

Site:	Sandleford Park
Client:	Bloor Homes and Sandleford Farm Partnership
Job Number:	A070660-24
Title:	Ecology Chapter 6: Appendix F24 – 2019 Survey Summary
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1.0 Introduction

This Appendix to the Ecology Addendum ES Chapter for the proposed Sandleford Park, Newbury development has been produced by WYG. It presents additional baseline ecological information of the study area and its environs gathered in 2019. This Appendix then assesses whether the updated baseline information will alter the findings of the Ecology ES Addendum Chapter prepared by WYG in 2018.

This Appendix has been prepared with the expectation that the full reports will be available once all surveys have been completed. Therefore, no appendices have been provided to support this Addendum.

2.0 Surveys completed in 2019

The scope of the 2019 surveys was established following consultation with the LPA; our understanding of site conditions; the age of existing survey data; and relevant survey guidance. Based on these factors, the following ecological surveys have been undertaken:

- Great Crested Newt Surveys;
- Reptile Surveys of Development Parcel North 1 (DPN1);
- Barn Owl Surveys;
- Bat Surveys (comprising activity surveys, ground level tree surveys and emergence surveys);
- Dormouse Surveys; and
- Badger Surveys.

3.0 Assessment Methodology

The methodology for the impact assessment for ecology is unchanged and is set out in the Ecology ES Addendum Chapter. This includes being compliant with CIEEM guidelines, whereby the value of ecological receptors is determined in a geographic context prior to establishing whether impacts will be significant. The full method used to establish the significance of impacts has not been repeated here.

4.0 Limitations

For bats and hazel dormice, the full survey schedule for 2019 has not been completed. The results presented here therefore do not represent a complete year of data according to best practice



guidelines (Collins¹ and Bright *et al.*, 2006² respectively). For hazel dormice, checks of nest tubes will continue until September 2019 (one check remaining) and bat activity surveys will continue until October 2019 (one visit to complete transects and one period of static detector deployment remaining).

The outstanding survey work therefore, represents only the final visits to gather updated data and it is considered extremely unlikely that data from these final visits would result in significant changes to the valuations and subsequent assessment of effects presented in this appendix.

5.0 Baseline Conditions

5.1.1 Great crested newt (including other amphibians)

There are two records of palmate newt and 16 records of great crested newt within 2km radius of the site. The closest record of a great crested newt is at Greenham Common SSSI, approximately 720 metres to the east of the site. Great crested newts are a European Protected Species (EPS) and Species of Principal Importance (SPI).

Great crested newt presence/likely absence surveys were completed for six ponds considered suitable in 2011 and 2013. These were undertaken in accordance with the methodology outlined in the Great Crested Newt Mitigation Guidelines³. This was supplemented by an Environmental DNA (eDNA) survey in 2017 in accordance with Natural England approved survey protocol⁴.

In 2019, the testing of water samples for the presence of eDNA belonging to great crested newt was repeated on all ponds tested in 2017 using the same method. For one pond (Pond 1 shown on Figure 1), this returned a positive result. Traditional surveys of Pond 1 were then completed in May and June 2019 comprising six visits using torching, egg searching, bottle trapping and netting. These were completed using the same survey guidelines described *Appendix F2* to the Ecology Chapter. These were all negative for great crested newts, great crested newt larvae and their eggs.

As no great crested newts were recorded, it is still considered that the species is absent from the site and that the detection of eDNA was a false positive. This is not uncommon and has been the subject of scientific research. For instance, Bohmann, *et al.*⁵ suggests that excrement from animals that prey on great crested newt could be deposited in waterbodies that do not support them.

¹ Collins, J. (ed.), (2016), *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 3rd Edition, The Bat Conservation Trust: London.

² Bright, P.W., Morris, P.A. and Mitchell-Jones, A., (2006), *Dormouse Conservation Handbook*, 2nd Edition, English Nature: Peterborough.

³ English Nature, (2001), *Great Crested Newt Mitigation Guidelines*, English Nature: Peterborough.

⁴ Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R.A., Foster, J., Wilkinson, J., Arnett, A., Williams, P. and Dunn, F., (2014), *Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5: Technical advice note for field and laboratory sampling of great crested newt (<u>Triturus cristatus</u>) environmental DNA. Freshwater Habitats Trust: Oxford.*

⁵ Bohmann, K., Evans, A., Gilbert, M.T., Carvalho, G.R., Creer, S., Knapp, M., Yu, D.W. and de Bruyn M., (2014), Environmental DNA for wildlife biology and biodiversity monitoring, *Trends Ecol. Evol.*, 29(6) :358-67.



The conclusion of the Ecology Chapter is therefore unchanged, and great crested newt are not currently considered to be present on the site. The site therefore offers **Negligible** value for great crested newts and no potential for significant impacts exist.

However, as a precaution, reasonable avoidance methods will be used throughout the site clearance phase in all areas of suitable habitat. This will reduce the risk of great crested newts being injured or killed during works, in the extremely unlikely event that they are present on site. This is described in Section 4.1 of the Ecological Mitigation and Management Plan that forms *Appendix F18* to the Ecology Chapter.

5.1.2 Reptiles

All four common species of reptiles have been recorded within 2km of the site; these include slow worm, common lizard, grass snake and adder. All these species are protected under the Wildlife and Countryside Act 1981 (W&CA) (as amended) and recognised as SPI. The closest record of slow worm is approximately 0.4km to the north of the site and the closest records of common lizard, grass snake and adder derive from approximately 1km to the north-east of the site.

Reptile presence/likely absence surveys were completed on site in 2011 2014, 2017 and 2018. These were undertaken in accordance with the guidance outlined in the Herpetofauna Workers' Manual⁶ and Advice Sheet 10 - Reptile Survey⁷. This consisted of placement of artificial refuges in suitable habitat followed by seven survey visits (see *Appendix F3* to the Ecology Chapter).

In 2011, low populations of slow worms and grass snakes were recorded at the site. The same size of slow worm and grass snake populations were again recorded in 2014, however a low population of common lizards was also found. In 2017, a low population of grass snake was recorded to the north of the site. In 2018, surveys found breeding but low populations of grass snake and slow worm.

In 2019, seven surveys using reptile refuges in DPN1 were completed in April and May. The locations of the refuges are shown in Figure 2. These surveys recorded a peak count of three grass snakes and would represent a low population. The valuation and consideration for inclusion of reptiles as an important receptor is therefore considered to be unchanged.

The reptile population on the site is considered to be of **Negligible** value given that there is a large amount of similar habitat connected to the site, the number of previous records within 2km and because reptiles are considered to be widespread in the south of England (as per Natural England's Standing Advice Species Sheet, 2011). However, reptiles are considered an important feature due to the potential for a breach of legislation (W&CA).

5.1.3 Barn owl

Assessments of potential barn owl nesting sites have been carried out in 2011, 2013, 2016, 2017 and 2018. Barn owl activity surveys have been completed in 2011, 2013, 2014 and 2018. Surveys were

⁶ Gent, T. and Gibson, S., (2003), *Herpetofauna Workers' Manual*, JNCC: Peterborough.

⁷ Froglife, (1999), *Froglife Advice Sheet 10: Reptile Survey – An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*, [online] Available at http://www.froglife.org/wp-content/uploads/2014/01/FAS_10.pdf, Accessed September 2019.



based on methods recommended in the RSPB Bird Monitoring Methods guidance (Gilbert *et al.*, 1998)⁸ (see *Appendix F5* to the Ecology Chapter).

Six trees on site have been assessed as having potential for barn owl and three have been confirmed as being occupied at some time during the 2011 - 2018 activity surveys.

In 2019, the survey results were consistent with previous years, with active roosts being found in Trees T1 and T3. The locations of all trees surveys are shown in Figure 3.

Whilst barn owls have been included within the breeding bird assessment, they also merit consideration in their own right and the site is considered to be of **Local** value for barn owls which is unchanged from the Ecology Chapter.

5.1.4 Bats

There are 59 records of bats within 2km of the site, which are for the following: Daubenton's, whiskered, Natterer's, noctule, common pipistrelle, brown long-eared, serotine and unspecified *Myotis* and long-eared species. Both noctule and brown long-eared bats are SPI.

Bat activity transect surveys were completed in 2011, 2013, 2016 and 2017 (in accordance with relevant guidelines at the time of the surveys – now Collins, 2016). These surveys included placement of automated detectors (Song Meter SM2 and Anabat Express).

Trees have been subject to a series of ground-level (2012, 2014, 2016 and 2017) and climbed tree inspections (2015, 2016 and 2018) between 2012 and 2018. These have identified 57 trees on site with suitability for roosting bats (11 high, 10 moderate and 36 low).

Dusk emergence/dawn return surveys were completed for suitable trees in 2012, 2014 and 2016 (in accordance with relevant guidelines at the time of the surveys – now Collins, 2016). Following these surveys nine trees were identified which support roosting bats (all small numbers of common or soprano pipistrelle).

In 2019, bat activity surveys have been completed once per month between April and September using the method described in *Appendix F9* to the Ecology Chapter. The transect routes and static locations are shown on Figure 4. The results from 2019 so far have not been significantly different to previous years, with bat records being dominated by common and soprano pipistrelles. Also like previous years, noctules form the next most frequently recorded species with other species being only very rarely recorded. The surveys therefore, confirmed that the site generally supports low numbers of the commonest species.

Bat surveys in 2019 also resurveyed trees in accordance with the methods described in *Appendix F7* to the Ecology Chapter. These surveys were limited to:

• Those identified in the Ecology Chapter with the potential to support roosting bats, that would need to be felled to facilitate the construction of the development proposals; and

⁸ Gilbert, G., Gibbons, D.W. and Evans, J., (1998), Bird Monitoring Methods, RSPB: Bedfordshire.



• Those identified in the Ecology Chapter with the potential to support roosting bats that pose a significant health and safety risk to residents due to their condition.

Seven trees fulfilled these criteria, as shown in Figure 5. Ground level assessments found that three of these trees had moderate potential and four had high potential to support roosting bats. These classifications were used to inform the survey effort necessary to be compliant with best practice guidelines (Collins, 2016).

Dawn and dusk surveys of the trees shown in Figure 5 were completed between May and September July 2019. During these surveys, no bats were recorded returning to or emerging from potential roosting features that the trees support. This is unsurprising as bat roosts in trees are extremely transient and are often only used a small number of nights at a time. The reasons for this are complex and can involve factors such as changes in internal conditions and parasite build-up. Ultimately, these results are not considered to have altered the findings of the Ecology Chapter, as the roosting features in these trees retain their ecological function and therefore value, whether bats are present or not.

Based on the findings of the 2019 surveys the assessments in the Ecology Chapter would be unchanged. The assemblage of foraging and commuting bats that the site supports would be of **County** value and the assemblage of roosting bats that the site supports would be of **Local** value. These assessments are based on which criteria the bat assemblages most closely resemble within 'Valuing Bats in Ecological Impact Assessment' (Wray *et al.*, 2010)⁹.

5.1.5 Hazel dormice

There are no records of hazel dormice within 2km of the site. Nest tube surveys were completed in 2011/12, 2014 and 2017. Surveys followed the methodology set out in the Dormouse Conservation Handbook (Bright *et al.*, 2006) (see *Appendix F11* to the Ecology Chapter).

Hazel dormice were recorded in Barn Copse and Slockett's Copse in 2014. None were recorded during 2017. Hazel dormice can persist with large territories and at low population density, even in high quality habitat (Bright *et al.*, 2006). As such they were considered to be either absent from the site or present at extremely low population density.

In May 2019, a hazel dormouse was found in a nest tube in Barns Copse when the wooden inserts were being replaced prior to subsequent checks. Since May, the tubes have been checked in June, July and August and no further hazel dormice have been found. The locations of the tubes installed and checked in 2019 are shown in Figure 6.

The assessment of the site is therefore, considered to be unchanged from the Ecology Chapter and it is of **Local** value for hazel dormice.

5.1.6 Badgers

There is a record of a badger sett within the site – details on location are provided in the confidential Badger Report (see *Appendix F12* to the Ecology Chapter). There are five other records of setts

⁹ Wray, S., Welss, D., Long, E. & Mitchell-Jones, T. (2010). Valuing bats in ecological impact assessment, In Practice, No 70, pp 22-25.



within 2km of the site. There is also a record of a badger road mortality on the A339 which lies approximately 0.89km to the south-east of the site.

Badger surveys have been completed on site in 2011, 2013, 2014, 2016, 2017 and 2018 (see *Appendix F12* to the Ecology Chapter). These surveys have recorded one active main sett and one active subsidiary sett on site, along with 11 outlier setts (only one of which was active).

In 2019, one disused sett, two setts with signs of occasional use and one well-used sett were recorded. These were not in novel locations for the site and had therefore been previously recorded. Their locations have not been provided in order to protect against persecution of badgers. In addition, signs of foraging badgers in the form of excavated wasp nest have been frequently found during bat activity surveys.

The apparent increase in badger activity on the site in 2019 is not considered to require a change in the assessment of the site from being of **Local** value for badgers.

5.1.7 Summary

The findings from the 2019 surveys for great crested newts; reptiles; barn owls; bats; hazel dormice; and badger are not considered to alter the assessment of the value of ecological features identified in the Ecology Chapter. Therefore, no changes to the proposed inherent, standard, or actionable mitigation measures during construction or occupation phases of the development proposals are required. Consequently, no changes to the assessment of significant effects for these receptors identified in the Ecology Chapter is necessary. The relevant sections of the summary tables following the assessment of effects from the Ecology Chapter have been provided as Table 6.1 and 6.2.

As described in Table 6.1 and 6.2, the findings of this appendix apply to the construction and occupation phases. Furthermore, the conclusions relating to residual and cumulative effects in the Ecology Chapter should remain unchanged, whereby none were identified.



Table 1: Summary of Impact Assessment – Construction Phase

Receptor	Sensitivity/ Importance /Value	Description of Impact	Inherent & Standard Mitigation Measures	Nature of Effect	Type of Effect	Significance of Effect
Reptiles	Negligible (legal protection)	Potential killing or injury	Adherence to construction-phase mitigation strategy incorporating avoidance and displacement (detailed in EMMP and CEMP)	Negligible	N/A	Not significant (Negligible)
Barn owl	Local	Habitat creation	Grassland creation within Country Park resulting in c. 57% increase in suitable foraging habitat	Significant positive (high positive)	Permanent	Significant (Moderate beneficial)
	Local	Disturbance	Adherence to standard control methods including avoidance of nesting season and pre- commencement nest checks (detailed in CEMP)	Negligible	N/A	Not significant (Negligible)
Bats	Local	Habitat creation	Increase in suitable foraging habitat – broadleaved woodland (c. 3.12ha); wetland (c. 0.15ha of SuDS) and grassland (c. 21.8ha)	Significant positive (medium positive)	Permanent	Significant (Minor beneficial)
	Local	Roost damage or disturbance	N/A	Significant adverse (high adverse)	Short-term	Significant (Moderate adverse)
Badgers	Local	Sett damage or disturbance	N/A	Significant adverse (high adverse)	Short-term	Significant (Moderate adverse)
Hazel dormice	Local	Habitat fragmentation	In-built mitigation including vegetated arches to maintain connectivity across breaches.	Negligible	N/A	Not significant (Negligible)



	Local	Habitat creation	Planting of c.3.12ha of broadleaved woodland or 10.4% increase	Significant positive (medium positive)	Permanent	Significant (Minor beneficial)
L	ocal	Potential killing or injury	Adherence to construction-phase mitigation strategy incorporating avoidance and displacement (detailed in EMMP and CEMP)	Negligible	N/A	Not significant (Negligible)

Table 2: Summary of Impact Assessment – Occupation Phase

Receptor	Sensitivity/ Importance/ Value	Description of Impact	Inherent & Standard Mitigation Measures	Nature of Effect	Type of Effect	Significance of Effect
Bats	Local	Disturbance (lighting)	In-built sensitive lighting strategy which maintains an increase of no more than 1lux on bat foraging habitats and commuting routes	Negligible	N/A	Not significant (Negligible)
	Local	Increased mortality (cat predation and traffic)	No large or high-speed roads proposed and links between parcels follow existing gaps between woodland blocks. High density of potential roost sites in woodland parcels likely to be inaccessible to cats	Negligible	N/A	Not significant (Negligible)



Badgers	Local	Sett disturbance	N/A	Significant adverse (high adverse)	Permanent	Significant (Moderate adverse)
	Local	Increased mortality (traffic)	N/A	Significant adverse (high adverse)	Permanent	Significant (Moderate adverse)
Hazel dormice	Local	Inappropriate management of hedgerows	N/A	Significant adverse (high adverse)	Permanent	Significant (Moderate adverse)
	Local	Disturbance (lighting)	In-built sensitive lighting strategy which maintains an increase of no more than 1lux on suitable habitat	Negligible	N/A	Not significant (Negligible)
	Local	Increased mortality (cat predation)	N/A	Significant adverse (high adverse)	Permanent	Significant (Moderate adverse)



Quality Control	
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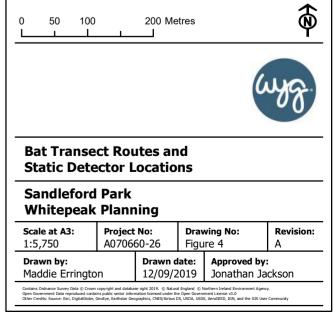
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