

22:41	G	Soprano pipistrelle	1	Heard but not seen.
22:48	G	Common pipistrelle	1	Heard but not seen.
22:49	G	Nathusius' pipistrelle	1	Heard but not seen.
22:52	G	Common pipistrelle	1	Heard but not seen.

June 2018

BAT DETECTOR ACTIVITY SURVEY					
SURVEY LOCATION:	BEREWOO Orange route	SURVEYORS:	Colin Sutch and Jenny Sutch	DATE:	11.06.2018
TEMP AT START:	18 ^o C	SUNSET:	21:17	START TIME:	21:17
TEMP AT END:	16 ^o C	CLOUD COVER (oktas):	1/8	END TIME:	23:17
WIND (bft):	3/12	RAINFALL:	Nil	WEATHER:	Dry, sunny.
(PLEASE ADD TARGET NOTES TO MAP AND APPEND TO RECORDING FORM)					
TIME	STOPPING POINT/TARGET NOTE	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.	
21:56	F	Soprano pipistrelle	1	Seen commuting in a northeast direction.	
21:56	F	Common pipistrelle	1	Heard but not seen.	
22:09	G-A	Common pipistrelle	1	Heard but not seen.	
22:10	A	Common pipistrelle	1	Heard but not seen.	
22:11	A	Common pipistrelle	1	Seen foraging in gap between trees.	
22:12	A	Common pipistrelle	1	Heard but not seen.	
22:16	A-B	Common pipistrelle	1	Foraging along hedgerow.	
22:18	B	Common pipistrelle	1	Foraging across open grass.	
22:19	B	Common pipistrelle	1	Foraging across open grass.	
22:20	B	Common pipistrelle	1	Foraging but not seen.	
22:21	B	Common	1	Social calls, heard but not seen.	

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		pipistrelle		
22:22	B-C	Common pipistrelle	1	Foraging between trees.
22:24-22:26	C	Common pipistrelle	1	Foraging along tree line by the oak and commuted east towards the pond.
22:28	C-D	Soprano pipistrelle	1	Heard but not seen.
22:28	C-D	Common pipistrelle	1	Foraging along the tree line and hedgerow.
22:30	C-D	Common pipistrelle	1	Foraging by an oak tree.
22:31	D			
22:32	D	Common pipistrelle	1	Foraging by an oak tree.
22:34	D	Common pipistrelle	2	Foraging under tree canopy.
22:40	E	Common pipistrelle	1	Heard but not seen, brief call.
22:42	E	Common pipistrelle	1	Heard but not seen, foraging around trees.
22:45	E-F	Common pipistrelle	1	Heard but not seen, foraging.
22:45-22:50	F	Common pipistrelle	1	Constant foraging and feeding buzzes around oak tree and under tree canopy.
22:51	F-G	Common pipistrelle	1	Foraging and feeding buzzes by oak tree.
22:53	F-G	Common pipistrelle	1	Foraging beneath an oak tree and across grass field.
22:57-22:59	G	Common pipistrelle	1	Foraging beneath an oak tree and across grass field. Feeding buzzes heard.
23:00	G-F	Common pipistrelle	1	Heard but not seen, foraging.
23:04	A	Common pipistrelle	1	Heard but not seen, foraging.
23:05	A	Common pipistrelle	1	Heard but not seen, foraging.
23:06	A	Common pipistrelle	1	Heard but not seen, brief call.
23:07-23:08	A	Common pipistrelle	1	Heard but not seen, foraging.
23:12	B	Common pipistrelle	1	Heard but not seen, foraging.
23:13	B	Common pipistrelle	2	Heard but not seen, foraging.
23:14	B	Nathusius's pipistrelle	1	Heard but not seen.

July 2018 (dusk)

BAT DETECTOR ACTIVITY SURVEY					
SURVEY LOCATION:	Berewood Orange transect	SURVEYORS:	Elen Lesourd and Lisa Sharp	DATE:	23.07.18
TEMP AT START:	21 ⁰ C	SUNSET:	21:03	START TIME:	21:03
TEMP AT END:	19 ⁰ C	CLOUD COVER (oktas):	0/8	END TIME:	23:03
WIND (bft):	0/12	RAINFALL:	Nil	WEATHER:	Cool, still
(PLEASE ADD TARGET NOTES TO MAP AND APPEND TO RECORDING FORM)					
TIME	STOPPING POINT/TARGET NOTE	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.	
21:48	A	Common pipistrelle	1	Foraging along a hedgerow and across the field in the southeast corner of the site.	
21:54	A-B	Common pipistrelle	2	Foraging along a hedgerow south of the site.	
21:56	A-B	Noctule	1	Seen commuting north to south across the field south of the site.	
21:58	B	Common pipistrelle	1	Seen foraging along the treeline in the southwest corner of the site then commuted west to east.	
22:01	B	Noctule	1	Heard but not seen.	
22:02	B	Common pipistrelle	2	Foraging along the treeline in the southwest corner of the site.	
22:09	C	Noctule	1	Heard but not seen in the southwest corner of the site.	
22:10	C	Serotine	1	Heard but not seen.	
22:10	C-D	Common pipistrelle	1	Heard but not seen.	
22:14	D	Common pipistrelle	1	Heard but not seen.	
22:16	D	Common pipistrelle	1	Heard passing overhead in the northwest corner of the site.	
22:28	E	Long eared sp.	1	Heard but not seen.	
22:28	E	Common pipistrelle	1	Heard but not seen.	
22:29	E				
22:33	E	Common pipistrelle	1	Heard passing overhead northern boundary of the site.	
22:39	E-A	Common pipistrelle	1	Seen foraging along the hedgerow in the centre of the site, then commuted	

				north to south.
22:43	A-G	Common pipistrelle	1	Heard but not seen.
22:45	G		1	
22:46	G	Common pipistrelle	1	Heard but not seen, foraging.
22:50	G	Serotine	1	Heard but not seen.
22:58	G-A	Common pipistrelle	1	Heard but not seen.

July 2018 dawn

BAT DETECTOR ACTIVITY SURVEY					
SURVEY LOCATION:	Berewood Orange route	SURVEYORS:	Elen Lesourd and Rick Sharp	DATE:	24.07.18
TEMP AT START:	17°C	SUNRISE:	05:19	START TIME:	03:19
TEMP AT END:	16°C	CLOUD COVER (oktas):	7/8	END TIME:	05:19
WIND (bft):	0/12	RAINFALL:	Nil	WEATHER:	Damp, very misty
(PLEASE ADD TARGET NOTES TO MAP AND APPEND TO RECORDING FORM)					
TIME	STOPPING POINT/TARGET NOTE	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.	
03:34	A	Common pipistrelle	1	Two passes observed southeast of the site.	
03:36	A	Common pipistrelle	1	Foraging, heard but not seen.	
03:37	A	Long eared sp.	1	Heard but not seen.	
03:41	A-B	Common pipistrelle	1	Heard not seen, passed overhead south of the site.	
03:41	A-B	Soprano pipistrelle	2	Two passes observed south of the site.	
03:42	A-B	Common pipistrelle	1	Heard but not seen, passed overhead.	
03:43	B	Common pipistrelle	1	Heard but not seen. Feeding buzz heard.	
03:47	B	Soprano pipistrelle	1	Four passes overhead in the southwest corner of the site. Feeding buzzes heard.	
03:50	C	Long eared sp. or myotis sp.	1	Heard but not seen.	

04:04	D	Common pipistrelle	2	Two passes overhead in the northwest corner of the site.
04:13	F	Common pipistrelle	1	Heard but not seen.
04:13	F	Soprano pipistrelle	1	Foraging around an oak tree south of the site.
04:14	F	Soprano pipistrelle	1	Heard but not seen.
04:41	A	Pipistrelle sp.	1	Heard but not seen.
04:45	B	Soprano pipistrelle	1-2	Foraging in trees in the southwest corner of the site, from north to south then east to west.

August 2018

BAT DETECTOR ACTIVITY SURVEY					
SURVEY LOCATION:	BEREWOO Orange route	SURVEYORS:	Colin Sutch & Andrew Heideman	DATE:	06.08.2018
TEMP AT START:	24°C	SUNSET:	20:40	START TIME:	20:40
TEMP AT END:	22°C	CLOUD COVER (oktas):	2/8	END TIME:	22:38
WIND (bft):	1/12	RAINFALL:	None	WEATHER:	Warm. Dry
Data Analysed Y/N:	Yes	Additional information:	iPad 4, EMT 6		
(PLEASE ADD TARGET NOTES TO MAP AND APPEND TO RECORDING FORM)					
TIME	STOPPING POINT/TARGET NOTE	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.	
21:14	B – A	Soprano pipistrelle	1	Foraging on the southern edge of the site.	
21:17	B – A	Common pipistrelle	1	Heard but not seen.	
21:22	A	Soprano pipistrelle	1	Commutated south to north.	
21:26	A – G	Common pipistrelle	1	Commutated on east side of the field south to north.	
21:26	G	Common pipistrelle	1	Heard but not seen.	
21:29	G	Common pipistrelle	1	Commutated on east side of the field north to south.	

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 Ecological appraisal, School land at Berewood, Waterloo

21:34	E	Common pipistrelle	1	Heard but not seen.
21:40	F	Common pipistrelle		Heard but not seen.
21:41-21:42	F	Common pipistrelle	1	Heard but not seen.
21:41	F	Noctule	1	Heard but not seen.
21:43	F	Common pipistrelle	1	Foraging in the middle of a field around a tree south of the site.
21:43	F	Long-eared	1	Heard but not seen.
21:45	F	Common pipistrelle	1	Heard but not seen.
21:47	A	Common pipistrelle		Heard but not seen.
21:49-21:50	A	Common pipistrelle	1	Heard but not seen.
21:52	A – B	Common pipistrelle	1	Heard but not seen.
21:54	B	Myotis sp.	1	Heard but not seen.
21:57	B	Common pipistrelle	1	Heard but not seen.
22:00	B	Long-eared	1	Heard but not seen.
22:00	B – C	Common pipistrelle	1	Heard but not seen.
22:05	C – D	Common pipistrelle	1	Heard but not seen.
22:06	C – D	Serotine	1	Heard but not seen.
22:07	C – D	Common pipistrelle	1	Heard but not seen.
22:08-22:13	D	Common pipistrelle	1	Heard but not seen.
22:19	E	Common pipistrelle	1	Heard but not seen.
22:22	F	Common pipistrelle	1	Heard but not seen.
22:23	F – G	Myotis sp.	1	Heard but not seen.
22:25	F – G	Common pipistrelle	1	Heard but not seen.

September 2018

BAT DETECTOR ACTIVITY SURVEY					
SURVEY LOCATION:	BEREWOO Orange Route	SURVEYORS:	Andrew Heideman & Sam Fletcher	DATE:	13.09.2018
TEMP AT START:	17°C	SUNSET:	19:24	START TIME:	19:24
TEMP AT END:	14°C	CLOUD COVER (oktas):	4/8	END TIME:	21:24
WIND (bft):	1/12	RAINFALL:	Nil	WEATHER:	Clear & dry.
(PLEASE ADD TARGET NOTES TO MAP AND APPEND TO RECORDING FORM)					
TIME	STOPPING POINT/TARGET NOTE	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.)	
19:44	B	Common pipistrelle	1	Heard but not seen, foraging.	
19:45	B	Noctule	1	Heard but not seen.	
19:53	B	Common pipistrelle	1	Foraging up and down the hedgerow.	
20:08	A	Common pipistrelle	1	Heard but not seen, foraging.	
20:08	A	Noctule	1	Heard but not seen.	
20:24-20:29	E	Soprano pipistrelle	1	Heard but not seen.	
20:54	B	Soprano pipistrelle	1	Heard but not seen, foraging along hedgerow.	
20:54	B	Noctule	1	Heard but not seen.	
21:06	C	Common pipistrelle	1-2	Foraging along the hedgerow.	
21:10	D	Common pipistrelle	1-2	Foraging along the hedgerow.	
21:13	D	Noctule	1	Heard but not seen.	
21:16	D	Common pipistrelle	1-2	Foraging along the hedgerow.	
21:18	E	Soprano pipistrelle	1	Heard but not seen, foraging.	



ECOLOGICAL APPRAISAL

PHASE 11B
BEREWOOD
WATERLOOVILLE
HAMPSHIRE

NOVEMBER 2023

ON BEHALF OF GRAINGER PLC



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Authorisation

	Name	Date
Report prepared by:	EP	10.10.2023
Report checked and authorised:	JS	16.10.2023
Report updated by:	JS	08.11.2023

The contents of this report were correct at the time of the last survey visit. The report is provided for the sole use of the named client and is confidential.

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It is company policy to share species records collected during our surveys with local biological records centres unless instructed otherwise by the client.

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SUMMARY

1. LC Ecological Services Limited were commissioned by Grainger Plc to conduct an ecological appraisal of phase 11b at Berewood, Waterlooville, PO7 7PS. Berewood (Havant Borough Council planning ref: APP/10/00828/ Winchester City Council planning ref: 10/02862/OUT) is a large multi-phased development. The site boundary for this report is shown in appendix I.
2. An ecological appraisal is essentially a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals such as the site's potential to support any legally protected species or habitats of high nature conservation value.
3. The nearest non-statutory designated sites include Newlands Row and Plant Row Site of Importance for Nature Conservation (SINC) which lies approximately 120 metres and beyond to the east. Further recommendations have been made in section 5.1.
4. The site comprises a former arable field which has transitioned to modified grassland with a small section of native hedgerow at the northeast corner. No other habitats are recorded within the redline boundary and the site has been tracked across by large plant and is being used to store some construction materials.
5. A short section of native hedgerow approximately 25 metres in length is within the site boundary. The hedgerow qualifies as UK Biodiversity Action Plan habitat. In the event that the hedgerow is to be impacted, a detailed hedgerow assessment is required to determine if they also qualify as 'Important' under the Hedgerow Regulations 1997. Further recommendations have been made in section 5.2.
6. No evidence of badger was recorded on site however they are known to be in the area and further recommendations to protect foraging badger during construction are provided in section 5.3.
7. Bat activity transect surveys and static bat detectors confirmed up to five species of bat and three genus of bat to be using the site and surrounds for foraging and commuting. Recommendations are provided in section 5.4.
8. The hedgerow on site has potential to support common and widespread bird species. Further recommendations are provided in section 5.5.
9. The hedgerow on site provides suitable habitat for hazel dormouse and evidence of nesting was confirmed during 2023 surveys in woodland linked to the site through the hedgerow network. Further recommendations have been made in section 5.6.
10. Recommendations to enhance the ecological value of the site are outlined in section 5.7.

1.0 INTRODUCTION

LC Ecological Services Limited were commissioned by Grainger Plc to conduct an ecological appraisal of Phase 11b at Berewood, Waterlooville, PO7 7PS (Central grid ref: SU 6689 0922).

Berewood, Waterlooville (Havant Borough Council planning ref: APP/10/00828/ Winchester City Council planning ref: 10/02862/OUT) is a large multi-phased development. This report is phase 11b and the site boundary is provided in appendix I.

An ecological appraisal is essentially a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals such as the site's potential to support any legally protected species or habitats of high nature conservation value.

Section 2 of the report provides some background information on legislative requirements and relevant policy. Section 3 details the methodologies adopted for the ecological surveys that were conducted and section 4 provides an account of the survey results. Section 5 provides information on the relevance of the results to the proposed development and makes recommendations for measures to mitigate and compensate for the effects on a particular habitat or species.

2.0 LEGISLATION AND POLICY

2.1 Legislation

The following legislation may be of relevance to this application site. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DEFRA Circular 06/2005.

- **The Conservation of Habitats and Species (Amendment) Regulations 2017:** This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law. The Regulations provide protection for a number of species including:
 - All species of bat
 - Hazel dormouse (*Muscardinus avellanarius*)
 - Great crested newt (*Triturus cristatus*)

This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species¹.

This legal protection means that where development has the potential to impact on bats, or other species of national interest², the results of a protected species survey must be submitted with a planning application.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are also protected under this legislation, by the creation of a National Site Network (NSN) on land and at sea following the 2019 Regulations. These are a network of sites designated for supporting habitats or species of high nature conservation importance in the European context. Any activity that has a detrimental effect on these NSN sites is made an offence under the Regulations. Where a development is likely to have a significant impact on a NSN, the Regulations require a rigorous assessment of the impacts, known as an Appropriate Assessment.

¹ The *Conservation of Habitats and Species (Amendments) Regulations 2017* consolidated the numerous amendments that were made to the Conservation (Natural Habitats, & c.) Regulations 1994. Of particular relevance are amendments made in August 2007 and January 2009 which increased the threshold of illegal levels of disturbance to European Protected Species (EPS). An offence is only committed if the deliberate disturbance would result in significant impacts to the EPS population. However, it should be noted that activities that cause low levels of disturbance to these species continue to constitute an offence under Section 9 of the Wildlife and Countryside Act (see below).

² Species of wild fauna and flora as listed in Annex II, IV or V to the Habitats Directive.