Dusk bat activity survey

Site at former Fole Dairy

Surveyor: Dr. Stefan Bodnar BSc (Hons) PhD MCIEEM NE bat class license (level 2 survey)

Report to C B Colllier F.D. Ltd.

Consultant

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1. Introduction

The surveys detailed here have been carried out to determine if the level of activity and presence of any potential roosts at a section of a site known as Fole Dairy, Uttoxeter. It was required to ensure no roosts were present at a section of the Bottling plant (the section identified with low bat roost potential) and in addition a canteen area (attached to, but not part of the old Mill building, Category: Low Roost Potential)) prior to demolition of these structures. There is a recorded roost on the site, though this is confined to the Old Mill building (not affected by the proposed works at this stage). The areas are shown below:

The garages had no access/egress features noted with the windows bordered with metal sheeting and the roller door closed. The brickwork was considered to be in good condition with no cracks/crevices identified. Areas of the fascia were lifting with evidence of previous blue tit nesting at one location, which creates a potential access/egress point for bats.

Canteen area shown below:

This report which follows the survey, specifically contains the following:

Survey/ Mitigation report

- Details of habitats on site that may support species of bats
- Results of survey(s) including numbers recorded, location, status of area (with bats whether it is maternity or hibernation site)
- An assessment of the impact of the scheme on bats present on the site
- Any mitigation proposals
- Details of any post construction monitoring proposals and any short, medium and long term management proposals for the habitat or bats
- Any site specific advice

This survey follows a previous Preliminary Ecological Appraisal survey undertaken in February 2018 by Dr. Stefan Bodnar MCIEEM, which identified the following:

Bottling Plant -	**Negligible** Small area low	Should potentially intrusive works be required to the Bottling Plant (e.g. refurbishment / dismantling / demolition). **No further survey, except area denoted as Low BRP. For this area only, one Nocturnal Activity Surveys to be conducted in May-September 2018.**
Tank and Garages -	**Negligible** Small area low	Should potentially intrusive works be required at the garages (e.g. refurbishment / dismantling / demolition). **No further survey, except area denoted as Low BRP. For this area only, one Nocturnal Activity Surveys to be conducted in May-September 2018.**

From this, and in line with BCT Good Practice guidelines (2016) a single further emergence/activity survey was recommended to determine any potential impacts on Protected species, specifically bats.

Table 7.2 Recommended timings for presence/absence surveys.

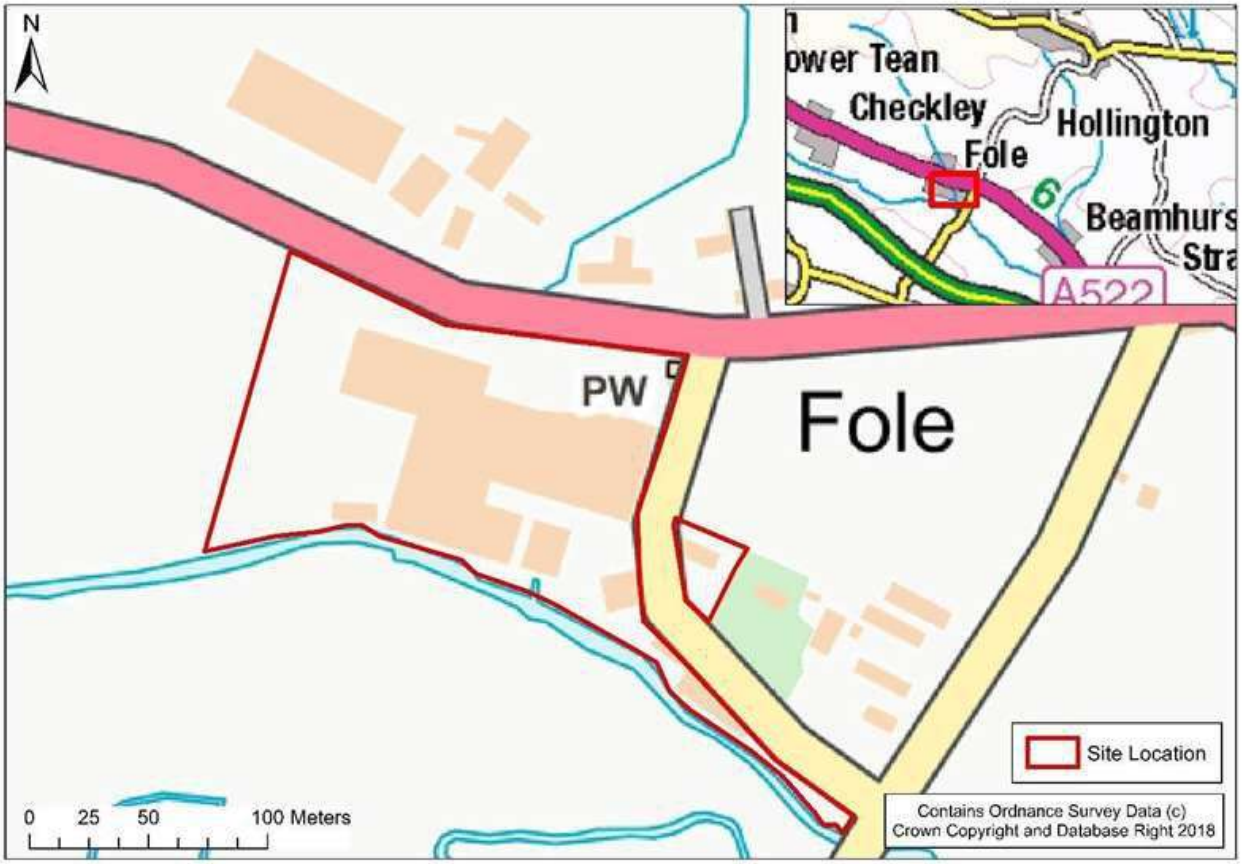
Survey type	Start time	End time
Dusk emergence	15 minutes before sunset[a]	1.5–2 hours after sunset[b]
Dawn re-entry	1.5–2 hours before sunrise[b]	15 minutes after sunrise[c]

[a] Survey start time should be adjusted on subsequent surveys if bats are recorded already in flight at 15 minutes before sunset on the first survey (or, if only one survey had been planned, this survey may then need to be repeated).
[b] The possibility of late-emerging and early-returning species should be considered in setting times for surveys (see Section 3.5).
[c] If bats are still in flight 15 minutes after sunrise then ecologists should remain in position until all the bats have entered their roosts.

1.2. Site Location

Fole Dairy is located north-west of Uttoxeter (NGR: SK 04358 37323, centre of area), see Figure 1-1 below. The site area is immediately north of the River Tean, within an arable-dominated landscape. Fole Dairy is a disused dairy farm and several buildings are present within the site area which will require demolition as part of the works.

All parts of the site and buildings were available for access. The site is shown below.



1.3. General Site Description and Status

The majority of the site supports disused buildings bound by expanses of hardstanding. These were predominantly constructed from brick and breezeblock walls with pitched corrugated sheet roofing at single-storey level. Many of the buildings had access and egress points for bats, predominantly via broken windows The brickwork was generally considered to be in good condition with only few cracks and areas of deterioration noted. The guttering and horizontal ledges of the buildings were also considered suitable for nesting birds.

1.4. Brief Description of Project

It is understood that the overall Planning application refers to new build residential development. Refer to planning application for detailed plans.

2. Bat Emergence Surveys

2.1 Approach and Brief:

a. The methods employed follow The Bat Conservation Trust Good Survey guidelines (2016) and involved one dusk survey, following current guidelines (shown below). The survey comprises a minimum of 3 surveyors using bat detectors.

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b. The key surveyor present throughout has a Natural England bat survey license (survey level 2), which he has held for a number of years. (Dr. Stefan Bodnar), assisted by Dr. L. Sutherland MIALE, a member of Warwickshire Bat Group and an experienced bat surveyor, and Carrie Allcock MSc. , a trainee bat surveyor.

2.2 Detailed Methodology

- **1 Evening activity surveys**

  One evening activity survey carried out using Bat detectors and an appropriate number of surveyors for the area concerned. The evening survey was carried out fifteen minutes prior to sunset and continued for ninety minutes to 120 after sunset. Weather conditions during the evening activity surveys were recorded. Bat activity at the site was mapped and any signs of roost formation determined.

The evening emergence/activity Survey was conducted on 3rd May 2018.

The following detectors were used in heterodyne mode:

- 2x Batbox duet, 1 x Magenta

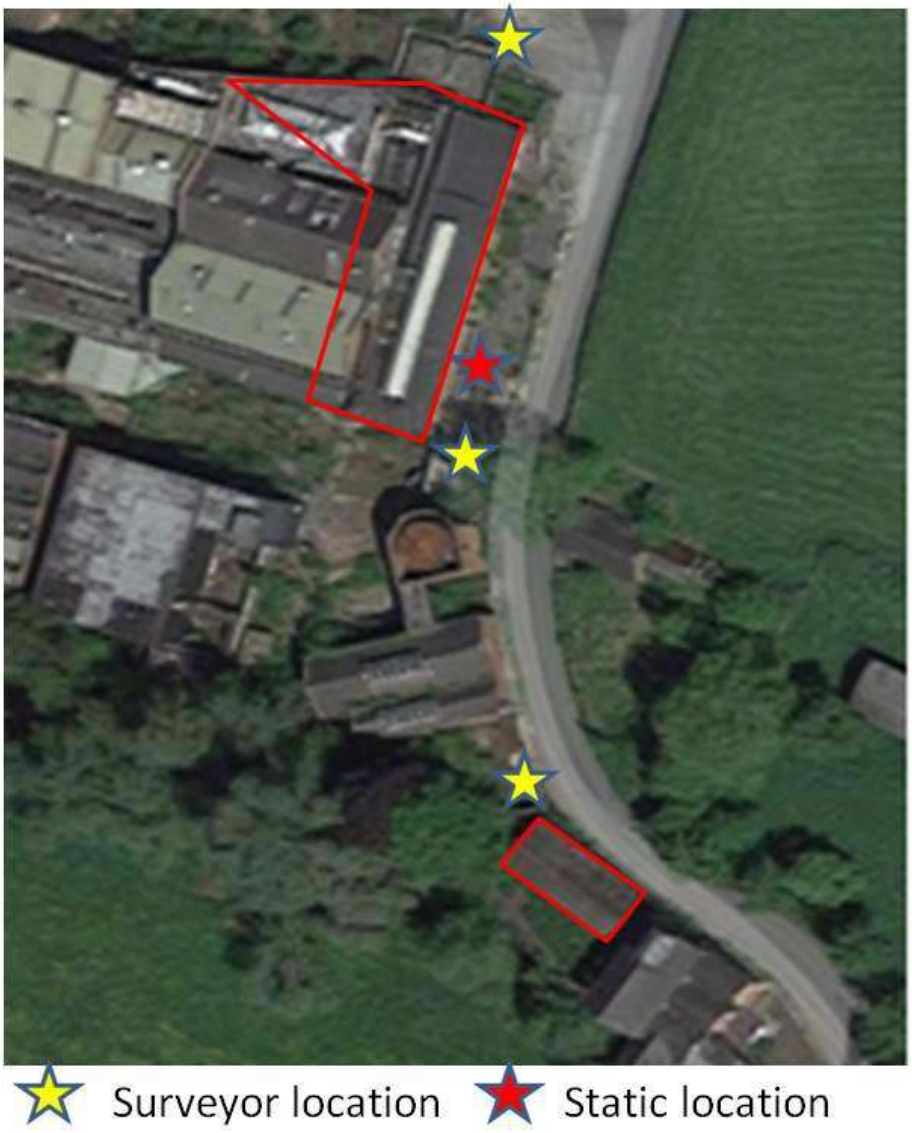
In addition a static detector (SM3 Bat plus) was placed during the period of the surveys.

3 field recorders were present throughout.

Levels of bat activity are strongly correlated to climatic conditions due to the influence that these factors have on the abundance of insect prey, the surveyors recorded temperature and prevailing weather conditions at the start and finish of each survey session.

3. Results:

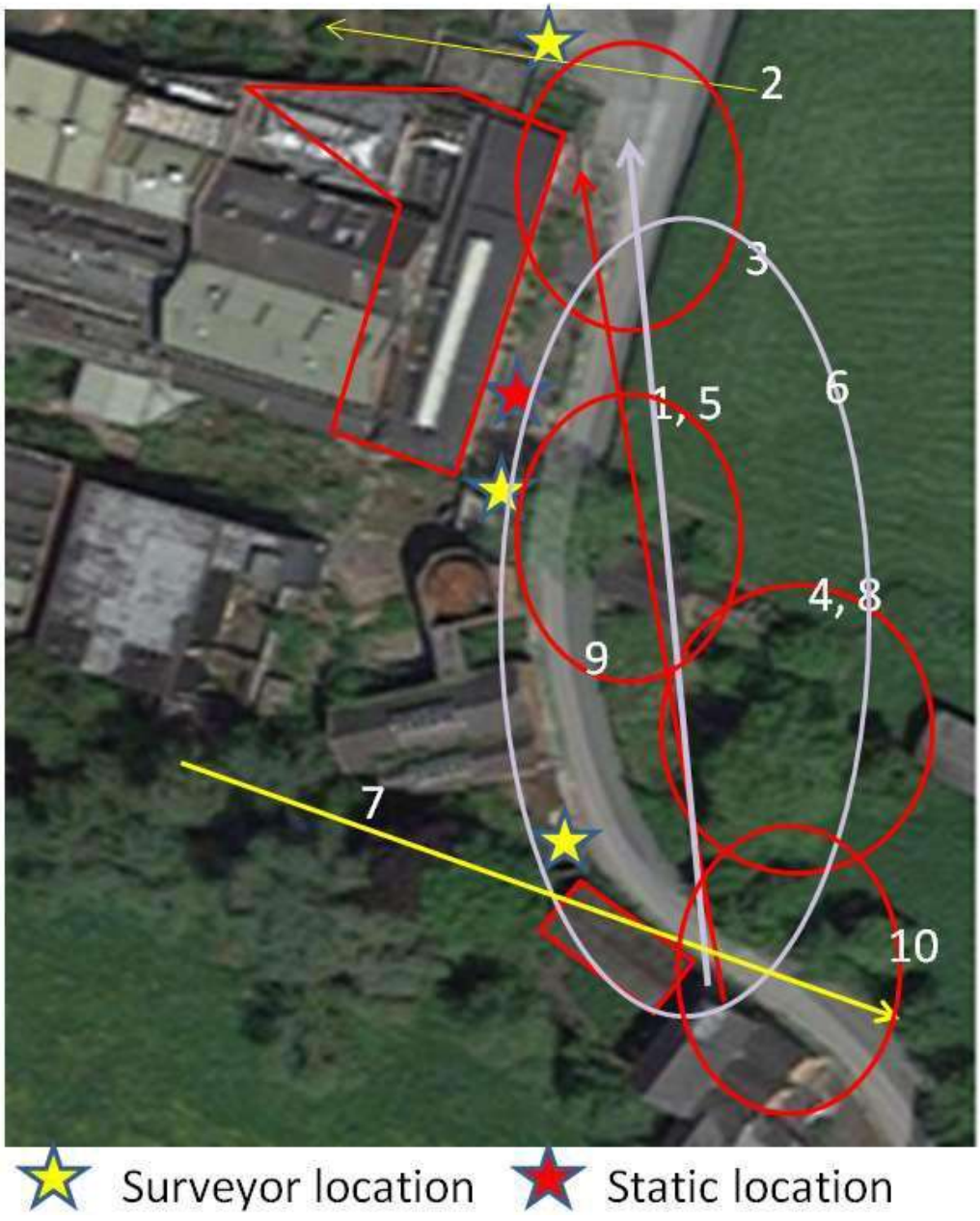
On the maps in the results the symbols below denote location of field surveyors and static detectors during the survey:



3.1 Evening Emergence/ Activity Surveys

3rd May 2018 Start time and temperature: 20:00 BST, 12ºC

Weather conditions: still and cloudy, 8/8) remaining constant throughout the survey. Finish time and temperature: 22:30 BST, 12ºC



Species	Record	Time	Activity	Detection frequency on heterodyne
Common pipistrelle x 3	1	21:01, 21:05, 21:06	Emerging from Mill building and Commuting	45 kHz
Noctule x2	2	21:30-49	Forage/commute	22 kHz
Common pipistrelle x 2	3	21:22-59	Foraging passes	45 kHz
Common pipistrelle x3	4	22:01-22:15	Foraging passes	45 kHz
Natterer's bat	5	21:36	Forage/emergence	28-70 kHz
Natterer's bat x2	6	21:37-59	Forage	28-70 kHz
Noctule	7	21:58-59	Forage	22 kHz
Common pipistrelle x4	8	22:05-30	Forage	45 kHz
Common pipistrelle	9	22:20-30	Foraging pass	45 kHz
Common pipistrelle	10	22:17-30	Foraging passes	45 kHz

Minimum count: 8 Common Pipistrelle, 3 Noctule, 3 Natterer's bat, were noted during the survey. No bats were emergent from the any of the buildings to be demolished on the site, but emergence was noted from the nearby Old Mill building, which is not to be demolished and is an existing recorded bat roost.

3.2 SM3+ remote data (analysis of sonograms)

The following bat traces were recorded:

Survey	Survey Date	Species
Survey 1	**3rd May 2018**	**Common pipistrelle**
Survey 1	**3rd May 2018**	**Noctule**
Survey 1	**3rd May 2018**	**Natterer's bat**

4. Conclusions:

- I can confirm that there was no bat emergence from the former canteen area of the buildings and that this can therefore be demolished. I was able to confirm that the former office areas also were clear of bats and breeding birds and that demolition work can proceed here also.

- I can furthermore confirm that no peregrines were present on the main tower structure within the complex and that work can proceed on this area too.

- There was considerable bat activity throughout with emergence confirmed from the main Old Mill building, the entrance points being at the wooden apex structure facing East, confirming the previously recorded roost presence here. Considerable activity was noted of Natterer's bat as well as Common pipistrelle. It may be that this building has a roost of Natterer's bat present in addition to the others identified.
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- It can be confirmed that bat roost entrance points to Mill house will not in any way be impacted by demolition of the canteen or other buildings. Works can proceed with appropriate avoidance and mitigation methods in place (listed below):

5. Demolition of Canteen Building adjacent to Mill Building, Avoidance and Mitigation Measures:

1. The 'tied-in areas of the single storey former canteen (including roof joists and brickwork) and the Mill Building will be carefully demolished by hand. In particular the roof materials and joists will be removed or if interconnected to the main building will be sawn off at the position of entry into the main building.
2. Any gaps created by this process with be sealed with bricks or mortar, as appropriate. This will apply only to any newly created gaps caused by separating the two buildings.
3. Once the two buildings are disconnected, demolition of the remainder of the canteen can proceed with normal measures.
4. Note that an existing RAMS and Health and Safety document has been produced for the demolition and that this will remain in place during the operation.
5. If bats or signs of bats are discovered at any time during processes involved with the development, including works to trees, work should cease immediately and the advice of a licensed ecologist sought.

6**.0 References:**

Bat Mitigation Guidelines. English Nature, Peterborough, Mitchell-Jones, A.J.& Mcleish, A.P. (Eds)(2004).

Bat workers Manual, 3rd Edn. Joint Nature Conservation committee, Peterborough.

(2004) Bat Survey guidelines (2016), Bat Conservation Trust

Preliminary Ecological Appraisal, February 2018, Dr. S. Bodnar