

Bat mitigation strategy

Stonehouse Farm, Wainscott, Kent. ME3 8EN

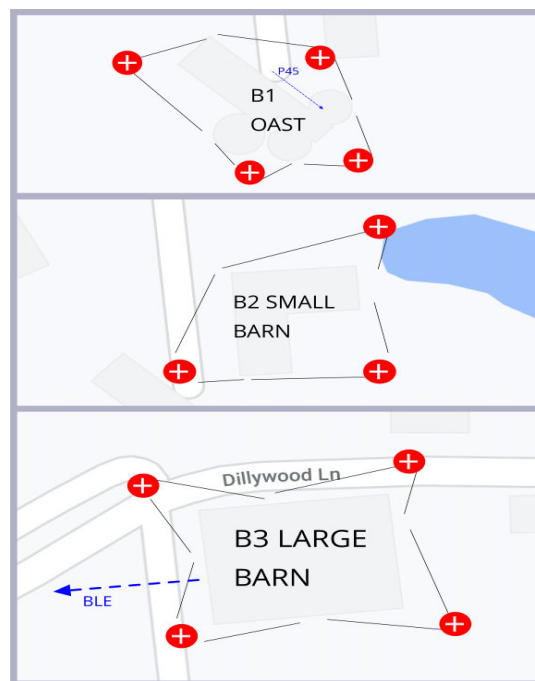
Bat emergence and re-entry surveys (BERS) were carried out at Stonehouse Farm, Frindsbury ME3 8EN in 2020 to support a planning application for change of use of the existing agricultural buildings to residential use. After submission of the bat survey report further details of mitigation were requested by the planning authority. The Council advice note stated that: *a detailed bat mitigation strategy should be provided at this stage of the determination process as Natural England will only issue the licence after the decision notice has been issued. Therefore, the local planning authority needs to be assured that effective mitigation measures can be implemented at this stage of the process.*

This supplementary document addresses the need for further details of the mitigation required and should be read in conjunction with the bat survey report.

Review

Three of the buildings on site had previously been assessed as having bat roost potential (BRP) and these are shown in Figure 1 below. The surveys showed that two of the buildings were being used by day roosting bats (one individual in each building).

Figure 1: Indication of survey positions and bat entrance/exit points (drawing not to scale)



For purposes of continuity and ease of reference this report will continue to refer to the buildings as: B1 Oast and B3 Large barn.

2020 Survey results

- Over the course of eight emergence and re entry surveys a total of six different species of bat were recorded. These included: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long eared bat *Plecotus auritus*, noctule *Nyctalus noctula*, Leisler's *Nyctalus leislerii* and natterers bat *Myotis natterii*.
- An individual common pipistrelle bat was observed returning to the easternmost roundel of B1 oast during the dawn survey of the building on 11/07/20. A second incidental observation of one individual common pipistrelle returning to the same access point in B1 oast was made during the dawn survey of B2 small barn on 17/06/20.
- A single brown long eared bat was observed emerging from B3 large barn at 21:47 during the second survey of the building on 10/07/20.
- Feeding remains and droppings in B1 Oast indicate that the building is being used as a feeding perch/night roost

Impact assessment

In line with current guidance, for works to be carried out, any impacts to the bat species that are present must be reduced to a non-significant level. Where this cannot be achieved, appropriate compensation must be offered. The impacts from the development are assessed below.

B1 Oast common pipistrelle day roost

During re roofing all materials will be replaced like for like. The crevice between the tiles and the roofing felt beneath will be retained:

Day roost and access points are to be retained therefore impacts on these areas can be avoided and mitigated without the need for a licence.

Potential impacts on the day roosts that are present are identified in table 1 below:

Table 1: Assessment of impacts on day roosts in B1 Oast

Roost to be impacted	Value of roost	Impact	Likely significance
Day roost for single common pipistrelle	Local	Construction works to refurbish internal area will cause noise/vibration (temporary).	Negligible/local; unlikely to be the only day roost used. Impact can be avoided.
Day roost for single common pipistrelle	Local	Habitation within B1 Oast will increase noise and vibration (permanent)	Negligible/local; unlikely to be the only day roost used. Impact can be mitigated through use of sound insulating materials.

To avoid and mitigate impacts the following steps must be taken:

<p>Potential Impact: Noise and Vibration: short term</p> <p>The roof covering is to be retained. Re roofing might result in temporary loss of the day roosts and loss of roost access points.</p> <p>There is potential for disturbance to roosting bats during the works to refurbish the building. It is understood that the roof is to be properly insulated and an internal ceiling created. The noise and vibrations associated with these works have the potential to disturb day roosting bats.</p> <p>Solution:</p> <p>Avoidance: internal works should be carried out in the autumn or Spring to avoid disturbing summer roosting bats.</p> <p>Mitigation: work can also be carried out under licence at any time of year under ecological supervision.</p>
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Potential Impact: Noise and vibration: permanent

Conversion of the disused building to residential is likely to result in an increase in human disturbance beneath the roosts and increases in vibration and noise from day to day usage.

Solution:

Mitigation: Insulating and lining the roof will provide a barrier for both sound and vibration and the building fabric itself will interrupt much of the noise. The insulation will also provide a barrier for increases in temperature resulting from the change of use.

When replacing the tiles, the roofer should be supervised by an experienced bat worker to ensure that there are occasional gaps allowing bats access to the roosting space.

Potential impacts on the night roosts that are present in B1 Oast are identified in table 2 below:

Table 2: Assessment of impacts on night roosts

Roost to be impacted	Value of roost	Impact	Likely significance
Feeding perch of brown long-eared bat	Local	Feeding area to be lit and noisy with access points repaired. Roost considered to be lost (permanent).	Negligible; unlikely to be the only feeding perch used.

The loss of a night-time roost/feeding perch will be permanent and is unavoidable: the increase in internal lighting and noise from conversion will render the internal space unusable for brown long eared bats. Repairing gaps and lining the roof and walls may prevent access to the internal space. It would also not be suitable to allow bats access to feed inside a residential setting.

In situations where the potential impact relates to total loss of a feature such as this, or the modification of such a feature to an extent that it will no longer have the same function, then the significance of the impact is the same as the valuation of the feature. The significance of the impact to bats through loss of the night roost and their ability to survive (demography) for the proposed works is 'negligible'. This is because B1 Oast is unlikely to offer the only feeding perch to brown long eared bats and the only internal flying space. Feeding perches and flight areas are no doubt present in the nearby woodland habitat for example.

Taking all the above into account, it should still be noted that the night roost is protected by law and works to impact it must be licensed by Natural England prior to any works commencing.

- A European protected species licence (EPSL) to impact or destroy the bat roosts must be granted by Natural England (NE) prior to any works which might affect them taking place.
- An EPSL application can only be made once planning permission has been granted.

In order to compensate for the loss of feeding perches or night roosts there is flexibility over provision of bat boxes and no conditions about timing (English Nature: Bat Mitigation guidelines).

For the loss of a feeding perch or night roost affecting up to three of the more common species (when used by low numbers of individuals only), Natural England do not currently require post-development monitoring.

It is thought likely that a licence will be issued for the site in this instance because:

1. The development will provide accommodation which is much needed in the local area; the construction project will also create more jobs locally and improve the local economy.
2. There is no way of retaining a bat feeding/night roost within a residential setting; but the loss of such a roost will have a negligible impact on local bats.
3. The mitigation measures offered in this report, and the change of use of the building itself, will ensure the building is regularly maintained and the existing day roosts will be protected in perpetuity.
4. The enhancements offered in this report ensure that the development results in a net gain for bats.

B3 Large Barn brown long eared day roost

Potential impacts on the brown long eared day roost present are identified in table 3 below:

Table 3: Assessment of impacts on day roosts

Roost to be impacted	Value of roost	Impact	Likely significance
Day roost for single brown long eared bat	Local	Construction works to refurbish internal area will cause the loss of the internal roosting space.	Negligible/local; unlikely to be the only day roost used.

To compensate for the loss of a roosting space the following steps must be taken:

<p>Potential Impact: Loss of roost: permanent</p> <p>Conversion of the disused building to residential will result in loss of the roosting space.</p> <p>A licence to impact/destroy a bat roost must be granted by Natural England.</p> <p>Compensation by way of a bat box suitable for BLE must be affixed to a nearby mature tree.</p> <p>Monitoring unlikely to be required.</p>

- A European protected species licence (EPSL) to impact or destroy the bat roosts or a low impact class licence (BLICL) must be granted by Natural England (NE) prior to any works which might affect them taking place.
- An EPSL or BLICL application can only be made once planning permission has been granted.

Habitats

As light-averse species were recorded during the survey (brown long eared and myotis bats), new lighting at the site should avoid lighting any key habitats and features. This includes the tree lines and hedgerows, retained mature trees and any of the bat access points highlighted in the bat survey report. External lighting of the site should be kept to a minimum wherever possible.

New external lighting of the car parking areas should be restricted to low level downlights such as downward facing bollard lighting where possible and where these are not appropriate, lighting should be activated by motion sensors.

Enhancements

As well as mitigating negative impacts the application must also be demonstrated to result in a net gain for the bat species present to be in line with National Planning Policy.

Installing enhancements to promote invertebrates such as log piles near the base of boundary features and within wooded areas will improve the area for bats. Two log piles are recommended.

Providing two bat boxes suitable for pipistrelle and brown long eared bats is likely to be a condition of the licence. This should be doubled to four bat boxes in order to provide net gain. The boxes can be of varied designs but must include at least two boxes which are suitable for brown long eared and common pipistrelle bats (one of each).

Boxes should be of the woodcrete type to ensure longevity and erected in a sheltered location, in close proximity or with a strong unlit linear connection to good quality foraging habitat. For all types of boxes, Collins et al. (2020) found that the box height most frequently occupied was 4m (2020). A height of at least 3 metres is recommended; to be hung from a mature tree in the grounds. Suitable bat box designs for brown long eared and soprano pipistrelle bats for illustrative purposes are provided in the appendix.