FIRS FARM, CRAWLEY

Preliminary Ecological Appraisal Report

August 2024

Collingtonwinter
environmental

Report Control Sheet

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/	06/08/2024	Draft report sent to Client for comment.	KB	CO	KB
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Quality Assurance

All ecological reports produced by Collington Winter Environmental Ltd are checked and approved by a Principal Ecologist with appropriate professional membership (CIEEM or IES) who are bound by a code of professional conduct and ethics.

EXECUTIVE SUMMARY

Site Address	Firs Farm, Copthorne Common, Crawley RH10 3LF
Grid Reference	TQ33433910
Approximate Site Area	0.4ha
Current Site Use	The site is currently used as a vegetated garden with an area of less managed grassland to the south. The buildings were in use for storage, as a garage and for offices.
Designated Sites within Zone of Influence	A series of non-statutory sites were located within 5km of the site, the closest of which related to Hedgecourt Sites of Special Scientific Interest Units (SSSI) located approximately 1.6km northeast of the site boundary. One non-statutory site was located within 1km of the site. Copthorne Common Local Wildlife Site (LWS) located approximately 670m west of the site boundary.
Notable Habitat Features	There were no notable habitats located on site.
Notable Species Applicable to the Assessment	• Common amphibians, including great crested newts • Reptiles • Birds • Bats (Potential commuting and foraging) • Badger • Hedgehog
Mitigation Recommendations	• Reasonable avoidance measures for amphibians, great crested newts and reptiles. • Nesting bird check and compensatory habitat creation/installation of bird boxes. • Precautionary Working Methods have been recommended for bats, badgers and hedgehogs • Lighting mitigation has been recommended for local bats.
Recommended Further Surveys and Assessment	• Building 1 and 5 were found to provide low bat roosting potential, and therefore, in accordance with Best Practice guidance (Collins, 2023) further nocturnal emergence should be undertaken. Due to the building being assessed as low, it is recommended the survey is completed between May-August (inclusive) to determine usage by roosting bats. • Review of proposed development plan(s) once produced to assess potential impact on designated site.
Recommended Ecological Enhancements	Bat and bird boxes could be placed on the new buildings once works are complete. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.

CONTENTS

1 INTRODUCTION

1.1. SCOPE & PURPOSE

1.1.1. Collington Winter Environmental Ltd was commissioned by ET Planning to undertake a Preliminary Ecological Appraisal (PEA) at Firs Farm, Copthorne Common, Crawley RH10 3LF. The report has been produced to set out a baseline of proposed planning applications. The extent of proposed works is unknown, as such recommendations have been outlined.

1.1.2. The author of this report is Katie Bird MEnvSci, ACIEEM Associate Director at Collington Winter Environmental Ltd. Katie is highly experienced managing schemes and has produced many ecological reports to inform planning management plans.

1.2. LOCATION

1.2.1. Please refer to Figure 1.1 for the site location.

Figure 1.1 Site Location

1.3. OBJECTIVES

1.3.1. The objectives of the Preliminary Ecological Appraisal are as follows:

- Identify the major habitats present
- Ascertain the presence or potential presence of any legally protected or notable species or habitats
- Identify any mitigation or further survey required and opportunities for strategic wildlife enhancements and long-term management.

2 METHODOLOGY

2.1. DESK STUDY

2.1.1. An initial desk-based assessment of the site was undertaken to collate baseline data. The desk study included:

- Obtaining local records of notable species and locally designated sites within 1 km of the site from Sussex Biodiversity Record Centre (SBRC), obtained on the 09.07.2024.
- Review of Magic.gov.uk website for details of any designated sites, notable habitats and presence of European Protected Species Licences.
- Review of aerial and OS maps for habitat information, as well as determining locations of potential waterbodies to be considered in the assessment.
- Review of potential habitat links on and off site, to determine the potential zone of influence of the proposed development.

2.1.2. Please note, a lack of records for a species does not confirm absence. Instead, local surveys may not have been undertaken or records not submitted to SBRC.

2.2. VEGETATION AND HABITAT ASSESSMENT

2.2.1. An Ecological Appraisal of the site was undertaken by Andrew Taylor, Project Manager Ecologist at Collington Winter Environmental Ltd. The survey was undertaken on the 10th July 2024. The weather was clear (3/8 oktas), with no precipitation, wind speed 2 and 20c.

2.2.2. The walkover survey was undertaken broadly in line with standard UK HAB Methodology, Version 2 (2023). The assessment is undertaken with consideration of methodology as per “Preliminary Ecological Appraisal” (CIEEM, 2018).

2.2.3. A UK HAB Plan has been produced and is presented in the Appendix of this report. Standard methodology has been used, though adjustments have been made based on judgement to demonstrate habitats in a clearer manner, or where standard guidance does not fit the conditions found on site.

2.3. FAUNA ASSESSMENT

2.3.1. A search for signs of protected and notable species of fauna was undertaken during the site walkover. This included both field signs of species, as well as potential for species to be present based on habitat availability.

2.3.2. The searches broadly included the following:

- Assessment of waterbodies on site and within 250m of the site boundary, and terrestrial habitats for suitability to support notable amphibians.
- Searches for field signs of, and habitat suitability for bats.
- Suitability of habitats to support reptiles, and searches for incidental field signs.
- Searches for field signs of badger (*Meles meles*), including setts, mammal paths, snuffle holes, badger hair and latrines to indicate activity.
- Searches of watercourses for signs of water vole (*Arvicola amphibius*), white-clawed crayfish (*Austropotamobius pallipes*) and otter (*Lutra lutra*), and assessment of habitat availability for the species.
- Assessment of the suitability of habitats to support notable birds and recording any field sightings of birds during the walkover.
- Assessment of the sites ability to support notable invertebrates and flora.
- Searches for non-native invasive species.

2.4. PRELIMINARY ROOST ASSESSMENT AND BAT ACTIVITY ASSESSMENT

2.4.1. A Preliminary Bat Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) of the site was undertaken by Andrew Taylor and overseen by Katie Bird who holds a Class 2 Bat Survey Licence from Natural England (Reference 2020-48950-CLS-CLS).

2.4.2. The survey was undertaken following guidance set out in Collins (2023). This includes undertaking a detailed

internal and external inspection of any features to compile information on potential and actual bat entry/ exit points, roosting locations and evidence of bats. Please refer to Figure 2.1 for the building references.

Figure 2.1 Building Referencing Plan

2.4.3. The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 4th edition (Collins 2023).

2.4.4. The GLTA and Potential flightpaths and foraging habitats were assessed as per categories listed in Table 4.1, 4.2 and 6.2, demonstrated below (Collins 2023).

2.4.5. If negative impacts on bat activity is suspected, further surveys may be required. Negative impacts anticipated on bats flights paths and foraging habitats may include:

- Modification of light paths or foraging habitats either physically or through disturbance such as light spill/noise
- Severance of flight paths (fragmentation)
- Loss of Foraging habitats

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible[a]	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[b] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats[c]).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[b] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[b] and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Assessment Criteria for Bat Roosting Potential

Table 4.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.

Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Table 6.2. Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

2.5. SURVEY LIMITATIONS

2.5.1. This survey does not constitute a full botanical survey. Key species for each habitat type have been identified to give a broad representation of habitats present within the site.

2.5.2. It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the natural environment. This survey does not constitute a full botanical survey. Plant species may have been under-recorded, unidentifiable or not visible due to a number of factors including the time of year the survey was carried out.

2.5.3. The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. This is based on the suitability of the habitat, known distribution of the species in the local area (provided by data searches) and any direct evidence within the survey area.

2.5.4. The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.

2.5.5. The data search obtained from SBRC does not cover the full 1km radius due to the site's 1km radius lying between

two local data sources. As such, it is possible records from the other local data source may have been missed.

2.5.6. Five ponds were located within 250m of the site boundary. However, they could not be accessed due to being located within third party land. This limitation has been considered within the assessment.

2.5.7. B4 could not be accessed internally as part of the PRA. This constraint has been considered within the PRA.

2.6. PROPORTIONALITY

2.6.1. Collington Winter Environmental Ltd provide recommendations in line with the British Standard for Biodiversity (BS42020). Within BS42020, proportionality is encouraged for both ecologists and Local Authority Decision Makers and Consultees. Please refer to the below extract from Section 5.5 of BS42020.

"The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

NOTE 1 This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England [41].

NOTE 2 The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary."

3 SURVEY RESULTS

3.1. SITE CONTEXT

3.1.1. The site is located within a predominantly urban area of Copthorne Common. Commercial units are located to the south of the site, with residential housing to the north. Beyond the urbanised habitats are agricultural fields with a large expanse of woodland. In addition, Copthorne Golf Club is located approximately 800m west of the site boundary. The habitats are anticipated to be of importance for a range of flora and fauna, within the local area and are connected to the site via hedgerows and lines of trees based on aerial imagery.

3.2. DESIGNATED SITES

3.2.1. The following statutory sites were located within 5km of the site boundary:

- Hedgecourt Sites of Special Scientific Interest Units (SSSI) located approximately 1.6km north east of the site boundary. Hedgecourt is the most important wetland site remaining in south-east Surrey. Situated in the upper Eden Brook Valley on alluvial soils overlying Tunbridge Wells sandstones, the site incorporates a range of habitats including woodland, grassland and fen-marginated open water. Hedgecourt lake itself is an ancient mill pond resulting from the damming of the river. These habitats support a wide variety of animal life including several locally distributed beetles (Coleoptera) and a large breeding-bird fauna.
- Turner's Hill SSSI located approximately 3.6km south of the site boundary. It is designated due to its geological reasoning.
- Grattons Park Local Nature Reserve (LNR) located approximately 4.5km west of the site boundary.
- Wakehurst & Chiddingly Woods SSSI located approximately 4.7km south of the site boundary. Wakehurst and Chiddingly Woods contain extensive exposures of sandrock, a nationally rare habitat, which are of biological and geological importance. This site has the richest sandrock community in the country, supporting a unique flora. It is the locality of an uncommon cranefly, and also has a diverse breeding community of woodland birds.

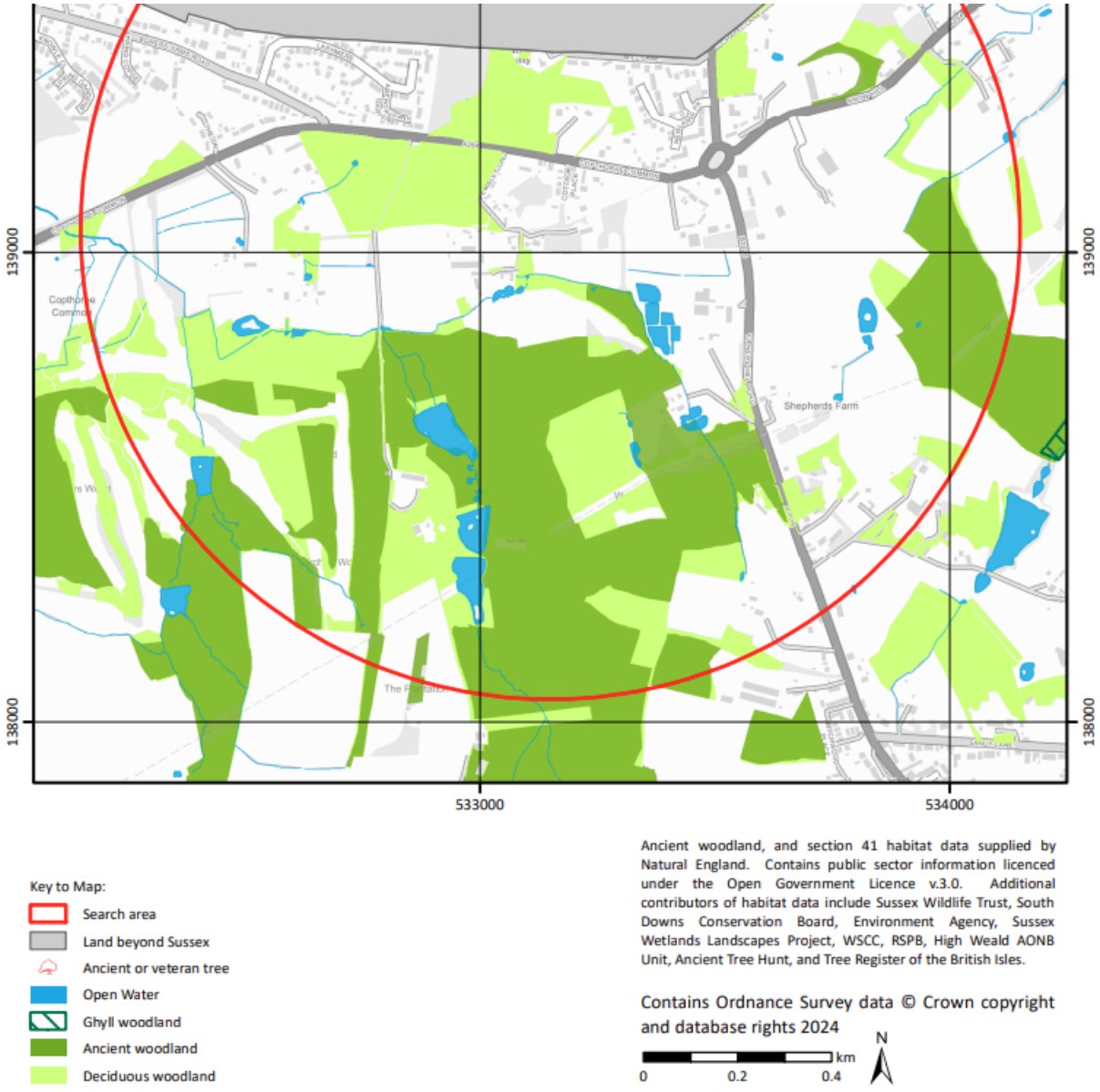
3.2.2. The site falls within the Impact Risk Zone of the SSSI sites detailed above.

3.2.3. One non-statutory site was located within 1km of the site. Copthorne Common Local Wildlife Site (LWS) located approximately 670m west of the site boundary. The site is located on the southern edge of Copthorne. It comprises two contiguous areas of common land, the larger of which is managed as a golf course, but still has valuable areas of semi-natural habitat. The main interest of the site is its heathland, but it also has a mosaic of grassland types and areas of woodland

3.3. PRIORITY HABITATS

3.3.1. SBRC (2024) identified the following Section 41 habitats within 1km of the site boundary (see Figure 3.1).

Figure 3.1 Section 41 habitats within 1km of the site.



3.4. HABITATS

3.4.1. Please refer to Drawing 20-2011 – 001 for the UK HAB Map for the site. Photographs of the site are presented in the Appendix.

DEVELOPED LAND; SEALED SURFACE

3.4.2. A series of buildings and associated courtyard was present onsite making up developed land; sealed surface.

MODIFIED GRASSLAND

3.4.3. Two parcels of modified grassland were located within the site.

3.4.4. The most northern grassland was well managed and was dominated by Japanese lawn grass (*Zoysia japonica*). It was utilised as a **vegetated garden** for the associated residential house. Additional species included wild radish (*Raphanus raphanistrum*), dandelion (*Taraxacum agg.*), bristly oxtongue (*Helminthotheca echioides*) and selfheal (*Prunella vulgaris*).

3.4.5. The southern grassland area was less managed and was dominated by creeping bent (*Agrostis stolonifera*) with the addition of cock's foot (*Dactylis glomerata*), common nettle (*Urtica dioica*), ragwort (*Jacobaea vulgaris*) and creeping thistle (*Cirsium arvense*).

VACANT/DERELICT LAND

3.4.6. A parcel of vacant/derelict land was located within the centre of the site in association with a driveaway and former building, which was colonised by mosses.

TALL FORBS

3.4.7. Tall forbs were located to the east of the southern grassland area. It was dominated by common nettle, with the addition of bramble (*Rubus fruticosus agg*.), willowherb (*Epilobium* sp.) and goat willow (*Salix caprea*) saplings.

INDIVIDUAL TREES

3.4.8. A series of individual trees were located within the site. To the south of the site, sycamore (*Acer pseudoplatanus*), willow (*Salix* sp.) and four cherry laurel (*Prunus laurocerasus*) were present.

3.4.9. Within the northern grassland area, ash (*Fraxinus excelsior*) and elder (*Sambucus nigra*) was present.

3.4.10. Within the southern grassland area, willow, field maple (*Acer campestre*) and goat willow was present.

ORNAMENTAL AND NON-NATIVE HEDGEROW

3.4.11. A cherry laurel hedgerow was located to the south of the site with the addition of creeping forsythia (*Forsythia suspensa*) and Japanese camellia (*Camellia japonica*).

3.5. SPECIES

FLORA

3.5.1. The data search returned 121 records of notable flora within 1km of the site boundary. Records included (but not limited to) heather (*Calluna vulgaris*), harebell (*Campanula rotundifolia*), bladder-sedge (*Carex vesicaria*), good-king-henry (*Chenopodium bonus-henricus*), round-leaved sundew (*Drosera rotundifolia*), bell heather (*Erica cinerea*), cross-leaved heather (*Erica tetralix*), wild strawberry (*Fragaria vesca*) and petty whin (*Genista anglica*).

3.5.2. The site mainly comprised developed land, well managed modified grassland with limited opportunities for notable flora. The tall forbs were dominated by common nettle, which is considered a highly competitive species, limiting opportunities for notable flora. In addition, there was no notable flora identified on site during the survey. Therefore, notable flora is discounted from the assessment.

INVERTEBRATES

3.5.3. The data search returned four records of notable invertebrates within 1km of the site boundary. Records included tanner beetle (*Prionus coriarius*), white admiral (*Limenitis camilla*) and *Mordellistena humeralis*.

3.5.4. The tall forbs and southern grassland parcel is anticipated to be of value for local invertebrates, providing suitable food resources for the species group. However, due to the dominance of common nettle and limited floristic diversity, it limits value of the habitats within the site for invertebrates due to the monoculture. The remaining aspect of the site is considered to be of limited value to the well managed nature and limited flora observed.

3.5.5. Overall, notable invertebrates may utilise the site for foraging but are not thought to utilise the site in significant numbers.

AMPHIBIANS

3.5.6. The data search returned one record of common frog (*Rana temporaria*) within 1km of the site boundary.

3.5.7. The following EPSL's were located within 3km from the site boundary based on consultation with magic.gov.uk:

Case reference of granted application	Licence Start Date	Licence End Date	impact on a breeding site?	Does the Licence allow damage of breeding site?	allow damage of a resting place?	allow destruction of breeding site?	allow destruction of a resting place?
2014-5188-EPS-MIT	27/11/2014	30/06/2016	N	N	N	N	N
2016-19744-EPS-AD2	13/04/2016	30/06/2020	Y	Y	Y	Y	Y
2017-27853-EPS-MIT	11/04/2017	30/07/2018	N	N	Y	N	Y
2017-30804-EPS-MIT	29/09/2017	31/12/2029	N	N	N	N	Y
2017-31507-EPS-MIT-1	27/06/2018	31/12/2023	N	N	Y	N	Y
2017-31507-EPS-MIT-2	26/11/2018	31/12/2020	N	N	Y	N	Y
2020-44432-EPS-MIT-1	21/08/2020	31/12/2030	N	N	Y	N	Y
EPSM2011-3224	06/08/2012	31/10/2015	N			N	Y

3.5.8. No ponds were located onsite; however, five ponds were located within 250m of the site boundary. The ponds are located adjacent to one another, with the closest of which located approximately 130m south of the site (see Figure 3.2). The ponds could not be accessed during the survey to assess for suitability for great crested newts. The ponds appear to be artificially made due to the shape and position, based on aerial photography. It is not possible to confirm presence or absence of great crested newts within the offsite ponds.

Figure 3.2 Ponds within 250m of the site

3.5.9. The site provides some terrestrial value for amphibians. The tall forbs and southern grassland parcel habitats may provide suitable cover and foraging resources for amphibians. However, the developed land and well managed grassland will provide limited value due to no cover and foraging resources. Overall, the presence of great crested newts within offsite ponds is unknown. Common amphibians may also occur onsite.

REPTILES

3.5.10. The data search returned three records of grass snake (*Natrix helvetica*) within 1km of the site boundary, all of which are considered historic and are dated 1996 and 1990.

3.5.11. The tall forbs and southern grassland parcel may provide shelter and foraging opportunities for reptiles. The site is connected to the wider area via hedgerows and line of trees, to habitats of potentially higher value i.e. woodland and agricultural land. The remaining aspect of the site is considered to be sub-optimal due to being well-managed and comprised of developed land which will not provide cover or foraging value.

3.5.12. Overall, reptiles may occur onsite but not considered to be of significant value for the species due to limited opportunities and the scale of the development.

BIRDS

3.5.13. The data search returned 160 records of birds within 1km of the site boundary. Species included (but limited to); red kite (*Milvus milvus*), mallard (*Anas platyrhynchos*), tufted duck (*Aythya fuligula*), woodcock (*Scolopax rusticola*), stock dove (*Columba oenas*), kingfisher (*Alcedo atthis*), cuckoo (*Cuculus canorus*), hobby (*Falco subbuteo*), kestrel (*Falco tinnunculus*), skylark (*Alauda arvensis*), bullfinch (*Pyrrhula pyrrhula*), house martin (*Delichon urbicum*), swallow (*Hirundo rustica*), grey wagtail (*Motacilla cinerea*), willow tit (*Poecile montanus*), marsh tit (*Poecile palustris*) and house sparrow (*Passer domesticus*),

3.5.14. Suitable nesting habitat related to the buildings, hedgerow and individual trees. No nests were observed within the buildings, however, may provide suitable opportunities for species such as swallow or house martin.

3.5.15. The site is considered unsuitable for ground nesting birds due to its frequent disturbance, which will deter nest creations.

3.5.16. Overall, the site provides value for breeding birds, however due to the presence of habitats of higher value within the local area (i.e. woodland), the site is not considered to be significant value.

BATS

3.5.17. The data search returned 11 records of bats and bat roosts within 1km of the site boundary. Species includes common pipistrelle *(Pipistrellus pipistrellus),* brown long-eared (*Plecotus auritus*) and soprano pipistrelle *(Pipistrellus pygmaeus).*

3.5.18. The following EPSL's were located within 3km from the site boundary based on consultation with magic.gov.uk:

				Does the Licence				
Case reference of granted application	**Species on the licence***	**Licence Start Date**	**Licence End Date**	**impact on a breeding site?**	**allow damage of breeding site?**	**allow damage of a resting place?**	**allow destruction of breeding site?**	**allow destruction of a resting place?**
2014-3084-EPS-MIT	BLE C-PIP	16/09/2014	01/10/2016	N	N	N	N	Y
2014-965-EPS-MIT	BARB BLE	20/03/2014	30/09/2014	N	N	Y	N	Y
EPSM2012-4307	C-PIP;BLE	24/04/2012	01/04/2014	Y			Y	Y
EPSM2012-5030	BLE	17/10/2012	01/10/2014	N			N	Y
EPSM2013-6382	C-PIP;S-PIP;WHISK;BRAN	10/10/2013	31/10/2015	N			N	Y
2017-31276-EPS-MIT	BLE	25/10/2017	31/10/2027	Y	Y	Y	N	Y
2018-33742-EPS-AD2	BLE C-PIP S-PIP	17/10/2018	11/10/2023	Y	N	N	Y	Y
2018-33742-EPS-AD2-1	BLE C-PIP S-PIP	03/12/2018	11/10/2023	Y	N	N	Y	Y
2018-36875-EPS-MIT	C-PIP	06/12/2018	06/12/2023	N	N	N	N	Y
2018-37539-EPS-MIT	BLE C-PIP	06/11/2018	01/11/2028	Y	N	N	Y	Y
2018-36616-	BLE C-PIP	01/03/2019	01/03/2024	N	N	N	N	Y

EPS-MIT								
2019-39450-EPS-MIT	BLE C-PIP	05/04/2019	31/01/2025	N	N	Y	N	N
EPSM2009-458	BLE	30/03/2009	01/10/2010	N			N	Y

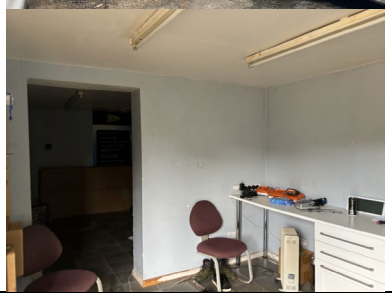
Species on the licence*	Species name	Latin
C-PIP	Common pipistrelle	*Pipistrellus pipistrellus*
S-PIP	Soprano pipistrelle	*Pipistrellus pygmaeus*
BLE	Brown long-eared bat	*Plecotus auritus*
BARB	Barbastelle	*Barbastella barbastellus*
WHISK	Whiskered bat	*Myotis mystacinus*
BRAN	Brandt's bat	*Myotis brandti*

3.5.19. No trees were identified as having bat roosting potential during the survey, due to lacking PRFs for roosting bats.

3.5.20. All buildings were subject to a PRA and is detailed in Table 3.1.

Figure 3.1 PRA of buildings onsite.

Ref	Description	Photograph
B1	*External* Old stables constructed of breeze block which had been rendered and painted white. The majority of the external façade was in good condition, with no PRFs observed. However, gaps at the apex on the northwestern aspect were identified, with additional gaps between the metal roof and brick work which will provide potential access points to the internal. The southern aspect comprised of a wooden panel which was well sealed and no PRFs identified. *Internal* The northwestern aspect was constructed of breeze block walls with a corrugated metal roof. No access points via the roof were observed to the internal. No PRFs identified internally, and no fields of roosting bats observed. The main barn comprised of exposed breeze block walls. The roof structure was exposed, demonstrating the timber support beams. The room was naturally lit. PRFs included; gaps between the timber support beams and the breezeblock walls. Building 1 was assessed as having **low bat roosting potential.**	  
B2	B2 comprised of a single storey garage, constructed of breezeblock walls and a metal panel roof, supported by timber frames. It is currently in frequent use as a garage and workshop. Wooden panel features were located on the southern aspect which will provide internal access. Additional internal access points were also recorded in relation to where the roof structure and brick walls were not sealed. No PRFs were identified internally or externally. No field signs of roosting bats were observed. Building 2 was assessed as having **negligible bat roosting potential.**	

		 
B3	B3 comprised a single storey building used as an office. It was constructed of brick which had been rendered and painted, with no PRFs identified within the external brick work. The roof was flat and was constructed of rubber roof material. Fascia boarding was well-sealed to the brick work and roof structure and did not provide a PRF. Internally, the space was used as an office, with a vaulted ceiling. No potential access points to the internal was observed and no PRFs identified. Building 3 was assessed as having **negligible bat roosting potential.**	 
B4	B4 comprised a single storey cabin which was used by tenants. No internal access to B4 was possible. The building was constructed of timber panels, with a flat roof constructed of rubber roof material. Fascia boarding was well-sealed to the brick works and roof structure and did not provide a PRF. Building 4 was assessed as having **negligible bat roosting potential.**	
B5	B5 comprised of a stable block now used for storage purposes. Windows were open and will provide potential access points to the internal aspect. It was constructed of timber with a metal corrugated roof. timber sarking was present that mat provide a PRF between the sarking and metal roof for roosting bats. Building 5 was assessed as having **low bat roosting potential.**	

		
B6	B6 comprised a derelict building constructed of single layered timbe walls and roof which had caved in, exposing the internal aspect. No PRFs were identified internally and externally, with no field signs of roosting bats observed. Building 6 was assessed as having **none bat roosting potential.**	 
B7	A single storey building with corrugated metal roof. No internal access to B7 was possible. The building was constructed of timber panels. boarding was well-sealed and roof structure and did not provide a PRF. Building 7 was assessed as having **negligible bat roosting potential.**	

3.5.21. The tall forbs on site could provide value for local foraging bats and the hedgerow may provide commuting value. The site is connected to further hedgerows and line of trees which will provide commuting and foraging bats. The nearby woodland habitats are anticipated to provide greater value and are anticipated to support local bat populations.

BADGER

3.5.22. No records of badger were returned within the 1km data search.

3.5.23. There were no signs of badger identified during the survey. The habitats will provide suitable habitats to support badgers which are anticipated to be present within the local area. Badger setts are currently absent, but they may forage and commute onsite.

OTHER TERRESTRIAL MAMMALS

3.5.24. Records of west European hedgehog (*Erinaceus europaeus*) were located within 1km of the site boundary. Given the habitats present within the site including hedgerow and tall forbs, it is anticipated that hedgehog could be present within the site.

3.5.25. No records of hazel dormouse (*Muscardinus avellanarius*) were identified within 1km of the site boundary. However, 17 EPSLs for the species were identified within 5km of the site boundary, the closest of which was located approximately 3.5km west of the site (licence reference number: 2016-25598-EPS-MIT). The site is considered to be unsuitable for species as no suitable habitats present onsite (i.e. woodland, scrub and hedgerows). The hedgerow onsite is non-native, which will not provide value for the species. As such, hazel

dormouse is deemed likely absent from site.

NON-NATIVE INVASIVE SPECIES

3.5.26. There were 28 records of non-native invasive species within the 1km data search. Species included; montbretia (*Crocosmia pottsii x aurea = C. x crocosmiiflora*), Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*), Himalayan balsam (*Impatiens glandulifera*), American skunk-cabbage (*Lysichiton americanus*), winter heliotrope (*Petasites fragrans*), cherry laurel, rhododendron (*Rhododendron ponticum*) and heath star moss (*Campylopus introflexus*).

3.5.27. Cherry laurel is listed under the Sussex Non-Native Invasive Species list and was identified in relation to the non-native and ornamental hedgerow and individual trees.

SPECIES DISCOUNTED FROM ASSESSMENT

3.5.28. Water vole (*Arvicola amphibius*), otter (*Lutra lutra)*, beaver (*Castor fiber)* and white-clawed crayfish (*Austropotamobius pallipes*) have been discounted from assessment. There are no aquatic habitats located on site or connecting to the site. The site does not provide any opportunities to support the listed species.

3.5.29. Red squirrel (*Sciurus vulgaris)* has been discounted from the assessment. Red squirrel populations are limited to small areas of northern England and are not known to be present in the local area; with no previous records returned in the data search. It is anticipated that high abundances of grey squirrel are present within this region (Shuttleworth/RSST n.d.). This species will displace red squirrel through competition as well as cause increased red squirrel mortality through the spread of squirrel pox (The Mammal Society, 2020).

4 MITIGATION RECOMMENDATIONS

4.1. DESIGNATED SITES

4.1.1. The site falls within the Impact Risk Zone of a series of SSSI sites, the closest of which related to Hedgecourt SSSI located approximately 1.6km northeast of the site. Once the proposed development(s) designs are finalised, it is recommended that a review of Magic.gov.uk is completed to assess whether further consultation with Natural England is required. However, generally it is also considered that the remaining designated sites are considered a sufficient distance from the development site, with no potential indirect and direct impacts will occur. A review of the proposed development plan(s) should be completed, once finalised to assess potential indirect impact (i.e. increase of recreational pressure).

4.1.2. Copthorne Common LWS is located approximately 670m west of the site boundary. The LWS is considered a sufficient distance from the site, with no obvious aquatic paths that will risk negative impacts during the construction phase. A review of the proposed development plan(s) should be completed, once finalised to assess potential indirect impact (i.e. increase of recreational pressure).

4.2. HABITATS

TREES

4.3.1. It is recommended that all trees are retained and protected (but not including the cherry laurels) as part of the proposed development(s). Generally, the protection measures of retained trees will be through used of temporary protective demarcation fencing to protect the trees and shrubs. The fencing must extend outside the canopy of the retained trees and must remain in position until all plots have been developed to ensure protection is provided throughout the construction phase.

4.3.2. The fencing will be in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations.

4.3.3. If not feasible, compensatory tree planting is recommended at 1:2 ratio. The tree species should be locally native and to be of benefit for local flora.

4.3. SPECIES

AMPHIBIANS

4.3.4. The presence of great crested newt within five offsite ponds is unknown. Much of the site provided limited terrestrial value for the species, with the tall forbs and southern grassland parcel considered to the be the only suitable terrestrial habitat within the site.

4.3.5. A Natural England Rapid Risk Assessment (RRA) has been conducted as it is currently unknown if great crested newts are present within the offsite pond, with the addition of Reasonable Avoidance Measures (RAMs). The RRA found that an offence is “Highly Unlikely”.

Component	**Likely effect** **(select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)**	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

4.3.6. The RRA noted the assessment as:

"*Green: offence highly unlikely" indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest*."

4.3.7. Based on this assessment, should great crested newts be within P1, the proposed development will most likely not cause an offence as the RRA demonstrates "Green: Offence Highly Unlikely".

4.3.8. Depending on the proposed scope of works, the following general RAMs are to be undertaken under the supervision of a licenced great crested newt ecologist. Pre-commencement works are as follows:

- All site contractors are to be inducted through a Toolbox Talk hosted by a suitably qualified ecologist on the presence of great crested newts and their legal protection. All contractors are to sign the Toolbox Talk and agree to the proposed RAMs;
- A designated working area will be maintained to minimise total working area, which will be marked out by the ecologist (where necessary). A fence and/or sign will be situated to mark the working areas to ensure no contractors and vehicles do not enter areas which have not been checked for great crested newts.
- Any vegetation on site to be cleared should first be strimmed to approximately 15 cm and left overnight, allowing any animals the chance to naturally disperse from site. A fingertip search of any vegetated areas should then be undertaken to check for the presence of great crested newts.
- Once the ecologist has declared all areas of potential for great crested newts have been checked, the proposed works can continue unsupervised.
- Storage of materials is to be on pallets i.e. raised off the ground and on areas of hard standing or tarmac. No materials to be stored on vegetation.
- All working areas are to be maintained as bareground or hardstanding throughout the construction phase.
- All open pits and pipes are to be covered during the night, with a check for presence of amphibians conducted prior to covering.
- If excavations are exposed and/or created, a slope will be positioned within the excavation to allow amphibians and mammals to escape should they fall in.
- Under no circumstances should site contractors attempt to handle great crested newt.
- Ecologist to undertake a site visit upon completion of works to confirm that the works have been undertaken using the above risk avoidance measures and that habitats have been restored.
- In the unlikely chance, a great crested newt is located during the RAM's, all works must cease immediately, and Natural England contacted for advice. No great crested newt is to be handled and the refugia is to be placed back to provide suitable cover.

4.3.9. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the impacted area.

REPTILES

4.3.10. Due to the potential presence of reptiles, it is recommended that the following RAMs are followed to minimise the likelihood of killing, injuring or disturbing any reptiles present on the site during the construction phase:

- An experienced Ecological Clerk of Works (ECoW) shall be appointed to ensure RAM's are enforced;
- A walkover of the area should be undertaken by the ECoW to determine any change in status of the habitats/structures on site prior to the initiation of any works.
- A toolbox talk will be given to the site manager and all contractors working on site with respect to the surrounding habitats and potential for protected/notable species. A copy of species factsheets relating to reptiles will be provided for display within the site office.
- Suitable vegetation is to be strimmed under ECoW to approximately 15cm in a northern to southern direction. It is to be checked by the ECoW following strimming to identify individuals. If discovered, they will be removed from the working area and covered. Once the areas are deemed reptile free, they are to be strimmed to ground level and maintained at this length for the remaining works.
- Any excavations will be back-filled on the same day as excavation, or checked immediately prior to backfilling. If not possible, a ramp, will be provided in all excavations that cannot be backfilled on the same day or alternatively, all excavations should be well-covered with plywood.
- No piles of loose construction materials are to be created during works – all material will be kept on hardstanding, stored on pallets, removed immediately from the site or checked prior to being removed.
- In the event reptiles are discovered, works will halt immediately and the ECoW will be contacted for advice. Contractors are not to handle reptiles unless informed to do so by the ECoW.

4.3.11. The precautionary destructive search work will be undertaken during the summer at a time of year when reptiles are active. The ecologist will be present during the strimming works. Any reptiles found during the destructive search will be relocated to the adjacent agricultural land.

BIRDS

4.3.12. It is considered likely that breeding birds will be present onsite. If the proposed development requires the removal of the individual trees and/or the existing buildings are impacted, compensatory measures are recommended. The recommended tree planting, detailed under paragraph 4.3.3 will consider the loss of the trees. If the buildings are renovated and/or new buildings are created, it is recommended that bird boxes targeting swallows and/or house martins are included within the development(s).

4.3.13. Any vegetation removal and building demolition should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably qualified ecologist should undertake a nesting bird check no more than 48 hours prior to removal. If nesting activity is observed, the nest(s) should be left in situ until the young have fledged. A suitable buffer will be maintained and determined by the ecologist.

BATS

4.3.14. Buildings 1 and B5 were assessed as having bat roosting potential, as such further surveys are recommended (see Section 5). The remaining buildings were assessed as 'none' or 'negligible' value, as such no further surveys or mitigation relating to bats is deemed necessary for these buildings.

4.3.15. It is anticipated that the site is utilised by foraging and commuting bats. The extent of habitat loss is unknown. The recommended tree planting would compensate for the loss of current trees. In addition, the development(s) should seek to include species rich habitats such as wildflower grassland, to compensate for the loss of tall forbs.

4.3.16. It is unknown whether lighting will be introduced as part of the proposed development. If any proposed lighting/existing lighting should follow the guidance outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and BCT's "Bats and Artificial Lighting at Night" (2023).

4.3.17. An External Lighting Scheme had not been produced on the writing of this report. As such, the following recommendations are to be considered within the scheme during its condition, to minimise impacts of lighting. The recommendations are as follows:

- Keep site lighting to minimum levels.
- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
- Lighting should feature peak wavelengths greater than 550nm.
- Light placement should be downward facing to prevent excess horizontal or vertical light spill.
- The use of integrated fittings such as cowls, shields, louvres and hoods, that effectively contain light spill from unintended areas.
- The use of hard landscaping features to block light and create dark corridors.
- Avoid illuminating habitats of value.
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use.
- Column heights of lighting can be considered to minimise light spill.

BADGER

4.3.18. No badger setts were identified during the survey; however, they may be within the local area. The following PWMs will be adhered to during the construction phase to ensure that no badgers are impacted by the proposed development (Badger Trust, 2023):

- A pre-commencement of work badger survey should be conducted by a suitably qualified ecologist to ensure the current badger situation is known and that the recommendations are correct.
- All site personnel should be fully briefed concerning the method statement, the presence of badgers, the mitigation measures to be followed, the relevant legislation, the penalties imposed and who to contact should they need to.
- Ensure excavations or trenches left overnight are covered or have an escape route such as a shallow gradient

at one or both ends.

- Ensure excavations or trenches are inspected each morning and evening to ensure no badgers have become trapped.
- Open pipework with a diameter of more than 120mm should be properly covered or capped at the end of the working day to prevent badgers from entering and becoming trapped.
- During the work, the storage of any chemicals should be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.
- The storage of topsoil or other "soft" building materials within the site should be given careful consideration. Badgers will readily adopt such mounds and dig setts which would then be afforded the same protection as established setts. To avoid the adoption of such mounds, they should be subject to daily inspections before work commences or alternative measures put in place, such as being fenced off for higher-risk areas.
- Litter, tools and potentially dangerous materials on site should be cleared at the end of the working day. Care should be taken that there are no sharp metal objects or pointed protrusions on the ground which could seriously injure a badger due to their poor eyesight.
- Ensure no dogs are brought to the work site.
- Security lighting should be kept to a minimum and away from setts to avoid disturbance to any badgers on site.
- Fires should be lit only in secure compounds away from areas of badger activity and should be fully extinguished at the end of the working day.
- Use of noisy plant or machinery should cease at least two hours before sunset and not commence until an hour after sunrise to avoid causing a disturbance to badgers or preventing access or egress to setts.

4.3.19. Adherence to these measures should be confirmed to planners at regular intervals by the project ecologist.

TERRESTRIAL MAMMALS

4.3.20. European Hedgehog are anticipated to be present within the local area and are a Species of Principal Importance. identified during the works, it should be relocated carefully by hand to a location away from the working area and into nearby habitats. If any injured either species are located, they should be taken to a local vet.

NON-NATIVE INVASIVE SPECIES

4.3.21. It is recommended that cherry laurel relating to the individual trees and the non-native and ornamental hedgerow is removed, to remove the cherry laurel from site.

5 CONCLUSION

5.1. FURTHER SURVEYS

Nocturnal Bat Surveys

5.1.1. Building 1 and 5 were found to provide low bat roosting potential, and therefore, in accordance with Best Practice guidance (Collins, 2023) further nocturnal emergence should be undertaken. Due to the building being assessed as low, it is recommended the survey is completed between May-August (inclusive) to determine usage by roosting bats.

5.1.2. The results of the further surveys will determine if any mitigation is required for roosting bats. If roosting bats are located within any of the buildings, additional surveys and a Natural England Mitigation Licence may be required for development to proceed. The Licence can only be obtained once planning permission has been granted and all wildlife conditions discharged. However, the bat emergence surveys must be undertaken prior to planning permission being applied for as they are a material consideration.

5.2. CONCLUSION

5.2.1. The site was found to comprise of developed land, modified grassland, vacant land and tall forbs. The site was found to provide value or potential value for amphibians, reptiles, breeding birds, bats, badger and other terrestrial mammals.

5.2.2. Specific enhancement recommendations for the site include the following:

- Bat and bird boxes could be placed on the new buildings once works are complete. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.

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Description	Photographs
Developed land; sealed surface	
Northern modified grassland parcel	
Southern modified grassland parcel	
Vacant/derelict land	
Talls forbs	

Non-native and ornamental hedgerow	

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Collingtonwinter
environmental

Firs Farm - UKHab
Date: 06.08.2024

- Individual Trees
- Buildings
- Non-native and Ornamental Hedgerow
- Tall Forbs
- Modified Grassland
- Vacant, Derelict Land
- Developed Land Sealed Surface
- Red Line Boundary

Scale: 1:1200

Drawn By: CW

Checked By: KB

Approved By: KB

Collington winter environmental

Client: ET Planning

Site: Firs Farm, Crawley RH10 3LF

Project Number: 20-2011 | Rev: 1.0