Preliminary Ecological Appraisal

Land at 2 Keymer Road, Hassocks

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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 may be 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 Michelle Coe to undertake a preliminary ecological appraisal (PEA) of land at 2 Keymer Road, Hassocks, BN6 8HW. This is in support of a planning application for the site.

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); and
- Conclusions (Section 6).

Site Context and Status

1.4 The site overall site comprises of a house, a garage and an area of grassland lawn, containing scattered trees, ornamental planting and a vegetable patch. The site is located within Hassocks, West Sussex (TQ 30444 15457). The site is approximately 0.1ha in size and is bound by low density residental dwellings to the north, east and south, with a parcel of woodland to the west and the London to Brighton train line located behind the parcel of woodland. The wider surrounding area comprises medium density residential dwellings, some comercial units, parcels of woodland and awith open countryside beyond.

1.5 The site is shown in Figure 1 overleaf.

Figure 1: Redline and Blueline Boundary of the site

Description of the Proposed Development

1.6 Proposals include the construction of a single dwelling at the rear of the property with a new access created involving the demolition of the existing garage. Please see the proposed layout in Figure 2 below.

Figure 2: Proposed location of new dwelling

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 2021) as well as policies from the Mid Sussex District Council. The Mid Sussex District Plan (2014-2031) contains policies relating to ecology which are relevant to the site. These policies include:

- ***District Policy 37: Trees, Woodland and Hedgerows***
- ***District Policy 38: Biodiversity***

1.8 The Environment Bill received Royal Assent on 9th November 2021 and is now enacted as the Environment Act 2021. Part 6 (Nature and Biodiversity) and Schedule 14 of the Environment Act 2021 inset a new section 90A and Schedule 7A into the Town and Country Planning Act 1990 (TCPA), which contain the provisions requiring mandatory biodiversity net gain for development granted planning permission pursuant to the TCPA. These provisions are not yet in force, but, once they are brought into effect through implementing legislation, will require developments to provide a biodiversity value post-development that exceeds the predevelopment biodiversity

value of the onsite habitats by at least 10%. These provisions are not expected to come into force until November 2023 for new planning applications.

1.9 The site has therefore been surveyed to assess its ecological value and to ensure compliance with national and local plan policies and other relevant nature conservation legislation including; Wildlife and Countryside Act 1981, Natural Environment and Rural Communities Act 2006, and the Conservation of Habitats and Species (EU Exit) Regulations 2019.

1.10 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 Practice 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 (maps.google.co.uk) was used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands, etc.) within the wider landscape. A 1km data search was obtained from Sussex Biodiversity Records Centre (SxBRC) for records of protected and notable species and non-statutory site designations.

Preliminary Ecological Appraisal

2.2 An extended preliminary ecological appraisal was undertaken on 11th October 2023 by Chris Jennings BSc (Hons) MSc MCIEEM and Alistair McNaughton BSc (Hons) QCIEEM. The surveyors identified the habitats present, following the standard 'UK Hab' auditing method. The site was surveyed on foot and the existing habitats and land uses were recorded on an appropriately scaled map (JNCC 2010).

Protected Species Assessments

2.3 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

2.4 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.

2.5 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.

3.0 Results

Desktop Study

3.1 There are no internationally designated sites located within 10km of the site. The nearest site is Castle Hill Special Area of Conservation (SAC) located *c*. 10.3km south-east of the site. This site is designated for its semi-natural dry grasslands and scrubland facies on calcareous substrates.

3.2 There are two statutory designated sites located within 2km (Figure 3). Clayton to Offham Escarpment Site of Special Scientific Interest (SSSI) (*c*. 1.57km south), and Walstonbury Hill SSSI (*c*. 1.84km south-west).

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

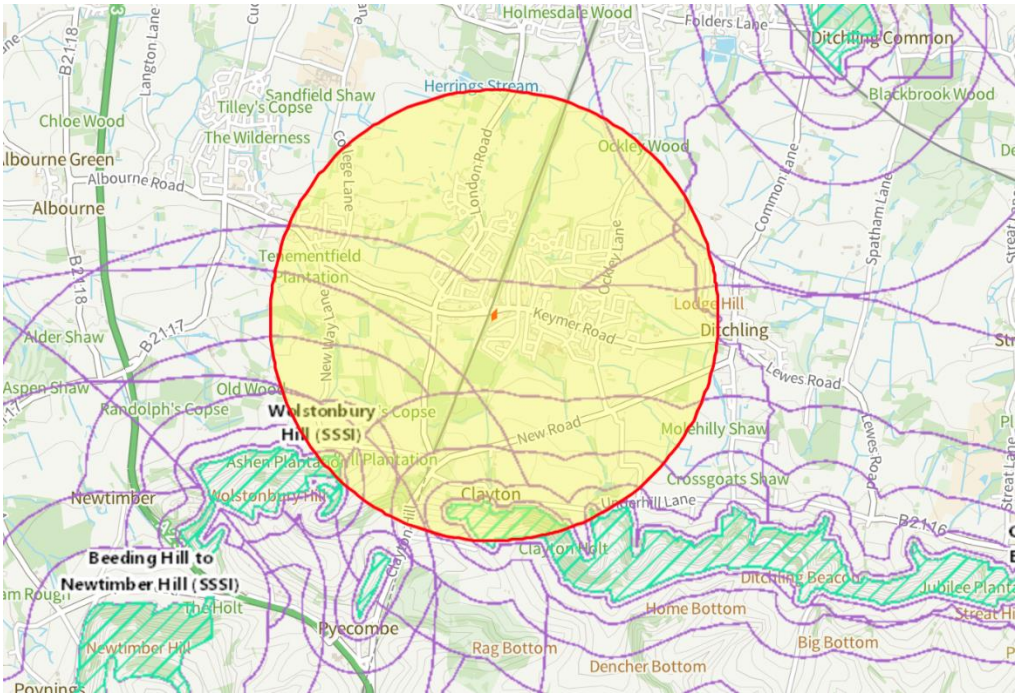

Figure 3: Statutory designated sites located within 2km of the site.

3.3 There is one non-statutory designation located within 1km of the site boundary. Lag Wood & Butcher's Wood Local Wildlife Site (LWS) is located *c*. 320m south of the site. This site is designated for its ancient semi-natural woodland habitats.

A number of priority habitats are present within 2km of site (Figure 4), including:

- Deciduous Woodland (*c*. 100m north);
- Ancient Semi-Natural Woodland (*c*. 310m south-west);
- Ancient Replanted Woodland (*c*. 1.75km west);
- Traditional Orchards (*c.* 330m south-east);
- Good Quality Semi-Improved Grassland (*c*. 1.47km south-west);
- Woodpasture and Parkland (*c*. 1.46km west);
- Lowland Calcareous Grassland (*c*. 1.67km south) and;
- Lowland Meadows (*c*. 1.77km south).

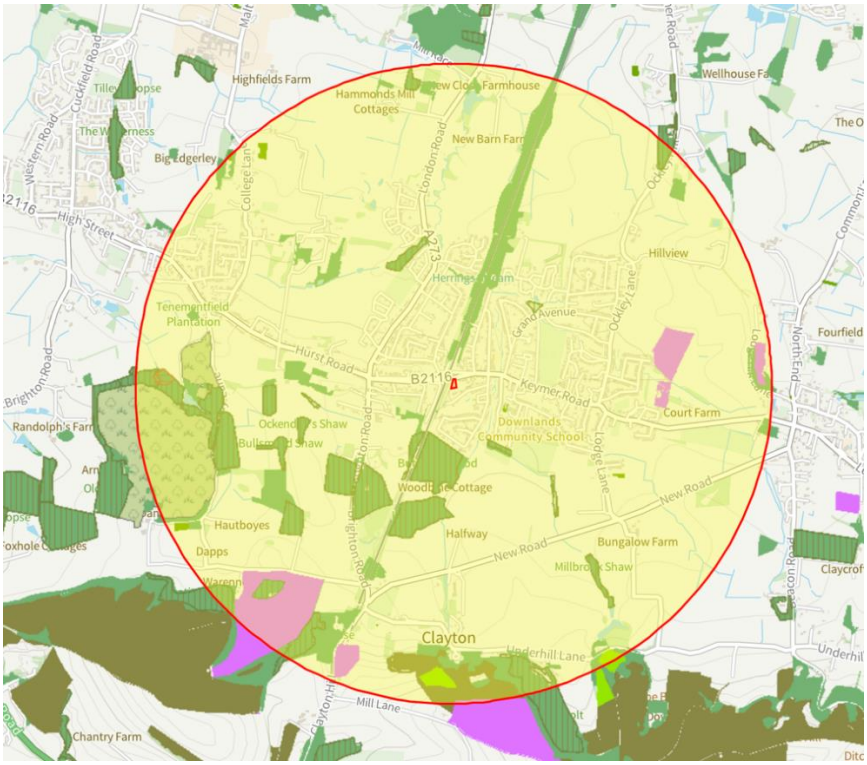

Figure 4: Priority habitats within 2km of site boundary including: deciduous woodland (dull green), ancient semi-natural woodland (vertical brown hatches), ancient replanted woodland (horizontal hatchings), traditional orchards (lime green), woodpasture and parkland (tree symbols), good quality semi-improved grassland (pink), lowland meadows (bright green) and lowland calcareous grassland (brown)

3.4 OS mapping found one pond within 250m of the site (Figure 5).

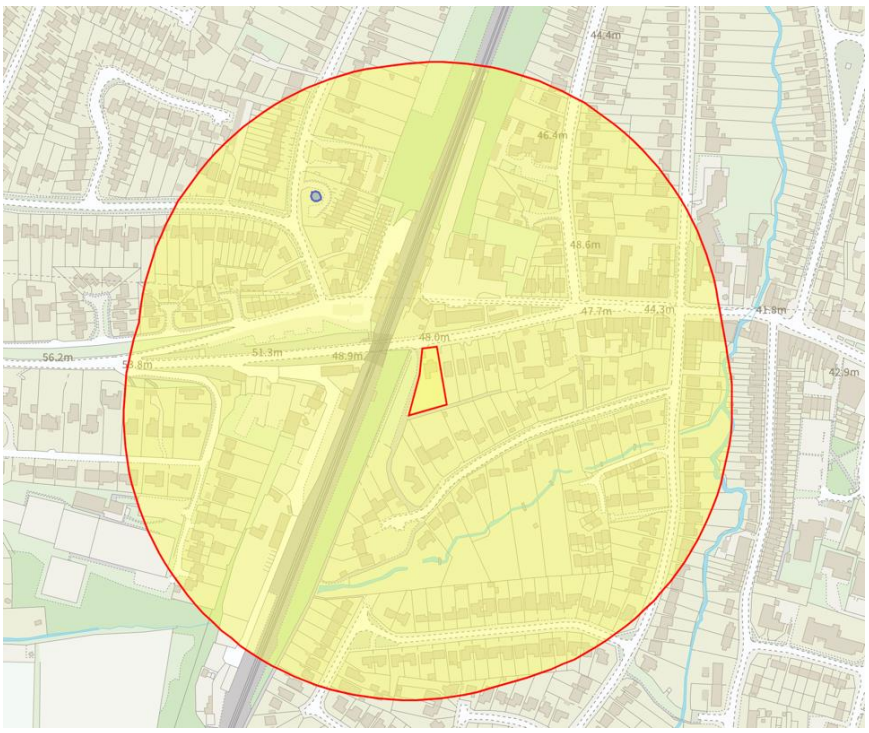

Figure 5: Ponds within 250m of the site (highlighted by blue circle)

3.5 The desktop study revealed that there was one European Protected Species (EPS) Licence within a 2km radius of the red line boundary, with many GCN class licence returns (Figure 6). Table 1 below shows the licences within 1km of the site.

Table 1: The closest Granted EPS Mitigation licences and class licence returns (within 1km of the site)

Species	Distance/Orientation from site	Licence Type	License Duration/Date	Comments
Common Pipistrelle	350m south-east	Destruction of a resting place	01/07/2014 – 31/10/2015	N/a
Great Crested Newt	920m west	Class Licence Return	01/05/2017	Presence recorded
Great Crested Newt	920m west	Class Licence Return	Ranges from 05/2017 to 06/2017	Presence recorded
Great Crested Newt	950m north-west	Class Licence Return	14/04/2015	Presence recorded

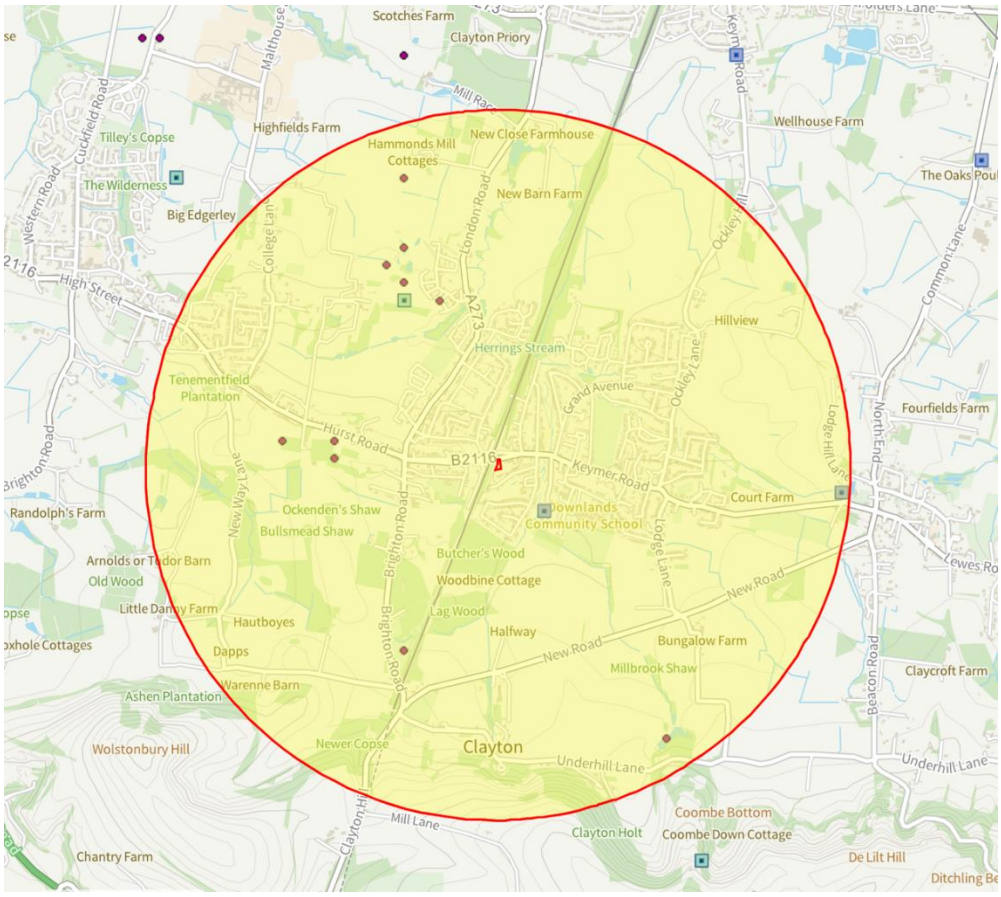

Figure 6: EPS licences (dark blue square – bats, turquoise square - GCN) and GCN class survey licence returns (purple dots, were presence were recorded) within 2km of the site

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

Table 2: Species records within 1km of the site boundary in the past 10 years

Species	Status	Distance from site	Date of record
Hazel Dormouse *Muscardinus avellanarius*	Wildlife and Countryside Act (1981 as amended) Schedule 5; Conservation of Habitats and Species Regulations (2010) Schedule 2; Habitats and Species Directive (1992) Annex 4; NERC Act (2006) Section 41	*550m south*	12/08/2014
European Water Vole *Arvicola amphibius*	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	*840m north*	18/03/2015
West European Hedgehog *Erinaceus europaeus*	NERC Act (2006) Section 41	*210m south-east*	17/06/2022
Palmate Newt *Lissotriton helveticus*	Wildlife and Countryside Act (1981 as amended) Schedule 5	*890m west*	15/06/2017
Smooth Newt *Lissotriton vulgaris*	Wildlife and Countryside Act (1981 as amended) Schedule 5	*210m south-east*	31/10/2017
Great Crested Newt *Triturus cristatus*	Wildlife and Countryside Act (1981 as amended) Schedule 5; Habitats Directive Annex 2 & 4; NERC Act (2006) Section 41	*210m south-east*	15/06/2017
Slow Worm *Anguis fragilis*	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	*30m west*	16/05/2018
Grass Snake *Natrix helvetica*	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	*150m north-west*	29/07/2015
Serotine Bat *Eptesicus serotinus*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	20/07/2017
Bechstein's Bat *Myotis bechsteinii*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	20/09/2021
Daubenton's Bat *Myotis daubentonii*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	17/07/2016
Natterer's Bat *Myotis natterei*	Conservation of Habitats and Species Regulations (2017) Schedule	*Within 1km*	27/07/2017

	2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5		
Noctule Bat *Nyctalus noctula*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	20/07/2017
Nathusius's Pipistrelle *Pipistrellus nathusii*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	17/06/2015
Common Pipistrelle *Pipistrellus pipistrellus*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	18/11/2022
Soprano Pipistrelle *Pipistrellus pygmaeus*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	06/07/2017
Brown Long-eared Bat *Plecotus auritius*	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	*Within 1km*	19/09/2019
Red Kite *Milvus milvus*	Birds Directive Annex 1; Wildlife and Countryside Act (1981 as amended) Schedule 1; Convention on Migratory Species Appendix 2	*Within 1km*	01/06/2021
Mallard *Anas platyrhnchos*	BoCC Amber List	*Within 1km*	29/06/2018
Herring Gull *Larus argentatus*	NERC Act (2006) Section 41, UK Biodiversity Action Plan Priority Species, Red List for Birds in Great Britain (2001)	*Within 1km*	17/06/2015
Common Gull *Larus canus*	BoCC Amber List	*Within 1km*	17/12/2013
Stock Dove *Columba oenas*	BoCC Amber List	*Within 1km*	11/06/2021
Kestrel *Falco tinnunculus*	Wildlife and Countryside Act (1981 as amended); Bern Convention Appendix 2; Convention on Migratory Species Appendix 2; BoCC Amber List.	*Within 1km*	13/06/2021
Skylark *Alauda arvensis*	NERC Act (2006) Section 41; Birds Directive Annex 2.2	*Within 1km*	01/06/2022
Hawfinch	UK BAP Priority; BoCC 4 Red list; NERC S41	*Within 1km*	02/04/2018

Coccothraustes coccothraustes			
Bullfinch *Pyrrhula pyrrhula*	UK BAP Priority; BoCC 4 Red list; NERC S41	*Within 1km*	18/04/2018
Meadow Pipit *Anthus pratensis*	BoCC Amber List	*Within 1km*	22/06/2021
Grey Wagtail *Motacilla cinerea*	BoCC Amber List	*Within 1km*	23/06/2023
Nightingale *Lusinia megarhynchos*	BoCC Red List	*Within 1km*	04/06/2022
House Sparrow *Passer domesticus*	Wildlife and Countryside Act (1981 as amended) Schedule 1; NERC Act (2006) Section 41; BoCC Red List	*Within 1km*	01/01/2016
Tree Sparrow *Passer montanus*	NERC Act (2006) Section 41, UK Biodiversity Action Plan Priority Species, Red List for Birds in Great Britain (2001)	*Within 1km*	11/06/2013
Tawny Owl *Strix aluco*	BoCC Amber List	*Within 1km*	01/06/2020
Barn Owl *Tyto alba*	Wildlife and Countryside Act (1981 as amended) Schedule 1	*Within 1km*	26/07/2020

Habitat Survey

3.7 The red line application boundary of the site is comprised of a section of the existing residential garden, with a garage located to the north. The blue line boundary of the site was comprised of the rest of the existing plot that is to be retained. This included a two-storey residential dwelling with a front lawn, ornamental planting, a vegetable patch, two wood storage areas and a garden shed within an associated existing garden.

3.8 The illustrated habitat map of the site can be found in **Appendix 2**. Only species of note have been listed within this section, the full species list can be found within **Appendix 3**.

Habitats Located within the Red Line Application Boundary

Buildings (u1b5)

3.9 The proposals are believed to include the demolition of the existing garage to make space for a car port and access. The garage is constructed with brick walls, with some air bricks also located within the elevations and a gently sloped bitumen felt roof (internally the roof was made of chipboard). The garage is built into the embankment of the site. The garage did not contain a loft void and appeared to be damp at the time of the site visit.

Modified Grassland (g4 108 828)

3.10 Much of the site is comprised of managed modified grassland in the form of a lawn. At the time of the site visit the grass had been cut to a short sward height across the site. Grassland 1 was located in the rear garden. Species present in grassland 1 included abundant red fescue (*Festuca rubra*) and Yorkshire fog (*Holcus lanatus*). A small area of cleared habitat was present in the south western corner which comprised bare earth at the time of the survey. It is thought that a garden shed may have been present previously in this location. The red line boundary also included a very small section of Grassland 2 which was located to the north of the site and was present in the form of a front lawn. This comprised a similar species composition to grassland 1 under the same management.

Hedgerows (h2b 828)

3.11 Hedgerow 1 was located along the western boundary of the red line application area. And contained abundant levels of cherry laurel (*Prunus laurocerus*) and leyland cypress (*Cypressus leylandii*).

Scattered Trees (u1 32 828)

3.12 Scattered saplings and young trees were located throughout the southern extent of the rear lawn, within the red line boundary. The species present included apple (*Malus domestica*), cherry (*Prunus Avium*), plum (*Prunus domestica*), redcurrant (*Ribes rubrum*), lime (*Tilia sp.*) and cherry laurel.

Introduced Shrub (u1 828 847)

3.13 Located behind the garage, in the north-western corner of the site is some ornamental shrubs. These were made up of cotoneaster, fern sp. (*Tracheophyta sp.*), garden privet (*Ligustrum ovalifolium*) and shrubbery honeysuckle (*Lonicera periclymenum*).

Habitats Located within the Blue Line Boundary

Buildings (u1b5)

3.14 The existing detached residential dwelling and some associated outbuildings and structures were present within the blue line boundary, these are understood to be retained and unimpacted by works, as such they were not surveyed in any detail.

Modified Grassland (g4 108 828)

3.15 The remainder of grasslands 1 (located to the rear of the property) and grassland 2 (located at the front of the property) were located at the front of the residential dwelling.

Hedgerows (h2b 828)

3.16 Hedgerow 2 is located in the northern aspect of the east side of the blue line boundary. Hedgerow 2 contained abundant levels of cherry laurel, with frequent holly *(Ilex aquifolium)* and cotoneaster sp. *(Cotoneaster sp.).*

Introduced Shrub (u1 828 847)

3.17 There is an area of ornamental planting located along the eastern side of the blue line boundary. This featured occasional bamboo (*Bambusa vulgaris*) with other species presented in the species list in Appendix 3.

Vegetable Patch (u1 616)

3.18 Located just south of the residential dwelling was a small vegetable patch containing what appeared to be tomato (*Solanum lycopersicum*) and butternut squash (*Curcurbita moschata*).

Protected Species

Bats

Roosting Bats

3.19 The only building within the red line boundary understood to be impacted by the works is the existing garage situated to the north of the site. The structure was built into the surrounding earth bank and was comprised of brick-built walls and a flat

bitumen lined roof. No potential features were noted on the external structure that were considered suitable for roosting bats. The garage was used for storage at the time of the survey visit. The building did not have any internal loft void. Externally, the some potential gaps were noted, with light spilling in through the soffits inside, however the building was not considered to have typical features that would utilised by roosting bats. No evidence of roosting bats was noted at the structure either internally or externally. As such, the garage was considered to have **'negligible'** potential to support roosting bats.

Foraging and Commuting Bats

3.20 The site has limited potential to support commuting and foraging bats, with managed garden habitats present. The scattered fruit trees offer some interest as they are likely to attract invertebrates which bats may prey on. With the garden dominated by managed lawn and ornamental shrubs and its small size, it is not considered to have any significant value to commuting or foraging bats.

3.21 In close proximity, to the west of the site a block of woodland is present. This presented a linear connective feature to a larger parcel of woodland located approximately 320m south of the site. It is believed that woodland strip would provide some opportunities for foraging and commuting bats.

Dormice

3.22 The site is mostly comprised of ornamental non-native plant species as well as grassland with small, scattered trees. These habitats offer very limited value and lack of any direct connectivity to suitable habitat. The hedgerows are largely dominated by non-native cypress and cherry laurel, fragmented and small in nature, again they lack any connectivity to suitable habitat for the species. The site is located within a residential area and is separated from the offsite deciduous woodland parcel to the west by a track and footpath and a wooden panelled fence. The proposals will see the site continue as residential land. Records suggest that dormice maybe present within the local area, however due to the current use and management of the site, lack of suitable habitats present and lack of direct connectivity to suitable habitat, it is considered highly unlikely that the species are present.

Great Crested Newt

3.23 No ponds were present on site; however, one pond was identified within 250m of the site boundary. The pond is approximately 160m north-west of the site. The pond is separated from site by several residential properties, buildings, gardens, driveways, a train station and associated car park and train track as well as other barriers to dispersal such as fences and walls. Due to the managed nature of the site and habitats present, the site offers very limited suitability for the species.

3.24 The nearest record for GCN within the wider landscape is 210m south-west of the site, and the nearest GCN Class Licence Return located 920m west of the site, with many other GCN class licence returns also located within 2km. This indicates that the species are within the local area.

3.25 However, with no direct connectivity to any potential GCN breeding ponds and very limited suitability of the terrestrial habitats on site, the site is considered to have 'negligible' potential to support great crested newts.

Badgers

3.26 No evidence of badgers, including setts, latrines, or holes, was found within the site boundary at the time of the survey. It is considered that Badgers are likely to be present in the local area.

Reptiles

3.27 The site contained will maintained habitats including regularly mown grassland which offered no suitable refuge for reptiles. The garden is likely to be subject to regularly disturbance by the occupants and their dog who live at the property. Some freshly laid logs were present within the centre of the site which appeared to be in use with the fire pit. The small log pile was isolated from any suitable reptile habitat and appeared to have been recently placed with a view to be used on the fire pit. It is considered highly unlikely that reptiles would be present on site. However, with a record of slow worm present approximately 30m from site, it is possible that the species are within surrounding habitats such as less managed and disturbed gardens and along the nearby railway embankment.

Breeding Birds

3.28 The hedgerows on site provide some suitable nesting opportunities for breeding birds. To a lesser extent the scattered trees on site offered some potential for nesting birds, however the lack of cover due and small size, severely limited the likelihood of use.

3.29 It was considered that there was a small chance that the garage maybe used by nesting birds if access could be gained into the internal environment. However, no evidence of nesting birds was noticed within the building during the internal inspection and as such it is not considered that the building has been used for this purpose in the recent past.

Other Species

3.30 Considering the habitats surrounding the site, it is likely that hedgehogs are present in the local area. At the time of the survey visit, a hole in the southern fence boundary was noted which could ease access for hedgehogs onto the site.

3.31 Due to a lack of suitable habitat, the site was not considered suitable for other protected species, such as barn owls, water voles and otters.

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 habitat 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.

Effects on Designated Sites

4.2 There are no internationally designated sites located within 10km of the site. The nearest internationally designated site is Castle Hill SAC, which is located *c*. 10.3km south-east of the site.

4.3 There are two statutory designations located within 2km of the site boundary. Clayton to Offham Escarpment SSSI c. 1.57km south, Walstonbury Hill SSSI c. 1.84km south-west. It is not considered that the development of the site would have any direct

impacts on these designations due to distance and the sites' urban location. The site is not present within any SSSI impact risk zone on magic maps with regards to an increase in residential development.

4.4 There is one non-statutory site located within 1km of the site boundary, Lag Wood & Butcher's Wood LWS, located 320m south of site. Due to the distance of this site from the proposed site boundary and the small-scale proposals, it is considered that no direct or indirect negative impacts will occur as a result of any developments on site. Therefore, it is considered unlikely that the proposed development on site will negatively impact any non-statutory sites within the local area.

Effects on Priority Habitats

4.5 There are no priority habitats located on site. A strip of lowland mixed deciduous woodland is present to the west of the site along the adjacent railway embankment. This habitat should be protected from potential impacts such as dust and pollution during site works. This should be implemented by containing activities on site and having pollution prevention measures in place to ensure this habitat is protected during works. If this is undertaken, then it is considered that the site will have no impact on priority habitats on site or within the local area.

Effect on On-site Habitats

4.6 The habitats on site are common and widespread and low in value and are highly managed and disturbed due to ongoing use and management by existing residents. As such it is not considered that any significant impacts would occur above a site level of importance. Any loss of value can be mitigated through any, provision of new compensatory planting and the provision of new ecological features. It is not considered that proposed development on site would have a significant impact on the value of habitats present onsite.

Protected Species

Bats

Roosting Bats

4.7 The garage on site was deemed to have 'negligible' potential for roosting bats. This was down to a lack of suitable features present that could be utilised by bat species. No evidence of bats utilising the space was found at the garage. With the building considered to have negligible potential no further survey work is recommended.

4.8 No features for roosting bats were observed within the trees on site. These were small in size and lacking potential features such as cracks, crevices and rot holes associated that could be used by crevice dwelling bat species.

Foraging and Commuting Bats

4.9 Any proposed development must consider ecological networks and green infrastructure, in line with national and local policies. The hedgerows present were largely dominated by non-native cypress and cherry laurel and small in extent offering limited value to bat species beyond potential flight lines. It is recommended that hedgerows and trees are incorporated within any new development to help maintain connectivity across the local area for bat species, which rely on linear habitats such as hedgerows and tree lines to navigate across the landscape. However due to the limited existing value of the site for foraging bats, existing use and small size of the site no further surveys are recommended with regards to foraging and commuting bats.

4.10 Any proposed lighting scheme as part of the development must consider bats in the surrounding area as well as site. This will protect the offsite woodland strip which may provide suitable opportunities for bat species. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Bats are known to be affected by light levels, which can affect both their roosting and foraging behaviour. This needs to be considered with a sympathetic lighting scheme for the development. Recommendations include:

- Installing lighting only if there is a significant need;
- Using sodium lamps instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics;

- Directing lighting to where it is needed and avoiding light spillage;
- Using baffled lighting where light is directed towards the ground and
- Avoid putting lighting near trees suitable for roosting bats, woodland, trees or hedgerows and angling light away from these linear features which are used by commuting and foraging bats.

Great Crested Newts

4.11 No ponds were identified on site; however, one pond was identified within 250m of the site boundary. During the site visit, the pond could be accessed to conduct a full his, however it was viewed from a public highway and appeared to be located within a landscaped area at the front of a communal property. The site is separated from this pond by residential development, roads, a train station with associated large car park, railway tracks, driveways and other barriers to dispersal such as fences and walls. Pond 1 is located 160m north-west of the site. The area to be impacted by the proposed development is approximately 0.05ha. At this distance even if there was connecting habitat (which there isn't), due to the small scale of the works, it is considered that the development is **'highly unlikely'** to impact GCN according to the Natural England GCN Licence risk calculator (Figure 7).

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	

Figure 7: Licence risk assessment

4.12 The managed garden habitats offer very limited terrestrial habitat for GCNs. The significant barriers to dispersal between any potential GCN breeding pond and the site, likely ongoing high levels of disturbance on site, the small size of the site as well as the sub optimal habitats located on site mean that the likelihood of GCN being on site is considered **'negligible'**. As such, there is no need for further surveys with respect to great crested newts and the species are not considered a constraint to development.

Reptiles

4.13 The site is considered to have 'negligible' potential to support reptiles. It is considered highly unlikely that the species group are present on site, although they may be present within the local area within semi-natural habitats and less managed gardens. With the current management of habitats in place reptiles are not considered a constraint to development and no further survey work is recommended. However, it is recommended that the current management regime of the site is continued on site, with the grassland kept short, to prevent common reptiles such as slow worm populating the site from surrounding habitat ahead of potential construction works.

Badgers

4.14 While no direct evidence of badgers, such as setts or latrines, was identified on site, it is probable that badgers use the habitats in the surrounding area to forage or commute across.

4.15 It is considered that the plans for the development of the site will not have any significant impact on badger foraging and commuting habitats. As such, there is no need for further surveys with respect to badgers. Whilst no badger setts are present on site and no further surveys are recommended, consideration for badgers in the wider landscape is recommended.

4.16 Best practice construction measures should be undertaken to avoid impacting badgers and other mammals, including rabbits which were observed on site. The guidelines are as follows:

- Any trenches or excavations on site should be either covered over at night or a plank of wood placed in to allow any mammals to escape if they were to accidentally fall in;
- Any open pipes or conduits laid should be blocked off each night to prevent any mammals from entering them; and
- Disturbances, such as loud noises, vibrations, and flood lighting in association with any required night work should be minimised.

Nesting Birds

4.17 The hedgerows on site and to a lesser extent the trees and buildings have the potential to support nesting birds. If the removal of any of these features is to be carried out,

this should be done outside of the breeding bird season (March-September inclusive) 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.

Other Species

4.18 Considering the habitats surrounding the site, it is likely that hedgehogs are present in the local area. At the time of the survey visit, a hole in the southern fence boundary was found which could provide access for hedgehogs onto the site. Any clearance of shrubbery on site should take the species into consideration. It is recommended that any vegetation is firstly cut down to 15cm in height checked by hand and then felled to ground level or roost stocks removed.

4.19 No potential for any other protected species, such as dormice, otters or water voles was identified within the site.

Ecological Enhancements

4.20 Several ecological enhancements that could be incorporated into the final scheme are included below.

4.21 Bird Boxes can be hung on mature trees within the site to increase the number breeding opportunities. Woodcrete (or similar) boxes (Figure 8) are recommended as the provide better thermal properties, are longer lasting and more durable than wooden boxes. These should be positioned at least 2.5m from ground level.

Figure 8: 2GR Schwegler Nest Box

4.22 The scheme could see the creation of species-rich hedgerows within suitable areas of the site, which will provide important food resources for formative wildlife. Species that may be planted include hazel (*Corylus avellana*), holly (*Ilex aquifolium*), elder (*Sambucus nigra*), alder buckthorn (*Frangula alnus*), guelder rose (*Viburnum opulus*), dog rose (*Rosa canina*) and dogwood (*Cornus* sp). Planting the base and edges of hedgerows with herbaceous plants and bulbs attract bees, butterflies and other insects as well as providing ground cover for smaller animals. In addition to this, the use of wildflower mixes to increase the biodiversity of any retained or created areas of grassland will enhance the ecological value of the site for a range of important invertebrates.

4.23 It is recommended that log piles are created for use as refugia by reptiles as well as amphibians, small mammals and invertebrates (Figure 9). These should be stacked and perhaps some leaf litter added. Planting around log piles with species such as honeysuckle or clematis can also add value.

Figure 9: Examples of log piles that can be made on site

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). 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 mitigation and compensation measures are outlined which help to reduce negative impacts.

5.3 The zone of influence for 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.
- Up to 2km for national statutory and non-statutory designations; and,
- Up to 10km for international statutory designations.

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 and woodland, where not of principal importance; and
- Habitats, where not if principal importance, that may function as wildlife corridors or stepping stones.

Baseline Ecological Conditions

5.5 The site falls within the zone of influence for the following important ecological features:

- Clayton to Offham Escarpment SSSI;
- Walstonbury Hill SSSI; and
- Lag Wood & Butcher's Wood LWS.

5.6 In addition, the site is considered to have **potential** to support the following priority species:

- Commuting and foraging bats – adjacent woodland strip and onsite garden habitats;
- Nesting birds – within trees hedgerow and buildings on site;
- Badgers – may use the site for foraging and commuting; and
- Hedgehog – may use the site for foraging and commuting.

Impact Assessment and Mitigation

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

Feature	Scale of Importance	Mitigation/Compensation Required	Residual Effect
Clyaton to Offham Escarpment SSSI	Local	N/A	Not Significant
Walstonbury Hill SSSI	Local	N/A	Not Significant
Lag Wood & Butchers Wood LWS	Local	N/A	Not Significant
Priority Habitats	Local	It is recommended that the adjacent woodland strip is protected from dust and other pollution events during construction, if this is undertaken no impacts are anticipated	Not Significant
Commuting and foraging bats	Site	Retention and enhancement of boundary hedgerows. Sensitive lighting scheme to shield retained garden habitats and adjacent woodland.	Not Significant
Nesting Birds	Site	Mitigating direct harm to nests by removal of any suitable habitat outside of nesting bird season or after a check by a suitably qualified ecologist	Not Significant
Badgers	Site	Sensitive working practices followed	Not Significant
Hedgehog	Site	Sensitive working practices followed	Not Significant

Summary

5.7 The development is unlikely to have any significant effects on designated sites, priority habitats or protected species in the local area, as long as the recommendations are followed.

6.0 Conclusions

6.1 The wider site site comprises a residential dwelling with associated outbuildings, garage, wood storage shelters and a garden shed, hedgerows, patches of ornamental planting and scattered trees. The development will only encompass a section of the existing property indicated by the red line boundary.

6.2 There are no internationally designated sites within 10km of the site boundary. Clayton to Offham Escarpment SSSI & Walstonbury Hill SSSI were located within 2km of the site. Due to the distance from site and the small scale works of the proposed development, no impacts on these statutory designated sites are considered likely due to the proposed developments.

6.3 There is one non-statutory site within 1km of the site boundary. No impacts on these designations are considered likely from developing the site.

6.4 There are no priority habitats present on site. However, it is recommended that the adjacent strip of lowland mixed deciduous woodland is protected during works from impacts such as dust and any potential pollution event.

6.5 The buildings present on site were considered to offer negligible potential to support roosting bats, due to a lack of potential roost features and evidence. As such no further survey work is recommended.

6.6 The site contains trees that are not mature enough to support roosting bats, so the suitability of the site for roosting bats is negligible, as such no further survey work is recommended.

6.7 The site contains some areas of fragmented planting that provide some suitable areas for foraging and commuting bats. Due to the overall low value of the site, current use and small size, its further survey work is not recommended. It is recommended that sensitive lighting scheme is incorporated with final proposals to protect adjacent wooded habitats from additional impacts of artificial lighting.

6.8 No evidence of badger setts was present on site. Some precautionary working measures have been recommended for badgers that may use the site for foraging or commuting purposes.

6.9 The boundary habitats, hedgerows and buildings have some potential to be used by birds as nesting habitat during the breeding season. The UK breeding season for most bird species takes place between March and September inclusive. Ideally, work affecting these areas should be avoided during this period. If unavoidable, it is recommended that any works affecting these habitats on site should be carried out

under ecological watching brief or after a nesting bird check by a suitably qualified ecologist.

6.10 The site supports no suitable habitat for dormice, reptiles, GCN, water voles or otters. Therefore, further surveys for these species' groups are not considered necessary.

7.0 References

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Internet resources:

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

Magic Interactive Map: www.magic.gov.uk

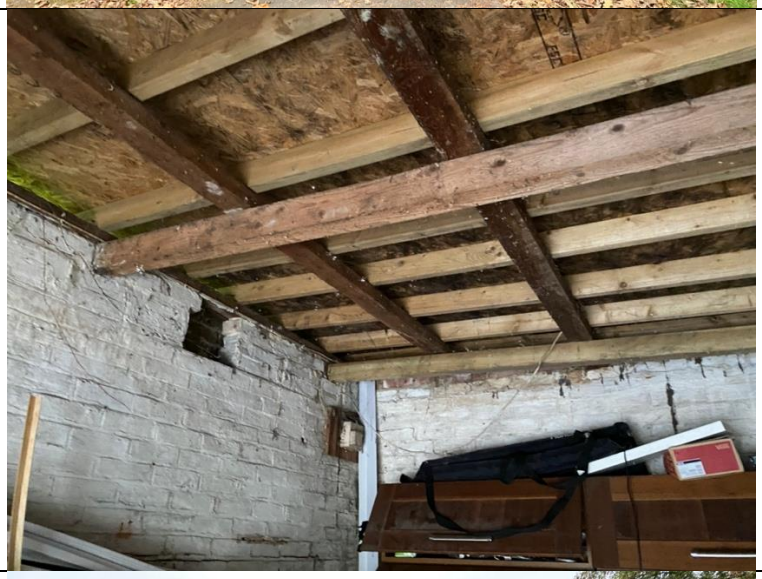
Appendix 1: Photos

Photograph 1: Modified grassland rear garden with ornamental planting running up the eastern boundary of the site.	
Photograph 2: South-western corner of the site, showing the temporary log piles with the fire pit located behind them.	
Photograph 3: Another view of the fire pit and temporary log piles.	

Photograph 4: Hedgerow 1 located along the western boundary of the site.	
Photograph 5: Scattered trees located in the southern aspect of the site.	
Photograph 6: View of the residential dwelling with the vegetable patch located south of the dwelling.	

Photograph 7: The wood storage shelters located along the eastern boundary of the site.	
Photograph 8: Garden shed located just south of the wood storage barns.	
Photograph 9: Area of modified grassland located in the northern aspect of the site.	

Photograph 10: Area of ornamental shrub located in the north-western area of the site	
Photograph 11: The roof and walls of the garage located in the northern aspect of the site.	
Photograph 12: Hedgerow 2 located in the northern aspect of the eastern boundary.	

Photograph 13: The front of the garage.	
Photograph 14: The roof within the garage, showing a gap in the soffit.	
Photograph 15: Northern boundary of the site.	

Appendix 2: Habitat Map

Appendix 3: Species List

Common name	Latin name	DAFOR score
Habitats within the Red Line Boundary		
Modified Grassland 1 (rear lawn)		
Red Fescue	*Festuca rubra*	A
Yorkshire Fog	*Holcus lanatus*	A
Ground Ivy	*Glechoma hederacea*	F
Garden Sorrel	*Rumex acetosa*	F
Perennial Ryegrass	*Lolium perenne*	O
Dove's-Foot Crane's-Bill	*Geranium molle*	O
Common Daisy	*Bellis perennis*	O
Bryophytes sp.	*Bryophytes sp.*	O
Dandelion	*Taraxacum officinale*	R
Yarrow	*Achillea millefolium*	R
Common Nettle	*Urtica dioica*	R
Modified Grassland 2 (front lawn)		
Red Fescue	*Festuca rubra*	A
Yorkshire Fog	*Holcus lanatus*	A
Ground Ivy	*Glechoma hederacea*	F
Bryophytes sp.	*Bryophytes sp.*	F
Perennial Ryegrass	*Lolium perenne*	O
Dove's-Foot Crane's-Bill	*Geranium molle*	O
Common Daisy	*Bellis perennis*	O
Yarrow	*Achillea millefloium*	R
Hedgerow 1		
Cherry Laurel	*Prunus laurocerus*	A
Leyland Cypress	*Cypressus leylandii*	A
Holly	*Ilex aquifolium*	O
Hazel	*Corylus avellana*	R
Sycamore	*Acer pseudoplatanus*	R
New Zealand Broadleaf	*Griselinia littoralis*	R
Introduced Shrubs (Front)		
Cotoneaster sp.	*Cotoneaster sp.*	R
Fern sp.	*Tracheophyta sp.*	R
Garden Privet	*Lingustrum ovalifolium*	R
Shrubbery Honeysuckle	*Lonicera periclymenum*	R

Scattered Trees (Rear)		
Apple	*Malus domestica*	O
Cherry	*Prunus avium*	R
Plum	*Prunus domestica*	R
Redcurrant	*Ribes rubrum*	R
Henry's Lime	*Tilia henryana*	R
Cherry Laurel	*Prunus laurocerus*	R
Habitats within the Blue Line Boundary		
Modified Grassland 2 (front lawn)		
Red Fescue	*Festuca rubra*	A
Yorkshire Fog	*Holcus lanatus*	A
Ground Ivy	*Glechoma hederacea*	F
Bryophytes sp.	*Bryophytes sp.*	F
Perennial Ryegrass	*Lolium perenne*	O
Dove's-Foot Crane's-Bill	*Geranium molle*	O
Common Daisy	*Bellis perennis*	O
Yarrow	*Achillea millefloium*	R
Modified Grassland 1 (rear lawn)		
Red Fescue	*Festuca rubra*	A
Yorkshire Fog	*Holcus lanatus*	A
Ground Ivy	*Glechoma hederacea*	F
Garden Sorrel	*Rumex acetosa*	F
Perennial Ryegrass	*Lolium perenne*	O
Dove's-Foot Crane's-Bill	*Geranium molle*	O
Common Daisy	*Bellis perennis*	O
Bryophytes sp.	*Bryophytes sp.*	O
Dandelion	*Taraxacum officinale*	R
Yarrow	*Achillea millefolium*	R
Hedgerow 2		
Cherry Laurel	*Prunus laurocerus*	A
Holly	*Ilex aquifolium*	F
Cotoneaster sp.	*Cotoneaster sp.*	F
Hazel	*Corylus avellana*	R
Introduced Shrub (Rear)		
Bamboo	*Bambusa vulgaris*	O
Pittosporum sp.	*Pittosporum sp.*	R
Oregon Grape	*Mahonia aquifolium*	R
Dogwood	*Cornus sanguinea*	R

Cotoneaster sp.	*Cotoneaster sp.*	R
Eucalyptus	*Eucalyptus globus*	R
Vegetable Patch		
Butternut Squash	*Curcurbita moschata*	O
Tomato	*Solanum lycopersicum*	R

Appendix 4: Biological Record Search

Sussex Biodiversity Record Centre

Ecological Data Search SxBRC/23/519 - Summary Report

An ecological data search was carried out for land at 2 Keymer Road, Hassocks on behalf of Alistair McNaughton (The Ecology Partnership) on 20/10/2023.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	1km
Protected, designated and invasive species	Yes	1km

Summary of results

Sites and habitats

Statutory sites	1 National Park
Non-statutory sites	1 LWS
Section 41 habitats	3 habitats
Ancient and/or ghyll woodland	Present

Protected and designated species

International designations	22 species	246 records
National designations	83 species	1,613 records
Other designations	155 species	2,444 records
Total	**170 species**	**2,813 records**
Invasive non-native	27 species	111 records

The report is compiled using data held by Sussex Biodiversity Record Centre (SxBRC) at the time of the request. SxBRC does not hold comprehensive species data for all areas. Even where data are held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there – the area may simply not have been surveyed.

This summary page may be published.
The full report and maps may not be published or otherwise shared.

The data search report is valid until 20/10/2024 for the site named above.

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