the ecology partnership

Preliminary Ecological Appraisal

The Cottage, Shripney Road
Bognor Regis, West Sussex

[redacted]

ARUN DISTR

Contents

1.0 INTRODUCTION 4
BACKGROUND 4
SITE CONTEXT AND STATUS 4
2.0 METHODOLOGY 15
DESKTOP STUDY 15
PRELIMINARY ECOLOGICAL APPRAISAL 15
INTERNAL AND EXTERNAL BAT SURVEYS 15
TREE ASSESSMENT FOR BATS 17
BADGER SURVEY 18
HABITAT SUITABILITY FOR REPTILES 19
OTHER PROTECTED SPECIES 19
LIMITATIONS 20
3.0 RESULTS 21
DESKTOP STUDY 21
PHASE 1 HABITAT SURVEY 25
PROTECTED SPECIES 27
4.0 DISCUSSION 36
SITE 36
PROTECTED SPECIES 37
GENERAL SITE ENHANCEMENTS 40
5.0 IMPACT ASSESSMENT 42
6.0 CONCLUSIONS 45
7.0 REFERENCES 47
APPENDIX 1: PHASE 1 HABITAT MAP 48
APPENDIX 2: PHOTOS 49
APPENDIX 3: BIOLOGICAL RECORDS 50

ARUN DISTRICT COUNCIL BE/137/19/RES

LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

ARUN DISTRICT COUNCIL BE/137/19/RES

1.0 Introduction

Background

1.1 The Ecology Partnership was commissioned by Castle Property Developments to undertake a preliminary ecological appraisal for land at The Cottage, Shripney Road, Bognor Regis, West Sussex, PO22 9PA.

1.2 This report presents the results of The Ecology Partnership's surveys in and around the site, which aims specifically to assess the site's potential to support protected species and protected habitats that may be affected by the proposed development.

1.3 Section 2 of this report sets out the methodologies of the Ecology Partnership's surveys. In section 3 the results of the surveys are presented. Discussions and implications for development are found in section 4, including general site enhancements. A general impact assessment has been conducted in section 5. Conclusions drawn from the report are presented in section 6.

Site Context and Status

1.4 The site is located on land at The Cottage on Shripney Road in Bognor Regis, West Sussex (SU 93834 02327). The site covers approximately 0.7ha and includes a house and garden with a glasshouse and a boundary of trees and hedgerows. The site is directly adjacent to a public house and hotel. The site is surrounded by a mosaic of agricultural fields and medium-density housing. There is one statutory designation, a Local Nature Reserve (LNR) within 2km of the site.

1.5 The aerial photograph below (Figure 1) shows the site and its immediate surroundings. The red line depicts the approximate site boundary and survey area.

ARUN DISTRICT COUNCIL BE/137/19/RES

Figure 1: Approximate location of the red line boundary (Blue line was part of the original 2016 survey and was also resurveyed in 2018 although outside the application area)

Description of Proposed Development

1.6 The site currently has outline planning permission for 20 new houses and flats, plus a replacement dwelling (21 units in total) following the demolition of the existing dwelling and outbuildings. Although the plans are indicative in their nature, the proposals provide for car parking, landscaping and associated infrastructure, with access to be provided from Shripney Road (A29). Aside from access, all other matters are reserved at this stage.

1.7 A new outline application is to be made to increase the number of dwellings on site. The southern section of the site will not be included within the new application, however has been covered within this report.

ARUN DISTRICT COUNCIL BE/137/19/RES

Previous Survey Work

1.8 A previous preliminary ecological appraisal and internal and external bat assessment was undertaken by The Ecology Partnership in September 2016. The habitats on site were considered common and widespread throughout the local area and the UK as a whole. The site was a developed residential plot, with well managed gardens and was dominated by buildings, short amenity grassland, ornamental planting and scattered trees.

1.9 The majority of the buildings onsite were considered unsuitable for roosting bats. However the main house (building 1) and building 3 a small outhouse, were considered to have suitable external roosting features for crevice dwelling bat species. No evidence was found internally within any of the buildings and it is considered that no internal features within the buildings such as loft space are being used by roosting bats. Further survey work on these buildings was recommended. Five potential bat trees were also identified during the survey with varying degrees of suitability.

1.10 No evidence of badgers was found on site at the time of the survey, although there were some areas that could not be fully assessed due to dense vegetation cover or lack of access. Badgers may use the site for foraging and so should be considered during construction works.

1.11 One dry ornamental pond was present on site. This waterbody was not considered suitable for supporting great crested newts. There are no other potential breeding ponds within 250m of the site. It is considered that the site is unlikely to contain great crested newts therefore no further survey work is recommended.

1.12 The grassland on site was considered to be too short for reptiles, which is subject to regular maintenance and also sheep grazing. It is recommended that all grassland on site is kept at a short sward height so that it remains unsuitable for reptiles. The site is not considered to be constrained by other protected species such as dormice, otters or water voles. No further surveys were recommended.

1.13 Nesting birds may use the trees and hedgerows on site. An old swallow / house martin nest was present within building 10 on site and it is considered that the buildings on site have some potential for nesting birds

ARUN DISTRICT COUNCIL BE/137/19/RES

1.14 Bat surveys were carried out in 2016 and 2017 on the house and trees around the site. Four bat activity surveys were undertaken on buildings 1 and 3, with one common pipistrelle seen to emerge from building 1 on the dusk survey in September 2016. It is therefore considered that the demolition of the building should be undertaken under Natural England licence. A mitigation strategy has been included within this report. A Natural England low impact licence will be applied for, for the demolition of building 1, once planning has been secured. It is concluded that bats are only using external features. An extensive period of static recording within the main loft void of building 1 during May 2017, confirmed that bats are not using the internal features.

1.15 No evidence of bats were recorded within building 3 during the activity surveys or internal and external inspection. It is recommended that the building is soft stripped prior to demolition, with roof tiles and other external features such as lead flashing and soffit boards removed by hand. If a bat is discovered during these works, then work should stop immediately and further advice from a suitably qualified ecologist should be sort, with a licence application made for the remainder of the demolition work.

1.16 Five potential bat trees were also subject to an activity survey. None of these trees were in use by roosting bats at the time of surveys. Tree 3 is to be retained as part of proposals, trees 4 & 5 have been downgraded to low potential as they are considered to no longer support significant roosting features. It is considered that if a period of a year passes from the last survey, that trees 1 & 2 should be subject to inspection by a suitably qualified ecologist, either by way of an aerial inspection or by undertaking an activity survey no more than 48hrs before felling.

1.17 This report, is an updated version of the original report following a walkover undertaken in September 2018.

ARUN DISTRICT COUNCIL BE/137/19/RES

Planning Policies

1.18 National and local planning policies may have an effect on the proposed development. The following paragraphs identify relevant planning policies and discuss these in the context of the site.

1.19 Under the Natural Environment and Rural Communities (NERC) Act 2006, *"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"*. In order to comply with this 'Biodiversity Duty', planning decisions must ensure that they adequately consider the potential ecological impacts of a proposed development.

1.20 In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principle importance for conserving biodiversity. These were known as BAP habitats and species. The UK BAP lists of priority species and habitats remain an important and valuable reference certainly at county levels. However, the UK Post 2010 Biodiversity Framework (published 2012) has succeeded BAP. It was produced by JNCC and Defra, on behalf of the Four Countries' Biodiversity Group (4CBG), through which the environment departments of all four governments in the UK work together to achieve the 'Aichi Biodiversity Targets' and the aims of the EU biodiversity strategy.

1.21 National policy guidance is provided by National Planning Policy Framework (NPPF), which sets out the Government's planning policies for England and how they should be applied. Section 11 of the document is entitled 'Conserving and Enhancing the Natural Environment'. This section highlights the following:

"The planning system should contribute to and enhance the natural and local environment by:

- *Protecting and enhancing valued landscapes, geological conservation interests and soils;*
- *Recognising the wider benefits of ecosystem services;*
- *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient*

ARUN DISTRICT COUNCIL BE/137/19/RES

to current and future pressures;

- *Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*
- *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."*

1.22 In addition to this the following paragraphs are also considered to be relevant:

"In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework."

"Planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value. Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land."

1.23 The site falls under the jurisdiction of Arun District Council. Planning policy in the district is decided by polices contained within the Arun Local Plan 2011 - 2031 (Adopted July 2018). The following policies are considered relevant with regards to nature conservation:

Policy ENV SP1 Natural Environment

Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects sites listed in Tables 17.1-17.6 that are recognised for the species and habitats contained within them.

ARUN DISTRICT COUNCIL BE/137/19/RES

Policy ENV DM1 Designated Sites of biodiversity or geological importance

a. Proposed development likely to have an adverse effect on land with the designated features of any Site of Biodiversity or Geological Importance as listed in Tables 17.1 - 17.7 or any subsequently designated sites (either individually or in combination with other developments), will not normally be permitted. Consideration will be given to the exact designated features present on the site, their scarcity/rarity and recognition of the protection offered by their existing status. Development on wildlife sites with the highest value will only be permitted exceptionally where the following can be demonstrated:

i. There is no alternative solution (which shall be adequately demonstrated by the developer).

ii. There are reasons of public health or public safety or

iii. There are benefits of primary importance to the environment or

iv. There are imperative reasons of overriding public interest. Notwithstanding the above however, the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.

b. In determining any planning application affecting Sites of Biodiversity or Geological Importance the Council will ensure that the intrinsic natural features of particular interest are safeguarded or enhanced having regard to;

i. The European, National or Local status and designation of the site;

ii. The nature and quality of the site's features, including its rarity value;

iii. The extent of any adverse impacts on the notified features of interest;

iv. The need for compensatory measures in order to re-create remaining features of habitats on or off the site.

c. Where appropriate the Council will ensure the effective management of designated sites through the imposition of planning conditions or Section 106 agreements as appropriate.

ARUN DISTRICT COUNCIL BE/137/19/RES

Policy ENV DM2 Pagham Harbour

a. Within Zone A (0-400m from the boundary) as identified on the Policies Maps, development will only be permitted in exceptional circumstances where the developer is able to demonstrate there will be no detrimental effects on Pagham Harbour, including non-native species and the water environment. Regard shall also be had to tests 1-4 as set out in Policy DM1 (Designated Sites of Biodiversity or Geological Importance).

b. Within Zone B (0-5km) for all new residential development and development which is likely to have an impact on Pagham Harbour will be required to:
i. Make developer contributions towards the agreed strategic approach to access management at Pagham Harbour.
ii. create easily accessible new green spaces for recreation within or adjacent to the development site. These shall be capable of accommodating the predicted increases in demand for local walking, including dog walking. Good pedestrian links shall be provided between housing areas and new and existing green space in order to discourage car use.

c. Major developments (as defined in the GDPO 1995 as amended) taking place outside Zone B and close to its boundary will be considered on a case by case basis to determine any potential effects on Pagham Harbour, and the need for any avoidance or mitigation measures.

Policy ENV DM3 Biodiversity Opportunity Areas

Development shall:

a. Retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones

b. Be designed in order to minimise disturbance to habitats

ARUN DISTRICT COUNCIL BE/137/19/RES

Development proposals that do not reasonably address opportunities for enhancing these through their design, layout and landscaping or access/management shall not be permitted. Where a development scheme would result in a habitat loss, mitigation measures will be proposed as part of the proposed scheme and such measures agreed with the Local Planning Authority prior to the determination of any planning application. Within Biodiversity Opportunity Areas (BOAs) identified on the Policies Maps or where likely to have an impact on species or habitats within the BOAs, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and impact(s) that development may have on the BOA.

Policy ENV DM4 Protection of trees

Development will be permitted where it can be demonstrated that trees protected by a Tree Preservation Order(s), (TPO) identified as Ancient Woodland, in a Conservation Area or contributing to local amenity, will not be damaged or destroyed now and as they reach maturity, unless development:

a. Would result in the removal of one or more trees in the interests of good arboricultural practice. This shall be demonstrated by the developer following the advice of a suitably qualified person which shall be guided by BS 5837 (2012). Details of any advice received having regard to BS 5837 (2012) shall be submitted, in writing, as part of a planning application; or

b. Would enhance the survival and growth prospects of other protected trees;

c. The benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland.

Where planning permission is granted in any of the above instances, conditions shall be used to ensure that, for any trees which are removed as part of a development, at least an equivalent number of a similar species and age (where practical) are planted on the proposed development site. Sufficient space for replacement trees to mature without causing future nuisance or damage shall be provided. The planting of new trees shall form an integral part of the design of any development scheme.

ARUN DISTRICT COUNCIL BE/137/19/RES

Proper provision must be made for the protection and management of trees or areas of woodland on-site when undertaking development. A management plan shall be provided as part of a planning application in accordance with BS 5837 (2012) in order to ensure that trees are adequately protected during development and appropriately maintained in the future. Conditions for the continued protection of trees on sites shall be included in any planning permission given.

Where there are existing trees on or adjacent to a development site, developers shall be required to provide:

d. Land and tree surveys

e. A tree constraints plan

f. An arboricultural impact assessment to include a tree protection plan and arboricultural method statement

These will ensure that development is planned to take a comprehensive view of tree issues at an early stage in the design process and that development works do not have a negative impact on existing trees.

Policy ENV DM5 Development and biodiversity

Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.

ARUN DISTRICT COUNCIL BE/137/19/RES

Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species.This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.

All developments shall have regard to Natural England's standing advice for protected species.

1.24 The site was surveyed to assess its ecological value and to ensure compliance with national and local plan policies. The report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM 2017) and in accordance with BS 42020:2013 Biodiversity – Code of Practise for Planning and Development.

ARUN DISTRICT COUNCIL BE/137/19/RES

2.0 Methodology

Desktop Study

2.1 A desktop study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and internet-based aerial mapping services (maps.google.co.uk) were used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands etc.) within the wider landscape.

Preliminary Ecological Appraisal

2.2 An extended preliminary ecological appraisal was undertaken on 3rd September 2018 by ecologist Chris Jennings BSc (Hons) MSc MCIEEM. The surveyors identified the habitats present, following the standard 'Phase 1 habitat survey' auditing method developed by the Joint Nature Conservancy Council (JNCC). The site was surveyed on foot and the existing habitats and land uses were recorded on an appropriately scaled map (JNCC 2010). In addition, the dominant plant species in each habitat were recorded. The potential for the site to support protected species was also assessed.

Internal and External Bat Surveys

2.3 An internal and external assessment of the buildings was undertaken. Buildings that are considered to have a high potential to support roosting bats would include the following:

- Agricultural buildings (e.g. farmhouses, barns and out buildings) of traditional brick or stone construction and/or with exposed beams;
- Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre 1960s detached buildings and structures within 200m of woodland and/or water;
- Pre 1914 buildings within 400m of woodland and/or water;
- Pre 1914 buildings with gable ends or slate roofs regardless of location;

ARUN DISTRICT COUNCIL BE/137/19/RES

- Buildings which are located within or immediately adjacent to woodland and/or immediately adjacent to water;
- Dutch barns or livestock buildings with a single skin roof and board and gap or Yorkshire boarding if, following a preliminary roost assessment the site, appear to be particularly suited to bats.

2.4 The surveyors assessed the buildings visually and searched for evidence such as:

- Staining beneath or around a hole caused by natural oils in bat fur.
- Bat droppings beneath a hole, roost or resting area.
- Audible squeaking from within a hole.
- Insects (especially flies) around a hole.
- Dead bats.

2.5 The buildings were assessed during the day. An external investigation assessed the tiles, any weatherboarding and structural timber joints of the building. This was undertaken in order to see if there were access points readily available for bats to utilise or crevices that bats could be roosting in.

ARUN DISTRICT COUNCIL BE/137/19/RES

Tree Assessment for Bats

2.6 Roosts of bats in trees may be identified from the following field signs:

- Black stains beneath cracks, splits and other features where bat dropping have fallen;
- Dark marks at entrance points where bats have rubbed against the wood and left natural body oils;
- Feeding remains beneath roosts, such as insect wings;
- Chattering of bats;
- Bat droppings under access points;
- Scratch marks around a feature (cavity or split) caused by bat claws;
- Urine stains below the entrance or end of split;
- Large roosts or regularly used sites may produce an odour;
- Flies around the entrance, attracted by the smell of guano.

2.7 The trees on site were assessed for their potential to support roosting bats. The trees were assessed visually for evidence of bats as well as for features that increase the likelihood such as the following:

- Woodpecker holes, natural cracks and rot holes in trunks and branches;
- Frost cracks;
- Trunk and branch splits;
- Hollow sections of trunk and branches;
- Loose bark;
- Cavities beneath old root buttresses and coppice stools;
- Dense epicormic growth;
- Dense ivy cover.

2.8 Trees scheduled for arboricultural work should also be assessed, and may be categorised (Table 1) to relate the value of their features to recommended actions. This approach allows trees to be graded according to their potential to support bat roosts. Trees may be assessed as having the potential to support bats (from an individual to a larger roost) even if no bats have been found.

ARUN DISTRICT COUNCIL BE/137/19/RES

Table 1: Protocol for visual inspection of trees due to assess their value to bats (Bat Conservation Trust 2016)

Suitability	Roosting habitat description
Negligible	Negligible habitat features on-site likely to be used by roosting bats.
Low	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
High	A tree 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 and surrounding habitat.

Badger Survey

2.9 A badger survey was undertaken at the site to assess if badgers were using the area and if any setts were located on the site and 30m away from the site that might constrain development. The evaluation of badger activity was based on methodology developed for the National Survey of Badgers (Creswell *et al.* 1990) and includes searching for badger field signs such as setts, badger pathways, tracks (pawprints), dung piles with latrines, badger hairs and feeding signs such as snuffle holes.

2.10 During the survey, all habitats potentially suitable for badgers were systematically examined for evidence of badger activity including:

- Setts: several sett types may be present within a social group territory, ranging from a single hole to numerous interconnecting tunnels. Setts can be categorised into main, annexe, subsidiary and outlier (Wilson *et al.* 1997).
- Latrine sites: badgers characteristically deposit dung in pits, which may be located along the boundaries and within the social group territory. These sites serve as means of inter- and intra-group communication.
- Paths and runs: well used routes between setts and/or foraging areas. Often used by generations of badgers.

ARUN DISTRICT COUNCIL BE/137/19/RES

- Snuffle holes: areas of disturbed vegetation often formed by badgers foraging for ground dwelling invertebrates such as earthworms and larvae and the underground storage organs of plants.
- Hair: often found among spoil and bedding outside entrances to setts or snagged on fences (such as barbwire) along well-used runs.
- Footprints: easily distinguishable from other large mammal species. Often found along paths and runs or in spoil outside sett entrances.

Habitat Suitability for Reptiles

2.11 Habitat surveys were carried out to assess the potential of the site to hold populations of reptile species. This involved looking for the presence of factors that would increase the suitability of the site for reptiles such as:

- Scrub and grassland (long sward) mosaic across the site;
- Features that can be potential hibernation sites for common reptiles such as log piles;
- Grass tussocks within the grassland that can act as shelter and burrowing sites;
- Water bodies or damp places on site (grass snakes);
- Compost heaps or decaying vegetation (slow worms);
- Features that can act as refugia on the ground such as disused roofing felt.

Other Protected Species

2.12 The site was also inspected for indications of the presence of other protected species, as follows:

- Relevant habitat for dormice such as dense deciduous woodland, coppice and thick shrubbery
- Ponds and associated habitat suitable to support great crested newts
- The presence of ditches for water voles
- The presence of fresh water stream/rivers for otters
- Suitable nesting places for birds
- Other potential protected species

ARUN DISTRICT COUNCIL BE/137/19/RES

Limitations

2.13 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. . The site was visited over the period of one site visit, as such seasonal variations cannot be observed and potentially only a selection of all species that potentially occur within the site have been recorded. Therefore, the survey provides a general assessment of potential nature conservation value of the site and does not include a definitive plant species list.

2.14 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on-site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment it is considered reasonably likely that protected species may be present.

ARUN DISTRICT COUNCIL BE/137/19/RES

3.0 Results

Desktop Study

3.1 The site does not fall within or adjacent to any statutory designated areas. The only statutory designation within 2km is the Brooks Local Nature Reserve (LNR)

3.2 The following statutory sites are present within the local area:

- The Brooks LNR – approximately 0.7km south west of site;
- Felpham SSSI – approximately 3.2km south of site; and
- Bognor Reed SSSI – approximately 3.5km south of site

3.3 It is noted that Pagham Harbour SSSI, LNR, Ramsar and SPA is located approximately 6.4km south west. There are no Local Wildlife Sites (LWS) within 2km of the site.

3.4 There are 10 units of priority deciduous woodland within 2km of the site (Figure 2). The closest of these is an unnamed patch of woodland approximately 250m south on the opposite side of Shripney Road. There are no areas of ancient woodland within 2km of the site. There are several areas of coastal & floodplain grazing marsh within the local area although no such areas are present on site or adjacent to site.

3.5 Satellite imagery revealed no ponds on site or within a 250m radius of the red line boundary.

ARUN DISTRICT COUNCIL BE/137/19/RES

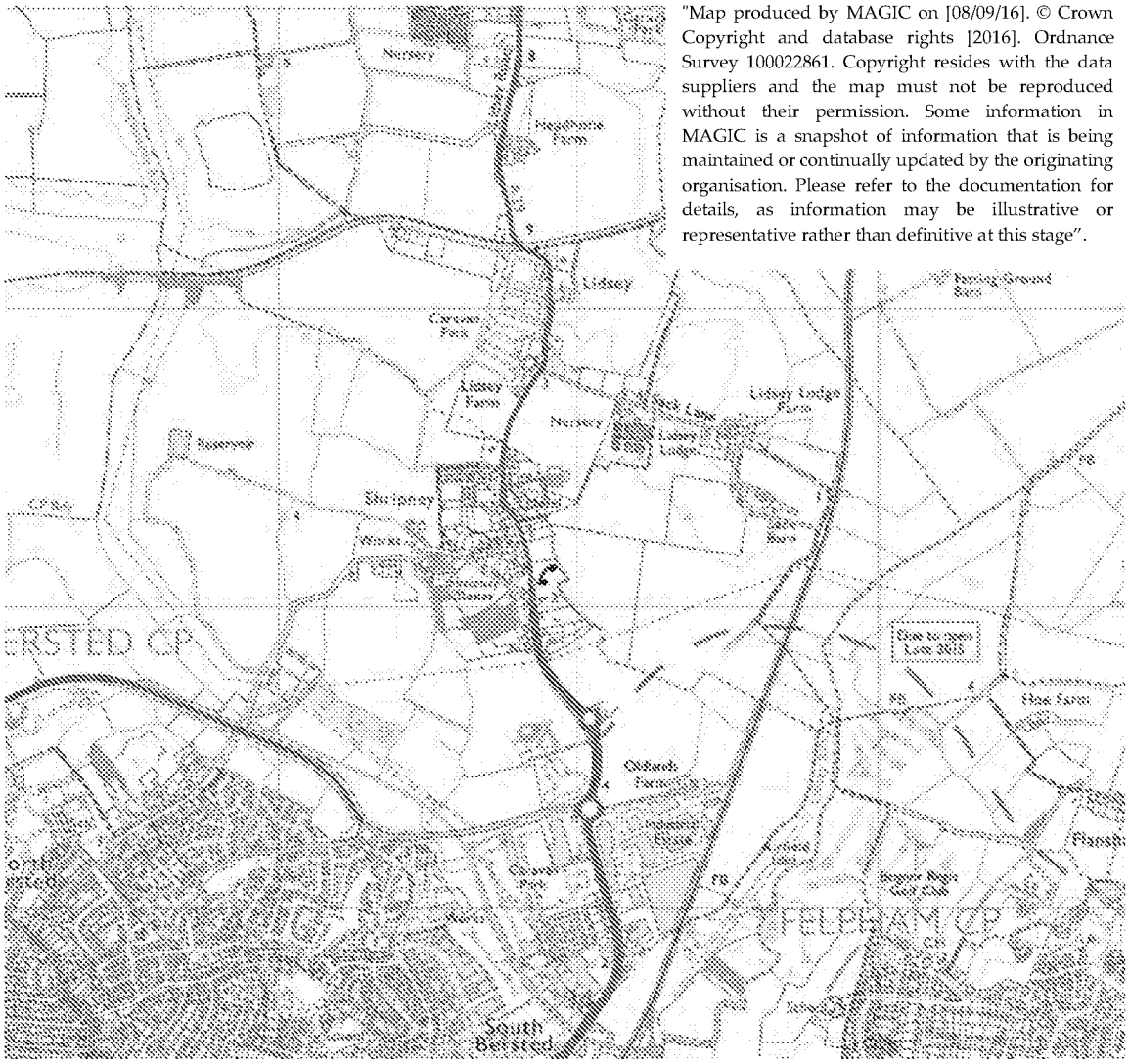


Figure 2: Woodland habitat within 2km of the red line boundary

3.6 A 2km data search was requested from the Sussex Biodiversity Record Centre. The records closest to site and recorded within the last 10 years have been included (Table 3). Further information from the data request is included in the appendix.

ARUN DISTRICT COUNCIL BE/137/19/RES

Table 3: Notable species records within 2km of the site in the last 10 years (Requested 2016)

Species	Status	Record distance	Record year
Great Crested Newt *Triturus cristatus*	Bern Convention Appendix 2; European Protected Species; Habitats Directive Annex 2 & 4; NERC Act (2006); Wildlife and Countryside Act (1981 as amended) Schedule 5	2km to the north within Westergate	2013
Slow Worm *Anguis fragilis*	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan; Sussex Protected Species Register; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5	Approximately 0.85km South	2014
European Water Vole *Arvicola amphibius*	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan; Sussex Protected Species Register; Sussex Rare Species Inventory; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5	Approximately 0.95km north west	2012 (Closest record)
Western Barbastelle *Barbastella barbastellus*	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Several grid squares within 2km	2015
Serotine *Eptesicus serotinus*	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Approximately 0.9km south	2014
Noctule Nyctalus noctula	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Approximately 0.9km south	2014
Common Pipistrelle *Pipistrellus pipistrellus*	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Confirmed roost approximately 0.2km south west	2012

ARUN DISTRICT COUNCIL BE/137/19/RES

Soprano Pipistrelle *Pipistrellus pygmaeus*	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Approximately 1.0km south	2014
Long-eared sp. *Plecotus* sp.	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Confirmed roost approximately 0.25km south west	2009
Brow long-eared *Plecotus auritus*	Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	Confirmed roost approximately 0.1km south west	2009
Red Kite *Milvus milvus*	Bird Population Status - amber; Birds Directive Annex 1; Convention on Migratory Species; Appendix 2; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Hobby *Falco subbuteo*	Bern Convention Appendix 2; Convention on Migratory Species; Appendix 2; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Peregrine *Falco peregrinus*	Bern Convention Appendix 2; Birds Directive Annex 1; Convention on Migratory Species; Appendix 2; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Little Ringed Plover *Charadrius dubius*	Bern Convention Appendix 2; Convention on Migratory Species; Appendix 2; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Black-tailed Godwit *Limosa limosa*	Bird Population Status - red; Birds Directive Annex 2.2; Convention on Migratory Species; Appendix 2; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Mediterranean Gull *Larus melanocephalus*	Bern Convention Appendix 2; Bird Population Status - amber; Birds Directive Annex 1; Convention on Migratory Species; Appendix 2;		

ARUN DISTRICT COUNCIL BE/137/19/RES

	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)		
Cetti's Warbler	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Swallow Hirundo rustica	Bern Convention Appendix 2; Bird Population Status - amber	Within 2km	2014
Firecrest Regulus ignicapilla	Bern Convention Appendix 2; Bird Population Status - amber; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2011
Kingfisher Alcedo athhis	Bern Convention Appendix 2; Bird Population Status - amber; Birds Directive Annex 1; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Barn Owl *Tyto alba*	Bern Convention Appendix 2; Bird Population Status - amber; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014
Kingfisher *Alcedo atthis*	Bern Convention Appendix 2; Bird Population Status - amber; Birds Directive Annex 1; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Within 2km	2014

Phase 1 Habitat Survey

3.7 The site was comprised of a residential dwelling comprising a house, several outbuildings including greenhouses, sheds and a garage. The large gardens were well maintained. The site was split into two sections with the larger northern section divided from the southern section by a public footpath.

Amenity Grassland

3.8 A large proportion of the site is comprised of amenity grassland. This habitat was species poor and appears to be subject to regular maintenance as the grassland was at a very short sward at the time of the survey. A small number of sheep were also present at the time of the survey, who were grazing the northern section of the site. Species present include perennial rye-grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca*

ARUN DISTRICT COUNCIL BE/137/19/RES

rubra agg) yarrow (*Achillea millefolium*), daisy (*Bellis perennis*) and white clover (*Trifolium repens*) dandelion (Taraxacum agg.) and greater plantain (*Plantago major*). Several additional species were present within the southern section of lawn including ground ivy (*Glechoma hederacea*), ribwort plantain (*Plantago lanceolata*), and creeping buttercup (*Ranunculus repens*).

Scattered Trees and Tree Lines

3.9 The site contained scattered trees throughout the residential garden, these were largely confined to the site boundaries and formed tree lines along the edges of the site. Species present included sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), copper beech (*Fagus sylvatica 'purpurea'*), apple (*Malus* sp.), hazel (*Corylus avellana*), holly (*Ilex aquifolium*), *Eucalyptus* sp., willow (*Salix* sp.), cherry (*Prunus* sp.), silver birch (*Betula pendula*), hawthorn (*Crataegus monogyna*) and Monterey cypress (*Cupressus macrocarpa*).

Hedgerows

3.10 Sections of hedgerow were present largely to the south of site. The southern boundary of the southern section of the site contained sycamore and forsythia, with sections of sycamore and hazel on the western and northern boundaries. The remainder of the northern boundary of the southern section contained fence. The western half of the southern boundary of the northern section, bounding the public footpath contained a section of privet (*Ligustrum ovalifolium*) hedge. Several sections of isolated ornamental hedges were present within the northern section of the site, with hawthorn, cherry laurel (*Prunus laurocerasus)* and shrubby honeysuckle (*Lonicera* sp.) present.

Buildings

3.11 There were several buildings on site, including a residential house, a garage, several outbuildings and green house structures.

ARUN DISTRICT COUNCIL BE/137/19/RES

Hardstanding

3.12 A driveway was present that led up to the residential house from the A29. A small patio area was also present.

Ponds and wet ditch

3.13 An ornamental pond was present on site. This pond was dry at the time of survey containing no water. The pond was built by the current owner of the house and is not historic. The pond was also dry during the previous 2016 inspection.

Off-site habitats

3.14 A large pub and hotel is present to the north of the site, with agricultural land mostly arable to the east, the A29 bounds the site to the west and residential properties are present to the south.

Protected Species

Bats

3.15 The buildings on site were inspected for the presence of bats, evidence of roosting bats and potential roosting features which roosting bats could exploit. The buildings were inspected both internally and externally.

ARUN DISTRICT COUNCIL BE/137/19/RES

Figure 3: Location of buildings on site, numbered for ease of reference

Building 1

3.16 Building 1 was the main residential house on the site. This detached dwelling contained a pitched tiled roof. Internally the house contained two roof voids. Void one was accessed at the top of the stairs and was very small in size, containing pipes and a water tank. The roof structure was open to the internal environment with tiles visible, with no boarding or felt lining, although the tiles appeared to be cemented on to the roof. The void was thick with cobwebs and no evidence of roosting bats was recorded within the void.

3.17 The second void was a lot larger in size. This void ran the length of the house from east to west. The base of the void was covered with insulation, with the tiles covered with wooden sarking on the eastern half of the roof, with tiles exposed internally on the western half. This could potentially allow access for roosting bats into the void and daylight could be seen through several gaps within the roof structure. A large inactive wasp nest was

ARUN DISTRICT COUNCIL BE/137/19/RES

present on the eastern gable end, this was also present when previously inspected in 2016. No evidence of bats were present within the void, although a large number of mouse droppings were present. The void has seemingly had a lack of activity for a period of time with a thick level of dust present and thick cobwebs throughout the void. The void is also free from domestic belongings and is not used as a storage area. No evidence of roosting bats was present. No droppings were present and there were no other signs of activity such as potential feeding remains.

3.18 Externally the building had a large pitched roof, which covered much of the first floor. The roof had numerous broken, missing, slipped and lifted clay tiles, presenting potential opportunities for crevice dwelling bats such as common pipistrelle.

Building 2

3.19 Building 2 was a detached garage. The garage was largely flat roofed although it had a slight pitch to the front section of the roof above the garage door. The building had no enclosed void and the internal environment was regularly used by the occupants of the site and was flooded with daylight through windows. Externally the building did not display suitable features for roosting bats. Some tiles were broken but did not leave potential entrance points into the roof structure.

Building 3

3.20 Building 3 was a small outbuilding to the north of the main house. The building had a pitched clay tiled roof. Again much like building 1, the building had several gaps within the roof where tiles have slipped or have been lifted, presenting opportunities for crevice dwelling bats.

3.21 Internally the building was used for storage. The tiles had been covered with chipboard. The internal environment was light, due to the presence of windows. Several mouse droppings were present although, no evidence of bats was recorded within the internal environment of the building.

ARUN DISTRICT COUNCIL BE/137/19/RES

Buildings 4 & 5

3.22 These buildings were adjacent to each other on the northern boundary of the site to the east of building 3. Building 4 was a wooden built garden shed and open sided log store. Building 5 was a open sided structure with a thin metal frame and a flat wooden roof. Both buildings were small in size and did not possess and suitable features for roosting bats.

Building 6

3.23 Was a medium sized green house. The building was considered unsuitable for roosting bats due to the construction materials and a lack of suitable roosting features.

Buildings 7 & 8

3.24 Buildings 7 was a frame for a poly tunnel, with no covering. The frame for building 8 had been removed since the 2016 survey and now was comprised of a concrete floor and ground level brick walls. Both buildings were unsuitable for roosting bats.

Building 9

3.25 Building 9 was a two-storey storage hut. The building was constructed of breeze blocks, with a pitched chipboard roof. The roof had large sections missing and the building was in a dilapidated state, with open sides and windows. It is considered possible that the construction of the building was never completed. It was not considered that the building was suitable for roosting bats and no evidence of roosting bats was recorded.

Building 10

3.26 Building 10 was a small workshop/shed. The building contained a flat roof structure covered with felt. The roof had collapsed to the rear of the building leaving a large hole in the roof. The elevations were constructed of breezeblocks with wooden frame windows. The building was considered to be unsuitable for roosting bats, due to a lack of features

ARUN DISTRICT COUNCIL BE/137/19/RES

and due to the open dilapidated nature of the building. It must be noted that old swallow/house martin nests were present within the structure, these were noted as "old" in the 2016 inspection and are considered to not have been used since.

Building 11

3.27 Building 11 was another greenhouse, the biggest on site. The building had a wooden structure on the western end. This appeared to be well sealed and did not possess any potential roosting features. The building was considered unsuitable for roosting bats.

Building 12

3.28 This building was previously not recorded and was a small garden shed situated in the north eastern corner of the site. The building was well sealed with a felt roof and did not possess any potential roosting features for roosting bats.

Tree Assessment for Roosting Bats

3.29 The trees on site were reassessed during the 2018 walkover. The following trees below were considered to have some roosting bat potential.

ARUN DISTRICT COUNCIL BE/137/19/RES

Figure 4: Trees considered to have roosting potential for bats

3.30 Several trees on site supported potential features for roosting bats. These were present within the mature coniferous specimens on site.

Tree Number / Species	Features	Potential
1 – Monterey Cypress	Lifted Bark	Medium / Low
2 – Cypress sp. (Dead)	Cracks in Stem	Medium
3 – Pinus. sp	Woodpecker hole in stem	Medium
4 – Monterey Cypress	Cracked limb, largely open to elements	Low
5 - Monterey Cypress	Some indentations within stem high up	Low

ARUN DISTRICT COUNCIL BE/137/19/RES

6 - Cypress sp. (Dead)	Dead stump, with some small sections of lifted bark	Low

3.31 All of these trees apart from tree 6, were subject to two activity surveys in September 2016 and May 2017, although tree 6 was considered to be "low potential".

Activity surveys

3.32 The original PEA identified five trees that were considered suitable for roosting bats. Two of these trees were considered to be negligible after further bat surveys (please see The Ecology Partnership Bat Activity Surveys report June 2017 reissued Sept 2018). It is understood that these trees had had some emergency work undertaken after storm damage, as they were situated next to the road and after emergence survey work and were not considered suitable for roosting bats any longer.

3.33 Four bat activity surveys were undertaken on buildings 1 and 3, with one common pipistrelle seen to emerge from building 1 on the dusk survey in September 2016. It was concluded that bats are only using external features. An extensive period of static recording within the main loft void of building 1 during May 2017, confirmed that bats are not using the internal features.

3.34 No evidence of bats were recorded within building 3 during the activity surveys or internal and external inspection.

3.35 Five potential bat trees (Trees 1 – 5 as listed within this report)were also subject to an activity survey. None of these trees were in use by roosting bats at the time of surveys.

Badgers

3.36 No badger setts were located on or within 30m of site where access was possible. No evidence such as latrines or snuffle holes, was identified anywhere on or around site. It

ARUN DISTRICT COUNCIL BE/137/19/RES

should be noted that not all areas of the site could be accessed on the day of the survey as much of the neighbouring land was private property

Dormice

3.37 The habitat on site was not considered to be optimal for dormice. Although there were several trees on site including fruit trees that may offer some food sources for the species, the gardens were well maintained, the site largely lacked dense vegetation to provide nesting habitat, cover from predators and habitat connectivity for the species. In addition, the local landscape lacks areas of woodland, which could support a population of the species in any number. There are no records of the species within 2km of the site.

Great Crested Newts

3.38 One ornamental garden pond was present on site at the time of the survey. The pond was dry and contained no water. The pond was partially shaded by sizeable adjacent trees. The pond is not historic or natural and was constructed by the current owner of the house, containing a pond liner. The pond was dry on previous inspection in 2016 and was noted as such during subsequent bat surveys. The site is well maintained with very short grassland and a lack of thick vegetation to provide cover for amphibians from predators, whilst in their terrestrial phase.

Reptiles

3.39 The site is considered to offer very limited opportunities for this species group. The grassland habitat on site was very short at the time of the survey, with the lawn areas mown to a short sward. In addition the northern section of the site contained sheep that were grazing on site, which has been grazed for a number of years. The site lacked thick vegetation to provide suitable cover for the species, and lacked a mosaic of tussocky grassland and scrub mosaic, which is considered optimal to support reptiles.

ARUN DISTRICT COUNCIL BE/137/19/RES

Water Voles

3.40 There are a large number of records for water voles within the local area. However the nearest record is approximately 0.95km to the north west of the site. There is no suitable habitat present for water voles on site, with a dry man made pond and well maintained gardens. It is considered highly unlikely that the species are present on site.

Other Species

3.41 The trees, hedgerows and buildings on site have the potential to support nesting birds. An old swallow / house martin nest was present within building 10, although recorded as disused in 2016 and seemingly inactive since then. It is considered that although the green houses are unsuitable for nesting birds the remaining buildings do have potential for nesting birds.

ARUN DISTRICT COUNCIL BE/137/19/RES

4.0 Discussion

Site

4.1 The site contains a single residential dwelling with the grounds currently managed as residential garden and includes former nursery buildings. The site does not lie within or adjacent to any statutory or non-statutory sites. The site is considered to have ecological value at site level only as the habitats present are common and widespread throughout the UK and local area.

4.2 With regards to planning policies, firstly policies ENV SP1 and ENV DM1, recommendations for enhancement of biodiversity and the natural environment have been made within this report. With regards to designated sites, the site is not situated within or adjacent to any designated sites, it is not considered that the development would have any significant direct or indirect impact on protected sites.

4.3 With regards to ENV DM2 the site is outside the 5km zone B with regards to Pagham Harbour SSSI, LNR, Ramsar and SPA, with the development site situated approximately 6.4km away. It is not considered that the development would have negative affect on this designation, however it up to the local planning authority to establish whether an appropriate assessment would be required.

4.4 With regards to Policy ENV DM3, the site is not considered to support locally valued and important habitats with the habitats present considered to have site value only. Recommendations have been made to minimise disturbance to habitats with recommendations for removal outside nest bird season and with regards to roosting bats.

4.5 The site does not contain ancient woodland or areas of significant woodland with regards to Policy ENV DM4. Replacement trees will need to be planted for the trees to be removed on site. Arboricultural consultants recommendations should be followed.

4.6 The site will achieve a net gain in biodiversity, with the creation of wildflower areas, new native hedging and provision of bat and bird boxes. A 3 metre wide planted buffer will be incorporated along the eastern boundary to promote the wildlife corridor between the site

ARUN DISTRICT COUNCIL BE/137/19/RES

and the adjacent agricultural field. Impacts towards protected species have been assessed and mitigation put in place. The separate bat report gives information on survey results, mitigation and licencing. This complies with Policy ENV DM5.

Protected Species

Bats

4.7 Buildings 1 and 3 were again considered to support potential for roosting bats. The buildings on site have not significantly changed since the previous inspection in 2016. The remaining buildings on site were not considered to offer potential for roosting bats. No additional evidence of roosting bats have been identified within any of the buildings on site. Buildings 1 and 3 have been subject to further survey work, with a single common pipistrelle recorded roosting within building 1. The recommendations from the species specific bat report should be followed, with the application for a Natural England low impact licence once full planning permission has been granted.

4.8 With regards to potential bat roost trees on site, the recommendations within the species specific bat report are considered still valid. Trees 1 – 5 have been subject to two bat emergence surveys, with no roosting bats recorded. Tree 6, was classed as low potential and following guidance does not require further survey, however should be subject to soft felling. If a roosting bat is found during this process, works should stop immediately and a suitably qualified ecologist contacted for further advice.

Badgers

4.9 No evidence of badgers, such as setts, latrines or snuffle holes, was identified on or around site at the time of the survey. If a mammal hole is found on site at any stage of the works, this should be inspected by a suitably qualified surveyor.

4.10 Whilst no evidence of badgers actively using the site was found on the day of the survey, they may reside in the surrounding habitats and may visit the development site to forage.

ARUN DISTRICT COUNCIL BE/137/19/RES

Foraging and commuting habitat is not legally protected, however safety measures can be taken to ensure no badgers are harmed during the development process.

4.11 It is recommended that any excavations and trenches associated with construction are either covered at night or supplemented with a means of escape for any badgers that may fall into the excavation whilst foraging. Any open pipes or conduits laid should be blocked off each night to prevent badgers from entering them. If possible, construction work should only take place between dawn and dusk with no late evening work to reduce possible disturbance.

Dormice

4.12 The site does not contain good quality habitat for dormice as the majority of the site is well maintained residential garden. There are not significant parcels of woodland or areas of extensive suitable habitat which may support a population of dormice within the local area. There are no records of the species within 2km of the site, therefore it is considered highly unlikely that the species are present on site. No further surveys for dormice are considered necessary.

Great Crested Newts

4.13 One pond was present on site, however this was completely dry at the time of survey. It is understood that the pond was constructed by the current owner of the site and was is not a historic or naturally occurring waterbody. It was noted as dry during the previous survey in 2016 and is not considered to be a functioning waterbody that could sustain great crested newts. The waterbody would not support great crested newt eggs and efts which require an aquatic environment to sustain and develop. After studying mapping and aerial photography there are no other potential great crested newt breeding ponds within the local area and it is considered highly unlikely that a great crested newt population would sustain itself within the local area. The site offers very poor terrestrial habitat with limited amounts of dense vegetation the provide cover for the species, with the well maintained garden offering sub-optimal habitat. The nearest record of great crested newts is approximately 2km to the north of site. It is considered unlikely that great crested newts are present onsite, no further surveys are recommended.

ARUN DISTRICT COUNCIL BE/137/19/RES

Reptiles

4.14 The site is comprised of well-maintained gardens, including regularly mown and sheep grazed lawn. It is considered that at the time of the survey the site did not support suitable reptile habitat. It is considered that the site is not constrained by the species as long as maintenance of the site is kept up. If there is a delay to the project where the grassland is not maintained to a short sward on site and scrub and dense vegetation is allowed to grow, the site maybe colonised by any reptile population on adjacent land particularly the agricultural field margins to the east, if this occurs further reptile work maybe necessary. It is therefore recommended that site maintenance is continued right up to any clearance works.

Water Voles

4.15 It is considered that the habitat on site provides very limited opportunities for water voles. The gardens are well maintained and although there is a water body present onsite, this was dry at the time of survey and was a small manmade feature, certainly unlikely to sustain the species. Several records of water vole have been recorded within the local area, with the nearest record recorded 0.95km away from site to the north east. Its is not considered that water voles would be impacted by proposals.

Other species

4.16 Birds are likely to use the trees and hedgerows on site and along the boundaries for foraging and breeding. An old swallow / house martin nest was present within building 10. It is considered that although the green houses are unsuitable for nesting birds the remaining buildings do have potential for nesting birds. It is recommended that trees and hedgerows be retained where possible or replaced. Any scrub or tree removal or building demolition should be implemented outside the breeding bird season (March-September) or immediately after a nesting bird check by a suitably qualified ecologist. If active nests are identified, works in the vicinity of the nest must cease until the birds have fledged the nest.

ARUN DISTRICT COUNCIL BE/137/19/RES

General Site Enhancements

4.17 A number of enhancements can be made to the final development to help reduce potential ecological impacts. It is important to utilise native species of local provenance in landscaping schemes to enhance the ecological value of a development.

4.18 Any trees removed on site need to be replaced elsewhere on site to ensure a 'no net loss' in biodiversity. These should be replaced with native species of value to wildlife and can include oak, ash (*Fraxinus excelsior*), hazel (*Corylus avellana*), beech (*Fagus sylvatica*), cherry (*Prunus sp.*), hornbeam (*Carpinus betulus*) and rowan (*Sorbus aucuparia*). It is understood that replacement trees will be included within the site layout.

4.19 The hedgerows and site boundaries should be enhanced or replaced if they are to be removed. Hedgerows help to provide a layering of different habitats that can be utilised by a wide variety of species. Species that can be planted include blackthorn (*Prunus spinosa*), hawthorn, hazel, holly (*Ilex aquifolium*), elder, alder buckthorn (*Frangula alnus*), guelder rose (*Virburnum opulus*), dog rose (*Rosa canina*) and dogwood (*Cornus sanuinea*). It is understood that boundary features are to be maintained and enhanced, for both ecological and visual impact reasons.

4.20 Newly formed areas of amenity grassland, boundaries and vacant spaces post-development could be supplemented by integrating a variety of native plant species. Patches of bare soil can be sown with wildflower seed mixes to increase the biodiversity of the site and also offer aspects of aesthetic appeal.

4.21 Log and rubble piles can be built to provide hibernacula habitats for potential species such as common amphibians and reptiles.

4.22 Additional habitats may be provided for species including birds and insects in the form of green walls. Green walls can be created by planting climbing plants in the ground and training these either directly onto the external walls of the building or on to trellis. Alternatively, it is possible to create an instant green wall using established climbing plants rooted in containers and grown onto frames. Species could include:

ARUN DISTRICT COUNCIL BE/137/19/RES

- Honeysuckle (*Lonicera japonica, L. fragantissima, L. standishii*)
- Clematis spp. (*Clematis vitalba, C. armandii, C. alpina, C. montana, C. tangutica*)
- Ivy (*Hedera helix*)
- Climbing hydrangea (*Hydrangea petiolaris*)
- Dog rose (*Rosa canina*)

4.23 The creation of swales and/or sustainable urban drainage systems (SUDS) as part of the development can further enhance the site. These waterbodies could be incorporated into the southern part of the site and should be linked to the wider landscape throughout the protection and enhancement of tree lines and associated grassland strips. Ponds, swales and ditches can be planted to enhance invertebrate species on the site and provide breeding opportunities for great crested newts and other amphibian species. These should be planted with species of ecological value, such as:

- Water mint (*Mentha aquatica*)
- Common reed (*Phragmites australis*)
- Soft rush (*Juncus effusus*)
- Water plantain (*Alisma plantago-aquatica*)
- Meadowsweet (*Filipendula ulmaria*)
- Yellow flag iris (*Iris pseudacorus*)
- Purple loosestrife (*Lythrum salicaria*)
- Marsh cinquefoil (*Potentilla palustris*)
- Amphibious bistort (*Polygonum amphibium*)

4.24 Nest boxes should be installed in order to provide new nesting opportunities for birds. These can be hung on the buildings or surrounding mature trees post development. Recommended boxes include:

- Schwegler 1N Deep Nest Box – This gives added nest protection from predators.
- Schwegler 1B Bird Box – A general purpose bird box, suitable for many species.
- Schwegler Bird House – This is suitable for all common garden birds and may be attached to a building or wall so is suitable for siting behind climbing plant.

ARUN DISTRICT COUNCIL BE/137/19/RES

5.0 Impact Assessment

5.1 This section of the report forms an EcIA (Ecological Impact Assessment) and is designed to quantify and evaluate the potential impacts of the development on habitats and species present on site, or within the local area.

Methodology

5.2 The approach to this assessment accords with guidance presented within the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2016). The guidelines recommend the following approach to EcIA:

- Identification of the ecological features on site, both habitats and species, from baseline surveys;
- Identification of the works on site, both during construction and operation that are likely to have impacts on ecological features (habitats and species);
- Identification of the zone of influence;
- Evaluation of the ecological receptors likely to be affected;
- Identification of impacts, for example positive or negative, on receptors and assess their significance;
- Incorporation of mitigation measures to reduce potential impacts;
- Review assessment in light of mitigation of negative impacts;
- Assessment of cumulative impacts;
- Assessment of residual effects and the potential need for compensation for negative effects which remain significant after mitigation.

5.3 Receptors are defined as a feature affected by an impact and may have negligible value for nature conservation or it may have value at site, local, county, national, or international level. Impacts on ecology assessed by (a) determining the level of important/sensitivity of the receptor, for example national, county, or local; (b) determining the type, magnitude and timescale of the impact; and then (c) using this information on the receptor and impact

ARUN DISTRICT COUNCIL BE/137/19/RES

to determine the significance of the impact: descried as major, moderate, or minor significant, or of negligible significance.

5.4 In essence, an EcIA assesses the activities associated with a proposed scheme that are likely to generate changes, within identified zone of influences, on identified ecological features and receptors. The proposals are subsequently reviewed, and iteration undertaken to include enhancements and mitigation to reduce negative impacts.

Assessment

5.5 The habitats on site offer limited opportunities for wildlife due to the previous use as a residential dwelling, and regular management of the grounds of the site, with mowing, strimming, and grazing from sheep. The habitats are widespread and common throughout the local area and the UK as a whole. The redevelopment of the site will not isolate or fragment nearby habitats and will not impact upon landscape connectivity. Therefore, it will have negligible ecological impact and enhancements recommended would increase the ecological value of the site post-development.

5.6 The site is largely unsuitable for European protected species, however bat activity surveys undertaken by the Ecology Partnership in 2016 and 2017 have highlighted a single common pipistrelle roosting within building 1 on site. Mitigation has been recommended and it is recommended that a low impact licence be applied for from Natural England to legalise the destruction of the roost and the demolition of building 1. It is not considered that bats are roosting within the additional buildings on site. It is considered that the roost is of importance at 'site' level and mitigation will ensure roosting features will remain on site post development. It is considered that the site proposals will have negligible impact on roosting bats with appropriate mitigation in place. Further activity surveys have been undertaken on the trees on site. No roosting bats have been found within the trees on site and recommendations have been made with regards to these trees. It is not considered that the site has potential for other protected species such as great crested newts, reptiles, water voles, badgers or dormice. Potential for breeding birds has been identified within trees and shrubs as well as some of the buildings on site. It is considered that breeding

ARUN DISTRICT COUNCIL BE/137/19/RES

birds maybe present on site. Breeding birds are considered to have importance at 'site' level, recommendation have been made to minimise impacts during development, provision of bird boxes and new planting will ensure there will be negligible impact to breeding birds as part of the proposals.

5.7 In terms of designated sites, the only designated site within 2km of the site is The Brooks LNR and is considered to have importance at local level. The designation is managed for recreational use and it is not considered that the development would have a significant negative effect directly or indirectly on this site. With regards to Pagham Harbour SSSI, LNR, Ramsar and SPA, the site is outside the 5km zone of influence approximately 6.4km away, it is not considered that development would have significant direct or indirect negative impacts on this designation, although it is up to the local planning authority to judge whether an appropriate assessment would be required.

ARUN DISTRICT COUNCIL BE/137/19/RES

6.0 Conclusions

6.1 The site does not lie within or adjacent to any statutory designated sites. The only statutory designation within 2km is the Brooks Local Nature Reserve (LNR) is approximately 700m southwest of site. Pagham Harbour SSSI, LNR, Ramsar and SPA, with the development site situated approximately 6.4km away. The development is not considered likely to have a negative affect on statutory or non-statutory designated sites in the local area.

6.2 The habitats on site are common and widespread throughout the local area and the UK as a whole. The site is dominated by buildings, short amenity grassland, ornamental planting and scattered trees. There had been not significant change to the habitats on site since the initial survey work undertaken in September 2016.

6.3 The majority of the buildings onsite were considered unsuitable for roosting bats. However the main house (building 1) and building 3 a small outhouse, were considered to have suitable external roosting features for crevice dwelling bat species. No evidence was found internally within any of the buildings and it is considered that no internal features within the buildings such as loft space are being used by roosting bats. Six trees were identified as having potential to support roosting bats during the site visit. Further survey work was undertaken on these buildings and five of the six trees in 2016 and 2017, please see the bat specific reports for full results and recommendations. The additional tree (tree 6) identified within the 2018 site visit is considered to be "low" potential and therefore does not require further survey. The tree should be sensitively soft felled.

6.4 No evidence of badgers was found on site at the time of the survey, although there were some areas that could not be fully assessed due to dense vegetation cover or lack of access. Badgers may use the site for foraging and so should be considered during construction works.

6.5 One dry ornamental pond was present on site. This waterbody was not considered suitable for supporting great crested newts. The pond was dry when previously inspected during 2016. There are no other potential breeding ponds within 250m of the site. It is

ARUN DISTRICT COUNCIL BE/137/19/RES

considered that the site is unlikely to contain great crested newts therefore no further survey work is recommended.

6.6 The grassland on site was considered to be too short for reptiles, which is subject to regular maintenance and also sheep grazing. It is recommended that all grassland on site is kept at a short sward height so that it remains unsuitable for reptiles.

6.7 The site is not considered to be constrained by other protected species such as dormice, otters or water voles. No further surveys are recommended.

6.8 Nesting birds may use the trees and hedgerows on site. An old swallow / house martin nest was present within building 10 on site and it is considered that the buildings on site have some potential for nesting birds. This was initially recorded in 2016 and is considered to have not been used for a significant period of time, however, it is recommended that clearance work on site be undertaken outside of the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist.

6.9 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site post development.

ARUN DISTRICT COUNCIL BE/137/19/RES

7.0 References

Bat Conservation Trust (2016) *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

Bright, P., Morris, P. & Mitchell-Jones, T. (2006) *The dormouse conservation handbook (Second edition)*. English Nature, Peterborough.

Creswell, P., Harris, S. & Jeffies, D.J. (1990) *The history, distribution status and habitat requirements of the badger in Britain.* Nature Conservancy Council, Peterborough.

Joint Nature Conservation Committee (2010) *Handbook for Phase 1 habitat survey – a techniques for environmental audit.* JNCC, Peterborough.

Langton, T.E.S., Beckett, C.L. & Foster, J.P. (2001) *Great Crested Newt Conservation Handbook.* Froglife, Halesworth.

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

Natural England (2011) *Badgers and Development: A guide to best practice and licensing.* Natural England, Bristol

Neal, E. & Cheeseman, C. (1996) *Badgers*. T & A D Poyser Ltd. London.

Wilson, G.J., Harris, S. & McLaren, G. (1997) *Changes in British badger population, 1988-1997.* People's Trust for Endangered Species, London.

Internet resources:

Google Maps: www.google.co.uk/maps

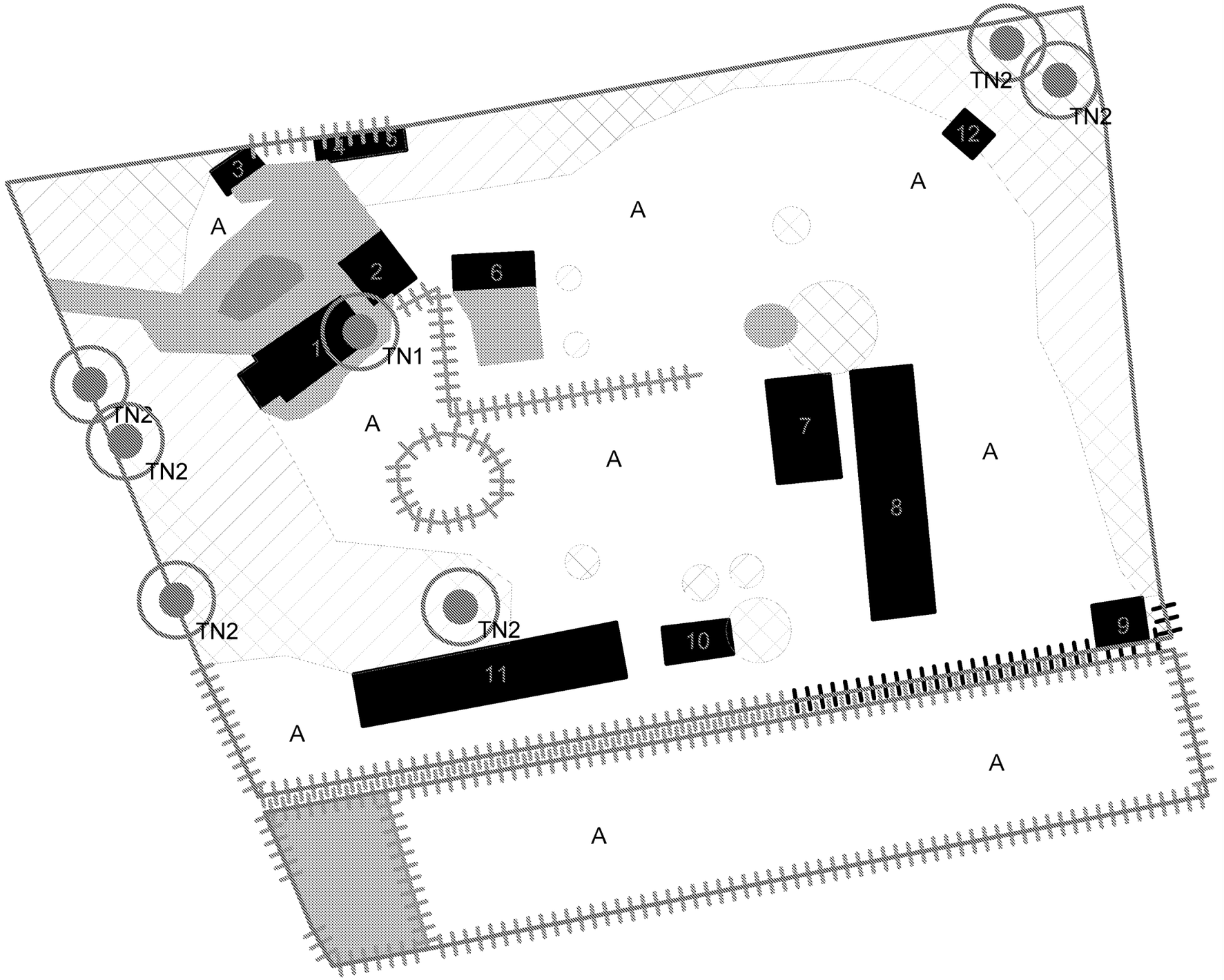
Magic Interactive Map: www.magic.gov.uk

Adur District Council: www.adur-worthing.gov.uk

ARUN DISTRICT COUNCIL BE/137/19/RES

Appendix 1: Phase 1 Habitat Map

ARUN DISTRICT COUNCIL BE/137/19/RES



Key

- A — Amenity grassland
- Hardstanding
- Building
- Scattered Trees
- Bare Earth
- Dry Pond
- Hedge / Tree Line
- Fence
- Bat Emergence
- TN1 Bat Potential Tree
- TN2 Survey boundary

Site: The Cottage, Shripney

Client: Castle Property Developments

Surveyor: C.Jennings

Survey Date: 3rd September 2018

Drawing Title: Habitat Map

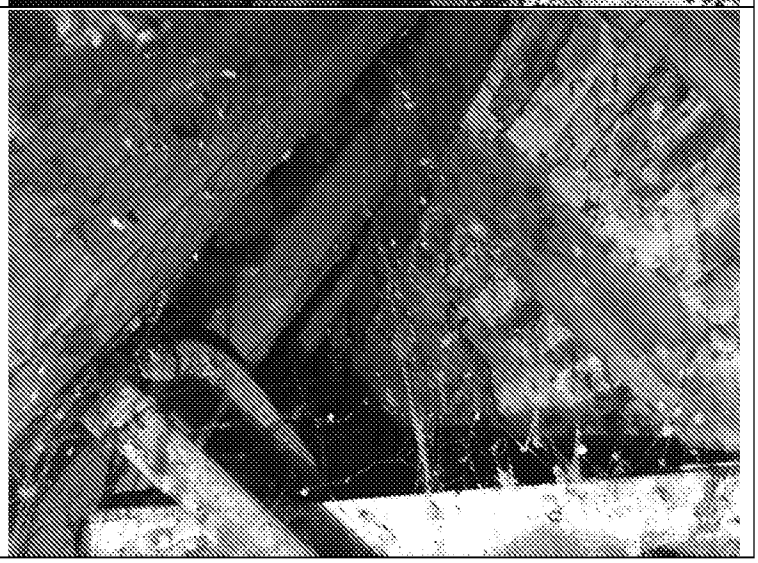
the ecology partnership

The Ecology Partnership Ltd
Thorncroft Manor, Thorncroft Drive, Leatherhead,
Surrey KT22 8JB
01372 364133 www.ecologypartnership.com

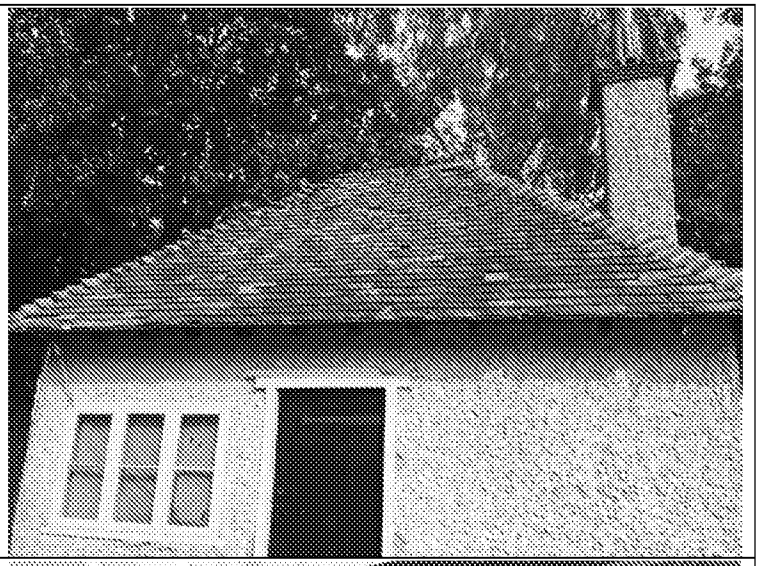
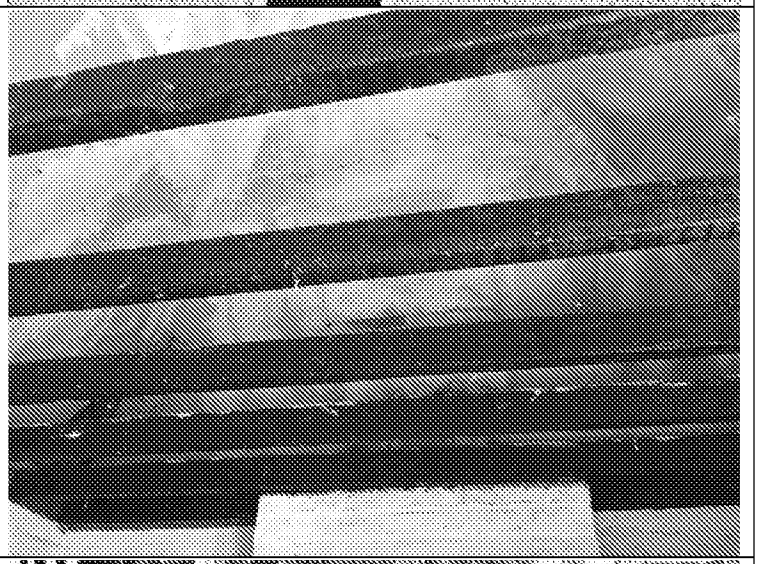
ARUN DISTRICT COUNCIL BE/137/19/RES

Appendix 2: Photos

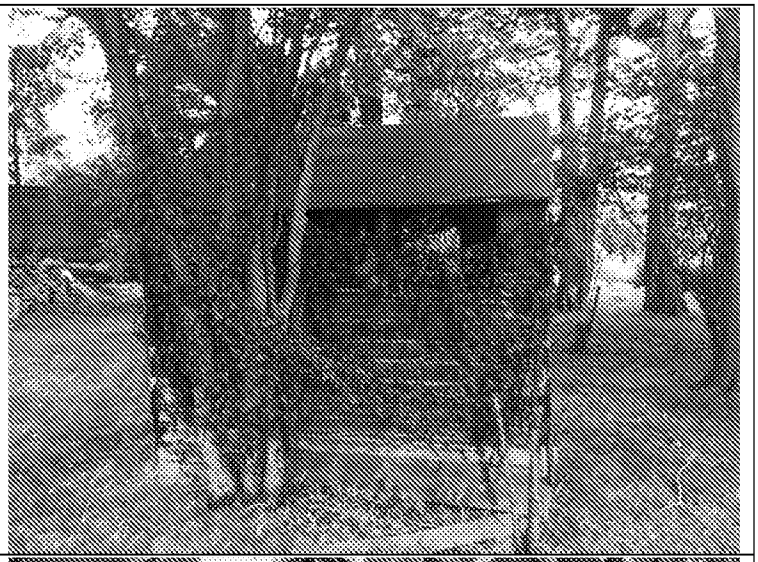
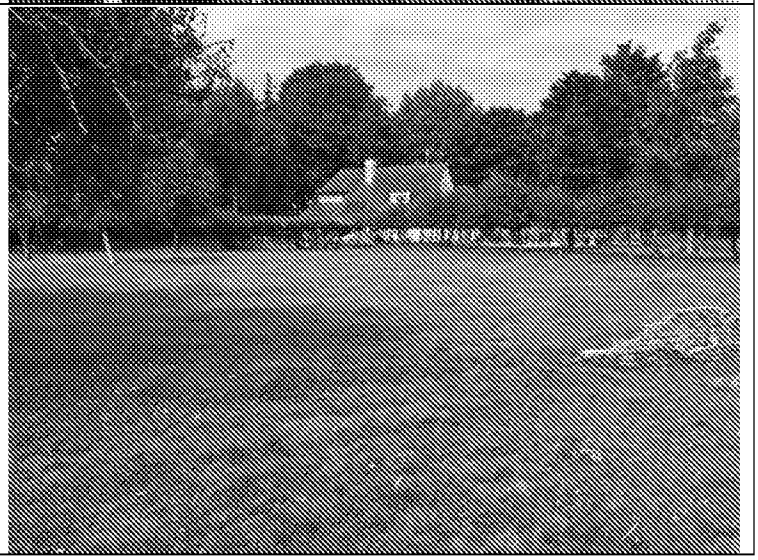
ARUN DISTRICT COUNCIL BE/137/19/RES

Photograph 1: Building 1, residential house	
Photograph 2: Inside void 2 the main void within the house	
Photograph 3: Inside void 1, located above the stairwell.	

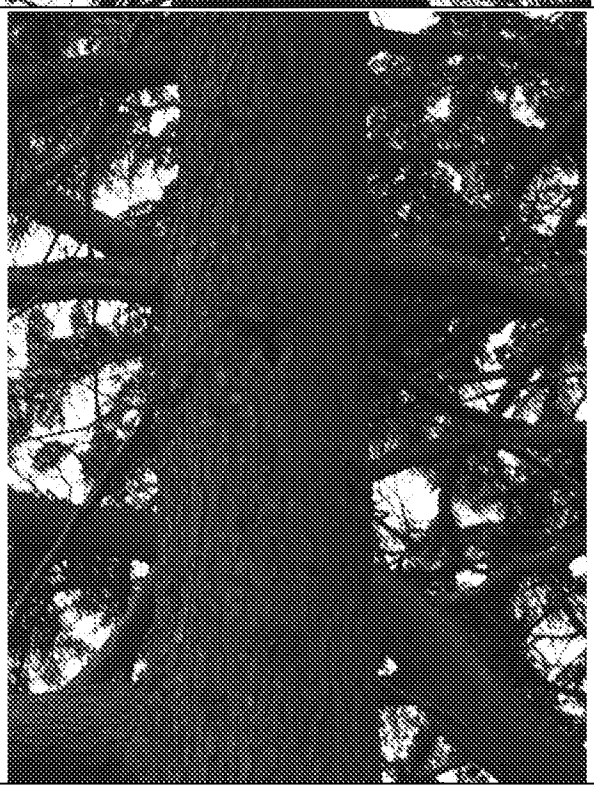
ARUN DISTRICT COUNCIL BE/137/19/RES

Photograph 4: Building 3	
Photograph 5: Inside building 3	
Photograph 6: The dry pond present on site	

ARUN DISTRICT COUNCIL BE/137/19/RES

Photograph 7: Building 12, which was not previously recorded on site	
Photograph 8: Building 11, a sizeable greenhouse	
Photograph 9: Overview of the site	

ARUN DISTRICT COUNCIL BE/137/19/RES

Photograph 10: Tree 2, which contained cracks in the stem	
Photograph 11: Tree 3 which contained woodpecker holes	

ARUN DISTRICT COUNCIL BE/137/19/RES

Photograph 12: Tree 6, which was considered low potential due to a small section of lifted bark	

ARUN DISTRICT COUNCIL BE/137/19/RES

Appendix 3: Biological Records

ARUN DISTRICT COUNCIL BE/137/19/RES

Sussex Biodiversity Record Centre

[redacted]

SUMMARY REPORT

Land at The Cottage, Shripney Road, Bognor Regis + 2km radius

13 September 2016 SxBRC/16/408 Search Area: SU9200 to SU9503; SU9101 to SU9102; SU9204 to SU9404

Chris Jennings (The Ecology Partnership)

Protected Species Register (not including bats, badgers,otters or birds)	
Number of species recorded	5
European Protected Species	
Number of species recorded	10
Bats	
Number of species recorded	9
Birds	
Number of species recorded	169
Number of BoCC Red list species recorded	27
Number of BoCC Amber list species recorded	70
Number of W&CA Schedule 1 species recorded	36
Number of significant breeding bird records	55
BAP species (not including bats or birds)	
Number of species recorded	19
Rare Species (not including bats, birds or otters)	
Number of species recorded	16

Ownership of this data remains with the original recorder whilst copyright of this material remains property of the Sussex Biodiversity Records Centre.

The Ecology Partnership Ltd

Thorncroft Manor

Thorncroft Drive

Leatherhead

Surrey

KT22 8JB

[redacted]

Approved: Alexia Tamblyn MA (Oxon) MSc CEnv MCIEEM FRGS

Date: 07/09/2018

Reissued (2nd): 11/09/2018

ARUN DISTRICT COUNCIL BE/137/19/RES