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**Preliminary Bat Survey Report for  
Lunedale, Woodcock Drive, Platt Bridge, WN2 5NW  
SD 6061 0283**

*Commissioned-by:*

David Booton

*for*

Wigan and Leigh Housing Company Limited

**Survey Date: 5/4/17**

**Report Date: 6/4/17**

**Summary.**

*(This summary should be read in conjunction with the conclusions and recommendations.)*

This property is adjacent to bat boxes in trees, put-up as compensation for the loss of a roost used by a single whiskered/Brandt's bat and a single common pipistrelle bat, when a neighbouring block of flats was demolished in 2015.

All of the multiple lofts were inspected, primarily for evidence of roosting by a large number of bats in a maternity colony in summer. Only two had a more thorough inspection, and 3 bat droppings were discovered in one. They have been sent for dna analysis to confirm the species that deposited them; which seems likely to have been common pipistrelle.

There are a number of minor potential bat entry places around the building. Any future roosting seems more likely to involve individuals or small numbers of bats, rather than a maternity colony. I've assessed the risk of future roosting as low to moderate.

To accord with good practice I have recommended two bat activity surveys (emergence-at-dusk or return-to-roost-at-dawn) be undertaken in favourable weather conditions between the months of May and September inclusive, with one to be carried-out between May and August inclusive. Dependent on the findings a third survey may be advised.

## **Introduction.**

I was asked to assess the importance of this building to bats as part of the planning process prior to its demolition. Incidentally I comment on any issues discovered with respect to other protected/invasive species and species of conservation concern.

This is a 1980s-style, largely two-storey, residential accommodation complex:



Lunedale as seen from south-east and east



Lunedale as seen from north and north-west

The building is in a sub-urban location about 150m from blocks of trees that link with Borsdane Brook, around 360m away. They also link with the nearest pond, which is less than 600m away in Low Hall Park Nature Reserve, to the north-east. The property is less than 1km from Wigan Flashes to the west. See Figure 1 below:



Fig. 1. Location of Lunedale indicated by red circle

The pipistrelle bat (2 species but especially *Pipistrellus pipistrellus*) is common and widespread in the area and is recorded in even the most urban locations.

In 2015 a European Protected Species Licence was obtained to cover the demolition of a block of flats - Westcroft - when a single whiskered/Brandt's bat (*Myotis mystacinus/Myotis brandtii*) was discovered roosting under hanging-tiles. At the time of demolition a single common pipistrelle bat (*Pipistrellus pipistrellus*) was found roosting behind the same hanging-tiles.

As compensation for the loss of the roost, nine bat boxes were put up in trees situated between Westcroft and Lunedale.

Figure 2 below shows both buildings, with the trees where the bat boxes were sited in-between:



Fig. 2. Locations of Lunedale and Westcroft, showing trees containing bat boxes between the two.

Roosts of the pipistrelle can occur in any building that provides suitable roosting crevices, with the risk of bat presence increased by close proximity to good bat feeding habitat and commuting routes; for example tree-lines, hedges, woodland, scrub and water courses and bodies. The bats use different roosts at different times of year, sometimes singly and sometimes in large groups of females with dependent young. They can move frequently and unpredictably between the roost sites known to them. The majority of house-holders with a roost of this species are unaware of it.

In summer females gather together each with their single off-spring in, sometimes large, maternity colony groups. Disturbance can cause the abandonment of babies (pups). In autumn when the young are independent, females visit males to mate. In winter the bats hibernate and rousing from hibernation - a slow process - can result in a depletion of fat reserves that may compromise the bats' ability to survive the winter. Females become pregnant in spring when their food (insects) becomes available again.

Although a whiskered/Brandt's bat has been recorded so close to the site - the two species are hard to separate without dna analysis - the likelihood of any species besides the pipistrelle regularly visiting Lunedale is relatively low.

### **Bats and the Law.**

All British bats and their roosts are legally protected under the Wildlife and Countryside Act of 1981 (as amended) and the EC Habitats Directive of 1992 as implemented by the 2010 Conservation of Habitats and Species Regulations. (Further information is available via <http://www.legislation.gov.uk/>)

As a result of these two pieces of legislation, amongst other things it is an offence to intentionally or recklessly kill, injure or capture bats, disturb bats or damage, destroy or obstruct access to bat roosts. Doing so can result in a custodial sentence. Fines of up to £5000 per bat can be issued in cases of non-compliance with the law. Bat roosts are protected whether or not bats are present at the time.

Under the European legislation, it is necessary for a development to maintain the favourable conservation status of bats in their natural range. This has generally been interpreted as meaning no net loss of roosts, and it is expected that roosting provision for bats will be made better than or equal to whatever is being lost to development. Wider environmental issues such as changes to feeding and commuting habitat, and lighting, also require consideration. However, the term “roost” in this context, tends to be interpreted to exclude places used opportunistically on a single occasion by just one bat.

Under English legislation (the Wildlife and Countryside Act, as above), a “bat roost” is described as “any structure or place which any wild [bat]... uses for shelter or protection”.

#### Implications.

Where a development will destroy a bat roost, a European Protected Species Licence is required before the roost can be interfered with in any way. It takes approximately 7 weeks for these to be issued once the application has been submitted. The application includes a Method Statement, and this along with the licence itself forms a legally binding document.

European Protected Species licences are issued providing planning permission has been granted, where appropriate.

Three conditions have to be met in order to obtain a licence:

- That the development is necessary for the purpose of “preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment”;
- That there is “no satisfactory alternative”;
- That the action authorised “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

does not occur.

Planners must now satisfy themselves before validating applications whether or not bats will be implicated in the work and whether or not the impacts can be mitigated against and/or compensated-for.

The mitigation and compensation measures would include appropriate timing and methodology for the work including details of how the bats will be provided-for in the long term.

Natural England, the Government body responsible for administering the law relating to bats, have issued guidelines to planners on how to proceed with respect to bats: [http://www.persona.uk.com/LTVS/I-OP\\_INQDOX/OBJ1604/FWY128.pdf](http://www.persona.uk.com/LTVS/I-OP_INQDOX/OBJ1604/FWY128.pdf).

Outside the planning system, the onus is on developers/members of the public, to have sufficient investigations undertaken to satisfy themselves (and the authorities in the event of a subsequent investigation), that their actions are unlikely to be in contravention of bat legislation. Where this is in doubt it is necessary to seek appropriate advice and licencing before commencing any work on site.

N.b. It should always be remembered that bats often roost in places not anticipated by a lay person, such as modern buildings, trees with cavities and bridges. Some leave no signs in lofts, as they roost underneath external features such as roof slates, ridges, weather-boarding and cladding.

In the case of a building, tree or other feature not already known to be a bat roost, if bats are found during the course of work, contractors are legally obliged to stop work and seek advice. This should be from an appropriately experienced and licenced bat ecologist. Assuming good-quality bat survey work had been carried-out before the commencement of the project, and its recommendations followed, it would be unlikely that the discovery of bats during the course of the work would be considered to be "reckless" interference.

*Additional Relevant Legislation and Policy.*

Between 1995 and 2010 certain more vulnerable habitats and species were the subject of National or Local Biodiversity Action Plans. This strategy for the protection of biodiversity has been superseded by UK post-2010 Biodiversity Framework, which is largely now implemented at county level. Internationally The Convention on Biodiversity produced a Strategic Plan for Biodiversity 2011-2020. Further to this the EU Biodiversity Strategy was launched in 2011.

Section 41 of NERC lists species "of principal importance for the purpose of conserving biodiversity".

The National Planning Policy Framework of 2012 states that "the planning system should contribute to and enhance the natural and local environment" by a number of means, including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks... ."

The Wildlife and Countryside Act of 1981 gives protection to the nests of all wild birds whilst being built or in use, including by newly fledged birds that have not left the immediate vicinity of the nest. The bird nesting season is generally considered to be 1st March to 31st July for most species but can extend a number of weeks either side of this depending on the species concerned and weather conditions in that particular year.

A consortium of organisations, via their report on "The population status of birds in the UK: Birds of Conservation Concern 4 (2015)" have listed species according to their conservation need based on red, amber, green basis, where red is of the highest conservation concern.

## **Survey.**

I made a daytime visit on **5/4/17** to undertake a preliminary survey of the building, assess its likely importance to bats and advise whether or not a precautionary approach or further survey work is needed.

Having being involved with bat survey work for 29 years and consultancy work for 20 years, it is always my objective to carry-out my work in a manner consistent with accepted Good Practice Guidelines (1) and consistent with the code of practice of the CIEEM. I hold Natural England Class Licences CL16 and CL18 (Registration CLS03475). These cover me for consultancy/scientific and Volunteer Bat Warden work, surveying hibernation sites and training others. I have a supplementary licence to photograph bats in roosts and a CL29 Barn Owl Class Licence. My credentials are expanded-upon in Appendix 1.

As far as possible, I surveyed the building inside and out with the aid of surveyor's ladders, 2 million candle-power torch, camera with 18x optical zoom and binoculars (8x42).

Head-torch, 10x 50 binoculars, fibrescope (6 and 13mm heads, extendable to 2m) and mirrors were also available if needed.

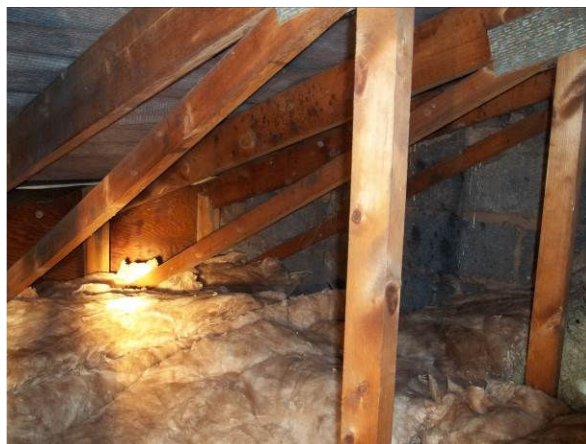
With respect to bats I was looking for access to potential roosting places and evidence of their use such as droppings, urine spots, staining and scratch marks around entrances, feeding remains and bats - alive or dead. It should be noted that droppings are the sign most frequently found, but they can turn to powder quite quickly and are soon washed and blown away from exposed external surfaces.

There are limitations to undertaking a bat survey just after winter, when bats are hibernating and largely inactive. Droppings from the summer may no longer be evident.

### **Findings.**

Lunedale has 12 apartments on the first floor, all with their own loft. Each contains some sort of gable-end structure. This is the most likely location for finding droppings of the pipistrelle bat in a loft.

Some of the lofts are too low in height to allow upright standing. The roof is lined with breathable membrane and there is thick insulation at floor level:



The first two lofts entered - Flat 11 and Flat 18 - were inspected quite thoroughly. Flat 11 contained a very small number of droppings from the house mouse (*Mus musculus*). In Flat 18, what appeared to be a bat dropping was found less than 2 m from the gable end wall - which faces north in this flat. It was crushed to confirm it to be a bat dropping not a mouse dropping and to confirm it had the typical texture and appearance of a bat dropping. At the gable wall, on the insulation below the apex, two more apparent bat droppings were found. They were removed to allow them to be sent for dna analysis but they appeared typical of the pipistrelle bat.

The gable end is shown below:



The location of the bat droppings is shown below:

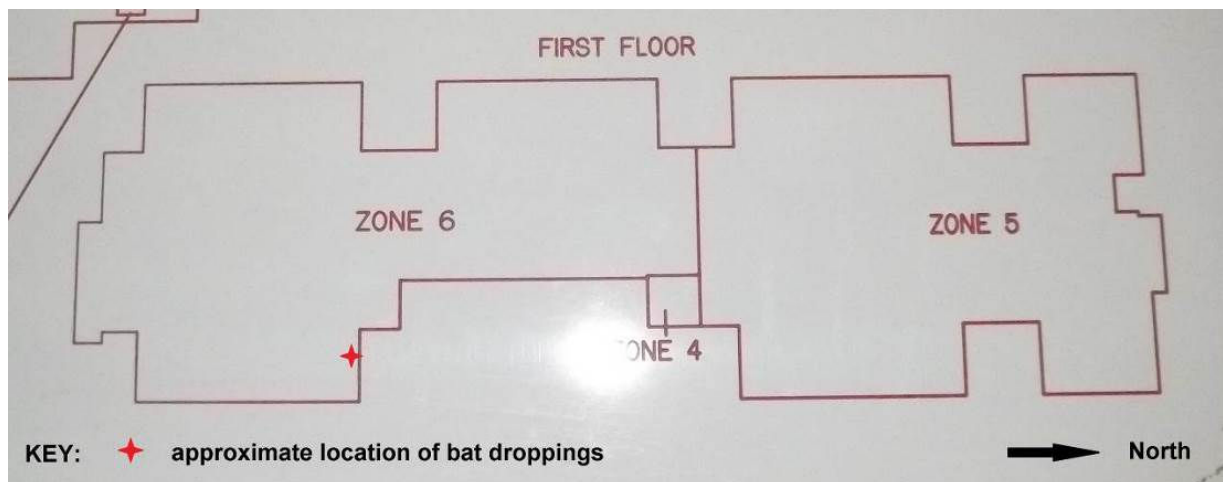


Fig. 3. Location of the few bat droppings found.



Fig. 4. Location of bat droppings

As the multiple lofts were taking too long to assess thoroughly in the time allowed for this preliminary visit, a more stream-lined approach was adopted in order to assess only whether there was obvious use by a maternity colony of bats. The typical evidence for this in the case of the pipistrelle bat consists of large numbers of bat droppings at the foot of an internal gable wall and on the wall itself.

No such signs were found in any of the lofts.

Occasionally vandalism to the roof tiles provided easy access for bats:



In some of the flats signs of historical nesting by birds, was evident:



Externally, the roof of Flat 18 appears to be in good condition and the eaves seem to be sealed. The apex is obscured however by another part of the building. This has a barge-board fitted and there is a gap between the gable wall of Flat 18 and barge-board:



Gable wall of Flat 18 with gap at adjoining structure, and same gable wall as seen from north, indicating location of the gap

Flat 18 is shown again below, as seen from the east:



Flat 18 as seen from the east

Otherwise, on the whole the roofs are in good condition and the eaves are mainly well-sealed. There are exceptions to the latter however, as shown below:



There are a few other minor, potential bat entry places at raised flashing and damaged dry-verges and. Examples are show below:



A single-storey element in the east of the site has been damaged and bat access is possible at either end of cladding at low level and into the cavity wall at one side:



### **Conclusions/Discussion.**

*Appendix 2 gives an outline of the criteria used in assessing the level of risk of use by bats.*

There was no evidence to suggest a maternity colony of bats has roosted here with dependent young in summer.

Three bat droppings were found in the loft of Flat 18 and a few mouse droppings were found in the loft is Flat 11. The remaining flats were not surveyed as intensively, so

similar quantities of droppings in these lofts could easily have been missed. However on the whole the opportunities for bats to enter lofts are limited - except in the few places where vandalism has created openings.

There seems to have been some nesting by birds in the past that doesn't appear to coincide with vandalised areas. It's uncertain how access was gained. It seems unlikely the property has been re-roofed in recent years, though it does have modern breathable membrane lining the roof.

It is uncertain how old the bat droppings are, and the entry-point used isn't clear, but this number of droppings could have been deposited by a single bat on a single occasion.

Due to the presence of the bat droppings and the presence of a few potential bat access places around the building, I've assessed it as being at moderate risk of use by individuals or small numbers of bats in the future.

Good Practice Guidelines suggest even low risk buildings should have a bat activity survey (emergence at dusk or to return-to-roost at dawn) when the findings of the initial survey were negative. See Appendix 3.

### **Recommendations.**

*These recommendations should be read in conjunction with the conclusions above.*

Have two bat activity surveys (emergence-at-dusk or return-to-roost-at-dawn) carried-out in favourable weather conditions over the months of May to September inclusive, with at least one of them between the months of May and August inclusive.

It is my usual practice to separate them by at least a month, as the way bats use buildings changes as the season progresses.

At the same time an assessment will be made of whether there seems to be any nesting by birds taking place.

### **References.**

1. Ed. by Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines - Third Edition. Bat Conservation Trust.

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## **Appendix 1 - Angela Graham's Experience.**

- I hold Natural England Class Licences CL16 and CL18. These cover me for consultancy/scientific work, work as a Volunteer Bat Warden and allow me to train volunteers. I have a supplementary licence to use flash photography in bat roosts (2014/SC1/0160), possess up to 10 live/dead bat specimens (20123429). I have a CL29 licence to disturb barn owls.
- I'm a member of The Chartered Institute of Ecology and Environmental Management and I report concerns about standards to them on an increasing basis.
- I undertake my work in accordance with the principles outlined in the Bat Conservation Trust's "Good Practice Guidelines".
- I have been involved in bat conservation for 28 years, initially as a volunteer with the Nature Conservancy Council (NCC) - first licenced in 1989 - and as a founder member of the South Lancashire Bat Group (1987). Later, and for many years, I was Co-ordinator/Chair and Trainer for the South Lancashire Bat Group. I trained the people who currently run the group, one of whom is a Trustee for the Bat Conservation Trust, along with an earlier trainee of mine.
- Over the last 20 years I have done increasing numbers of bat surveys on a consultancy basis, firstly part-time, then-full time from December 2003.
- I am experienced at applying-for European Protected Species Licences with respect to bats, especially common pipistrelles.
- From 2003 to 2008 I represented the bat groups of the north-west region at national meetings of the Bat Conservation Trust.
- I regularly communicate with the Ecologists who advise local authority planners, especially the Greater Manchester Ecology Unit and West Yorkshire Ecology raising concerns about practice and protocols.

Other experience includes:

- Attending bat-worker conferences every year since 1988 (mainly England, some in Wales) plus additional symposia on specific topics such as mitigation and woodland bats.
- Helping with winter surveys of underground hibernation sites in Clwyd.
- Participating in "Bat Detector Workshops" during the 1990s in different areas of the country, concerned with locating bat roosts and feeding sites/commuting routes.
- Sitting on local council "Wildlife Advisory Groups" (WAGs) in the Greater Manchester area from the early 1990s until around 2005.
- Helping local authorities and the Greater Manchester Ecology Unit formulate their Biodiversity Action Plans for bats, including the plan for Bolton.
- Administering the bat casework for English Nature (now Natural England) in the South Lancashire and Greater Manchester areas over 1998-2000.
- Assisting with research involving mist netting, harp trapping and radio-tracking.
- Continuing to attend courses run by recognised experts to ensure I stay up-to date both with respect to bat survey-work, sound analysis and conservation, and issues such as health and safety.
- Re-passing the Construction Site (CITB) Operatives test in May 2012 and updating my confined spaces training in 2006.
- Contributing to the Bat Conservation Trust's survey standards guidelines.

**Appendix 2** - Criteria used in assessing risk of roosting (in the absence of obvious evidence of roosting).

Risk of roosting	Definition	Suggested Action
Nil	Whole of structure/tree can be seen well enough to be sure there are no roosting opportunities.	No need to consider bats further unless development is delayed and potential roosting places might develop in time.
Minimal/negligible	All or most of structure/tree can be seen well enough to suggest (but not confirm with 100% certainty) there are few, if any, places where bats could roost and/or the location does not provide easy access for bats to their insect prey, either in the immediate vicinity and/or via links with the wider natural environment.	Although roosting is thought to be unlikely and therefore the development is unlikely to impact on the favourable conservation status of bats, a precautionary approach should be taken at the time of the work. Further survey work needed only if development delayed.
Low	Whole of structure/tree can be seen well enough to know there are no more than a few openings that could be used by an individual bat or two and/or these provide access to the sorts of features that are likely to be suboptimal due to materials and/or conditions within (eg unstable temperature); and/or the location provides limited access to prey items, either in the immediate vicinity and/or via links with the wider natural environment.	Although regular roosting is thought to be relatively unlikely and the development is unlikely to impact on the favourable conservation status of bats, a single survey at dusk or dawn in favourable weather conditions would be appropriate to reduce the extent to which the judgement is based on speculation. If the findings were ambiguous e.g. possible bat emergence and/or considerable bat activity around the building, the survey would need repeating. My personal view is that it may be possible to by-pass such a survey if the timing and methodology (including alternative provision of potential roosting places for bats if any will be lost) can be planned to ensure no harm comes to bats and there is no reduction of appropriate roosting places available to them in the future. As pipistrelle bats in particular can change roosts frequently, often leaving no signs of their presence, this could be better all-round than carrying out a single survey that may provide little additional useful information. Basic precautions will be required at the time of the work irrespective of the findings of any additional survey work.

Moderate/ medium	A small number of openings are present and at least some seem likely to provide good conditions for roosting bats, and/or a loft/hay-loft/cellar is present that appears to have good qualities for roosting but no evidence of bats has been found at the time; and/or the location (as above) may limit the attractiveness to bats, but it is uncertain to what extent.	Further work is needed to better assess the abundance of bat activity in the vicinity and whether or not bats seem to make use of the roosting potential available. It is likely that more than one survey at dusk or dawn will be necessary, and possibly a repeat day-time inspection, including lofts/hay-lofts. In the case of cellars and equivalent winter inspection is necessary.
High	There is at least one feature that is typical of those favoured by bats for regular roosting and it/they provide access to abundant insect food on-site and/or via links with the wider natural environment. The feature/s could be suitable for use by a maternity colony, either as a main or satellite roost, or by a territorial male in autumn in the case of pipistrelles, or by individuals or small numbers of bats at any time of year, including winter when hibernating.	The extent to which bats of different species make use of the potential available needs to be investigated by carrying-out at least 3 surveys at dusk and/or dawn spaced over the months of May to September inclusive, possibly extending into April or October if weather conditions are favourable. (Air temperature above 8°C and not more than light rain and/or gentle breeze.) Maternity colonies have largely disbanded by September, but territorial male pipistrelles may be missed without a survey in September and a lot of smaller roosts are discovered at this time of year. As bats could hibernate unseen in winter and/or roost at other times not covered by the survey work, appropriate precautions will be needed at the time of the work along with maintenance of appropriate potential roosting places.
High - hibernation only	Cave-like places with stable conditions and high humidity, such as cellars can be used for hibernation in winter.	High-risk potential hibernation sites need at least 3 inspections spaced over the winter months as bats will move between sites depending on the weather conditions.

### Appendix 3 - Recommendations for further survey work when the findings of the preliminary survey were negative.

Bat Conservation Trust

**Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).**

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey <sup>a</sup> (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. <sup>b</sup>	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. <sup>b</sup>

<sup>a</sup> Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in the category.

<sup>b</sup> Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

Taken from "Bat Surveys for Professional Ecologists: Good Practice Guidelines", 3<sup>rd</sup> Edition (2)

**Table 7.1 Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).**

Low roost suitability	Moderate roost suitability	High roost suitability
May to August (structures) No further surveys required (trees)	May to September <sup>a</sup> with at least one of surveys between May and August <sup>b</sup>	May to September <sup>a</sup> with at least two of surveys between May and August <sup>b</sup>

September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season.

Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on 31 August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.

Taken from "Bat Surveys for Professional Ecologists: Good Practice Guidelines", 3<sup>rd</sup> Edition (2)