returned it is deemed unlikely they are utilising site for anything more than sporadic foraging or commuting. Although this may change as more data is collected.

BLE accounted for 0.38% of transect survey data and 0.15% of all static detector data. The low number of BLE recordings in comparison to other species may be due to their tendency to avoid echolocating, their tendency to have quieter echolocation calls or may simply be due to a lower number of BLE using the survey area.

The seasonal usage of the site based on the static data generally follows the anticipated trend. Bat activity was highest in April and May, as would be expected due to bats reducing the amount of time spent in torpor and more time feeding as the temperature increases. Levels of bat activity dropped significantly during June and July. The transect surveys also recorded bat activity peaking in April. Bats were not observed swarming during the surveys. As stated in the limitations, these summaries are informed by a partial dataset and the conclusions drawn may change as a result of the further survey work due to be undertaken.

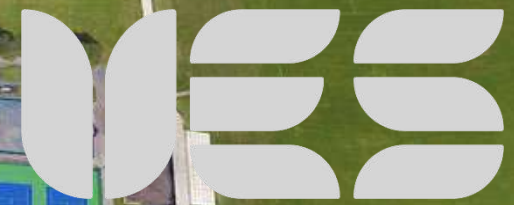
As the proposed development will result in the loss of a large area of suitable foraging and commuting habitat, the proposed development has potential to adversely affect bat populations utilising the site. Compensation for the loss of foraging and commuting opportunities for bat species on site is recommended and may be provided through the retention of the most valuable habitats in addition to the implementation of a well-designed landscaping scheme (on and / or off site). The installation of a suite of bat boxes on site would also enhance roosting opportunities for bats locally. A full summary of recommendations for necessary mitigation and compensation will be determined upon conclusion of the remaining surveys.

If you require anything else or wish to discuss, please do not hesitate to get in touch with myself or another member of staff at UES.

Yours faithfully,

Harry Fox BSc MRes
Graduate Ecologist
United Environmental Services Ltd

Appendix 1 – Site plan



East Lancs Paper Mill, Radcliffe

Site plan

- Development boundary
- Transect route
- ★ Stopping points
- ★ Static detector 1
- ★ Static detector 2

Appendix 2 – Survey results

Static Detector Monitoring Surveys - percentage of total number of recordings			
Bat Species	Static 1	Static 2	Grand Total
Brown long-eared	0.01%	0.15%	0.15%
Common pipistrelle	43.29%	55.34%	98.64%
<i>Myotis</i>	0.48%	0.47%	0.95%
Noctule	0.01%	0.01%	0.02%
Soprano pipistrelle	0.19%	0.06%	0.25%
All Species	43.98%	56.02%	100.00%

Table 1 – A summary of all species recordings across the detectors as a percentage of total recordings.

Static Detector Monitoring Surveys - percentage of total number of recordings					
Bat Species	April	May	June	July	Grand Total
Brown long-eared	0.01%	0.00%	0.15%	0.00%	0.15%
Common pipistrelle	46.68%	27.38%	12.12%	12.46%	98.64%
<i>Myotis</i>	0.40%	0.13%	0.38%	0.03%	0.95%
Noctule	0.00%	0.01%	0.00%	0.01%	0.02%
Soprano pipistrelle	0.08%	0.12%	0.01%	0.03%	0.25%
Grand Total	47.17%	27.65%	12.65%	12.53%	100.00%

Table 2 – A summary of all species as a percentage of total recordings across all surveyed months.

Static Detector Monitoring Surveys - percentage of total number of recordings					
Static	April	May	June	July	Grand Total
Static 1	19.49%	24.49%	N/A	N/A	43.98%
Static 2	27.68%	3.16%	12.65%	12.53%	56.02%
Grand Total	47.17%	27.65%	12.65%	12.53%	100.00%

Table 3 – A summary of the total recordings per static detector each month.

Static Detector Monitoring Surveys - percentage of species recordings per static		
Bat Species	Static 1	Static 2
Brown long-eared	0.01%	0.26%
Common pipistrelle	98.44%	98.79%
<i>Myotis</i>	1.08%	0.84%
Noctule	0.03%	0.01%
Soprano pipistrelle	0.43%	0.10%
Grand Total	100.00%	100.00%

Table 4 – A summary of species recordings as a percentage of each statics total recordings

Nighttime Walkover Surveys - Percentage of species recordings per survey by month			
Bat Species	April	July	All Surveys
Brown long-eared	0.61%	0.00%	0.38%
Common pipistrelle	90.57%	94.08%	91.92%
<i>Myotis</i>	2.87%	0.66%	2.02%
Soprano pipistrelle	5.94%	5.26%	5.68%
Grand Total	100.00%	100.00%	100.00%

Table 5 – A summary of the % recordings of each species per survey.