

Bat Emergence Survey Report

Glendale House, Coopers Lane, Aldington, TN25 7HH

Prepared for: Redec Limited Application ref: PA/2023/2232

Document ref: F-7017-07-24 Issue date: 10th July 2024

DOCUMENT CONTROL

This document has been prepared by Fellgrove in accordance with the Chartered Institute of Environmental Management (CIEEM) guidelines for Ecological Report Writing. This report should be read in full and detailed guidance given must be followed to avoid breaching legislation regarding protected species and Habitats.

This report is valid for two years from the date of the survey visit. Should works be delayed to later than one year after the survey then a further update survey of the site would be required as habitats change over time, along with their potential to support protected species. Planning policy and legislation may affect the timing of works and operations described in this report.

It is accepted that this is a working document and may need to be updated with more detailed information added throughout the planning and development process. The interpretations and recommendations contained within this report represent our professional opinion in addition to using accepted industry practice based on current legislation. Fellgrove accept no responsibility for any use of this document outside that of which it is intended.

In the interest of protecting important ecological data where evidence is given pertaining to the locations of protected species and their habitats, this information <u>must</u> be redacted PRIOR to public circulation.

VERSION	STATUS	CHECKED (1), REVIEWED (2)	APPROVED (3)
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REVISIONS				
PAGE	DATE	DETAILS OF CHANGE MADE	CHANGE APPROVED	

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1.0 INTRODUCTION

- 1.1 Fellgrove have been appointed by Redec Ltd (**'the Client'**) to undertake bat emergence surveys at Glendale House, Aldington, Ashford, Kent, TN25 7HH (**'the Site'**) OS Grid Ref: TR 040369.
- 1.2 The Site comprises two buildings (as referred 'B1', 'B2') that are to be demolished to accommodate the proposed development of four new residential dwellings with associated parking and landscaping.
- 1.3 The Preliminary Ecological Appraisal (**'PEA'**) undertaken by Fellgrove 26th January 2024 included a Scoping Assessment of the Site buildings which notes: (*page 13, 5.47*) "B1 and B2 both exhibited multiple cracked/loose tiles, gaps under tiling and gaps between adjoining buildings". It is also noted that 6 bat species records were found within the relevant (2-5km) Zone of Influence as recent as 2022, and 1 bat protected species license within a 2km radius located east of the Site at Clap Hill.
- 1.4 Bats, and their roosts, are legally protected under United Kingdom legislation and the Wildlife and Countryside Act 1981 (as amended). Further detailed information can be found in the sections that follow within this report.
- 1.5 B1 and B2 have been considered 'moderate' in terms of potential to support roosting bats. The Site has been considered 'low' for its suitability to support foraging bats. In line with industry recognised guidance published by the Bat Conservation Trust, two emergence surveys have been recommended to further determine the presence or likely absence of bat species, their numbers or roost types.
- 1.6 It is noted within the PEA that survey efforts should be extended to T1, a Walnut tree situated in the south neighbouring garden with some potential roost features. Consequently, no emergences were recorded and as T1 does not form part of this proposal it has been scoped out of further assessment and consideration.
- 1.7 As relative to this proposal, the recommended bat emergence surveys of the buildings have been completed 3rd and 24th May 2024 in accordance with BCT Good Practice Guidelines. No emergences have been recorded and no further surveys have been recommended.
- 1.8 In line with NPPF/G 2023, new developments must demonstrate biodiversity enhancement above and beyond mitigating or compensating for any ecological effects. Favourable recommendations have been put forward within the scale and context of the proposal that will also enhance the Site for local bat population in the long-term.

2.0 LEGAL AND PLANNING CONTEXT

- 2.1 All species of British bat are afforded legal protection within the United Kingdom under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of the Conservation (Natural Habitats, etc) Regulations 2017 (Regulation 43).
- 2.2 It is a criminal offence to kill, injure or handle any bat or obstruct access to, destroy or disturb any known roost site. Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:
 - Deliberately (or recklessly in Scotland) capture, injure or kill a bat.
 - Deliberately (or recklessly in Scotland) disturb a bat in a way that would (significantly in Scotland) affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
 - Damage or destroy a roost [this is an 'absolute' offence and need not be deliberate or intentional].
 - Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.
- 2.3 Seven species (barbastelle, Bechstein's, Noctule, soprano pipistrelle, Brown long-eared, Greater horseshoe and Lesser horseshoe) are Priority Species under the UK Biodiversity Action Plan and under the Species of Principle Importance in England under section 41 NERC Act (2006).
- 2.4 Certain bat species including soprano pipistrelle are also listed as a Species of Principal Importance (SPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This means public bodies, including local planning authorities have a duty to have regard for SPI when carrying out their functions, including determining planning applications. It should be noted that common pipsitrelle and soprano pipistrelle bat species are also Kent Biodiversity Action Plan (BAP) Priority Species.
- 2.5 Where it is applicable that a bat roost will be affected by development, a licence to carry out the work will be required (issued by Natural England). This will be granted only if it can be satisfied that suitable mitigation for any adverse impacts on bats is to be carried out.
- 2.6 It should be noted that any and all recommendations are made in alignment with paragraph 99 of the ODPM 06/2005, which states "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 the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision".

3.0 METHODOLOGY

- 3.1 The emergence surveys have been undertaken in May 2024 within the optimal survey period stated in published guidance from the Bat Conservation Trust (Collins, 2023) with a 3-week interval. Survey temperatures were above 10 degrees as recommended within the guidance.
- 3.2 The objectives of the bat emergence surveys are:
 - Determine the presence/likely absence of bats;
 - Carefully observe potential roost features as identified within the PEA;
 - Evaluate the importance of bat species and their nocturnal activity within and around the Site;
 - Suggest measures to maintain and enhance biodiversity, including mitigation where necessary.
- 3.3 Buildings with moderate potential require two separate survey visits at dusk to monitor for bat emergences. Additionally, increased importance is being placed on the use of Night Vision Aids and Thermal imaging cameras during surveys which were used to assist the survey effort.
- 3.4 B1 and B2 have been surveyed. T1 has not been given further consideration within this report.
- 3.5 The surveyors used a combination of visual observation and echolocation detection to identify any bats emerging from the building using Batlogger M2 and EchoMeter Touch Pro detectors and Infra-red cameras Canon XA11 IR and Sony. Any bat sightings were noted, including the time, location, behaviour, and call.
- 3.6 The surveys have been undertaken at dusk in suitable weather conditions by a team of experienced ecologists each with the skills and knowledge necessary to carry out thorough assessment for bats as identified within the "Competencies for Species Surveys: Bats" (CIEEM). A licensed bat ecologist was available on-call to assist or advise if required.
- 3.7 The survey began fifteen minutes prior sunset and continued until ninety minutes post. Potential roost features have been made known to the surveying team members with each surveyor appropriately positioned so all angles and features of the buildings could be observed as required.

3.8 Limitations

- 3.9 There are no limitations associated with the survey conditions.
- 3.10 Bat surveys are subject to numerous variables, and it is to be acknowledged that survey results represent a sample of bat activity at the time of survey and that it is possible that bats may use the building at other times. Surveys provide only a snapshot of activity and are designed to follow best practice guidelines to determine likely presence or absence of bats to inform the planning process. This has followed the current guidelines to establish 'probable' absence as proving 'certain' absence is not possible within the scope of surveys.
- 3.11 Bats are known to use a variety of roosts at different times of year and for different purposes (ranging from maternity, swarming and hibernation roosts with large numbers of individuals, to night-time feeding roosts or day roosts with a few individuals). It is also known for bats to be nomadic and can spend varying lengths of time in a variety of roosts. As such it is possible that small, transient roosts may not be picked up on a single survey visit.
- 3.12 Certain species such as brown long-eared bats emit echolocation calls of low amplitude which may not always be picked up on bat detectors. Bat calls in general cannot always be identified to species level. This can be due to distance or other environmental conditions (such as bats flying in cluttered environments) or a similarity in calls between some species of bats. Where this occurs, it is recorded as what bat species it is most likely to be based on the call characteristics.

4.0 RESULTS

- 4.1 Survey 1 3rd May 2024.
- 4.2 No bat emergences recorded. Full results data is provided in APPENDIX 2.
- 4.3 The dusk (emergence) survey began at 20:07 and concluded at 21:52, with sunset at 20:22. Conditions were suitable throughout with no rain and consistent temperatures above 10 degrees. Surveyors were placed to the South of the buildings, facing west and northeast corner of the buildings.
- 4.4 NVA cameras were positioned in surveyor line of sight at north west corner and south side facing east. Majority of foraging activity entering site from the south crossing between the Site and south gardens.
- 4.5 Brief foraging activity was recorded along the east and northern sides of the buildings from primarily Common bat species Soprano pipistrelle (*Pipistrellus pygmaeus*) and Common pipistrelle (*pipistrellus pipistrellus*).
- 4.6 Survey 2 24th May 2024
- 4.7 No bat emergences recorded. Full results data is provided in APPENDIX 2.
- 4.8 The dusk (emergence) survey began at 20:40 and concluded at 22:25, with sunset at 20:55. Conditions were suitable throughout with no rain and consistent temperatures above 10 degrees. Surveyors were placed Southwest, facing north east and east facing west of the buildings.
- 4.9 NVA cameras were positioned in surveyor line of sight centrally facing north.
- 4.10 Brief foraging activity was recorded along the south sides of the buildings from primarily Common bat species Soprano pipistrelle (*Pipistrellus pygmaeus*) and Common pipistrelle (*pipistrellus pipistrellus*). A short appearance from a Brown long-eared bat was recorded north to south behind the west side of B1.

5.0 EVALUATION

- 5.1 Using the information gathered during these recent surveys, onward recommendations have been made as appropriate to the Site and its proposal. On this basis, it is reasonable to assume roosting bats are absent from the Site buildings.
- 5.2 The PEA considered the buildings B1 and B2 as 'moderate' to support roosting bats. The PEA considered the Site as 'low' to support foraging bats. The PEA (*page 13, 5.47*) notes: "Scattered trees within the scrub line to the west boundary which continues as linear features past the boundaries of the site boundaries. Ancient woodland located approximately 230m south of the site boundary." Bat commuting and foraging activity was recorded.
- 5.3 The conditions and temperatures have been considered suitable for bat surveys that were undertaken 3rd May and 24th May 2024.
- 5.4 It should be noted that any considerable time (e.g. >2 years) that elapses between the survey work as detailed and any development works, may require updated surveys to be necessary.
- 5.5 Given the likely construction works required to facilitate the removal of the buildings, a controlled (supervised) approach is advised regarding the roofing areas which will be dismantled with caution.
- 5.6 As per Section 40 of the NERC Act 2006, NPPF and Kent BAP which encourages enhancement integration into development projects, this report provides suitable suggestion for the addition of habitat features for bats as well as enhancing the viability of the site for biodiversity.

6.0 **RECOMMENDATIONS**

- 6.1 *Supervised works:* Removal of any roofs or other structures with PRF's should be undertaken with care during favourable weather conditions (e.g. not during heavy rain, high winds or unseasonable low temperatures) under an appropriate watching brief. Should any bats be encountered, works must stop and Fellgrove contacted so that suitable mitigation can be agreed prior to works re-commencing. This may potentially involve discussion with Natural England and acquisition of a development license for works to resume, if necessary.
- 6.2 *Updated surveys:* Should any considerable time (e.g. >2 years) elapse between the survey work detailed and any development works, further survey/s of the buildings with potential to support roosting bats should be undertaken prior to the commencement of works to confirm the continued absence of bats.
- 6.3 *Sensitive Lighting:* Further details are provided in APPENDIX 5 and general guidelines are given below in line with the Bat Conservation Trust and the Institute of Lighting Professionals for minimising adverse effects to bats from artificial lighting:
 - Lamp types: using low- or high-pressure sodium instead of mercury or metal halide lamps, and use of UV filters/glazing;
 - Lighting Levels: Within standards for safety and security, levels should be at the minimum required;
 - Timing: Use of switch-offs and/or movement sensors to ensure lighting is only used when required;
 - Minimising light spill by luminaire design and accessories (i.e., hoods, cowls louvres and shields;
 - Construction working hours are advised to be kept 07.30am-18.00pm.
 - Dark buffer zones: screening within the site boundary to provide areas of suitable habitat for nocturnal species, particularly bats, where the main development area will be less suitable.
- 6.4 Bat boxes: To enhance the viability of the Site for roosting bats, bat boxes are to be incorporated throughout the completed development. No.2 'Schwegler 1FFH Bat Box' (or similar) boxes are ideal for crevice-dwelling species such as Pipistrelles. No.2 'WoodStone Beaumaris' (or similar) bat boxes are ideal for Brown Long-eared and Noctules. These specifications are advised for their durable and low-maintenance construction. In line with the Bat Conservation Trust, general recommendations are given as follows for their suitable integration:
 - In areas where bats are known to feed and navigate (close to hedges and tree lines);
 - Installation at least 4m above the ground (where safe installation is possible);
 - Placement away from artificial light sources (to protect them from predation);
 - Sheltered away from strong winds and over-exposure to the sun (usually facing S / SE / SW)
- 6.5 *Planting:* Native planting is recommended to enhance the Site for bats and their foraging activity. Inclusion of native tree species planting (i.e., Silver Birch, Field Maple, Common Oak, Wild Cherry, Elder) is recommended, along with Native hedgerow species planting (i.e. Hawthorn, Holly, Hazel) which can be used create corridors of habitat. Retained areas of scrub and trees should be managed regularly for the benefit of biodiversity with inclusion of nectar/flowering plant species that will attract night-flying insects as a vital food source. (i.e., birds foot trefoil, cowslip, field scabious, meadow buttercup).

7.0 CONCLUSION

- 7.1 The surveys have achieved the initial objectives and are considered reasonable effort for obtaining data regarding the potential presence of roosting bats at the Site within buildings B1 and B2.
- 7.2 Based on the information gathered as well as relative size and scale of this proposal, the previously recommended production of a comprehensive ECIA has not been justifiable given the absence of emerging bats.
- 7.3 This report has been produced for the purposes of the proposed application and meets the requirements of the survey effort in accordance with relevant ecological legislation, planning policy and industry recommended guidance and best practice methodology.
- 7.4 No emergences have been recorded at the Site during the surveys undertaken in May 2024, indicating a likely absence of roosting bats within the buildings. Further surveys, mitigation or licensing have therefore not been recommended for this proposal.
- 7.5 It is not considered that the proposal will have a detrimental impact on roosting, local foraging or commuting bat populations. However, sensitive lighting design has been put forward as a recommendation to maintain suitable bat foraging and commuting opportunities within the Site and wider landscape and their overall Favourable Conservation Status. Proposed works should adhere to cautionary approaches as outlined.
- 7.6 This report has been prepared by Fellgrove using the most up to date available Site information relating to Application reference: PA/2023/2232. Any changes to the development plans that may affect the survey information should be communicated at the earliest opportunity possible.
- 7.7 The Client is responsible for reading and understanding the advice given to ensure further recommendations pertaining to compensation, or enhancement, are followed.

8 **REFERENCES**

Collins (2023) Bat Surveys: Good Practice Guidelines, 4th edition, Bat Conservation Trust (BCT)

Institute of Lighting Professional's Guidance Note 08/23 Bats and Artificial Lighting at Night: https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance- note-update-released

Reason, P.F and Wray, S. (2023). UK Bat Mitigation Guidelines: A Guide To Impact Assessment, Mitigation And Compensation For Developments Affecting Bats. CIEEM (Ampfield)

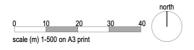
Fure, A., 2006. Bats and Lighting. The London Naturalist, Volume 85.

- HMSO, 1981. Wildlife and Countryside Act 1981 (as amended)
- HMSO, 2006. Natural Environment and Rural Communities (NERC) Act 2006
- HMSO, 2019. The Conservation of Habitats and Species Regulations 2019
- Jones, J., 2000. Impact of Lighting on Bats
- UK Bat Mitigation Guidelines CIEEM, September 2023
- https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes/putting-up-your-box
- Block Plan, Existing & Proposed 20-52-32.pdf F1 Prime Folio
- 20-52-34B site roof plan proposed[99].pdf F1 Prime Folio

9 APPENDICES

9.1 Appendix 1: Site plans





 CLENT:
 Redec Ltd

 PROJECT:
 Glendale House Aldington TN25 7HH

 TITLE:
 block plan, existing & proposed

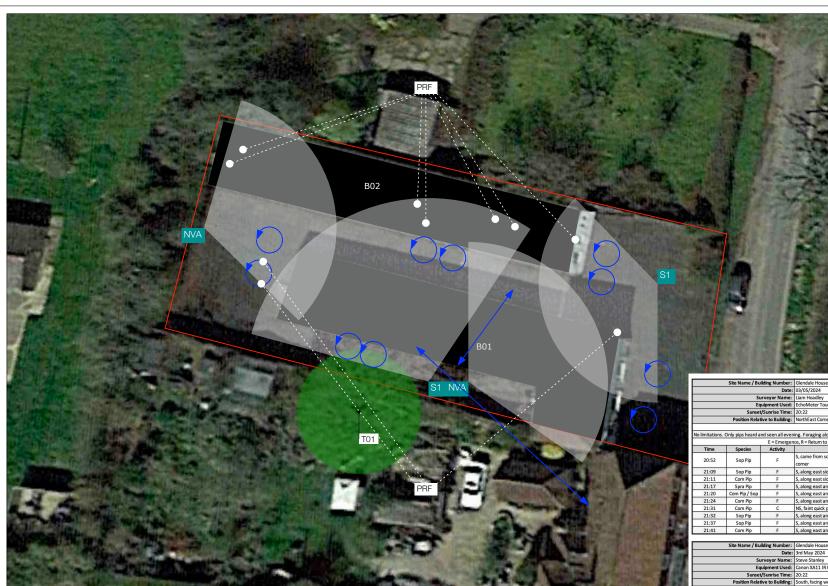
 SCALE:
 1-500 (A3)

 DATE:
 Feb. 21

 DWNGBE
 20-52-32

9.2 Appendix 2: Bat survey results *See below.*

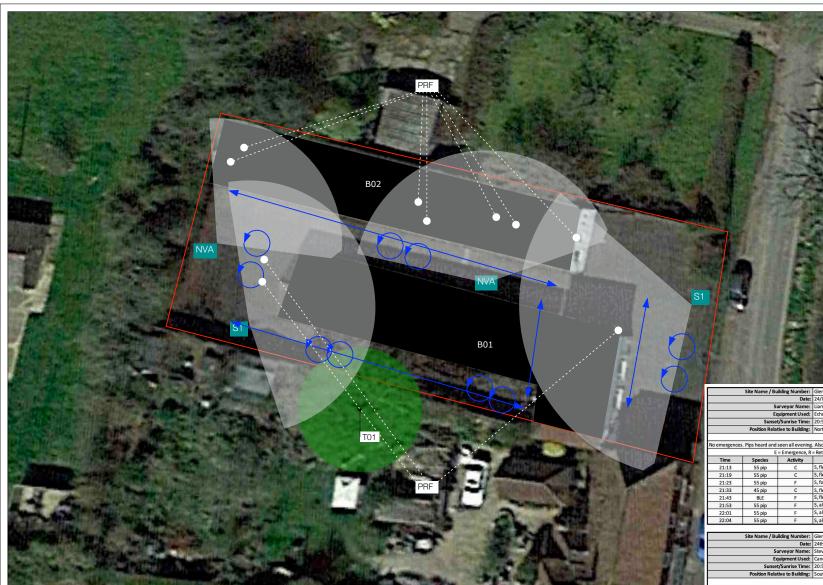




Status		
	Planning	
Project		
	Glendale House	e
Drawin	g title	
	Survey 03rd Ma	y 2024 - Appendix 2
Rev	Description	Date
-	-	-
-	-	-
	Date	Drawing Number
NTS Legen	27/06/24 d	7003_01
-		
-	d	
-	d Site boundary	
-	d Site boundary Building (s)	
-	d Site boundary Building (s) Tree (s)	7003_01
-	d Site boundary Building (s) Tree (s) Flight path	7003_01
-	d Site boundary Building (s) Tree (s) Flight path Emergence - N	7003_01

		Glendale House, Coopers Lane, Aldington		Start	End		
Date:		03/05/2024	Time	20:07	21:52		
Surveyor Name:			Liam Hoadley	Temp °C	12	11	
Equipment Used:		EchoMeter Touch 2 Pro, Sony IR	Cloud %	60%	0%		
Sunset/Sunrise Time:			20:22	Wind (BF)	2	0	
Position Relative to Building:			NorthEast Corner	Rain	0	0	
			Survey Summary	/ Limitations / Notes			
o limitations	. Only pips heard a	nd seen all even	ing. Foraging along north and east si	des of the building			
		E = Emergen	ce, R = Return to roost, C = Commutir	g, F = Foraging, NS = Not S	een, SNH = Seen not heard		
Time Species Activity			Notes	e (eg: flight direction, durat	tion of foraging, location of roost	4)	
20:52	Sop Pip	F	S, came from southwest corner flying up and down Northside and along east side for 10 mins, then flew south by south corner				
21:09	Sop Pip	F	S, along east side briefly then flew South				
21:11	Com Pip	F	S, along east side briefly then flew South				
21:17	Spra Pip	F	S, along east and north side of building				
21:20	Com Pip / Sop	F	S, along east and north side of build	S, along east and north side of building for few mins			
21:24	Com Pip	F	S, along east and north side of build	5, along east and north side of building for few mins			
21:31	Com Pip	с	NS, faint quick pass				
21:32	Sop Pip	F	S, along east and north side of build	ing few times			
21:37	Sop Pip	F	S, along east and north side of build	ing few times			
21:41	Com Pip	F	S, along east and north side of build	ing few times			
	Site Name / Bui	Iding Number:	Glendale House, Aldington, Ashford		Start	End	
		Date:	3rd May 2024	Time	20:07	21:52	
Surveyor Name:		rveyor Name:	Steve Stanley	Temp °C	12	11	
Equipment Used:		Canon XA11 IR Camera and Batk	Cloud %	60%	0		
Sunset/Sunrise Time:		20:22	Wind (BF)	2	0		
	Position Relat	ive to Building:	South, facing west	Rain	0	0	
			Survey Summary	/ / Limitations / Notes			
cameras al	so positioned in sun	veyor line of sig	ht at north west corner and south side	e facing east. No emergen	ces from B1 or T1. Majority of for	aging activity entering si	
om the sout	h, and crossing betv	veen the site an	d south gardens.				
		E = Emergen	ice, R = Return to roost, C = Commutin	ig, F = Foraging, NS = Not S	een, SNH = Seen not heard		
Time	Species	Activity	Notes	e (eg: flight direction, durat	tion of foraging, location of roost	4	
20:45	Pip 55	с	From E to W along S side of building				
20.45	0. 55.0	F	From S, F along S of B1 for 5 mins th	ien C N.			
20:45	Pip 55x2			Mostly F S of B1 and in neighbour's garden further to S.			
	Pip 55x2 Pip 55x2	F	Mostly F S of B1 and in neighbour's	garden further to S.			
20:48		F	Mostly F S of B1 and in neighbour's S to N over building.	garden further to S.			
20:48 21:04	Pip 55x2			garden further to S.			





OTELT		co.uk - www.teligrove.co.u
Status		
	Planning	
Project		
	Glendale House	
Drawing	g title	
	24th May 2024	Appendix 2
Rev	Description	Date
-	-	-
-	-	-
Scale NTS	Date 27/06/24	Drawing Number 7003_02
Legen	d Site boundary	
	Building (s)	
	Tree (s)	
	Flight path	
	Emergence - Noi	ne recorded
	Re-entry - None	recorded
	Re-entry - None Surveyor position	

Site Name / Building Number:			Glendale House		Start	End	
			24/05/2024	Time	20:40	22:25	
Surveyor Name:			Liam Hoadley	Temp *C	15	11	
Equipment Used:			EchoMeter Touch 2 Pro / SonyFDR AX53	Cloud %	0%	0%	
Sunset/Sunrise Time:			20:55	Wind (BF)	1	1	
Position Relative to Building:			NorthEast Corner	Rain	0	0	
			Survey Summary / Limitations / Notes				
lo emergence	s. Pips heard and	seen all evening	. Also a brief sighting of a brown long-eared bat.				
	E	= Emergence, R	= Return to roost, C = Commuting, F = Foraging, NS = Not See	n, SNH = Seen not hear	d		
Time	Time Species Activity Notes (eg: flight direction, duration of foraging, location of						
21:13	55 pip	С	S, flew south to north past east side of building				
21:19	55 pip	с	S, flew south to north past west side 1st floor building				
21:23	55 pip	F	S, foraging along east side of building for about 10 seconds				
21:33	45 pip	С	S, flew west to east along north side of building				
21:43	BLE	F	S, flew north to south behing west side of 1st floor building for 30 seconds then reappeared and then flew north				
21:53	55 pip	F	S, along east side back and forth for 15 seconds				
22:01	55 pip	F	S, along east side back and forth for 15 seconds				
22:04	55 pip	F	S, along east side back and forth for 15 seconds				
	Site Name / B	uilding Number:	Glendale House, Aldington, Ashford		Start	End	
		Date:	24th May 2024	Time	20:40	22:25	
	S	urveyor Name:	Steve Stanley	Temp *C	15	9	
	Equipment Used: Canon XA11 IR Camera and Batlogger M2		Cloud %	0%	0%		
	Sunse	t/Sunrise Time:	20:55 Wind (BF) 1			1	
	Position Rela	tive to Building:	South, facing east	Rain	0	0	
			Survey Summary / Limitations / Notes				
R cameras als	o positioned in su	rveyor line of sig	ht at north west corner and south side facing east. No emerge	ences from B1 or T1.			
	E	= Emergence, R	= Return to roost, C = Commuting, F = Foraging, NS = Not See	n, SNH = Seen not hear	d		
				- the second second second second	(react)		
Time	Species	Activity	Notes (eg: flight direction, duration	or toraging, location o	roosy		
Time 21:19	Species Pip 55	Activity F	Notes (eg: flight direction, duration Along south side of building for 3 mins.	of for aging, location of	irroosy		
				i of for aging, location o	roosy		
21:19	Pip 55	F	Along south side of building for 3 mins.	i of foraging, location o	i roosų		
21:19 21:26	Pip 55 Pip 55	F	Along south side of building for 3 mins. Briefly along south side of building.	n or for aging, location o	170050		
21:19 21:26 21:33	Pip 55 Pip 55 Pip 55	F	Along south side of building for 3 mins. Briefly along south side of building. Along south side of building for 2 mins.	i of foraging, location o	170050		
21:19 21:26 21:33 21:41	Pip 55 Pip 55 Pip 55 Pip 55 Pip 55	F F F	Along south side of building for 3 mins. Briefly along south side of building. Along south side of building for 2 mins. Briefly along south side of building.	i or roraging, iocation o	i roustj		

Briefly along south side of building. Along south side of building for 6 mins.

F

21:33 Pip 55 21:41 Pip 55 21:52 BLE 21:53 Pip 55 21:58 Pip 55 22:06 Pip 55

- 9.3 Appendix 3: Technical Note: 'Bats and Artificial Lighting at Night'. Source: Institute of Lighting Professionals (ILP) and Bat Conservation Trust (BCT). *Guidance Note 08/23: Bats and Artificial Lighting.*
 - Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires:
 - All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
 - LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
 - Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
 - Any external security lighting should be set on motion-sensors and short (1 minute) timers.
 - Warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce blue light component.
 - Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
 - Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
 - Low level or bollard lighting can often cause unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition. Use of specialist bollard or low-level downward directional luminaires should only be considered if their use is directed by a lighting professional.
 - The height of columns should be carefully considered to minimise light spill.
 - Only luminaires with an upward light ratio of 0% and with good optical control should be used See ILP Guidance for the *Reduction of Obtrusive Light*.
 - As a last resort to minimise, accessories such as hoods or louvres should be utilised.

9.4 Appendix 4: Relevant legislation and bat ecology (United Kingdom)

All species of British bat and their roosts are protected under British law by the:

- Conservation of Habitats and Species Regulations 2017
- Wildlife & Countryside Act 1981 (as amended)
- Natural Environment and Rural Communities Act 2006

Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:

- Deliberately (or recklessly in Scotland) capture, injure or kill a bat.
- Deliberately (or recklessly in Scotland) disturb a bat in a way that would (significantly in Scotland) affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
- Damage or destroy a roost [this is an 'absolute' offence and need not be deliberate or intentional].
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.

Certain bat species including soprano pipistrelle are also listed as a Species of Principal Importance (SPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This means public bodies, including local planning authorities have a duty to have regard for SPI when carrying out their functions, including determining planning applications. It should be noted that common pipsitrelle and soprano pipistrelle bat species are also Kent Biodiversity Action Plan (BAP) Priority Species.

Planning policy requires new developments to take into consideration our local and national wildlife. With the objective to maintain or increase the viability of the site for wildlife. The existing proposals are considered to determine whether Habitat enhancements are offered and whether they are adequate to meet the policy requirements. Again, national, regional, county and borough policies are considered.

NPPF, 2023

The National Planning Policy Framework states that the planning system should contribute to and enhance the natural and local environment by minimizing impacts on biodiversity and delivering net gains in biodiversity where possible. Ecological habitat enhancements measures need to be over and above any mitigation measures.