the ecology partnership

Preliminary Ecological Assessment

Land at Shoreham House,

Shoreham, Kent.

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Contents

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.

1.0 Introduction

Background

1.1 The Ecology Partnership was commissioned by Andrew Barrett to undertake a preliminary ecological assessment (PEA) of land at Shoreham House, Church Street, Shoreham, Kent.

1.2 The key objectives of a PEA (CIEEM, 2017) are to:

- Identify the likely ecological constraints associated with a project;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy' (CIEEM, 2016; BSI 2013, Clause 5.2);
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
- Identify the opportunities offered by a project to deliver ecological enhancement.

1.3 This report comprises the:

- Legislative and planning context (Section 1);
- Assessment methodologies (Section 2);
- Results (Section 3);
- Implications for development (Section 4);
- An impact assessment (Section 5);
- Conclusions (Section 6).

Site Context and Status

1.4 The site is located on the eastern bank of the River Darent, east of Shoreham village centre and west of Shoreham train station (TQ 52213 61527). The immediate surroundings predominantly consisted of residential buildings in the village as well as agricultural fields, pasture fields and small blocks of plantation woodland with connective treelines and hedgerows. The local area shows much of the same mixture of land use with more arable land to the north, east and west, and the larger village of Otford to the south. It should also be noted that a portion of the site lies within Green Belt land.

1.5 The site, its immediate surroundings and approximate red line boundary are shown in the Figure 1 below.

Figure 1: Approximate red line boundary of the site and immediate surroundings. Taken from Google Earth Pro, March 2021

Description of the Proposed Development

1.6 Proposed development on site involves the removal of the existing garage structure, and the construction of a new residential dwelling on its footprint. This dwelling will have a driveway and garden. New replacement garages will also be constructed on the grounds of the existing Shoreham House. A block plan of the development can be seen in Figure 2 below.

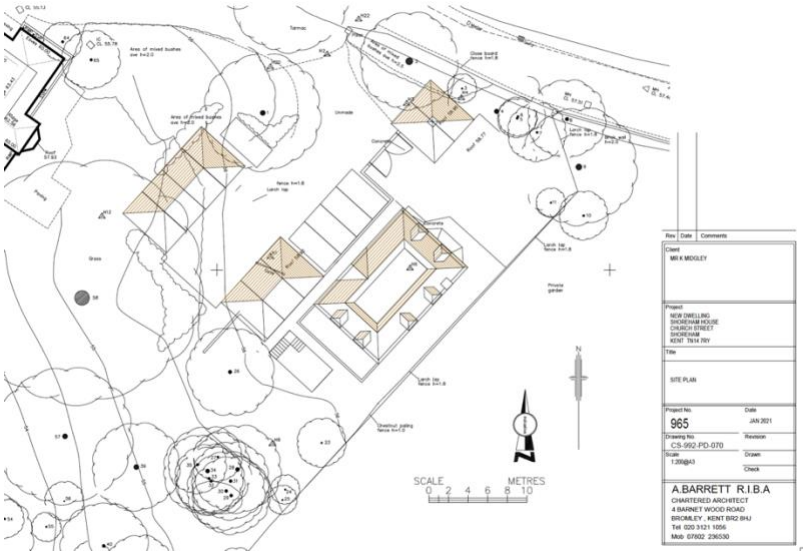

Figure 2: The proposed site block plan for the development by A. Barrett (dated January 2021).

Planning Policies

1.7 The site was surveyed to assess its ecological value and to ensure the proposals were compliant with relevant planning policy and legislation. Policy guidance is provided by the National Planning Policy Framework (NPPF 2019) as well as polices from Sevenoaks Core Strategy (Adopted February 2011). The main policy which is considered relevant to ecology, biodiversity and nature conservation is;

- ***Policy SP 11 Biodiversity.***

1.8 The new Environment Bill is currently under review but is expected to be adopted in 2021, therefore, the proposals need to be considered the new policies outlined within the proposed submission document. The current draft of the Environment Bill (26th February 2020) has outlined the requirement for granted developments to provide a biodiversity value post-development which exceeds the pre-development biodiversity value of the onsite habitat by at least 10%. Proposals also need to provide a net gain in biodiversity in accordance with the NPPF.

1.9 The assessment also takes into consideration nature conservation and wildlife legislation including, but not limited to, the Wildlife and Countryside Act 1981 (as

amended), the Natural Environment and Rural Communities (NERC) Act 2006 and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

1.10 This report addresses the site in relation to nature conservation and wildlife and indeed to the local planning requirements as well as national planning and nature conservation legislation.

1.11 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.

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 an internet-based aerial mapping service (www.maps.google.co.uk) was used to understand the habitats present in and around the survey area and habitat linkages and features (such as ponds, woodlands etc.) within the wider landscape. Biological records (up to 2km) were acquired from Kent and Medway Biological Records Centre (KMBRC).

Preliminary Ecological Appraisal

2.2 An extended preliminary ecological appraisal was undertaken on the 4th March 2021 by Jade Brennan BSc (Hons) MSc ACIEEM and Cameron Allaway BSc (Hons). 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.

2.3 Plant species abundance was recorded using the DAFOR scale. Species abundance was assigned to one of the following categories; Dominant, Abundant, Frequent, Occasional or Rare.

Protected Species Assessments

2.4 Any evidence of protected species was recorded. Standard methods of search and measures of presence, or likely presence based on habitat suitability were used for bats in trees and buildings (Collins 2016), breeding birds[1], dormouse (Bright *et al.* 2006), great crested newt (ARG 2010), reptiles (Froglife 2015), badgers (Creswell *et al*. 1990) and water vole (Strachan *et al*. 2011).

Limitations

2.5 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.

2.6 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.

[1] https://www.bto.org/our-science/projects/birdatlas/methods/breeding-evidence

3.0 Results

Desktop Study

3.1 There are no internationally designated sites within 10km of the site.

3.2 The site itself is not designated for its nature conservation value but it is situated within 2km of two Sites of Special Scientific Interest (SSSI). The Otford to Shoreham Downs SSSI is approximately *c.* 617m east of the site at its nearest point the Magpie Bottom SSSI is located *c.* 1.8km east of the site. Just outside of the 2km boundary at 2.1km north from the site is Lullingstone Park SSSI which contributes to the SSSI Impact Risk Zone status of the site.

3.3 The site also falls within the SSSI Impact Risk Zone for the Shoreham Downs SSSI (Figure 3). The proposed development does not fall within the listed developments which would require a consultation with the Local Planning Authority (LPA).

3.4 There are no non-statutory designated sites within 2km of the development.

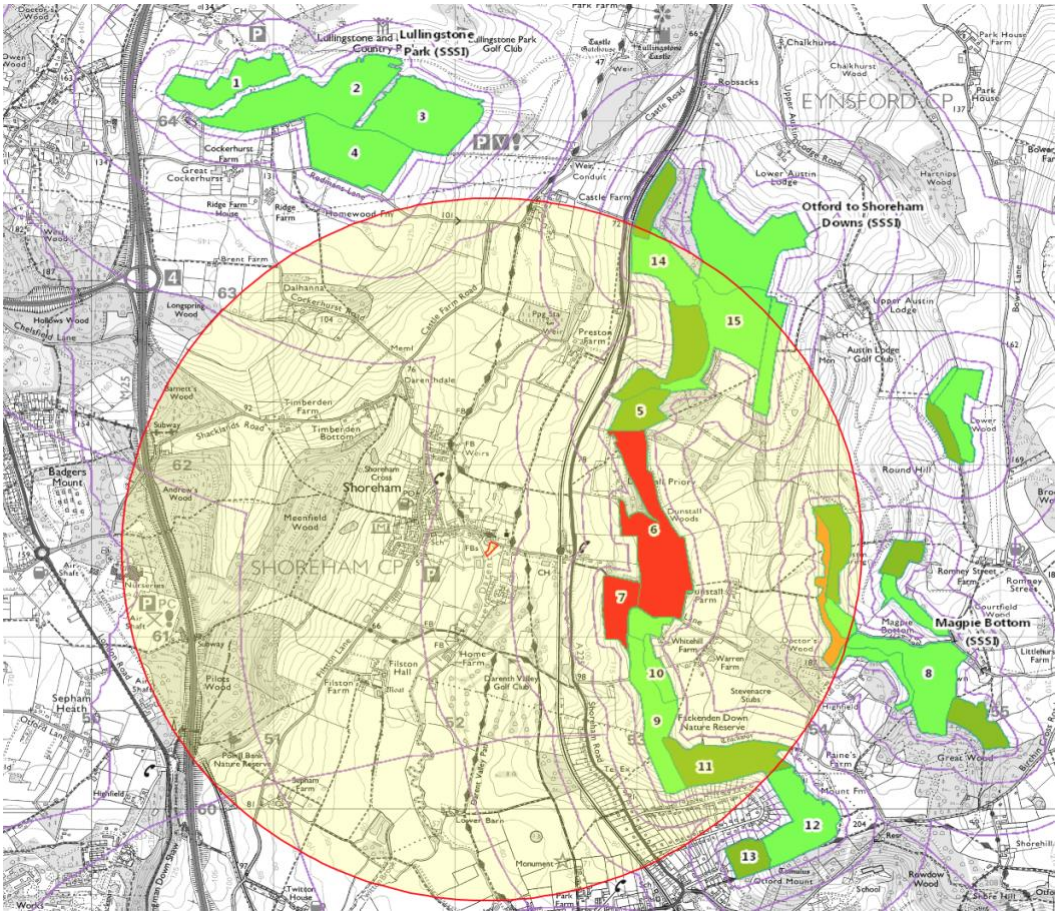

Figure 3: Designated sites within 2km of the red line boundary. The site lies within a SSSI impact zone (light lilac line) and within 2km of two SSSIs.

3.5 There are a number of Priority Habitats within 2km of the red line boundary (Figure 4):

- Deciduous woodland (closest *c*. 20m west)
- Coastal and floodplain grazing marsh (closest *c*. 707m south-west)
- Lowland Calcareous Grassland (closest *c*. 760m south-east)
- Ancient and semi-natural woodland (closest Dunstall Woods *c*. 750m east)
- Ancient replanted woodland (closest Meenfield Wood *c*. 860m west)

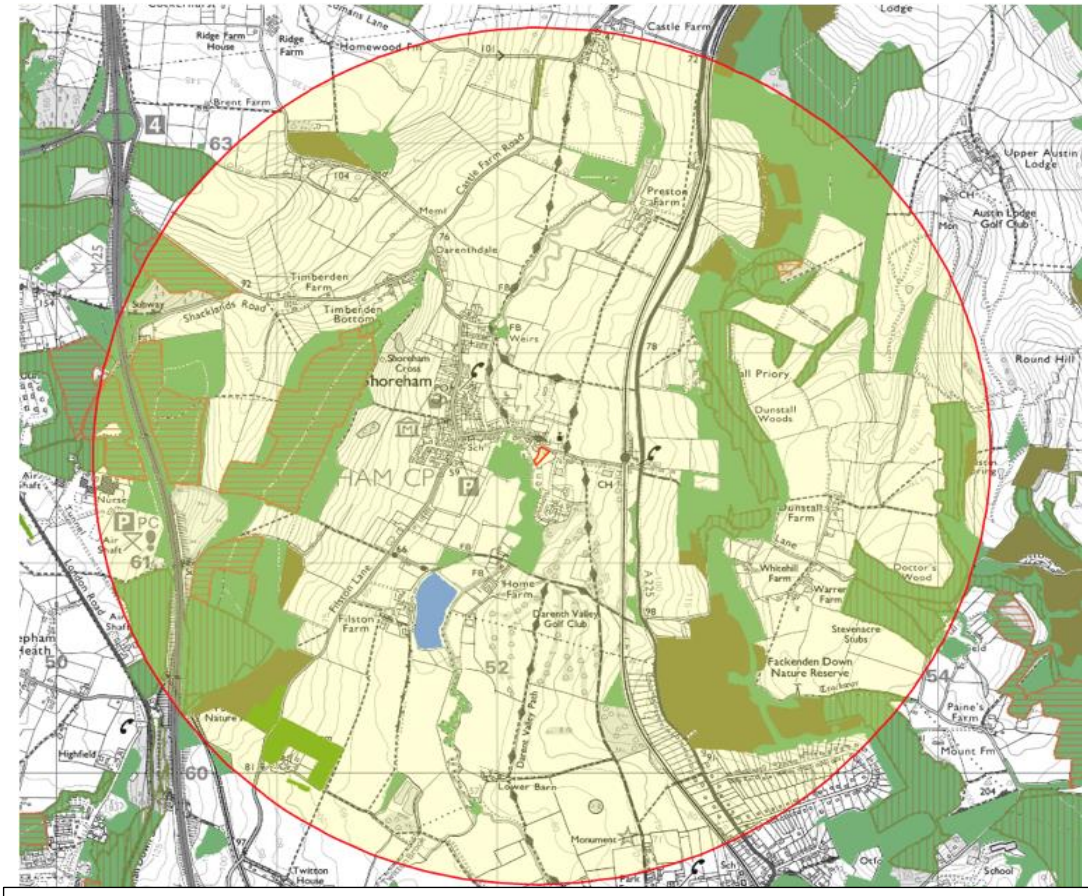

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Figure 4: Priority habitats within 2km of the red line boundary; deciduous woodland (dull green), lowland calcareous grassland (brown), coast and floodplain grazing marsh (blue), ancient semi-natural woodland (vertical hatchings) and ancient replanted woodland (horizontal hatchings).

3.6 There were no ponds present within the red-line boundary but online mapping did identify two ponds within a 250m radius (Figure 5). Both ponds were inaccessible to be surveyed on the day of survey due to being located on private land.

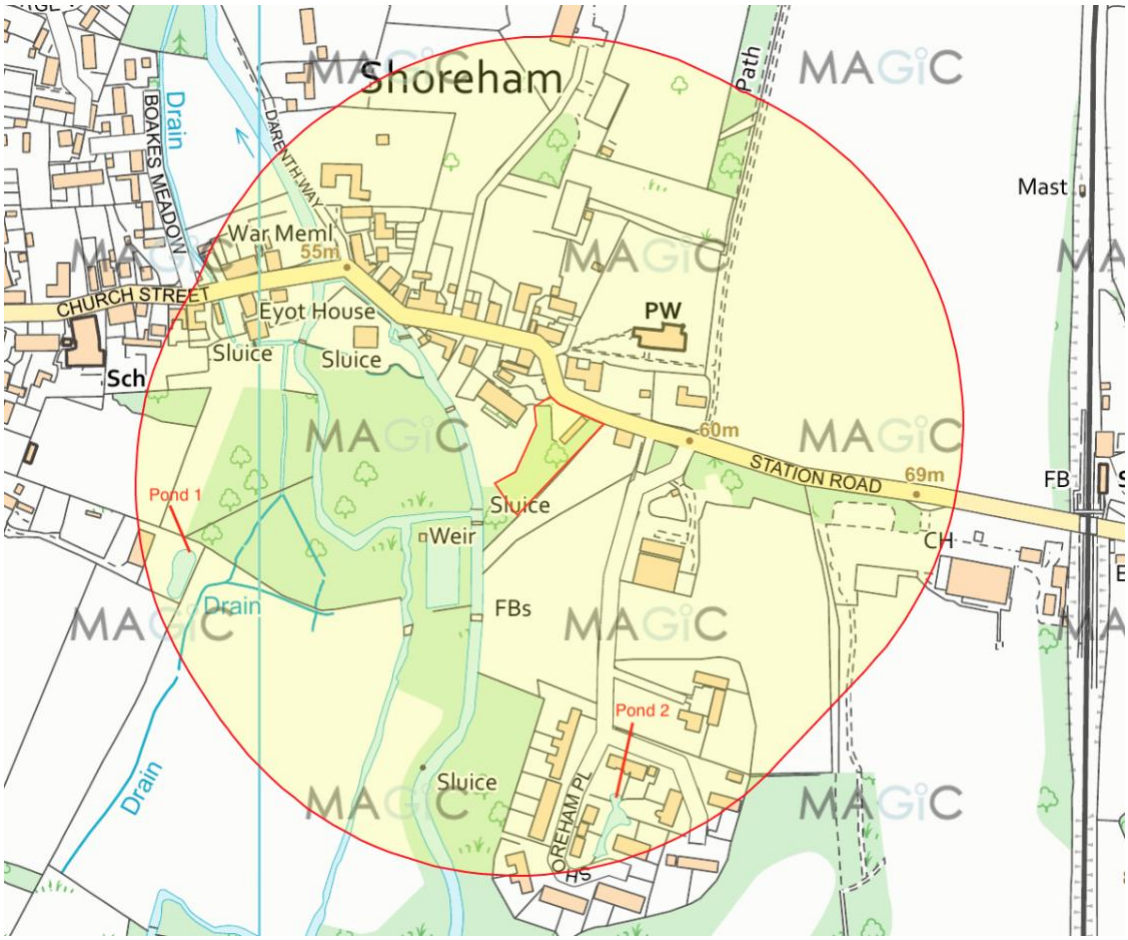

Figure 5: Ponds within a 250m radius (yellow area) of the red line boundary, labelled Pond 1 and 2 for ease of reference.

3.7 A single of European Protected Species (EPS) licence for bats has been granted within 2km of the site (Figure 6). This was for the destruction of a resting place for brown long-eared, common pipistrelle and natterer's bats in 2016 1.3km north at Preston Farm. A search via MAGIC maps did not identify any further European Protected Species licences, great crested newt licence returns, or eDNA survey records within 2km of the red line boundary.

3.8 A 2km records search was requested from the KMBRC. The records closest to site, recorded within the last 10 years, and relevant to the habitats on site, have been included in Table 1 below.

Table 1: Notable species records within 2km of the site in the last 10 years (note: only species which are habitats present on site are included below)

Species	Status	Distance from site	Date of record
Great crested newt *Triturus cristatus*	Habitats Directive Annex II & IV; Conservation (Natural Habitats, &c.) Regulations 2017 (Sch. 2); Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC S41	*c*. 835m south-west	2018
Common toad *Bufo bufo*	Wildlife and Countryside Act (1981 as amended) Schedule 5 Section 9.5a; NERC S41	*c*. 835m south-west	2018
Common frog *Rana temporaria*	Wildlife and Countryside Act (1981 as amended) Schedule 5 Section 9.5a	*c*. 835m south-west	2018
Hazel Dormouse *Muscardinus avellanarius*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Wildlife and Countryside Act (1981 as amended) Schedule 5 Section 9.4b/s9.4c/s9.5a, NERC S41	*c*. 711m south-east	16/07/2014
Slow worm *Anguis fragilis*	Wildlife and Countryside Act (1981 as amended) Schedule 5 Sec9.1 and 9.5a; NERC S41	*c*. 573m south	13/06/2019
Adder *Vipera berus*	As above	*c*. 327m north	09/09/2020
Grass snake *Natrix natrix*	As above	*c*. 1km south-west	23/07/2020
Common lizard *Zootoca vivipara*	As above	*c*. 1.02km south-west	09/09/2020
Serotine *Eptesicus serotinus*	Habitats Directive Annex IV; Habitat regulations Sch2; W&C Act (Sch.5)	*c*. 1.2km north-east	05/09/2019
Daubenton's bat *Myotis daubentonii*	Habitats Directive Annex IV; Habitat regulations Sch2; W&C Act (Sch.5); NERC S41	*c*. 1.1km east	08/02/2020
Whiskered/Brandt's bat *Myotis mystacinus/brandtii*	As above	*c*. 1.9km east	11/02/2016
Natterer's bat *Myotis nattereri*	As above	*c*. 1.6km south-east	07/01/2018
Common pipistrelle *Pipistrellus pipistrellus*	As above	*c*. 1.2km north	05/09/2019
Soprano pipistrelle *Pipistrellus pygmaeus*	As above	*c*. 1.2km north	05/09/2019

Brown Long-eared *Plecotus auritus*	As above	*c*. 223m north-west	09/03/2019
Red Kite *Milvus milvus*	Birds Directive Annex 1; Wildlife and Countryside Act (1981 as amended) Schedule 1; Convention on Migratory Species Appendix 2	Within 2km	20/04/2018
Kestrel *Falco tinnunculus*	Wildlife and Countryside Act (1981 as amended); Bern Convention Appendix 2; Convention on Migratory Species Appendix 2	Within 2km	20/11/2019
Cuckoo *Cuculus canorus*	NERC Act (2006); BoCC Red List	Within 2km	15/06/2014
Skylark *Alauda arvensis*	NERC Act (2006) Section 41; Birds Directive Annex 2.2	Within 2km	04/10/2019
Firecrest *Regulus ignicapillus*	Wildlife and Countryside Act (1981 as amended) Schedule 1	Within 2km	30/06/2018
Linnet *Linaria cannabina*	NERC Act (2006) Section 41; Red List BoCC	Within 2km	03/02/2019
Bullfinch *Pyrrhula pyrrhula*	NERC Act (2006) Section 41; Amber List BoCC	Within 2km	22/07/2019
Yellowhammer *Emberiza citronella*	NERC Act (2006) Section 41; Red List BoCC	Within 2km	20/11/2019

Phase 1 Habitat Survey

3.9 The northern portion of the site largely comprised of a large patch of bare earth to the north which provides access to a block of garages and a tarmac driveway along the northern site boundary with patches of scattered scrub where the driveway joins the main road. The area behind the garages consists of a mix of tall ruderal habitat and bare earth with scattered trees and introduced shrubs running along the boundary line. The south section of the site was a mix of amenity grassland surrounding tall ruderal habitat and scattered mixed trees. A detailed Phase 1 Habitat Map is attached in Appendix 1, and a full species list is provided in Appendix 2.

Tall ruderals

3.10 The most extensive habitat on site were the scattered tall ruderals . This habitat was located on the north-eastern portion of the site adjacent to the garages and scattered within the scrub as well as in large patches on the southern half of the site.

3.11 The areas on the southern portion of the site were dense; predominantly comprising of common ivy, common nettle, green alkanet, and lords and ladies with occasional wood avens, common ivy and broadleaved dock. Tall ruderals adjacent to the garage were scattered and this area supported frequent patches of bare earth in addition to species such as common nettle, white dead-nettle and broadleaved dock.

Scattered mixed trees

3.12 Scattered mixed trees were present on the southern portion of the site. Sycamore, elder and lime were abundant with individual specimens of other species throughout the habitat. A low number of introduced shrubs such as a cotoneaster species and cherry laurel, were also scattered in these areas. The ground layer comprised of scattered tall ruderals on bare earth.

Amenity grassland

3.13 Tussocky areas of amenity grassland were mainly located to the south of the garages, along parts of the western boundary and along the southern boundary of the site. The grassland mainly consisted of perennial rye-grass, cock's foot and Yorkshire fog with scattered herbs such as daisy, creeping buttercup, smooth sow-thistle, cow parsley and wood avens.

Introduced shrub

3.14 The main patch of introduced shrub was located on the north-western section of the site which forms part of part of the communal garden area for the existing Shoreham House. Scattered shrubs were also intermixed with mature trees along the northern and eastern site boundaries, and on the southern portion of the site. Species present in these areas included cherry laurel, geranium, snowberry, spotted laurel, garden box, bamboo, cotoneaster species and juniper.

Scrub

3.15 Scrub was found in two small patches on the northern boundary of the site. These patches were either side of the driveway where it joined the public road. Bramble was

abundant but species such as common ivy, barberries, nipplewort, cleavers, wood avens, stinking iris and perennial rye-grass were also scattered throughout.

Ephemeral/short perennial

3.16 A strip of ephemeral/short perennial vegetation was growing on bare earth directly adjacent to the garages. Species present included consisting mainly of annual meadow grass, cock's foot, stone parsley, germander speedwell, wood avens, red fescue, prickly sow-thistle and dandelion. .

Bare earth

3.17 A large area of bare earth was present adjacent to the garages on the north-western portion of the site. Tall ruderals were also growing on bare earth on the north-eastern portion of the site.

Target Notes [2]

Target Note 1: Bat roost potential trees -Three trees with 'low' potential for roosting bat were identified on site. This was due to the presence of features such as loose bark or dense ivy cover that could obscure potentially suitable roosting features.

Target Note 2: Hibernacula - Behind the garages were two log piles and a compost heap which may have some suitability to provide refuge for a range of wildlife species.

Target Note 3: Invasive species - Areas of variegated yellow archangel was intermixed with tall ruderals on site. This species is an invasive listed under Schedule 9 of the Wildlife and Countryside Act, 1981.

[2] The location of the Target Notes can be seen within the habitat map in Appendix 1.

Protected Species

Bats

Buildings

3.18 The locations of the buildings on site are shown in Figure 6 below.

Figure 6: Approximate locations of buildings highlighted in yellow, within the red line boundary. Taken from Google Earth Pro, March 2021.

3.19 The garage block was constructed from asbestos boarded walls and a corrugated metal roof with metal garage doors. Wooden barge boards were present along all aspects, and those along the northern and southern aspects supported minor gaps. The gaps are considered to be unsuitable for bats due being exposed. The gaps could provide access into the interior space, however, there were no internal features suitable for roosting bats. Furthermore given the nature of the structural materials, which will likely result in temperature fluctuations, this building is considered to be unsuitable for roosting bats.

3.20 A small shed of typical construction was present on the western portion of the site. It is considered to retain 'negligible' potential for roosting bats.

Trees

3.21 Three trees on site were identified as retaining 'low' potential for bat roosting due to supporting features such as dense ivy cover or flaking bark. This included a yew on the northern boundary, an elder adjacent to the southern corner of the garage and a large ash adjacent to the southern boundary. The other scattered trees on the site were considered to retain 'negligible' potential to support roosting bats due to the lack of suitable features.

Foraging and commuting habitat

3.22 The habitats on site are largely sub-optimal for foraging and commuting bats but the scattered trees and tall ruderals on the southern section of the site could provide some, limited foraging opportunities. The local surroundings also included the River Darent and adjacent deciduous woodland to the south of the site which could provide good quality foraging and commuting habitat. There are recent biological records for seven bat species within 2km of the site.

Badgers

3.23 No setts or any other field signs of badgers, such as latrines, mammal trails or snuffle holes were found during the survey although these could be present within areas of dense vegetation on site. Badgers may also use the site for foraging and commuting purposes.

Reptiles

3.24 The majority of site comprised of sparse vegetation which lacked suitable cover from predators and only limited foraging opportunities. Small areas of scrub and denser areas of tall ruderal vegetation along the eastern boundary could provide some, limited opportunities for common reptiles. The area behind the garages within the tall ruderal vegetation contained two log pile and a compost heap which may provide suitable

refuge and some basking opportunities for reptile species. There are recent biological records for slow worm *c.* 573m south, adder *c.* 327m north, grass snake *c.* 1km south-west and common lizard *c*. 1.02km south-west.

Hazel Dormice

3.25 The site is largely sub-optimal for dormice due to lacking in the suitable composition and structure they favour. The only potentially suitable habitats were the scrub along the northern boundary and scattered trees on the southern section of the site. However, the scrub was sparse and isolated from optimal woodland habitats to the south of the site. The areas of scattered trees on the southern portion of the site also lacked the necessary canopy connectivity and understorey composition which they require. There are recent biological records for dormice *c.* 711m south-east of the site however they are not considered likely to be present on site due to the sub-optimal nature of the site. As such, further surveys are not considered necessary.

Great Crested Newts (GCN)

3.26 Two ponds were present within 250m of the site however could not be assessed at the time of survey due to being located on private land. Pond 1 was located c. 215m west of the site with the River Darent providing a barrier to dispersal to the site. Pond 2 was located c. 205m south-east within a ring of houses and a residential road provided a barrier for dispersal to the site. Furthermore, the closest biological records for GCN are *c*. 835m south-west of the site which is a notable distance from the site.

3.27 The habitats on site were considered to be largely sub-optimal for GCN however the boundary tall ruderals and amenity grassland could provide some, limited foraging opportunities for individuals in their terrestrial phase. Log piles and the compost heap on site could provide refuge opportunities.

Other Species

3.28 Common birds are likely to use the scattered trees, introduced shrub and scrub for foraging and nesting.

3.29 It is considered that this site does not contain suitable habitat for protected species such as water vole, otter or European eel. The site is in close proximity to the River Darent which may provide potential habitat for these species.

4.0 Discussion

4.1 The following paragraphs consider the effects of the development on designated sites, priority habitats and protected and priority species. Where the desk study and Phase 1 survey provide sufficient evidence for an assessment of effects on any of these groups to be taken through planning, these are detailed below, the need for additional surveys and when and how these should be completed are summarised, if required.

4.2 Provisional recommendations are also given for means to achieve net biodiversity gain, following the principle (CIEEM et al. 2016) of following the mitigation hierarchy of; avoidance, minimisation of loss, compensation on site and biodiversity offset.

Effects on designated sites and priority habitats

4.3 The site does not fall within 10km of any internationally designated sites.

4.4 The site falls within 2km of two SSSIs, with the closest site being over 600m from the site. The proposals are of a small-scale, involving the construction of a single dwelling and garages on the footprint of the existing garage and adjacent garden habitats. Due to distances involved and the small-scale of the proposals, no adverse impacts to these sites are predicted. There is potential for an increase in recreational pressure but given the nature of the proposals, this would be nugatory above the baseline. Therefore, the development would comply with this component of *Policy SP 11 Biodiversity.*

4.5 The development area falls within the SSSI impact zone for the Otford to Shoreham Downs SSSI. However, the proposed development does not fall within the listed

developments which would require a consultation with the Local Planning Authority (LPA) as such, a consultation with the LPA is not considered necessary at present.

4.6 There are parcels of Priority Habitat within 2km of the red line boundary, most notably the deciduous woodland to the south and west of the site. Given the small-scale and low impact nature of this development, it is not predicted that there will be any adverse direct or indirect impacts on any of these priority habitats. Enhancements to improve existing green links with the wider landscape should be incorporated into the scheme to ensure that connectivity remains across the local landscape.

Effect on on-site habitats

4.7 The habitats present on site are largely common and widespread throughout the local area and the UK and are considered to be of site value only. The habitats on site included amenity grassland, tall ruderal, introduced shrub, scrub, ephemeral/short perennial and scattered trees. Although limited in extent, they are considered to have ecological potential for several protected species, namely bats, reptiles and nesting birds.

4.8 The current proposed plan to create a residential dwelling with associated garages will involve the clearing of some areas of tall ruderal vegetation, introduced shrub and scattered trees. The clearance of these habitats should be carried out in accordance with the following protected species procedures outlined in paragraph 4.20. It is not considered that the removal of these areas of vegetation would be significant as the habitat is considered to be of value at site level only.

4.9 The development should aim to achieve an overall biodiversity net gain and enhancement recommendations are laid out in the Enhancements section of this report. The site was assessed for its potential to support a range of protected species and these are discussed individually below. Recommendations for further survey work, mitigation and suitable ecological enhancements are in line with *Policy SP 11 Biodiversity*.

Invasive Species

4.10 The invasive species, variegated yellow archangel, was identified on site. This species is listed on Schedule 9 part 2 of the Wildlife and Countryside Act 1981 due to growing rapidly and spreading easily. It is therefore that this species is controlled, removed and ideally eradicated, where possible. These works should be completed with the help of a specialist invasive species contractor who can devise an appropriate treatment plan. Cherry laurel and bamboo on site are also considered to be invasive species and should be removed from site where possible to prevent them from spreading into the wild.

Protected Species

Bats

Buildings

4.9 The garage and small potting shed are both considered to retain 'negligible' potential for roosting bats, as such no further surveys are considered necessary and these can be removed without any further consideration for bats.

Tree Survey

4.10 Three trees with 'low' potential for roosting bats were identified on site. At present, only the elder adjacent to the southern corner of the garage to be removed for development. It is always recommended that trees are retained where possible given their intrinsic value for wildlife.

4.11 Should this tree need to be felled, the ivy should initially be removed by hand and the trunk inspected. If no features are present, it should then be soft felled in sections by arboriculturalist. If any roosts are discovered, works should be halted and an ecologist consulted on how to proceed.

Foraging and Commuting Bats

4.12 Using The Bat Conservation Trusts document *Bat Surveys Good Practice Guidelines 3rd Edition*, 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' and Table 8.3 '*Guidelines on the number of bat activity surveys recommended to achieve a reasonable survey effort in relation to habitat suitability*' the recommended survey effort is as follows. As stated within section 8.2.7 of the latest survey guidelines (2016), the following points need to be taken into account with regard to planning activity surveys:

- Likelihood of bats being present;
- Likely species concerned;
- Numbers of individuals;
- Type of habitat affected;
- Predicted impacts of the proposed development on bats;
- Type and scale of proposed development.

4.13 The majority of trees and areas of scrub on the site, should be retained and enhanced to prevent habitat fragmentation within the local area for foraging and commuting bats. With the small scale of the proposals, which will not significantly impact habitat for roosting bats, lead to fragmentation of suitable habitat or indeed bats ability to function on site or within the local landscape it is not considered that further activity surveys would be required as long as the below recommendations are followed.

4.14 To enhance the local bat population and provide roosting opportunities, it is recommended that boxes should be hung on mature trees or buildings around the site. Recommended boxes should be constructed of woodcrete or a similar material to ensure the long life of bat boxes installed onsite.

4.15 Further enhancements for bats in the local area can be achieved through the use of native tree and shrub planting and landscaping within the development (see general enhancements below).

4.16 Any proposed lighting scheme as part of the development will have to consider bats in the surrounding area as well as site. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Many species of bats are known to sample the light levels before emerging from their roost; only emerging for their night's hunting when the light intensity outside reaches a critical level after sunset. Artificial lighting can restrict and alter this natural behaviour, and if a roost site is illuminated it

can restrict and shorten the time bats spend foraging at night or completely discourage bats from using an area at all. This needs to be considered, with a sympathetic lighting scheme for the development. Recommendations include:

- No potential bat roost should be illuminated by artificial lighting, lighting should be positioned to point away from any roosting site, leaving the entrance and exit points in darkness, this should consider the bat potential trees identified;
- Lighting should only be installed if there is a significant need;
- Light levels should be kept low where possible;
- Using LED luminaries due to their lower intensity, sharp cut-off and good colour rendition – any lights with UV elements or metal halide lights should not be used;
- Lights with peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012);
- Lights with an upward light ratio of 0% and good optical control;
- Lighting should be avoided near treelines or hedgerows, with light angled away from these areas, bats use linear features such as treelines to commute across the landscape to forage; and
- Lights should have focussed luminance on their target area, preventing light spill and pollution into other areas of the site and local area.
- Additional shielding such as use of blinds should be used to restrict light spill from any artificial night-time light used within the greenhouse.

Badgers

4.17 No evidence of use of the site by badgers were recorded on site such as setts, latrines or potential snuffle holes and signs of foraging however, evidence could be present within areas of dense vegetation on site. It is recommended that these areas are sensitively cleared using hand tools only, as such if any mammal holes are identified then the works would not have impacted their structure. Ecological advice should be sought if any mammal holes are identified within the works footprint.

4.18 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.

4.19 It is always recommended that badger update surveys are undertaken across the site prior to any development works or if there is a lapse in time between the survey and development as badgers may move onto the site in the intervening period.

Reptiles

4.20 Dense strips of tall ruderals and scattered scrub along the site margins could provide limited opportunities for reptiles. This habitat was considered to be sub-optimal in quality at best. Furthermore, the surroundings are largely sub-optimal for reptiles due to the dominance of managed, garden habitats. It is understood that pockets of these habitat are to be removed as part of development. Given the largely sub-optimal condition of the site and its surroundings, further surveys are not considered necessary but it is recommended that these habitats are removed in a sensitive manner under ecological watching brief.

4.21 It is recommended that habitat manipulation techniques are used to encourage reptiles away from the development footprint. This will be achieved by use of a two phased cut when are reptiles are active between March to September. Prior to development the footprint of development and any additional works areas will need to be cut in a sensitive manner using a two-phase cut undertaken under ecological watching brief. Vegetation removal works will follow the following specification:

- Vegetation removal works are to be carried out using hand tools only or a raised fixed flail on the rear of a non-tracked vehicle;
- Works will proceed in a linear progression, beginning in the north of the site and working towards the south to encourage reptiles to disperse into retained southern habitats
- Any trees and shrubs are to be checked thoroughly for the presence of birds' nests, observing the tree from within the canopy where possible.
- Vegetation will be strimmed down using the following method in suitable weather conditions (avoiding rain/wet conditions) under ecological supervision:

1 Day 1: Strim to 200mm
2 Day 2: No works to vegetation to allow any reptiles present to vacate the site
3 Day 3: Strim to ground level
4 Day 4: No works to vegetation to allow any remaining reptiles present to vacate the site
5 Day 5: End of sensitive clearance process

4.22 Once cut it is recommended that habitat is maintained at a short sward during construction.

4.23 It is understood that the log piles and compost heap on site are to be removed as part of the construction. These should be sensitively dismantled by hand and recreated in sheltered locations on retained land to the south to ensure opportunities for wildlife remain.

4.24 It is considered that if this process is undertaken then reptile species will not be harmed as part of works and any small population present on site will persist post development. The scheme has scope to increase the habitat available for reptiles.

Great Crested Newt (GCN)

4.25 Records for GCNs present in the wider landscape show they are present within the local area. However, they are at a sufficient distance from the site for the development to not be constrained by their presence.

4.26 Two ponds are present within 250m of the site and both were inaccessible to be assessed at the time of the survey. However, both are located over 200m from the site which is a significant distance from the site.

4.27 Great crested newts tend to remain in close proximity to their breeding pond. Whilst a maximum routine migratory range has been estimated as approximately 250m from a breeding pond (Franklin, 1993; Oldham and Nicholson, 1986; Jehle, 2000), one study by Robert Jehle, (2000) demonstrated a 'terrestrial zone' of 63m, within which 95% of summer refuges were located. A further study (Jehle, R & Arntzen, JW. 2000) showed

that after the breeding season 64% of newts were recorded within 20m of the pond edge. Therefore, it is considered likely that if GCN are present within these ponds, they would remain within the nearby optimal woodland habitats.

4.28 Given the separation of the site from the closest suitable ponds, the largely sub-optimal condition of the site and the small-scale of the works, residual impacts to breeding GCN are considered highly unlikely (Figure 2). The potential impacts will also be further minimised by retaining and buffering the retained areas of scattered trees and ruderal habitat. Therefore, no further surveys are considered necessary.

Table 2: Natural England's licence risk assessment

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
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)	0.01 - 0.1 ha lost or damaged	0.01
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.01
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

Hazel Dormice

4.29 It is considered possible that hazel dormice are present within the local area, although the potential for the habitat present on site to support dormice is considered to be negligible. With scrub and tall ruderal removal limited to several shrubs and trees in the northern half of the site, it is considered proportionate that further survey for dormice is not required.

4.30 Any trees or scrub to be removed should be done so using hand tools, under ecological supervision. If any signs or dormice are discovered during works then works must stop and a suitably qualified ecologist contacted on how to proceed.

4.31 With scope for additional planting to enhance the site for wildlife it is recommended that additional connectivity around the site is improved as part of enhancements for this site. This will benefit a wide range of wildlife including dormice if present within the local landscape.

4.32 It is recommended that the following species are planted to establish new scrub or woodland understorey habitats on site:

- Hazel
- Honeysuckle
- Rowan
- Spindle
- Hawthorn
- Oak
- Wayfaring Tree; and
- Sycamore

Other Species

4.33 Common breeding birds are likely to use the introduced shrub, scrub and scattered trees on site as nesting habitat. The UK breeding season for most bird species takes place between March and September. Any removal of nesting bird habitat should be completed outside of this period or immediately after a nesting bird check by a suitably qualified ecologist. If an active nest is identified, works in the vicinity of the nest must cease until the birds have fledged the nest.

4.34 With much of the nesting bird habitat on site to be retained and the opportunity to enhance retained areas of greenspace to provide better quality habitat for ground nesting birds, the requirement of a breeding bird survey is not considered necessary.

4.35 The potential impact on dormice, water voles, otters and European eels is considered negligible due the absence of suitable habitat on site. In addition, a small-scale residential development of this type is unlikely to have any negative direct or indirect impacts on the potential habitats provided by the nearby River Darent. Further surveys are therefore not required.

General Ecological Enhancements

4.36 A number of enhancements can be made to the final development to help reduce potential ecological impacts and to provide net gains to biodiversity in line with the

NPPF (2019) and the proposed Environment Bill. It is important to utilise native species of local provenance in landscaping schemes to enhance the ecological value of a development. These enhancements will also help ensure the development complies with *Policy SP 11 Biodiversity.*

4.11 All mature trees should be maintained and incorporated into the design of the potential development where possible as these provide valuable habitat for species such as birds, invertebrates and some mammals including bats. Where it is necessary to remove trees for this development it is advised to replant nearby in a 2:1 ratio with the following species:

- Hazel
- Honeysuckle
- Rowan
- Spindle
- Hawthorn
- Oak
- Wayfaring Tree; and
- Sycamore

4.12 New shrub and herb planting should occur within the newly created garden habitats to provide new opportunities for birds and hedgehogs. Recommended native species include bilberry (*Vaccinium myrtillus*), spindle (*Euonymus europaeus*), buckthorn (*Rhamnus cathartica)*, foxglove (*Digitalis purpurea*), wood sage (*Teucrium scorodonia*), betony (*Stachys officinalis*) and sweet woodruff (*Galium odoratum*).

4.13 A species-rich lawn turf can be acquired for the garden which includes a wide range of plant species tolerant of regular mowing and wear. Alternatively, areas of bare earth which will become regularly mown amenity grassland can be sown with an appropriate wildflower lawn seed mix tolerant to such management and can include:

- Red fescue (*Festuca rubra*)
- Meadow fescue (*Festuca pratensis*)
- Sheep's fescue (*Festuca ovina*)
- Common bent (*Agrostis capillaris*)

- Creeping bent (*Agrostis stolonifera*)
- Annual meadow grass (*Poa annua*)
- Smooth meadow grass (*Poa pratensis*)
- Crested dogstail (*Cynosurus cristatus*)
- Perennial ryegrass (*Lolium perenne*)
- White clover (*Trifolium repens*)
- Red clover (*Trifolium pratense*)
- Yarrow (*Achillea millefolium*)
- Selfheal (*Prunella vulgaris*)
- Bird's-foot trefoil (*Lotus corniculatus*)
- Bulbous buttercup (*Ranunculus bulbosus*)
- Cat's ear (*Hypochaeris radicata*)
- Common knapweed (*Centaurea nigra*)
- Lady's bedstraw (*Galium verum*)
- Lawn chamomile (*Anthemis noblis*)
- Daisy (*Bellis perennis*)
- Meadow vetchling (*Lathyrus pratensis*)
- Wild thyme (*Thymus polytrichus*)
- Common dog violet (*Viola riviniana*)
- Kidney vetch (*Anthyllis vulneraria*)
- Ribwort plantain (*Plantago lanceolata*)
- Sorrel (*Rumex acetosa*

4.37 Bird boxes may be hung on retained mature trees to increase the number of breeding opportunities throughout the site. This should be made of woodcrete or similar to ensure they are long lasting, and a variety of boxes should be used to attract a varied bird assemblage.

4.38 Bat boxes could be hung on mature trees around the site to create new roosting opportunities on site. Recommended boxes include:

- Vivara Pro WoodStone Bat Box – A general purpose bat box that supports a range of species (Figure 7). These can be hung on trees in a variety of heights and aspects in order to provide a variety of micro-climates.

- Large Multi Chamber WoodStone Bat Box – This is a multipurpose box designed for larger colonies and a range of bat species including pipistrelles, noctules and brown long-eared bats. These should be hung on mature trees around the site (Figure 7).

Figure 7: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

4.39 Hedgehog homes could be installed on site to provide areas of shelter for hedgehogs within the site, helping support the local population. An example of an appropriate hedgehog home is shown in Figure 8 below.

Figure 8: Example of a hedgehog house that can be utilised on site

4.40 The incorporation of the recommended enhancements to the design of the site will greatly enhance the site for local wildlife. Wildflower planting within existing grassland and habitat edges using a perennial meadow mix would create new habitats for a range of invertebrate species, most notably pollinators. Log piles can be incorporated into the design to encourage invertebrates, as well as hedgehogs and amphibian and reptile species.

4.41 It is considered that the use of wildflower edges, native species planting, installation of bat and bird boxes, and the creation of new habitats would enhance the biodiversity within the site and the local area to ensure biodiversity net gain.

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 2018).

5.3 The zone of influence of the development is defined as:

- The project red line, for effects on habitats and species;
- Adjacent habitat, considered by species, for mobile species with territories or foraging ranges that may overlap the site.

5.4 The types of features considered in the assessment of effects, to meet legislative and policy requirements, are:

- Designated sites (European, national and local);
- Protected species;
- Habitats and species of principal importance (Section 41 list);
- Hedgerows, where not of principal importance; and
- Habitats, where not of principal importance, that may function as wildlife corridors or stepping stones.

5.5 Impact assessment is required for each feature determined as important and not for other features. CIEEM (2018) advises that each impact assessment should consider if possible the different stages of a development (construction, operation and decommissioning) and that it should be characterised by the following:

- Positive or negative – whether the impact leads to an adverse, beneficial or neutral effect;

- Extent – the spatial area over which the impact occurs;
- Magnitude – change in for example the amount of habitat or the size of population;
- Duration – both in relation to the life cycle of the ecological feature and of the life of the project;
- Frequency and timing – for example the number of disturbance incidents to birds and their timing in relation to the breeding cycle; and
- Reversibility – if and at what timescale recovery is possible.

5.6 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

Baseline Ecological Conditions

5.7 The site lies within 2km of two SSSIs: Otford to Shoreham Downs SSSI and Magpie Bottom SSSI. Numerous priority habitats are present within the local area .

5.8 The tall ruderal vegetation, scrub, grassland, introduced shrub and scattered trees on site could act as wildlife corridors, to varying extent. The habitats to be impacted by works are common and widespread and form importance at a site level.

5.9 In terms of protected species, the site was considered to have **potential** to support the following:

- Roosting bats – within trees;
- Foraging and commuting bats;
- Commuting and foraging badgers;
- Dormice;
- Reptile species;
- Nesting birds.

Impact Assessment and Mitigation

5.10 Table 2 below summarises the impacts and required mitigation for each receptor as previously detailed in the discussion.

Table 3: Assessment of effects from the proposal after mitigation and compensation

Feature	Scale of Importance	Mitigation/Compensation Required	Residual Effect
Otford to Shoreham Downs SSSI	National	No adverse impacts predicted. No mitigation or compensation required.	Not significant
Magpie Bottom SSSI	National	No adverse impacts predicted. No mitigation or compensation required.	Not significant
Offsite priority habitats	Local	No adverse impacts predicted. No mitigation or compensation required	Not significant
On site habitats	Local	Removal of habitats that are of site level importance and common in the surrounding area. Scope for enhancement of existing habitats and creation of new habitats within the site design.	Not significant
Roosting bats	Local	Removal of low potential tree should be done so using soft felling techniques Retained trees should be protected from artificial light from the development	Not significant .
Commuting and foraging bats	Local	Sensitive lighting scheme and the retention of the suitable foraging habitats including the scattered trees on southern section of site to maintain foraging opportunities. No residual impacts are predicted.	Unknown / Not Significant

		Enhancement of site boundaries. This will improve the functionality of the existing hedge as a wildlife corridor for a multitude of species including bats.	
Commuting and foraging badgers	Local	Safety measures enforced on site during works to mitigate any possibility of accidental harm to badgers through interaction with open excavations and underground services.	Not Significant
Reptiles	Local	Habitat manipulation and sensitive clearance techniques to encourage any reptiles present to retained habitat under ecological watching brief. Enhancement of retained ground to provide increased reptile habitat on site post development. New grassland areas to provide additional opportunities.	Not significant
Dormice	Local	Sensitive clearance of habitats using hand tools only. Enhancement of retained habitats with native tree and shrub planting.	Not significant
Nesting Birds	Local	Mitigating direct harm to nests by removal of any trees, introduced shrubs and scrub habitat outside of nesting bird season or after a check by a suitably qualified ecologist. Compensation in the form of the installation of bird boxes.	Not Significant

Cumulative impacts

5.11 The scheme should also be considered in conjunction with other surrounding proposals in order to determine cumulative impacts on ecological features. The development is of a small-scale, involving the construction of a single residential dwelling, as such no adverse impacts of locally designated sites or habitats of importance are predicted. Therefore, a development of this nature can be considered in isolation.

6.0 Conclusions

6.1 There are two SSSIs within 2km of the site which are the Otford to Shoreham Downs SSSI and Magpie Bottom SSSI. Given the nature and small-scale of the proposals, no adverse impacts are predicted.

6.2 The habitats on site included amenity grassland, scattered mixed trees, tall ruderals and ephemerals/ short perennials. These habitats are considered to be of site level interest with the most ecologically valuable features being the boundary habitats and mature trees. These features should be retained and buffered from development where possible. The loss or removal of the remaining habitats would not be considered beyond impacts at site level and would not warrant consideration within an EcIA assessment.

6.3 Variegated yellow archangel was identified on site which is a Schedule 9 invasive. This species should be controlled, removed and ideally eradicated, where possible. Cherry laurel and bamboo on site are also considered to be invasive species and should also be sensitively removed from site where possible to prevent them from spreading into the wild.

6.4 The buildings on site both retained 'negligible' potential for roosting bats. No further surveys are considered necessary and these can be removed without further consideration for bats.

6.5 It is always recommended that trees are incorporated into development given their intrinsic value for wildlife. It is understood that a low number of trees will be removed

for development. Trees with 'low' potential should be soft felled in sections. A sensitive lighting scheme must be designed for the site to limit the impacts of artificial light.

6.6 The cluster of broadleaved trees and ruderals on the southern portion of the site could provide some, limited foraging opportunities for bats. The habitats to be impacted are largely sub-optimal for foraging and commuting bats as such, no further surveys are considered necessary as long as there is no significant loss of the boundary habitats and a sensitive lighting scheme is implemented on site.

6.7 No field signs of badgers currently using the site or badger setts were found. The site is not considered to be constrained by badgers.

6.8 A sensitive clearance and habitat manipulation approach has been recommended within this report with regards to reptiles. This should be undertaken when reptile species are active (between March to September).

6.9 The development area is largely sub-optimal for GCN and the site is located over 200m from the closest waterbodies, as such it is considered highly unlikely that GCN would be present on site or would be impacted by the proposals. Therefore, no further surveys are considered necessary and no residual impacts are predicted.

6.10 The scattered trees, introduced shrub and scrub are considered to provide suitable habitat for common breeding birds. Precautionary measures should be undertaken during the clearance of these habitats by undertaking such works outside of breeding bird season (March-September inclusive). New opportunities can be provided for breeding birds on site by creating new areas of dense mixed scrub within the northern receptor site.

6.11 The site does not support suitable opportunities for dormice, water vole, otter or European eel.

6.12 Potential ecological enhancements that can be implemented into development plans have been recommended within the report. Recommendations include use of native species planting and the installation of bat and bird boxes on site. These enhancements

would provide an increase in biodiversity interest to the site post development and allow the site to conform to the relevant local planning policies described.

7.0 References

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Froglife (2015) *Surveying for Reptiles*. Froglife, Peterborough.

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

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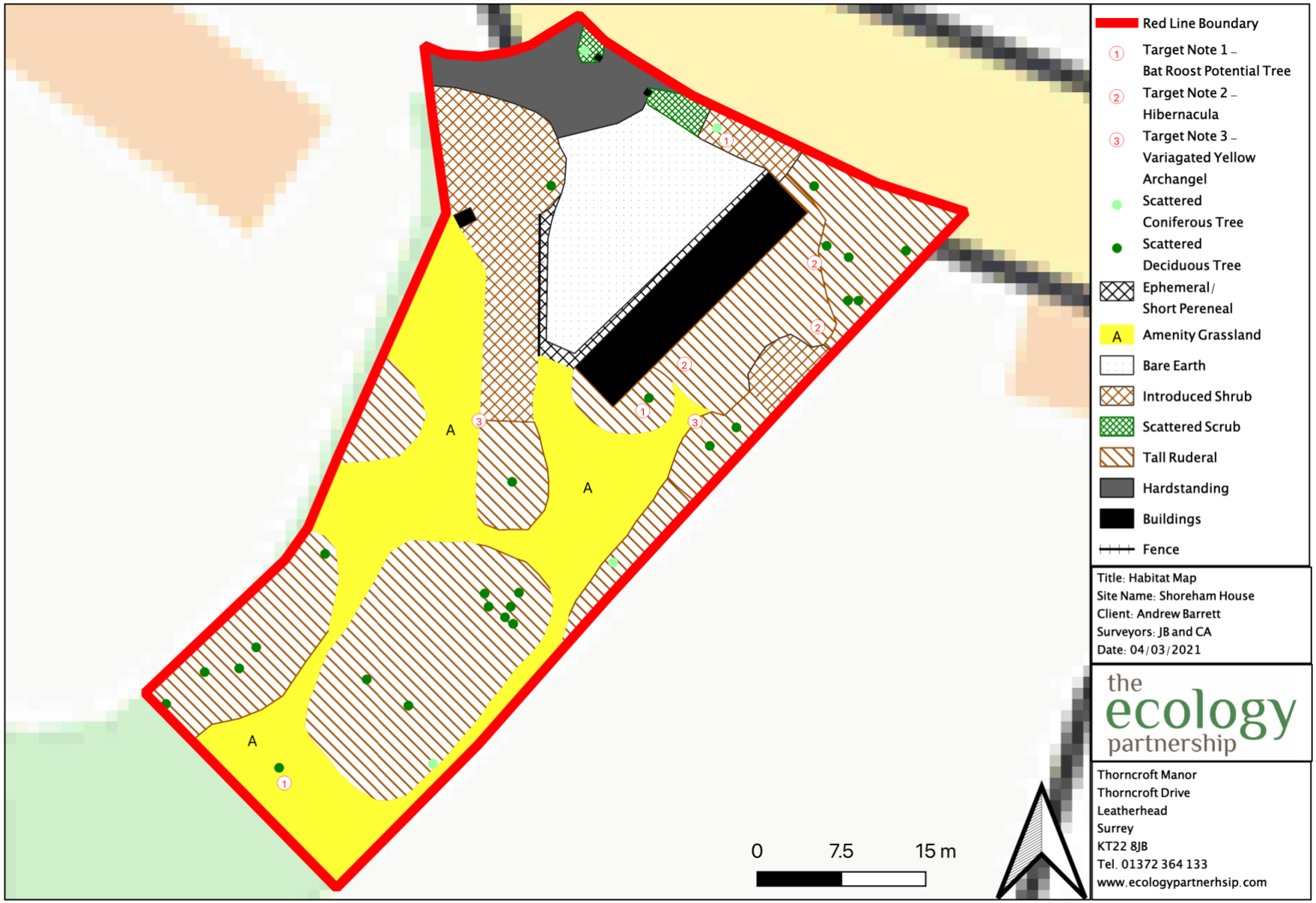
Internet resources:

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

Magic Interactive Map: www.magic.gov.uk

Appendix 1: Habitat Map



Appendix 2: Species list for the site

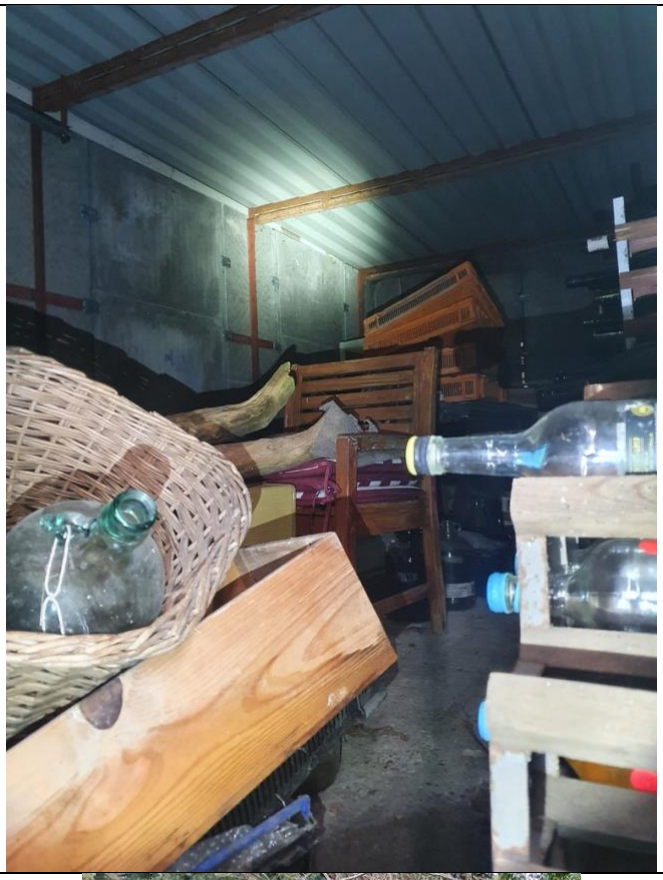
Common name	Latin name	DAFOR score
Amenity Grassland		
Perennial ryegrass	*Lolium perenne*	F
Yorkshire fog	*Holcus lanatus*	F
Cock's Foot	*Dactylus glomerata*	F
Daisy	*Bellis perennis*	O
Creeping buttercup	*Ranunculus repens*	O
Garden chive	*Allium schoenoprasum*	O
Smooth sow thistle	*Sonchus oleraceus*	O
Cow parsley	*Anthriscus sylvestris*	O
Wood avens	*Geum urbanum*	O
Forget me not spp.	*Myosotis spp.*	R
Germander speedwell	*Veronica chamaedrys*	R
Nipplewort	*Lapsana communis*	R
Selfheal	*Prunella vulgaris*	R
Tall Ruderals		
Lords and ladies	*Arum maculatum*	A
Green alkanet	*Pentaglottis sempervirens*	A
Common nettle	*Urtica dioica*	A
Bramble	*Rubus fruticosus*	F
White dead-nettle	*Lamium album*	F
Ground Ivy	*Glechoma hederacea*	F
False oat grass	*Arrhenatherum elatius*	O
Snowdrop spp.	*Galanthus spp.*	O
Wood avens	*Geum urbanum*	O
Stone parsley	*Sison amomum*	O
Smooth sow thistle	*Sonchus oleraceus*	O
Broadleaved dock	*Rumex obtusifolius*	O
Nipplewort	*Lapsana communis*	O
Perennial ryegrass	*Lolium perenne*	O
Cleavers	*Galium aparine*	O
Wood avens	*Geum urbanum*	O
Stinking iris	*Iris foetidissima*	O

Lords and ladies	*Arum maculatum*	R
Strawberry	*Fragaria vesca*	R
Broadleaved dock	*Rumex obtusifolius*	R
Snowdrop spp.	*Galanthus spp.*	R
Hogweed	*Heracleum sphondylium*	R
Forget-me-not spp.	*Myosotis spp.*	R
Creeping Thistle	*Cirsium arvense*	R
Groundsel	*Senecio vulgaris*	R
Ragwort	*Jacobaea vulgaris*	R
Greater celandine	*Chelidonium majus*	R
Petty spurge	*Euphorbia peplus*	R
Daffodil	*Narcissus pseudonarcissus*	R
Cyclamen	*Cyclamen purpurascens*	R
Scrub		
Bramble	*Rubus fruticosus*	A
Common ivy	*Hedera helix*	F
Berberis	*Berberis spp.*	F
Short perennials and ephemerals on bare earth		
Annual meadow grass	*Poa annua*	A
Stone parsley	*Sison amomum*	F
Cock's Foot	*Dactylus glomerata*	F
Germander speedwell	*Veronica chamaedrys*	O
Wood avens	*Geum urbanum*	O
Red fescue	*Festuca rubra*	O
Prickly sow thistle	*Sonchus asper*	R
Dandelion	*Taraxacum officinale*	R
Scattered Mixed Trees		
Sycamore	*Acer pseudoplatanus*	F
Elder	*Sambucus nigra*	F
Ash	*Fraxinus excelsior*	O
Lime spp.	*Tilia spp.*	O
Cherry	*Prunus avium*	O
Yew	*Taxus baccata*	O
Oak	*Quercus spp.*	R
Holly	*Ilex aquifolium*	R
Dogwood	*Cornus sanguinea*	R

Spruce spp.	*Pinaceae spp.*	R
Introduced Shrub		
Cherry laurel	*Prunus laurocerasus*	O
Juniper spp.	*Juniperus spp.*	O
Geranium spp.	*Pelargonium spp.*	O
Spotted Laurel	*Aucuba japonica*	O
Snowberry	*Symphoricarpos albus*	R
Viburnum spp.	*Viburnum spp.*	R
Common broom	*Cytisus scoparius*	R
Garden Box	*Buxus sempervirens*	R
Bamboo spp.	*Bambusoideae spp.*	R
Cotoneaster spp.	*Cotoneaster spp.*	R
Yucca spp.	*Yucca spp.*	R
Invasives		
Variegated yellow archangel	*Lamium galeobdolon*	O

Appendix 3: Photographs

Photograph 1: Western aspect of the garages with scattered trees behind.	
Photograph 2: View of the driveway, bare earth area and garages. Taken from the northern boundary facing east.	
Photograph 3: Tall ruderal habitat behind the garages. Taken facing south.	

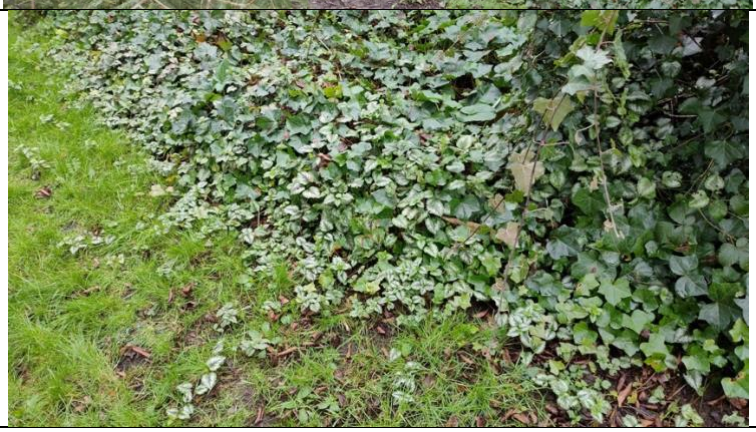
Photograph 4: Interior of one garage.	
Photograph 5: Northern wall of the garages showing the gap between the wall and boarding.	

Photograph 6: Small potting shed within the introduced shrub.	
Photograph 7: Low bat roost potential yew tree on the northern boundary.	

Photograph 8: Potential hibernacula log pile behind garages within tall ruderal and bare earth.	
Photograph 9: Potential hibernacula log pile behind garages within introduced shrub.	
Photograph 10: Low bat roost potential elder at the southern corner of the garages.	

Photograph 11: Patch of invasive variegated yellow archangel on the edge of tall ruderal vegetation.	
Photograph 12: A mix of amenity grassland and tall ruderal habitat just south of the garages. Photo taken facing north.	

Photograph 13: Large patch of tall ruderal vegetation in the southern half of the site. Photo taken facing north.	
Photograph 14: Low bat roost potential ash tree at the southern boundary.	

Photograph 15: Path leading to the southern habitats of the site with tall ruderal vegetation on the right.	
Photograph 16: Patch of invasive variegated yellow archangel on the edge of introduced shrub.	

Appendix 4: Biological Records

Our Reference: **ENQ/21/102**
Your Reference:

Kent and Medway Biological Records Centre

report regarding

Shoreham House

on behalf of

Cameron Allaway

The Ecology Partnership

08/03/2021

This report is not a comprehensive ecological survey of the area in question, but can usefully form part of desktop studies to assist competent persons in ecological assessments to determine species and/or habitats reasonably likely to be present in a particular area.

This report was compiled using data held at KMBRC at the time of printing. The KMBRC takes data validation seriously but cannot be held responsible for the accuracy of the data included in this report.

Enclosed within this report is the following information specific to the enquiry site :

Protected Species Inventory	☑
Kent Rare and Scarce Species Inventory	☑
Conservation Concern Species Inventory	☑
Invasive Species List	☑
SSSI Risk Zones map and report	☐
Bird List	☑
Bat List	☑
Bat Roost Map	☑
Designated Areas Map	☑
Kent Habitat Survey Map	☐
Biodiversity Action Plan Habitat Map	☐

Bespoke Reports:

Kent and Medway Biological Records Centre
Brogdale Farm Office, Brogdale Road, Faversham, Kent. ME13 8XZ
Tel: (01795) 532386 Fax: (01795) 532386
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19/03/2021