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Technical Appendix III –

Dusk Survey Results

Taylors Farm,
Lancashire,
PR3 1DH

National Grid Ref: SD52945151

Document Title	Dusk Survey Results
Issue	1.0
Prepared for	Graham Anthony Associates
Prepared by	Tyrer Ecological Consultants Ltd

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Technical Appendix

- *Wyreside Master Plan – Tyrer Ecological Consultants Ltd, November 2022*

1.0 Background and Introduction

1.1 Tyrer Ecological Consultants Ltd were commissioned by Graham Anthony (GA) Associates on behalf of the owner of Wyreside Hall Hotel owner Wyreside Leisure Limited to produce an Ecological Assessment Report that considers the 'Wyreside Master Plan', an ambitious project to create one of the most comprehensive leisure businesses in Wyre.

1.2 The vision of the 'Master Plan' is to combine four development locations – **Wyreside Hall Hotel, Brook Lodge, Taylors Farm and Rivendell** - through a network of trekking trails and footpaths across the surrounding landscape for recreational enjoyment with each site providing a range of commercial services.

1.3 As part of the Wyreside Master Plan the applicant is proposing to rewild and enhance up to eight biodiversity hotspots in the wider ownership of Wyreside Hall Hotel which this report identifies as **Sites 1-8**.

1.4 A summary of the Master Plan proposals is provided below:

'Satellite developments in association with Wyreside Hall Hotel including: redevelopment of Taylors Farm to create equestrian centre for guest and conversion of existing buildings to overnight accommodation and guest reception; redevelopment of former fish hatchery Brook Lodge to create recreational fishery for guests staying at Wyreside and change of use of land to allow siting of holiday lodges; formation of nature trails and horse trekking routes; designation of rewilding and habitat protection areas in connection with Wyreside Hall;'

1.5 This report presents the results of surveys carried out at Taylors Farm - Building 1 and Building 2 - for coherence with a previously issued report by Envirotech[1]. This report identified a number of bat roosts in the building covered later in this report.

[1] *Envirotech / Bat, Barn owl & Nesting Bird survey at Taylors Farm, Dolphinholme (2018)*

2.0 Survey Methods

2.1 Bat Conservation Trust (BCT) - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) edition states:

"The guidelines do not aim to either override or replace knowledge and experience. It is accepted that departures from the guidelines (e.g. either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate. The guidance should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive."

2.2 Relative to the above the survey methods and protocol adopted for this study were determined using the collective and long standing experience of Tyrer Ecological Consultants Ltd and knowledge of the specific nature of the site.

Survey protocol

2.3 In accordance with Bat *Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed.* (2016), it is specified that: "*The bat active period is generally considered to be between April and October inclusive*", though the period of **May - August** is the optimal most productive period that Natural England accept bat surveys and grant European Protected Species Mitigation licences (EPSML).

2.4 The timing of the bat surveys took place in August and September; in August bats begin dispersing from maternity colonies prior to gathering at mating and hibernation roost sites whilst in September surveys may detect transitional roosts used prior to hibernation. The second survey took place just outside of the optimal window, though September surveys hold value in understanding the value of a building to bats.

2.5 Two dusk surveys were carried out following a pre-dusk inspection during survey 1 carried out by R. King (see **Table 3.1**). When considering survey protocol, the decisions about whether dusk or dawn surveys are selected are based on the extensive experience of the Tyrer Ecological Consultants Ltd, the nature of the building and species that can be anticipated as being present either at the property or in the locality and how complex a building is relative to observations. In this case, the bat roost potential that exists at Taylors Farm presents no visual constraints for dusk observations.

2.6 In May 2022 the BCT issued an Interim Guidance Note in advance of a 4th edition of bat survey guidelines, which supersedes existing guidelines and states in relation to dawn surveys that:

"Whilst dawn surveys can reward surveyors with displays of dawn swarming behaviour, there is a concern that bats that have returned earlier will be missed…"

"The 4th edition of the survey guidelines will therefore transition away from the standard use of dawn surveys, particularly as a method for presence/absence…"

2.7 Furthermore, at dawn temperatures are usually lower than at dusk particularly in the north; as a result, bat activity can, in some locations, be less frequent. Additionally, where singular/small numbers of bats are present and there are no survey constraints then dawn surveys are of no more value than dusk surveys; singular bats can and do return to a roost before dawn and as a result a dawn survey would not record them anyway.

2.8 Survey protocol should not be determined by parties who are 1) not familiar with the site 2) do not have a sufficient level or experience in relation to the undertaking of dusk/dawn bat surveys.

2.9 The number of surveys and surveyors was adequate relative to the roost potential that was identified in an initial preliminary roost assessment i.e. 'Moderate' and requiring three surveyors at any one time, to accurately monitor potential roost features (PRF's).

2.10 Surveyors were strategically positioned so that all elevations with bat roost potential could be observed without limitations. The surveys were aided with Anabat electronic bat detectors that enable the locating and recording of the high frequency calls that are emitted by bats, along with Bat logger and Peersonic RPA3 detectors; echolocation calls were analysed the next day using Analook and Kaleidoscope computer software to verify field observations.

Survey limitations

2.11 Following the completion of the surveys having carefully considered the results and conclusions derived, no significant constraints were experienced that might hinder the gathering of ecological data on which to base sound conclusions and recommendations.

Building labelling

2.12 For coherence with a previously issued report by Envirotech[2] which included two dusk surveys for bats following a preliminary roost assessment, the two compartments of the surveyed building have been labelled and are described in the report as Building 1 and Building 2 (see **Figure 2.1**).

Figure 2.1 – Building 1 and Building 2 form the survey area as initially labelled in a previous ecological report for coherence

[2] *Envirotech / Bat, Barn owl & Nesting Bird survey at Taylors Farm, Dolphinholme (2018)*

3.0 Dusk Survey Results

3.1 Two dusk emergence surveys were respectively undertaken on the 18th August and 1st September 2022 by a combination of five surveyors with three operating at any one survey, as per **Table 3.1** below. See **Table 3.2** and **Table 3.3** for raw data. See **Figures** for visual aids.

Table 3.1 - Surveyor Credentials

Name	Experience	Details
Dusk survey 1		
R. King	14 years	Seasonal Consultant at Tyrer Ecological Consultants Ltd. Natural England Great Crested Newt License (Class 1) held since 2007 (2015-18633-CLS-CLS)
A. Hamer	2 years	An experienced Ecologist working as a sub-contractor for Tyrer Ecological Consultants who holds a Natural England Class 1 bat licence (2021-54008-CLS-CLS)
M. Smith	7 years	An experienced seasonal bat surveyor with Tyrer Ecological Consultants Ltd
Dusk survey 2		
H. Green	30+ years	Highly experienced Bat Specialist and carer whom has professional surveying experience over decades with Tyrer Ecological Consultants Ltd - Class 2 Natural England Bat Licence (CLS-03290)
M. Smith	7 years	An experienced seasonal bat surveyor with Tyrer Ecological Consultants Ltd
L. Moat	16 years	A highly experienced freelance surveyor working as a sub-contractor for Tyrer Ecological Consultants Ltd

Table 3.2 – Survey dates, times and weather conditions

Times of Survey	**Date**	**Weather Conditions**
Dusk survey 2016 - 2138	18/08/2022	**Sunset**: **2038**: Dry, overcast, strong breeze, 95% cloud cover Start temp: 18.5 º C End temp: 17.5 º C
Dusk survey 1941 - 2101	01/09/2022	**Sunset**: **2001**: Dry, clear skies, gentle breeze, 0% cloud cover Start temp: 18.0 º C End temp: 15.5 º C

Table 3.3 – Raw data from the surveys

Dusk Survey	Time	Activity
18/08/2022 Dusk 1	2016 - 2138	**Pre-dusk inspection**: Evidence of prey items assimilated below overhead beams in Building 1, loosely suggesting a feeding roost. No bats were physically observed. _____ **Summary: Six Common Pipistrelle bats emerged in total from Building 2 along with one Brown long-eared bat.** 2025 -2100 hrs: Emergence of five Common Pipistrelle bats during this time period from the apex at the south-east facing gable elevation of Building 2. 2037 hrs: Small numbers of Common and Soprano Pipistrelle bats commuting towards the survey area from the west. 2042 hrs: Emergence of a Common Pipistrelle from a broken soffit on the south-west elevation of Building 2. 2047 hrs: a Soprano Pipistrelle was observed commuting north-west over the building. 2050 hrs: a Common Pipistrelle observed to enter and forage inside Building 2 via a open lower barn door facing south-east before exiting at 2052. 2101 hrs: a Noctule passed overhead. 2105 hrs: a Whiskered/Brandt's was heard not seen. 2108 hrs: a Whiskered/Brandt's observed to enter and forage inside Building 2 via lower barn door facing south-east before exiting again shortly after. 2116 hrs: Emergence of a Brown long-eared bat from the north-west facing gable elevation at the apex of Building 2. 2123 hrs: Two Common Pipistrelle foraging near to the building. 2127 hrs: Several Common Pipistrelle bats feeding around the building. General activity comprised of constant foraging by Common Pipistrelle bats throughout the survey with occasional activity from singular numbers of Soprano pipistrelle and Whiskered/Brandt's. Single incidences with Brown long-eared and Noctule bats.

Dusk Survey	Time	Activity
01/09/2022 Dusk 2	1941 - 2101	**Summary: Two Common Pipistrelle bats emerged from the north-west ground level elevation of Building 2 via an open door by roof-covered staircase. Likely emergence of a Soprano Pipistrelle from inside Building 1 also occurred.** 2007 hrs: Soprano Pipistrelle heard inside Building 1 but no emergence took place; likely internal emergence from an internal cavity or crevice bat it was not physically witnessed and the bat did not emerge to the outside. 2016 hrs: Emergence of two Common Pipistrelle bats from below the covered staircase via an open door into Building 1, from an internal crevice. The two bats proceeded to forage along the northern treeline thereafter. 2021 hrs: Small numbers of Common and Soprano Pipistrelle bats commuting towards the survey area from the west. 2023 - 2101 hrs: Three Common Pipistrelle foraging near to the building. Social calls included. Bats observed to enter and forage inside the building via open doors in Building 2 before exiting again shortly after with repeated behaviour. 2034 hrs: Common Noctule pass overhead heard but not seen. 2053 hrs: Common Noctule pass overhead heard but not seen. General activity comprised of constant foraging by up to four Common Pipistrelle bats throughout the survey with occasional activity from singular numbers of Soprano pipistrelle and Noctule bats.

	Survey boundary		General foraging activity
	Surveyor Positions		Internal foraging activity
N	Directional compass		Commuting activity
			Bat Emergence point

Figure 3.1 - Dusk Survey 1 results (adapted over Google Earth 2022 imagery)

	Survey boundary		General foraging activity
	Surveyor Positions		Internal foraging activity
N	Directional compass		Commuting activity
			Bat Emergence point

Figure 3.2 - Dusk Survey 2 results (adapted over Google Earth 2022 imagery)

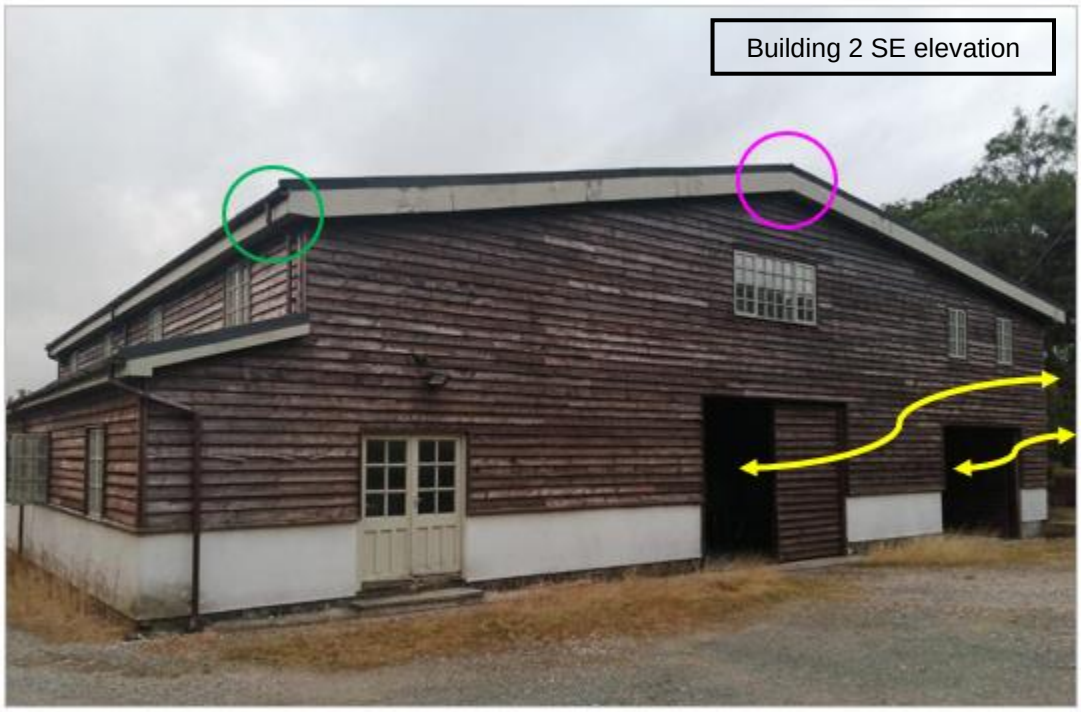

Figure 3.3 - Dusk survey 1 images

One Brown long-eared bat emerged from the apex of the north-west facing gable elevation of Building 2 (Roost 1 circled blue)

Five Common Pipistrelle bats emerged from the apex of the south-east gable elevation (Roost 2 circled pink) and one Common Pipistrelle bat emerged from a broken soffit facing south-west (Roost 3 circled green)

Bats were also foraging inside Building 2 entering via open doors (yellow arrows).

Figure 3.4 - Dusk survey 2 images.

Two Common Pipistrelle emerged from the ground level open doorway of the north-west facing elevation of Buiding 1 by the stairway (Roost 4 red arrows).

One Soprano Pipistrelle is also highly likely to have emerged inside as it was heard inside Building 1, but did not emerge outside (Roost 5 red arrows).

Bats were also foraging inside Building 2 entering via open doors (yellow arrows).

4.0 Dusk Survey Conclusions & Recommendations

4.1 From the 2022 dusk survey results the surveyed building at Taylors Farm has been ascertained as supporting Transitional/Day roosts for six Common pipistrelle bats, one Soprano pipistrelle bat and one Brown long-eared bat.

4.2 Both Building 1 and Building 2, as per **Figure 4.1**, are being utilised for roost use, while the inside of buildings is further being utilised for internal foraging.

- Roost 1 – x1 Brown long-eared bat, apex of the roof facing NW, one access point,
- Roost 2 – x5 Common pipistrelle bats, apex of the roof facing SE, one access point,
- Roost 3 – x1 Common pipistrelle bat, gap in broken soffit box facing SW, once access point,
- Roost 4 – x2 Common pipistrelle bats, internal crevice within Building 1, two access points,
- Roost 5 – x1 Soprano pipistrelle, internal crevice within Building 1, two access points.

Figure 4.1 – Building 1 and Building 2 form the survey area as initially labelled in a previous ecological report for coherence

4.3 The surveys also identified the foraging presence of Whiskered/Brandt's bats using the inside and open doorways for internal foraging, and Common noctule commuting overhead, though these species were not observed roosting. The surveys do however quantify the findings of a previous ecological report issued in 2018 by Envirotech (see section 2.11) which had similar findings to 2022, though with slightly higher numbers and Whiskered/Brandt's found to be roosting in small numbers in that case. Whiskered/Brandt's are not considered to be roosting in this instance based on the survey results.

4.4 The proposals involve internal and external conversion and refurbishment works to the existing Building 1 and Building 2. In the absence of mitigation, the works are likely to result in the permanent destruction of several bat roosts and pose the risks of disturbance, injury and death to individual bats.

4.5 Impacts therefore need to be addressed from both a conservation and legal perspective along with the application of suitable mitigation before any works can take place. A European Protected Species Mitigation Licence (EPSML) will be required to legally disturb, damage or destroy a roost site "actively used for breeding, rest or shelter (roost)" by bats, however, before a licence can be applied for all planning issues need to be resolved.

4.6 In order that the LPA can implement its obligations under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), appropriate and proportionate mitigation will need to accompany the planning application which will demonstrate that the "*favourable conservation status"* of the species concerned can be maintained.

4.7 It should be noted that installation of new lighting as part of a development scheme that exceeds current levels may have a negative impact upon foraging/commuting bats confirmed as present in the vicinity, particularly if increased light spillage occurs in areas currently free from illumination. There are several measures that can be used to offset impacts upon bats, where lighting is unavoidable; these include, however are not limited to: the light source used and luminaire design, and accessories to direct light at its intended target. Numerous software programmes are currently available which can be used inform lighting plans, demonstrating how lighting decisions will illuminate a site. Refer to the Bat Conservation Lighting Guidelines for further information.

5.0 Indicative Mitigation

5.1 From the evidence gained during the surveys the use of the site is considered to be of 'Low' level significance and 'Local' importance relatable to Common pipistrelle, Soprano pipistrelle and Brown long-eared bats given their current conservation status (as according to current mitigation licencing applications in England); the proposed mitigation is proportionate to that assessment. However, if at any time that assessment is revised to a higher level, then the mitigation will also be accordingly revised.

5.2 The following procedures and mitigation recommendations are designed to allow the Local Planning Authority (LPA), in association with their ecological advisers, to determine a Planning Application where a European Protected Species has been identified and will be affected by the work for which the Planning Application seeks consent. In addition, Local Planning Authorities in accordance with the obligations placed upon them by way of their duties under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579) have to take into consideration the presence of a European Protected species (EPS) before determination of an application where it/they have been identified.

5.3 The LPA need to consider the mitigation in relation to the potential success of a Natural England (NE) licence application and/or if in their opinion the mitigation is considered as being appropriate, or if it is over and above what is required; if NE determine that the mitigation is appropriate then a Planning Condition should be attached requiring the roost provision to be implemented in accordance with this ecological report. If the LPA consider that the mitigation is over and above what is necessary but require "enhancement" as part of their Local Biodiversity/Net-Gain Planning Policies, this should be included in the terms of Consent. The acting bat ecologist deems the proposed new roost creation as appropriate and not over and above what is required.

5.4 Notwithstanding that Planning Consent is granted or equally if the work is undertaken outside of the planning system, whereby projects that do not require planning consent may affect bats or their roost, including disturbance, it does not absolve the applicant, site owner, developer or any other party involved with the work from ensuring that an application is made for a Natural England development licence, to legally undertake work that will affect bat(s) or their roost(s). If work is undertaken without a licence and bat(s) or their roost(s) is/are affected, then a breach of current wildlife legislation will occur for which penalties are high.

5.5 Under Regulation 53(1) and 56(3)(a) of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), a licence is required prior to disturbing bats or destroying/damaging or obstructing any place that is used by bats as a resting place or breeding site.

Mitigation Strategy

5.6 The applicant seeking planning consent acknowledges that the presence of roosting bats needs to be addressed from both a legal and conservation perspective, and the applicant is keen to address that responsibility. The mitigation proposals outlined in this report are seen to form the most productive way forward that will retain long term roosting opportunities for bats.

Habitat

5.7 No significant habitat loss is anticipated with surrounding priority habitats, treelines and vegetated habitats either retained or subject to landscaping plans.

Lighting

5.8 External lighting on site post-development is likely to be slightly greater than what currently exists to facilitate the development proposals, however where new lighting is to be installed it will not be directed towards any bat roost access points, flight paths and foraging/commuting areas. Details will be provided under a Bat sensitive lighting plan.

Receptor roost

5.9 To ensure that bats are not left without a roost while works take place that could displace bats from their roost(s) at the building, two receptor bat roosts will need to be installed on suitable trees near to the building. See **cursor in Figure 5.1** for indicative location of these boxes.

5.10 The bat boxes should be placed on opposite sides of a tree trunk over 4 metres high. The receptor roosts should be bat boxes such as a Schwegler 2F bat box (or equivalent tree box if this model is not available). The receptor roosts will serve as receiver units for if bats are required to be captured and translocated to it under licence by the named ecologist at any stage of the works schedule. Receptor roosts should be installed and in place prior to any demolition or deconstruction works inside or outside and be within a reasonable distance and line of sight of the existing roost sites.

Figure 5.1 - Receptor roosts proposed location (adapted over Google imagery) - use Schwegler 2F bat box (or suitable alternative if not available)

Timings

5.11 Works should aim to avoid the active season of bats (May-August) when bats are likely to be present and susceptible to disturbance. Works that will generate the most construction related activity should take place between September and April.

5.12 Any dismantling or neutralising of potential roost features that could involve capture and translocation will be undertaken during favourable weather conditions (above 9ºC).

Toolbox talk – Attendance of Ecological clerk of works (ECoW)

5.13 Once a mitigation licence is in place at the pre-commencement stage the named Ecologist or a suitably qualified accredited agent will undertake a site induction 'Toolbox talk' to the Licensee and all site associated contractors on possible bat presence and discuss document features taken from the EPSM license, i.e. License, Method Statement, Mitigation, Figures and Work Schedule to be kept on site for the duration of the work.

5.14 Prior to any work being undertaken the presence/absence of bats, as far as is possible, will be established by undertaking a thorough investigation of the areas at which bats have been observed using both Building 1 and Building 2 where necessitates. This will involve a thorough inspection of the internal and external roof, wall plates, timbers and any cavities during dismantling or neutralising using endoscopes and/or narrow-beam torch, as necessary, and will involve a soft strip at the local areas of interest around slates/tiles, as necessary, which is the careful lifting, inspecting and removal of roof components. The Ecologist will supervise careful dismantling of all other places of interest. In addition, at the Ecologist's/ECoWs discretion, wherever opportunities for bats exist in other areas of the building that might be affected by works, supervised dismantling/inspections will extend to these areas with strategies for safely removing bat(s) applied.

5.15 Where crevices are extensive, or if it cannot be ascertained that bats are absent from a potential roost feature, exclusion devices may be fitted for a period of 3 days and 3 nights, or longer, at the named Ecologist's discretion - this is where material is placed over the roost entrance area(s) allowing bats a means of escape whilst preventing them from re-accessing. This method will only be adopted if necessary, and exclusion fitted cavities will only be filled in following this process.

Capture/exclusion

5.16 Once an EPSML licence is in place the Licensee/assigned contractors should ensure that a safe means of access exists such as scaffolding or vertical lifting platform/cherry picker, to allow the named Ecologist to investigate the roost. In addition, wherever opportunities for bats exist in other parts of the building, the supervised dismantling will extend to these areas at the discretion of the ecologist in attendance as covered above.

5.17 In the event of bat(s) being present during the works it/they will be removed, placed in a secure box with soft tissue and transferred into a receptor bat box that will have previously been erected nearby as indicated in **Figure 5.1**. Only once it has been conclusively established by the named Ecologist that bat(s) are absent can works continue to completion.

5.18 In the unlikely event that bats are found outside of ecological supervision then as legal requirement and conditions of the licence, work will immediately cease and the named Ecologist will be contacted for further advice; contractors must not touch, handle or in any way cause bats to move.

Mitigation

5.19 Roosts 1-2 will be retained as part of the proposals.

5.20 Roost 3 will be permanently lost then replaced like-for-like during the installation of a new soffit box on the south-west elevation (see **Figure 5.1**).

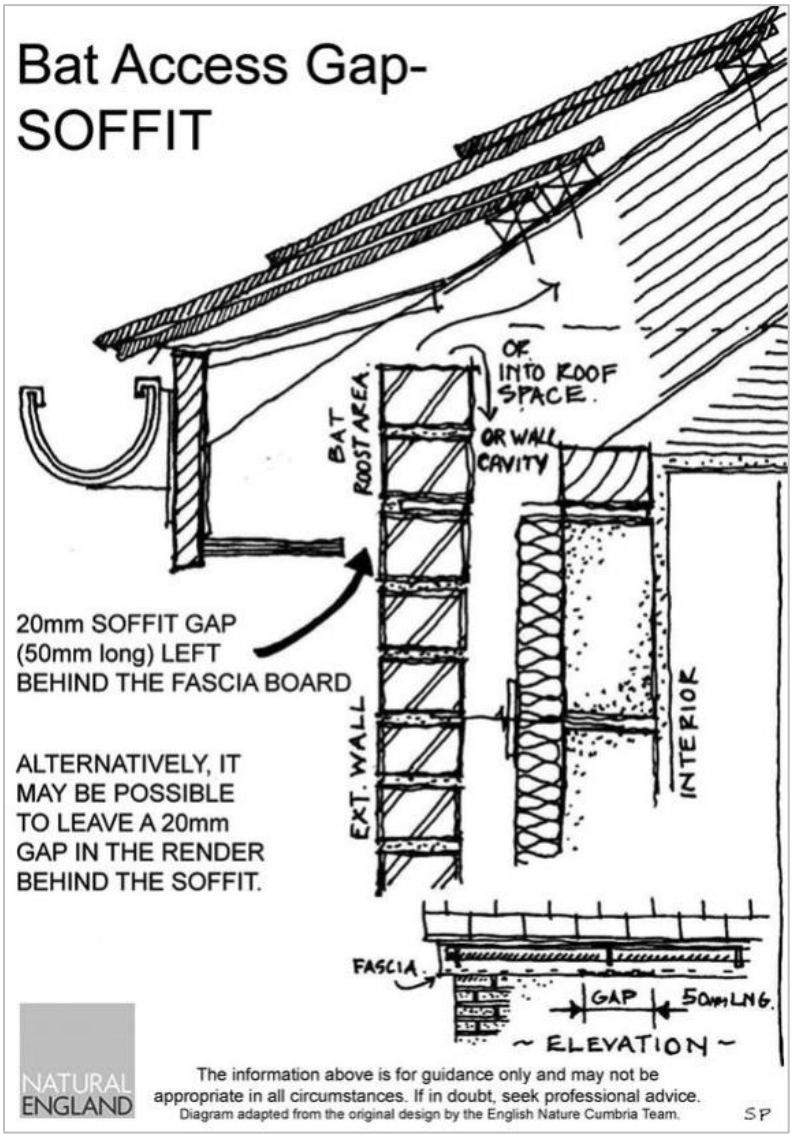

Figure 5.1 – Roost 3 loss mitigation

5.21 Roosts 4-5 being contained inside the building will be permanently lost through the works process involving internal refurbishment. Post-construction there will be areas in the east of Building 2 left open for equine storage and bat access maintained by keeping external doors open; to this end two 'Three crevice bat boxes' (see **Figure 5.2**) will be installed on internal facings to provide mitigation for loss of roost oppertunities inside the building. In addition, the continued access provided by external doors left open maintains feeding roost oppertunities for loft dwelling species such as Brown long-eared and bats that come inside to forage such as Whiskered/Brandt's.

Figure 5.2 – Three crevice bat box available from [Wildlife Boxes | Greenwood's Ecohabitats (greenwoodsecohabitats.co.uk)]

Post-mitigation

5.22 A precautionary inspection during a follow up site visit by the named Ecologist will be carried out following the works. Any remedial work will be instructed if applicable. The licence will be signed off only when the bat roost has been effectively mitigated.

Post-development

5.23 Post-development management is not required though it will be the Licensee's responsibility to ensure the existing building and thus the roost sites remain in favourable order.

5.24 Monitoring may be required as part of the terms of the mitigation licence but it is typically uncommon for Natural England to require monitoring for Transitional/Day roosts for the named species and numbers recorded in Lancashire.

5.25 This mitigation proposed is subject to the approval of the Natural England EPS team who may influence the terms of this mitigation; all proposed roost provisions outlined hereafter will be dedicated for bats and permanent.

8.0 References

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External Appendix

Wyreside Master Plan – Tyrer Ecological Consultants Ltd, November 2022