United Environmental Services Ltd
1 Booths Park,
Chelford Road,
Knutsford,
Cheshire
WA16 8QZ

www.ues.org.uk
enquiries@ues.org.uk
01565 757788

BAT SCOPING AND PRESENCE / ABSENCE SURVEY

At

Summerville
Hargate Drive
Hale
Greater Manchester
WA15 0NL

NGR: (SJ) 378178 386204

Prepared for:	Simon Gallop, Belmont Homes (Cheshire) Ltd
Written by:	Emily Clark, UES Senior Ecologist
Approved by:	Toby Hart, UES Managing Director
	[redacted]
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UES reference:	UES03365/02

CONTENTS

EXECUTIVE SUMMARY

A bat scoping survey and subsequent bat presence / absence surveys were undertaken at Summerville, Hale, Greater Manchester by United Environmental Services (UES) Ltd in June and July 2021. This report provides an assessment of the potential impacts on bats as a result of the proposed development of the site. The proposals include the demolition of the existing residential dwelling and detached garage, and one construction of a residential dwelling with an associated driveway and garage within the same site boundary.

The objective of the bat scoping survey was to establish the suitability of the buildings to on site to support roosting bats, based on a site specific survey and habitat assessment. The buildings were searched externally and internally (where accessible) for bat presence and features associated with bat activity, as detailed in Bat Conservation Trust (BCT) guidance (2016).

The quality of roosting habitat within the residential dwelling (Building 1) is considered to be moderate. The building has a number of potential roosting features (PRFs) for bats, such as gaps under roof and hanging tiles and gaps at the eaves. The quality of roosting habitat within the detached garage (Building 2) is considered to be low. The building has small number of PRFs such as gaps at the end roof tiles and behind barge boards. No evidence of roosting bats was observed within either building during the survey.

Therefore, following the scoping survey, Building 1 was subject to two further presence / absence surveys, Building 2 was subject to one further presence / absence survey. The surveys were undertaken in June and July 2021. The objective of the presence / absence surveys was to determine whether or not bats are using the buildings on site to roost, and if so to assess the type and importance of roosts in order to inform the planning process. The surveys were carried out to recognised guidelines, timings and weather conditions, with particular reference to Natural England and BCT publications.

Summerville is situated amongst residential houses and mature gardens that provide low-moderate quality habitat for bats. The mature gardens will provide some foraging and commuting opportunities for bats in the local area. However, habitats in the wider surrounding area (approximately 500m south-west of the site) are of higher quality, with hedge and tree-lined fields, woodland corridors and the River Bollin. These habitats will provide higher quality foraging and commuting opportunities for bats in the area. Alternative roosting opportunities are present within the numerous mature trees and residential buildings present in the local and wider area.

Three species of bat were recorded during the presence / absence surveys: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and noctule *Nyctalus noctula*.

A single soprano pipistrelle was recorded roosting under a hanging tile on a ground floor bay window on the western aspect of Building 1 during the re-entry survey. The bat is likely to be male, or a non-breeding female. No bats were recorded roosting within the buildings during the emergence surveys.

Due to the presence of a roosting bat within Building 1, the development will need to be registered under Natural England's bat mitigation class licence (BMCL) system prior to the works to Building 1 taking place. This can only be applied for once planning

permission has been granted. Natural England aim to process applications within 10 working days of receipt.

The measures listed within section 4.3 of this report outline the mitigation and compensation measures required in order to safeguard bats throughout the duration of development. They form a method statement which the contractors undertaking works on site must adhere to.

No bats were recorded roosting in Building 2 on site during the presence / absence surveys and no evidence of roosting bats was observed during the scoping survey. As such, no further mitigation or compensation measures are required for works to proceed to Building 2, with regards to bats.

***A Cotoneaster* species was recorded immediately adjacent to Building 1. Numerous cotoneaster species are listed under Schedule 9 of the Wildlife and Countryside Act 1981. As such, it is an offence to plant or otherwise cause these species to grow in the wild, including as a result of development works. The plants will need to be subject to control measures prior to the start of works on site and eradicated as part of the development in order to ensure that they do not spread across the site or onto adjacent areas.**

Due to the potential presence of breeding birds in the buildings on site, it is recommended that the initial site clearance (including vegetation) and demolition works take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible and works need to take place during this period, a breeding bird nest survey should be undertaken prior to the commencement of works by a suitably experienced ecologist, and an ecological clerk of works appointed to oversee the works if considered necessary.

This report should be read in conjunction with appendices 1 to 6, which provide visual representations of the survey results and statutory and planning context.

1 INTRODUCTION

1.1 Author, surveyors and qualifications

This report is compiled and written by Emily Clark BSc PGdip ACIEEM, UES Senior Ecologist. Emily is licensed by Natural England to disturb, take and handle all species of bats under licence number 2019-39350-CLS-CLS (level 2). Other surveyors include:

- Tom Kenwright BSc MSc, UES Senior Ecologist. Tom is licensed by Natural England to survey all species of bats by observation using an artificial light under licence number 2021-53549-CLS-CLS (level 1)
- Amanda Beck, UES Assistant Ecologist. Amanda is licensed by Natural England to survey all species of bats by observation using an artificial light under licence number 2018-38295-CLS-CLS (level 1)
- Paul Cassidy ACIEEM, UES Sub-contractor. Paul is licensed by Natural England to disturb, take and handle all species of bats under licence number 2017-27610-CLS-CLS (level 2)
- Daniel Smith BSc MScRes, UES Graduate Ecologist
- James Subbs UES University Placement Student
- Mark Jefferies UES Sub-contractor
- Selina Royal UES Sub-contractor
- Sarah McLaren UES Sub-contractor

All surveyors have the knowledge, skills and experience identified within CIEEM's "Competencies for Species Survey: Bats" (2013), or were under the supervision of a surveyor with the required competencies.

1.2 Survey objectives

UES was commissioned in June 2021 to conduct site surveys which include the following activities:

- Conduct internal and external building inspections to look for field signs of bats
- Assess the suitability of the buildings for use by roosting bats
- Confirm bat presence or likely absence by conducting emergence and re-entry surveys of the buildings
- Assess the type and importance of the roost(s), if present
- Recommend appropriate mitigation and compensation, if applicable

1.3 Proposed development

The applicant plans to demolish the existing residential dwelling and detached garage on site and construct one residential dwelling within the same site footprint.

1.4 Structure of the report

This report sets out the methodology, results, and recommendations in relation to a specific bat survey. Recommendations are in line with statutory legislation and planning policy objectives.

The report should be read in conjunction with appendices 1 to 6, which give visual representations of the survey results.

2 METHODOLOGY

2.1 General

All surveys were carried out to recognised guidelines, timings and weather conditions, with particular reference to Natural England and BCT publications (see references for further information).

The habitats on site and in the surrounding area were assessed during a walkover survey and through studying aerial photographs, in order to gauge their suitability to support roosting, foraging and commuting bats.

2.2 Building survey

The buildings on site were searched both externally and internally for bat presence and features associated with bat activity, as detailed in BCT guidance (Collins, 2016). This was conducted on 4th June 2021 by Emily Clark.

2.2.1 External inspection

The external inspections of the buildings were carried out from ground level using binoculars, and also using ladders and an endoscope to investigate suitable gaps. The objective of the survey was to find and record any signs of bat use, for example:

- Bat droppings
- Feeding remains
- Grease staining / urine marks
- Corpses or skeletons

The bat signs listed above are visible from the outside of a building. The following areas were searched, where present:

- Roof and ridge tiles
- Lead flashing
- Eaves
- Boxed soffits
- Fascia and barge boards
- Window sills and panes
- Walls
- Gaps under felt
- Cracks / holes in woodwork or behind cladding
- Gaps in brickwork and mortar
- Air bricks
- Grills
- Vents

2.2.2 Internal inspection

The internal inspections covered all of the accessible rooms and roof spaces within the buildings.

Bats regularly utilise specific areas within roof spaces, which were searched for any field signs of bats using high-powered torches and an endoscope, where considered necessary by the licenced ecologist. The following features were searched, where present:

- Roof beams and junctions
- Gaps under felt
- Dividing walls
- Chimney breasts
- Gaps in brickwork and mortar
- Cracks / holes in woodwork
- Floor or other surfaces on which droppings could accumulate

2.3 Emergence and re-entry surveys

Potential roost access points were identified during the building inspections. These points were covered by a surveyor during the dusk emergence and dawn re-entry periods.

Bat echolocation, flight and habitat characteristics were recorded where possible, in order to determine the species. The level and type of bat activity was also recorded to establish how bats are using the site.

2.3.1 Equipment

BATLOGGER M bat detectors and recorders were used during the surveys. This device records bat echolocation calls across the full spectrum, with a sensitivity range of 10 – 150 kHz. The integrated heterodyne live monitoring also allows the observer to hear the echolocation calls in real time, with automatic tuning. The recordings are individually time/date, GPS and temperature stamped, and are of high enough quality to produce time expansion quality sonograms.

An Anabat Walkabout bat detector was used during the surveys. This allowed the observer to hear bat echolocation calls and see the sonograms in real time, aiding identification. All registrations were automatically recorded onto a memory card and time/date stamped. The device can record and display both zero crossing and full spectrum bat echolocation calls and has a built-in GPS and mapping system.

Canon XA11 Professional Video Cameras was used in conjunction with a infra-red LED illuminators to monitor part of the building during the surveys. The camera was positioned to cover potential roost access points. Footage of the survey was recorded and reviewed post-survey.

2.3.2 Weather conditions

Table 1 - Weather conditions and survey timings

DATE	SURVEY TYPE	TIMINGS	SUNSET / SUNRISE	TEMP.	WIND	RAIN	CLOUD COVER
21/06/21	Emergence	21:27 – 23:12	21:42	14°C	Light breeze	Dry	100%
07/07/21	Re-entry	03:21 – 05:06	04:51	15°C	Gentle breeze	Dry	0%

2.4 Survey limitations

Loft 2 within Building 1 could be partially viewed, however a full inspection was not possible due to the small size and position of the loft hatch. However, an inspection of Loft 1 and a thorough external inspection was carried out and sufficient evidence was gathered to make a robust assessment as to the potential for the building to support roosting bats. This is not considered to be a limitation as the building could be fully covered during the subsequent bat presence / absence surveys.

3 RESULTS

3.1 Habitat assessment

Summerville is located approximately 1.1km from the centre of Hale, a suburb within the metropolitan borough of Trafford, Greater Manchester. The site comprises a residential dwelling, triple detached garage, associated hardstanding driveway, mature gardens and disused swimming pool. The garden and disused swimming pool on site will provide some insect prey for foraging bats.

The site is surrounded by residential dwellings and mature gardens, which are situated on well-lit roads. Habitats within 500m are similar in composition with large residential areas and well-lit roads present in all directions. The back gardens are connected with tree-lines, hedgerows or mature introduced shrubs and will provide some foraging and commuting opportunities for bats, although are considered to provide low-moderate quality habitat.

Habitats in the wider surrounding area (within 2km) to the north, east and west are similar in composition, with large areas of residential housing and well-lit busy roads. However, habitats approximately 500m south of the site improve in quality, with tree and hedge-lined agricultural fields, woodland corridors and golf courses. The River Bollin lies approximately 800m south-west of the site and its banks are heavily vegetated with dense trees and scrub. These habitats will provide higher quality and foraging and commuting opportunities for bats. Alternative roosting opportunities are present within the numerous mature trees and residential buildings present in the local and wider area.

3.2 Building inspections

3.2.1 External inspection

For the purposes of the report, the buildings have been numbered. A site plan of the buildings is included at Appendix 1.

Building 1 is a detached residential dwelling that is currently unoccupied. The building has been extended several times and has two single storey extensions on the northern aspect of the building. The building is constructed from brick and has an L-shaped pitched roof, while the roof on the western aspect of the building is hipped. There are also three pitched gable ends present on the southern aspect of the building, see Appendix 3 Photographs, Photograph 1. The roofs are clad with clay roof and ridge tiles, several of which are lifted (Photograph 2). There are also several gaps where mortar is missing from the end roof tiles, see (Photograph 3). Several chimneys are present on the roof, all of which are in good condition. There is one dormer present on the north-eastern aspect of the building (Photograph 4). The dormer has a flat roof, which is lined with bitumen roofing felt and the sides of the dormer window are clad with hanging tiles. There are also wooden barge boards present on the dormer. There are slight gaps where the roofing felt, barge boards and hanging tiles are lifted (Photograph 5).

There are wooden boxed soffits present on the gable ends of the building, which are generally in good condition. There are protruding rafters connected to wooden barge boards on all other aspects of the building and several gaps were noted on the eastern and western aspects of the building. The gaps may lead to the wall plate and loft within the building (Photographs 6 and 7). There are bay windows present on the southern and eastern aspects of the building, which are clad with hanging tiles (Photograph 8). Several hanging tiles are lifted while a large number of gaps were noted where mortar is missing from the hanging tiles (Photograph 9).

The windows and doors have wooden frames, which are generally in poor condition but no gaps suitable for roosting bats were noted. The walls of the building are partially rendered and are in good condition, however one gap was noted on the eastern aspect of the building, where the brickwork is damaged (Photograph 10).

The extensions on the northern aspect of the building appear to have been constructed relatively recently (Photographs 11). One has a flat roof lined with bitumen roofing felt while the other has a mono-pitched roof clad with clay roof tiles. The extensions are generally in excellent condition and tightly sealed, with no PRFs noted.

Building 2 is a detached triple garage with a small extension on the western aspect of the building. The main section of the garage is constructed from brick with a hipped roof, clad with clay roof and ridge tiles (Photograph 12). The roof of the main garage is in excellent condition with no lifted roof tiles noted. The small extension on the western aspect of the garage is constructed from brick with a pitched roof, clad with clay roof and ridge tiles (Photograph 13). A number of gaps were noted at the end roof tiles on the western aspect of the building, where mortar is missing (Photograph 14). There are barge boards present on most aspects of the building. There are slight gaps which lead behind the barge boards; however these were fully inspected with a high powered torch and no evidence of roosting bats was recorded. Furthermore, many of the gaps were filled with dense, old cobwebs, indicating no recent use by roosting bats. The walls are generally in good condition with no PRFs noted. There are several windows present which have wooden window frames, which are in poor condition but no PRFs were noted. The main section of the garage is missing two garage doors, allowing bats access into the building.

No bat field signs were found during the external building inspections.

3.2.2 Internal inspection

Building 1: A large proportion of the building has vaulted ceilings; however, two loft voids are present within the building, see Appendix 1 – Site Plan. One loft void (Loft 1) is located on the southern aspect of the building while the other (Loft 2) is located within the centre of the building. The lofts are a typical wooden purlin rafter construction and are unlined. Loft 1 is smaller and has a floor to ridge height of approximately 1m (Photograph 15) while Loft 2 has a floor to ridge height of approximately 3m (Photograph 16). No evidence of roosting bats was recorded within the lofts, however, due to the small size and position of the loft hatch, a thorough internal inspection of Loft 2 was not possible (Photograph 17).

A small cellar is also present within the northern section of the building (Photograph 18). The cellar is constructed from brick and no access points or PRFs were noted within the cellar.

Building 2 has no loft void but has one small mezzanine section present (see Photograph 19). The roof is a typical wooden purlin rafter construction and is lined with a mixture of polystyrene sheets, wooden sarking boards and bitumen roofing felt (Photograph 20). The roof lining is generally in good condition with no light ingress noted. The building is well lit, due to the presence of windows and absence of garage doors, reducing its suitability to support roosting bats.

No bat field signs were found during the internal building inspections.

3.3 Emergence and re-entry surveys

Table 2 – Survey results

DATE	SURVEY TYPE	SPECIES	NUMBER OF INDIVIDUALS	ROOST LOCATION	ACCESS POINT	TIMINGS
21/06/21	Emergence	None	N/A	N/A	N/A	N/A
07/07/21	Re-entry	Soprano pipistrelle	1	Under a hanging tile on the bay window on the western aspect of the building (Photographs 21 and 22).	Hanging tile	04:45

3.4 Activity summary

Table 3 – Bat activity summary

DATE	SURVEY TYPE	SPECIES	NOTES
21/06/21	Emergence	Common and soprano pipistrelle	Common and soprano pipistrelles were recorded throughout the survey, foraging and commuting along the treeline on the northern site boundary and within the grassland to the west of the building.
		Noctule	One noctule was observed commuting high above the site early in the survey.
07/07/21	Re-entry	Common and soprano pipistrelle	Common and soprano pipistrelles (soprano pipistrelles to a greater extent) were recorded throughout the survey, foraging and commuting within the garden and along the tree line that demarcates the northern site boundary.
		Noctule	Two brief noctule passes were recorded but were not seen by surveyors.

4 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

Summerville is situated amongst residential houses and gardens that provide low-moderate quality habitat for bats. The mature gardens will provide some foraging and commuting opportunities for bats in the local area. However, habitats in the wider surrounding area (approximately 500m south-west of the site) are of higher quality, with hedge and tree-lined fields, woodland corridors and the River Bollin. These habitats will provide higher quality foraging and commuting opportunities for bats in the area. Alternative roosting opportunities are present within the numerous mature trees and residential buildings present in the local and wider area.

The quality of roosting habitat within Building 1 on site is moderate, with a number of PRFs identified, such as gaps under hanging tiles and at the eaves, raised roof tiles and gaps where the end roof tiles are missing mortar. Whilst a small cellar is present, the building is considered to offer limited potential to support hibernating bats due to a lack of internal PRFs and access points into the cellar. No evidence of roosting bats was observed during the internal and external building inspections.

The quality of roosting habitat within Building 2 on site is low, with a small number of PRFs identified, such as gaps where the end roof tiles are missing mortar. The building internal areas of the building are extremely light and open, reducing its suitability to support roosting bats. The building offers limited potential to support hibernating bats. No evidence of roosting bats was observed during the internal and external building inspections.

Three species of bat were recorded during the bat presence / absence survey: common pipistrelle, soprano pipistrelle and noctule. Activity was generally low, with a small number of common and soprano pipistrelles foraging and commuting within the garden during the surveys, especially along the treeline along the northern site boundary. Noctule bats were recorded to a lesser extent, with one noctule bat observed commuting high above the site during the emergence survey.

During the survey, one soprano pipistrelle bat was found to be roosting within Building 1, the roost is located under a hanging tile on a bay window on the western aspect of the building. The roost is characterised in the following section.

No bats were recorded roosting within Building 2 on site.

4.2 Roost assessment

Bat activity and field signs recorded during the survey suggest that Building 1 is used as a day roost on a casual basis by a single soprano pipistrelle bat. The bat present is likely to be male or a non-breeding female. The building is unlikely to be used as a maternity or hibernation roost.

4.3 Mitigation and compensation measures

4.3.1 Bats

Due to the presence of a roosting bat within the Building 1, the development will need to be registered under Natural England's BMCL system prior to the works to Building 1 taking place. This can only be applied for once planning permission has been granted. Natural England aim to process applications within 10 working days of receipt.

A full European protected species (EPS) mitigation licence is not considered necessary, due to the low number and common species of bat that will be affected by the development.

The measures below outline the mitigation and compensation measures required in order to safeguard bats throughout the duration of development. They form a method statement which the contractors undertaking works to Building 1 must adhere to:

- As per the requirements of the BMCL application, an updated inspection of Building 1 must be undertaken by an appropriately licensed ecologist within three months prior to submission of the BMCL application, to ensure that conditions on site have not changed.

- As per the requirements of the BMCL application, presence / absence must have been conducted within the current and / or most recent optimal season (May to August inclusive). Therefore, if the licence application has not been submitted to Natural England by July 2022, additional presence / absence surveys will be required to inform the licence application.

- The low number and common species of bat that are to be affected, as well as the proposed soft demolition techniques, negate the need for timing restrictions in relation to this development.

- Prior to the start of works, the project ecologist will deliver a toolbox talk to the contractors responsible for the destructive works. The talk will cover bat ecology, bats and the law, and what to do if bats or field signs of bats are found during the works.

- Prior to the destructive works, one Schwegler 2F (general purpose) bat box will be fitted to a mature tree within the grounds of the property, as specified by the onsite ecologist, and will be left *in situ* after the works have been completed on site. The bat box should be located on a southerly aspect, where it will receive the maximum amount of sunlight. It should be sited at a height of between four and six metres and away from any potential disturbance (including external lighting). Once bats have inhabited a bat box they may only be disturbed by a licensed bat ecologist

- If works cannot be carried out in the winter months (November to March inclusive), a pre-commencement emergence / re-entry survey is to be undertaken immediately prior to the destructive works. The survey will monitor the current activity on site and occupied roosting locations to direct works accordingly.

- Prior to the start of works, the known roosting area will be inspected by a licensed bat ecologist. The ecologist will use an endoscope where necessary to examine inside the roost access points, in order to further confirm the presence or absence of bats and direct works accordingly.

- Sensitive areas of the Building 1, such hanging tiles, are to be removed by hand, under the direct supervision of a licensed bat ecologist. In the event that a bat is discovered during the works, the bat will be captured by hand by the onsite ecologist and transported to the aforementioned pre-installed bat box. If the bat is harmed or emaciated, it will be taken to the nearest animal hospital or bat carer if deemed necessary by the onsite ecologist.

- When planning external lighting, consideration is to be given to the commuting and dispersal routes used by bats. External lighting is to be directed away from the tree lines and proposed bat box locations. See Appendix 5 – External lighting guidance for further information.

- UES will remain on call throughout the development in case any further advice is needed or bats are encountered. **UES can be contacted directly on 01565 757788.**

As no bats were found to be using Building 2 on site to roost, no further mitigation or compensation measures are required for works to proceed to Building 2, with regards to bats.

4.3.2 Invasive Species

A large stand of cotoneaster is present immediately adjacent to Building 1, at the base of the bay windows on the southern and western aspect (Photograph 23). Numerous species of cotoneaster are listed under Schedule 9 of the Wildlife and Countryside Act 1981. As such, it is an offence to plant or otherwise cause these species to grow in the wild, including as a result of development works. The invasive species will need to be subject to control measures prior to the start of works on site and eradicated as part of the development in order to ensure that they do not spread across the site or onto adjacent areas. Cotoneaster can be controlled and eradicated by mechanical excavation of the entire plant and its roosts. Alternatively, it can be controlled chemically via cutting to ground level and applying a glyphosate-based herbicide to the freshly cut stumps.

4.3.3 Birds

Due to the potential presence of breeding birds within the buildings and surrounding vegetation, it is recommended that destructive works and vegetation clearance take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible and works need to take place during this period, a breeding bird nest check should be undertaken prior to the commencement of works by a suitably experienced ecologist and an ecological clerk of works appointed if considered necessary.

5 CONCLUSION

Summerville is situated amongst residential houses and gardens that provide low-moderate quality habitat for bats. The mature gardens will provide some foraging and commuting opportunities for bats in the local area. However, habitats in the wider surrounding area (approximately 500m south-west of the site) are of higher quality, with hedge and tree-lined fields, woodland corridors and the River Bollin. These habitats will provide higher quality foraging and commuting opportunities for bats in the area. Alternative roosting opportunities are present within the numerous mature trees and residential buildings present in the local and wider area.

No evidence of roosting bats was observed within Building 1 or Building 2 during the bat scoping survey.

During the bat presence / absence surveys, a single soprano pipistrelle bat was found to be roosting within Building 1, the roost is located under a hanging tile on a bay window on the western aspect of the building. Bat activity and field signs recorded during the survey suggest that Building 1 is used as a day roost a casual basis by single soprano pipistrelle bat. The bat present is likely to be male or a non-breeding female. The building is unlikely to be used as a maternity or hibernation roost.

Due to the presence of a roosting bat within Building 1, the development will need to be registered under Natural England's BMCL system prior to the works to Building 1 taking place. This can only be applied for once planning permission has been granted.

The measures listed within section 4.3.1 of this report outline the mitigation and compensation measures required in order to safeguard bats throughout the duration of development. They form a method statement which the contractors undertaking works on site must adhere to.

No bats were recorded roosting in Building 2 on site. As such, no further mitigation or compensation measures are required for works to proceed to Building 2, with regards to bats.

Due to the presence of invasive species on site and potential presence of breeding birds within the buildings, works on site will also need to be mindful of invasive species and breeding bird legislation, as detailed in section 4.3.2 and 4.3.3.

6 REFERENCES

Chartered Institute of Ecology and Environmental Management (2013). *Competencies for Species Survey: Bats*.

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Ministry of Housing Communities and Local Government (2021). National Planning Policy Framework (NPPF).

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines.* English Nature.

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APPENDICES

Appendix 1 – Site Plan

Summerville, Hale

Site plan

Building 1

Building 2

Loft

Soprano pipistrelle day roost

Loft 2

Loft 1

Appendix 2 – Aerial Photographs

Summerville, Hale

Close aerial photograph

Survey boundary

Site boundary

Summerville, Hale

Wide aerial photograph

Site location

Appendix 3 – Photographs

Photograph 1 – Southern aspect of Building 1.

Photograph 2 – Numerous lifted roof tiles on the southern aspect of Building 1.

Photograph 3 – Example of gaps where mortar is missing from the end roof tiles.

Photograph 4 – View of dormer on the north-eastern aspect of the building.

Photograph 5 – Close view of dormer window.

Photograph 6 – Gaps at the eaves on the western aspect of the building.

Photograph 7 – Gaps at the eaves and around the protruding rafters on the eastern aspect of the building.

Photograph 8 – View of hanging tiles on the western aspect of the building.

Photograph 9 – Example of gaps behind hanging tiles.

Photograph 10 – Gaps in the brickwork on the eastern aspect of the building.

Photograph 11 – Extensions on the northern aspect of the building.

Photograph 12 – Southern aspect of garage (Building 2).

Photograph 13 - View of small extension on the eastern aspect of the garage.

Photograph 14 – View of gaps at end roof tiles of garage.

Photograph 15 – View of Loft 1, within Building 1.

Photograph 16 – View of Loft 2, within Building 2.

Photograph 17 – View of small loft hatch to Loft 2.

Photograph 18 – Cellar within Building 1.

Photograph 19 – Mezzanine section within Building 2.

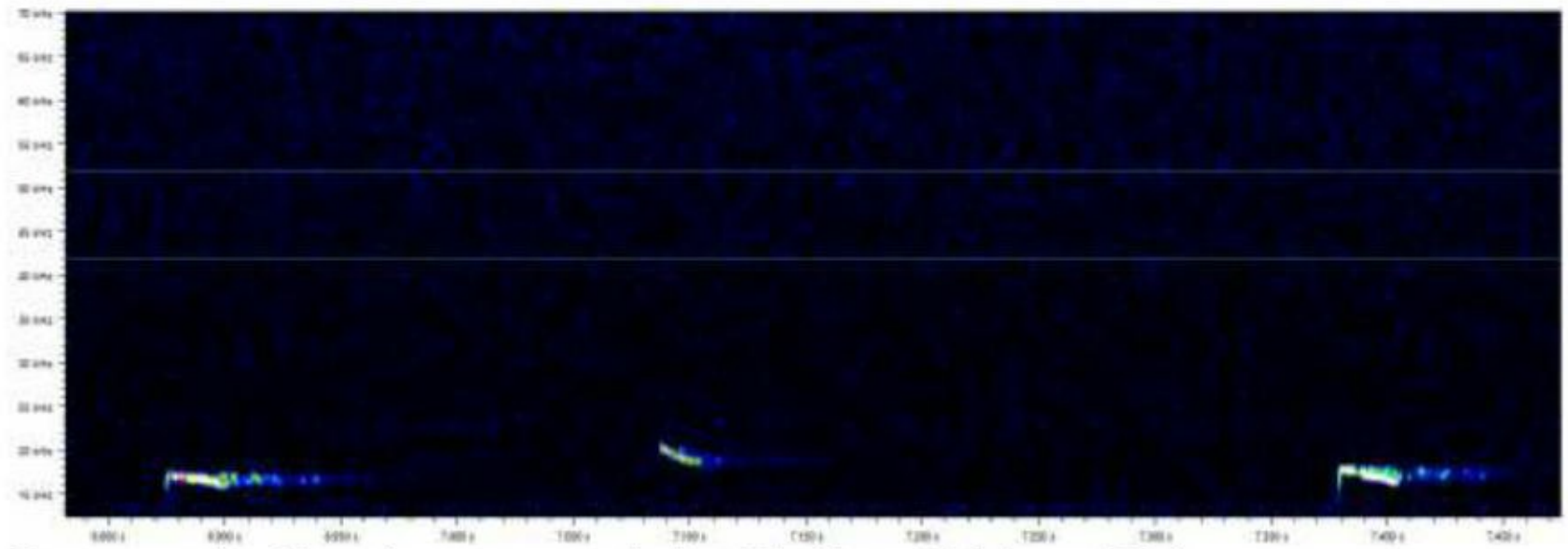
Photograph 20 – View of roof linings; polystyrene sheets, bitumen roofing felt and wooden sarking boards.

Photograph 21 – Arrow pointing to the location of the soprano pipistrelle roost.

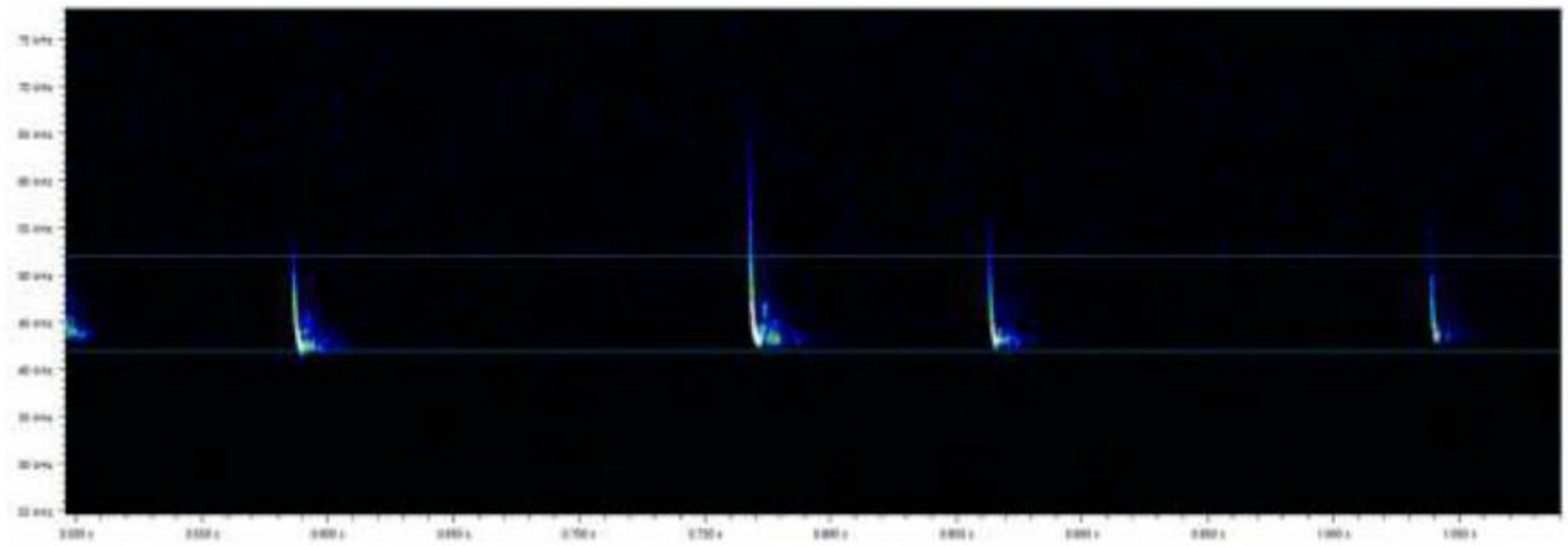
Photograph 22 – Arrow pointing to the location of the soprano pipistrelle roost.

Photograph 23 – Cotoneaster around the bay windows on the western aspect of the building.

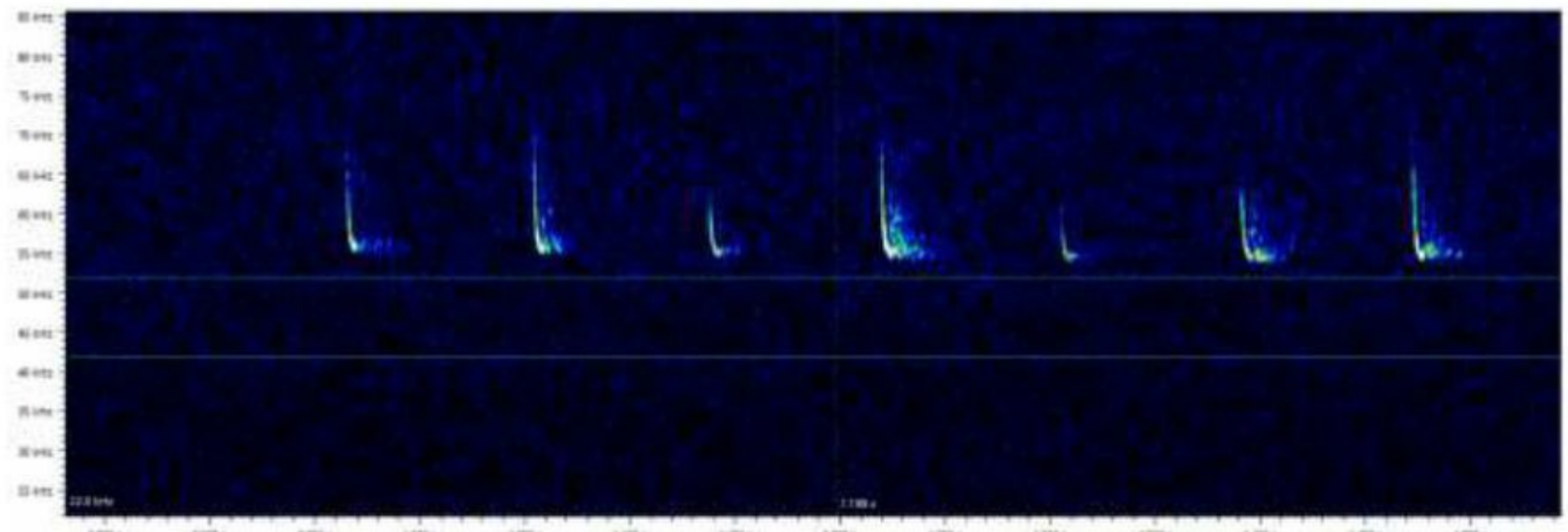
Appendix 4 – Results



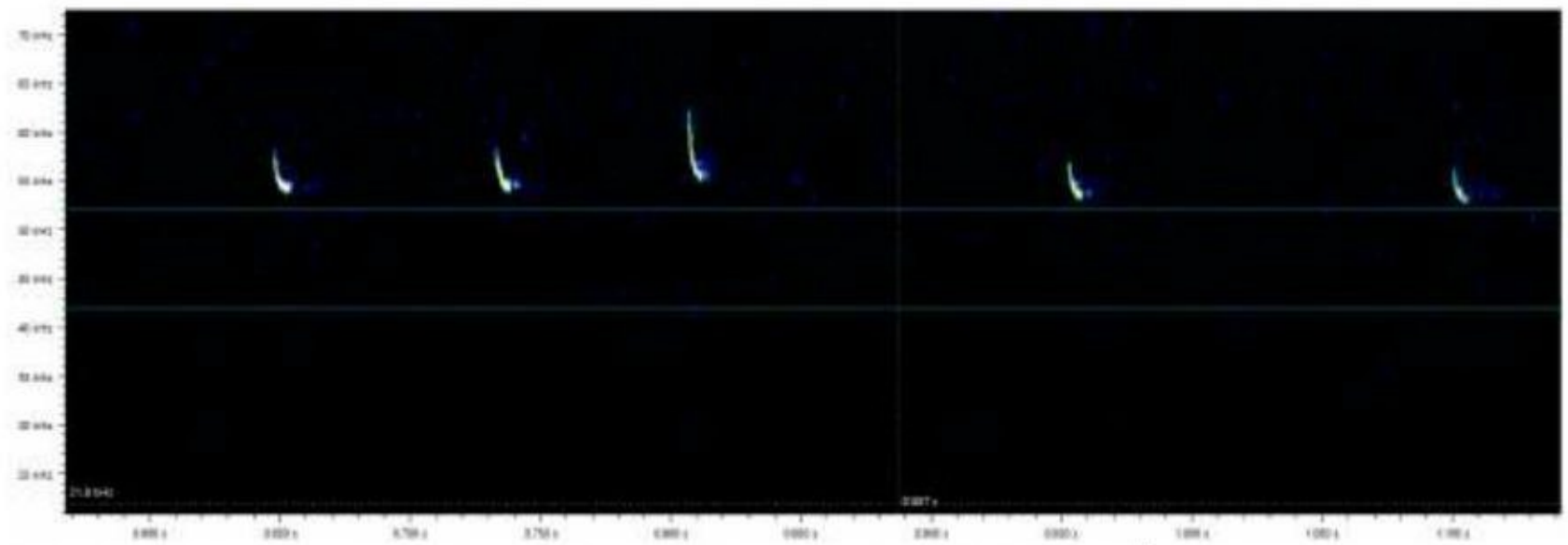
Sonogram 1 – Noctule pass recorded at 21:44 on 21st June 2021.



Sonogram 2 – Common pipistrelle pass recorded at 21:47 on 21st June 2021.



Sonogram 3 – Soprano pipistrelle pass recorded at 21:57 on 21st June 2021.



Sonogram 4 – Soprano pipsitrelle return to roost at 04:45 on 7th July 2021.

Appendix 5 – External lighting guidance

Lighting scheme in relation to bats

The two most important features of street and security lighting with respect to bats are:

1. The UV component. Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.

2. Restriction of the area illuminated. Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

UV characteristics:

Low

- Low pressure Sodium Lamps (SOX) emit a minimal UV component.
- High pressure Sodium Lamps (SON) emit a small UV component.
- White SON, though low in UV, emit more than regular SON.

High

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.
- Variable
- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.
- Glass glazing and UV filtering lenses are recommended to reduce UV output.

Street lighting

- Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.
- Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.
- If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

Security and domestic external lighting

The above recommendations concerning UV output and direction apply. In addition:

- Lighting should illuminate only ground floor areas. Light should not leak upwards to illuminate first floor and higher levels.
- Lamps of greater than 2000 lumens (150 W) must not be used.
- Movement or similar sensors must be used. They must be carefully installed and aimed, to reduce the amount of time a light is on each night.
- Light must illuminate only the immediate area required, by using as sharp a downward angle as possible. Light must not be directed at or close to bat roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit.
- Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
- Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.

Taken from the Bat Conservation Trust

Appendix 6 – Statutory and Planning Context

Ecological assessments
Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

Bats
In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Amendment (EU exit) Regulations 2019 (known as the "Habitats Regulations"). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] … uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by Natural England.

A Natural England mitigation licence application requires a Mitigation Method Statement and, in many cases, a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

The National Planning Policy Framework 2021 (NPPF) provides guidance on the interpretation of the law in relation to the natural environment and development.

The Natural Environment and Rural Communities (NERC) Act 2006 lists the following bat species as species of principle importance under Section 41:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

Section 40 requires every public body in the exercising of its functions 'have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity' (all biodiversity and not just section 41 species and habitats); therefore making these bats a material consideration in the planning process and requiring a detailed ecological bat survey before planning permission can be granted.

Birds
All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The NERC Act offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status' of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Planning policy

National Planning Guidance is issued in the form of the National Planning Policy Framework 2021 (NPPF). The most relevant section is 15: Conserving and enhancing the natural environment.

Key relevant principles stated in 15: Conserving and enhancing the natural environment are;

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:
- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

179. To protect and enhance biodiversity and geodiversity, plans should:
- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity[61]; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation[62]; and
- b) 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

180. When determining planning applications, local planning authorities should apply the following principles:

a) 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;
b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons63 and a suitable compensation strategy exists; and
d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.