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Dusk Survey Results

August 2020

Parkgate House
Park Gate Road
Blackburn
BB1 9ET

National Grid Ref: SD674342





Document Title	Dusk Survey Results
Prepared for	PPY Design Ltd
Prepared by	Tyrer Ecological Consultants Ltd

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Appendix I: *Inspection and Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants Ltd, July 2020)

1.0 Background and Introduction

- 1.1 As part of a proposed planning application regarding Parkgate House, Blackburn, Tyrer Ecological Consultants Ltd conducted a preliminary roost assessment (PRA) with respect to bats during July 2020, which concluded the following (Figure 1):

Parkgate House has been found to offer a number of viable Potential Roost Features (PRF's) suitable for. The structure has consequently been categorised to possess 'moderate' roost suitability in line with up-to-date BCT guidance (Figure 7).

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 ^a (structures).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	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. ^b
No further surveys required (trees).		

^a 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 this category.

^b 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 that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

Figure 7: Bat Conservation Trust extract

Based upon this categorisation, it is recommended that two dusk and/or dawn emergence or/and dawn re-entry surveys are conducted at the building, within the main active season of bats (May - August) and spaced as a minimum of 2 weeks apart in order to establish if/how the building is being used by bats and if so identify the species, abundance, roost locations and flight lines following emergence/re-entry.

Figure 1 - Extract from *Inspection & Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants Ltd, July 2020)

- 1.2 Development proposals for the site involve the modernisation and extension of the existing residential property, which also includes a conversion of the loft space.
- 1.3 Tyrer Ecological Consultants Ltd were therefore re-commissioned by PPY Design Ltd to undertake the further bat surveys recommended in the PRA; the surveys (two dusk surveys) were carried out in July-August 2020 in accordance with current Bat Conservation Trust (BCT) Guidelines during the active season of bats.
- 1.4 The results, conclusions and recommendations following the surveys, including any indicative mitigation to inform an application to Natural England for a European protected species mitigation licence (EPSML), where necessary, will be supplied within this report.
- 1.5 This report should be read, understood and presented to the local authority as an additional document to Appendix I (see Contents page).
- 1.6 In accordance with *Biodiversity Net Gain: Good practice principles for development* (CIEEM *et al*, 2019), measures have been recommended proportionate to anticipated impacts to ensure that the proposed development results in a biodiversity net gain.



2.0 Bats - Legislation & Policy

2.1 All British bats and their ****roosts** ¹are afforded protection under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579). When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the Regulations, that has a statutory duty as the local authority to have due regard to the provisions of the Regulations in the exercise of its functions.

2.2 Use of Buildings by Bats

- a) Summer breeding roost (May-August)
- b) Hibernation roost (October-March)
- c) Transitional or temporary roost (Mainly spring/summer months)

Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance, climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

Policy

2.3 The National Planning Policy Framework (NPPF) has replaced the Planning Policy Guidelines (PPG's). In relation to wildlife, PPG 9 was one of the documents to which Planning Authorities referred to, particularly where a specially protected species is or may be present and will be affected by a development for which a Planning application seeks consent. The aims of the NPPF, in relation to species and habitats, are that it places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where they may be affected by development.

Paragraph 175 of the National Policy Planning Framework (as revised in 2019) stipulates:

"if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused".

... whilst Paragraph 174 states:

"To protect and enhance biodiversity and geodiversity, plans should... promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

¹ ******The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats and Species Regulations (2019) (EU Exit) (Regulation 43 (d) the term roost is not used but refers to "*a breeding site or resting place of such an animal*" and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation.



- 2.4 The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation:

"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision."

- 2.5 This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependent upon built structures for survival and that roosts can be easily incorporated into existing and new developments to benefit these species.

- 2.6 Policy CS15 of Blackburn with Darwen's Borough Council's core strategy (2011) goes onto state that:-

"General habitats which may support species of principal importance either for shelter, breeding or feeding purposes (both natural and built features), will be protected from development, in accordance with the Environmental Strategy set out in Policy CS13."

3.0 Bats in Greater Manchester

- 3.1 Up to eleven bat species have been regularly recorded in Lancashire, many of which use built structures and trees for roosting. A variety of building types and features are utilised by bat species at different times of year, ranging from occupied residential dwellings to disused barns and bridges. The most frequently encountered species is the common pipistrelle bat (*Pipistrellus pipistrellus*) and its abundant status in Lancashire is mirrored throughout the UK.

4.0 Survey Methods

- 4.1 Bat Conservation Trust - 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."

Relative to the above the survey protocol has been determined using the collective and long standing experience of Tyrer Ecological Consultants Ltd and knowledge of the specific nature of the site.

Survey Protocol

- 4.2 The timing of the surveys took place in July-August thus within the main active period of bats, at a time when maternity colonies have formed / returned to summer roosts and bats are in a highly active and social stage.

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).

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 Parkgate House presents no problems for dusk observations; if a building is complex, or observations were restricted, or species that are difficult to detect at dusk are suspected then dawn surveys would be conducted. At Parkgate House there are no visual constraints and to date there is no evidence to suggest the presence of such species.

Furthermore it should also be noted that at dawn temperatures are usually lower than at dusk and 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. Dawn surveys are more productive when “back tracking” bat to a roost from foraging grounds.

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

- 4.3 The number of surveys and surveyors was adequate relative to the roost potential that was identified i.e. 'Moderate', and requiring two surveyors to accurately monitor potential roost features (PRF's) at any one time.
- 4.4 Surveyors were strategically positioned so that all elevations with bat roost potential, as described in the daytime report, could be observed as best as is possible from ground level. 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; echolocation calls were analysed the next day using Analook computer software to verify field observations.



5.0 Results

Two dusk emergence surveys were undertaken on the 20th of July 2020, and 03rd August 2020 by the two surveyors from Table 1 below. Surveyor credentials have been given within Table 1. Tables 2 and 3, alongside Figures 2 and 3 document the results of the dusk surveys with Figure 4 providing an emergence location visual aid.

Table 1 - Surveyor Credentials

Surveyor(s)	Experience	Surveyor Credentials
Mrs. H. Taylor-Boyd	6 years	A highly experienced bat surveyor with several years' experience with Tyrer Ecological Consultants Ltd.
Mr. D. Boyd	6 years	A highly experienced surveyor currently working as a sub-contractor for Tyrer Ecological Consultants Ltd.

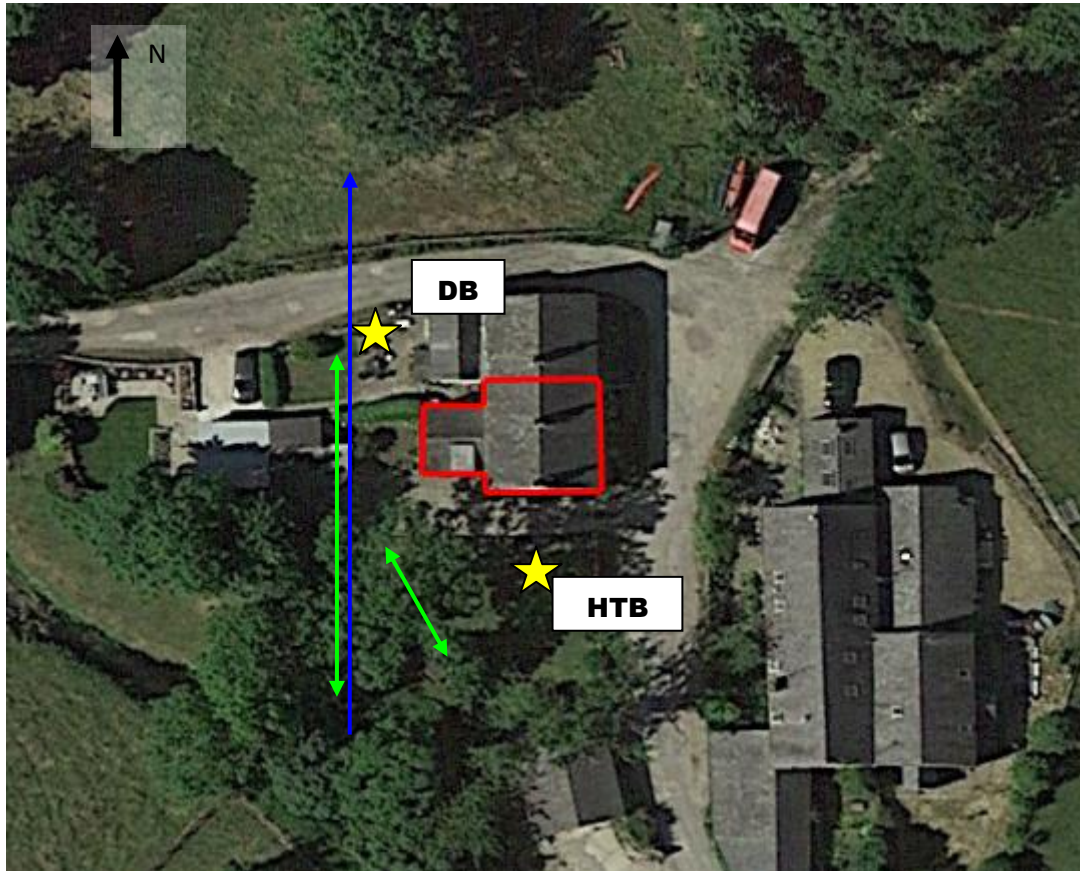
Table 2 – Survey dates, times and weather conditions

Times of Survey	Date	Weather Conditions
Dusk survey 2105 - 2245	20 th July 2020	Sunset: 2125: Dry, Light Air, 2% cloud cover Start temp: 13 °C End temp: 12 °C
Dusk survey 2042 - 2210	03 rd August 2020	Sunset: 2102: Dry, Calm, 5% cloud cover Start temp: 12 °C End temp: 10 °C



Table 3 – Dusk Survey Results

Dusk Survey	Time	Activity
20/07/2020	2105 - 2245	Summary: No emergence of any bats from the building. 2134 hrs: a Common Pipistrelle foraged in the west of the site. 2135 hrs: a Common Pipistrelle was recorded but not observed. 2136 hrs: a Common Pipistrelle commuted south to north along the west of the site. 2139-2152 hrs: 14 Common Pipistrelle commuted south to north along the west of the site. 2152 hrs: a Soprano Pipistrelle commuted south to north along the west of the site. 2154-2207 hrs: two Common Pipistrelle foraged in the garden in the south-west of the site. Activity comprised of frequent foraging and commuting by a maximum of ten CP bat at a time.
03/08/2020	2042 - 2210	Summary: Emergence of three Myotis bats from the target building. 2110 hrs: three Common Pipistrelle bats commuted from south to north over the building. 2115 hrs: three Common Pipistrelle bats commuted south to north along the west of the site. 2121 hrs: a Noctule was recorded but not observed. 2123 hrs: three Common Pipistrelle bats commuted south to north along the west of the site. 2127-2202 hrs: five Common Pipistrelle bats foraged around the garden in the west of the site. 2136 hrs: a Natterer's bat emerged from the roof verge in the north-west corner of the house at roof-plate level. 2137 hrs: a Natterer's bat emerged from the roof verge in the north-west corner of the house at roof-plate level. 2139 hrs: a Natterer's bat emerged from the roof verge in the north-west corner of the house at roof-plate level. 2155 hrs: a Natterer's bat was recorded but not observed. Activity comprised of frequent commuting and foraging by a maximum of five CP bats, and emergence of three Myotis bats.



Dusk Survey 1 - 20/07/2020

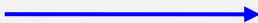
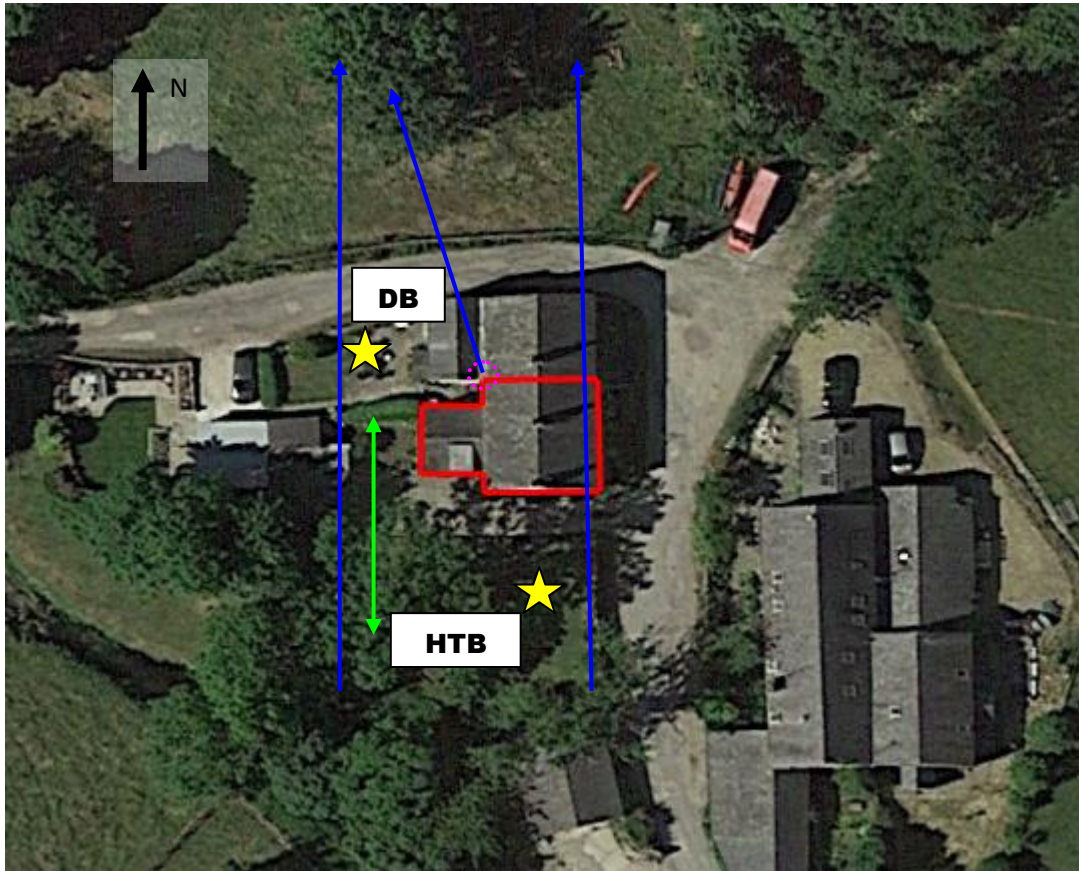
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		Surveyor initials

Figure 2 - Visual Aid - Dusk Survey 1 Results with Key



Dusk Survey 2 - 03/08/2020

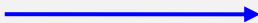
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		Surveyor initials
	Suspected emergence location		

Figure 3 - Visual Aid - Dusk Survey 2 Results with Key



Figure 4 - *Visual Aid* – Suspected emergence location at roof plate level on the north-west corner of the building from which three Natterer's bats emerged during the second survey

6.0 Dusk Survey Conclusions & Recommendations

- 6.1 The survey results gathered by Tyrer Ecological Consultants Ltd conclude that Parkgate House, Blackburn, is being used by three Natterer's (*Myotis nattereri*) bats for roosting purposes. Based upon the evidence, the building is host to a 'Day roost' for the named species in singular/small numbers, with three bats observed emerging from the north-west corner of the building at wall-plate level during the second dusk survey.
- 6.2 Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) describes a 'Day roost' as:
- "a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer".*
- 6.3 The permanent modification / destruction of a bat roost will therefore need to be addressed from both a conservation and legal perspective along with the application of appropriate mitigation. A European Protected Species Mitigation Licence (EPSML) will be required to legally destroy a place that is 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.
- 6.4 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*" of the species concerned can be maintained.

- 6.5 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 such as illumination of boundary features. 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 strategic information if applicable.

7.0 Indicative Mitigation

- 7.1 From the evidence gained during the dusk surveys, the use of Parkgate House by bats is considered to be of 'low' level significance relatable to Natterer's bats and their current status (as according to - English Nature: Bat Mitigation Guidelines 2004); the proposed mitigation is proportionate to that use. However, if at any time that assessment is revised to a higher level, then the mitigation will also be accordingly revised.

- 7.2 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.

- 7.3 The LPA need to consider the mitigation in relation to the potential success of a Natural England 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 they determine that the mitigation is appropriate then a Planning Condition should be attached requiring the roost provision to be implemented.

If the LPA consider that the mitigation is over 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.

- 7.4 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 severe.

- 7.5 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. The licence is issued by the EPS Licensing Team of Natural England.

Summary of Mitigation

- 7.6 The modernisation and extension of the existing building Parkgate House including conversion of the loft space is the key component of the applicant's plans for the site; however it is acknowledged that the presence of roosting bats needs to be addressed from both a legal and conservation perspective.

The mitigation proposals outlined in this report are seen to be the most productive way forward that will retain long term roosting opportunities for bats.

- 7.7 No foraging habitat should be lost as a result of the proposals. Existing foraging habitat in the form of the treelines and shrubbery on and adjacent to the will mean all proposed new roost(s) will not be at any further distance from valuable foraging areas of the site.
- 7.8 To ensure that bats are not left without a roost while the work takes place one Schwegler 2F bat box (or suitable equivalent) will be erected on a suitable tree in proximity to the survey area; if this is not possible, a pole-mounted box will be required. The receptor will act as a receptor for if bats have to be captured and relocated to it during the work schedule (See Figure 5).

The receptor bat box will act as a receiver box for if bats have to be captured by hand and relocated to it by the ecologist during the work schedule; it will be retained permanently post-development to provide a long term roost opportunity for bats.

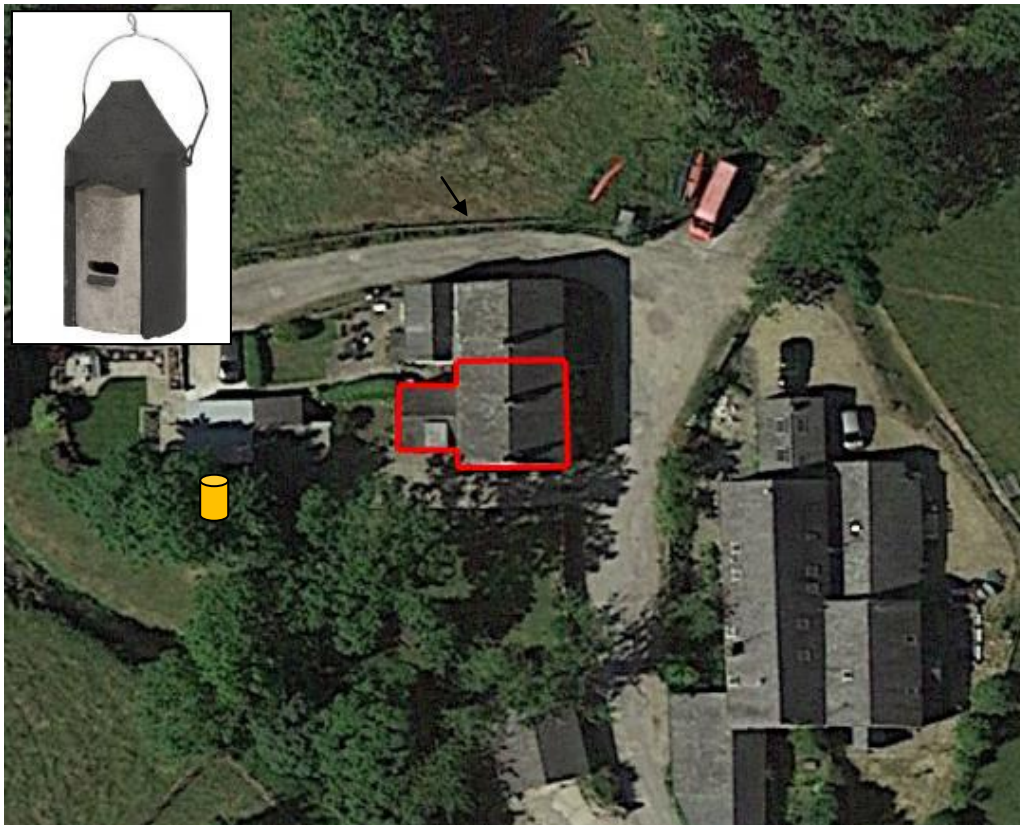


Figure 5 - Proposed location of receptor roost  (Google Earth, 2020) subject to permission, and 2F Schwegler Bat box (overlayed)

Assigned Ecological Clerk of Works - EcOW

- 7.9 At the pre-commencement stage a suitably qualified Ecologist is to undertake induction 'toolbox talk' on possible bat presence and present/discuss document features taken from the license i.e. License, Method Statement, Mitigation Figures and Work Schedule to be kept on site for the duration of the work.

Prior to any work being undertaken the presence/absence bats as far as is possible will be established by undertaking detailed investigation of the areas at which bats have been observed using the building; typically at wall-plate level in the north-west corner of the building. The ecologist will supervise careful dismantling of all places that will be removed as part of the proposed work which have been identified as offering roost access or roost potential at the ecologist discretion. In addition wherever opportunities for bats exist in other parts of the building the supervised dismantling will extend to these areas with strategies for safely removing bat(s), as long as a maternity colony is considered not to have taken up occupancy of the building.

All dismantling of roost features will be undertaken during favourable weather conditions outside. No increase in external lighting is expected during the conversion; should additional lighting be installed it must be directed away from any bat roost access points, flight paths and foraging areas.

Mitigation proposed is subject to the approval of the Natural England EPS team; all proposed roost provisions outlined hereafter will be dedicated for bats and permanent.

7.10 Work undertaken by the Ecologist

Capture/Exclusion: Once an EPSML licence is in place the contractor will provide a safe means of access to allow the ecologist to investigate the confirmed roost area for bat presence at Parkgate House.

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. In the event of bat(s) being present, it/they will be removed, placed in a secure box with soft tissue and immediately transferred into the receptor bat box that will have previously been erected on a suitable tree nearby as indicated in Figure 5. Once it has been established by the ecologist that bat(s) are absent the building works will continue to completion.

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

7.11 Work undertaken by the Contractor

New roost provision will be built into the design of the proposed new dwelling:

- New roosting provision will be re-created in the form of one access point for bats at the wall plate; the access point will permit ingress to areas of underfelt to be instated below the roof cover for bats. The access point is to be instated on the west facing elevation, using a bat brick with the entry hole at the top to create an inconspicuous access point (see Figure 6-8),

- As part of this roost creation process it is imperative that traditional bitumen 1F roofing felt will be used as the chosen local underfelt/roof lining as opposed to any breathable roofing membrane (BRM). Modern breathable roofing membranes (BRM) entrap bats through wear and tear in the synthetic polymers used to protect the breathable membrane causing bats harm, injury and death.

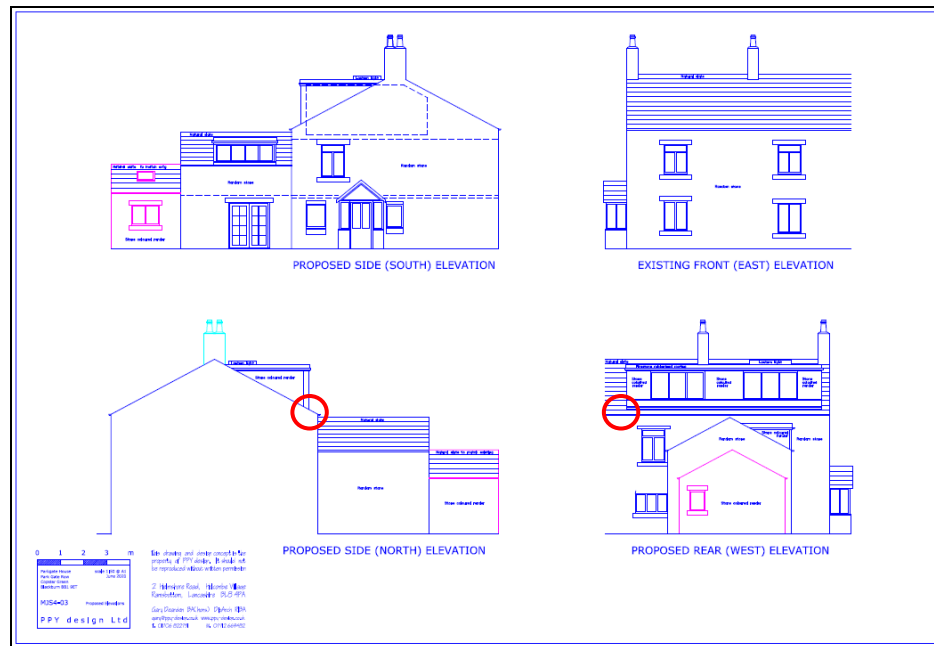


Figure 6 - Proposed location of new roost access (adapted ©PPY Design)



Figure 7 – The bat brick should be placed with the hole to the top, at the north-west corner of the building at wall-plate level (see <https://www.nhbs.com/bat-brick?bkfno=197697>)



Figure 8 – The access point should only be installed at Parkgate House in conjunction with bitumen underfelt, no breathable roofing membranes (BRM)



8.0 References

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Appendix I: *Inspection and Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants Ltd, July 2020)